

# INDIA POLICY FORUM 2018

## The Impact of Tax Breaks on Household Financial Saving

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# The Impact of Tax Breaks on Household Financial Saving\*

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## Abstract

Academic literature on the effectiveness of tax breaks on financial savings in India is scant. This paper, for the first time, presents macro as well as micro evidence on what has been achieved by tax breaks with regards to financial savings. It uses aggregate national accounts data to study how financial savings have evolved with changes in tax breaks. It studies household portfolios for the financial year 2016-17 using the the CMIE Consumer Pyramids household survey. It finds that there is no link between tax breaks and overall financial savings. Households that fall under the tax bracket invest more heavily in the tax-incentivised products. These results have implications for the design of tax policy.

**JEL Classification:** H24, H31, H55, D14

**Keywords:** Household saving, financial saving, insurance, pension

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# Contents

<b>1</b>	<b>Introduction</b>	<b>3</b>
<b>2</b>	<b>Indian tax structure: Section 80C</b>	<b>5</b>
<b>3</b>	<b>Data</b>	<b>7</b>
<b>4</b>	<b>Impact on savings</b>	<b>10</b>
4.1	Overall financial saving . . . . .	11
4.2	Composition of household financial saving . . . . .	13
<b>5</b>	<b>Impact on savings: Micro-level evidence</b>	<b>13</b>
<b>6</b>	<b>Policy implications</b>	<b>19</b>
6.1	Low tax base . . . . .	19
6.2	Inconsistent tax treatment . . . . .	21
6.3	Skew towards insurance . . . . .	21
<b>7</b>	<b>Conclusion</b>	<b>22</b>
	<b>Appendix</b>	<b>26</b>
<b>A</b>	<b>Tables</b>	<b>26</b>

# 1 Introduction

Household saving<sup>1</sup> in India were 32 percent of GDP in 2015-16 (RBI, 2017b). However, this has not translated to financial investments. Net financial saving by households were only 7.8 percent of GDP in the same year. Indian households on average tend to hold a high fraction of non-financial assets with particularly high relative weights in real estate and gold (Badarinza, Balasubramaniam & Ramadorai, 2017).

A policy lever used in India, as in other countries, to influence saving into financial markets has been tax breaks for certain specified financial products through the Income Tax Code. Assets with exemptions include certain bank deposits, small saving instruments administered by the Government of India, insurance and pension products.

In theory, tax breaks can have two effects on savings. First, they may encourage additional savings, that is, lead to savings that would not have happened had there been no tax breaks. Second, they may only encourage diversion of savings to tax preferred instruments, in which case no new savings take place. This is known as the “infra-marginal” effect that describes savings households would have made anyway, except that now they are in the product with the tax break.

Empirical evidence from international research on the impact of tax policy on household savings largely points to the infra-marginal effect.<sup>2</sup> For example, Ochmann (2014) studies German data and finds that households with higher tax rates are found to have relatively greater demand for tax-privileged assets. Similarly, Chetty, Friedman, Leth-Petersen, Nielsen and Olsen (2014) study Danish households and find that tax subsidies induce relatively few individuals to respond. When individuals do respond, they primarily shift assets to the subsidised accounts. Academic literature on the effectiveness of tax breaks in India is scant (Das-Gupta, 1990). There has, however, been a fair bit of discussion in the policy space on the optimal way to tax financial savings. While policy reports (Shome, 2001; Kelkar, 2002; Malegam, 2015) claim that there is only a “substitution effect” in India, empirical work largely remains absent.

This is mainly because, empirical analysis on these questions is best done using survey data which studies investor level decisions over time. Unfortunately, in India such historical micro-data is not available. This paper, for the first time, presents micro as well as macro evidence on what has been achieved by the tax breaks with regards to financial

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<sup>1</sup>To distinguish between the use of the term as stock and flow, we use the term ‘saving’ to denote flow and ‘savings’ to denote cumulative stock.

<sup>2</sup>Some of the studies include: (Gale & Scholz, 1994; Poterba, Venti & Wise, 1995; Engen, Gale & Scholz, 1996; Gelber, 2011)

savings. Is it that overall financial savings have increased? Or is it that the tax policy has channeled household savings into specific products? This question assumes importance as individual households are the major contributors of direct tax in India. As per the latest database on the distribution of tax-payer status in India as of 31st March, 2018, 97.46% of the tax-payers are individuals (Income Tax Department, 2018a). Out of 3,91,28,247 returns filed for the assessment year 2014-15, 3,65,13,034 returns were filed by individuals (Income Tax Department, 2018b). These figures motivate an analysis of the impact of tax-policy on household savings.

For a macro level analysis, the paper uses aggregate national accounts data to study how financial saving has evolved with changes in tax breaks. It enumerates the changes in the taxation of saving instruments for individuals that have taken place since 2001, and studies financial saving over the same period. We find that overall financial saving is not correlated with tax breaks. Financial saving has in fact fallen over the period.

For a micro perspective, the paper studies household portfolios for the financial year 2016-17 using the CMIE Consumer Pyramids household survey. This allows us to compare households that fall under the tax bracket with households that do not. To control for the income effect as distinct from the tax effect, we further compare households that have the same household income, but differ in the tax treatment because at least one individual in the household has income that makes her fall in the tax bucket. We find that tax-incentivised households invest in the products that are given a tax break, especially insurance.

The results suggest that tax breaks do not have an impact on increasing overall financial saving, but lead to a “substitution effect”, i.e., they lead to households channeling savings into the tax-exempt products without increasing the amount of overall savings. It is not so surprising then that financial saving in India is skewed towards certain financial instruments.

The Government of India recently set up another committee to re-draft direct tax law.<sup>3</sup> As the new committee deliberates on the direct tax law, there is a need to ask what specific objectives does the government wish to meet through tax-breaks, and whether the existing tax-breaks are designed to meet those objectives. For example, the existing framework provides inconsistent tax treatment across a number of savings products. A fundamental wedge exists between NPS<sup>4</sup> and other savings products as the former is an exempt (at contribution stage), exempt (at accumulation stage) and tax (at withdrawal

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<sup>3</sup><https://goo.gl/NFG5qF>

<sup>4</sup>This is the National Pension System which is mandatory for civil servants and voluntary for everyone else. Details are presented in Section 2.

**Table 1** Tax thresholds

Annual income	Tax rate
< Rs.2,50,000	NIL
Between Rs.2,50,000 - Rs.5,00,000	5%
Between Rs.5,00,000 - Rs.10,00,000	20%
> Rs.10,00,000	30%

stage) (EET) instrument while most of the savings products are exempt, exempt and exempt (EEE). A cost-benefit analysis of such provisions can shape policy in generating savings into financial markets.

## 2 Indian tax structure: Section 80C

The Income Tax Act, 1961 is the primary law regarding taxation in India. Table 1 shows the tax-thresholds as of 2016-17. Individuals with an annual income of less than Rs.250,000 are exempt from income tax. The tax rate increases to 5%, 20% and 30% at higher income thresholds.

Since our focus is to analyse the impact of tax-breaks on household saving we look at those provisions of the Income Tax Act that provides for various tax deductions and exemptions for individuals. This is primarily possible through Section 80 (Sections 80C, 80CCC, 80CCD(1)) through which a deduction of Rs.150,000 can be claimed from total taxable income of an individual in a particular financial year.<sup>5</sup>

There are exemptions given on four categories of financial products. These include long-term savings, small savings schemes, fixed income products, and investment vehicles including equity products, and collective investment vehicles (Malegam, 2015). The following instruments within these categories are eligible for the deduction:<sup>6</sup>

- Long term instruments
  - Payment of *life insurance premium* to effect or to keep in force (Premium restricted to 10% of the actual capital sum assured)
  - Payment made to effect or to keep in force a contract for a *deferred annuity* (including payment made by Government as an employer)
  - Contribution to a *provident fund* (or superannuation fund)

<sup>5</sup>Section 80CCE of the Income Tax Act, 1961 restricts the deduction under Sections 80C, 80CCC, and 80CCD(1) to Rs. 1.5 lakh.

<sup>6</sup><http://bit.ly/2re2Qr3>

- Contribution to a *pension fund* set up by a mutual fund
- Contribution to National Pension System of the Central Government
- Investment in notified *fixed deposits* with a mandatory lock-in period of 5 years
- Fixed income instruments
  - Subscription to such *bonds issued by the National Bank for Agriculture and Rural Development*
  - Any subscription made to any such *deposit scheme or, pension fund set up by the National Housing Bank*
- Small savings instruments
  - Investments in *time deposits* at the Post Office.
  - Subscription to any *notified security* of the Central Government, or *saving certificates*<sup>7</sup>
  - Any investment in an account under the *Senior Citizens Savings Scheme Rules, 2004*.
- Equity instruments and Collective investment schemes
  - Subscription to units of any mutual Fund of section 10(23D), referred to as *equity linked mutual funds*.
  - Subscription to *equity shares or debentures* forming part of any eligible issue of capital

The tax structure also taxes some financial instruments through capital gains taxes, as well as a dividend distribution tax. For example, in the budget of 2017-18, a capital gains tax was levied on equity investments through mutual funds, but not on unit linked insurance plans.

Until 2005-06, most of the deductions for individuals were part of Section 88 of the Income Tax Act. They were substituted by Section 80C. The 2005-06 budget speech which brought in this change said:

*State must be neutral between one form of saving and another and allow the tax-payer greater flexibility in making savings/investments decisions.*

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<sup>7</sup>National Savings Certificates are issued by the Post Office and have a minimum lock-in of 5 years.

The 2006-07 budget speech included bank fixed deposits for a term of not less than five years as an eligible instrument for tax deduction under Section 80C of the Income Tax Act.

Having said this, the mix of Section 80C was more or less kept the same as Section 88. The exemptions have continued till date with minor changes between instruments. The overall limit was increased from Rs.100,000 to Rs.150,000 in the budget speech of 2014-15. Through the budget of 2015-16, investments in the National Pension System (NPS) were given an additional tax break of Rs.50,000 through Section 80CCD (1B).

From the perspective of “long term savings”, insurance, pensions and fixed deposits (for a period of five years) have been given preferential treatment. Table 2 presents the changes in taxation specifically related to fixed deposits, insurance and pensions over the last 15 years.

A fixed deposit of upto 5 years was included in the list of instruments in the budget speech of 2006-07. In the case of insurance, the first tax break since 2001 appeared in 2003-04, when any sum a beneficiary received from the insurance policy (including a bonus) was made exempt from income tax. The next change was in 2012-13 when the exemption on deduction for life insurance premium was reduced to 10% of the actual capital sum assured, from the earlier 20%. Finally, in 2013-14, this exemption was increased to 15% for persons with disability and people with diseases or ailments. The first change provides an incentive to save more, while the second change is a reduction in the incentive. The third change improves the incentive to save into insurance, but is not applicable to everyone.

In 2004, the government introduced the National Pension System (NPS), a defined contribution pension plan for new recruits to civil services. In April, 2009 this was opened for citizens of India on a voluntary basis. Over the last few years, most of the tax breaks on pensions have revolved around the NPS. The big incentive to the NPS was in the budget speech of 2015-16 where an additional deduction of Rs.50,000 (over an above the Rs.150,000 overall limit) was provided for investing in the NPS.

### **3 Data**

We use both micro and macro level datasets to analyse the impact of tax breaks on household financial savings. Our analysis begins from 2001 since we want to analyse the impact of changes in tax-policy governed by Section 80C of the Income Tax Act on household saving. We source our data from CMIE Economic Outlook that provides a

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**Table 2** Changes to fixed deposits, insurance and pension taxation

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This presents the changes in taxation specifically related to fixed deposits, insurance and pensions over the last 15 years.

Year	Section	Tax changes
Fixed deposits		
2006-07	80C	Investment in a term deposit, for a fixed period of not less than 5 years, with any scheduled bank shall be eligible for deduction.
2012-13	80TTA	Deduction of Rs. 10,000 can be claimed against interest income from a bank savings account
Insurance		
2003-04	10D/88	Any sum received under a life insurance policy, including the sum allocated by way of bonus on such policy is exempt. Restricted to 20% of the actual capital sum assured.
2012-13	80C	Deduction for life insurance premium, issued on or after 1st April, 2012 shall be allowed for only so much of the premium payable as does not exceed 10% of the actual capital sum assured. This is a change from the 20% of capital sum assured, earlier.
2013-14	80C	A higher limit of 15% of actual capital sum assured has been provided for persons with disability and people with diseases or ailments.
Pensions		
2004-05	80CCD	Mandatory NPS for new entrants to civil services from 1 January 2004.
2007-08	80CCD	Individual employed by “other employers”, and not just the Central Government are now included under the purview of this act
2009-10	80CCD	NPS extended to “self-employed” also
2011-12	80CCE	The contribution made by the Central Government or any other employer to a pension scheme shall be excluded from the limit of one lakh rupees provided under section 80CCE.
2015-16	80CCD	Additional deduction of Rs. 50,000 for amount deposited by taxpayer to their NPS account

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consolidated data release from Government sources.

Data on annual household saving are published by the Central Statistical Office (CSO). Information on financial assets and liabilities of the household sector are also published annually by the RBI as part of the ‘Flow of Funds (FoF)’ Accounts of the Indian Economy. The RBI has been publishing estimates of household financial assets and liabilities, five months ahead of the CSO’s release.

We use the RBI data on “Changes in Financial Assets and Liabilities of the Household Sector (RBI)” for data on household financial saving (RBI, 2017a). This table focuses only on the assets and liabilities of the household sector, and provides us with a time-series of financial assets such as assets in insurance, and pension and provident funds.<sup>8</sup>

The table on “Gross Value Added and Gross Domestic Product” provides data on GDP. This is provided as two different series. The first one is the GDP at current prices using the 2004-05 base year series, while the second is sourced from the 2011-12 base year series. Unfortunately, it is not possible to combine these two series into one consolidated GDP series, as the base year change was accompanied by a comprehensive change in the Central Statistical Organisation’s methodology for computing GDP.<sup>9</sup>

We also source data from “Consumer Pyramids”, a pan-India household survey carried out by the Centre for Monitoring Indian Economy, three times a year (known as a Wave), across India, with a total sample size of about 160,000 households.<sup>10</sup> The survey asks questions on income, consumption, sources of credit, and choice of savings instruments.

We restrict ourselves to the sample of households that are available throughout the financial year 2016-17, which leaves us with about 90,000 households. We analyse household responses on income and consumption for the financial year 2016-17 (April 2016 - March 2017). The responses on savings are from the first wave of 2017 (January 2017- April 2017).

The survey asks households if they have outstanding investments in a particular product as of the survey date. We classify households with investments in *financial products* as those who have outstanding investments in at least one of the following:

- Bank fixed deposits

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<sup>8</sup>Financial assets include currency, bank deposits, non-banking deposits, life-insurance fund, Provident and pension fund, claims on Government, shares & debentures, units of UTI and trade debt.

<sup>9</sup>For a discussion on the GDP measurement methodology, see (Sengupta, 2016)

<sup>10</sup>To make the sample representative of the household population in India, adequate weights have been provided to the roughly 160,000 households. These weights are based on the Compounded Annual Growth Rate (CARG) on the Census data from 2001 to 2011.

- Post office savings
- National Savings Certificate
- Kisan Vikas Patra
- Insurance
- Provident Funds/Pensions
- Mutual funds
- Listed shares

We classify households with some investments in *physical assets* as those who have outstanding investments in at least one of the following:

- Gold
- Real estate

The survey does not ask for the rupee value of saving in each product. As a result we can only know whether the households have saved in some instrument, but cannot know how much.

To analyse household portfolios based on tax incidence, it is important to classify households based on whether they fall under the tax bracket. Since all the questions are asked at the “household level”, it is possible that while total household income seems higher than the tax threshold, each household member individually earns less than the threshold. We, therefore, calculate the total income of each member of the household for the 2016-17 financial year. We then classify each household as “taxed”, or “not-taxed” if there is at least one member with annual income greater than Rs.2,50,000.

## 4 Impact on savings

If tax incentives affect financial saving, then we should see a rise in financial saving over the years, as there has been some tax break or the other given on financial products, especially since 2005. If, on the other hand, there is a pure substitution effect, we should see that instruments that have received the most tax breaks see the largest share in total financial savings.

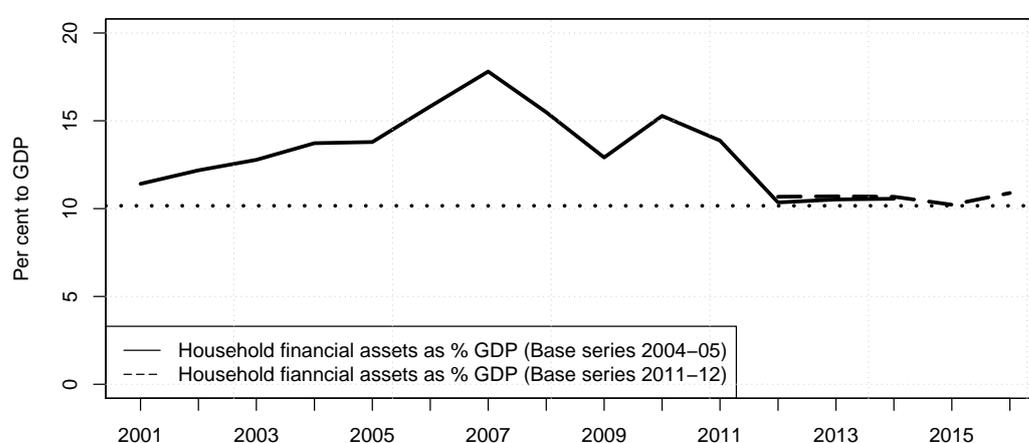
## 4.1 Overall financial saving

Figure 1 shows the time series of household investment in financial assets (representing financial saving) as a percent of GDP. The black line shows the series using data from the 2004-05 base year, while the dashed line shows the data using the 2011-12 base year series. Financial saving had been rising steadily from about 11% of GDP in 2001 to a high of about 17% in March 2007. The years between 2003 and 2005 did not see any tax breaks, and yet there was a rise in financial savings.

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**Figure 1** Household financial assets as percent to GDP

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Source: RBI and CSO

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Since 2007 there has been a tax break announced pretty much every year (See Table A.1 in Appendix). And yet, financial saving had fallen to about 11% of GDP by March 2013. The new series also shows roughly the same estimate. Financial saving as percent to GDP remained roughly constant through the tax breaks of 2012 to 2015 and increased only slightly as of March 2016. This may be because of the increase in the overall limit of tax exemption from Rs.100,000 to Rs.150,000 in the 2014-15 budget. The association between tax breaks and financial saving appears weak.

This is reflected in the fall in financial saving as a percent of household gross saving as well. Figure 2 focuses on the time-series of the rupee value of financial saving, and its share in overall household saving since March 2001. The top panel shows the rupee value of financial saving, while the bottom panel shows financial saving as a proportion of total household saving.

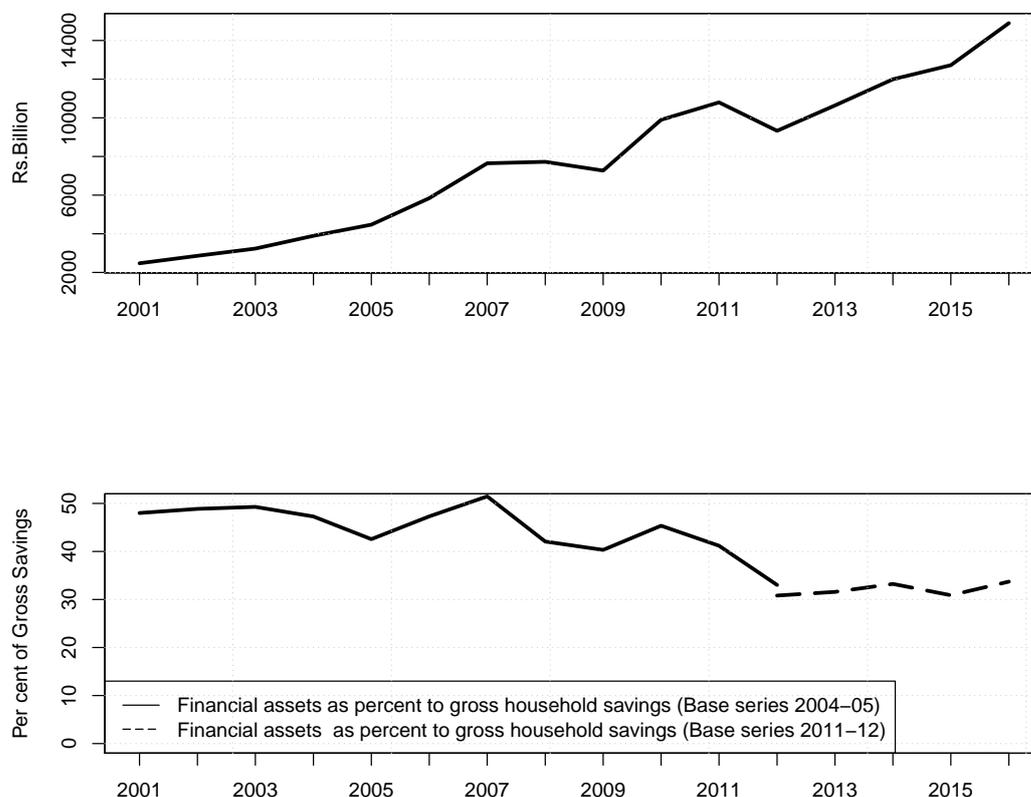
The rupee value of saving has been rising since March, 2001. It stayed stable between

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**Figure 2** Total financial assets of households

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The figure shows the time-series of overall financial household financial assets since March 2001. The top panel shows the rupee value of financial assets, while the bottom panel shows financial assets as a proportion of total household savings.



Source: RBI and CSO

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March 2008 and 2009. Since 2009 it has been rising (barring a small dip in 2011). The share of household financial saving in total household saving has actually been falling since 2007. The new series suggests that since 2012 this has roughly stayed constant, with a slight increase in 2015 - perhaps a response to the increase in the overall exemption limit to Rs.1.5 lakh from Rs.1 lakh described earlier.

There appears to be no correlation between tax breaks and financial saving. Despite a continuous regime of tax breaks on one product or another, household financial saving have risen in some years, stayed stable in others, and have actually fallen in one. The share of household financial saving in total household saving is lower in 2016 relative to 2001.

**Table 3** Composition of household financial savings

	2011-12	2012-13	2013-14	2014-15	2015-16
Currency	11.39%	10.48%	8.36%	10.61%	13.19%
Deposits	57.95%	56.97%	56.01%	50.94%	43.59%
Shares and Debentures	1.77%	1.60%	1.59%	1.58%	2.72%
Claims on Government	-2.35%	-0.67%	1.94%	0.08%	4.38%
Insurance Fund	20.98%	16.91%	17.17%	23.81%	17.50%
Provident and Pension Fund	10.26%	14.71%	14.93%	15.02%	18.21%

Source: CSO

## 4.2 Composition of household financial saving

Table 3 shows the share of the various savings instruments in the overall household financial saving from 2011-12 to 2015-16. Bank deposits constitute the bulk of household financial saving, though its share in the overall household financial savings has seen a dip from 2011-12 onwards. Shares and debentures constitute a small part of the overall financial saving of households. Investments in provident and pension funds have seen a gradual rise, though they still constitute a small proportion of the overall saving. The table gives us a big picture of the profile of household financial saving. It is instructive to look at the household data to gain an understanding of household preferences for the savings instruments.

When we look at the composition of household portfolios, we find a big difference in those households that are taxed vs. not taxed (in Table 4). In 2016-17, a much larger proportion of taxed-households claim to have outstanding investments in fixed deposits, insurance, small savings and pensions - all of which are instruments covered under Section 80C. For example, 88% of households that are not taxed claim to have outstanding investments in fixed deposits, as opposed to 96% of taxed households. The next instrument of choice is insurance with 50% of non-taxed households having insurance, as opposed to 90% of taxed households, followed by provident/pension funds where the difference is much more stark - 7% of non-taxed households as opposed to 55% of taxed households.

## 5 Impact on savings: Micro-level evidence

We turn to estimating the effect of being in the tax bracket on the probability of having outstanding investments in specific financial products. We estimate a probit regression as follows

$$Y^* = t_i\beta_1 + X_i\beta_2 + \epsilon_i$$

**Table 4** Household portfolios by tax (2016-2017)

	Under the tax threshold	Above the tax threshold
Average household income (Rs.)	1,61,731.7	5,51,579.4
<b>Percentage of households with investments in</b>		
Physical assets	99	99
Financial assets	92	99
Fixed deposits	88	<b>96</b>
Insurance	50	<b>90</b>
Provident funds	7	<b>55</b>
Small savings	10	<b>23</b>
Mutual funds/shares	0.3	3.4
Number of households	79,497	7,279

Source: Consumer Pyramids

where  $Y$  is an indicator for the latent variable  $Y^*$ . In this case,  $Y = 1, if Y^* > 0$  or 0 otherwise. This indicates if a household  $i$  has outstanding investments in a specific financial product.  $t_i$  indicates if the household falls in the tax-paying bracket.  $X_i$  are the controls which include household characteristics such as age, gender, education, occupation, religion and caste of the head of the household, the number of earning and non-earning members in the household.  $\epsilon$  is normally distributed with mean zero, and variance 1.

Table 5 shows the results of investments in fixed deposits (Column 1 and 2), insurance (Columns 3 and 4), pensions (Columns 5 and 6), and small savings (Columns 7 and 8). Columns 1, 3, 5 and 7 show the results without any controls, while Columns 2, 4, 6 and 8 control for all the household characteristics.

The results show that controlling for socio-demographic variables, households that fall in the tax bracket are more likely to have outstanding investments in the four tax-favoured financial products than households that are not in the tax bracket. This is true for all four savings instruments.

**Table 5** Investments in tax incentivised products

This table shows estimates of probit model that explains a dummy variable that is “1” when investment is made in a tax-saving financial product and “0” otherwise. For each financial product, two models are estimated. One in which the explanatory variable is whether the household falls in the tax bracket, second in which household characteristics such as gender, age, average number of earning members, education, religion, caste are also controlled for. The results show that controlling for household characteristics, households in the tax bracket are more likely to have outstanding investments in the tax-favoured financial products.

	FD		INS		PF		SS	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
taxed	0.570*** (0.027)	0.465*** (0.029)	1.282*** (0.020)	0.786*** (0.022)	1.600*** (0.016)	1.037*** (0.019)	0.526*** (0.017)	0.336*** (0.020)
Constant	1.177*** (0.006)	0.604*** (0.130)	-0.009** (0.004)	-2.617*** (0.104)	-1.476*** (0.007)	-4.574*** (0.182)	-1.264*** (0.006)	-1.970*** (0.137)
Observations	86,776	86,776	86,776	86,776	86,776	86,776	86,776	86,776
Log Likelihood	-30,324.6	-29,574.6	-57,491.6	-53,025.1	-25,160.9	-19,807.6	-30,314.2	-29,817.9
Additional controls	NO	YES	NO	YES	NO	YES	NO	YES

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

**Table 6** Marginal effects: Investments in instruments

Instrument	marginal effect
Fixed deposit	0.065*** (0.003)
Insurance	0.280*** (0.006)
Pensions	0.202*** (0.006)
Small savings	0.073*** (0.005)

**Table 7** Tax incentivised households within salary

This table shows the count of households within each income bracket that have tax liability and those that do not have tax liability.

Household income between	Under tax threshold	Above tax threshold
250-300K	1218	323
300-350K	682	680
350-400K	358	766
400-450K	213	651
450-500K	136	427
500-550K	61	282
550-600K	81	363
> 600K	69	1309

Source: Consumer Pyramids

The magnitude of the effect of the tax break is best understood by calculating the marginal effects. Table 6 shows the marginal effects of being in tax bracket from the probit regressions in Columns 2, 4, 6 and 8, that is, the regressions with the controls. The marginal effect can be considered as an approximation of the effect of a unit change in the independent variable on the probability  $P(Y=1|X=x)$ . The results show that being in the tax bracket leads to a 6.5% higher probability of investing in a fixed deposit, a 28% higher probability of investing in insurance, 20% higher probability of investing in pensions and a 7% higher probability of investing in small savings. These results strongly suggest that tax incentives may have an influence on the composition of savings.

However, one could argue that this is a purely an income effect, and not a tax-effect. Those in the tax bracket are also those with higher incomes and would have saved in these products anyway. We, therefore, only consider those in the salaried class, as there is less of an ambiguity over the tax liability of these households, and because of TDS, we see the highest compliance. We also only consider those households with income over Rs.250,000 as this is where the incentives will begin to matter. In Table 7 we further divide these households into those that are taxed or not. There may be households whose income may be over the threshold, but no single member may have an income higher than the threshold. This household would not qualify as a taxed household. This gives us tax variation in the same income bracket. As an example, Table 7 shows that there are 1218

households in the income bracket of 250-300K but since the individual member of such households earn less than Rs 250,000, they are not taxed. This approach enables us to isolate the impact of tax-policy on savings of households.

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**Table 8** Marginal effects: Outstanding investment of salaried households

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This table shows the marginal effect of being taxed on the probability of having outstanding investment in various saving products. The “tax-incentive” impact is seen to be the most significant for insurance and pensions.

Income category	FD	INS	PF	SS
	(1)	(2)	(3)	(4)
250-300K	-0.023 (0.10)	0.033 (0.024)	0.038 (0.033)	-0.010 (0.024)
300-350K	-0.005 (0.030)	0.038 (0.044)	0.094 (0.030)	0.011 (0.021)
350-400K	0.007 (0.091)	0.069*** (0.021)	0.163*** (0.033)	0.023 (0.026)
400-450K	0.002 (0.071)	0.046** (0.024)	0.109*** (0.039)	0.012 (0.037)
450-500K	0.003 (0.344)	0.028 (0.151)	0.083 (0.049)*	0.037 (0.051)
500-550K	0.001 (0.11)	0.028 (0.17)	0.005 (0.055)	0.025 (0.055)
550-600K	-0.001 (0.252)	0.075 (0.523)	-0.002 (0.064)	0.096 (0.269)
600K+	0.002 (0.102)	0.066 (0.040)	0.069 (0.059)	0.039 (0.054)

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We estimate a probit regression on each of the income categories separately. The regressions control for all the household characteristics. Table A.2 in the Appendix presents the results from the regressions. They suggest that there is a “tax-incentive effect” on savings in insurance and pensions. Those households within the same income bracket that are exposed to the tax are more likely to have outstanding investments in insurance and pensions than households that are not taxed. The effect is strongest for insurance, in the sense that households across the various income groups are more likely to have outstanding investments in insurance if they fall in the tax bracket. There is no difference in savings in FDs and small savings. At incomes about Rs.500,000 there is no difference in the probability of investing in pensions between the taxed and non-taxed households.

Table 8 shows the marginal effects. Here also, we see that the effect is significant mostly for insurance and pensions for households in the income category of Rs.350,000 to Rs.500,000. For example, those who fall under the tax bracket in the Rs.350,000 - Rs.400,000 income category are almost 7% more likely to have invested in insurance relative to those who do not fall under the tax bracket. Those taxed in the Rs.400,000 - Rs.450,000 income category are 5% more likely to have invested in insurance.

Another way to test whether this is a tax-incentive effect is to evaluate if there is a difference between the household characteristics of those who purchase insurance. If

tax-incentives matter, then household characteristics should not have any influence on investments in insurance for the group that is taxed. On the contrary, for the group that is not under the tax bracket, we should see that certain characteristics such as age, or household size influence the decision to invest in insurance. We consider the subset of salaried households, and regress probability of purchase of insurance on the proportion of working members in the household, age, age square, gender, religion, caste, education, total annual income and region (urban vs. rural). The results are presented in Table 9.

**Table 9** Probability of investment in insurance of salaried households

This table shows the effect of household characteristics on the probability of investment in insurance for taxed and non-taxed households. The table shows that household characteristics drive the decision to invest in insurance for non-taxed households. These characteristics matter less for households having tax liabilities.

	Not-taxed (1)	Taxed (2)
Prop. working members	-0.139*** (0.020)	-0.032 (0.021)
age	0.030*** (0.004)	0.003 (0.005)
age2	-0.0003*** (0.00004)	-0.00005 (0.00005)
gender: Male	0.070*** (0.016)	0.025 (0.017)
annual income	0.00000*** (0.00000)	0.00000*** (0.00000)
religion: Muslim	-0.209*** (0.023)	-0.053** (0.025)
religion: Hindu	-0.025 (0.018)	-0.008 (0.015)
caste: intermediate	0.037*** (0.014)	0.009 (0.012)
caste: lower	-0.091*** (0.010)	-0.013 (0.009)
caste: not stated	0.075** (0.036)	0.012 (0.033)
educ: school	0.186*** (0.018)	0.021 (0.031)
educ: diploma	0.245*** (0.033)	0.017 (0.036)
educ: graduate/above	0.281*** (0.021)	0.005 (0.032)
region: Urban	0.033*** (0.011)	0.017 (0.013)
Constant	-0.361*** (0.093)	0.829*** (0.120)
Observations	13,065	4,801
Log Likelihood	-7,973.669	-485.168
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01	

We find that most household characteristics do not explain the investments in insurance of the taxed households. This is not true for the non-taxed households. The probability of insurance investments is lower when the proportion of working members is higher, increases with age, and then decreases, is higher for those educated relative to those who

are illiterate, is higher for those in urban regions. The direction of coefficients is what one would expect. While income is statistically significant, the coefficients suggest that it has no economic impact on the decision to invest in insurance. Once the household is in the tax-bracket, none of these variables have any effect. This suggests that tax incentives do play a role in the purchase of insurance.

Our analysis suggests a “tax-incentive” effect of investments in financial products. Controlling for household characteristics, households that have tax liability are more likely to have outstanding investments in tax-incentivised financial products.

## 6 Policy implications

The analysis indicates that tax breaks have no effect on overall financial saving of households. It also shows that households that are in the tax bracket are incentivised to save in a specific set of products, in particular, insurance products. In this section, we evaluate the policy implications of the existing system of tax incentives and its impact on household portfolios.

### 6.1 Low tax base

The inability of tax breaks to have any effect on overall financial saving might come from the low tax base in India. As shown in Table 1, individuals with an annual income of less than Rs.250,000 are exempt from income tax. The tax rate increases to 5%, 20% and 30% at higher income thresholds.

Given the low incomes in India, very few households actually fall into the tax bracket. Figure 3 shows the number of households in the tax bracket in the Consumer Pyramids dataset. About 92% of our sample (79,497) households fall in the zero percent tax paying bracket. 7.6% fall in the 5% tax bracket, while less than 1% fall in the 20% and the 30% tax brackets.

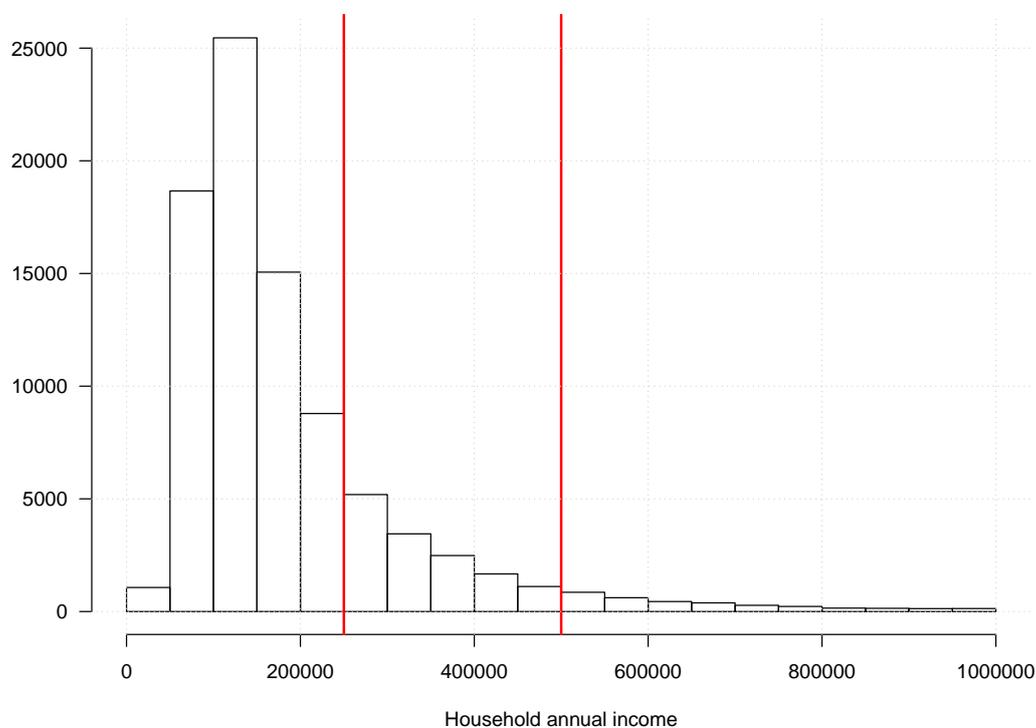
The numbers from the survey data consists of households who have at least one member in the household with annual income greater than the thresholds. It is quite possible that some of this is agricultural income, and therefore, exempt from tax. It is also possible that there is an inconsistency between income declared to the field investigators and the actual income of the household.

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**Figure 3** Household incomes

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The shows the annual income of households from the Consumer Pyramids dataset



Source: Consumer Pyramids

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Data from the Income Tax department shows that 39 million individuals filed tax returns in the year 2014-15. This is less than 1% of India’s total population. Of these, 6.4 million (39%) filed zero returns - that is they had income less than Rs.2,00,000 (Income Tax Department, 2018b) In 2015-16, 40.7 million individuals filed returns with the IT department in the assessment year 2015-16. Of these, 8.2 million had gross total income below the Rs.2,50,000 threshold. 4 million had salary income greater than zero but less than Rs.2,50,000, while 21 million claimed to have zero salary income. This suggests the tax exemptions are useful to about 18.9 million individuals (Income Tax Department, 2017).

It is, therefore, not surprising that tax breaks given by the government on specific financial products have had little effect on the overall financial saving in the economy. Given the low reach of direct tax incentives, the government should evaluate the benefits of these tax breaks vis-a-vis the costs of revenue forgone, or distortions in the market that get created. For example, the “Economic Survey 2015-16” points out that tax incentives for household savings lead to fiscal loss, distort the interest structure “and merely help in

mobilising funds to specified savings instruments”. The Survey also observes that the “real small savers” are outside the tax net and do not enjoy any form of tax subsidy on their savings.

## 6.2 Inconsistent tax treatment

Most salaried individuals have their retirement savings in either the Employees’ Provident Fund (EPF)<sup>11</sup>, Public Provident Fund (PPF)<sup>12</sup> and/or NPS. For EPF and PPF, the tax treatment is EEE which means that the money is exempt from taxation at the time of investment, accumulation and withdrawal. The NPS is subject to EET. While for contribution an additional tax deduction of Rs 50,000 under Section 80CCD(1B) is allowed over and above the Rs 1.5 lakh tax deduction limit under Section 80C, withdrawal is subject to tax. From the perspective of an NPS investor who is at the highest tax bracket, this means that 30% of her savings are eroded in tax. This disincentivises people from investing in NPS as a saving vehicle. Budget 2016-17 acknowledged the need for *uniform tax treatment for defined benefit and defined contribution pension plans* and proposed 40% of the withdrawal under NPS tax-exempt. However 60% is still subject to tax.

Thus, while it appears that several tax breaks were given on the NPS, a fundamental wedge still exists between the tax treatment of the NPS and other long term products. In order to achieve the objective of long term savings, the tax treatment of contribution, accumulation and withdrawal need to be made uniform. In fact, in 2015, the RBI working group on Taxation Practices For Financial Instruments In India recommended that the exemption limit u/s 80C should be confined only to saving/investment instruments, and all such instruments should be uniformly subject to the EET tax treatment on a prospective basis (Malegam, 2015).

## 6.3 Skew towards insurance

According to a study by Willis Towers Watson (2015), in the year 2014-15, life insurance accounted for 19% of total household financial assets in India, second only to the bank-

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<sup>11</sup>The Employees’ Provident Fund is a savings scheme for the workforce. Under the EPF scheme, an employee has to pay a certain percentage from his pay and an equal amount is contributed by the employer. Upon retirement, the employee receives a lump sum amount.

<sup>12</sup>The PPF(Public Provident Fund) Scheme, 1968 is a tax-free savings avenue that was introduced by the Ministry of Finance (MoF) in India in the year 1968. It was launched to encourage savings, especially to create a retirement corpus.

ing sector that holds 46.9%. Traditional endowment products, that bundle savings and insurance, account for 87% of the total business of Rs 3.6 trillion in the life insurance market in India.<sup>13</sup> Among the class of tax-incentivised instruments, insurance remains very popular.

The skew towards insurance becomes a concern in the context of the large scale mis-selling scandals in the sector that have been witnessed over the last decade and half.<sup>14</sup> Mis-selling of bundled insurance products (unit linked insurance plans) has been estimated to have cost customers around USD 28 billion between 2004-2011 (Halan, Sane & Thomas, 2014). A committee set up by the Ministry of Finance has found that the problem of poor disclosures on products is highest in the context of endowment insurance products (DEA, 2015). Audit studies have also provided evidence of poor sales practices, especially with regards to insurance products (Halan & Sane, 2017; Anagol, Cole & Sarkar, 2017). A committee formed by the insurance regulator on the sale of insurance products through banks has also admitted to mis-selling through banks (IRDA, 2011). In such an environment of poor consumer protection, the role of tax breaks on specific products needs to be questioned.

The channeling of savings into insurance and pensions may also not be useful in providing capital to firms, if regulatory mandates inhibit these sectors from investing in assets other than government bonds. For example the IRDI (Investment) Regulation mandate that not less than 50% of the funds of insurers in life insurance business need to be invested in Government Securities and other Approved Investments.<sup>15</sup>

## 7 Conclusion

While there is an active policy debate on the tax treatment of savings, empirical evidence on the impact of tax breaks on household savings in India is relatively scant. This paper aims to fill this gap. It presents macro and micro level evidence on the impact of tax-breaks on household financial savings.

Results suggest that overall financial saving is not correlated with tax announcements. Financial saving has in fact fallen in the period. Micro-level analysis of household portfolio suggests a ‘tax-incentive impact’ on savings. We evaluate the probability of investments in

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<sup>13</sup>See (IRDAI, 2016)

<sup>14</sup>For example see (Datta-Ray, 2015) and (Basu, 2015) for commentary on mis-selling.

<sup>15</sup>The Budget 2018-19 proposed that regulators should allow investments in below ‘AA’ rated bonds to propel investments in corporate bonds.

tax-favoured financial products for households having tax-liabilities. We find that after controlling for household characteristics the probability of investments in tax-favoured financial products is higher for households that are taxed.

A disaggregated analysis of salaried households suggests that the tax-incentivised impact on savings is highest for salaried households in the income bracket of Rs.350,000 to Rs.500,000. For households not subject to tax liability, household characteristics drive the probability of investments in insurance products. Thus, while the aggregate financial saving has remained stable, tax breaks have been influential in driving savings into specific products, such as insurance and pensions.

The skew towards insurance becomes a concern in the context of the large scale mis-selling scandals in the sector that have been witnessed over the last decade and half. The results suggest that policy makers should re-think what policy goals are being served by channeling savings into specific products.

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**Table A.1** Changes to the tax structure

	Overall	Increase in tax break		
		Insurance	Pensions	Other
2015-16	Yes	NA	Yes	Yes (post office)
2014-15	Yes*	Yes	Yes	NA
2013-14	NA	Yes	NA	Yes (shares)
2012-13	NA	No	NA	Yes (bank)
2011-12	NA	NA	Yes	Yes (bonds)
2010-11	NA	NA	NA	Yes (bonds)
2009-10	NA	NA	Yes	NA
2008-09	NA	NA	NA	Yes (bank)
2007-08	NA	NA	Yes	NA
2006-07	Yes	NA	NA	Yes (bank)
2005-06	Can't say	NA	NA	NA
2004-05	NA	NA	Yes	NA
2003-04	NA	NA**	NA	NA
2002-03	NA**	NA	NA	NA
2001-02	NA	NA	NA	Yes (annuity)

\*Overall limit increased to Rs.1.5L

\*\*Change under Sec. 88, not under Sec. 80C

Source: Budget documents

## Appendix

### A Tables

**Table A.2** Outstanding investment of salaried households

This table shows estimates of probit model that explains a dummy variable that is “1” when investment is made in a tax-saving financial product and “0” otherwise. The analysis is done on households having tax liabilities in various income brackets. The findings suggest that households subject to tax are more likely to invest in tax-incentivised saving products—in particular in insurance and pensions.

Income category	FD	INS	PF	SS
	(1)	(2)	(3)	(4)
250-300K	-0.022 (0.017)	0.032 (0.025)	0.037 (0.032)	-0.012 (0.025)
300-350K	-0.007 (0.014)	0.041** (0.018)	0.092*** (0.027)	0.010 (0.021)
350-400K	0.012 (0.016)	0.071*** (0.020)	0.158*** (0.030)	0.024 (0.027)
400-450K	0.006 (0.020)	0.050** (0.023)	0.112*** (0.037)	0.012 (0.035)
450-500K	0.022 (0.021)	0.034 (0.030)	0.079* (0.046)	0.036 (0.044)
500-550K	0.009 (0.021)	0.036 (0.037)	0.004 (0.055)	0.024 (0.055)
550-600K	-0.015 (0.030)	0.100** (0.040)	0.0003 (0.065)	0.101 (0.063)
600K+	0.039 (0.024)	0.069** (0.031)	0.070 (0.053)	0.035 (0.056)