

**Discussion
of
Tax Breaks and Household Savings**

Radhika Pandey, Ila Patnaik and Renuka Sané
National Institute of Public Finance and Policy

Rajnish Mehra

Arizona State University
NBER and NCAER

October 2018

I am especially thankful to Saurabh Bandyopadhyay for his helpful comments and research assistance.

Introduction¹

Historically, savings for retirement has not been major public policy issue, especially in developing countries as life expectancy and the working life span largely coincided. Increases in life expectancy have increased the number of years a household spends in retirement relative to its working years. Consequently the issue of motivating time consistent saving for retirement planning has appeared front and center in the public policy arena. To induce households to save more, governments the world over have resorted to tax incentivized schemes. A key public policy question is: do these incentives increase household savings or do they simply result in portfolio rebalancing?

Tax incentivized schemes increase the after tax rate of return to a targeted asset class, thus changing the price of future consumption relative to current consumption. This induces both an income effect and a substitution effect. Making future consumption cheaper induces households to save more. However, tax free compounding increases the after tax rate of return on assets; this will, in general, lead to portfolio rebalancing and may induce an household to save less. Economic theory tells us that the net effect of a change in the after tax return on savings will, in general, be *ambiguous*². Hence this issue needs to be investigated empirically.

¹ My comments below are on the ‘work in progress’ version presented at the IPF and they may not reflect on the published version.

² It will depend on the elasticity of intertemporal substitution. We illustrate this in the context of a simple deterministic two period (partial equilibrium) model where agents have preferences of the form

$$u(c, \gamma) = \frac{c^{1-\gamma} - 1}{1-\gamma}$$

with elasticity of intertemporal substitution $1/\gamma$; $\gamma \geq 0$. In the first period agents work, consume (c_0) and save (s) at the *after tax return* (r). In the second period (retirement) they consume (c_1) their savings. Households solve the following problem:

This paper addresses this important question in the Indian context. At the ‘macro’ level, the authors examine aggregate national accounts data to study how financial savings have evolved with changes in tax breaks. They find no link between tax breaks and overall financial savings. At the ‘micro’ level, using data on household portfolios for the financial year 2016-17 from the **CMIE Consumer Pyramids household survey**, they find that households that are taxed invest more in the tax-incentivized asset classes. The two findings taken together suggest that, in the Indian context, tax incentivized schemes result in household portfolio reshuffling rather than net additional investment in financial assets.

A Snapshot of Taxation in India

Before discussing the paper, it is useful to examine the taxation landscape, as it puts the findings and the scope of the paper in context.³

In 2015-16, only 40.7 million individuals, less than 4% of the population, filed tax returns. After adjusting for individuals reporting income below the Rs. 250,000 taxation threshold, the authors conclude that the tax exemptions discussed in the paper are useful to about 18.9 million individuals, less than 2% of the population. Hence any quantitative effects of the policy changes addressed in the paper are likely to be insignificant. The authors are fully aware of this, “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.”

$\max u(c_0, \gamma) + \beta u(c_1, \gamma)$ subject to

$$c_0 + s \leq Y$$

$$c_1 \leq s(1+r)$$

The solution is:

$$s = \frac{\beta^{1/\gamma}}{(1+r)^{1-1/\gamma} + \beta^{1/\gamma}} Y.$$

Since

$\frac{\partial s}{\partial r} < 0, = 0$ or > 0 if $\gamma > 1, = 1$ or < 1 , the effect of an change in the after tax return savings on savings is ambiguous.

³ All the figures are from the paper.

A Macro Perspective

The paper begins by documenting the changes to capital taxation over the last 15 years and examining the effects of these changes on savings in financial assets (the stock of assets expressed as a fraction of GDP).

Figure 1 Household financial assets as percent to GDP

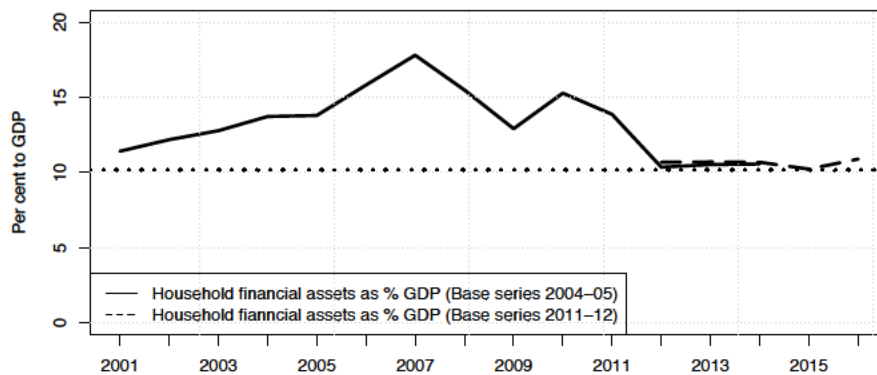


Figure 1

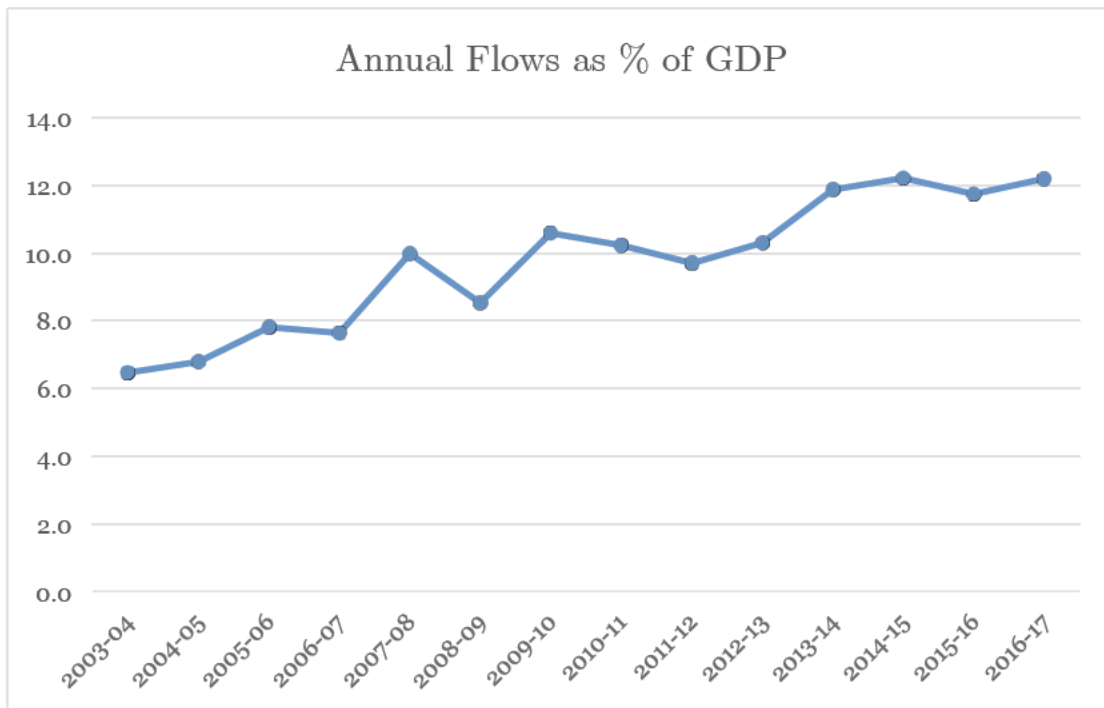
Figure 1 in the paper (reproduced above) plots household financial assets as a share of GDP. The lack of any systematic and significant variation in this figure leads the authors conclude:

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

While this may well be true, it is premature to base this conclusion on the evidence presented in Figure 1 as it confounds two effects: inflows to financial assets and a revaluation of existing assets.

While the stock of financial assets in the economy increases due to inflows, it also changes due to a revaluation of existing assets, both due to the tax subsidies and changes in economic conditions. The latter effects may be positive or negative. A better metric would be to examine if flows respond to tax incentives.

Figure 2 presents the annual flows into financial assets as a fraction of GDP over the period 2003 – 2017⁴.



Plot Courtesy of Saurabh Bandyopadhyay

⁴ Data for this table is available from the author

In contrast to the stock values presented in figure 1, inflows as a share of GDP have increased over time. I have not correlated the flows with changes in tax incentives but this is something the authors may explore in their revision.

A Micro Perspective

The authors next estimate the effect of being in a taxable income bracket on the probability of having investments in specific financial products, They do this by examining portfolio formation using the **CMIE Consumer Pyramids**

Household SurveyData for 2016-17⁵ and running the following Probit regression:

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

The results are presented in Tables 5 and 6. While Table 5 shows that the results are statistically significant the economically interesting results are in Table 6.

Table 6

Marginal effects: Investments in instrument

<u>Instrument</u>	<u>Marginal effect</u>
Fixed deposit	0.065***
Insurance	0.280***
Pensions	0.202***
Small savings	0.073***

⁵ The low tax base presents a challenge, which the authors acknowledge: “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 first number, 0.065, implies that in moving from a non-taxpaying bracket to a taxpaying bracket, the probability of investing in Fixed Deposit increases by 6.5%. There exist the potential for confounders in the empirical analysis; potential confounders in this paper include income, wealth (financial and non-financial assets), and financial literacy. For example, wealthy people both pay taxes and invest more. This mechanically induces a correlation between paying taxes and investing. The authors are aware of this and attempt to mitigate this, by exploiting the differential tax status in income-matched households.

They categorize households based on salary, change X from being an indicator variable to one representing category values and re-run the Probit regressions. The results are reported Table 8. In Tables 5 and 6 where the comparison is between households in the non-taxpaying bracket with households in the taxpaying group, and the results *are statistically significant*. In contrast, in Table 8 where the comparison is between salaried taxpaying and non-taxpaying households in different salary brackets, *the statistical significance largely vanishes* (except for households in the 350-400 K and 400-450 K bracket).

Based on this mixed evidence it would be premature to conclude that there exists a “tax-incentive” effect of investments in financial products, as the authors conclude.

Concluding Comments

The paper documents the response of Indian households to tax incentivized financial instruments a relatively new, topical and important area of public policy research. It is work in progress. I look forward to a more nuanced parsing of its implications for tax policy.