

The impacts of a PAYE reform on taxable earnings in Uganda

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Research question

- The PAYE and personal income tax system in Uganda was reformed in 2012/13
 - A key feature of the reform: top marginal tax rate from 30 to 40%
- This paper
 - Uses administrative PAYE data from URA
 - **To examine the impact of the reform on the top taxpayers' reported incomes and tax revenues**

Motivation and rationale for income tax reform

- **Bracket creep** as PIT had not been adjusted for inflation for a long time.
- **Aim:**
 - Alleviate tax burden on small incomes, while
 - Sustaining tax revenue, therefore
 - Recoup lost tax revenue from top of the distribution.
- **Increase progressivity of tax schedule**
- **A new top tax rate** was introduced, on persons earning more than 10 million UGX a month
 - Top 1 per cent



FOCUS TODAY

Tax system before and after the reform

Fiscal year	Monthly chargeable income	Tax rate
1997/98 to 2011/12 (pre-reform)	Not exceeding 130,000	0%
	Over 130,000, but not exceeding 235,000	10% of the amount exceeding 130,000
	235,000, but not exceeding 410,000	10,500 plus 20% of the amount exceeding 235,000
	410,000	45,500 plus 30% of the amount exceeding 410,000
2012/13 and onwards (post-reform)	Not exceeding 235,000	0%
	Over 235,000, but not exceeding 335,000	10% of the amount exceeding 235,000
	Over 335,000, but not exceeding 410,000	10,000 plus 20% of the amount exceeding 335,000
	Exceeding 410,000	a) 25,000 plus 30% of the amount exceeding 410,000 b) Plus additional 10% of the amount exceeding 10,000,000

Data

- **Universe of administrative tax data** from URA
- monthly **PAYE returns as filed by employers** on behalf of their employees
- Covering **fiscal years 2010/11–2014/15**
- **Employers** hold **unique tax identification number (TIN)** but not employees
 - cross sectional data for employees
 - panel of employers
- We **exclude** employees:
 - taxed at **fixed flat rate** (employment income from secondary job, small fraction of data)
 - non-resident employees (small fraction of data)

Summary statistics

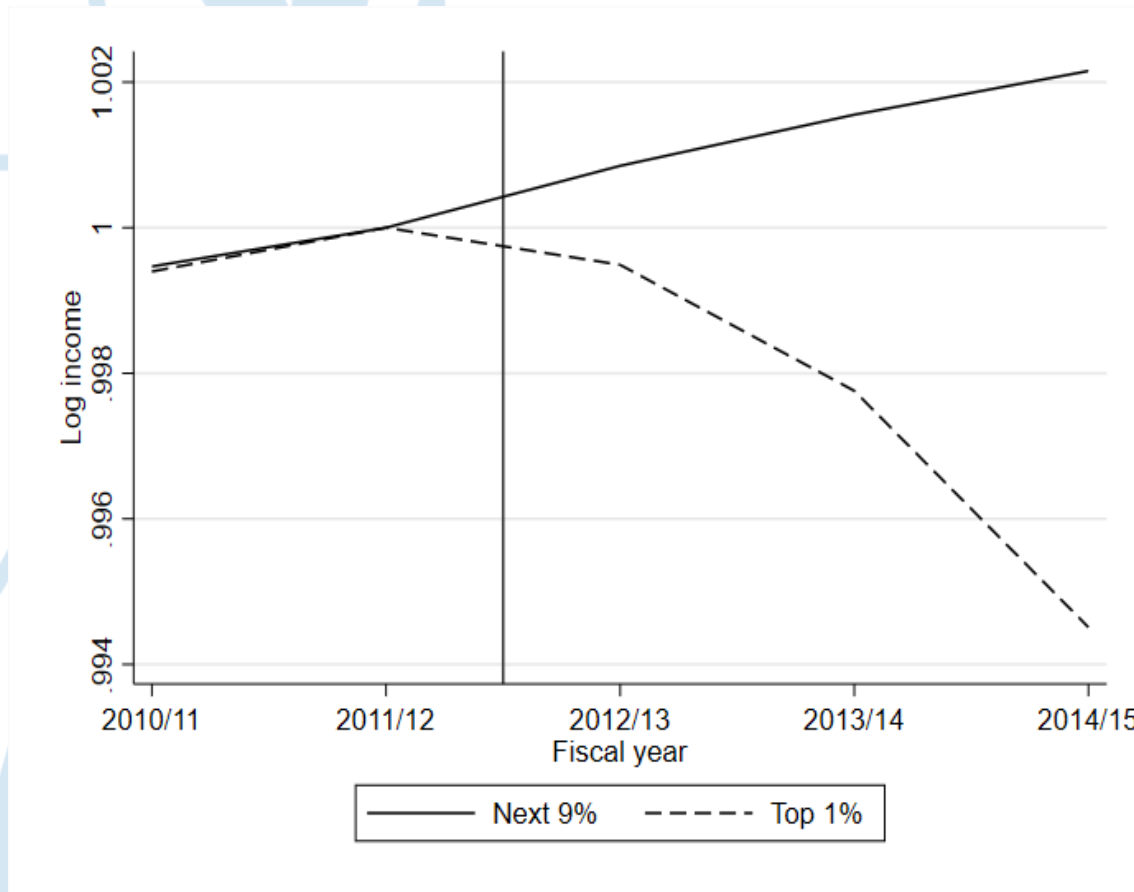
	Chargeable income			Payable tax			
Year	Mean	Median	St. Dev.	Mean	Median	St. Dev.	N
2010/11	1027101	354750	14339589	2147903	34455	4301466	2147903
2011/12	1031467	350000	350000	247136	33500	1651306	2959084
2012/13	1169879	400000	4135703	287143.4	23000	1556276	3568851
2013/14	1169773	400000	4362415	285476	23000	1653639	4180571
2014/15	1088942	440000	4576946	256371	34000	1754052	5381323

Source: Authors' own calculations based on URA PAYE monthly administrative tax records, 2010 through 2014 fiscal years.

Research method

- Use data on reported earnings from both before and after the reform
- Compare earnings developments over time between
 - Those subject to the higher tax rate: people earning more than UGX 10 million a month (top 1% of taxpayers); treatment group
 - The rest in the top 10% of taxpayers whose marginal tax rate did not change; control group
- **This is the so-called Difference-in-Differences (DiD) method**
- If earnings decline more among the treatment group than among those in the control group, this can be because of the tax increase or because of other simultaneous trends which have lowered earnings inequality

Income developments



Estimation results

	<i>Treated: Top 1%</i>		<i>Treated: Top 1%, censored</i>	
	(1) Simple	(2) Weighted	(3) Simple	(4) Weighted
<i>Basic:</i>				
DiD estimate	-0.0743** (0.0345)	-0.319** (0.131)	-0.0729** (0.0344)	-0.175*** (0.0624)
Year and month dummies	Yes	Yes	Yes	Yes
R-squared	0.558	0.622	0.56	0.701
Implied elasticity	0.5201	2.233	0.5103	1.225

About the estimation results

- On average, treatment group taxable income declined by 7% after the reform
 - The reduction is greater among the highest incomes
 - This is why income-weighted estimates are larger
 - If the analysis is restricted to the same set of tax-remitting firms, the estimated impact declines somewhat
 - Corresponds with an elasticity of taxable income
= % change in taxable income / % change in (1-MTR)
of approximately 0.5 or more
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Revenue implications

- Here: pertaining to the new extra top tax rate
 - Top taxpayers paid approximately UGX 400 Bn a year
 - This tax receipt would have been 12% greater had there been no income decline among the top earners
 - The additional top 10% led to increased revenues
 - Various reasons for being cautious about these analyses
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Summary

- We investigate the **impact of the 2012 personal income tax reform** in Uganda on employees' earnings using a DiD approach.
 - Here: restrict results to top group.
 - We estimate that the incomes declined by 7 per cent or more for the treatment group
 - The response most likely not so large that it would have offset the mechanical increase; hence the revenues from the top taxpayers increased
 - Next step is to carry out similar analysis for the personal income tax payers
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