

Economic Impact of a “Flat” Tax. What have we learned from the Russian Experience?



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Summary

Russia flattened its personal income tax (PIT) schedule as part of a comprehensive tax reform in 2001. Tax revenues and compliance surged in the years following the reform, leading many to declare the reform a success. Since then, 28 countries have adopted the flat tax schedule and other countries continue to discuss the prospects, including the United States. This issue of *Insights* recaps the evidence on the performance of Russia’s flat tax and provides a brief discussion of the proposed *optional* flat taxes in the U.S.

What is a Flat Tax?

The flat tax proposed by Robert Hall and Alvin Rabushka in 1983—later revised in 1995—taxes businesses and individuals at the same single rate. Businesses are taxed on total sales less labor costs, cost of capital goods, and purchase of raw materials, while individuals are taxed on the difference between their total labor compensation and a personal allowance. There is no tax on savings, no double taxation of dividends, and interest income is taxed as part of business income, making it a tax on consumption. While the “flat tax” has not been implemented in its original form, the term is now generally used interchangeably with “linear PIT” or “flat rate PIT.” A linear PIT schedule taxes personal income at a single rate that may vary by type of income, but is not a tax on consumption. Still, the two terms are used interchangeably here.

How Widespread is the Flat Tax?

Since 1940, approximately 38 countries have adopted the flat tax as of December 2011 (see Table 1). However, the first wave did not truly begin until Jamaica, Tuvalu, Estonia, Lithuania, Grenada, and Latvia adopted the flat tax in the ten-year window from 1986 to 1995. A second and more active ten-year window began with Russia in 2001; approximately 28 countries—20 Eastern European—adopted the linear PIT between 2001 and 2011.¹

Russia’s flat tax remains the most widely studied for at least two reasons: Russia is the largest country (economic output, geographical area, population) to adopt the flat tax; and its reform preceded an unprecedented growth in flat tax adoptions, particularly in Eastern Europe. This, along with the fact that relatively good data are available for Russia, makes it a natural place to examine the impact of flat tax rates on economic outcomes and provide insights into the likelihood that a developed country such as the U.S. would benefit from adopting a linear PIT.

The Russian Reform

Russia had a graduated PIT schedule with three non-zero rates in the years leading up to 2001 (see Figure 1). On January 1, 2001, the graduated tax schedule was replaced

¹ Both Iceland and Jamaica switched to a graduated tax schedule in fiscal year 2010, but Jamaica has since reverted to the flat tax for fiscal year 2011. Six of the countries using the flat tax are not recognized as independent states internationally.

Table 1. Linear Personal Income Tax Jurisdictions: December 31, 2011

<i>Jurisdiction</i>	<i>Year Implemented</i>	<i>Jurisdiction</i>	<i>Year Implemented</i>
1 Jersey*	1940	21 Macedonia	2007
2 Hong Kong *	1947	22 Mongolia	2007
3 Guernsey*	1960	23 Iceland++	2007
4 Jamaica+	1986	24 Montenegro	2007
5 Tuvalu	1992	25 Kazakhstan	2007
6 Estonia	1994	26 Pridnestrovie**	2007
7 Lithuania	1994	27 Mauritius	2007
8 Grenada	1994	28 Bulgaria	2008
9 Latvia	1995	29 Czech Republic	2008
10 Russia	2001	30 Timor Leste	2008
11 Serbia	2003	31 Bosnia and Herzegovina	2009
12 Iraq	2004	32 Belarus	2009
13 Slovakia	2004	33 Belize	2009
14 Ukraine	2004	34 Nagorno Karabakh**	?
15 Georgia	2005	35 Seychelles	2010
16 Romania	2005	36 Paraguay	2010
17 Turkmenistan	2005	37 Hungary	2011
18 Trinidad & Tobago	2006	38 Abkhazia**	?
19 Kyrgyzstan	2006		
20 Albania	2007		

* limited independence

**Independent, but disputed region

+ adopted a graduated tax for the year 2010, but resumed linear PIT in 2011

++ abandoned the flat tax in 2010

Source: Adapted from <http://flattaxes.blogspot.com/2010/09/flat-tax-countries-and-jurisdictions.html>

with a single tax rate, one standard deduction, and individual specific deductions for educational, medical, and housing expenses. The new tax rate, 13 percent, was one percentage point higher than the lowest rate in the pre-reform schedule and the standard deduction was only marginally higher than the previous deduction. The employees' share of the payroll tax was eliminated and the employers' share was changed from a single flat rate to a schedule with multiple rates. Additionally, certain types of non-labor income such as dividends, interest income, lottery prizes, and insurance payments were taxed at different rates in the post reform tax schedule. There were also changes aimed at increasing enforcement at the local and national level, such as the use of tax identification numbers starting in 1999.

A number of other taxes were also affected by the reform: reduction in the number of exemptions in the value added tax (VAT), reduction in the road user tax, elimination of the social

infrastructure maintenance tax, and authorization of an optional five percent profit tax for local governments.

The Russian Experience Revenue impact of the reform

Real PIT revenues grew by 26 percent in 2001, 21 percent in 2002, and 12 percent in 2003. This was a dramatic improvement over the previous three years, which saw two years of decline followed by one year of growth. A similar pattern was observed for PIT revenue as a share of gross domestic product (GDP), indicating PIT revenues grew faster than GDP. The significant and immediate impact on tax revenues led many to view the reform a success and is believed to have been the catalyst for the subsequent spread of the flat tax, especially in Eastern Europe.

Although the evidence suggests a role for various aspects of the reform, the focus here is on the impact of the PIT rate changes. Lower tax rates have two effects on tax revenues. First, lower rates imply lower revenues, *all else equal*, since each taxpayer pays a smaller share of his income in taxes. However, lower rates provide an incentive for taxpayers to change their behavior in ways that increase their taxable income, implying higher revenues. The net effect of tax rates on revenues depends on which effect is larger.

While it is clear that improved enforcement and other economic factors contributed to the growth in revenue, there is also strong empirical evidence that behavioral responses to the lower tax rates played a significant role. Tax rate changes affected two broad

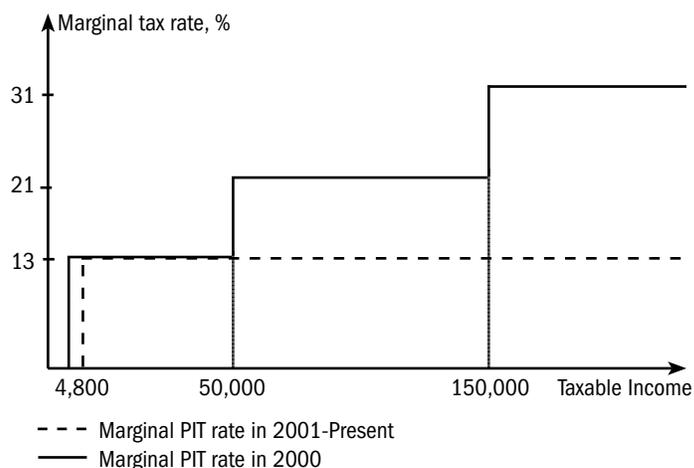


Figure 1. Marginal Personal Income Tax Rate Before and After Reform. Taxable income is annual and in rubles. The 2000 marginal PIT rates include 1 percent individual contribution to the pension fund. Standard deductions were 3,168 rubles in 2000, but they increased to 4,800 rubles in 2001. Source: Duncan and Sabirianova-Peter (2010).

categories of behavior: real, such as changes in hours worked at a given job or number of jobs, and income shifting, such as evasion and avoidance. There is clear evidence that reform had no effect on hours worked among women and a very small positive effect on hours worked among men. That is, these labor supply (real) responses cannot explain the increase in PIT revenue. Given that tax rates fell, the real response implies a decline in revenue.

Revenue could have also increased through compliance (income shifting), i.e., lower evasion. Although compliance increased for all groups, there was a greater increase among taxpayers who experienced the largest declines in tax rates. The magnitude of tax-induced change in compliance was large enough to offset the revenue loss that resulted from lower tax rates on the affected individuals. Therefore, revenue increases that followed tax reform can partly be attributed to lower tax rates. Given that income shifting responses are generally larger than real responses, this finding implies that countries with large non-compliance are more likely to experience revenue increases from lower tax rates, *all else equal*.

Although tax rate induced changes in compliance had a noticeable positive effect on revenues, a large share of the revenue increase cannot be explained by the lower tax rate. It is therefore important that future adopters place equal, if not greater, emphasis on enforcement and other administrative changes as well as economic climate.

Distributional consequence of the reform

Because average tax rates increase less steeply with income under a flat tax than under a conventional graduated tax schedule, flat taxes generally lead to a reduction in progressivity, which implies an increase in net income inequality. As a result, flat taxes are mainly critiqued for their impact on equity and inequality.

The impact of Russia's flat tax on income inequality is difficult to isolate, especially given the fact that Russia experienced a steady decline in income inequality from 2000 to 2005. Nonetheless, there is some empirical evidence that tax rate changes affected income inequality via two channels. First, lower tax rates on the rich reduced their tax liability relative to that of the poor, which led to a mechanical increase in net income of the rich relative to the poor. Concurrently, lower tax rates led to income shifting and real productivity responses, which increased gross (and hence net) income of the rich relative to the poor. Together, direct mechanical effect and indirect behavioral effects increased income inequality in reported net income.

But, not all sources of inequality are equal. The impact on net income inequality depends on the behavioral response driving

the change in income. As indicated above, tax-induced changes in compliance are the main source of tax-induced changes in taxable income. It is no surprise, then, that compliance had the largest effect on observed inequality. However, this compliance effect did not represent new resources, nor did it represent a shift in resources from the rich to the poor. Rather, it represented pre-existing resources that were observed post-reform because of the lower tax rate. It follows that the level of inequality observed prior to the change in tax rates is misleading (too low) because it did not account for hidden income. On the other hand, increased compliance had a comparably small increasing effect on actual net income inequality—approximated by consumption—because of taxes paid on previously hidden income. Therefore, while compliance had a large *artificial* increasing effect on observed inequality, it had a much smaller effect on actual inequality.

Unlike the compliance effect, productivity responses such as number of hours worked had a very small increasing (positive) effect on both observed and actual income inequality. Tax-induced real productivity responses created new income, which was distributed unequally in favor of the rich. Because direct and productivity effects were very small compared to the artificial compliance effect, reform had a negligible impact on income inequality.

A number of factors, mostly unrelated to the tax reform, contributed to the decline in inequality observed over the period. For example, real GDP grew at an average rate of six percent over the same period. Reform likely contributed to this favorable economic climate. However, a general equilibrium framework would be needed to determine how much of the economic growth can be attributed to the reform. In any case, the economic recovery began two years before the reform, implying macroeconomic effects might be small.

What a difference choices make

The recent fiscal crisis has brought tax policy back to the forefront of political debates in many countries, including developed countries such as the U.S. In fact, two of the 2012 presidential primary candidates have proposed flat rate PIT schedules that would co-exist with the current PIT schedule. Simulations for hypothetical flat taxes in several Western European countries suggest there could be significant increases in income inequality in developed economies. At the same time, productivity responses in the form of labor supply are very limited. Compliance effects are also likely to be small in developed countries, although there is no concrete empirical evidence on this margin in the context of a flat tax. Because simulations are often designed to be revenue neutral, there is no impact on revenue in these studies. Hall and Rabushka

designed the original flat tax for the U.S. economy and argued that it would improve economic output by creating incentives to work and invest, reduce complexity by eliminating many tax expenditures (e.g., deductions), and maintain progressivity by providing a generous allowance. Similar to the European studies cited above, the tax was designed to be revenue neutral. Still, revenues would increase over time as the economy expands.

Unlike Hall and Rabushka's flat tax, the two *optional* flat taxes will most likely reduce revenues, increase inequality, and increase complexity. First, assuming the current graduated tax schedule remains largely unchanged, revenues will fall as taxpayers choose the structure that yields the lowest tax liability. According to estimates by the Tax Policy Center, PIT with an *optional* flat tax would generate approximately 20–33 percent less revenue than the current tax system. It is possible this effect will be mitigated by tax-induced changes in behavior among those who switch to the flat tax schedule (switchers). Based on current estimates of taxable income elasticity, the lower marginal rate under the *optional* flat tax might induce switchers to increase their taxable income, which then reduces the revenue loss. Note that an *optional* flat tax makes it all but impossible to achieve revenue neutrality.

Second, the impact on income inequality depends largely on who switches to the flat tax schedule, which depends on how the flat tax affects tax liability. Approximately 40 percent of tax filers, mostly low-income filers, have zero tax liability under the current tax schedule. Therefore, taxpayers with relatively high income are more likely to switch, which implies the *optional* flat tax proposals will increase income inequality. A static analysis by the Tax Policy Center shows that most of the benefits of switching will accrue to the rich. However, the size of the *artificial* component—driven by changes in compliance—is not immediately clear.² Unlike revenue, the impact on inequality is not unique to the *optional* flat tax. That is, *replacing* the current tax schedule with a flat tax would also increase income inequality.

Finally, having to calculate tax liability under two separate tax schedules (three for taxpayers in the alternative minimum tax net) implies a direct increase in complexity and thus compliance costs. The impact on complexity is a direct result of the tax being *optional* and not a usual feature of flat taxes. Tax complexity is driven by the determination of taxable income. Therefore, a flat tax with multiple deductions and exemptions is likely to be just as complex as a graduated tax schedule with these features. In other words, simply providing taxpayers with the option of filing under a flat tax schedule does nothing to address the complexity of the existing tax code.

² While numerous estimates of taxable income elasticity exist for the U.S., very little is known about the actual size of the compliance response.

Conclusion

Russia's 2001 tax reform played a nontrivial role in increasing compliance and hence tax revenues. Furthermore, the impact on actual net income inequality was relatively small. However, countries hoping to benefit from a similar flat rate PIT ought to consider comprehensive tax reform and the economic climate in which said reform will be implemented instead of a simple linearization of the tax schedule. It is also important that policymakers avoid *optional* flat tax schedules because they have all the negative qualities of flat taxes with very little, if any, of the positive qualities.

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