THE TAX SYSTEM OF BELARUS

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October 5, 2016

Abstract

This paper provides a comprehensive analysis of taxation in Belarus. I compare the dynamics of the tax rates and the tax revenue in Belarus to the world averages and to other countries of the Eurasian Union. The paper studies the the harmonization of the rates within the union and the efficiency of tax collection. Finally, the two possible reforms of taxation in Belarus and its possible consequences are discussed: an increase of VAT; reintroduction of the progressive personal income tax.

Keywords: Flat Tax, VAT, Efficiency, Eurasian Union

JEL Classification: H21, F62

BEROC Working Paper Series, Working Paper No. 36

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1 Introduction

The government is an important part of every economy. It accounts for 22% of GDP on average in the world. Tax revenues have remained relatively flat in an average country, but they have slightly increased in OECD countries in recent decades up to 33%. With the respect to the share of the government in the economy, Belarus is an average OECD country. The relatively big size of tax revenue in OECD as well as in Belarus raises the importance of analyzing the tax impacts on major macroeconomic variables such as saving, investment and employment.

Following Mendoza et al. (1994) I calculate the average effective tax rates on consumption, labor and capital and compare them to the statuary tax rates on value added, personal and corporate income for the OECD countries and countries of the Eurasian Union. The comparison reveals two features of the Belarusian tax system. First, Belarus has high efficiency of VAT tax collection. In fact, one of the highest in the sample. Second, the tax burden in Belarus falls mostly on capital, rather than on labor, which is in contrast to the typical case of higher burden on labor and low on capital.

Tax harmonization with a union is an important issue. In the case of the European Union it has been on the agenda of policy makers since 1960s. Surprisingly, the taxes are not very different for the Eurasian Union countries with one notable exception, which is social security contribution.

I conclude the analysis by discussing possible tax reforms in Belarus, such as the introduction of progressive personal income tax and an increase in the VAT rate. First, if necessary to raise tax revenue, Belarus still has a scope for a moderate increase of VAT. Second, although the introduction of flat tax clearly had a positive impact on the tax revenue, the impact of reintroduction of ptogressive tax is rather ambiguous.

2 Overview of Taxation

This section provides the overview of taxation in the Eurasian union. I look both on tax revenues and tax rates.

Let me start with the definition of primary balance, which states that the primary deficit (the difference between total revenue T and government expenditure G) is covered by the new debt issuance net of interest rate payments. This is the right-hand side of equation (1):

$$T_t - G_t = (1 + r_{t-1})D_{t-1} - D_t \tag{1}$$

The government tries to balance the budget or at least to minimize the deficit over the medium or long run. Hence, total revenue T_t is a good proxy for the size of the government. The next question is where total revenue comes from. The primary source of total revenue is typically taxation. Tax revenue can be further decompose on direct taxes, including individual income tax, corporate profit tax, property tax, tax on capital gains and dividends; and indirect taxes, such as general sales tax and taxes on international trade. System (2) describes this decomposition.

$$\begin{array}{ll} T & = Tax + NonTax \\ Tax & = direct + indirect \\ direct & = indiv + profit + social + capital + property \\ indirect & = sales + trade \end{array} \tag{2}$$

Figure 1 plots total revenue in percentage of GDP for the world and OECD averages as well as for five countries of the Eurasian union, which are Armenia(ARM), Belarus(BLR), Kazakhstan(KAZ), Kyrgyzstan(KGZ) and Russia(RUS). As you can see the size of the government is substantially higher in the OECD countries, around 33 % of GDP, than in the World. Belarus or Russia is an average OECD country in terms of total revenue in % of GDP, while Kazakhstan is switching from being a world average country to the OECD level. Russia, Belarus, mostly due to higher tax burdens, and recently Kazakhstan, mostly due to natural resource revenues, have the similar level of government involvement into their economy. Armenia and Kyrgyzstan tend to have the size of the government is slightly below the world average, but it has been increasing.

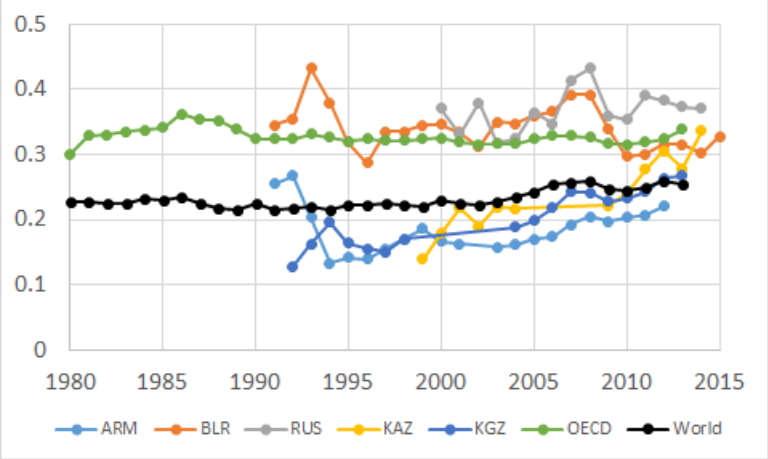


Figure 1: Total Revenue in % of GDP

In the government finance, the most important and challenging issue arises in relation to the treatment of natural resource revenue. Countries and sources vary dramatically in whether revenue from the natural resource sector is recorded as tax or non-tax revenue.

In general, countries record corporate taxes paid by private sector resource companies as taxes, while recording royalties, export taxes, profit sharing and the profits of state-owned enterprises (SOEs) as non-tax revenue. The latter means that non-tax revenue is a good proxy for resource revenue. In the case of Kazhahstan, all resource revenue is treated as non-tax revenue. As you can see from Figure 2, the recent increase of total revenue is due to the sharp increase in the share of non tax revenue. Having relatively higher abundance of natural resources enables Kazakhstan to rely lees on tax revenue. The total resource revenue in 2011 accounts for more than a half of the budget in Kazakhstan. The resource revenue is very important for Russia and to lesser extend for Belarus. In the case of Belarus, the excess volatility of non-resource revenue can be explained by the fact the non-resource revenue seems to be also a way to balance the budget. [1]

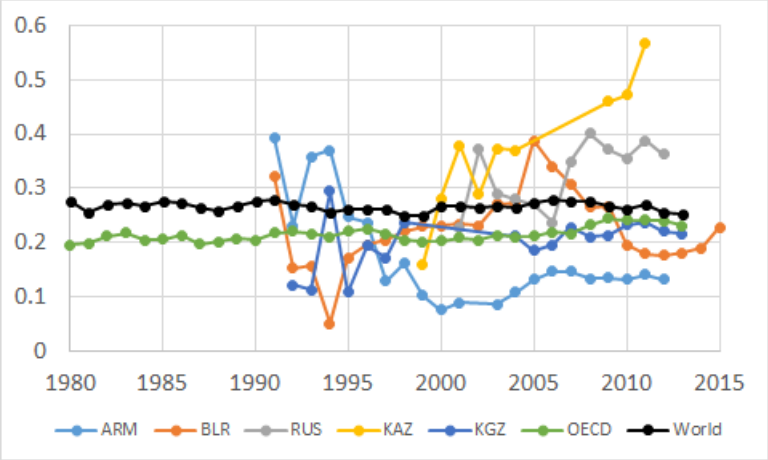


Figure 2: Non Tax Revenue in Total Revenue % of GDP

Figures 3 and 4 present the decomposition of total tax revenue according to the definition in system (2) into five categories: non-tax revenue, which is mostly resource revenue; individual income tax; corporate income tax; general sales taxes, which combines the revenues from general sales and excises; international trade. As you can see, due to trade liberalization trade revenues shrunk from 23 % in 1980 to only 10% 2013 on the average in the world. This rapid depletion have been substituted by the increase of sales tax revenue, which mostly VAT. the sales tax accounts for 37 % of total revenue, which is substantially higher than all direct taxes combined. Belarus has not experienced a similar development. First, the share of trade revenue has increased due to raising potash prices and the agreement between Russia and Belarus about the sharing of oil and gas revenue in 2007. Second, the reason behind the volatility of non-tax revenue in Belarus was already discussed.

I now turn to statuary tax rates. Figure 5 presents the evolution of the world average

[1] A note from the finance ministry of Belarus states: "Taken measures is to compensate for shortfalls in tax revenue by the increase of non-tax revenues, including revenues from the budget management, revenues from income-generating activities and the state compensation costs, other non-tax budget revenues."

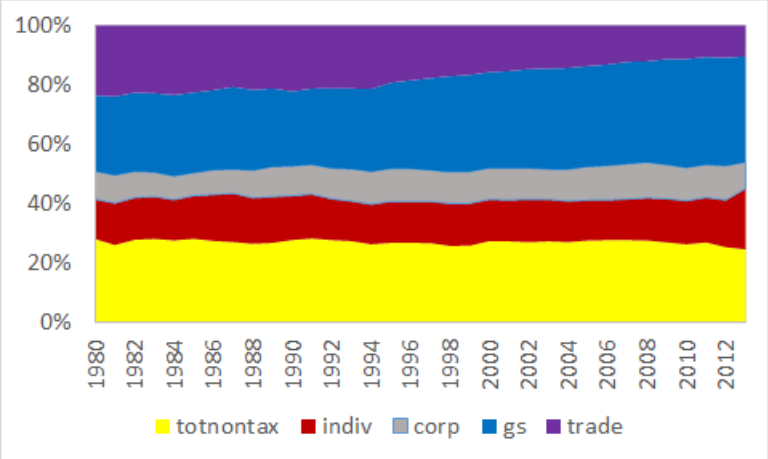


Figure 3: Total revenue decomposition, world

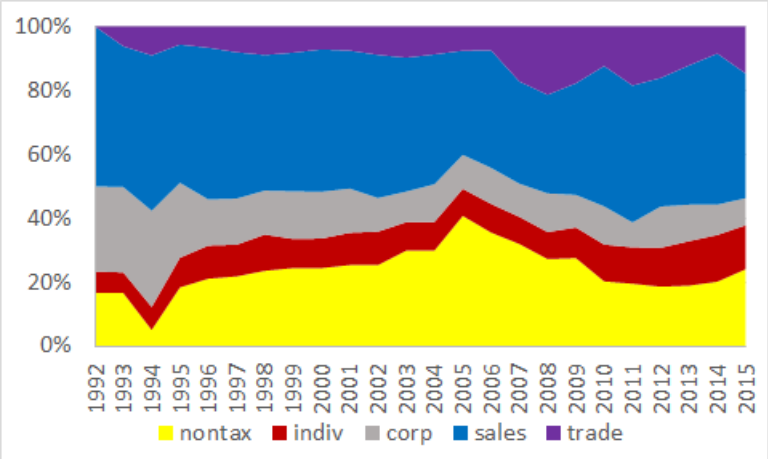


Figure 4: Total revenue decomposition, Belarus

top statuary rates for individual income (PIT), corporate income (CIT), value added (VAT) and sum of social security, which is paid both by employee and employer. There are several important trends. First, since PIT is typically progressive, the reduction of the top rate means that the progressivity of individual income taxation has dropped substantially. The top rate was on average 75 % percent and as high as 95% in some counties. It was sharply first reduced in the late 1970s and continue to gradually decrease up until now. Second, the top rate of CIT experience the similar dynamics starting from 1980. However, the CIT as well as VAT is typically flat. This means that the tax burden on corporation was reduced. Third, the reduction of CIT and PIT has been accompanied by a rapid increase of VAT, as governments have looked for new sources of revenue. The increase of VAT echoed in Figure 3.

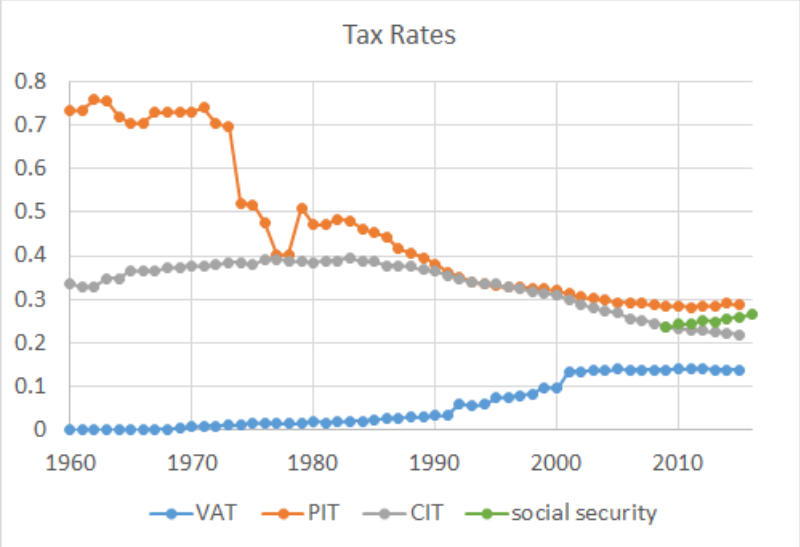
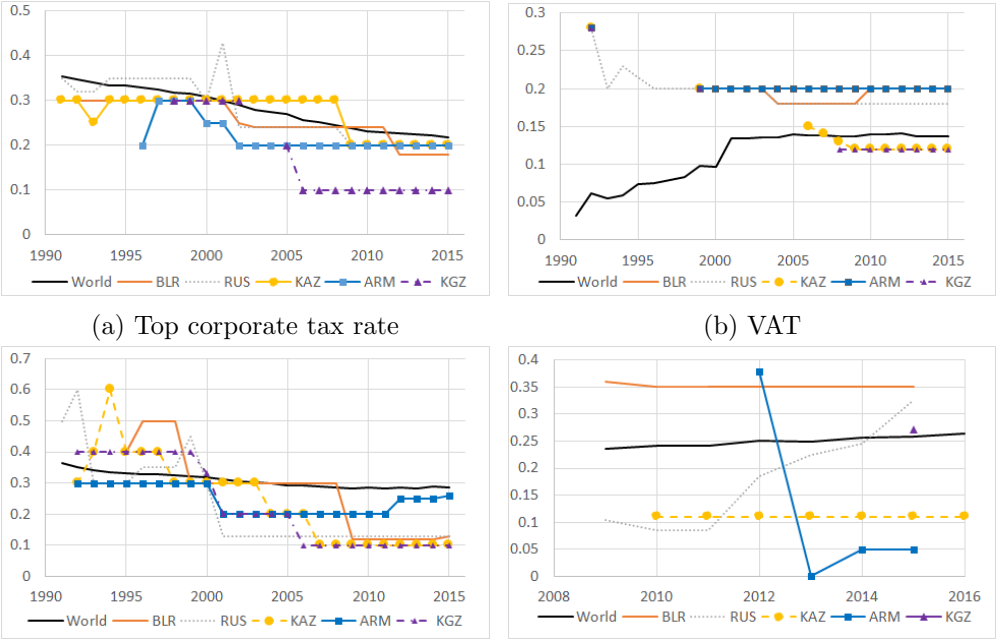


Figure 5: Tax Rates: world

2.1 Harmonization of Tax System in the Eurasian Union

Figure 6 presents each of four tax rates separately for Armenia, Belarus, Kazakhstan, Kyrgyzstan and Russia and compares them with the world average. First, the CIT has been remarkable similar in all countries, but Kyrgyzstan. Furthermore, it has closely tracked the world average from the time it was introduced till now. Second, after independence all five countries started with the same VAT at relatively higher rate of 28% in the comparison to the world average. It corresponded to high sales revenue, which accounts for 47% of total revenue in 1992 for Belarus. See Figure 4. The VAT was gradually reduced to somewhere average levels: the above of the world average for Russia, Armenia and Belarus; the below the world average for Kazakhstan and Kyrgyzstan. Third, since independence, countries of the Eurasian union have experimented a lot with personal income taxation, but eventually converge to the flat tax rates: 13 % for Russia and Belarus; 10 % for Kazakhstan and Kyrgyzstan. Only Armenia still has progressive personal income tax. Introduction of the flat system will be discussed in detail in subsection 4.1. Fourth, falling commodity prices put pressure on the government's budget. Russia responded by nationalization of funded pension and the sharp increase of social security rate from 8.5% to 32.5 %, which is comparable to the Belarusian level of 35 %. Whether Kazakhstan will follow is an open question. Armenia eliminated the part of social contribution, which is paid by employer in 2013, and simultaneously increased the personal income tax rates.

Overall, the salutary tax rates are very similar within the union with one important exception, which is social security contribution. Due to relative resource abundance Kazakhstan relies less on taxation. Kazhahstan has substantially lower social security rates, which have a direct impact on the labor cost. Given that the rest of tax system is reasonable similar, the hiring of a worker from the firm's point of view as of 2014 should be



(a) Top corporate tax rate

(b) VAT

(c) Top individual income tax rate

(d) Social security: employer + employee

Figure 6: Tax rates in Eurasian Economic Union

substantially cheaper in Kazakhstan, than in the rest of the union. Armenia is a special case, because it still has progressive personal income tax and does not have social security contribution of employer.

3 Tax Efficiency

The relatively big size of tax revenue in the OECD as well as in Russia and Belarus raises the importance to determine its effects on major macroeconomic variables such as saving, investment and employment. This section intends exactly to do so. As noted by Mendoza et al. (1994), various strategies to combine information on statutory tax schedules, tax returns and tax codes with data on income distribution, household surveys, and projections of real present values for investment projects in specific industries have been proposed to measure marginal effective income tax rates. However, in view of the complexity of tax credits, exemptions and deductions in most countries, it is not clear that such tax rates are equivalent to the macroeconomic variables that affect macroeconomic variables as measured in National Accounts. An alternative approach, pioneered by Lucas (1990) and developed by Mendoza et al. (1994), is to relate realized tax revenues directly to the relevant macroeconomic variables, tax bases, from the National Accounts. This paper combines the two approaches. I calculate the effective tax rates following the Mendoza et al. methodology and compare them to the statutory tax rate. Such approach helps to understand if there is a scope to improve the efficiency of tax collection.

3.1 Construction of Effective Tax Rates

In the following sub-sections, the methodology used to calculate each individual effective tax rate is described in detail. The Mendoza et al. methodology involves relating realized tax revenues to estimates of the associated tax bases.

Tax Rate on Consumption: The effective tax rate on consumption corresponds to the difference between the post-tax consumer price and the pre-tax price at which firms supply the consumption goods and services. Thus, the effective tax rate on consumption is:

$$\tau^c = \frac{TR^{gs}}{C^p + C^g + TR^{gs}}. \tag{3}$$

In the other words, τ^c represents the tax revenue from general taxes on goods and services and excise taxes TR^{gs} as the percentage of pre-tax consumption expenditure, which the sum of private C^p and public C^g consumption as well as sales tax revenue TR^{gs}. There is a data limitation, such as I combine revenue from excise, sales tax and VAT, but I have data on tax rate only for VAT.

Average Effective Tax Rate on Labor and on Capital: There are two steps in calculating the AETR on labor/capital. The first step in calculating the average effective tax rate on labor income is to compute a personal income tax rate that applies both to labor and capital income of the household. We can calculate that the personal income tax rate as the ratio between taxes on income, profits and capital gains of individuals or households to total pre-tax household income, which is the sum of total compensation of employees (COMP), self-employment and property income received by households

The representative households personal income tax rate is the ratio of total tax revenue from individual taxation to total pre-tax household income, which is the sum of total compensation of employees $COMP$, operating surplus of private enterprises OS, and property and self-employed income received by households PEI minus total social security contribution SS:

$$\tau^h = \frac{TR^{pit}}{COMP + OS + PEI - SS}. \tag{4}$$

Using the rate above we can calculate AETR on labor/capital. Labor income tax revenues from personal income tax on net wages $\tau^h(COMP - SS)$. Thus, the effective tax rate on employed labor income is given by:

$$\tau^l = \frac{\tau^h(COMP - SS) + SS}{COMP}. \tag{5}$$

Similarly, the effective tax rate on capital is the ratio between total tax revenues from capital, which includes the tax revenues from corporate income tax TR^{cit} and property tax TR^{pt} as well as the part of revenues from personal income tax, and the pre-tax capital income, which is the base for the tax, is the gross operating surplus of the economy:

$$\tau^k = \frac{\tau^h(OS + PEI) + TR^{cit} + TR^{pt}}{OS + PEI}. \tag{6}$$

Table 1 reports the average effective tax rates(AETR) and the statuary tax rates over the sample period. VAT is obviously a consumption tax. The picture is more blurry for PIT and CIT for the reasons, which were discussed previously. The common perception is that the CIT is a capital tax. Although, there are some evidence that a substantial burden of CIT borne by domestic labor. Similarly, the PIT is commonly viewed as a labor tax. (Hassett and Mathur, 2010; Gravelle, 2010).

Table 1 is sorted based on the ratio R^c between τ^c and VAT, The ratio R^c is defined as the ratio between the AETR on consumption and corresponding VAT statuary tax rate. The ratio R^c is below 1 with exception of the US, Canada and Japan. All three countries have very low VAT, below 10% and positive excises. In fact the US has zero VAT, but positive AETR on consumption of 4% solely due to excises. The discrepancy between VAT and the AETR on consumption comes from two sources. First, VAT is not homogeneously applied for all goods and services. There are differentiated VAT-rates and VAT-exemptions. Second, the second reason is the inefficiency in tax collection. The fact that the lowest ratio, below 60 %, in Mexico and three south European countries: Greece Italy and Spain as well as some Eastern European countries, suggests that it is a good proxy for the efficiency of tax collection. Belarus has the ratio around 80 %, which is substantially above the sample average and all the neighbors. Among counties with VAT rate close or above 20, it is the best result. We can conclude that the collection of consumption tax is very efficient in Belarus. On the contrary, Russia has a sizable room to increase revenue collection from consumption taxation by eliminating exceptions and improving tax collection.

For the reasons, discussed above, we cannot directly compare CIT(PIT) and AETR on labor(capital). As for effective tex rate on capital and labor taxes, Belarus has the relatively high effective tax rate on capital of 25 % in spite of moderately lower CIT, but one of the lowest the effective tax on labor 22 %. Overall, Belarus has a moderate level of tax burden for the economy.

4 Possible Tax reforms

Depending on the dynamics of commodity prices, which would directly impact trade and non tax revenues, Belarus might have to look for new sources of revenue. This section discusses two possible reforms, such as reintroduction of progressive tax system and a further increase in VAT.

Table 1: Average effective tax rates and statutory tax rates

country	τ^c	VAT	τ^l	PIT	τ^k	CIT	R^c
USA	4%	0%	20%	46%	23%	43%	
Canada	8%	6%	23%	30%	29%	40%	1.28
Japan	5%	5%	23%	46%	21%	44%	1.17
Switzerland	7%	7%	20%	24%	16%	24%	0.92
New Zealand	12%	13%	16%	36%	29%	31%	0.90
Korea, South	9%	10%	9%	46%	13%	29%	0.89
Australia	7%	10%	15%	51%	27%	39%	0.83
Belarus	15%	19%	24%	19%	25%	22%	0.80
Estonia	14%	19%	25%	24%	11%	24%	0.78
Slovenia	14%	20%	33%	47%	12%	23%	0.75
Israel	12%	16%	23%	48%	23%	30%	0.73
Norway	16%	22%	29%	32%	30%	35%	0.71
Finland	15%	22%	34%	43%	24%	26%	0.68
Germany	11%	17%	33%	48%	15%	41%	0.67
Hungary	16%	24%	31%	35%	14%	18%	0.67
Portugal	13%	19%	22%	42%	16%	31%	0.66
Denmark	17%	25%	31%	34%	40%	29%	0.66
Austria	13%	20%	41%	50%	17%	30%	0.66
Netherlands	12%	19%	33%	55%	18%	31%	0.65
France	13%	19%	32%	58%	18%	42%	0.65
Ireland	14%	21%	20%	44%	19%	15%	0.64
Chile	12%	19%		40%		18%	0.62
Lithuania	11%	19%	36%	27%	11%	21%	0.60
UK	11%	18%	22%	42%	28%	29%	0.60
Czech Rep.	12%	21%	33%	29%	12%	26%	0.60
Spain	10%	17%	27%	47%	18%	33%	0.58
Slovakia	12%	20%	31%	30%	10%	26%	0.58
Greece	11%	19%	32%	43%	12%	31%	0.58
Ukraine	12%	20%	40%	28%	20%	26%	0.57
Poland	13%	22%	33%	42%	12%	28%	0.56
Sweden	14%	25%	42%	39%	29%	27%	0.56
Belgium	11%	21%	35%	52%	26%	36%	0.55
Italy	10%	20%	37%	45%	22%	38%	0.51
Russia	9%	20%		26%		28%	0.48
Latvia	8%	19%	36%	26%	8%	20%	0.42
Mexico	5%	15%		30%		30%	0.34
Average	11%	18%	28%	39%	20%	30%	0.68

4.1 Progressive Taxation

This subsection discuss the introduction of the flat personal income taxes and reintroduction of progressity. Table 2 presents the tax schemes before and after the reform, which is the introduction of flat taxes. As you see, many countries have only recently implemented the flat personal income tax. These are mostly central and eastern European countries and some Latin American countries as well as some island nations. Although the list is not exhausted, it already contains fair amount of countries. The reform typically, with some exceptions, notably of Baltic states, reduces all rates to the rate of the lowest income bracket.

Table 2: Flat personal income tax

country	tax before	year implemented	tax after
Jersey		1940	
Hong Kong		1947	
Guernsey		1960	
Jamaica		1980	33.3
Bolivia		1986	10
Estonia	16-35	1994	26
Lithuania	18-33	1994	33
Latvia	10/25	1997	25
Russia	12/20/30	2001	13
Georgia	12-20	2005	12
Romania	18-40	2005	16
Kyrgyzstan	10-20	2006	10
Paraguay	None	2006	10
Macedonia	15-24	2007	12
Kazakhstan	5-20	2007	10
Mongolia	10-30	2007	10
Mauritius	15-22.5	2007	15
Bulgaria	10-24	2008	10
Belarus	9-30	2009	12
Belize	15-45	2009	25
Federation of Bosnia	10-15	2009	10
Seychelles	None	2010	18.8

Table 3: Introducing and abolishing flat tax system

country	tax before	year implemented	tax after	tax before	year abolished	tax after
Serbia	10/15/20	2003	14	10	2010	10-15
Iceland	23.75/25.75	2007	22.75	22.75	2010	24.1/27/33
Ukraine	10-40	2004	13	15	2011	15/17
Czech Rep.	12-32	2008	15	15	2013	15/22
Slovak Rep.	10-38	2004	19	19	2013	19/25
Montenegro	15-23	2007	15	9	2013	9-15
Albania	5-30	2007	10	10	2014	13/23

However, flat taxes can have a serious drawback in terms of their impact on the distribution of tax burdens. The growing inequality and the pressure on the budget in the aftermath of the recent economic and financial crisis have caused seven countries to abolished their flat tax (see Table 3) and to reintroduce progressive tax scheme. Reintroducing a directly progressive income tax schedule was done by adding additional taxes for higher incomes. What is more interesting is that the degree of progresivity is lower than it is used before introduction of the flat tax rate in all cases but Iceland.

Figure 7 presents what happens with tax revenues before and after the reform: the blue solid line is tax revenue from individual income; the gray dashed line is total tax revenue. I focus on the three year window arond th reform and normilize all tax revenues to be one at the time of reform. As you see, the introduction of flat tax rate boosts the tax revenue from individual income tax by more than 20 % in spite of the reduction of the average rate. Paulus and Peichl (2009) make a similar observation. More importantly, this boost seems to be persistent. On the contrary, the reintroduction of progressive tax has a small and temporary increase. However, the latter result should be taken with the grain of salt, because of a very small sample size (seven countries) and specific circumstances (the great recession). However, we can conclude that the reintroducing a directly progressive income tax schedule as a part of an austerity package in the aftermath of the recent economic and financial crisis did not have the expected outcome in boosting tax revenue.

(a) Introduction of flat tax (b) Reintroduction of progressive tax

Figure 7: Progressive and Flat tax reforms

4.2 An increase of VAT

With further trade liberalization and an increase in factor mobility of labor and capital, it is likely that the current trend, such as reducing tariffs and CIT would continue. On the same time, the government expenditure is unlikely to be reduced due to aging population, the increasing demand for education and health. Hence, governments around the world wold look for the new sources of revenues to balance the budget. The VAT seems as an obvious choice. The question is how much VAT can be increased.

Let look at the example of a country, which has recently increased its VAT. Hungary raised the VAT rate from 20%, which is the current level of Belarus, to 27 %. Figure 8 plots the tax revenues from general sales of goods and services (the solid red line), and with addition of revenue from special services (the solid orange line); the VAT rate (dotted blue line), the AETR on consumption, which is calculated by expression (3) (the dashed violet line). Tax revenue in % of GDP is on the left-hand side vertical axis, while tax rate is on the right-hand side axis.

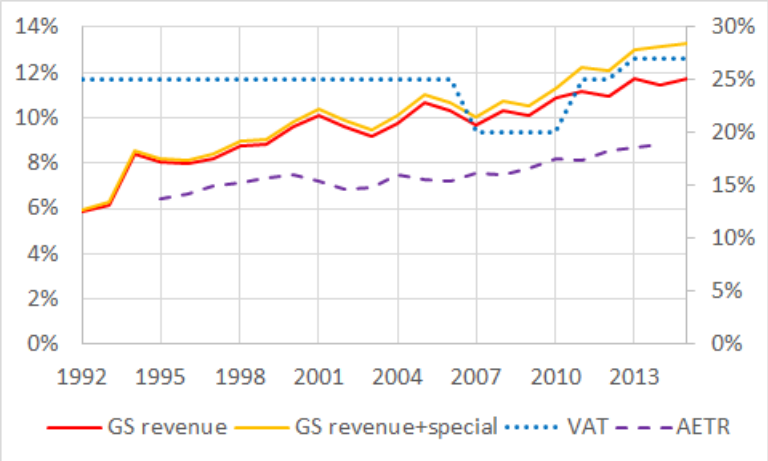


Figure 8: VAT and sales tax revenue

Based on the figure, two observations can be made. First, the gap in terms of efficiency between VAT and AETR is closing, which is in line with a proposal by Jacobs (2013) to have uniform VAT rate by abolish differentiated VAT-rates and VAT-exemptions. Second, the relatively high level of 27% seems to be still on the right side of the Laffer curve. Hungary collects up to 13% of GDP in sales tax revenue and additional 3.5 % form excises. As for Belarus, We have seen previously that Belarus has reasonable high efficiency of collecting consumption tax. Therefore, a moderate increase of VAT should not affect this efficiency much. It is likely that the same increase in the VAT would have the similar impact on sales tax revenue: from the current 9.5 % of GDP to at least the current level of Hungary 13 %. Furthermore, Belarus experienced in past the higher VAT rate at 28 % and derives 47 % of tax revenue from this tax.

5 Conclusion

The above analysis indicates that there are no considerable differences in Belarus between the effective tax rates and their statutory counterparts. The tax burden is skewed towards capital when we compare to other OECD countries. Further tax reforms in Belarus should be aimed at reducing the tax burden on capital by decreasing statutory rate of profit tax

and social security contributions paid by employers. In necessary, the burden can be shifted on consumption by increasing VAT rate or labor by increasing the social security contributions paid by employees or reintroducing the progressive personal income tax. This allows improve tax competitiveness of national economy.

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