10. TAX POLICY UNDER THE CURSE OF LOW REVENUES: THE CASE OF ROMANIA (PART I)[1][2]

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Abstract

The Romanian tax revenue-to-GDP ratio has been far below the average level of both the European Union and the New Member States for many years. The decade long growth cycle hid significant structural imbalances in the public budget. This paper attempts to identify reasons why tax revenues in Romania are the lowest among the EU-27 countries. It takes a broader perspective by looking at the main sources of tax revenues over the last two decades. Implications of the policy regime change following the introduction of flat tax in 2005 are considered. It also does a few comparisons with other countries from Central and Eastern Europe by looking at the main tax revenue components.

Keywords: Budgetary Revenues, Taxation, Implicit Tax Rates, Arrears, Shadow Economy

JEL Classification: H24, H25, H26, H30

Introduction

Romania has registered persistently low budget revenues over the years. The Romanian tax revenue-to-GDP ratio has been far below the average level of both the

European Union (EU-27) and the New Member States (NMSs[6]) for many years. The decade long growth cycle hid significant structural imbalances in the public budget. The global financial crisis, which erupted in 2007, has had a strong negative impact on the Romanian economy. The ensuing fall in GDP growth lowered tax revenues and forced the authorities to come up with a fiscal consolidation package. A choice made for financing the mounting budget deficit and securing financial stability was an international loan package, which was agreed upon in May 2009. The attached economic programme aimed at stabilising and consolidating Romania's fiscal position. But measures for raising tax revenues, which are particularly low in Romania, are still to work their way, or are awaited. This paper attempts to identify reasons why tax revenues in Romania are the lowest (as a share of GDP) among the EU-27 countries. It takes a broader perspective by looking at the main sources of tax revenues over the last two decades. Implications of the policy regime change following the introduction of flat tax in 2005 are considered. It also does a few comparisons with other countries from Central and Eastern Europe by looking at the main tax revenue components. The last section sums up the results.

1. The European Experience and Policy Responses during the Crisis

The current financial crisis has raised, once again, the issue of public sector fiscal sustainability. The costs of bailing out the financial sectors have placed a large burden on public sector debt for years to come in a number of countries. But, the choice between pursuing fiscal austerity or economic policies that stimulate growth continues to remain a hard one, though one could argue that short term stimulus can be reconciled with longer term fiscal consolidation. While the US, for instance, favoured by the global status of its currency could afford to use monetary and fiscal policy for spurring economic growth, for small open economies which run large budget deficits and need access to external finance fiscal consolidation can hardly be delayed in the short and medium term. Recent economic developments in Europe have shown that indebted countries face now more difficulties than they encountered in the past, when they needed to rollover their debts. Marked differences in competitiveness and the state of public finances have increased sovereign risk premia for countries both within the euro-zone and Europe in general. The crisis has led to large increases in budget deficits and government debts in many countries. In simulations performed under current scenarios, government debt in advanced economies is forecast to rise, on average, by about 35 percentage points of GDP between 2007 and 2014. Moreover, primary deficits are expected to remain high even as economic growth picks up.

Large scale fiscal adjustments in most developed countries were needed before the crisis – as pensions and health care costs had been on the rise. The cost of current financial crisis would merely add on to those. Fiscal consolidation is expected to be highly challenging as countries would have to maintain sustainable debt levels and structural primary balances would have to improve considerably, be it gradually

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[6] *NMS includes Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Slovenia and Slovakia.*

though. A sharp increase in fiscal risk and rising problems with the financing of private debt, have prompted discussions of the urgency of fiscal consolidation and the need to reform the public sector and improve the system of taxation.

It is obvious that the scale and composition of adjustment need to be tailored to the specific conditions of individual countries. The necessary adjustments would have to come primarily from structural fiscal reforms. IMF (2010, February) list a series of actions which could be taken such as: reforms aimed at stabilising entitlement-spending-to-GDP ratio; measures to lower other primary spending in relation to GDP; or increased revenue, for instance by broadening tax bases but also tax rate hikes.

The crisis has had a sizable impact on the public finances of European economies. The challenge of addressing high and rising budget deficits and public debts across the EU is a stringent one. Prior to the crisis, in 2007, the fiscal position of most EU countries seemed to be one of a relative strength, especially in most of the NMSs. According to the EC (2010a), in 2007 government deficits amounted to less than 1% of GDP on aggregate in EU27 while in 2010 they went beyond 7% of GDP. Public debt has also been going up markedly, rising from 59% in 2007 to almost 80% of GDP in 2010 as higher government borrowing was triggered by widening budget deficits. This strong deterioration in public finances has four main causes: the fall in tax receipts caused by a lower level of economic activity, the adoption of discretionary support measures introduced by governments across the EU countries in an attempt to prop up economic growth[7], effects of automatic stabilisers and bail out operations of the financial industry in the main[8].

Table 1.1 below depicts the magnitude of stimulus and consolidation measures in EU countries during 2009 and 2010 under the European Economic Recovery Plan.

Table 1.1

Expansionary stimulus measures and consolidation measures in EU, % of GDP*

	Discretionary stimulus 2009			Consolid 2009	Discretionary stimulus 2010			Consolid 2010
	Overall	Out of which,			Overall	Out of which,		
		T	P			T	P	
BE	1.1	0.4	0.7	0.0	1.1	0.1	1.0	-0.9
BG	0.3	0.3	0.0	-3.3	1.0	0.0	1.0	-3.3
CZ	2.3	1.5	0.8	0.0	1.2	0.2	1.0	-1.1
DK	0.7	0.5	0.3	0.0	1.5	0.9	1.0	0.0
DE	1.7	1.2	0.5	0.0	2.4	1.0	1.5	0.0

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[7] In December 2010 the European Council endorsed the European Economic Recovery Plan (EERP), which allowed for the introduction of a discretionary fiscal stimulus aiming to boost demand. A large part of stimulus measures implemented in both 2009 and 2010 are temporary and would be phased out by 2011.

[8] *Since other industries were also propped up by government intervention (ex: the car industry in the US, Germany, France, etc)*

	Discretionary stimulus 2009			Consolid 2009	Discretionary stimulus 2010			Consolid 2010
	Overall	Out of which,			Overall	Out of which,		
		T	P			T	P	
EE	0.0	0.0	0.0	-9.2	1.2	1.2	0.0	-10.7
IE	0.7	0.1	0.6	-5.4	1.0	0.2	0.8	-10.2
EL	0.6	0.6	0.0	-1.0	0.0	0.0	0.0	-1.8
ES	2.4	2.2	0.2	-0.3	0.8	0.5	0.2	-0.9
FR	1.6	1.3	0.2	0.0	1.4	0.4	1.0	-0.1
IT	0.8	0.6	0.2	-0.9	0.8	0.7	0.1	-0.8
CY	2.7	1.8	0.5	0.0	2.4	1.8	0.6	0.0
LV	1.5	1.5	-0.1	-4.5	0.1	0.0	0.1	-11.7
LT	0	0	0	-7.6	0	0	0	-12.5
LU	3.4	0.7	2.7	0.0	2.2	0.3	1.9	0.0
HU	0.5	0	0.5	-2.2	2.1	0.0	2.1	-5.5
MT	0.7	0.3	0.4	-1.7	1.1	0.4	0.7	-2.2
NL	0.9	0.5	0.3	-0.2	1	0.6	0.4	-0.1
AT	1.5	0.2	1.2	0.0	1.8	0.3	1.5	0.0
PL	1.6	0	1.5	-0.6	3.2	0.1	3.1	-0.5
PT	1.1	0.8	0.3	0.0	0.6	0.3	0.3	0.0
RO	0.2	0.2	0.0	-0.6	0.3	0.2	0.0	-2.7
SI	1.5	0.4	1.1	-1.0	1.8	0.6	1.2	-1.7
SK	0.4	0.4	0	-0.5	0.5	0.5	0	-1.1
FI	1.6	0.4	1.2	0.0	2.7	0.6	2.3	-0.4
SE	1.7	0.5	1.2	0.0	2.7	0.9	1.8	0.0
UK	1.9	1.7	0.2	-0.2	0.5	0.3	0.4	-0.6
EU-27	1.5	1.1	0.4	-0.4	1.4	0.6	0.9	-0.7

* T- temporary measures, P – permanent measures. Differences are due to rounding effects.
Source: Adapted from EC (2010d)

Several points can be made:

- In general, consolidation measures were much larger than stimulus measures so that the net effect on the budget balance has been positive
- In New Member States (NMSs) which were deeply affected by the crisis and confronted by liquidity crises (sudden stops), such as Romania, Hungary, or the Baltics, consolidation measures prevailed. The scope of fiscal stimulus was reduced in all these countries. Temporary stimulus measures[9] were also favoured instead of permanent measures.

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[9] *Such as financial aid programs for medium-sized enterprises, financial incentives for companies which hired new employees, etc.*

- Consolidation measures tended to be more pronounced in 2010 compared to 2009 as the magnitude of needed official adjustment became more evident. 2010 was also the year that triggered a sovereign debt crisis in the EMU.

Except Hungary, NMSs do not have large public debts. But budget deficits have gone up dramatically in the wake of this crisis. Moreover, not a few NMSs were running meaningful structural deficits prior to the crisis. Subsequent to the crisis, a few countries, the Baltic countries, Hungary, Bulgaria and Romania among others, were forced to implement fiscal consolidation programs due to the impairment of economic growth --against the backdrop of a highly unfriendly external environment that has been entailed by the turmoil in financial markets. But, as Becker et al (2011) note, fiscal consolidation has to take into account the risk of adding public deleveraging to the ongoing private deleveraging, a factor which could harm economic recovery and future economic growth.

1.1 Tax Sensitivity to the Business Cycle

Economic growth plays an important role in the evolution of tax revenue ratios[10]. Higher growth tends to increase tax receipts while recessions decrease them. Between 1999 and 2002 tax revenues in the EU fell, as economic activity slowed down, but subsequently rose again until 2007, before the current crisis reversed, once again, this trend. However, once the effect of the business cycle is removed, the data shows that there was almost no structural increase in the overall tax ratio, this appears to have been rather flat throughout the period. Cyclical factors contribute decisively to fluctuations observed in tax ratios data. In fact, cyclically adjusted revenues were even marginally higher, about 1%, in 2003 than in 2007 (EC, 2010b). This marginal fall could be attributed to corporate income tax cuts during the boom years.

The deterioration of economic conditions, starting with 2008, impacted negatively tax revenues, which reached their lowest level since 1999. Thus, the apparent increase incurred during 2005-2007 period in EU revenue tax ratios was due to the exceptionally good global economic situation. In fact, structural tax revenues have been falling markedly over that period.

Tax revenue sensitivity[11] is an important parameter because it allows to establish a link between tax revenues and economic activity. Table 1.2 below presents estimates of tax revenue sensitivity in the EU countries:

Table 1.2

Tax Revenue Sensitivity in EU

Member State	Tax Revenue Sensitivity	Member State	Tax Revenue Sensitivity	Member State	Tax Revenue Sensitivity	Member State	Tax Revenue Sensitivity
BE	0.47	EL	0.42	LU	0.48	RO	0.28
BG	0.35	ES	0.38	HU	0.45	SI	0.42

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[10] Tax revenue ratio measures the proportion of budgetary tax revenues in GDP.
[11] Tax revenue sensitivity is an indicator that measures how tax revenues are influenced by economic activity.

Member State	Tax Revenue Sensitivity	Member State	Tax Revenue Sensitivity	Member State	Tax Revenue Sensitivity	Member State	Tax Revenue Sensitivity
CZ	0.36	FR	0.44	MT	0.35	SK	0.27
DK	0.50	IT	0.49	NL	0.39	FI	0.41
DE	0.40	CY	0.39	AT	0.43	SE	0.48
EE	0.29	LV	0.26	PL	0.33	UK	0.40
IE	0.36	LT	0.26	PT	0.41	EU-27	0.39

Source: OECD, Commission services & 2010 Taxation Trends

Several remarks can be drawn from the data above:

- Countries showing the highest sensitivity of tax revenues to economic developments are Denmark, Italy, Sweden and Luxembourg. Here economic growth has been either dismal, as in the case of Italy, preventing disparities between structural tax and unadjusted tax revenues emerging, or tax policies have been pursued wisely, paying attention to the cyclically adjusted tax values. Thus, these countries did not have, in general major problems in financing their deficits in the face of the slowdown in economic growth.
- The Baltic countries, Romania and Slovakia exhibit the lowest response to the economic cycle. However, even though these countries present the lowest tax sensitivity, tax revenues in most of them were impacted dramatically by the financial crisis since the cyclical component was extremely high – vis-à-vis average EU-27. All of these countries experienced higher growth rates in the years prior to the crisis, thus leaving them exposed to the rapid deterioration in tax revenues when economic growth fell abruptly.

1.2 Tax Policy Response in the EU

The tax policy response across the EU members during the current financial crisis has been quite complex and has been influenced by the initial budgetary conditions, the structure of the economy as well as the extent to which each individual economy was affected by the crisis. Automatic stabilisers played their role but the degree to which they did so varied in each country. In general EU governments took an activist stance and the course of action for each individual country has been influenced by a series of factors such as:

- The extent to which the provision of social services (pensions, health care) was provided by the public sector. Some EU countries have a share of these services provided by the private sector, for these the budgetary impact was smaller.
- Technical factors. Some EU members provide social or economic assistance via tax reductions rather than direct government spending (EC, 2010c). Social transfers are exempted from taxes and social security contributions in some EU countries but not in others.
- The shares of direct and indirect taxes in the overall tax structure. A tax system where direct taxes have a large share tends to allow for higher redistributional effects. Thus, economies where redistributional effects are larger, have been inclined to use more direct taxes, which are also more 'visible' to the electorate.

- There is a noticeable distinction between the old EU members and the new ones when it comes to the structure of tax rates. The former tend to raise almost equal share of revenues from direct taxes, indirect taxes, and social security contributions, while the latter have a lower share of direct taxes.

Table 1.3 below summarises the tax measures taken by the EU members during the current financial crisis.

Table 1.3

Tax Measures in the EU

		Statutory Rate	Base or special regimes
		Corporate Income Tax	
Increase		LT, HU, PT	BE, BG, IE,EL (09-13), IT, LT (09-11), HU,
Decrease		CZ, EL(10-14),HU,LU,SI,SE,LT	AT,BE (10-11), ES (09-11), CY, IT, LT,N SE,SK, UK(09-11)
Personal Income Tax			
Increase		EL,IE,FR,LV,PT,SI,UK	DK,EE,EL,ES,IE,HU,LV,LT,PT
Decrease		AT,DE,DK,FR,FI,HU,LV,LT,RO	AT,BE,BG,DE,DK,ES,FI,HU,MT,IE,IT,LV,L O,SK,SI,SE
		Social Security Contributions	
Increase		CY,EE,HU,PT,RO,SK,FI	BG,CZ,EE,LV,LT
Decrease		BG,CZ,HU,RO,SE	FI
		Value Added Tax	
Increase		CZ,EL,ES,EE,HU,LV,LT,FI	EE,LV,LT
Decrease		IE,FI,UK (08-09)	BE,DE,CY,FR,LT,MT,HU,NL,RO,SI,FI
		Excise Duties	
Increase		BG,DK,EE,EL,ES,IE,HU,LV,LT, PT,PL,RO,SI,FI	DG,FI,EL,LV
Decrease		IT,LT,PL,SK	BG

Source: European Commission (2010a).

The EU members' response varied significantly. It can be observed that, within all main tax categories, some EU member countries introduced both tax increases and tax cuts over the past two years. This behaviour could be attributed to responses to the different phases of the crisis or the implementation of changes within the same tax component such as reducing tax breaks while introducing new incentives.

Several remarks can be made on the EU tax responses to the financial crisis.

- Some countries which had fiscal space implemented cuts in corporate and personal income taxation. Although this measure was not of an immediate help to companies which were already making losses, the government revenue loss was deemed to outweigh the benefits of the positive signal to investors[12].

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[12] There have been other measures adopted by many EU countries, aimed at supporting business investment, such as favourable depreciation allowances or investment tax credits. Incentives have been usually granted for a limited period of time.

- Tax increases were prevalent in excise duties and VAT. With respect tot the latter, the tendency has been to raise the base rates.
- Support of households purchasing power. The reduction of personal income tax was usually implemented through an increase in household allowances rather than lowering rates. Also, in a few cases top rates have been raised, following fairness concerns.
- Social security contributions have generally been increased.

Although the majority of the measures adopted has had an estimated budgetary impact of well below a half point of GDP*,* the overall impact of the adjustment turned out to be higher *ex post*. Adjustments in the tax rate sometimes ended up to around 1% of GDP. Reforms of the VAT, the PIT or the reforms of social security, as well as some excise rate increases, have often involved large amounts in terms of GDP.

Many countries have pursued significant changes in the tax mix. Bulgaria, for instance, shifted the burden of taxation from social contributions to indirect taxes[13]. In Latvia and Slovenia direct tax increases almost compensated for decreases in social contributions and indirect taxes. In Greece, a strong decline in both direct and indirect tax revenues was partly offset by increases in social security contributions.

2. The Romanian Experience

We examine the tax revenues performance in Romania during the last two decades. We present briefly tax revenue dynamics and tax policies implemented during transition and up to 2008, the end of the expansionary cycle. Then, we analyse main stylised facts of tax revenues in terms of size, statutory tax rates, efficiency of tax collection and taxpayers' response during the expansionary cycle between 2000 and 2008. We also provide a simple model for estimating the dimension of the shadow economy. Last, we present the tax policy response during the current crisis and estimated tax revenues for the following two years.

2.1 Tax revenue dynamics (1990-2008)

Over the last twenty years, after the economy started its transition from central planning to market economy tax revenues exhibited a declining trend. They declined abruptly up to 1994, fell again mildly up to 1999 being influenced by the electoral cycle thereafter. The total budget revenue, as percentage of GDP, registered a maximum at 37.5% in 1992 before reaching the pre-crisis maximum of 32.7% in 2006-2007 (Figure 1). The tax revenue followed an identical path declining from 33.5% in 1992 to 27.8% in 1998 and reaching 30% in 1999 (Figure 2).

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[13] *Indirect taxes could be a larger source of tax revenue if net migration is negative (i.e. out-migration is larger than in-migration) or when a part of working contracts in the economy are not officially registered.*
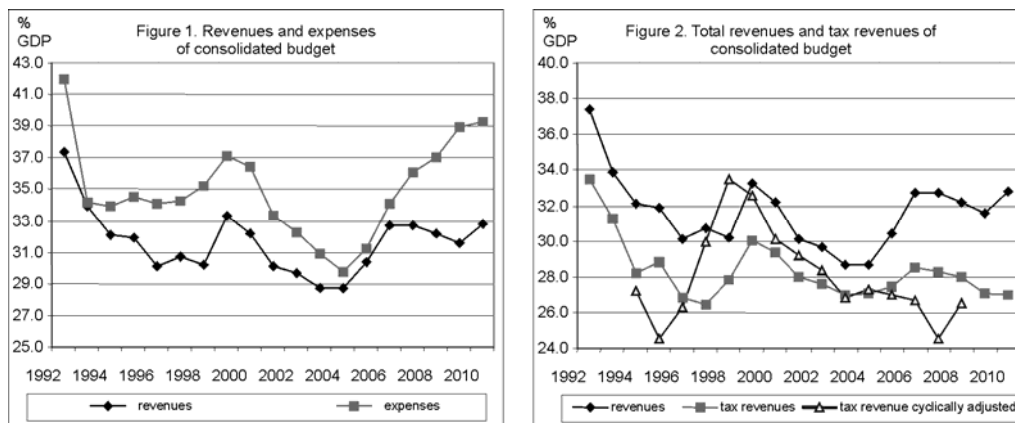
Source: IMF (1998), IMF (2006), Ministry of Public Finance, European Commission (2011).

The almost a decade long decline of the consolidated budget revenue in the 90s is the result of the adjustment of the public sector to the new emerging economic environment. Several causes/explanations were advanced.

The first was that a disorganisation effect à la Blanchard (1997) due to the abolishment of the centralised coordination resulted in lower tax collection[14]. Departing from an economy almost totally state owned, in just nine years around 61% of GDP was produced by privately owned firms.

The second cause was the formidable shrinking of the tax base. The GDP was 83% of the 1989 level in 1998 and fully recovered only in 2002. The number of employees, the main segment of taxpayers, has declined by 35% between 1989 and 1998.

The third cause was successive tax rate cuts, downward adjustments in income tax brackets, the many tax exemptions and tax holidays encouraging the perpetuation of *soft budget constraints*[15]. The downsizing of the state was an anticipated process for all countries from Central and Eastern Europe. von Hagen and Traistaru (2004) estimated the government expenditure-to-GDP ratio as a linear function of trade-to-GDP ratio and GDP per capita based on a data set including 22 OECD, 11 Latin American and 10 Central and Eastern European countries from 1998. They showed that given the openness and per capita income levels in Central and Eastern Europe, the governmental sectors of these countries were oversized compared to the other countries in the sample and a process of downsizing relative to GDP was to occur.

The increase during the 1997-1999 recession and the decline during the 2000-2008 expansionary period of the cyclically adjusted tax revenues[16], indicate an enhanced

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[14] *See also Daianu and Vranceanu (2000).*
[15] *Kornai used first this notion for the case of command systems which were seen as* shortage economies *(1980).*
[16] *This is an analytical construct reflecting uniquely implemented discretionary tax policies and ignoring the effects of the growth cycle. To derive the cyclically adjusted tax revenues the European Commission relies on a methodology based on elasticities with respect to the output gap of different component of tax revenues (personal income tax, corporate income tax, social contribution and indirect taxes).*

pro-cyclical fiscal policy (Fig. 2). It appears that over these years, the authorities were able to reverse the declining trend of tax revenues twice: in 1997 and 2005. On the first occasion the adopted measures led to two years of tax revenues gain equivalent to 7% of GDP which was lost between 1999 and 2004. On the second occasion, the tax revenues gain was equivalent to just 1% of GDP and lasted only one year.

2.2 Stylised Facts of Current (2000-2008) Tax Revenues[17]

The analysis focuses on the tax revenue dynamics during the expansionary cycle between 2000 and 2008 and tries to capture effects of the introduction of the flat income and profit tax. For this purpose the period is split into pre 2005 and post 2005; features of the tax revenue evolution in comparison to EU27[18] and NMSs are presented[19] (Table 2.2.1). The pre 2005 (2000-2004) period is characterised by a standard VAT rate at 19%, a progressive personal income tax (PIT), statutory corporate income tax (CIT) at 25% and declining social security contribution (SSC) rate from 60% to 49%. During this period the GDP/capita in PPS increased by 10.3% each year, the number of employees by 0.2%. The tax revenues per GDP declined by 2.6% each year, while the cyclically adjusted tax revenue rates declined by 4.8%. The period 2005-2008 witnessed an impressive growth, the GDP/capita in PPS increased by 14% each year, the number of employees by 1.7%. However, although the tax revenues –to-GDP increased by 0.2% yearly, the cyclically adjusted tax revenue-to-GDP declined by 3.2% yearly. The tax code of the period was characterised by the same standard VAT rate from pre 2005, a flat PIT and CIT at 16% and a declining SSC rate from 49% to 41.8%. EU-27 and NMSs followed the same trends but with slower dynamics both pre 2005 and post 2005.

Table 2.2.1

Main Macro Indicators in Romania, EU-27 and NMSs

	Pre 2005			Post 2005		
	2000	2004	Annual % change	2005	2008	Annual % change
Romania						
GDP/capita PPS	5000	7400	10.3	7900	11700	14
Employees, m	4.37	4.4	0.2	4.5	4.74	1.7
Tax revenue/GDP	30.2	27.2	-2.6	27.8	28	0.2
Tax revenue/GDP cyclically adjusted	32.6	26.8	-4.8	27.3	24.8	-3.2
EU-27						
GDP/capita PPS	19100	21700	3.2	22500	25100	3.7

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[17] *The analysis is based on data from European Commission, which uses ESA95, available for the period 1995 and 2009. The difference between the tax revenue-to-GDP ratio computed by the European Commission and the tax revenue-to-GDP ratio from the IMF country reports used in Fig. 2 from Section 2.1 ranges between 0.1% and 0.9%.*

[18] *Weighted average, before 1998 weighted average in EU-25 according to EC(2010).*

[19] *Simple average of the figures for Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Slovenia and Slovakia according to EC(2010).*

Employees, m	173.7	178.5	0.7	180.4	186.7	1.2
Tax revenue/GDP	40.6	38.9	-1.1	39.2	39.3	0.1
Tax revenue/GDP cyclically adjusted	39.9	38.8	-0.7	39	38.1	-0.8
NMSs						
GDP/capita PPS	9600	12500	6.8	13400	16500	7.2
Employees, m	25.4	25.1	-0.3	25.9	28.6	3.4
Tax revenue/GDP	33.4	33.1	-0.2	33.4	33.9	0.5
Tax revenue/GDP cyclically adjusted	34	32.8	-0.9	32.5	30.5	-2.1

Source: GDP/capita PPS and employees from Eurostat database, tax revenue/GDP and tax revenue/GDP cyclically adjusted from European Commission (2010c).

2.2.1 Tax Revenue Size

The overall tax revenue-to-GDP ratio (including social security contribution) was 27% in 2010, the lowest in the EU-27. In 2009 the Romanian tax revenue-to-GDP ratio was by 8 percentage points below EU-27 average and near 4 percentage points below NMSs average. The gap persisted since 1995 and settled onwards 2000 in the range between 10-12% of GDP relative to EU27 average and 4-6% of GDP relative to NMSs average (Fig. 3). It is worthwhile to mention that the synchronisation of the business cycles tended to stabilise the tax-revenue-to-GDP gap. In 1996-1999 when Romania was in recession and the other European states were growing the tax revenue –to-GDP ratio gap widened. During 2000-2008, when all EU member states were growing the tax revenue-to-GDP ratio stabilised and in 2009 when most of EU member states contracted the tax revenue-to-GDP ratio narrowed.

Romanian tax revenue-to-GDP gap
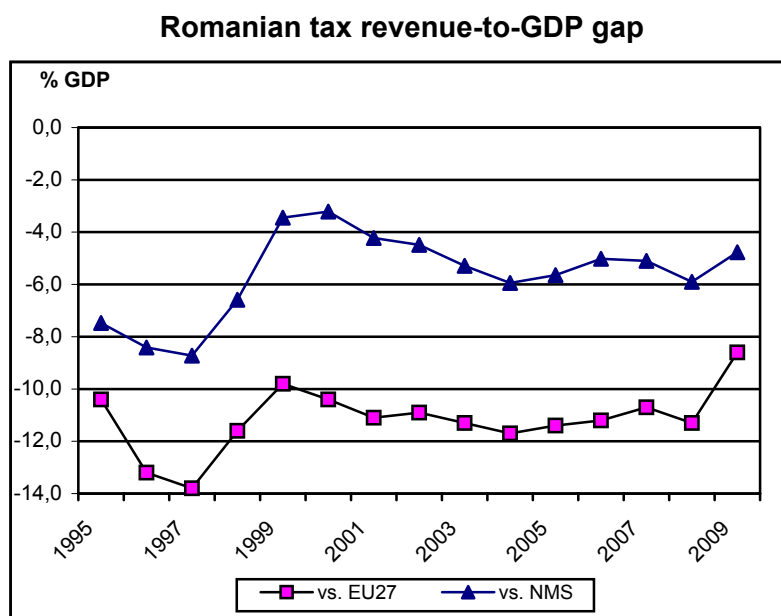
Source: based on European Commission (2010c).

The persistent small tax revenues-to-GDP ratio is puzzling. An argument would be that Romania is a developing country with low GDP per capita (Gupta, 2007). Against this argument pleads the tax revenue-to-GDP ratio in countries from SE Europe with GDP per capital equal or smaller than Romania's (Table 2.2.1.1).

Table 2.2.1.1

Tax Revenue-to-GDP ratio in South Eastern Europe

	GDP/ capita (US$)	2006	2007	2008	2009
		Tax revenue-to-GDP ratio			
Albania	3808	23	23.6	24.3	23.5
Bulgaria	6423	34.1	34.8	33.3	30.6
Croatia	14222	35.1	35.2	35.2	34.1
Macedonia	4515	27.9	27.8	27.4	26.1
Montenegro	6635	35.1	37.38	37.1	35.5
Romania	7500	28.5	29	28	27.9
Serbia	5872	38.2	36.8	35.8	35.5

Source: Albania-IMF 2010 Article IV Consultation Preliminary Conclusion of the Mission March 19, 2010, IMF Country Report 09/73; Bulgaria and Romania European Commission, Croatia-IMF Country Report 10/179 and 9/185, Macedonia IMF Country Report 11/42, Montenegro-IMF Country Report 9/88 and 11/100; Serbia-IMF Country Report 9/158, 10/25 and 11/95.

Bulgaria, Croatia, Montenegro and Serbia are able to collect more tax revenues than Romania by several percentage points of GDP. The small tax revenue to GDP ratio in Romania shows considerable potential for tax collection improvement, unlike in many EU member states, where the tax revenues-to-GDP ratio is much superior.

2.2.2 The Flat Tax and Changes in the Tax Revenue Structure

Development influences the structure of tax revenues (Gordon and Li, 2005b). Poor countries collect less revenue as a fraction of GDP than is collected in richer countries. Gordon and Li (2005a) showed that while developed countries rely on broad based income and consumption tax making little use of tariffs or seignorage as sources of revenue, the poor countries make much less use of broad-based taxes, relying instead on excise taxes, tariffs and seignorage. This section examines changes in the tax revenue structure that have been entailed by the flat tax introduction in 2005. This is done by comparing the average tax structure pre 2005 and post 2005 with the tax revenue structure from EU-27 and NMSs. It is worthwhile to mention that all old EU Member states have progressive personal income tax while six out of the nine NMSs (excepting therefore Poland, Hungary and Slovenia) apply flat rate personal income taxes. The expectation is that the divergences in the tax revenue structure comparative to EU-27 to have strengthened after 2005, while the divergences compared to NMSs to have got milder.

2.2.2.1. Structure by Tax Categories

Out of the three fiscal revenue categories (direct[20], indirect[21] and social security contributions[22]) the revenues collected through indirect taxes are the least pro-cyclical. This is because they tend to evolve proportionally with the output and, therefore, the ratio to GDP should be relatively stable over the cycle. Direct taxes are most procyclical because of the sensitivity of corporate taxes to the business cycle and because of the progressive nature of personal income taxes23. Social security contributions, which are closely related to wage bill, tend to be less responsive to the cycle. Taking into account that the analysed period was a growth period, the above characteristics of various taxes would predict an increased share of direct taxes in total tax revenues at the expense of social security taxes and to a lesser extent of

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[20] *Direct taxes include personal income tax, corporate income tax and other income on capital taxes corresponding to other taxes on holding gains, taxes on receivings from lottery or gambling, other taxes on income, taxes on capital defined as other current taxes and capital taxes.*

[21] *Indirect taxes include Vat type taxes, excise duties and consumption taxes, other taxes on products, other taxes on production.*

[22] *Social security contributions include compulsory employers' actual social contribution, compulsory employees' social contribution and compulsory social contribution by self and non-employed persons.*

[23] *According to EC (2010a) the introduction of a flat tax combined with a tax-exempt threshold does not necessarily decrease tax progressivity. When income shocks concentrate in the income region somewhat above the threshold of the flat tax, progressivity could be greater under the flat tax. This is due to the fact that in this region the introduction of a flat tax generates, above the threshold, an increase in the marginal tax and, below the threshold, for very low income, a zero marginal tax rate.*

indirect taxes, other conditions unchanged. Indeed, this is what happened in NMSs. In Romania, the tax system was changed in 2005 and altered the cycle driven expected structural changes (Table 2.2.2.1.1).

Table 2.2.2.1.1

Structure of Tax Revenues by Tax Categories

	Romania				EU-27				NMSs			
	Average 2000-2004		Average 2005-2008		Average 2000-2008		Average 2005-2008		Average 2000-2008		Average 2005-2008	
	%	% GDP	%	% GDP	%	% GDP	%	% GDP	%	% GDP	%	% GDP
Total	100	28.4	100	28.3	100	39.4	100	39.3	100	33	100	33.7
Indirect tax	41.7	11.8	44.4	12.6	34.7	13.7	34.7	13.7	40.2	13.3	41.1	13.9
VAT	23.8	6.7	28.2	8	17.3	6.8	17.6	7	23.4	7.7	24.7	8.3
Excise Tax	11	3.1	10.8	3.1	7.5	3	6.7	2.7	10.5	3.5	10.9	3.7
Import duties	5	1.4	3.1	0.9	4.2	1.6	4.4	1.7	3.2	1.1	2.7	0.9
Other taxes on production	2	0.6	2.3	0.7	5.8	2.3	5.9	2.3	3	1	2.7	0.9
Direct tax	22.3	6.3	21.8	6.2	33.4	13.2	33.8	13.4	23.7	7.8	24.5	8.3
Personal income tax	10.7	3	10.4	3	24.1	9.5	23.6	9.3	16.1	5.3	15.2	5.1
Corporate income tax	10	2.8	10.2	2.9	6.3	2.5	7.2	2.8	6.6	2.2	8.4	2.8
Social security contribution	36.1	10.2	33.8	9.6	32.1	12.7	31.7	12.5	36.1	11.9	34.3	11.6
employers	23.8	6.8	22	6.2	18.4	7.2	18.2	7.2	24.2	8	22	7.4
employees	12.1	3.4	11.3	3.2	10.1	4	9.8	3.9	9.4	3.1	8.9	3
Self-employed	0.2	0.1	0.5	0.2	3.7	1.4	3.7	1.5	2.5	0.8	3.5	1.2

Source: European Commission (2010c)

The post 2005 tax revenue structure changed in Romania and NMSs but not in the EU-27.

• The weight of indirect taxes in total tax revenue increased consistently (the yearly generated revenue was 12.6% of GDP on average) due to VAT, unlike in NMSs, at the expense of social security contribution.
• The weight of direct taxes in total tax revenue declined, unlike in other NMSs where it increased (generated by corporate income tax)
• The weight of social security contributions in total tax revenue declined (the yearly generated revenue was 9.6% of GDP on average) due to smaller share of both employers' and employees' contribution. Although the share of contribution of self employed in total tax revenues rose somewhat, it remained three times smaller than in EU-27 and NMSs.

The tax revenue structure in the pre 2005 period shows that:

- the two main pillars of public finance in Romania are indirect taxes (the yearly generated revenue was 11.8% of GDP on average) and social security contributions (the yearly generated revenue was 10.2% of GDP on average), like in NMSs but unlike in EU-27 where the public finance relies equally on direct, indirect and social security contributions.
- the composition of indirect taxes is similar to that in other NMSs. The only difference is the larger share of import duties, explained by the fact that Romania joined the EU later than most NMSs, except Bulgaria, and therefore trade integration with the EU lagged behind;
- direct taxes (the yearly generated revenue was 6.3% of GDP) are equally generated by personal income tax and corporate income tax, unlike in EU-27 and NMSs where the largest part is generated by personal income tax.
- the largest source of social security contributions is employers' contribution (the yearly generated revenue was 6.8% of GDP on average) as in EU-27 and NMSs. The marked difference compared to both NMSs and EU-27 is the very small contribution of self employed, which suggests that this category remained, basically, outside official taxation.

2.2.2.2. Structure by Economic Function

The structure of tax revenues according to the economic function played by taxes – consumption tax[24], labour tax[25] and capital tax[26] - reveals that the most prominent source of revenue had changed between pre 2005 and post 2005 from labour tax to consumption tax, unlike in EU-27 and NMSs, where labour tax remained the main source of tax revenue all over the period (Table 2.2.2.2.1). The pre 2005 shows that:

- The tax revenue had two pillars with very similar strength –labour tax (the yearly generated revenue was 12.1% of GDP on average) and consumption tax (the yearly generated revenue was 11.1% of GDP on average) – unlike in EU-27 and NMSs where labour tax revenue was the leader exceeding the revenues generated by consumption tax by several percentage points.
- The larger share of revenues generated by consumption tax in total tax revenues both in Romania and NMSs compared to EU-27 is the consequence of a deliberate tax policy to rely on a tax which is considered growth friendly. Otherwise, the role

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[24] *Consumption tax includes value added type taxes, taxes and duties on imports, taxes on products, other taxes on production (taxes on international transactions, taxes on pollution, under-compensation of VAT, poll taxes, expenditure taxes, payments by households for licenses.*

[25] *Tax on labour includes all taxes directly linked to wage and mostly withheld at source, paid by employees and employers including actual compulsory social contribution, all taxes and compulsory social contribution on transfer income (social transfers paid by state and benefits from old age pension schemes) of non-employed persons, where these could be identified.*

[26] *Capital is defined broadly including physical capital, intangible and financial investment and savings. Capital tax includes taxes on business income in a broad sense not only taxes on profits but also taxes and levies that could be regarded as a prerequisite for earning, profit such as the real estate tax or the motor vehicle tax paid by enterprises and taxes on capital stocks of households or their transactions.*

of this tax in total tax revenue would have converged toward the EU-27 average, since the indirect taxes on which it is based is largely harmonized at EU level.

- More than half of the tax on employed was paid by employers unlike in EU-27 where employees are more burdened or in NMSs where the burden is equally shared by employers and employees.
- The non-employed are very little taxed as compared to both EU-27 and NMSs.
- The share of the tax on capital in total tax revenue was higher than in NMSs but lower than in EU-27. The annual tax revenue on capital was 5.2% of GDP on average. The largest component of the tax revenue on capital originated from income of corporations (55% compared to 34% in EU-27 and 49% in NMSs). Self employed contribution to tax revenue on capital was minimal compared to both EU-27 and NMSs and was offset by the unusually large (by EU27 and NMSs standards) contribution of households. The capital tax revenue-to-GDP ratio followed an ever declining path in Romania from a value equal to the EU-27 average in 1995 and converged to the NMSs average in 2002. The reason was that the preparation of the accession into EU imposed the gradual liberalisation of the capital account and the free cross-border movement of capital flows.[27] Through lower taxes on capital[28] the EU candidate countries tried to attract capital and thereby boost real convergence. The structure of tax revenue on capital indicates that

Table 2.2.2.2.1

Structure of Tax Revenues by Economic Function of Taxes

	Romania				EU-27				NMSs			
	Average 2000-2004		Average 2005-2008		Average 2000-2004		Average 2005-2008		Average 2000-2004		Average 2005-2008	
	%	% GDP	%	% GDP	%	% GDP	%	% GDP	%	% GDP	%	% GDP
Total	100	28.4	100	28.3	100	39.4	100	39.3	100	33	100	33.7
Tax on consumption	39.2	11.1	41.8	11.9	28.3	11.2	27.9	11	37.4	12.3	38.4	13
Tax on labour	42.5	12.1	40.6	11.5	50.7	20	49.7	19.5	48.8	16.1	45.7	15.4
Tax on employed labour, of which	42.3		40.4		46.4		45.2		47.7		43.3	
- paid by	23.7	6.8	22	6.2	19.8	7.8	19.8	7.8	24.3	8	22.6	7.6

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[27] *Piatkowski and Jarmusek (2008) showed that changes in the average of other countries' CIT rate in Eastern Europe had strong statistical significance in explaining changes in CIT rate in individual countries. A one pp change in the average of other countries statutory CIT rate resulted in a 0.4-0.5pp change in CIT rate in a particular country.*

[28] *The evolution of effective marginal and average tax rates on corporation between 1998 and 2009 (EC, 2009b) indicates an abrupt declining path for both Romania and NMSs. In pre 2005 compared to 1998-1999 the effective marginal tax rate on corporate declined by 9.5pp and the effective average tax rate by 11.5pp. The corresponding declines in NMSs were much milder, by 4.7pp and 5pp respectively. Post 2005 the decline continued, compared to pre 2005 the effective marginal tax rate lost another 5.6pp, while the effective average tax rate 7.9pp in Romania. Both declines were milder than those registered by NMSs. Post 2005 in Romania the effective marginal tax rate was still above the NMSs rate, but the effective average tax rate ended below the NMS rate by 2pp.*

	Romania				EU-27				NMSs			
	Average 2000-2004		Average 2005-2008		Average 2000-2004		Average 2005-2008		Average 2000-2004		Average 2005-2008	
	%	% GDP	%	% GDP	%	% GDP	%	% GDP	%	% GDP	%	% GDP
employers												
-paid by employees	18.7	5.3	18.3	5.2	26.6	10.5	25.5	10.1	23.4	7.7	20.7	7
Tax on non-employed labour	0.1	0.04	0.2	0.05	4.3	1.7	4.2	1.7	1.1	0.4	2.4	0.8
Tax on capital	18.2	5.2	17.6	5	21.2	8.4	23	9.1	14	4.6	15.6	5.3
Capital and business income	14.5	4.1	14.0	4.0	14.3	5.6	15.8	6.3	11.2	3.7	12.6	4.3
-income of corporations	10.1	2.9	10.2	2.9	7.2	2.9	8.2	3.2	6.9	2.3	8.4	2.8
-income of households	3.7	1.0	2.6	0.8	2.1	0.8	2.5	1.0	0.7	0.2	0.7	0.3
-income of self-employed	0.6	0.2	1.1	0.3	5.0	2.0	5.1	2.0	3.6	1.2	3.4	1.2
Stocks of capital/wealth	3.7	1.1	3.6	1.0	6.9	2.7	7.2	2.8	2.8	0.9	3.0	1.0

Source: European Commission (2010c).

Post 2005, the consumption tax revenue-to-GDP ratio, at 11.9% on average, exceeded the EU-27 average but lagged behind the NMSs average, the capital tax revenue-to-GDP ratio at 5% on average reached parity with NMSs average and around half of the EU-27 average, while the labour tax revenue-to-GDP ratio lagged behind both NMSs average and EU-27 averages by 8pp and 4pp respectively. The structural changes of the period point to the followings

- The share of the consumption tax in total tax revenues increased at the expense of both capital and labour tax, unlike in NMSs where both the share of consumption and capital tax increased. The changes in EU-27 favoured capital taxes at the expense of both consumption and labour taxes.
- The contribution of self-employed to tax revenue on capital almost doubled but still remained far below the contribution of self-employed in NMSs and EU-27.
- The lower share of labour taxes revenues was due to the reduced share of labour taxes paid by employers. In NMSs both employers and employees' labour tax share declined but the share of non-employed labour tax increased. In EU-27 the share of the labour tax paid by employees declined. It looks like that the tax burden has been reduced for the scarcest resource in the economy, the capital in Romania, labour in EU-27 and both in NMSs.
- Taxes on non-employed labour are almost non-existent post 2005 as pre 2005. These taxes brought 1.7% of GDP in EU-27 and 0.8% of GDP in NMSs (the double of the level registered pre 2005).

2.2.3 Legal Tax Rates and the Tax Burden

The low tax revenues might be due to low tax rates. This possibility is examined by comparing the four main tax rates, which generate 84% of the total tax revenue, with

the EU-27 average and NMSs. At the first sight CIT and PIT rates are below the EU27 and NMSs average, VAT rate is about the same and SSC level is above both EU27 and NMSs averages (Fig.4). Compared to Bulgaria the tax rates are substantially higher whereas the collected tax revenues are smaller by near 1 pp.

Figure 4

Legal tax rates, 2009
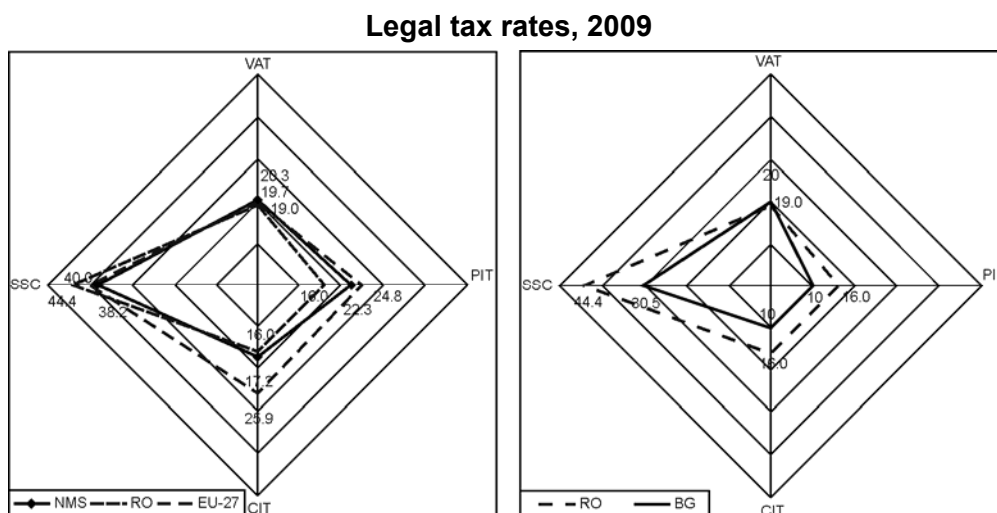
We compute the notional tax revenue (Table 2.2.3.1) by applying each of the above four statutory tax rates to their corresponding tax base (compensation of employees for PIT[29] and SSC, gross operating surplus for CIT and final consumption for VAT). According to the notional tax revenue-to-GDP ratio Romania has the second smallest tax burden after Bulgaria. The collected tax revenue-to –GDP generated by the four main taxes is smaller than in Bulgaria by 0.7pp. Since Bulgaria's total tax revenue-to - GDP was larger by 2.6pp than Romania's in 2009, the main source of the difference and the strength of Bulgarian fiscal position reside in the tax revenue generated by excise taxes. The gap between notional tax revenue-to-GDP ratio and the collected tax revenue-to –GDP ratio is middle sized, indicating that the collection/evasion efficiency is neither the largest nor the smallest among NMSs.

Table 2.2.3.1

Notional and Collected Tax Revenue-to-GDP ratios in 2009

	RO	BG	CZ	EE	LV	LT	HU	PL	SI	SK	EU27
VAT rate	19	20	19	18	21	21	22.5	22	20	19	19.7
Notional tax revenue/GDP	15.3	15.9	13.8	13.3	17.1	19.1	17.0	17.5	15.1	15.4	15.9

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[29] *PIT includes taxes on several types of income (investments, revenues from cession of goods use, prizes and gambling, pensions, revenues from independent activities, transfers of real estate properties from the personal patrimony) besides wages, therefore compensation of employees might understate the tax base. However, the tax revenue obtained from wages represented the largest and increasing weight in PIT generated revenues: 68% pre 2005 and 73% post 2005 of the total tax revenue generated by PIT.*

	RO	BG	CZ	EE	LV	LT	HU	PL	SI	SK	EU27
Collected tax revenue/GDP	6.8	10.3	7	9	5.8	7.2	8.4	7.3	6.8	8.4	7.4
gap	8.5	5.6	6.8	4.3	11.3	11.9	8.6	10.2	8.3	7.0	8.5
PIT rate	16	10	15	21	26	21	18-36	18-32	16-41	19	24.8
Notional tax revenue/GDP	6.5	3.8	6.7	10.8	12.2	9.4	12.7	9.2	15.1	7.4	12.4
Collected tax revenue/GDP	3.7	3.1	3.7	5.7	5.6	4.1	7.5	4.7	6.0	2.9	7.5
gap	2.8	0.7	3.0	5.1	6.6	5.3	5.2	4.5	9.1	4.5	4.9
CIT rate	16	10	19	21	15	20	16	19	25	19	25.9
Notional tax revenue/GDP	8.0	4.9	8.9	7.4	6.6	9.1	6.4	9.7	8.7	10.0	10.0
Collected tax revenue/GDP	2.5	2.7	3.7	1.9	1.5	1.8	2.2	2.3	2.3	3.0	2.9
gap	5.5	2.2	5.2	5.5	5.1	7.3	4.2	7.4	6.4	7.0	7.1
SSC rate	44.35	30.5	45	33	33	34	42.5	39.4	38.2	48.6	40
Notional tax revenue/GDP	18.1	11.5	20.0	17.0	15.5	15.2	19.3	14.5	20.3	18.9	20.0
Collected tax revenue/GDP	10.4	8.0	15.4	13.4	8.8	12.8	13.0	11.3	15.4	12.8	12.2
gap	7.7	3.5	4.6	3.6	6.7	2.4	6.3	3.2	4.9	6.1	7.8
Total notional tax revenue/GDP	48.0	36.1	49.3	48.5	51.4	52.6	55.5	50.9	59.3	51.7	58.3
Total collected tax revenue/GDP	23.4	24.1	29.8	30.0	21.7	25.9	31.1	25.6	30.5	27.1	30.0
Gap	24.6	12.0	19.5	18.5	29.7	26.7	24.4	25.3	28.8	24.6	28.3

Source: notional tax revenue/GDP own computation based on Eurostat data, collectedtax revenue/GDP from Romanian Fiscal Council (2011).

In order to separate effects of the flat income tax from effects of recession we compute the notional tax revenue and collected tax revenue generated by CIT, PIT and VAT separately for pre and post 2005 periods (Table 2.2.3.2). We find the following characteristics for the pre 2005 interval:

- The notional tax revenue relative to GDP ratio was just by 1pp higher than the NMSs average due to the larger notional tax revenue for CIT. The collected tax revenue was however 3 pp lower than the NMSs average pointing to a similar difference in the gap between notional and collected tax revenue relative to GDP.
- The largest gap between the notional and collected tax revenue occurred for CIT, but compared to NMSs the largest difference in the gap was registered for PIT, signalling a very inefficient tax collection in both cases.

Post 2005 there were significant changes

- The notional tax revenue-to-GDP was below the NMSs average by 2.5pp, due especially to the notional tax revenue –to-GDP ratio associated to PIT, which was by almost 4pp below the NMSs average. Indeed, the large reduction in the

statutory PIT rate was not compensated by the rise of the tax base and therefore the notional tax revenue-to-GDP ratio halved.

- The notional tax revenue-to-GDP ratio associated to CIT declined by 64% compared to pre 2005, while the CIT rate declined by only 36%. After the lower CIT rate the tax base shrank as well.
- The gap between the notional and collected taxes fell below the NMSs average for both PIT and CIT, but went beyond the NMSs average for VAT.

Table 2.2.3.2

Notional and collected tax revenue, pre 2005, post 2005 and in 2009

	Notional tax revenue/GDP, annual average			Collected tax revenue/GDP, annual average			Gap		
	Pre 2005	Post 2005	2009	Pre 2005	Post 2005	2009	Pre 2005	Post 2005	2009
CIT									
NMSs	11.2	8.5	8	2.2	2.8	2.4	9	5.7	5.6
RO	12.7	7.9	8	2.8	2.9	2.9	9.9	5	5.1
PIT									
NMSs	11.7	10.6	9.7	5.3	5.1	4.8	6.4	5.5	4.9
RO	11.3	6.3	6.5	3	3	3.7	8.3	3.3	2.8
VAT									
NMSs	16.3	15	16	7.7	8.3	6.5	8.6	6.7	9.5
RO	16.2	16	15.3	6.7	8	6.8	9.5	8	8.5
CIT+PIT+VAT									
NMSs	39.2	33.8	33.7	15.2	16.2	13.7	24	17.9	20
RO	40.2	30.2	29.8	12.5	13.9	13.4	27.7	16.3	16.4

Source: notional tax revenue/GDP own computation based on Eurostat data, collected tax revenue/GDP pre 2005 and post 2005 from European Commission (2010c), collected tax revenue/GDP 2009 from Romanian Fiscal Council (2011).

2.2.4 Implicit Tax Rates[30] and Tax Collection Efficiency

The implicit tax rate (ITR) computed for a given tax type is a backward looking effective tax rate which if applied to the chosen tax base gives the amount of collected tax revenues. The ITR for consumption[31] was stable since 2005 at around 18% but below both the EU-27 and the NMSs average. The tax rate gap was 2.8pp compared to EU27average and 3.8pp compared to NMSs average. However, comparing the consumption tax –to-GDP ratio with the implicit consumption tax rate reveals that one percentage point of implicit consumption tax brought one-sixth percentage point of GDP above both EU-27 (0.55pp) and NMSs (0.658pp) averages.

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[30] *Implicit taxes can be computed for each tax type as the ratio of total tax revenue of that tax type to a proxy of the potential tax base defined using the production and income accounts of the national accounts.*

[31] *Computed in EC (2010c) using as proxy for the potential tax base the final consumption expenditure of households on the economic territory of the country.*

The ITR on labour[32] has been declining continuously from a maximum equal to EU-27 average reached in 1999. In 2008 it was below the EU-27 average by 7pp and below NMSs average by 4.4pp. One percentage point of the implicit tax rate brought one-fourth percentage point of GDP below EU-27 (0.54pp) and NMSs (0.63pp) averages.

The implicit tax-to-legal tax ratio measures tax collection efficiency and shows how much of the potential tax revenue, given the proxy for the tax base chosen, was really collected. The implicit tax-to-legal tax ratio (Fig. 5) computed (see Box 1) for four principal taxes –VAT, households' income tax, corporate income tax and social security contribution- situates Romania below NMSs for VAT and social security contribution.

Box 1. Methodological notes

ITR for VAT, social security contribution, PIT and CIT were computed using Eurostat database on national accounts and main tax aggregates.
ITR for VAT is computed as the ratio between value added type taxes and household final consumption expenditure.
ITR for social contribution is computed as the ratio between actual social contribution and compensation of employees;
ITR for PIT is the ratio between taxes on individual or household income plus taxes on other income and compensation of employees. Taxes on individual or household income do not include taxes on profit and holding.
ITR for CIT is the ratio between taxes on the income or profits of corporations including holding gains and gross operating surplus and gross mixed income.
Household final consumption expenditure, according to the methodology of national accounts, includes all purchases of goods and services made by households and covers goods and services purchased from the market and own-supplied, the later representing the formal economy.

The least efficient tax collection is the corporate income tax. Households' income tax collection registered a significant improvement since 2006 catching up with the efficiency of VAT and social security contribution collection: little above half of the potential. Corporate income tax is collected in a proportion of 33% of potential. The switch to the flat tax pushed the dependency of public finances on taxes with the highest compliance but still below the corresponding compliance rates in NMSs. The low implicit tax rate might have several explanations: first, the legal tax rate in Romania is smaller than the legal tax rate in NMSs; second, reduced tax rates (VAT and PIT in non-flat-tax-countries); third, there are more tax exemptions and loopholes and more tax avoidance possibilities in Romania with negative impact on the tax base; fourth, the efficiency of tax collection is much lower in Romania than in other NMSs. Some of these possibilities are examined next.

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[32] *Computed in EC (2010c) using as proxy for the potential tax base the compensation of employees working in the economic territory defined as total remuneration, in kind or cash, payable by an employer to an employee in return for work done (includes gross wages and employers' contribution to social security as well as to private pensions and related schemes.*

Figure 5

ITR-to-LTR ratio
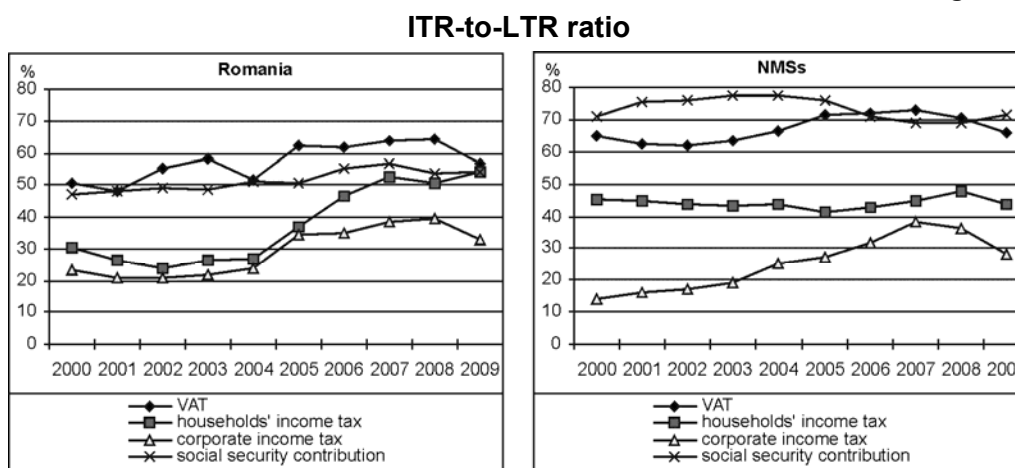
Source: own computation based on Eurostat definitions and data.

2.3 Taxpayers

According to the National Authority for Fiscal Administration 7.7m taxpayers were registered, out of which 1.3m companies, in 2009. The voluntary payment compliance[33] improved from 77.4% in 2009 to 78.9% in 2010, while the voluntary registration compliance[34] improved from 83.9% to 84.6%. Around one quarter of those who are liable to pay taxes do not pay.

The burden of direct taxes and social security contributions falls almost equally on individuals and companies. The share of taxes paid by individuals in direct taxes and social security contributions taken together was 48.2% (EU-27 56.2% and NMSs 47.5%) in 2009 EC, 2011). The tax paid by individuals-to-GDP ratio fluctuated between 5% and 7% from 1997 to 2008 and climbed to 8% in 2009 being by 5 percentage points below the EU-27 average and 1 percentage point below NMSs average. The tax paid by companies-to-GDP ratio after o period of high volatility between 1995 and 2000 embarked on an abrupt declining path up to 2002 and stabilised thereafter at 9%. In 2008, another declining phase followed leading the corporate income tax-to-GDP ratio to 8.5% in 2009 compared to 10% in both NMSs and EU-27. Studies show (EC, 2010c) that income taxes are pro-cyclical, while social security contributions are rather countercyclical. The cyclical nature of income tax and social contributions taken together depends on the compounded sensitivity to the cycle of both. In case of employees the counter-cyclicality of social security contribution more than offset the pro-cyclicality of income tax, while in the case of companies the effects work in the other way round.

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[33] *The share of tax revenue in total tax revenue originating from taxpayers paying all their tax contribution in time.*

[34] *The share of taxpayers voluntarily submitting their income statement in the total estimated number of taxpayers.*

2.3.1 Households[35]

Around 7.4m households were registered in Romania in 2009. 37% of total households were with an employed household head (employee households), 44% with a retired household head (retiree households)36 and 8% with an agricultural worker as household head (agricultural households)[37]. 77% of taxes paid by individuals were the contribution of employee households, while the retiree and agricultural households contributed by 17% and 1.5% respectively in 2009. What did determine this uneven distribution of tax burden among households? The explanation is revealed by the structure of households' budget.

Households' income has two main components: money income and in kind income. The money income consists of gross salaries, income from independent activities, income from social provision[38] and income from proprietorship. The income in kind consists of equivalent value of free or lower price provisions from economic units and the equivalent value of consumption of agricultural products from own resources. The structure of personal income tax revenue shows that the main contributors are the employees, wage tax representing 68.3% of total personal income tax revenue pre 2005 (on average over the 4-year-period before 2005) and 73.5% post 2005 (on average over the 4-year-period after 2004). Pensioners and agricultural workers are little taxed. Pension tax revenue represented 0.6% pre 2005 and 1.3% post 2005 in total personal income tax revenue. The tax revenue from agricultural income is like non-existent (the annual revenues in the last decade being below 0.01% of GDP). This figure should be judged against the share of agriculture in GDP, which fluctuates in a range of 8-12%. This situation contributes to the low level of tax revenues in Romania. The average annual share of gross salaries in total income of the average household was 43% pre 2005 and 50% post 2005 (Table 2.3.1.1). Although, the share of gross salaries in total households' income increased post 2005 for all households, it still varies hugely among different households from 80% in case of employees households to 7.7% and 21% in case of agricultural households and retiree households respectively[39]. The uneven distribution of wage income among households generates the uneven distribution of tax burden among households.

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[35] *The analysis is based on aggregated data from Households Budget Surveys conducted yearly by the National Statistical Institute since 1996.*

[36] *The number of retirees increased by 70% between 2000 and 1991 due to the massive early retirement used as a substitute for unemployment. Between 2010 and 2000 the number of retirees has declined by 10%, reaching 5.5m. The retiree-to-employee ratio has declined from 1.4 pre 2005 to 1.2 post 2005.*

[37] *The other categories were households with an unemployed head (3.9% of the total), households with an own account worker as head (4.9% of the total) and households with an employer as head (1.8% of the total). We decided not to report on these types of households first, due to their size in total households and second due to the fact that the data was not provided in each year's survey.*

[38] *Include unemployment benefits, pensions, children allowances, scholarships and other allowances of social protection.*

[39] *The wage income in retiree and agricultural households is obtained by the other households/ members than the head.*

Table 2.3.1.1

Households' Budget Income Structure

	Total HH		Employee HH		Agricultural HH		Retiree HH	
	Average 2000-2004	Average 2005-2008	Average 2000-2004	Average 2005-2008	Average 2000-2004	Average 2005-2008	Average 2000-2004	Average 2005-2008
Money income								
Gross salaries	43.4	50	77.1	79	6.5	7.7	16.4	21
Independent activities	6.2	6.2	1.5	1.3	22	26.7	4.6	4.8
Social provision	19.6	20.4	4.7	5.6	8.6	14.1	40.9	46.5
Income in kind								
From own agricultural products	24.8	15.7	12.5	8.1	55	43.8	32.5	21.4
Other income	6	7.7	4.2	6	7.9	7.7	5.6	6.3
Total income								
Income-to-GDP/capita	0.4	0.38	0.46	0.43	0.30	0.25	0.40	0.36

Source: Households' budget survey, 2000-2008.

Households' budget income structure by deciles shows how skewed towards the richest 30% of households the tax burden is. Only for these households the share of gross salaries in total income exceeds half, the country average (Table 2.3.1.2). For all deciles, except for the richest, the share of total income in GDP/capita declined post 2005. For all deciles, except the poorest, the share of gross salaries in total income increased post 2005. The implementation of flat tax and the reduction of social security contribution lowered the tax wedge for the employed person with low income from 44% pre 2005 to 41.8% post 2005[40] stimulating work and pulling out some informal activity into formal and taxable activity and thereby raising the tax base.

The tax revenue contribution[41] of the richest household decile[42] in total taxes paid by individuals had a hump shape evolution between 1998 and 2009 with a maximum reached at 41.5% in 2004. After the introduction of the flat income tax rate in 2005, the tax contribution continued to fall up to 33% in 2009. The poorest household decile's tax contribution was 0.5% of the total.

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[40] Source : http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsiem050.
[41] Income taxes and social contributions.
[42] Based on data from households' budget survey organized yearly since 1995.

Households' Budget Income Structure by deciles

	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
2000-2004										
Money income										
Gross salaries	4.9	13.3	20.9	27	34	38.6	44.2	50.8	58.5	66
Independent activities	9.2	9.2	7	6.4	5.3	4.6	4.2	4	4	5.5
Social provision	20.9	24.3	26	26.5	26.3	27.3	25.4	21.5	15.1	6.9
Income in kind										
From own agricultural products	60.9	48.6	41.6	35.6	28.6	23.7	20	16.8	14.4	10
Other income	4.1	4.6	4.5	4.5	5.8	5.8	6.2	6.9	8	11.6
Total income										
Income-to-GDP/capita	0.14	0.21	0.25	0.29	0.33	0.35	0.41	0.48	0.62	1.06
2005-2008										
Money income										
Gross salaries	4.4	15.4	23.6	31.5	38.3	43.7	50.7	58.9	66.8	72.5
Independent activities	13.7	12.8	9.7	8.1	6.7	5.6	4.7	3.8	4.1	5
Social provision	25.5	27.2	29.1	29.1	28.8	28.1	25.5	20.8	14.8	7.6
Income in kind										
From own agricultural products	51.8	38.8	31.2	24.8	19.9	16	12	9.2	7.1	4.3
Other income	4.6	5.8	6.4	6.5	6.3	6.6	7.1	7.3	7.2	10.6
Total income										
Income-to-GDP/capita	0.12	0.18	0.22	0.27	0.31	0.35	0.40	0.47	0.63	1.08

Source: Households' budget survey, 2000-2008.

The middle-income households (5 and 6 deciles) tax contribution share in total was U-shaped with a minimum in 2004. These households contributed to the total individuals' tax by 15% in 2009. Half of individuals' tax burden fell on the richest 30% of households in 1998, then on the richest 20% of households in 2004 before shifting back on the richest 30% in 2009.

Both pre 2005 and post 2005 the social benefit distribution among households was hump shaped. The largest social benefit share from total was directed to the seventh household deciles. The share from the total social benefit received by the richest 3 household deciles was higher than the share from total social benefit received by the poorest household decile and rose post 2005 compared to pre 2005. Taking into account that social benefits include pensions, unemployment benefit, children allowances and other social protection benefits the above distribution might indicate that social benefits are improperly targeted by not favouring the poorest individuals. Nevertheless, the income inequality between the richest and poorest households deciles moderated after the provision of social benefits. Pre 2005 the richest households decile income was higher than the poorest household decile income 4.9 times when the social benefit provision was ignored and just 4.1 times when the provided social benefits were included in the income. Post 2005 the corresponding ratios were 6 and 4.9. The compound effect of flat tax and the provision of social benefit among households raised the inequality.

Households' budget income is spent for consumption representing on average more than half of the budget, taxes and social contributions[43] weighting 14.2% and expenses for agricultural products from own production, mostly untaxed, representing around 17% of the budget post 2005 (Table 2.3.1.3).

Table 2.3.1.3

Structure of Households' Budget Expenditures

	Total HH		Employee HH		Agricultural HH		Retiree HH	
	Average 2000-2004	Average 2005-2008	Average 2000-2004	Average 2005-2008	Average 2000-2004	Average 2005-2008	Average 2000-2004	Average 2005-2008
Consumption expenditures	56.4	62.1	61.2	63.2	35	42.6	54	62.7
Taxes and social contribution	12.9	14.2	21.6	22.5	1.8	2.1	6.3	6.4
Expenditures for agricultural products from own production	25.2	17	13	8.8	55.8	46.7	32.7	22.8
Other expenditures	5.5	6.7	4.2	5.5	7.4	8.6	7	8.1

Source: Households' budget survey, 2000-2008.

This untaxed part of the budget hugely differs among different types of households being the smallest in the case of employee households and the largest for agricultural households. Although the share of this "do it by yourself" activity type diminished post 2005 it remained sizable and creates inefficiency for VAT tax collection. A fiscal policy in which the whole public finance relies mainly on indirect taxes will not create enough

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[43] *Taxes and social contributions include: taxes on wages, taxes on pensions, taxes on independent non-agricultural activities, contributions for pensions, contributions for unemployment benefit, contributions for health insurance.*

revenues unless it creates incentives for the large hidden part of the economy to come into the open. The process started but at a very low speed. A simple computation[44] shows that total households' consumption from own production would represent 6.5% of GDP. Out of this 1% of GDP would represent agricultural households' consumption from own production[45].

The untaxed part of consumption is increasing with poverty (Table 2.3.1.4).

Table 2.3.1.4

Structure of Households' Budget Expenditures by deciles

	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
2000-2004										
Consumption expenditures	41.4	45.6	49.3	52.8	56.9	60.2	61.6	62.3	61.6	57.7
Taxes and social contribution	0.8	2.6	4.2	5.7	7.5	8.9	10.8	13.0	16.1	22.4
Expenditures for agricultural products from own production	52.3	46.0	39.9	34.7	28.5	24.1	20.8	17.9	15.8	11.7
Other expenditures	5.4	5.8	6.6	6.8	7.1	6.7	6.8	6.7	6.6	8.2
2005-2008										
Consumption expenditures	48.2	52.7	56.9	60.5	63.2	65.2	66.6	65.9	65.8	62.7
Taxes and social contribution	0.9	3.4	5.4	7.5	9.5	11.5	13.8	16.4	20.0	24.9
Expenditures for agricultural products from own production	45.5	38	31.2	25.5	20.7	17.1	12.9	9.9	7.9	5.2
Other expenditures	5.4	5.9	6.5	6.5	6.6	6.2	6.7	7.8	6.3	7.2

Source: Households' budget survey, 2000-2008.

The share of expenses for agricultural products from own production was more than half pre 2005 and became 45% post 2005 in the poorest household decile. Only in the richest 40% of households this kind of consumption represents less than in the average household.

The tax contribution in total budget expenses increased for all households during the last decade from 13% pre 2005 to 14.6% post 2005. For employee households the increase was from 21.6% to 23.1%, from 1.8% to 2.4% for agricultural households and from 6.3% to 6.6% for retiree households. The reason was the increase of tax base namely the increase of remunerated work. The tax contribution in total budget expenses for the middle-income households (5 and 6 deciles) increased from 7.5-8.9% pre 2005 to 10-12% post 2005, for the richest household decile the increase was from 22.4% to 25.5%, while for poorest households decile there was almost no change.

2.3.2 Companies

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[44] *Taking into account that the total income of the average households is 0.38 of GDP/capita and the consumption from own production represents 17% of total income.*

[45] *Taking into account that 8% of total households are agricultural households, the average agricultural households include 3.274 persons, the total income of average agricultural household represent 0.25 of GDP/capita and the share of consumption from own production in total income represented 46.7%.*

The corporate income tax was 2.5% of GDP and the social security contributions paid by employers[46] amounted to 6.1% of GDP in 2009. In the same year companies accumulated arrears to consolidated general budget representing 3.36% of GDP up by 0.85pp compared to the previous year. In the year when all these arrears would have been paid the taxes paid by companies –to-GDP ratio would have been similar to EU-27 average. Compared to the arrears to the consolidated budget registered during the previous recession (1997-1999), current arrears are half. 45% of the arrears to the consolidated budget represent arrears to state budget in terms of unpaid VAT and income tax and 49% are arrears to the social insurance budget. 60% of total arrears are generated by public companies. The sectoral breakdown of arrears points out mining, manufacturing and services as major arrears generators: they generate 30.5%, 21% and 21% respectively of all arrears to consolidated general budget.

2.4 Summing Up

The tax revenue-to-GDP ratio is the lowest in EU-27. The tax revenue-to-GDP gap settled after 2000 between 10-12% of GDP relative to EU-27 and 4-6% of GDP relative to NMSs.

The main pillars of the tax revenues are indirect taxes and social security contributions (like in other NMSs); according to their economic function they are the consumption tax and labour tax (like in other NMSs). The labour tax burden fell entirely on employees and employers; self employed and non-employed are almost tax exempted.

The tax burden measured by the notional tax revenues is among the lowest in NMSs; the gap between the notional tax revenue and collected tax revenue is middle sized among NMSs

The efficiency of tax collection, although it has improved over time, especially in the case of CIT and PIT, is still far below the level of other NMSs

Although agriculture contributes to GDP in the range of 8-12% (depending on weather conditions) its share in tax revenues is pathetically small; this reflects the size of for own-consumption agriculture, the few modern forms of agricultural activity and, not least, tax evasion.

The declining trend of the tax revenue-to-GDP ratio was twice reversed over the last two decades. First, in 1997, when a gain of tax revenue was obtained through the increase of VAT and of social security contributions. The second time was in 2005, but less efficient and not lasting, when the flat PIT and CIT tax was introduced. For the rise in the VAT rate in 2010 is still to early to make a judgement

The introduction of the flat tax corroborated with successive reductions in SSC had several consequences. First, the weight of indirect and consumption tax revenue in total tax revenue increased. The efficiency of collecting VAT, indicated by the evolution of ITR, exceeded the efficiency of PIT and CIT, but remained far behind the VAT efficiency reached in NMSs. Second, judging upon the evolution of the share of

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[46] *The burden of social security contribution paid by employers is partially carried by employees in form of lower gross market wages.*

expenditures on agricultural products from own production in households' budget, a proxy of informal activity, some informal and "do by yourself" activity was pulled into the open between pre-2005 and post 2005. The process was slow and was related to still large tax wedge on low-income employment. The increased social benefits to agricultural households reduced the consumption from own production and presumably increased the tax base for VAT. Third, the income inequality between the richest and poorest households has increased.

Companies' tax arrears are large. If added to the amount of taxes paid the collected tax revenue from companies would become comparable to EU27 average.

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Glossary

	Country abbreviations	Commonly used acronyms	
BE	Belgium	NMSs	New Member States
BG	Bulgaria	EU	European Union
CZ	Czech Republic	EU-25	European Union (25 Member States)
DK	Denmark	EU-27	European Union (27 Member States)
DE	Germany	EMU	Economic and Monetary Union
EE	Estonia	EC	European Commission
IE	Ireland	ESA95	European System of Accounts 1995
EL	Greece	IMF	International Monetary Fund
ES	Spain	OECD	Organization for Economic Co-operation and Development
FR	France	GDP	Gross Domestic Product
IT	Italy	PPS	Purchasing Power Standard
CY	Cyprus	PIT	Personal Income Tax
LV	Latvia	CIT	Corporate Income Tax
LT	Lithuania	SSC	Social Security Contribution
LU	Luxembourg	LTR	Legal Tax Rate
HU	Hungary	ITR	Implicit Tax Rate
MT	Malta	HH	Households
NL	Netherlands		
AT	Austria		
PL	Poland		
PT	Portugal		
RO	Romania		
SI	Slovenia		
SK	Slovakia		
FI	Finland		
SE	Sweden		
UK	United Kingdom		