Viktor Trasberg
University of Tartu
Faculty of Economics and Business Administration
Estonia
E mail: viktor.trasberg@ut.ee

DYNAMICS OF EUROPEAN TAX STRUCTURES

JEL classification: H11, H2, H24, H25

Abstract

The paper is focusing on the European Union countries tax structure changes during the last decade. Deep economic recession in the 2009-2010 and critical sovereign debt levels have forced the European Union countries rethink their tax systems effectiveness to restore growth. One of the aspects of taxation system improvements is related with modifications in of tax structure. There is argued, that the tax structure has an important impact on growth. Taxes supposed not only to facilitate smooth cross border trade activities, but also should generate proper public revenue and not to harm economic growth. Therefore, the Commission invites to increase quality of taxation through more growth-friendly tax structure. The main purpose is to shifting tax burden from "labor to consumption". The paper maps structural changes in taxation across the EU countries groups. Actually the most of structural changes takes place in the New Member States; at the same time the old EU countries tax structure has remained mostly unchanged. The new EU member states have decreased income taxation burden and increased taxes on consumption.

Keywords: taxation, tax structure, European Union;

1. INTRODUCTION

Since the beginning, the EU tax policies have concentrated on the "elimination of tax obstacles to all forms of cross-border economic activity" and "fight against harmful tax competition" (European Commission 2006). In this framework, the main activities on EU tax coordination has been focusing on indirect tax harmonization, "which may create an instant obstacles to the common market functioning" (*ibid.*). There has been declared that there is "no need for an across the board harmonization of Member States' tax systems", but in fact, "many tax problems simply require better co-ordination" *(ibid.)*

However, deep economic recession in the 2009-2011 and critical sovereign debt levels in many EU countries have forced the European Commission to widen and refocusing tax policy objectives. There is a concern that tax systems in crisis-countries are not able to fulfill their fiscal tasks – collect adequate amount of public revenues. On the other hand – EU society's general tax burden became a serious obstacle for economic growth.

In the recent years, some new aspects of the EU tax policies have emerged. The Commission invites to increase "quality of taxation" which means that tax system should generate a proper amount of public revenue and cause minimal harm to economic growth (EU Commission, 2011abc). One of the aspects of taxation system quality issue is a modification of tax structure. That means optimal and efficient allocation of tax burden across various tax subjects. The Commission invites to improve taxation through "more growth-friendly tax structure", which means shifting tax burden from "labor to consumption" (European Commission (EU Commission, 2011c, p.4-5). Instead of taxing labor activities, the countries should more burden consumption activities; environmental resource use and housing. The EU Commission brings out that those taxes introduce fewer distortions and therefore, make less harm on economy than labor and income taxes (European Commission 2011b, p. 52).

Over the decades taxation studies have been focused mainly on individual characteristics of particular taxes. Some taxes - for example consumption taxes - are efficient on revenue collection purposes. Some other taxes – *e.g*. taxes on individual income – perform as efficient income redistributors. On the growth prospective, there are argued that income taxes are more damaging for the economic growth than property, consumption or environmental taxes (Myles 2009; Johansson 2008).

Studies on taxation structures are relatively new field of academic research. Formations of theoretical foundations for optimal taxation structure were given by Atkinson and Stiglitz (Atkinson and Stiglitz, 1976). Later on, several authors have widened the tax structure studies on various related issues. Also issues of tax compliance, productivity, income redistribution and other aspects are the interest of tax mix studies (Elgar, 2011, Martinez-Vazquez, 2010). Various international institutions have analyzed optimality of taxation structure in relations with efficient public finance and business cycle stability point of view (European Commission 2011; OECD 2012).

However, discussion over the efficient taxation structure should be distinguished from the debates about individual characteristics of particular taxes. Theoretical and empirical studies, which demonstrate particular taxes are more "harmful for growth" than other taxes, are not directly functional on implementing tax reforms. As Martinez-Vazques emphasizes, "..optimal tax literature never provided quick or exact recipes to be followed… optimal tax design requires the use of both direct and indirect taxes leaving open what the optimal tax mix should be" (Martinez-Vazquez, 2010 p. 43). There are no theoretical and empirical studies available, which provides exact proportions for optimal tax structure.

Therefore the author shares the view that "practical tax reform requires a balance between the aims of efficiency, equity, simplicity and revenue raising"(Johansson 2008, p.1). Tax structure is rather country specific and depends on particular circumstances and society's preferences. In this reason, the EU Commission invitation to shift the taxation burden from "labor to consumption" can be hardly seen as universal recipe for all EU countries in implementing their tax reforms.

In following will be studied actual changes in tax structure across the European Union countries during the last decade.

1.1. Research focus and terminology

In this text the phrase "tax structure" applies for two aspects - particular taxes are compared with GDP level or share of a particular tax in total tax revenues. Such a taxes distribution (e.g. by types) also named as "tax mix".

There is considered dynamics of those tax ratios across the region during the decade. The changes of those ratios are interpreted as shifts in taxation structure. Country's tax structure indicates relative distribution of taxes into different tax types and over taxation bases.

There are several widely recognized classifications of taxes - *e.g*. provided by OECD and the European Union (European Commission 2013, Annex B, and OECD 2012). In this text, the taxes are structured on the basis of ESA95 classification.

Structured by type, the taxes are classified as taxes on production and imports (also indirect taxes); taxes on income and wealth and capital taxes (also as direct taxes); and compulsory social security contributions (shortened in text SSC). Indirect taxes are value-added taxes (VAT); excise duties (*e.g.* on alcohol and tobacco) and other consumption related taxes. Social security contributions include compulsory and voluntary payments to the social security funds, made both by employees and employers.

Another classification of tax structure grounds on their economic function. Here the taxes are classified by their base of taxation. There are generally four bases for taxation – consumption, labor, capital and use of environment. In large - consumption taxes are close with indirect taxes. In turn, labor taxes are summing up personal income taxes and social security contributions. Capital taxation includes taxes on profits and assets related revenues. Characteristics of tax base provide important information about allocation of tax burden over society's economic activities.

The main purpose of study is to generalize the trends of the EU countries tax structure. The period of analyses cover years 2000-2011and grounds on the data provided by the *Eurostat*. The countries under consideration are distributed into 3 groups. The first group (thereafter named also EU15 Plus) is "old" EU members; also the group includes Malta, Cyprus and 3 non-EU member countries – Iceland, Norway and Switzerland. The second group (thereafter named EU10 NM or the new EU members), consist 10 EU new member states from East and Central Europe. The third group (as a control group) includes current EU27 member countries (thereafter named also EU27). The reason for such a countries separation is to demonstrate taxation particularities of the different sets of countries. Actually, there are significant differences in taxation structures between EU15 and E10 countries groups.

1.2 General tax developments in the EU

During the last decade, the EU countries total tax burden (incl. SSC) fluctuated around 40% as compared with GDP level. Nevertheless, the tax burden has declined (Figure 1). However, there are existing significant differences in tax burden between old and new EU member states. In the EU10 counties, the tax burden is 7.6 percentage points lower at the end of the period in comparison with the EU15 Plus group and the difference has widened. Also, in the EU10 countries tax burden has decreased faster than in other EU member countries.

Intuitively, there are various reasons behind tax level differences in the different EU countries groups. In the new member countries, the public sector is smaller and less socially focused. Long-term social entitlements (e.g. pension schemes and social guarantees, other) are usually less expanded in those countries. Often the EU10 countries have been focused mainly on economic growth issues and enhancement competitiveness though low-tax business environment. Despite the EU indirect taxation harmonization requirements have forced increase of consumption taxation levels in the EU10 countries; actually, decrease of direct taxes has offset the consumption tax increase and brought general tax level down.

Table 1

Total taxes and social security contributions as percentage of GDP, %

	2000-2001	2002-2003	2004-2005	2008-2009	2010-2011	Change over the period, % points
EU27 (1)	40.6	39.7	39.8	39.8	39.6	-1.1
EU 15 Plus (2)	39.2	38.7	39.2	38.9	38.7	-0.5
EU 10 NM (3)	32.7	32.3	32.2	32.2	31.1	-1.6
Difference (2)-(3)	6.4	6.4	7.0	6.7	7.6	1.2
Max	50.5	48.7	50.7	48.5	48.3	-2.2
Min	29.3	28.2	28.1	28.0	26.6	-2.8

Source: *http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/data/database* ; *section Main national accounts tax aggregates* and author's calculations

Definitely, the tax burden depends not only from tax rates, but different elements. Tax burden depends also from country's efficiency of tax administration and tax collection capacity; from the extent of shadow economy activities and stage of business cycle – all those different factors have explicit impact on tax burden level. Intuitively, the EU15 Plus countries are usually administratively and institutionally more capable to collect taxes more efficiently, than post-socialist EU member countries.

Taxation burden is also correlated with level of incomes. Table 2 demonstrates the GDP differences by the countries' groups. Despite the fact that during the period the new EU countries' incomes have grown faster, the income differences remained manifold and even growing in comparison with the EU15 Plus countries.

Table 2

Gross domestic product *per capita* in market prices, EUR

	2000-2001	2004-2005	2008-2009	2010-2011	Change over the period, % points
EU27 (1)	19 400	22 100	24 250	24 800	5 400
EU 15 Plus (2)	26 305	30 443	33 377	35 018	8 713
EU 10 NM (3)	4 865	6 960	10 310	10 460	5 595
Difference (2)-(3)	21 440	23 483	23 067	24 558	3 118
Max	50 700	62 450	74 350	80 350	29 650
Min	1 850	2 800	4 600	5 000	3 150

Source: *http://epp.eurostat.ec.europa.eu/portal/page/portal/national_accounts/data/ database; Section GDP and main components* and authors' calculations

Society's income level is an important factor, which has a clear impact on the society's tax mix. Higher income level allows societies allocate higher burden on direct taxation – e.g. personal incomes – than low income countries do. As will be demonstrated below- lower income countries are using less income and more consumption based taxation in comparison with the richer EU countries.

2. DYNAMICS OF TAX STRUCTURE BY TAX

In the next will be followed structural composition taxes and its dynamics across the EU countries (Table 3). All taxes are split by three type of taxes – direct and indirect taxes and social security contributions (SSC). Interestingly, in average all the tax groups cover about equal share - around 13% as compared with the GDP amount.

In general, during the period indirect taxes and social security contributions have remained rather flat level in GDP comparison[1]. At the same time, the direct taxes importance is declined 1% point.

[1] The last column in the tables provides indicators change (*Change over the period in % points).* By the authors scale, the taxes change considered to be "considerable" if it exceeds more than 1% point *as percentage of GDP* or more than 2% points in case of certain taxes share *in total taxes*

Table 3

EU countries tax structure, %

		2000-2001	2002-2003	2004-2005	2006-2007	2008-2009	2010-2011	Change over the period, % points
Total taxes and SSC		40.6	39.7	39.8	40.3	39.8	39.6	-1.1
Direct taxes	As % of GDP	13.6	12.7	12.7	13.5	12.9	12.5	-1.1
	In total taxes, %	33.5	31.9	31.9	33.5	32.4	31.5	-2.0
Indirect taxes	As % of GDP	13.0	13.0	13.1	13.2	12.7	13.1	0.1
	In total taxes, %	32.0	32.7	32.9	32.7	31.9	33.0	1.0
SSC	As % of GDP	12.9	12.8	12.8	12.5	12.9	12.9	0.0
	In total taxes, %	31.7	32.3	32.1	31.1	32.5	32.6	0.9

Source: *http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/data/database* ; *section Main national accounts tax aggregates* and author's calculations

To generalize, certain changes in different tax changes as compared with GDP have taken place. General tax level has decreased. The most observable change is a decrease of direct tax burden share by 2% in all taxes and 1% as compared with GDP level. Such a decline was compensated with less significant increase of indirect taxes and social security contributions. However, indirect taxes cover at the end of the period the biggest share of all taxes. At the beginning of the decade, the direct taxation burden was slightly higher.

Diminishing trend of direct taxes – both in comparison with GDP level and in total taxation – fits with the EU taxation policy goals. However, the progress during the period is relatively slow.

In following the structural changes in taxation are considered by the EU countries groups (Table 4). As presented in the table 1, in the new EU members the tax burden is significantly lower than in older EU countries. What about the tax structure differences between old and new EU membership countries?

Table 4

Current taxes on income and wealth (direct taxes), %

		2000-2001	2010-2011	Change over the period, % points
EU27 (1)	As % of GDP	13.6	12.5	-1.1
	In total taxes, %	33.5	31.5	-2.0
EU 15 Plus (2)	As % of GDP	14.8	14.4	-0.5
	In total taxes, %	37.6	37.0	-0.6
EU 10 NM (3)	As % of GDP	7.7	6.4	-1.2
	In total taxes, %	23.5	20.7	-2.8
Difference (2)-(3)	As % of GDP	7.2	7.9	0.7
	In total taxes, %	14.1	16.3	2.2
Max	As % of GDP	29.8	29.7	-0.2
	In total taxes, %	60.0	61.3	1.3
Min	As % of GDP	6.7	4.6	-2.2
	In total taxes, %	19.6	17.1	-2.5

Source: *http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/data/database* ; *section Main national accounts tax aggregates* and author's calculations

As said, during the period direct (income) taxes burden have decreased in the all countries groups - as compared with GDP and in total taxation. However, the most significant decline on of the direct tax burden took place in the new member counties. The EU15 Plus countries direct tax burden remained almost untouched.

The burden of direct (income) taxes as compared with GDP has remained clearly higher in the old EU15 countries than in the new EU10 states. The NM10 countries collect about 8% less direct tax than EU15 countries do.

In the new EU member states the income tax burden in total taxes at the end of the period was only 20.7% of all taxes; at the same time, the old EU members' income taxes covered 37% of total taxation.

Differences in use of direct taxes among the groups are also widened during the decade; mainly due to decrease of income taxation burden in the NM10 countries. By the individual countries, the amplitude of taxation burden (max-min amplitude) has also widened.

In general, those significant differences in direct taxation demonstrate the principal distinction on tax burden allocation among the EU different countries groups.

The higher income tax levels are correlating with higher general income levels (Table 2). Actually, that is a typical in the global context – higher income societies rely more on direct taxation than lower income countries do. However, despite the NM10 countries are increasing their income levels, they did not shift the taxation burden more towards income taxation. In opposite, they have decreased income taxation burden! Therefore, the EU's tax shift away from income taxation has taken place on the account of the NM10 countries mostly.

There are two main interrelated aspects, why the new EU membership countries direct taxation ratio has decreased faster than in the old EU countries. First, the new EU members had to harmonize their indirect (consumption) tax levels to the EU regulations. Explicitly, that leaded to significant tax increases on VAT and other consumption taxes. To compensate the increase of tax burden in those relatively low-income societies, the personal income tax rates were decreased.

Second, the concern about the countries competitiveness forced the new EU10 members to make business environment more attractive through low taxation of business or personal revenues. As an outcome, the governments' increased revenues from indirect taxation, which allowed them to decrease income taxation. As an outcome of lowering personal income and profit tax rates, the burden of direct taxation in the new EU member fell significantly. At the same time, the decline of direct taxation in the old EU15 countries has been insignificant.

Following table 5 demonstrates the dynamics of indirect taxation across the EU countries during the decade. In general, the indirect tax burden has been rather static. The only considerable change is visible with indirect taxes share in total taxation in the EU10 countries.

At the end of the period, the indirect taxes reached 13.1% as GDP level and covered 28.7% of total taxation. The countries' groups demonstrate rather equal level by that indicator. At the same time, production taxation share in total taxation is rather diverse. In the NM10 countries, the indirect taxes cover more than 40% of total taxation, but only 31% in EU15 member states.

Table 5.

Taxes on production and imports (indirect taxes), %

		2000-2001	2010-2011	Change over the period, % points
EU27 (1)	As % of GDP	13.0	13.1	0.1
	In total taxes, %	28.2	28.7	0.5
EU 15 Plus (2)	As % of GDP	13.2	13.1	-0.2
	In total taxes, %	31.2	31.0	-0.2
EU 10 NM (3)	As % of GDP	12.9	13.0	0.2
	In total taxes, %	36.9	40.1	3.2
Difference (2)-(3)	As % of GDP	0.33	0.03	-0.3
	In total taxes, %	-5.6	-9.0	-3.4
Max	As % of GDP	17.1	18.2	1.1
	In total taxes, %	42.3	53.0	10.7
Min	As % of GDP	10.6	10.2	-0.4
	In total taxes, %	24.6	24.2	-0.4

Source: *http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/data/database* ; *section Main national accounts tax aggregates (gov_a_tax_ag)* and author's calculations.

During the period, the NM10 countries have increased use of indirect taxes more than 3% points. That is, decrease of importance of direct taxes (-2.8%) in those countries has replaced by the same proportion increase of indirect taxes. At the same time, in the EU15 Plus countries, both indirect and direct taxes changed only slightly.

Similarly to the direct taxation, min-max amplitude of the indirect tax burden by the individual countries has widened during the period.

Table 5 demonstrates dynamics of social security contributions burden. Similarly to the indirect taxes, their level as compared with GDP has remained during the decade about the same level. Such a situation is somehow surprising because of aging of the European societies and increasing demand for social programs. On the other hand, the SSC importance in total taxes has slightly increased.

Table 5

Actual social security contributions, %

		Average 2000-2001	Average 2010-2011	Change over the period, % points
EU27 (1)	As % of GDP	12.9	12.9	0.0
	In total taxes, %	31.7	32.6	0.9
EU 15 Plus (2)	As % of GDP	10.0	10.1	0.1
	In total taxes, %	25.4	26.2	0.8
EU 10 NM (3)	As % of GDP	12.1	11.4	-0.7
	In total taxes, %	36.8	36.4	-0.4
Difference (2)-(3)	As % of GDP	-2.1	-1.3	0.8
	In total taxes, %	-11.4	-10.2	1.2
Max	As % of GDP	17.4	16.8	-0.6
	In total taxes, %	44.4	45.4	1.0
Min	As % of GDP	1.8	1.0	-0.8
	In total taxes, %	3.7	2.2	-1.5

Source: *http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/data/database* ; *section Main national accounts tax aggregates* and author's calculations.

Social security contributions as compared with GDP are rather similar in different EU countries groups. During the decade, the SSC (as compared with GDP) have somewhat decreased in the NM10 countries and remained about the same in EU15 states. At the end of the period, the difference between the countries groups was only 1 percentage point!

In the opposite, the role of SSC in the total taxes is considerably higher in the NM10 countries - more than 10 percentage points during the period.

In the NM10 states, the social programs provision grounds more on individual contributions rather than a general tax base. Therefore, revenue flows into healthcare or pension systems in the NM10 countries depend largely on employees-employers contributions through the tax system. As a result, in those countries the SSC are rather important part of public budgets to secure social system stability.

In the EU15 Plus countries the social security system financing is not so tightly linked with the certain earmarked taxes. The social security systems there are funded more largely on the total tax basis. The extreme case among the EU countries is Denmark, there SSC cover only 2% of all taxes. At the same time, the country's total tax burden is the highest among the EU member states (around 50% as compared with the GDP).

3. TAXES BY THE TAXATION BASE

In following are considered structural changes in the type of taxation base or sometimes called, tax structure by economic functions. Such a structure combines different types of taxes under the particular "umbrella", which allows bring out allocation of tax burden across different type of activities.

There are four main bases for taxes – consumption; labor; capital and environment. In this text, the environmental taxes are skipped as they are rather small part of all taxes.

Taxes on labor comprise all taxes, which are directly linked to wages (*e.g.* income taxes), but also including compulsory social contributions and payroll taxes. Labor taxes are the biggest item of all taxes; they are covering more than half of all EU countries total taxes. Therefore, it is a rather natural concern over the high level of labor taxation burden across the European countries.

During the period, the labor taxes have decreased as compared with GDP, but labor taxation has increased as share of total taxation (Table 6). At the end of the period, the labor taxes covered about one fifth as compared with GDP and even more, they covered 51% in total taxation. Author agrees with the EU Commission understanding that European taxation competitiveness depends first of all from decreasing the tax burden on labor!

Table 6

Taxes on labor, %

		2000-2001	2010-2011	Change over the period, % points
EU27 (1)	As % of GDP	20.2	19.6	-0.5
	In total taxes, %	50.5	51.2	0.8
EU 15 Plus (2)	As % of GDP	18.6	18.5	0.0
	In total taxes, %	46.2	47.6	1.4
EU 10 NM (3)	As % of GDP	16.1	14.6	-1.5
	In total taxes, %	49.4	46.2	-3.2
Difference (2)-(3)	As % of GDP	2.4	3.9	1.5
	In total taxes, %	-3.2	1.3	4.6
Max	As % of GDP	30.8	25.9	-4.9
	In total taxes, %	61.0	56.8	-4.2
Min	As % of GDP	9.8	9.0	-0.8
	In total taxes, %	32.3	32.2	0.0

Source: *http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/data/database* ; *section Main national accounts tax aggregates* and author's calculations

As the labor use related income taxes in Europe have decreased (Table 4), the proportion of labor taxes has also decreased as compared with GDP level (Table 6). However, the SSC importance in total taxation has increased. The difference between highest and lowest labor tax burden (max-min amplitude) diminished during the period.

The labor taxation dynamics during the period has been rather different across the EU countries groups. The EU15 countries have maintained high level of labor taxation as compared with GDP, at the same time labor related taxes in the total taxation have gone up. Differently, the NM10 countries have reduced labor taxes as compared with GDP. Even more have declined labor taxes share in total taxation. Labor taxes share was downsized mainly through the personal income tax decreases. As an outcome, the labor taxation share in total taxation reached rather similar level in both EU countries groups.

In the next are considered trends on consumption taxation. Taxes on consumption are defined as taxes levied on transactions between final consumers and producers and include mainly VAT and excise duties. Very broadly, consumption taxes are rather similar to indirect taxation, but include lesser number of taxes.

As table 7 presents, consumption taxation has slightly decreased across the EU countries as *per cent* of GDP, but somewhat increased consumption taxes in total taxes.

Table 7

Taxes on consumption, %

		2000-2001	2010-2011	Change over the period, % points
EU27 (1)	As % of GDP	11.3	11.0	-0.3
	In total taxes, %	28.2	28.7	0.5
EU 15 Plus (2)	As % of GDP	11.9	11.7	-0.3
	In total taxes, %	31.1	31.0	-0.1
EU 10 NM (3)	As % of GDP	12.0	12.4	0.4
	In total taxes, %	36.9	40.1	3.2
Difference (2)-(3)	As % of GDP	-0.1	-0.7	-0.7
	In total taxes, %	-5.7	-9.0	-3.3
Max	As % of GDP	15.7	15.0	-0.7
	In total taxes, %	42.3	53.0	10.7
Min	As % of GDP	9.8	8.7	-1.1
	In total taxes, %	24.6	24.2	-0.4

Source: *http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/data/database* ; *section Main national accounts tax aggregates* and author's calculations

Their dynamic pattern in different EU countries groups copies the dynamics of indifferent tax dynamics. During the period, the consumption taxes in the EU remained about the same level – both as compared with GDP level and their importance in total taxation. At the same time their min-max amplitude as compared with the GDP level or consumption taxes in total taxation has widened.

Use of consumption taxes in total taxation in NM10 countries at the end of the period was 9 percentage points higher than in the EU15 Plus countries. The NM10 countries have more visibly increased their dependency from the consumption taxes during the period. The recent global economic crisis hit many

East and Central European countries more severely than EU15 Plus member countries. To cope with deterioration of public finances, the NM10 countries increased mostly taxes on consumption. Consumption taxation share of in GDP and in total taxation remained almost unchanged in the old EU member states.

The last considered taxes are capital related taxes (Table 8). That taxation base is significantly narrower if compare with labor or consumption taxation. However, the capital taxes are the most visible and sensitive ones from the point of view of countries competitiveness and investment attractiveness.

Table 8

Taxes on capital, %

		2000-2001	2010-2011	Change over the period, % points
EU27 (1)	As % of GDP	8.7	7.8	-0.9
	In total taxes, %	21.6	20.4	-1.2
EU 15 Plus (2)	As % of GDP	8.9	8.2	-0.7
	In total taxes, %	23.2	21.7	-1.4
EU 10 NM (3)	As % of GDP	4.5	4.3	-0.2
	In total taxes, %	13.9	13.8	-0.1
Difference (2)-(3)	As % of GDP	4.3	3.9	-0.4
	In total taxes, %	9.2	7.9	-1.3
Max	As % of GDP	13.4	13.5	0.1
	In total taxes, %	34.0	31.5	-2.5
Min	As % of GDP	1.7	2.2	0.5
	In total taxes, %	5.6	6.3	0.7

Source: *http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/data/database* ; *section Main national accounts tax aggregates* and author's calculations

In average, the capital taxes cover around 8% of GDP and one fifth of all taxes in the EU. During the decade the capital taxes have declined in the all sets of countries. Also is a narrower capital taxes max-min amplitude.

At the same time, there are significant differences among the EU countries groups in use of capital taxes. The EU 15 Plus countries collect about twice more of capital taxes as NM10 countries do in GDP comparison (8.2% and 4.3% respectively). Also, in the EU15 Plus countries about 22% of all taxes comes from the capital taxation. The same ratio is only about 14% in the new EU member states. Capital taxation remained mainly flat level in the new EU countries and declined rather slightly. Such a situation once again demonstrates different approach in allocation taxation burden across tax bases. Then the EU15 Plus countries rely more on direct income taxation, the new EU members are burdening more consumption activities.

4. CONCLUSIONS

The study is motivated from the EU Commissions initiatives and proposals to shift tax burden away from labor taxation and increase more consumption and property taxes. The Commission is concerned about harmful impact of high burden on taxes to the EU growth and competitiveness prospective. Therefore the paper focuses on European Union countries' tax structure dynamics during the last decade.

In the study, the countries are distributed different groups – as new EU member states from East Central Europe (NM10) and group of countries "old" EU countries (EU15Plus).

In the global context, the EU is still a high tax level area (about 40% as GDP) and during the decade, the average total taxation burden has been only slightly declined. However, the new EU member countries have lowered their tax burden more than "old" Europe ones. As the EU average, the main tax types - direct, indirect and social security contributions - each cover equally about 13% of GDP level and one third of total taxation. In general, across the EU the direct taxation has declined as percentage of GDP and as in total taxation. Indirect taxation has remained the same level in GDP comparison, but increased in total taxation. Social security contributions have been relatively stable during the period.

That concerns changes in taxation structure, then actual changes take place only in the region of the NM10 countries. In the group of EU15 Plus countries tax structure changes have been quite moderate and tax structure remained rather stagnant.

The taxes on income have decreased across the Europe during the period. However, the income is much heavily taxed (as percentage of GDP and in total taxation) in EU15 countries than in NM10. The difference has also increased during the period.

Indirect taxes remained as the EU average about the same level. Such taxes have significantly increased in the NM10 budgets but remained about the same in the old EU countries. The lower income countries use more indirect taxes, otherwise, the higher income countries rely more on direct taxation.

Social security contributions across the countries groups cover relatively similar proportion in GDP comparison. However, the SSC is representing much higher share in the NM10 countries budgets than EU15 Plus countries.

All the EU countries groups are burdening labor with taxes rather similarly and those taxes cover about half of all taxes. At the same time, the consumption is heavily burdened in the NM10 countries. In opposite, capital income is much heavily burdened in the EU 15 Plus countries.

To conclude, EU15 Plus countries have been relatively stable by the taxation structure; the NM10 countries have visibly moved towards higher importance of consumption and smaller use of direct taxation.

REFERENCES

Arnold (2008) Do Tax Structures Affect Aggregate Economic Growth? ECO/WKP(2008)51 Working Paper No. 643 OECD Economic Department

Atkinson A. & Stiglitz, J. (1976) 'The Design of tax Structure: Direct versus indirect Taxation', *Journal of Public Economics 6, pp. 55-75,* North-Holland Publishing Company.

The Elgar Guide to Tax Systems (2011) edited by E. Albi, Jorge Martinez-VazquezEdward Elgar Publishing, 2011

Eurostat Internet Homepage http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/

European Commission (2006) T*he EU's Tax Policy Towards a barrier-free area for citizens and businesses* (EU, Directorate-General for Economic and Financial Affairs) http://ec.europa.eu/taxation_customs/resources/documents/common/publications/info_docs/taxation/tax_policy_en.pdf

European Commision (2011a) Growth Friendly Tax policies in the Member States and better Tax Coordination in the EU, Annex, COM(2011) 815 Final , Vol. 5/5 - ANNEX IV (Luxembourg, Publications Office of the European Union)

European Commission (2011b) T*axation Trends in the European Union* (Luxembourg: Publications Office of the European Union)

European Commission (2011c) 'Tax reforms in EU Member States 2011' European Economy 5/2011 (EU, Directorate-General for Economic and Financial Affairs)

European Commission (2013) *Taxation Trends in the European Union* (Luxembourg: Publications Office of the European Union) http://epp.eurostat.ec.europa.eu European Commission 2013, Annex B).

Johansson, Å. & Heady, C. & Arnold, J. & Brys, B. &ja Vartia, L. (2008) Tax and Economic Growth, ECO/WKP(2008)28 Working paper No.620 OECD Economic Department

Martinez-Vazquez, J. & Vulovic, V. &Liu, Y. (2010) Direct versus Indirect Taxation: trends, Theory and Economic Significance, Working Paper, 10-14, May Andrew Young School of Policy Studies, Atlanta, USA

Myles, G. (2009) 'Economic growth and Role of Taxation –Theory' ECO/WPK (2009)54 Working Paper NO.713 OECD Economic Department

OECD (2012) Revenue Statistics 2012, OECD Publishing www.oecd.org/tax