

SCATTER VIEW ON EUROPEAN TAX STRUCTURES

Viktor Trasberg
University of Tartu

Abstract

The paper analyses European Union countries tax structure changes during the last decade. Particular interest is related with correlations between tax structure and economic growth. There is argued, that the tax structure has an important impact on growth. The EU Commission proposes to shift tax burden from labor taxation to consumption to stimulate growth. However, is the tax structure and economic growth really related? The paper brings out structural changes in EU countries tax structures and impact of taxation to growth.

Keywords: taxation, tax structure, indirect and direct taxation, social security contributions, European Union

JEL Classification: H11, H2, H24, H25

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, in addition to continuing the fight against harmful tax competition” (European Commission 2006). The Commission's tax policy strategy sets, that there is no need for the harmonization of direct tax systems; but mainly indirect taxes which may create an instant obstacles to the common market functioning (*ibid.*)

Deep economic recession in 2009-2010 and critical sovereign debt levels have forced the European Union countries rethink also their tax systems effectiveness. Taxes supposed not only to facilitate smooth Union-wide trade activities, but also should generate proper public revenue and not to harm economic growth.

One of the aspects of taxation improvements is related with modifications in tax structures. The Commission invites to improve taxation through “more growth-friendly tax structure” which means shifting tax burden from “labor to consumption” (European Commission (2011a, p.4-5). Therefore, the EU tax strategy expects increase the “quality of taxation”. Instead of labor activities, more should be burdened consumption; environmental resource use and housing. The EU Commission brings out that those taxes introduce fewer distortions or make less harm on economy than labor and income taxes (European Commission 2011c, p. 52).

However, studies on taxation structures are relatively new area of academic research. Theoretical foundations for functional tax structure were first given by Atkinson and Stiglitz (Atkinson A. and Stiglitz J, 1976). Later on several authors

have widened the understanding tax mix discussions ((Martinez-Vazquez & others). Various international institutions also have studies attention on optimality of taxation structure (European Commission (2012); OECD 2012).

Academic discussion focus over efficient taxation structure should be kept separate from debates over particular taxes individual characteristics. Comparing individual taxes, there are argued that income taxes are more damaging for the growth than consumption or environmental taxes (e.g. Myles 2009; Johansson 2008). On the other hand, income taxation progressivity allows better to address redistribution purposes.

Does it mean, what a country can replace all “harmful taxes” with “growth friendly” taxes? This is definitely nonsense! However, there are no theoretical and empirical studies available, which bring out exact proportions for optimal tax structure. Tax structure is rather country specific issues and depends on particular circumstances and stage of economy.

Therefore, optimal tax structure is a complex issue. Different taxes inevitably should be used due to achieve society’s goals. Individual taxes characteristics should be efficiently combined to accomplish both economic growth and redistribution.

2. Methodology and terminology

What is a tax structure? There are several widely recognized classifications of taxes (e.g. provided by OECD or European Union). In this text taxes are structured on the basis of ESA95 classification (European Commission 2011b, Annex B).

Structured by their type, there are taxes on production and imports (indirect taxes); current taxes on income and wealth and capital taxes (direct taxes); and compulsory social security contributions (SSC).

Indirect taxes are value added tax (VAT); excise duties (e.g on alcohol and tobacco) and other consumption related taxes.

Another classification of taxes structures is by their economic function. Here the taxes are classified by the base of taxes. There are four bases for taxation – consumption, labor, capital and use of environment. In large, consumption taxes are in large equal with indirect taxes. Labor taxes are summarizing personal income taxes and social security contributions. Characteristics of tax base provide important information about allocation of tax burden over economic activities and taxable sources.

The following paper will analyze European Union countries tax structures during the last decade. The main focus is to bring out changes in the tax structures over the decade and demonstrate relationship between tax structures and growth. Country’s tax structure indicates relative distribution of taxes into different tax types and over taxation bases. Such a taxes distribution (e.g. by types) also named as “tax mix”. 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.

The analyses are used data of the EU countries during the period 2000-2010; all data is provided on *Eurostat* Homepage. The data panel consist 27 European Union countries plus Norway and Iceland.

For the calculations is used *Excel* spreadsheet graph-builder. There is constructed scatter graphs and added trend line (regression) and displayed R^2 as a measure of the fit¹. The linear graph line is preferred; however, if R^2 improves significantly (more than 5 percentage points), the different form line (polynomial) is chosen. In this level of analysis the regressions significance is not estimated; the purpose of the study is bring out general form of relationships and mark traces of following empirical studies. To avoid random short term fluctuations in data, there is calculated by the author aggregated data for the certain periods.

In the calculations is used as proxy for the income level ‘*GDP product at market prices per capita*’ in euros and particular taxes absolute amount and tax ratios over all EU countries.

3. General tax developments

During the last decade, the EU countries total tax burden has been rather stable (Figure 1).

The total tax burden (incl. SSC) fluctuated around 40% as compared with GDP level. Taxation burden has slightly declined during the period

In 2011, indirect taxes reached 13.1% as GDP level; accordingly, direct taxes were 12.6% and SSC sum was 13.9%. Similarly to the total tax burden, those taxes proportions were relatively stable as compared with GDP.

Figure 2 demonstrates relationship between tax burden and long term economic growth. During the decade, the countries with lower initial tax burden have grown clearly faster. However, the relationship is not linear and there are significant outliers from that rule.

Figure 3 presents the correlations between taxation levels at the beginning and at the end of the period. There is a very high correlation between those two periods. However, the slope value different from 1 indicates the change in particular taxation level and share in total taxes during the period.

¹ R^2 alue is a number from 0 to 1, that reveals how closely the estimated values for the trendline correspond to actual data. R^2 presented in the paper is directly related with correlation coefficient r .

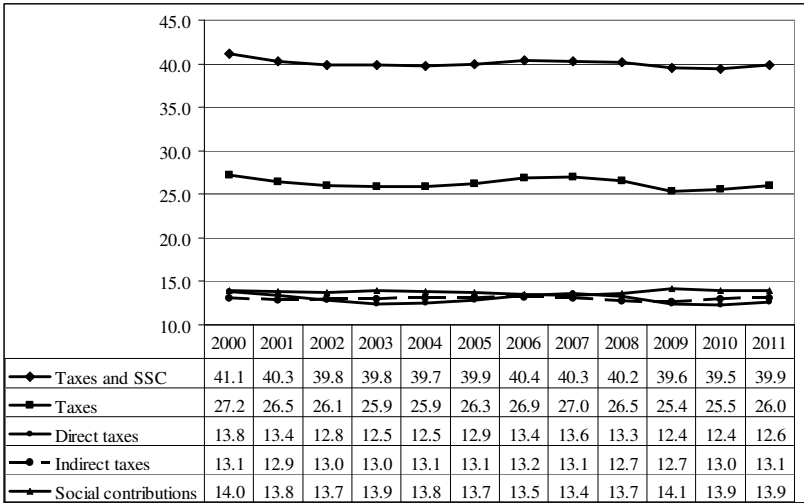


Figure 1. Total taxes and SSC as percentage of GDP (EU27+2) (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators <http://epp.eurostat.ec.europa.eu/> and author's calculations).

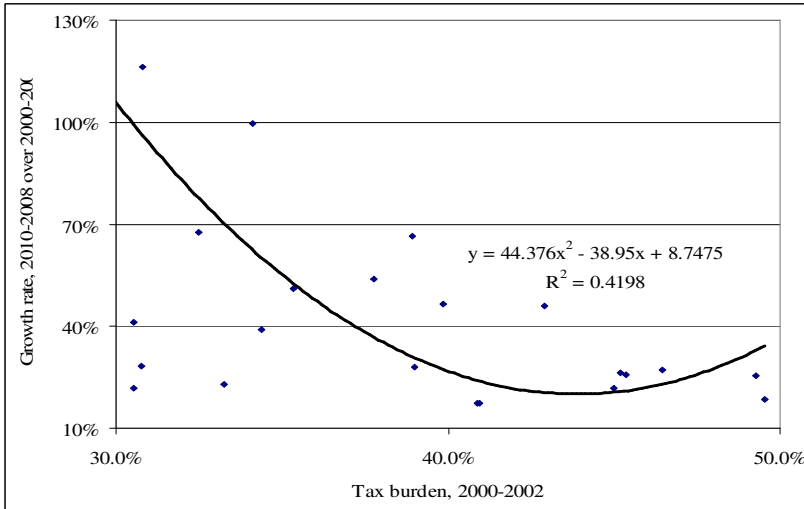


Figure 2. GDP growth (2008-2010 as compared 2000-2003) and tax initial tax burden (tax base 2000-2003) (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators <http://epp.eurostat.ec.europa.eu/> and author's calculations).

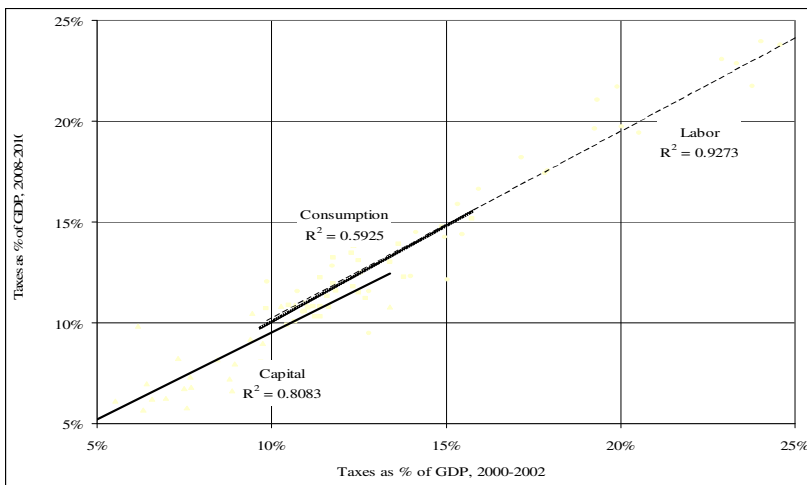


Figure 3. Taxes as % of GDP (*Eurostat Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators* <http://epp.eurostat.ec.europa.eu/> and author's calculations).

There is an almost a perfect correlation between labor and capital taxation level over the period; somehow lower correlation is calculated on consumption taxes. That means, that the countries with high/low level of labor or capital taxation at the beginning of the period were about the same situation at the end of the decade. A smaller R^2 on consumption taxes compared with labor and consumption gives a signal, that situation in use of consumption taxation is little more diverse. Countries with high/low level of consumption taxation at the beginning of the period are not necessarily in the same situation at the end of the decade.

Relatively to the GDP, the labor and capital taxes have decreased during the period as slope of the trend line is less than 1. At the same use of consumption taxation as compared with GDP has remained about the same.

The Figure 4 presents the structural changes in taxation during the decade. Again, there is very close correlation between taxation structure at the beginning and at the end of the decade. The taxes trendline slopes indicate, that consumption taxes reached the bigger proportion of the total taxation (slope more than 1); at the same time labor and capital taxes have slightly lost their position in total taxation. One can say that the situation fits with the EU tax policy goals – shift tax burden from labor to consumption!

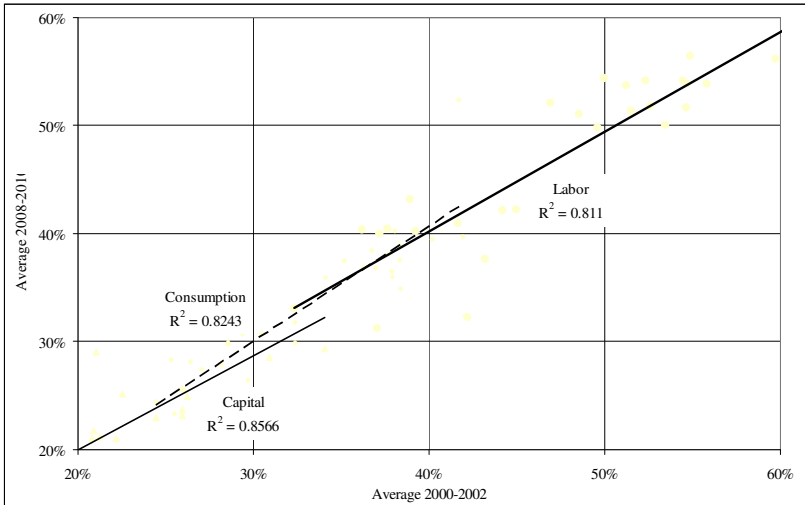


Figure 4. Taxes as % of total taxes (*Eurostat Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators* <http://epp.eurostat.ec.europa.eu/> and author's calculations).

4. Taxes and income level

Figure 6 demonstrates a relationship between the income level of and GDP level *per capita*. There is a rather strong and positive correlation between income and taxation. That means - more the income level is in a country – higher tax level is in it.

There are presented regression lines, demonstrating tax and income level relationship at the beginning and end of the period. During the decade, the correlation strength between income level and tax burden across the EU remained about the same magnitude. Fast increase of GDP levels in the new EU member states and income leveling with old member countries, however, did not equalize taxation level across Europe. Lower income countries still tax less and higher income countries tax more also at the end of the period.

The best fit of the regression line is polynomial. Interestingly, if we exclude Luxembourg as an outlier among the countries, the best fit for the regression line will be linear.

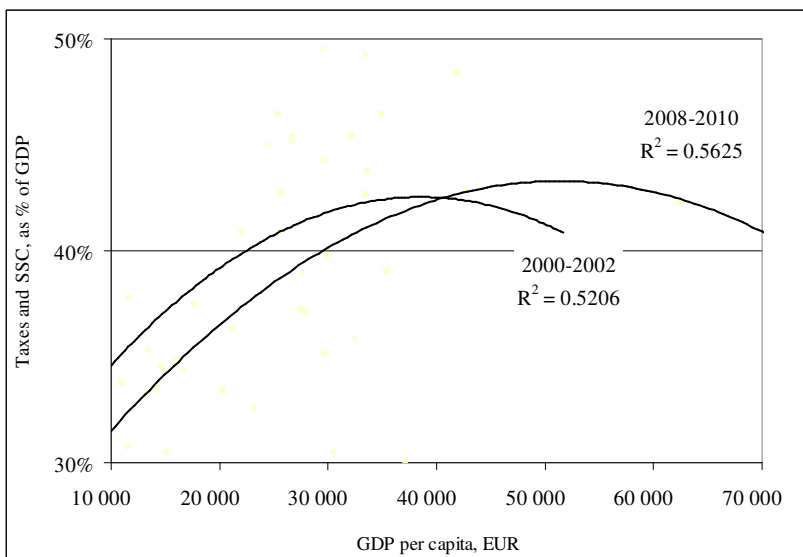


Figure 5. Total taxes (incl. SSC), % and level of GDP per capita, EUR (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators <http://epp.eurostat.ec.europa.eu/> and author's calculations)

5. Taxes types and income level

How the society's income level is related with tax structure it uses? There seems to be clear situation that societies with different income levels also differ by their tax structure (Sandford).

In large, indirect taxes (sales taxes, excises, other) are preferred by the lower income countries. In those countries the direct taxes base (income and profit) is often limited. Therefore the focus of taxation has gone more on consumption. In addition, the lower income countries are often less administratively capable to collect income related taxes. In the EU context, the lower income countries are mainly Central and East European countries.

Accordingly, more affluent societies are using proportionally more direct taxes. Those societies' higher income levels and administrative capacity allows collect relatively more revenue on the basis of personal incomes and companies' profits.

Figures 6 and 7 demonstrate the tax structure and GDP level correlations over the decade.

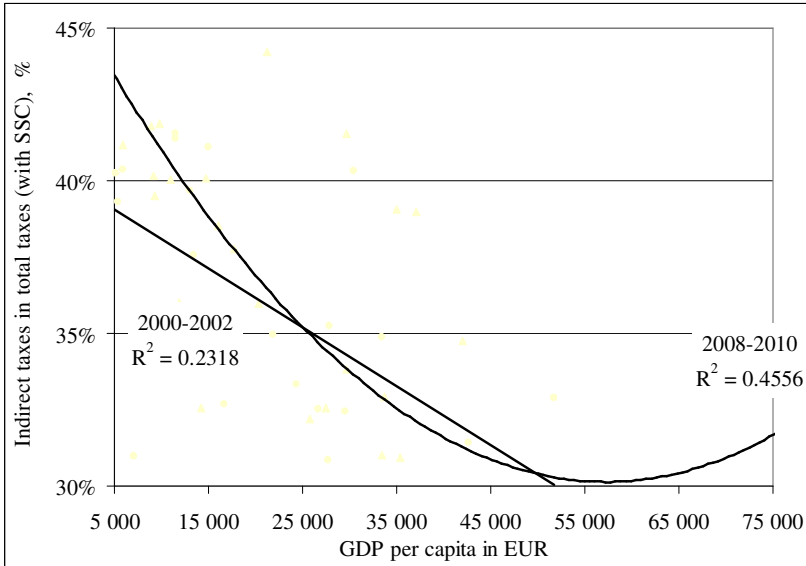


Figure 6. Indirect taxes in total taxes, % and GDP *per capita* level, EUR (Eurostat Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators <http://epp.eurostat.ec.europa.eu/> and author’s calculations).

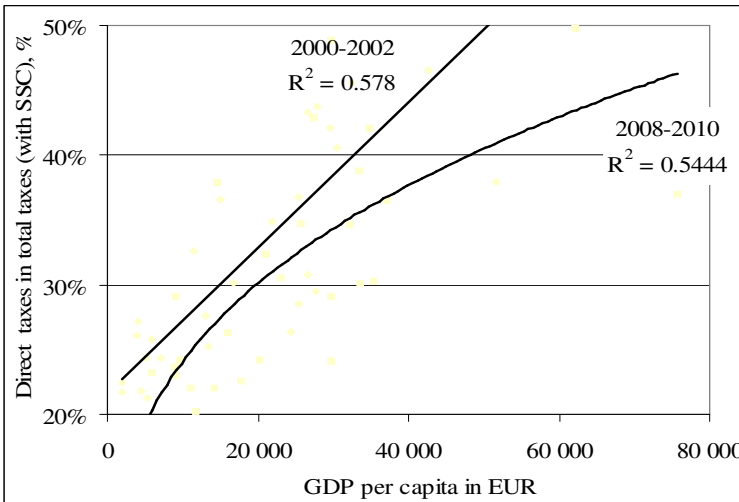


Figure 7. Direct taxes in total taxes, % and GDP *per capita* level, EUR (Eurostat Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators <http://epp.eurostat.ec.europa.eu/> and author’s calculations).

The graphs demonstrate general understanding, that lower income² EU countries use more indirect taxes and less direct taxation. However, the correlation between the income and indirect taxation is rather weak. At the beginning of the period, the correlation between GDP level and indirect taxation is much weaker, than correlation between income and use of direct taxes. The best fit for the regression line in the both cases is linear.

However, at the end of the period the situation is more “interesting” and relationships are not any more linear. The correlation between income and indirect taxes share in total taxation has strengthened. Intuitively, such an outcome might be explained by the EU enlargement factor during the period. The new EU members were mostly low income countries from Central and Eastern Europe. Those countries had commitment to harmonize their indirect taxes with EU regulations requirements. That inevitably led to increase of VAT and excise duties rates. Also were introduced several new, mainly indirect taxes (e.g. excise on containers or electricity). As an outcome, the taxation structure in CEE countries shifted towards indirect taxation; however, levels of income remained far behind richer West-European countries. Moreover, during the crisis year increase of indirect taxes took place mostly in lower income countries.

Relations between income level and direct taxation are strongly correlated and remained far stable during the period. The relationship is just opposite to the indirect taxation and wealthier countries use more direct taxes. However, at the end of the period the best fit for the regression line became polynomial. Nevertheless, the situation remains pretty clear – higher income countries tax structure is focused more on personal income and company’s profits instead of consumption is lower income countries.

6. Tax structure and business cycle

How the use of different tax types are related with long-term growth and short term fluctuations across Europe? In following are followed the relationship between economic growth and tax structures during the last decade.

Figures 8 and 9 demonstrate indirect and direct taxation relationship with growth rates. The growth rate here is measured as change of GDP *per capita* during short and long term period. The long term period is defined as whole decade; short term periods consider GDP changes in 2009 as recession and 2010 as recovery. In the figures is given the tax base period from that the growth is measured.

² By the ‘income level’ here we mean the GDP level *per capita*.

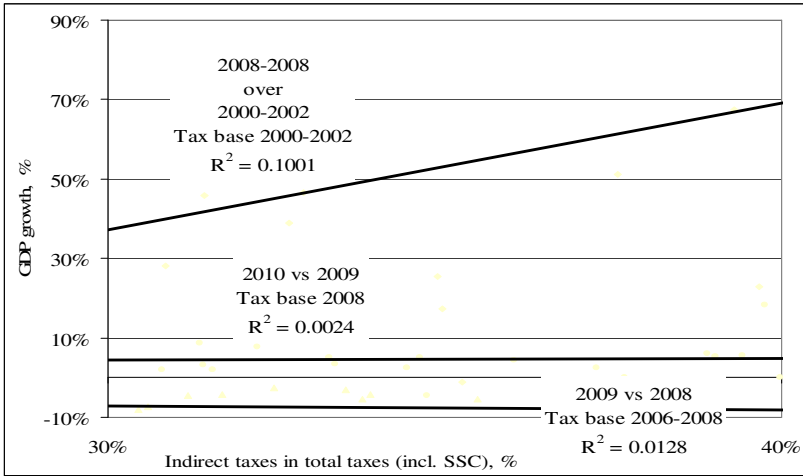


Figure 8. Indirect taxes in total taxes and growth rates, % (Eurostat Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators <http://epp.eurostat.ec.europa.eu/> and author's calculations)

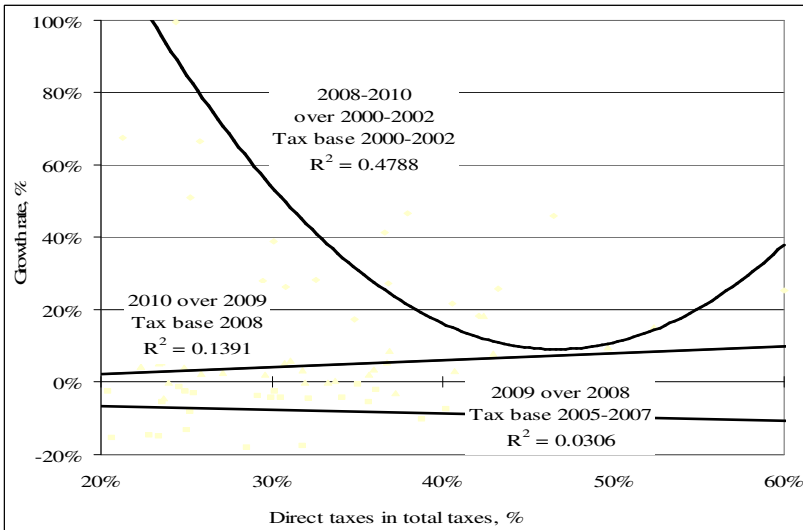


Figure 9. Direct taxes in total taxes and growth rates, % (Eurostat Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators <http://epp.eurostat.ec.europa.eu/> and author's calculations).

The Figure 8 presents, those countries with higher share of indirect taxation have grown slightly faster during the period. There is a positive correlation between the share of indirect taxes and long term growth. However, as coefficient of determination R^2 indicates, that share of indirect taxes has rather limited impact on growth.

Does share of indirect taxes in total taxation is correlated with countries decline during the crisis year 2009 and with recovery the year later? The answer is negative - there is no visible relationship between indirect taxes and deepness of recession in 2009. There is no correlation between economic recovery in 2010 and indirect taxation either.

Relationship between share of direct taxes and growth presents rather different picture if compare with indirect taxation (Figure 9). There is a strong negative correlation between direct taxation and the long term growth. The countries with lower income and profit taxes in their tax revenues have grown clearly faster. However, the best fit for the trendline type in polynomial. Direct taxation share also explains about a half of GDP growth during the decade.

In the short run, direct taxation share is not related with deepness of economic recession. In-large, the higher income countries implemented more stabilization measures and therefore, avoided deep economic decline. However, economic recovery in 201 was slightly faster in the countries with lower direct taxation burden in their revenues.

To summarize, there is a certain correlation between taxation structure and long term economic growth. However, income and profit tax burden seems to limit economic growth much more than indirect (consumption) taxes. In the short term, the tax structure does not have significant impact on recession or slowdown.

Therefore, we have to agree with the EU institutions recent activities to facilitate shift from direct taxes (e.g. labor income) to indirect taxation (e.g. consumption). However, the positive impact is expected to be rather long term.

In following, similar relationships are presented for labor and consumption taxes (Figures 10 and 11).

As expected, consumption taxes are positively related with long term growth. The situation is rather similar with indirect taxation, as the taxation base is largely overlapping. However, the correlation is much stronger on consumption taxes than indirect taxes. But again, there is no correlation between short term GDP fluctuations and consumption taxes share in total taxes.

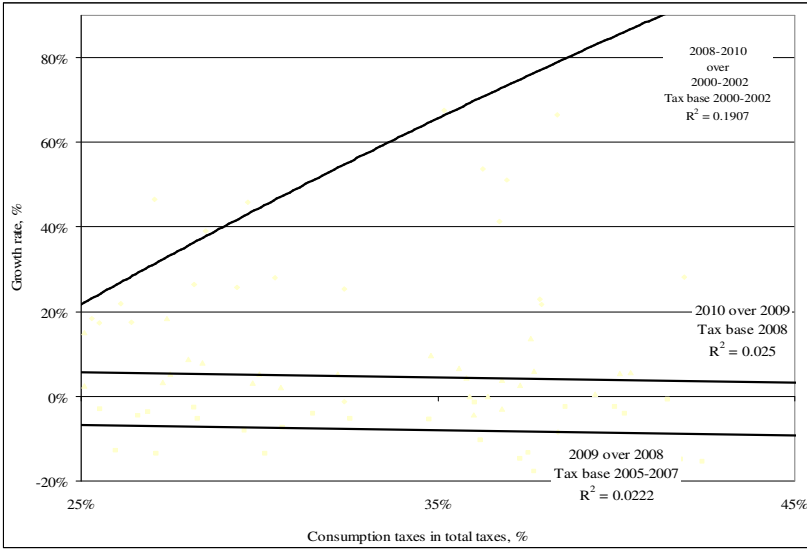


Figure 10. Consumption taxes in total taxes and GDP growth, % (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators <http://epp.eurostat.ec.europa.eu/> and author's calculations).

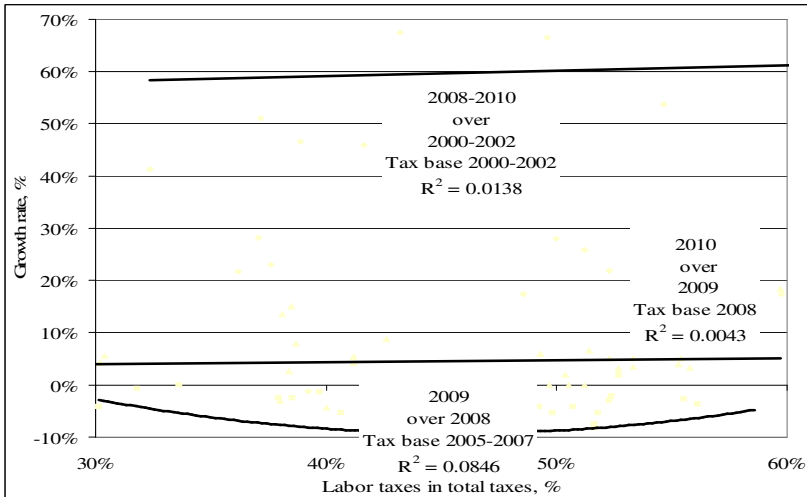


Figure 11. Labor taxes in total taxes and GDP growth, % (*Eurostat* Statistics/Government Statistics/Annual Government Finance Statistics/Derived tax indicators <http://epp.eurostat.ec.europa.eu/> and author's calculations).

Labor taxation (Figure 11) and GDP developments are not correlated, even during the long term basis. That is somehow surprising and controversial outcome. In growth purposes, the EU recent tax policies are emphasizing a need to shift taxation out of labor (European Commission 2012). Actually, there is no visible correlation between labor taxation level and growth – neither in short term nor in long term.

The explanation is the structure of labor taxes in the member states. Those include both personal income taxes and social security contributions. In many countries, often those types of taxes offset each other. For example in Denmark - rather high personal income tax is combined with low social securities contributions.

Therefore, the taxation shift is rather country specific and should consider particular situation in the country.

7. Conclusions

European Union is a high tax level area in the global context. During the decade, the EU taxation burden has been about the same.

The countries with lower tax level have grown faster than those countries, which had higher taxation level at the beginning of the decade. However, taxation burden over the individual countries depends closely on the level of income – richer the countries are, higher taxation level they have.

During the period, the consumption taxation importance has slightly increased and labor and capital taxes importance has declined. Lower income countries use more indirect taxes, higher income countries depend more on direct taxation. However, the relationship between types of taxes and income level became more complex during the decade.

Countries with higher indirect taxation share has been grown slightly faster during the decade; at the same time high direct taxation level is strongly negatively correlated long term growth. In the short run, taxation structure does not matter on the growth pattern.

High share of consumption taxes in total taxes is positively, but moderately related with long term economic growth, but again, there are no short term relationship between short term fluctuations.

Surprisingly, there is no relationship between labor taxation and growth - both long and short term.

Despite the EU tax policy purposes to shift taxation from labor to consumption, it is not a general rule. Tax structure modification is rather country specific issue and depends on particular economic and political circumstances.

References

1. **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.
2. Eurostat <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>
3. European Commission (2006) *The 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
4. European Commission (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)
5. European Commission (2011b) *Taxation Trends in the European Union* (Luxembourg: Publications Office of the European Union)
6. European Commission (2011c) 'Tax reforms in EU Member States 2011' European Economy 5/2011 (EU, Directorate-General for Economic and Financial Affairs)
7. European Commission (2012) *Taxation Trends in the European Union* (Luxembourg: Publications Office of the European Union)
<http://epp.eurostat.ec.europa.eu>
8. **Johansson, Å. & Heady, C. & Arnold, J. & Brys, B. & Vartia, L.** (2008) Tax and Economic Growth, ECO/WKP(2008)28 Working paper NO.620 OECD Economic Department
9. **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
10. **Myles, G.** (2009) 'Economic growth and Role of Taxation –Theory' ECO/WPK (2009)54 Working Paper NO.713 OECD Economic Department
11. OECD (2012) Revenue Statistics 2012, OECD Publishing www.oecd.org/tax
12. **Sandford, C.** (2000) *Why Tax Systems Differ* (Fiscal Publications, Milton Keynes, UK)

HAJUS VAADE EUROOPA LIIDU RIIKIDE MAKSUSTRUKTUURIDELE

Viktor Trasberg
Tartu Ülikool

Artiklis analüüsitakse Euroopa Liidu riikide maksustruktuuri muutusi viimasel kümnendil. Eesmärk on markeerida seoseid maksude struktuuri ja majanduskasvu vahel. Maksustruktuuril on oluline mõju majanduskasvule. Hiljutisest majanduskriisi valguses on Euroopa maksupoliitikaga tegelevad institutsioonid teinud ettepanekuid ka maksustruktuuri ümberkujundamiseks. Eesmärgiga ergutada majanduskasvu nähakse ette nihutada maksukoormust tööjõu maksustamiselt tarbimise, loodusressursside kasutamise ja kinnisvara maksustamisele.

Alates oma loomisest on EL-i maksupoliitika olnud keskendunud maksutõkete kõrvaldamisele piiriülesest majandustegevusest ning võitlusele kahjuliku maksukonkurentsi vastu. EL Komisjoni maksupoliitika strateegia ei näe ette vajadust ühtlustada otseseid makse; eelkõige on fookus suunatud kaudsete maksude ühtlustamisele, et tagada ühise turu sujuv toimimine.

Sügav majanduslangus aastatel 2009-2010 ja riigivõla kriitiline tase on aga suunanud EL-i riikide fookuse oma maksusüsteemi tõhustamise vajadusele. Maksud ei peaks mitte ainult hõlbustama sujuvat piiriülest kaubandustegevust, vaid peaks võimaldama koguda piisavalt tulusid avaliku sektori vajadusteks ning mitte pidurdama majanduskasvu.

EL Komisjoni sihiks on "maksusüsteemi kvaliteedi" tõstmine, mis kokkuvõtteks suurendaks ka majanduskasvu. Sel eesmärgil nähakse ette maksustruktuuri kujundamist sel moel, mis suunaks maksukoormuse "tööjõult tarbimisele". Tööjõumaksude asemel tuleks rohkem koormata tarbimist, looduskeskkonna ja loodusvarade kasutamist ning kinnisvara. EL-i komisjon toob välja, et need maksud toova kaasa vähem moonutusi ja põhjustavad majandusele vähem kahju kui otsesed töö- ja tulumaksud.

Maksustruktuuri ja majanduskasvu vaheliste seoste esiletoomine on suhteliselt uus uurimisvaldkond. Teoreetiline raamistik optimaalse maksustruktuuri kujundamiseks on esmakordselt esitatud Atkinson'i ja Stiglitz'i poolt (1976). Mitmed autorid on avardanud arusaama maksustruktuuri seostest majanduskasvuga (Martinez-Vazquez, 2010); mitmed rahvusvahelised institutsioonid on ka uuringus tähelepanu pööranud maksustruktuuriga seotud aspektidele (Euroopa Komisjon 2012, OECD 2012).

Diskussioon efektiivse maksustruktuuri teemadel on siiski eraldiseisev erinevate maksude individuaalsete omaduste üle. Võrreldes näiteks tulumakse tarbimismaksudega leitakse, et esimesed on majanduskasvule rohkem kahjulikud kui tarbimise või looduskeskkonnaga seotud maksud (Myles 2009; Johansson 2008). Teiselt poolt, võimalus tulumaksumäära diferentseerida võimaldab paremini saavutada tulude ümberjaotamisega seotud eesmäärke. Seega, ühiskond ei saa asendada kõiki "kahjulikke" makse „majanduskasvu sõbralike" maksudega.

Praegusel ajal pole siiski jõutud ei teoreetiliste ega empiiriliste uuringute käigus üldise optimaalse maksustruktuuri väljatöötamisele. Sobiv maksustruktuur sõltub igale riigi konkreetsetest majandustingimustest ja ühiskonna eelistustest. Seega on maksustruktuuri optimeerimine üpris kompleksne tegevus. Paratamatult tuleb kasutada erinevate mõjudega maksuliike, mis võimaldaksid rahastada avaliku sektori tegevust, soodustada majanduskasvu ja liikuda parema tulujaotuse suunas ühiskonnaliikmete vahel.

Mitmed rahvusvahelised organisatsioonid klassifitseerivad makse erineval moel (näiteks OECD või Euroopa Liidu klassifikatsioonid). Antud tekstis maksud on struktureeritud ESA95 klassifikatsiooni alusel. Sellest lähtes on maksud jaotatud maksuliigi ja maksustamise baasi alusel. Maksude liigi alusel on tegemist tootmis- ja impordimaksudega (nimetatakse ka kaudseteks maksudeks); tulu-, omandi ja kapitalimaksudega (otsesed maksud) ning kohustuslikke sotsiaalkindlustusmaksudega (tähistame neid ka lühendiga SSC).

Kaudsed maksud on käibemaks (VAT); aktsiisimaksud (nt. alkohol ja tubakas) ja muud tarbimisega seotud maksud. Otsesed maksud on nii füüsilise isiku kui äriühingu tulumaks (kasumimaks) ja kapitalituludega seotud maksud.

Teiseks maksude liigitamise aluseks on majandustegevus, millest lähtudes makse kogutakse. Nimetame seda ka maksubaasiks. Üldistatult on tegemist nelja maksubaasiga – tarbimine; tööjõu- või kapitalitulu ning looduskeskkonna kasutamine. Üldises plaanis on tarbimismaksud samas suurusjärgus kaudsete maksudega; tööjõu maksud seonduvad summeerituna üksikisiku tulumaksu ja sotsiaalimaksudega; kapitalimaksud põhinevad kapitali ja tootmisvahendite (ka kinnisvara ja maa) kasutamisel.

Artiklis analüüsitakse agregeeritud Euroopa Liidu riikide maksustruktuuri muutusi viimasel kümnendil (2000-2010) ning vaadeldakse maksustruktuuri ja majanduskasvu vahelisi seoseid. Defineerime siinkohal maksustruktuuri kui konkreetse maksuliigi mahtu võrrelduna SKP suurusega või maksuliikide osakaalu kogumaksudes. Majanduskasvu defineeritakse kui EL riikide SKP taset jooksvates hindades arvestatuna ühe elaniku kohta. Tekstis toodud ajalisel perioodid ja maksutasemed on arvatud EL riikide kolme aasta keskmistena. Korrelatiivsete seoste leidmisel on kasutatud Exceli punktdiagrammi funktsiooni ning lisatud on ka trendijoon (regressioon) ja R^2 väärtus, mis näitab trendijooone poolt kirjeldatud näitajate vaheliste seoste ulatust ja tugevust.

Viimase kümnendi jooksul EL-i riikide üldine maksukoormus olnud suhteliselt püsiv, ulatudes (koos SSC) umbes 40%-ni võrrelduna SKP-ga. Aastal 2011. olid kaudsed maksud 13,1%; otsesed maksud 12,6% ja sotsiaalkindlustusmaksed 13,9% SKP-st. Sarnaselt maksukoormusega oli maksude struktuur EL-is suhteliselt stabiilne. Samas on üldine majanduskasv kümnendi vältel on olnud kiirem neis riikides, kus oli esialgselt (2000-2002) madalam maksukoormuse tase.

Kuidas on muutunud maksude struktuur võrreldes SKP-ga? Tööjõu ja kapitalimaksude tase on väga tugevas korrelatsioonis kümnendi alguses ja lõpus. Riigid, mis kasutasid kõrget/madalat tööjõu ja kapitali maksustamist perioodi alguses, tegid seda ka kümnendi lõpus. Samal ajal on nende maksude tase SKP-s mõnevõrra vähenenud. Nõrgem on korrelatsioon tarbimismaksude kasutamises; samal ajal ei ole tarbimismaksude tase SKP-s vähenenud.

Ka EL- i riikide kogumaksude struktuur on olnud suhteliselt püsiv; siiski on toimunud väike nihe tööjõult tarbimismaksude suunas. Seega pikaajaliselt on EL poolt soovitud protsess ka toimumas – maksukoormus on liikunud tööjõult tarbimisele.

Kümnendi vältel on selgelt nähtav püsiv ja positiivne korrelatsioon sissetulekute taseme ja maksukoormuse vahel. Mida suurem on sissetulekute tase riigis – seda kõrgem on ka maksude tase. Kiire kasv SKP tase Euroopa Liidu uutes liikmesriikides on küll vähendanud sissetulekuerisusi, aga ei ole võrdsustanud samal määral maksukoormuse taset.

Kuidas ühiskonna sissetulek on seotud maksude struktuuriga? Üldreegel on selline, et madalama tulutasemega riikides on suurem osakaal kaudsetel maksudel. Nendes riikides on otseste maksude baas (tulu ja kasum) sageli piiratud. Seetõttu keskendub maksustamine rohkem tarbimisele. Lisaks on madalama sissetulekuga riigid sageli administratiivselt vähem suutlikud tuluga seotud maksude kogumisel. Jõukamad ühiskonnad aga kasutavad proportsionaalselt rohkem otseseid makse. Kõrgem sissetulek ja haldussuutlikkus võimaldavad koguda suhteliselt rohkem tulu isiklike sissetulekute ja ettevõtete kasumite alusel.

Viimase kümnendil on EL riikide maksustruktuurid seda eelpooltoodud seost ka kinnitanud. Madalama sissetulekuga ELi riigid kasutavad rohkem kaudseid makse ja vähem otsesest maksustamist. Perioodi lõpus on korrelatsioon tulutaseme ja kaudsete maksude kasutamise vahel veelgi tugevnenud. Uued ELi liikmed olid enamasti madala sissetulekuga Kesk- ja Ida-Euroopas riigid. Lähtudes EL kaudsete maksude harmoneerimise nõudest suurendasid nimetatud riigid tarbimismaksude määrasid (VAT, aktsiisid, jm.) ning kehtestasid uusi kaudseid makse. See kõik suurendas ka madalamatululiste riikide kaudsete maksude koormust.

Sarnaselt kaudsete maksudega on ka otsesed maksud tugevas (positiivses) korrelatsioonis tulutasemega. Rikkamad ühiskonnad kasutavad rohkem otseseid makse kui madalatululisemad riigid ning see seos on Euroopas kümnendi vältel tugevnenud.

Kuidas on seotud maksustruktuur pikaajalise majanduskasvu ja lühiajaliste tsükliliste kõikumistega? Artikkel vaatleb pikaajalist majanduskasvu (2000 kuni 2010) ja maksustruktuuri seoseid. Perioodi vältel on mõnevõrra kiiremini kasvanud need riigid, kus on suurem osakaal kaudsel maksustamisel. Samas on korrelatsioon suhtelisel nõrk ning kaudsete maksude osakaalul on üsna piiratud mõju majanduskasvule. Lühiajaliselt aga puudub oluline seos majanduse tsükliliste

kõikumiste vahel. Ei majanduslanguse ulatus 2009 ega taastumine järgneval aastal ei ole korrelatsioonis kaudsete maksude osakaaluga tuludes.

Erinevalt kaudsete maksudest on otsete maksude osakaal ja pikaajalise majanduskasvu (negatiivne) seos väga tugev. Madalama tulutaseme ja väiksema otseste maksukoormusega riigid on saavutanud selgelt kiirema majanduskasvu. Otseste maksustamise madal tase osa selgitab ka üsna suures mahus SKP kasvu põhjusi viimase kümnendi jooksul. Aga sarnaselt kaudsete maksudega puudub seos otsete maksude ja lühiajaliste tsükliliste kõikumiste vahel.

Jälgides tarbimismaksude ja majanduskasvu seosed näeme, et tegemist on üpris sarnase seostemustriga kui oli kaudsete maksude puhul. Tegemist on loogilise tulemusega, sest maksubaasid suures osas kattuvad. Samas on tarbimismaksude ja majanduskasvu seos mõnevõrra tugevam kui kaudsete maksude puhul.

Tööjõumaksude taseme ja majanduskasvu vahel aga puudub oluline seos nii pika- kui lühiajaliselt. See on mõnevõrra üllatav ja vastuoluline tulemus. Euroopa liidu maksuiniitsiatiivid on viimastel aastatel korduvalt rõhutanud vajadust kanda maksukoormus tööjõu maksustamiselt üle tarbimisele ja keskkonnamaksudele. Artikli autor aga ei siinkohal leidnud otsest korrelatsiooni tööjõumaksude osakaalu ja majanduskasvu vahel. Olukorda võiks aga tõlgendada järgmiselt. Erinevate EL-i liikmesriikide tööjõumaksude struktuur on väga erinev. Need hõlmavad nii üksikisiku tulumaksu ja sotsiaalkindlustusmaksuid. Sageli eri tüüpi maksud aga tasakaalustavad üksteist. Näiteks Taanis kõrge üksikisiku tulumaksu tase kombineeritud madala SSC tasemega. Nii kõrge tulumaksu kui sotsiaalkindlustusmaksude tase on negatiivselt seotud majanduskasvuga. Taani näite puhul aga need maksud tasakaalustavad üksteist.

Kokkuvõttes, Euroopa Liidu riikide maksukoormus on olnud kümnendi vältel üsna stabiilne. Perioodi vältel on tarbimise maksustamine mõnevõrra kasvanud; tööjõu ja kapitali maksustamine aga vähenenud. Suurema kaudsete maksude osakaaluga riigid on kasvanud veidi kiiremini; samal ajal on kõrge otseste maksustamise tase tugevas negatiivses korrelatsioonis pikaajalise majanduskasvuga. Vaatamata EL maksupoliitika eesmärgile suunata maksustamist tööjõult tarbimisele, ei ole tegemist kõikidele maadele kohandatava optimaalse maksustruktuuri üldreegliga. Optimaalne maksustruktuur sõltub pigem iga riigi konkreetsetest tingimustest ning ühiskonna majanduslikest ning sotsiaalsetest valikutest.