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# **Analysis of dependence of tax behavior on macroeconomic factors: the case of OECD countries**

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# **Analysis of dependence of tax behavior on macroeconomic factors: the case of OECD countries**

## **Introduction**

The paper aims to study the principles of economic behavior of government, notably with regard to the tax burden. It is commonly known that the main functions of taxes are fiscal function, when the government collects taxes in order to fulfill the budget for providing its own economic and social policy, and regulatory function, consisting in the adjustment of the state's economic policy and of appropriate economic relations. By increasing taxes the government, *ceteris paribus*, aims to raise budget revenue. By reducing the tax burden it induces the additional investment inflow caused by improvement of economic environment. Under this fiscal aspect the government faces two main problems, notably:

1) the contradiction between the need to fulfill budget and to improve the economic climate by means of adjustment of the tax burden;

2) possibility of appearance of the "race to the bottom" situation, when some countries compete against each other in order to attract new investors by reducing the tax burden on a regular basis.

So, a given government has three alternative variants of tax behavior, notably, either to reduce the tax rate in order to improve economic conditions and to attract new investors or to increase the tax rate as a way to raise budget revenue. Also it can fix the tax rate, i.e. do not use this tax instrument itself.

However, the government when it increases the tax rate, it affects only the investors' interests, while the reduction of the tax burden could serve as the tool of competition between jurisdictions, i.e. it is the "race to the bottom" case.

## **2. Literature review**

The large part of research focused on the patterns of government tax behavior in different economic conditions. Joumard & Kongsrud (2003) studied the government economic and fiscal behavior in the process of decentralization in OECD countries. They analyzed the spending side, the revenue side and the macroeconomic perspective of fiscal relations across government levels. The authors developed a set of parameters (size of jurisdictions, overlapping responsibilities, social transfers and redistributive goods, tax competition, fiscal rules and market discipline etc.) in order to assess fiscal relations across different levels of government. Weber et al. (2014) investigated the government behavior and taxation. They found that behavioral economic factors can significantly influence tax compliance, and if well applied, usually cause an increase in compliance; these behavioral factors affect decision-making in ways that are important for making good tax policy. Mirrlees et al. (2011) in the final report from the Mirrlees Review "Tax by design" developed some important patterns of the government's tax behavior,

notably, they underlined the central role of redistribution in the tax and benefit system and the importance of maintaining neutrality.

Another set of papers studies the aspects of government behavior influenced by different institutional factors. Thus, Krishna & Slemrod (2003) analyzed the tax behavior of the government aiming to minimize the perceived burden addressing particularly to the ethical and normative implications of price presentation in the tax system. Avi-Yonah (2011) found general conditions under which taxation as regulation makes sense: it should apply to small numbers of taxpayers; the taxpayers are sophisticated and able to deal with complex tax incentive and the regulatory goal is clear and related to the level of the tax. Laffer et al. (2011) estimated the economic burden caused by complexity of the Tax Code. They outlined that the potential benefits to economic growth could be from a reduction in tax complexity. Under establishment of the low rate flat tax on a broad tax base the inefficiencies caused by tax code complexity, notably, administrative costs, time costs, and compliance costs would be substantially reduced. As a result, overall economic efficiency would increase, as well as the growth in income and wealth. Leicester et al. (2012) analyzed behavioral aspects of government's tax and benefit policy intervention taking into account such behavioral insights like bounded rationality, framing, time inconsistency, social preferences etc. The administrative techniques and institutions for the management of tax complexity were investigated by Freedman (2015). She concluded that institutions can also improve tax systems and sometimes reduce complexity, but this simplification will only be achieved if the institutions are conceptually coherent with clear tax policy objectives.

Afonso & Hauptmeier (2003) analyzed the determinants of government's fiscal behaviour in EU countries. Their results show that the existence of effective fiscal rules, the degree of public spending decentralization, and the electoral cycle can impinge on the country's fiscal position. Another cross-country analysis was made by Bessard (2009), who calculated the tax oppression index (including the weight of the tax burden, the legitimacy of the tax system and the protection of financial privacy) for 30 OECD countries in order to evaluate the OECD's fight against harmful tax competition and "tax havens". He showed that the only ones to gain from this fight are unreformed high-tax states, to the detriment of their residents and their prosperity. Furthermore, Stănică (2011) and Daianu et al. (2012 a,b) studied empirically the state fiscal policy which aims to promote the economic growth using different tax instruments, notably tax incentives, adjustment of the flat tax and social security contributions, increase of fiscal consolidation etc.

In summary, we can conclude that current studies mainly investigate the government tax behavior (policy) from the standpoint of expediency of certain regulatory and adjustment measures. Any government considers its own economy as perfect or its own tax system as optimal. But at the same time by

no means all of them use the proposed instruments in order to improve the situation.

The studies of the causes of this fact, which we evaluate as important, are not sufficiently covered in the existing literature. Notably, we consider the insufficiently exhaustive and clear answer about government's tax behavior when it chooses the direction of change of the tax burden in certain economic conditions.

Consequently the purpose of this paper is to determine factors and conditions, which influence on government's decision related to the choice of certain type of tax behavior. This allowed us to set the following tasks:

- ✓ to define a set of potential indicators, based on which the government makes a decision concerning certain economic (tax) behavior;
- ✓ to identify if such a dependence in fact exists;
- ✓ to analyze which indicators influence more over the government's economic behavior;
- ✓ to define principles (nature) of the government response, i.e. under what conditions the government intend to increase the tax burden, to reduce it or to keep it at the same level.

Let us assume that governments' behavior patterns mostly correspond to the definition of satisfiers<sup>1</sup>, i.e.:

- ✓ they initially intend to achieve the required (under current conditions) level of budget revenue;
- ✓ in the stable situation governments tend to increase the attractiveness of their economies by reducing the tax rate;
- ✓ being economically efficient leaders they considerably disengage to improve the country's economic climate, notably, by use of tax instruments.

### **3. Data and Methodology**

In the article we analyze the economic behavior of OECD governments, which for the purposes of study can be regarded as adjustment of the corporate tax burden. It should be noted that in some countries, like Germany, the corporate tax rates, established by local authorities, differ by region. In this case we used a weight-average tax burden, adjusted by some central government.

Now the task is to examine the possible impact of the actual economic efficiency of the country on government's economic behavior (i.e. on the changes of tax rates). GDP is the generally accepted indicator of power of the economy in the context of the world economic system while GDP per capita could be considered as indicator of the wealth of the economy.

Taking into account the difference between domestic prices of a given market basket, one could examine the power and wealth of the economy outside the global

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<sup>1</sup> Here, in order to describe the behavior, we used the term "satisfiers" introduced by Simon (1955, 1956), who distinguished the "maximizers", aiming to maximize their own profit, and "satisfiers", for whom it is enough to be profitable.

framework and to measure these factors by purchasing power parity, i.e. by GDP (PPPs), GDP (PPPs) per capita. Thus, all mentioned indicators are based on the estimated increase of the value added, on the gross domestic product. But countries differs by a number of working hours required to produce GDP. Consequently, it is reasonable to estimate the efficiency of certain national economic system using the productivity of this economy (total or per capita), i.e. normalizing the size of GDP (total or per capita, in absolute terms or by purchasing power parity) by a number of hours worked. Further in order to evaluate the efficiency of economy (in terms of power and wealth) we provide the formal estimation of the correlation between the changes of corporate tax rates and each of the selected indicators.

### **The sample**

We chose the OECD countries for the analysis according to the following considerations. The more powerful are the economies, the less they are influenced by different externalities, and, consequently, their behavior can be explained principally by internal factors and parameters of the economic system. Therefore, OECD countries, among which there are the most developed countries of the world, are the most representative for the analysis and estimation of the correlation between economic indicators of country and government's behavior.

At once, using in the sample the institutionally established group of countries increases the representativeness of the input data. Moreover, the available data for OECD countries is sufficiently complete and calibrated and the sample itself is sufficiently large: for example, more than 25% of all countries with available data on labor productivity are OECD countries.

### **The analysis of governments' behavior related to adjustment of the corporate tax burden in OECD countries**

We explore the data for 10 years (2005-2014) for 34 OECD member countries. In order to determine principles of the government's behavior we examine the correlation between changes of corporate tax rates and selected indicators, which could be considered as characteristics of country's aggregate economic efficiency: eight indicators, based on GDP and normalized in various ways on the level of consumer prices in the country, on per capita data and on per hour worked. I.e. we obtained GDP, GDP (PPPs), GDP per capita, GDP (PPPs) per capita, GDP per hour worked, GDP (PPPs) per hour worked, GDP per hour worked per capita, GDP (PPPs) per hour worked per capita.

The input data on GDP, GDP (PPPs), GDP per capita, GDP (PPPs) per capita, average annual hours actually worked per worker, used in further analysis, are presented in Tables. 1, 2a-h.



**Table 1. Continued**

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Japan	0,407	0,407	0,407	0,407	0,407	0,407	0,380	0,380	0,356	0,331
Korea	0,275	0,275	0,275	0,242	0,242	0,220	0,242	0,242	0,242	0,242
Luxembourg	0,296	0,296	0,296	0,286	0,286	0,288	0,288	0,292	0,292	0,292
Mexico	0,290	0,280	0,280	0,280	0,300	0,300	0,300	0,300	0,300	0,300
Netherlands	0,296	0,255	0,255	0,255	0,255	0,250	0,250	0,250	0,250	0,250
New Zealand	0,330	0,330	0,300	0,300	0,300	0,280	0,280	0,280	0,280	0,280
Norway	0,280	0,280	0,280	0,280	0,280	0,280	0,280	0,280	0,270	0,270
Poland	0,190	0,190	0,190	0,190	0,190	0,190	0,190	0,190	0,190	0,190
Portugal	0,275	0,250	0,250	0,250	0,250	0,250	0,250	0,250	0,230	0,210
Slovak Republic	0,190	0,190	0,190	0,190	0,190	0,190	0,190	0,230	0,220	0,220
Slovenia	0,250	0,230	0,220	0,210	0,200	0,200	0,180	0,170	0,170	0,170
Spain	0,350	0,325	0,300	0,300	0,300	0,300	0,300	0,300	0,300	0,280
Sweden	0,280	0,280	0,280	0,263	0,263	0,263	0,263	0,220	0,220	0,220
Switzerland	0,213	0,206	0,192	0,190	0,188	0,183	0,181	0,180	0,179	0,179
Turkey	0,200	0,200	0,200	0,200	0,200	0,200	0,200	0,200	0,200	0,200
United Kingdom	0,300	0,300	0,300	0,280	0,280	0,260	0,240	0,230	0,210	0,200
United States	0,400	0,400	0,400	0,400	0,400	0,400	0,400	0,400	0,400	0,400

*Source: Authors' calculations*

**Table 2a. GDP per capita in OECD countries in 2005-2014**

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Australia	732,781	781,739	948,997	1052,869	996,461	1248,219	1500,355	1555,915	1501,883	1444,189
Austria	315,187	334,603	386,995	429,638	398,602	390,383	429,493	407,801	428,456	437,123
Belgium	387,618	411,059	472,964	522,556	487,065	485,307	528,721	499,129	524,970	534,672
Canada	1164,179	1310,795	1457,873	1542,561	1370,839	1614,072	1788,741	1832,716	1838,964	1788,717
Chile	123,060	154,722	173,085	179,571	172,128	217,308	250,655	265,099	276,586	257,968
Czech Republic	135,990	155,213	188,818	235,205	205,730	207,016	227,307	206,751	208,796	205,658
Denmark	264,559	282,962	319,500	352,589	319,765	319,812	341,498	322,277	335,878	340,806
Estonia	14,022	16,983	22,257	24,276	19,701	19,529	22,824	22,673	24,888	25,953
Finland	204,786	216,742	255,739	285,087	252,137	248,262	273,925	256,849	268,281	271,165
France	2207,450	2327,052	2666,805	2937,321	2700,658	2651,772	2865,304	2688,210	2807,306	2846,889
Germany	2862,521	3001,251	3440,446	3764,675	3421,630	3418,371	3755,549	3535,199	3731,427	3859,547
Greece	248,095	273,519	319,127	356,296	330,693	300,156	289,068	249,663	242,306	238,023
Hungary	111,890	114,238	138,580	156,579	129,360	129,585	139,447	126,825	133,424	137,104
Iceland	16,799	17,101	21,447	17,599	12,824	13,261	14,666	14,183	15,330	16,693
Ireland	210,723	230,737	269,671	275,020	234,149	218,843	237,990	222,089	232,150	246,438
Israel	141,222	152,231	176,675	213,919	206,477	232,910	258,408	257,205	290,551	303,771
Italy	1856,684	1945,234	2207,143	2403,213	2191,781	2130,586	2280,315	2076,370	2137,615	2147,952



Table 2a. Continued

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Japan	4571,867	4356,750	4356,347	4849,185	5035,141	5495,387	5905,631	5954,475	4919,564	4616,335
Korea	898,137	1011,797	1122,679	1002,219	901,935	1094,499	1202,464	1222,807	1304,468	1416,949
Luxembourg	37,088	41,818	49,279	55,223	50,271	52,241	59,010	56,323	60,150	62,395
Mexico	866,346	966,867	1043,472	1101,274	894,950	1051,128	1171,185	1186,663	1262,250	1282,725
Netherlands	673,525	720,044	834,346	935,707	860,261	837,949	894,576	823,595	853,806	866,354
New Zealand	113,576	109,730	134,484	134,337	120,724	144,194	164,959	173,231	184,752	198,118
Norway	308,722	345,423	400,886	461,946	386,382	428,527	498,157	509,705	522,349	500,244
Poland	304,430	343,272	429,172	530,170	436,817	476,528	524,104	496,687	526,031	546,644
Portugal	197,642	208,750	240,502	263,249	244,364	238,748	245,120	216,488	224,983	230,012
Slovak Republic	49,031	57,088	76,861	96,572	88,859	89,173	97,621	92,799	97,743	99,971
Slovenia	36,401	39,624	48,181	55,853	50,372	48,060	51,299	46,288	48,005	49,506
Spain	1159,257	1265,661	1481,393	1642,738	1502,876	1434,257	1495,968	1356,483	1393,476	1406,855
Sweden	389,043	420,029	487,818	513,966	429,656	488,378	563,110	543,881	579,526	570,137
Switzerland	407,535	429,392	477,686	551,013	539,785	580,696	696,528	665,898	685,871	712,050
Turkey	482,737	529,278	646,425	730,628	614,389	731,539	774,729	788,605	821,918	806,108
United Kingdom	2415,053	2586,548	2964,399	2814,476	2318,782	2409,409	2594,114	2624,291	2680,123	2945,146
United States	13093,700	13855,900	14477,625	14718,575	14418,725	14964,400	15517,925	16163,150	16768,050	17418,925

Source: Authors' calculations

**Table 2b. GDP (PPP) in OECD countries in 2005-2014**

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Australia	729,041	771,387	827,707	866,518	886,766	917,880	962,317	1014,858	1051,164	1095,384
Austria	301,408	321,079	341,560	353,649	342,797	353,509	371,889	381,912	388,486	395,490
Belgium	372,489	394,034	416,656	428,878	420,819	436,615	452,929	461,497	469,659	481,474
Canada	1156,469	1223,256	1281,027	1321,508	1295,439	1355,512	1424,447	1477,904	1529,977	1591,580
Chile	243,848	265,981	287,275	302,379	301,535	322,743	348,356	374,205	396,173	409,329
Czech Republic	231,284	254,783	276,026	289,070	277,163	286,988	298,664	301,569	303,915	314,585
Denmark	209,419	224,057	231,908	234,770	224,515	230,943	238,436	241,130	243,531	249,527
Estonia	26,119	29,725	32,927	31,784	27,305	28,327	31,301	33,344	34,393	35,621
Finland	180,902	194,021	209,512	215,161	198,869	207,322	217,041	217,787	218,111	221,038
France	2046,601	2159,587	2269,408	2318,445	2267,340	2340,155	2438,124	2490,198	2534,509	2580,750
Germany	2803,191	3001,606	3185,997	3273,608	3114,430	3276,618	3466,666	3549,481	3610,061	3721,551
Greece	296,980	323,907	344,289	349,483	336,661	322,207	299,709	285,039	278,018	284,255
Hungary	199,724	214,019	220,838	227,148	213,879	218,201	226,729	227,388	234,296	246,354
Iceland	10,436	11,212	12,630	13,025	12,449	12,214	12,732	13,109	13,765	14,210
Ireland	177,993	193,497	208,444	206,986	195,272	197,113	206,760	209,813	213,309	226,768
Israel	159,761	174,188	190,031	200,541	205,912	220,413	234,391	245,748	257,511	268,460
Italy	1917,326	2015,892	2100,042	2118,758	2017,829	2077,420	2132,747	2110,893	2105,962	2127,743

Table 2b. Continued

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Japan	3858,502	4044,392	4243,030	4281,198	4075,293	4316,984	4386,152	4543,204	4685,286	4750,771
Korea	1094,751	1186,796	1284,941	1347,214	1367,049	1473,651	1559,447	1623,836	1696,996	1778,823
Luxembourg	36,366	39,314	42,968	44,025	41,992	44,692	46,805	47,569	49,240	51,411
Mexico	1475,117	1596,486	1690,566	1747,866	1678,360	1785,682	1896,258	2007,659	2065,913	2140,564
Netherlands	627,287	671,277	718,060	747,430	728,231	745,008	773,037	774,436	780,286	798,587
New Zealand	115,880	122,724	130,279	132,166	131,296	135,007	140,318	146,197	151,669	158,864
Norway	262,061	276,583	292,261	299,140	296,521	301,950	311,169	325,463	332,764	345,160
Poland	575,120	629,502	692,794	734,076	759,135	796,833	852,008	882,580	910,672	954,454
Portugal	246,922	258,462	271,952	277,839	271,612	280,150	280,710	274,239	273,859	280,360
Slovak Republic	95,363	106,412	120,912	129,998	124,056	131,633	137,984	142,712	146,902	152,634
Slovenia	47,889	52,153	57,257	60,307	56,027	57,404	58,948	58,423	58,701	61,127
Spain	1295,272	1390,841	1481,672	1527,604	1484,171	1502,567	1524,078	1519,012	1522,711	1566,369
Sweden	332,369	358,643	380,723	386,029	368,794	395,656	414,584	420,819	432,566	448,246
Switzerland	336,048	360,573	385,471	401,763	396,257	412,612	429,124	441,640	456,932	472,830
Turkey	919,946	1013,579	1089,128	1117,809	1071,944	1184,398	1314,897	1366,981	1444,566	1508,102
United Kingdom	1976,152	2098,838	2209,753	2245,619	2165,137	2233,479	2317,088	2374,234	2449,727	2548,889
United States	13093,700	13855,900	14477,625	14718,575	14418,725	14964,400	15517,925	16163,150	16768,050	17418,925

Source: Authors' calculations

**Table 2c. GDP per capita in OECD countries in 2005-2014**

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Australia	36077,075	37897,806	45155,684	49026,233	45572,043	56295,912	66622,359	67882,238	64428,801	61219,156
Austria	38319,371	40469,858	46620,512	51536,699	47662,388	46542,048	51003,191	48170,578	50499,804	51306,674
Belgium	37107,353	39106,096	44684,430	48988,690	45295,434	44770,456	48062,759	44987,455	47033,359	47721,586
Canada	36151,537	40296,667	44382,832	46464,702	40821,771	47530,602	52145,452	52818,117	52392,733	50397,862
Chile	7612,565	9473,478	10486,921	10761,197	10199,090	12733,268	14526,082	15196,432	15686,964	14477,099
Czech Republic	13333,862	15181,880	18413,709	22739,599	19732,790	19787,293	21675,701	19680,401	19854,844	19563,330
Denmark	48889,167	52135,316	58655,290	64390,556	58018,211	57782,724	61413,559	57750,313	59950,000	60563,623
Estonia	10319,267	12573,195	16573,461	18137,285	14749,440	14647,333	17165,539	17109,122	18852,091	19670,852
Finland	38965,429	41073,402	48248,175	53524,312	47115,792	46185,882	50714,960	47330,758	49214,372	49496,717
France	36209,519	37900,031	43155,504	47273,321	43234,246	42249,064	45430,283	42416,867	44103,942	44538,147
Germany	34723,318	36460,600	41845,496	45909,354	41828,059	41814,114	46752,729	43902,561	46199,633	47589,972
Greece	22403,996	24614,451	28637,194	31862,746	29550,850	26839,152	25987,357	22445,596	21903,391	21653,081
Hungary	11080,419	11336,553	13767,149	15587,745	12896,007	12940,392	13964,206	12769,315	13464,921	13881,131
Iceland	57220,108	57024,186	69706,560	55789,328	40153,834	41749,947	46053,388	44379,613	47630,028	51261,875
Ireland	50975,633	54510,371	61627,703	61318,497	51649,698	48046,567	52020,716	48433,914	50543,223	53461,974
Israel	20387,525	21587,967	24619,591	29277,811	27596,286	30562,283	33286,909	32527,868	36066,174	36990,982
Italy	32081,078	33501,430	37907,950	40973,485	37148,465	35995,617	38411,983	34959,128	35814,808	35823,219

Table 2c. Continued

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Japan	35780,571	34076,745	34038,349	37865,066	39321,220	42916,744	46175,364	46661,319	38632,962	36331,742
Korea	18657,522	20917,030	23101,511	20474,887	18338,706	22151,209	24155,829	24453,971	25975,240	28100,717
Luxembourg	79638,974	88428,555	102514,535	112883,393	100906,243	102937,690	113611,894	105970,202	110306,590	111716,268
Mexico	8084,925	8918,073	9503,766	9894,250	7930,497	9196,893	10123,928	10137,654	10661,175	10714,826
Netherlands	41269,909	44050,168	50930,635	56895,736	52042,427	50433,312	53589,909	49155,176	50809,705	51372,963
New Zealand	27421,483	26180,367	31786,861	31487,813	28001,256	33085,191	37580,487	39245,679	41490,293	43837,294
Norway	66652,703	73936,731	84904,366	96499,702	79786,852	87309,338	100171,698	101169,278	102495,753	97013,261
Poland	7974,838	8996,285	11256,831	13909,503	11454,233	12532,674	13769,472	13048,811	13820,174	14378,622
Portugal	18817,106	19838,829	22811,647	24933,218	23122,447	22580,678	23217,458	20588,807	21514,427	22130,488
Slovak Republic	9114,577	10593,086	14256,180	17897,650	16426,613	16447,196	18103,227	17171,302	18064,470	18454,040
Slovenia	18222,579	19778,846	23966,354	27784,009	24785,048	23478,326	25021,584	22519,314	23316,676	24019,253
Spain	26550,341	28531,246	32748,087	35724,769	32412,231	30802,845	32008,721	29005,506	29907,256	30278,346
Sweden	42998,847	46089,924	53122,332	55525,761	45998,350	51869,158	59381,870	56915,732	60086,488	58491,468
Switzerland	54960,893	57566,977	63615,123	72568,517	70083,701	74582,041	88504,231	83708,079	85317,955	87475,464
Turkey	7053,954	7638,034	9213,851	10282,998	8528,558	10001,630	10437,717	10490,121	10806,883	10482,140
United Kingdom	40093,849	42693,577	48607,857	45839,858	37525,599	38697,910	40990,981	41194,424	41819,987	45653,410
United States	44218,306	46351,667	47954,532	48302,283	46909,422	48309,451	49724,999	51409,129	52939,101	54596,653

Source: Authors' calculations

**Table 2d. GDP (PPP) per capita in OECD countries in 2005-2014**

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Australia	35893	37396	39384	40349	40555	41397	42731	44277	45094	46433
Austria	36644	38834	41147	42422	40990	42146	44163	45112	45789	46420
Belgium	35659	37486	39365	40207	39135	40279	41173	41596	42078	42973
Canada	35912	37606	38999	39806	38576	39917	41526	42593	43590	44843
Chile	15085	16286	17405	18121	17867	18911	20188	21451	22470	22971
Czech Republic	22677	24921	26918	27947	26584	27431	28480	28706	28900	29925
Denmark	38700	41282	42575	42874	40736	41726	42879	43209	43467	44343
Estonia	19221	22007	24519	23747	20442	21246	23540	25161	26052	26999
Finland	34421	36768	39527	40396	37162	38570	40183	40133	40011	40347
France	33571	35173	36725	37313	36297	37284	38657	39292	39818	40375
Germany	34004	36465	38751	39921	38073	40080	43156	44080	44697	45888
Greece	26819	29149	30895	31253	30084	28811	26944	25626	25132	25859
Hungary	19779	21238	21939	22613	21322	21790	22705	22895	23645	24942
Iceland	35548	37387	41049	41290	38979	38454	39982	41021	42767	43637
Ireland	43058	45713	47636	46150	43074	43276	45194	45757	46441	49195
Israel	23064	24702	26481	27447	27521	28923	30193	31079	31965	32691
Italy	33129	34718	36068	36124	34200	35097	35926	35540	35284	35486

**Table 2d. Continued**

<b>Country</b>	<b>Year</b>									
	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Japan	30198	31634	33153	33430	31825	33714	34295	35602	36793	37390
Korea	22742	24535	26440	27523	27796	29825	31327	32474	33791	35277
Luxembourg	78090	83133	89387	89993	84288	88064	90114	89499	90298	92049
Mexico	13766	14725	15397	15703	14873	15624	16392	17151	17449	17881
Netherlands	38437	41067	43832	45448	44055	44839	46309	46221	46435	47355
New Zealand	27978	29281	30793	30979	30453	30977	31967	33121	34061	35152
Norway	56579	59202	61899	62490	61231	61520	62571	64600	65295	66937
Poland	15066	16498	18171	19259	19906	20957	22384	23187	23926	25105
Portugal	23509	24563	25795	26315	25701	26497	26589	26081	26188	26975
Slovak Republic	17727	19745	22427	24092	22933	24279	25588	26407	27150	28175
Slovenia	23974	26033	28481	29999	27567	28043	28753	28423	28512	29658
Spain	29665	31353	32754	33221	32009	32270	32610	32481	32681	33711
Sweden	36735	39354	41460	41704	39483	42022	43719	44038	44849	45986
Switzerland	45320	48341	51335	52912	51449	52994	54527	55517	56839	58087
Turkey	13443	14627	15524	15732	14880	16193	17715	18184	18994	19610
United Kingdom	32807	34643	36234	36575	35039	35872	36614	37269	38225	39511
United States	44218	46352	47955	48302	46909	48309	49725	51409	52939	54597

*Source: Authors' calculations*

**Table 2e. Labor productivity in OECD countries in 2005-2014 (GDP)**

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Australia	0,842	0,902	1,077	1,189	1,182	1,473	1,777	1,819	1,775	1,718
Austria	0,359	0,390	0,439	0,491	0,484	0,473	0,515	0,490	0,516	0,524
Belgium	0,564	0,600	0,676	0,754	0,733	0,738	0,814	0,772	0,810	0,828
Canada	1,313	1,474	1,622	1,716	1,593	1,862	2,048	2,070	2,071	2,023
Chile	0,128	0,181	0,204	0,198	0,195	0,249	0,291	0,305	0,313	0,291
Czech Republic	0,153	0,173	0,212	0,254	0,240	0,235	0,263	0,241	0,244	0,239
Denmark	0,311	0,333	0,379	0,437	0,421	0,449	0,479	0,458	0,481	0,486
Estonia	0,013	0,016	0,021	0,024	0,025	0,025	0,027	0,026	0,029	0,030
Finland	0,245	0,258	0,303	0,345	0,327	0,319	0,354	0,333	0,354	0,360
France	3,174	3,434	3,900	4,349	4,190	4,132	4,464	4,155	4,333	4,425
Germany	4,021	4,163	4,671	5,129	4,861	4,839	5,172	4,860	5,129	5,238
Greece	0,260	0,291	0,331	0,385	0,372	0,354	0,342	0,332	0,342	0,333
Hungary	0,118	0,121	0,147	0,177	0,161	0,163	0,174	0,163	0,171	0,174
Iceland	0,017	0,017	0,020	0,018	0,015	0,015	0,016	0,016	0,016	0,018
Ireland	0,222	0,244	0,291	0,298	0,288	0,292	0,325	0,303	0,307	0,324
Israel	0,183	0,189	0,213	0,245	0,238	0,266	0,295	0,296	0,334	0,347
Italy	2,171	2,301	2,623	3,006	2,924	2,838	3,072	2,877	3,036	3,075



**Table 2e. Continued**

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Japan	5,066	4,769	4,750	5,342	5,814	6,303	6,792	6,761	5,491	5,121
Korea	0,857	0,950	1,064	0,967	0,864	1,060	1,182	1,130	1,231	1,317
Luxembourg	0,031	0,037	0,041	0,046	0,046	0,050	0,061	0,059	0,062	0,065
Mexico	0,940	1,072	1,162	1,216	1,090	1,174	1,353	1,318	1,376	1,398
Netherlands	0,884	0,951	1,078	1,219	1,141	1,114	1,188	1,094	1,153	1,177
New Zealand	0,116	0,115	0,143	0,142	0,139	0,164	0,189	0,198	0,212	0,225
Norway	0,363	0,429	0,477	0,584	0,464	0,542	0,658	0,685	0,691	0,657
Poland	0,364	0,399	0,483	0,582	0,494	0,570	0,630	0,598	0,638	0,647
Portugal	0,204	0,224	0,258	0,288	0,282	0,279	0,294	0,278	0,300	0,301
Slovak Republic	0,067	0,077	0,101	0,127	0,123	0,124	0,130	0,124	0,133	0,135
Slovenia	0,049	0,054	0,062	0,071	0,066	0,064	0,071	0,066	0,070	0,071
Spain	1,393	1,565	1,851	2,099	2,078	1,994	2,132	2,038	2,157	2,147
Sweden	0,470	0,515	0,599	0,645	0,560	0,618	0,709	0,689	0,737	0,723
Switzerland	0,374	0,405	0,459	0,544	0,550	0,590	0,724	0,701	0,725	0,749
Turkey	0,739	0,836	1,050	1,268	1,110	1,285	1,322	1,316	1,350	1,291
United Kingdom	3,182	3,445	3,830	3,680	3,125	3,152	3,393	3,406	3,431	3,768
United States	15,359	16,110	16,868	17,492	18,293	19,182	19,766	20,363	20,905	21,517

*Source: Authors' calculations*

**Table 2f. Labor productivity in OECD countries in 2005-2014 (GDP (PPP))**

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Australia	0,838	0,890	0,939	0,979	1,052	1,083	1,140	1,186	1,243	1,303
Austria	0,344	0,374	0,388	0,404	0,416	0,428	0,446	0,459	0,467	0,474
Belgium	0,542	0,575	0,596	0,619	0,634	0,664	0,697	0,714	0,725	0,746
Canada	1,304	1,375	1,425	1,470	1,505	1,564	1,631	1,670	1,723	1,800
Chile	0,254	0,311	0,338	0,333	0,342	0,370	0,404	0,430	0,448	0,461
Czech Republic	0,259	0,285	0,310	0,313	0,324	0,326	0,346	0,352	0,355	0,366
Denmark	0,246	0,264	0,275	0,291	0,295	0,324	0,335	0,343	0,349	0,356
Estonia	0,025	0,027	0,031	0,032	0,034	0,036	0,037	0,039	0,040	0,041
Finland	0,216	0,231	0,248	0,260	0,258	0,267	0,280	0,282	0,288	0,293
France	2,942	3,187	3,319	3,433	3,518	3,646	3,799	3,849	3,912	4,011
Germany	3,937	4,163	4,326	4,460	4,425	4,638	4,774	4,880	4,962	5,050
Greece	0,311	0,344	0,357	0,378	0,379	0,380	0,354	0,379	0,392	0,397
Hungary	0,211	0,227	0,235	0,256	0,265	0,274	0,284	0,293	0,301	0,312
Iceland	0,011	0,011	0,012	0,013	0,014	0,014	0,014	0,014	0,015	0,016
Ireland	0,187	0,205	0,225	0,224	0,240	0,263	0,282	0,287	0,282	0,298
Israel	0,207	0,217	0,229	0,229	0,237	0,252	0,267	0,283	0,296	0,307
Italy	2,242	2,385	2,496	2,650	2,692	2,767	2,873	2,925	2,991	3,046

**Table 2f. Continued**

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Japan	4,276	4,427	4,627	4,716	4,706	4,951	5,044	5,158	5,229	5,270
Korea	1,044	1,114	1,218	1,300	1,309	1,427	1,532	1,500	1,601	1,653
Luxembourg	0,030	0,035	0,036	0,037	0,038	0,042	0,049	0,050	0,051	0,054
Mexico	1,600	1,770	1,883	1,930	2,045	1,994	2,191	2,231	2,252	2,333
Netherlands	0,824	0,887	0,927	0,974	0,966	0,990	1,026	1,029	1,054	1,085
New Zealand	0,118	0,129	0,138	0,140	0,151	0,154	0,161	0,167	0,174	0,180
Norway	0,308	0,343	0,348	0,378	0,356	0,382	0,411	0,438	0,440	0,454
Poland	0,688	0,731	0,780	0,805	0,859	0,953	1,024	1,063	1,104	1,130
Portugal	0,255	0,278	0,292	0,303	0,314	0,327	0,337	0,352	0,365	0,367
Slovak Republic	0,130	0,144	0,159	0,171	0,172	0,182	0,184	0,190	0,200	0,207
Slovenia	0,065	0,071	0,074	0,077	0,074	0,076	0,081	0,083	0,085	0,088
Spain	1,556	1,720	1,851	1,952	2,052	2,089	2,172	2,283	2,357	2,390
Sweden	0,402	0,440	0,467	0,484	0,481	0,501	0,522	0,533	0,550	0,568
Switzerland	0,308	0,341	0,371	0,397	0,404	0,419	0,446	0,465	0,483	0,497
Turkey	1,408	1,600	1,770	1,940	1,937	2,080	2,243	2,281	2,373	2,415
United Kingdom	2,603	2,796	2,855	2,936	2,918	2,922	3,031	3,082	3,136	3,261
United States	15,359	16,110	16,868	17,492	18,293	19,182	19,766	20,363	20,905	21,517

*Source: Authors' calculations*

**Table 2g. Labor productivity in OECD countries in 2005-2014 (GDP per capita)**

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Australia	41,47	43,75	51,25	55,37	54,05	66,43	78,90	79,36	76,16	72,82
Austria	43,68	47,14	52,93	58,84	57,86	56,41	61,12	57,92	60,76	61,47
Belgium	53,98	57,06	63,89	70,66	68,20	68,12	73,99	69,57	72,58	73,90
Canada	40,77	45,30	49,37	51,68	47,43	54,83	59,71	59,67	59,01	56,99
Chile	7,94	11,06	12,35	11,86	11,57	14,60	16,86	17,48	17,75	16,31
Czech Republic	14,96	16,97	20,69	24,60	23,04	22,46	25,09	22,95	23,16	22,77
Denmark	57,49	61,38	69,49	79,87	76,34	81,10	86,17	82,10	85,87	86,40
Estonia	9,79	11,56	15,39	18,19	18,41	18,84	20,36	19,88	21,97	22,90
Finland	46,55	48,88	57,10	64,79	61,19	59,38	65,46	61,31	64,95	65,71
France	52,06	55,93	63,11	70,00	67,08	65,83	70,79	65,56	68,07	69,22
Germany	48,77	50,57	56,82	62,54	59,42	59,19	64,39	60,35	63,50	64,58
Greece	23,47	26,18	29,67	34,42	33,27	31,64	30,71	29,82	30,89	30,27
Hungary	11,73	12,01	14,64	17,60	16,01	16,28	17,47	16,44	17,29	17,59
Iceland	58,57	55,74	65,24	55,79	45,65	47,21	50,24	48,78	50,86	56,40
Ireland	53,64	57,75	66,46	66,46	63,56	64,05	71,03	66,17	66,92	70,35
Israel	26,46	26,83	29,66	33,48	31,82	34,91	37,95	37,49	41,43	42,24
Italy	37,51	39,63	45,05	51,26	49,56	47,95	51,74	48,45	50,87	51,29

**Table 2g. Continued**

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Japan	27,45	29,52	31,59	27,40	24,25	28,72	30,41	30,44	31,57	33,04
Korea	25,71	24,81	25,73	30,07	32,88	36,78	41,45	39,32	33,48	31,86
Luxembourg	66,65	78,02	85,23	94,70	92,14	97,83	118,05	110,34	114,37	116,38
Mexico	8,77	9,89	10,59	10,93	9,66	10,27	11,69	11,26	11,62	11,68
Netherlands	54,19	58,18	65,78	74,13	69,00	67,02	71,15	65,32	68,64	69,79
New Zealand	27,97	27,45	33,72	33,36	32,20	37,63	43,04	44,80	47,51	49,73
Norway	78,36	91,82	101,02	122,10	95,78	110,34	132,27	136,04	135,63	127,51
Poland	9,54	10,44	12,67	15,26	12,96	15,00	16,55	15,72	16,75	17,02
Portugal	19,43	21,30	24,46	27,23	26,73	26,35	27,85	26,46	28,68	28,96
Slovak Republic	12,39	14,35	18,78	23,59	22,79	22,78	24,18	22,88	24,57	24,98
Slovenia	24,58	26,76	31,06	35,35	32,71	31,11	34,56	32,16	33,94	34,63
Spain	31,89	35,28	40,91	45,64	44,81	42,82	45,62	43,59	46,29	46,21
Sweden	51,99	56,53	65,21	69,65	59,95	65,68	74,81	72,07	76,45	74,13
Switzerland	50,42	54,36	61,19	71,67	71,38	75,74	92,06	88,10	90,20	91,99
Turkey	10,80	12,06	14,97	17,84	15,41	17,57	17,80	17,50	17,76	16,79
United Kingdom	52,82	56,87	62,80	59,93	50,57	50,62	53,62	53,47	53,54	58,40
United States	51,87	53,89	55,87	57,41	59,52	61,93	63,34	64,77	66,00	67,44

*Source: Authors' calculations*

**Table 2h. Labor productivity in OECD countries in 2005-2014 (GDP (PPP) per capita)**

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Australia	28,10	31,00	32,01	33,76	33,87	33,97	31,84	34,05	35,44	36,15
Austria	20,94	22,51	23,33	25,53	26,46	27,41	28,40	29,47	30,36	31,61
Belgium	36,39	36,55	38,42	41,29	44,32	43,49	43,61	45,09	45,67	48,01
Canada	45,31	48,43	51,37	50,02	53,01	57,69	61,71	62,52	61,49	64,74
Chile	29,93	30,70	31,90	31,38	31,74	33,04	34,42	35,82	36,72	37,33
Czech Republic	38,73	41,07	42,86	45,19	45,62	46,75	48,39	49,25	50,12	50,81
Denmark	33,46	34,62	36,15	36,83	36,75	38,67	39,44	40,42	41,06	41,48
Estonia	21,69	23,04	25,06	26,55	26,62	28,89	30,78	30,00	31,88	32,79
Finland	65,36	73,35	74,31	75,49	76,97	83,69	93,63	93,19	93,62	95,89
France	14,93	16,33	17,15	17,34	18,12	17,44	18,94	19,06	19,02	19,49
Germany	50,47	54,24	56,62	59,21	58,41	59,59	61,49	61,42	62,73	64,33
Greece	28,54	30,70	32,67	32,83	35,02	35,23	36,61	37,81	39,00	39,88
Hungary	66,52	73,52	73,65	79,07	73,50	77,75	82,62	86,87	86,40	87,98
Iceland	18,03	19,15	20,45	21,13	22,52	25,08	26,91	27,94	29,00	29,71
Ireland	24,27	26,38	27,65	28,74	29,71	30,92	31,89	33,51	34,91	35,30
Israel	24,09	26,75	29,54	31,75	31,82	33,63	34,17	35,18	36,93	38,14
Italy	32,33	35,21	36,92	38,17	36,39	37,16	39,71	40,60	41,51	42,75

Table 2h. Continued

Country	Year									
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Japan	35,64	38,77	40,92	42,44	44,25	44,86	46,48	48,81	50,59	51,44
Korea	44,41	48,27	50,90	52,31	51,46	53,21	55,08	55,76	57,07	58,28
Luxembourg	41,57	45,65	49,38	52,26	52,40	53,82	56,71	58,43	60,09	61,09
Mexico	20,58	23,09	25,23	27,30	26,89	28,44	30,22	30,34	31,21	31,41
Netherlands	43,22	46,15	46,81	47,82	47,22	46,92	47,89	48,37	48,94	50,55
New Zealand	51,87	53,89	55,87	57,41	59,52	61,93	63,34	64,77	66,00	67,44
Norway	28,10	31,00	32,01	33,76	33,87	33,97	31,84	34,05	35,44	36,15
Poland	20,94	22,51	23,33	25,53	26,46	27,41	28,40	29,47	30,36	31,61
Portugal	36,39	36,55	38,42	41,29	44,32	43,49	43,61	45,09	45,67	48,01
Slovak Republic	45,31	48,43	51,37	50,02	53,01	57,69	61,71	62,52	61,49	64,74
Slovenia	29,93	30,70	31,90	31,38	31,74	33,04	34,42	35,82	36,72	37,33
Spain	38,73	41,07	42,86	45,19	45,62	46,75	48,39	49,25	50,12	50,81
Sweden	33,46	34,62	36,15	36,83	36,75	38,67	39,44	40,42	41,06	41,48
Switzerland	21,69	23,04	25,06	26,55	26,62	28,89	30,78	30,00	31,88	32,79
Turkey	65,36	73,35	74,31	75,49	76,97	83,69	93,63	93,19	93,62	95,89
United Kingdom	14,93	16,33	17,15	17,34	18,12	17,44	18,94	19,06	19,02	19,49
United States	50,47	54,24	56,62	59,21	58,41	59,59	61,49	61,42	62,73	64,33

Source: Authors' calculations

The available statistical data was analyzed in terms of given assumption.

I.e., all OECD countries were divided into three groups, notably:

countries which have reduced the corporate tax rates (the 1<sup>st</sup> group) during 7 years;

countries which have increased the rates (the 2<sup>nd</sup> group); and

countries which did not make any changes (the 3<sup>rd</sup> group).

Moreover, all countries were arranged by each of eight indicators.

Tables 3 and 4-a-d present the obtained results.

In the Table 3, values of parameters are arranged according to the reduction of corporate tax burden.

In Tables 4a-d values are arranged according to the increase of certain indicator: (GDP, GDP (PPP), GDP per capita, GDP (PPP) per capita, GDP per hour worked, GDP (PPP) per hour worked, GDP per hour worked per capita, GDP (PPP) per hour worked per capita).



**Table 3. Ratios of macroeconomic indicators, based on the GDP to the changes of corporate tax rates in OECD countries (GDP), arranged by decrease of CRT dynamics**

Changes of corporate tax rates (2014 – 2005), Yr	GDP	GDP (PPPs)	GDP per capita		GDP per hour worked			
			GDP	GDP (PPPs)	GDP	GDP (PPPs)	GDP	GDP (PPPs)
0,055	257,968	409,329	14477,099	22971,444	0,291	0,461	16,315	25,887
0,030	137,104	246,354	13881,131	24942,158	0,174	0,312	17,590	31,607
0,030	99,971	152,634	18454,040	28175,340	0,135	0,207	24,984	38,145
0,020	16,693	14,210	51261,875	43637,270	0,018	0,016	56,399	48,010
0,010	1282,725	2140,564	10714,826	17880,512	1,398	2,333	11,677	19,486
0,000	1444,189	1095,384	61219,156	46433,299	1,718	1,303	72,821	55,233
0,000	437,123	395,490	51306,674	46420,129	0,524	0,474	61,475	55,619
0,000	534,672	481,474	47721,586	42973,425	0,828	0,746	73,902	66,549
0,000	2846,889	2580,750	44538,147	40374,529	4,425	4,011	69,220	62,749
0,000	246,438	226,768	53461,974	49194,773	0,324	0,298	70,354	64,738
0,000	546,644	954,454	14378,622	25105,404	0,647	1,130	17,018	29,714
0,000	806,108	1508,102	10482,140	19610,445	1,291	2,415	16,789	31,409
0,000	17418,925	17418,925	54596,653	54596,653	21,517	21,517	67,442	67,442
-0,004	62,395	51,411	111716,268	92048,548	0,065	0,054	116,378	95,891
-0,010	500,244	345,160	97013,261	66937,460	0,657	0,454	127,510	87,979
-0,030	238,023	284,255	21653,081	25858,773	0,333	0,397	30,271	36,150
-0,030	25,953	35,621	19670,852	26998,783	0,030	0,041	22,899	31,430

Table 3. Continued

Changes of corporate tax rates (2014 – 2005), Yr	GDP	GDP (PPPs)	GDP		GDP		GDP	
			per capita		per capita		per hour worked	
–0,033	1416,949	1778,823	28100,717	35277,347	1,317	1,653	26,117	32,787
–0,034	712,050	472,830	87475,464	58087,211	0,749	0,497	91,991	61,086
–0,045	303,771	268,460	36990,982	32691,018	0,347	0,307	42,244	37,334
–0,045	340,806	249,527	60563,623	44342,659	0,486	0,356	86,396	63,256
–0,046	866,354	798,587	51372,963	47354,525	1,177	1,085	69,786	64,327
–0,050	205,658	314,585	19563,330	29925,128	0,239	0,366	22,767	34,826
–0,050	198,118	158,864	43837,294	35151,754	0,225	0,180	49,729	39,876
–0,059	2147,952	2127,743	35823,219	35486,171	3,075	3,046	51,292	50,809
–0,060	271,165	221,038	49496,717	40346,972	0,360	0,293	65,711	53,564
–0,060	570,137	448,246	58491,468	45986,383	0,723	0,568	74,129	58,280
–0,065	230,012	280,360	22130,488	26974,632	0,301	0,367	28,960	35,300
–0,070	1406,855	1566,369	30278,346	33711,409	2,147	2,390	46,205	51,444
–0,076	4616,335	4750,771	36331,742	37389,785	5,121	5,270	40,302	41,475
–0,080	49,506	61,127	24019,253	29657,783	0,071	0,088	34,626	42,754
–0,087	3859,547	3721,551	47589,972	45888,423	5,238	5,050	64,584	62,275
–0,096	1788,717	1591,580	50397,862	44843,442	2,023	1,800	56,992	50,711
–0,100	2945,146	2548,889	45653,410	39510,937	3,768	3,261	58,405	50,546

Source: Authors' calculations

**Table 4a. Ratios of the GDP indicators to the changes of corporate tax rates in OECD countries**

<b>Changes of corporate tax rates (2014 – 2005), Yr</b>	<b>GDP (2014 piк)</b>	<b>Changes of corporate tax rates (2014 – 2005), Yr</b>	<b>GDP (PPP) (2014 piк)</b>
0,020	16,693	0,020	14,210
-0,030	25,953	-0,030	35,621
-0,080	49,506	-0,004	51,411
-0,004	62,395	-0,080	61,127
0,030	99,971	0,030	152,634
0,030	137,104	-0,050	158,864
-0,050	198,118	-0,060	221,038
-0,050	205,658	0,000	226,768
-0,065	230,012	0,030	246,354
-0,030	238,023	-0,045	249,527
0,000	246,438	-0,045	268,460
0,055	257,968	-0,065	280,360
-0,060	271,165	-0,030	284,255
-0,045	303,771	-0,050	314,585
-0,045	340,806	-0,010	345,160
0,000	437,123	0,000	395,490
-0,010	500,244	0,055	409,329
0,000	534,672	-0,060	448,246
0,000	546,644	-0,034	472,830
-0,060	570,137	0,000	481,474
-0,034	712,050	-0,046	798,587
0,000	806,108	0,000	954,454
-0,046	866,354	0,000	1095,384
0,010	1282,725	0,000	1508,102
-0,070	1406,855	-0,070	1566,369
-0,033	1416,949	-0,096	1591,580
0,000	1444,189	-0,033	1778,823
-0,096	1788,717	-0,059	2127,743
-0,059	2147,952	0,010	2140,564
0,000	2846,889	-0,100	2548,889
-0,100	2945,146	0,000	2580,750
-0,087	3859,547	-0,087	3721,551
-0,076	4616,335	-0,076	4750,771
0,000	17418,925	0,000	17418,925

*Source: Authors' calculations*

**Table 4b. Ratios of the GDP indicators to the changes of corporate tax rates in OECD countries, per capita**

<b>Changes of corporate tax rates (2014 – 2005), Yr</b>	<b>GDP per capita (2014 Yr)</b>	<b>Changes of corporate tax rates (2014 – 2005), Yr</b>	<b>GDP (PPP) per capita (2014 Yr)</b>
0,000	10482,140	0,010	17880,512
0,010	10714,826	0,000	19610,445
0,030	13881,131	0,055	22971,444
0,000	14378,622	0,030	24942,158
0,055	14477,099	0,000	25105,404
0,030	18454,040	-0,030	25858,773
-0,050	19563,330	-0,065	26974,632
-0,030	19670,852	-0,030	26998,783
-0,030	21653,081	0,030	28175,340
-0,065	22130,488	-0,080	29657,783
-0,080	24019,253	-0,050	29925,128
-0,033	28100,717	-0,045	32691,018
-0,070	30278,346	-0,070	33711,409
-0,059	35823,219	-0,050	35151,754
-0,076	36331,742	-0,033	35277,347
-0,045	36990,982	-0,059	35486,171
-0,050	43837,294	-0,076	37389,785
0,000	44538,147	-0,100	39510,937
-0,100	45653,410	-0,060	40346,972
-0,087	47589,972	0,000	40374,529
0,000	47721,586	0,000	42973,425
-0,060	49496,717	0,020	43637,270
-0,096	50397,862	-0,045	44342,659
0,020	51261,875	-0,096	44843,442
0,000	51306,674	-0,087	45888,423
-0,046	51372,963	-0,060	45986,383
0,000	53461,974	0,000	46420,129
0,000	54596,653	0,000	46433,299
-0,060	58491,468	-0,046	47354,525
-0,045	60563,623	0,000	49194,773
0,000	61219,156	0,000	54596,653
-0,034	87475,464	-0,034	58087,211
-0,010	97013,261	-0,010	66937,460
-0,004	111716,268	-0,004	92048,548

*Source: Authors' calculations*

**Table 4c. Ratios of the labor productivity to the changes of corporate tax rates in OECD countries**

<b>Changes of corporate tax rates (2014 – 2005), Yr</b>	<b>GDP per hour worked (2014 Yr)</b>	<b>Changes of corporate tax rates (2014 – 2005), Yr</b>	<b>GDP (PPP) per hour worked (2014 Yr)</b>
0,020	0,018	0,020	0,016
-0,030	0,030	-0,030	0,041
-0,004	0,065	-0,004	0,054
-0,080	0,071	-0,080	0,088
0,030	0,135	-0,050	0,180
0,030	0,174	0,030	0,207
-0,050	0,225	-0,060	0,293
-0,050	0,239	0,000	0,298
0,055	0,291	-0,045	0,307
-0,065	0,301	0,030	0,312
0,000	0,324	-0,045	0,356
-0,030	0,333	-0,050	0,366
-0,045	0,347	-0,065	0,367
-0,060	0,360	-0,030	0,397
-0,045	0,486	-0,010	0,454
0,000	0,524	0,055	0,461
0,000	0,647	0,000	0,474
-0,010	0,657	-0,034	0,497
-0,060	0,723	-0,060	0,568
-0,034	0,749	0,000	0,746
0,000	0,828	-0,046	1,085
-0,046	1,177	0,000	1,130
0,000	1,291	0,000	1,303
-0,033	1,317	-0,033	1,653
0,010	1,398	-0,096	1,800
0,000	1,718	0,010	2,333
-0,096	2,023	-0,070	2,390
-0,070	2,147	0,000	2,415
-0,059	3,075	-0,059	3,046
-0,100	3,768	-0,100	3,261
0,000	4,425	0,000	4,011
-0,076	5,121	-0,087	5,050
-0,087	5,238	-0,076	5,270
0,000	21,517	0,000	21,517

*Source: Authors' calculations*

**Table 4d. Ratios of the labor productivity to the changes of corporate tax rates in OECD countries, per capita**

<b>Changes of corporate tax rates (2014 – 2005), Yr</b>	<b>GDP per capita per hour worked (2014 Yr)</b>	<b>Changes of corporate tax rates (2014 – 2005), Yr</b>	<b>GDP (PPP) per capita per hour worked (2014 Yr)</b>
0,010	11,677	0,010	19,486
0,055	16,315	0,055	25,887
0,000	16,789	0,000	29,714
0,000	17,018	0,000	31,409
0,030	17,590	-0,030	31,430
-0,050	22,767	0,030	31,607
-0,030	22,899	-0,033	32,787
0,030	24,984	-0,050	34,826
-0,033	26,117	-0,065	35,300
-0,065	28,960	-0,030	36,150
-0,030	30,271	-0,045	37,334
-0,080	34,626	0,030	38,145
-0,076	40,302	-0,050	39,876
-0,045	42,244	-0,076	41,475
-0,070	46,205	-0,080	42,754
-0,050	49,729	0,020	48,010
-0,059	51,292	-0,100	50,546
0,020	56,399	-0,096	50,711
-0,096	56,992	-0,059	50,809
-0,100	58,405	-0,070	51,444
0,000	61,475	-0,060	53,564
-0,087	64,584	0,000	55,233
-0,060	65,711	0,000	55,619
0,000	67,442	-0,060	58,280
0,000	69,220	-0,034	61,086
-0,046	69,786	-0,087	62,275
0,000	70,354	0,000	62,749
0,000	72,821	-0,045	63,256
0,000	73,902	-0,046	64,327
-0,060	74,129	0,000	64,738
-0,045	86,396	0,000	66,549
-0,034	91,991	0,000	67,442
-0,004	116,378	-0,010	87,979
-0,010	127,510	-0,004	95,891

*Source: Authors' calculations*

From the Tables 3, 4a-d it can be seen that 21 OECD countries have reduced the corporate tax rates (the 1<sup>st</sup> group), 8 countries did not make any changes (2<sup>nd</sup> group) and 5 countries have increased the rates (the 3<sup>rd</sup> group).

For each of these groups we statistically tested the hypotheses about independence between GDP, GDP(PPPs), both in absolute terms and per capita, and also of all indicators, normalized on per hour worked and CTR. To some detail, we divided OECD countries into three groups according to values of their efficiency indicators: countries with high, moderate and low efficiency.

Following to the assumption, the governments of low-efficient countries tend to increase the corporate tax burden, those with moderate efficiency tend to reduce this burden, and governments of high-efficient countries keep it unchanged. Consequently for each efficiency indicator we take an appropriate sample: the less efficient economies with increased CIT rate; economies with moderate efficiency with reduced CIT rate, and the most efficient economies which did not make changes.

In order to confirm this assumption and to reject the hypothesis about independence between trend of the change of the CIT rate and certain efficiency indicator, the number of economies in the appropriate groups should fall in the 95% confidence interval.

The obtained results are presented in Tables 5 and 6.

**Table 5. The results of statistical test between efficiency of economics and changes the CIT rates**

<b>The tax trend</b>	<b>positive</b>	
<b>Number of countries meeting the criteria</b>	<b>5 of 34</b>	
<b>Indicator</b>	<b>number of countries in the sample meeting the criteria</b>	<b>C.I. (95%)</b>
GDP	3 of 6	[0,242; 1,523]
GDP (PPPs)	3 of 9	[0,582; 2,065]
GDP per capita	4 of 6	[0,242; 1,523]
GDP (PPPs) per capita	3 of 4	[0,047; 1,130]
GDP per hour worked	3 of 6	[0,242; 1,523]
GDP (PPPs) per hour worked	3 of 10	[0,705; 2,236]
GDP per capita per hour worked	3 of 5	[0,140; 1,331]
GDP (PPPs) per capita per hour worked	3 of 6	[0,242; 1,523]
<b>The tax trend</b>	<b>zero</b>	
<b>Number of countries meeting the criteria</b>	<b>8 of 34</b>	
<b>Indicator</b>	<b>number of countries in the sample meeting the criteria</b>	<b>C.I. (95%)</b>
GDP	6 of 17	[2,655; 5,345]
GDP (PPPs)	6 of 15	[2,194; 4,865]
GDP per capita	4 of 10	[1,128; 3,578]
GDP (PPPs) per capita	4 of 8	[0,742; 3,023]
GDP per hour worked	5 of 14	[1,971; 4,618]
GDP (PPPs) per hour worked	5 of 13	[1,752; 4,366]
GDP per capita per hour worked	6 of 14	[1,971; 4,618]
GDP (PPPs) per capita per hour worked	6 of 13	[1,752; 4,366]
<b>The tax trend</b>	<b>negative</b>	
<b>Number of countries meeting the criteria</b>	<b>21 of 34</b>	
<b>Indicator</b>	<b>number of countries in the sample meeting the criteria</b>	<b>C.I. (5%)</b>
GDP	8 of 11	[3,492; 10,096]
GDP (PPPs)	8 of 10	[2,960; 9,393]
GDP per capita	15 of 18	[7,594; 14,641]
GDP (PPPs) per capita	17 of 22	[10,215; 16,962]
GDP per hour worked	10 of 14	[5,173; 12,121]
GDP (PPPs) per hour worked	8 of 11	[3,492; 10,096]
GDP per capita per hour worked	13 of 15	[5,760; 12,770]
GDP (PPPs) per capita per hour worked	13 of 15	[5,760; 12,770]

*Source: Authors' calculations*



**Table 6. The results of statistical test between changes of CIT rates and efficiency of economies**

Indicator	Number of countries meeting the criteria		C.I. (95%)
	total	in the sample	
<b>GDP</b>			
High efficiency	17 of 34	6 of 8	[1,576; 6,424]
Average efficiency	11 of 34	8 of 21	[4,997; 8,591]
Low efficiency	6 of 34	3 of 5	[0,168; 1,597]
<b>GDP (PPPs)</b>			
High efficiency	15 of 34	6 of 8	[1,391; 5,668]
Average efficiency	10 of 34	8 of 21	[4,543; 7,810]
Low efficiency	9 of 34	3 of 5	[0,252; 2,395]
<b>GDP per capita</b>			
High efficiency	10 of 34	4 of 8	[0,927; 3,779]
Average efficiency	21 of 34	15 of 21	[9,540; 16,401]
Low efficiency	3 of 34	2 of 5	[0,084; 0,798]
<b>GDP (PPPs) per capita</b>			
High efficiency	8 of 34	4 of 8	[0,742; 3,023]
Average efficiency	22 of 34	17 of 21	[9,995; 17,182]
Low efficiency	4 of 34	3 of 5	[0,112; 1,064]
<b>GDP per hour worked</b>			
High efficiency	14 of 34	7 of 8	[1,298; 5,290]
Average efficiency	14 of 34	10 of 21	[6,360; 10,934]
Low efficiency	6 of 34	3 of 5	[0,168; 1,597]
<b>GDP (PPPs) per hour worked</b>			
High efficiency	13 of 34	5 of 8	[1,205; 4,912]
Average efficiency	11 of 34	8 of 21	[4,997; 8,591]
Low efficiency	10 of 34	3 of 5	[0,280; 2,661]
<b>GDP per capita per hour worked</b>			
High efficiency	14 of 34	6 of 8	[1,298; 5,290]
Average efficiency	15 of 34	13 of 21	[6,814; 11,715]
Low efficiency	5 of 34	3 of 5	[0,140; 1,331]
<b>GDP (PPPs) per capita per hour worked</b>			
High efficiency	13 of 34	6 of 8	[1,205; 4,912]
Average efficiency	15 of 34	13 of 21	[6,814; 11,715]
Low efficiency	6 of 34	3 of 5	[0,168; 1,597]

*Source: Authors' calculations*

## 4. Discussion

From the tables 5 and 6 it can be seen that for all OECD countries with 0,95 probability the most of hypotheses about independence between the trend of changes of the CIT rates and values of efficiency indicators (20 of 24, 83,3%) and vice versa: the independence between values of these indicators and changes of the corporate tax burden (17 of 24, 70,8%) are rejected.

This shows that there is the mutual interaction between changes of the corporate tax burden and economic efficiency of countries according to all measurement methods. The obtained conclusion provides an answer to one of the tasks of our study which concerns the implicit dependence between government's tax behavior and each of eight indicators of the economic efficiency for OECD countries.

Moreover the assumption stating that the tax behavior of government corresponds to that of satisfiers is confirmed. Besides we can assume that not only tax behavior could be considered as satisfying but also any other economic behavior of the government.

For additional substantiation of this hypothesis we established the following trends:

1. 3 of 5 countries (60%), which increased the CIT rate during 10 years, are among the 5 less productive economies, and 4 of 5 (80%) belong to the 8 less productive ones. Iceland is the single exception being on the 17<sup>th</sup> place among 34 countries. But it should be noted that Iceland perhaps suffered mostly among OECD and EU countries in the period of financial and economic crisis in 2008, so in order to save the economy it used the sufficiently rigorous tools, notably, the substantial increase of the corporate tax burden. Further after stabilization of the macroeconomic environment, there was no changes in CIT rate but in 2014 the revenue from collection of CIT exceeded the revenue obtained in 2005. Thus it can be argued that in the case of Iceland there was a powerful externality which has been distorted the whole picture.

3 of 5 countries which increased the CIT rate are among the 6 the less productive OECD economies in terms of GDP (PPPs) per hour worked per capita while in the upper half of the list (among 18 the most productive economies) these countries are absent.

2. At once, 6 of 8 (75%) countries which did not change the CIT rates are among 14 of 34 (41%) the most effective OECD economies in terms of GDP per hour worked per capita. By GDP (PPPs) per hour worked per capita these 6 countries are among 13 the most effective countries (38%).

3. Finally the 3<sup>rd</sup> group – economies with average productivity – which contains 15 countries (15-29 places in terms of GDP productivity and 14-28 places in terms of the GDP (PPPs) productivity). In both of these groups 13 countries of 15 (almost 87%) in 2014 had a smaller tax burden than in 2005.

Since there are 21 OECD countries which reduced the tax burden, the 13 of 21 (62%) countries have the moderate labor productivity (44% of total number of countries) (table 7a-d, 8a-d).

**Table 7a. The mutual numerical distribution of groups of labour productivity in economy (in terms of GDP) and trends of changes of the CIT rates**

Group of economies	Trend of change									Total		
	negative			zero			positive					
the more productive	10	59	48	6	35	75	1	6	20	17	100	50
moderately productive	8	73	38	2	18	25	1	9	20	11	100	32
the less productive	3	50	14	0	0	0	3	50	60	6	100	18
<b>Total</b>	<b>21</b>	<b>62</b>	<b>100</b>	<b>8</b>	<b>24</b>	<b>100</b>	<b>5</b>	<b>15</b>	<b>100</b>	<b>34</b>	<b>100</b>	<b>100</b>

*Source: Authors' calculations*

**Table 7b. The mutual numerical distribution of groups of labour productivity in economy (in terms of GDP(PPPs)) and trends of changes of the CIT rates**

Group of economies	Trend of change									Total		
	negative			zero			negative					
the more productive	8	53	38	6	40	75	1	7	20	15	100	44
moderately productive	8	80	38	1	10	13	1	10	20	10	100	29
the less productive	5	56	24	1	11	13	3	33	60	9	100	26
<b>Total</b>	<b>21</b>	<b>62</b>	<b>100</b>	<b>8</b>	<b>24</b>	<b>100</b>	<b>5</b>	<b>15</b>	<b>100</b>	<b>34</b>	<b>100</b>	<b>100</b>

*Source: Authors' calculations*

**Table 7c. The mutual numerical distribution of groups of labour productivity in economy (in terms of GDP per capita) and trends of changes of the CIT rates**

Group of economies	Trend of change									Total		
	negative			zero			negative					
the more productive	6	60	29	4	40	50	0	0	0	10	100	29
moderately productive	15	83	71	2	11	25	1	6	20	18	100	53
the less productive	0	0	0	2	33	25	4	67	80	6	100	18
<b>Total</b>	<b>21</b>	<b>62</b>	<b>100</b>	<b>8</b>	<b>24</b>	<b>100</b>	<b>5</b>	<b>15</b>	<b>100</b>	<b>34</b>	<b>100</b>	<b>100</b>

*Source: Authors' calculations*

**Table 7d. The mutual numerical distribution of groups of labor productivity in economy (in terms of GDP(PPPs) per capita) and trends of changes of the CIT rates**

Group of economies	Trend of change									Total		
	negative			zero			negative					
the more productive	4	50	19	4	50	50	0	0	0	8	100	24
moderately productive	17	77	81	3	14	38	2	9	40	22	100	65
the less productive	0	0	0	1	25	13	3	75	60	4	100	12
<b>Total</b>	<b>21</b>	<b>62</b>	<b>100</b>	<b>8</b>	<b>24</b>	<b>100</b>	<b>5</b>	<b>15</b>	<b>100</b>	<b>34</b>	<b>100</b>	<b>100</b>

*Source: Authors' calculations*

**Table 8a. The mutual numerical distribution of groups of labor productivity in economy (in terms of GDP per hour worked) and trends of changes of the CIT rates**

Group of economies	Trend of change									Total		
	negative			zero			negative					
the more productive	8	57	38	5	36	63	1	7	20	14	100	41
moderately productive	10	71	48	3	21	38	1	7	20	14	100	41
the less productive	3	50	14	0	0	0	3	50	60	6	100	18
<b>Total</b>	<b>21</b>	<b>62</b>	<b>100</b>	<b>8</b>	<b>24</b>	<b>100</b>	<b>5</b>	<b>15</b>	<b>100</b>	<b>34</b>	<b>100</b>	<b>100</b>

*Source: Authors' calculations*

**Table 8b. The mutual numerical distribution of groups of labor productivity in economy (in terms of GDP(PPPs) per hour worked) and trends of changes of the CIT rates**

Group of economies	Trend of change									Total		
	negative			zero			negative					
the more productive	7	54	33	5	38	63	1	8	20	13	100	38
moderately productive	8	73	38	2	18	25	1	9	20	11	100	32
the less productive	6	60	29	1	10	13	3	30	60	10	100	29
<b>Total</b>	<b>21</b>	<b>62</b>	<b>100</b>	<b>8</b>	<b>24</b>	<b>100</b>	<b>5</b>	<b>15</b>	<b>100</b>	<b>34</b>	<b>100</b>	<b>100</b>

*Source: Authors' calculations*

**Table 8c. The mutual numerical distribution of groups of labor productivity in economy (in terms of GDP per capita per hour worked) and trends of changes of the CIT rates**

Group of economies	Trend of change									Total		
	negative			zero			negative					
<b>the more productive</b>	8	57	38	6	43	75	0	0	0	<b>14</b>	<b>100</b>	<b>41</b>
<b>moderately productive</b>	13	87	62	0	0	0	2	13	40	<b>15</b>	<b>100</b>	<b>44</b>
<b>the less productive</b>	0	0	0	2	40	25	3	60	60	<b>5</b>	<b>100</b>	<b>15</b>
<b>Total</b>	<b>21</b>	<b>62</b>	<b>100</b>	<b>8</b>	<b>24</b>	<b>100</b>	<b>5</b>	<b>15</b>	<b>100</b>	<b>34</b>	<b>100</b>	<b>100</b>

*Source: Authors' calculations*

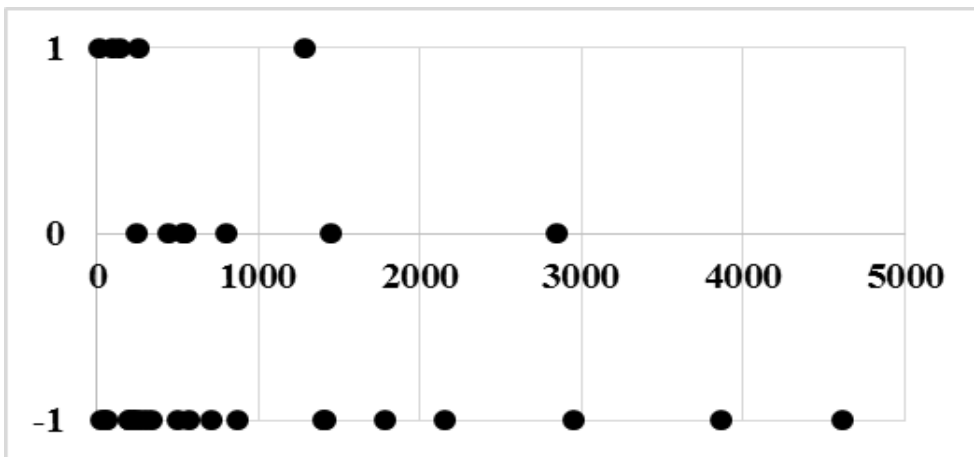
**Table 8d. The mutual numerical distribution of groups of labor productivity in economy (in terms of GDP(PPPs) per capita per hour worked) and trends of changes of the CIT rates**

Group of economies	Trend of change									Total		
	negative			zero			negative					
<b>the more productive</b>	7	54	33	6	46	75	0	0	0	<b>13</b>	<b>100</b>	<b>24</b>
<b>moderately productive</b>	13	87	62	0	0	0	2	13	40	<b>15</b>	<b>100</b>	<b>65</b>
<b>the less productive</b>	1	17	5	2	33	25	3	50	60	<b>6</b>	<b>100</b>	<b>12</b>
<b>Total</b>	<b>21</b>	<b>62</b>	<b>100</b>	<b>8</b>	<b>24</b>	<b>100</b>	<b>5</b>	<b>15</b>	<b>100</b>	<b>34</b>	<b>100</b>	<b>100</b>

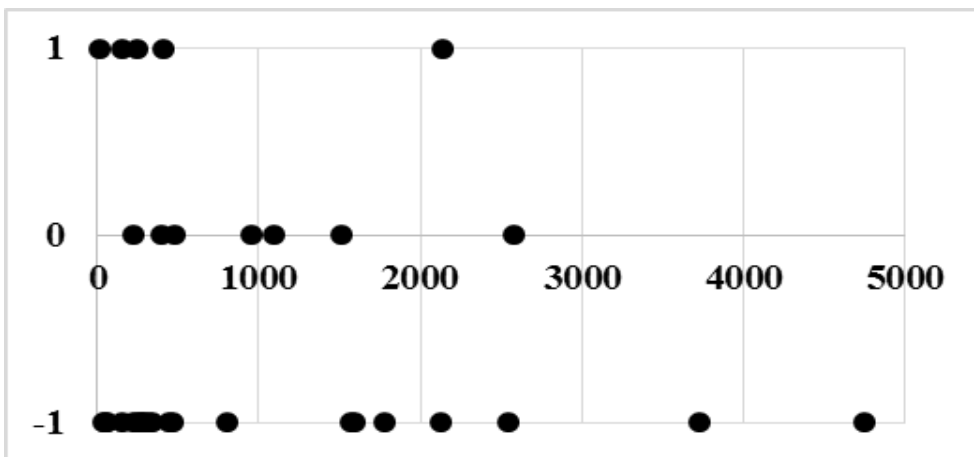
*Source: Authors' calculations*

The economies, which governments have increased, reduced or did not make changes of the corporate tax burden, arranged by each of eight efficiency indicators, are presented on Fig. 1a-h. Some trends between CRT and efficiency indicators could be observed even visually. Notably, it is evident that almost all economies, in which the corporate tax burden has been increased, are the less productive ones, while both in the more productive and moderately productive economies the tax burden has been reduced.

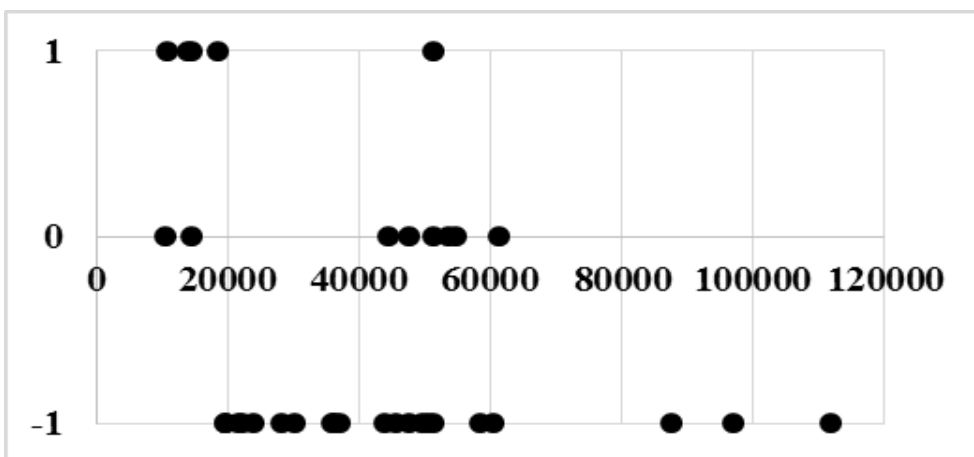
**Figure. 1. Dependence of the trend of the corporate tax burden from both GDP and labor productivity in OECD countries**



a) GDP<sup>2</sup>



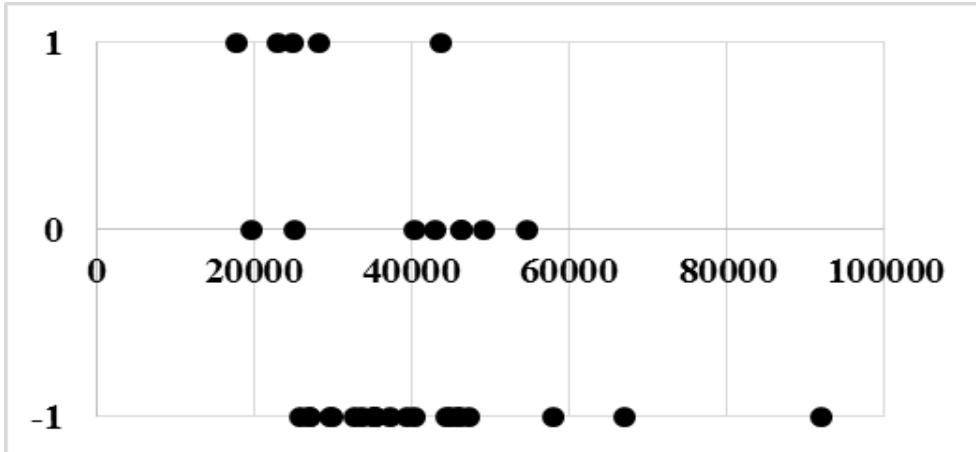
b) GDP(PPP)<sup>3</sup>



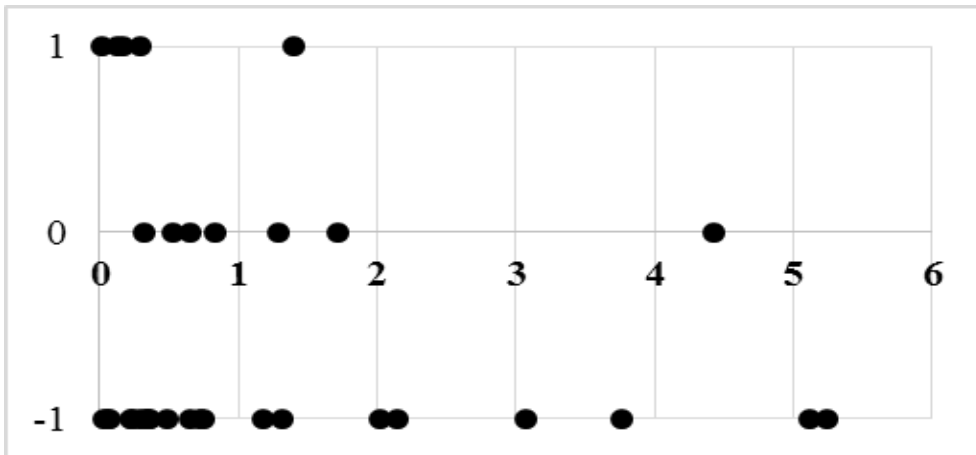
<sup>2</sup> For illustrative purposes this figure does not show the USA economics (17419; 0)

<sup>3</sup> For illustrative purposes this figure does not show the USA economics (17419; 0)

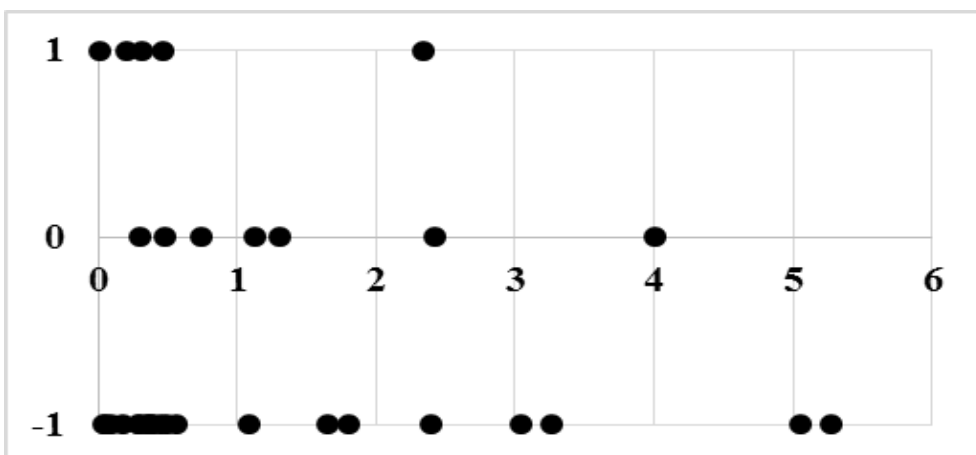
c) GDP per capita



d) GDP(PPP) per capita



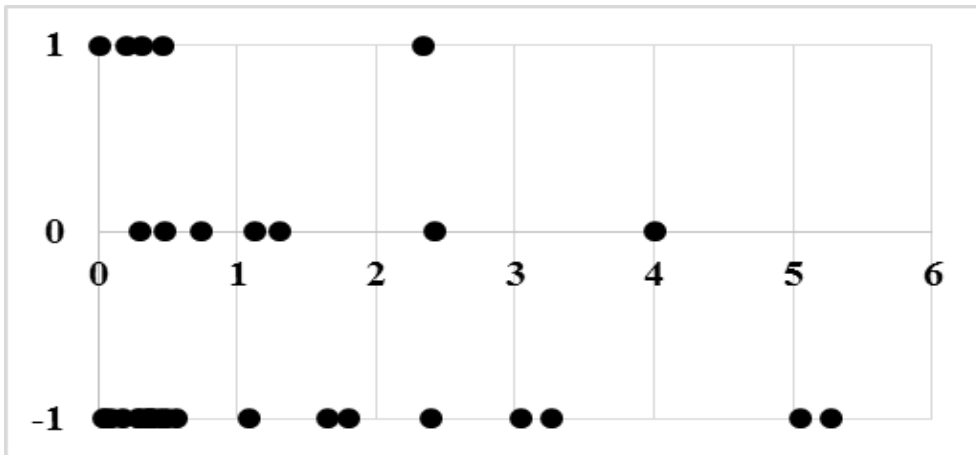
e) GDP per hour worked<sup>4</sup>



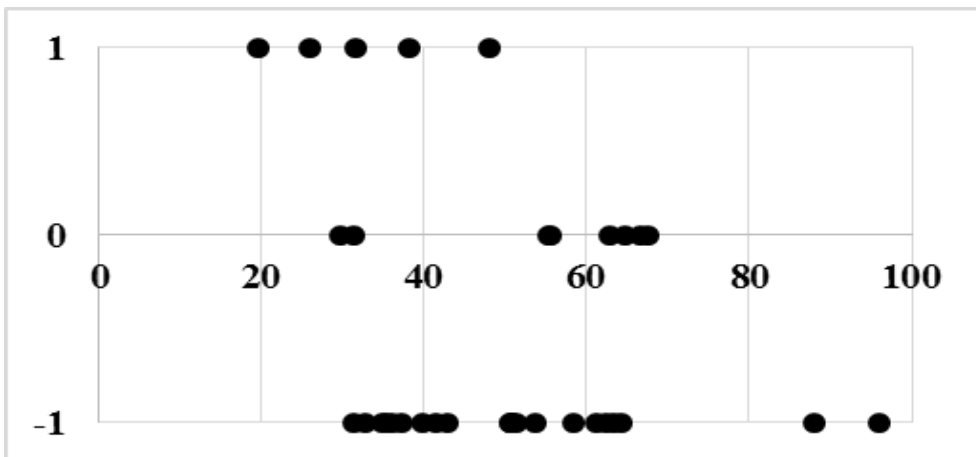
f) GDP(PPP) per hour worked<sup>5</sup>

<sup>4</sup> For illustrative purposes this figure does not show the USA economics (21,517; 0)

<sup>5</sup> For illustrative purposes this figure does not show the USA economics (21,517; 0)



**g) GDP per hour worked per capita**



**h) GDP(PPP) per hour worked per capita**

The next question is which efficiency indicators are closer correlated to changes of the CIT rate? From the Tables 5 and 6 it can be seen that only indicators of labor productivity per capita (in absolute terms and by purchasing power parity, i.e. GDP per capita per hour worked, GDP (PPPs) per capita per hour worked) in all cases fall in the 95% confidence interval. In further analysis one can use either or both of these two indicators since they demonstrate the approximately equal mutual interaction with changes of the CIT rate.

These observations can be explained as follows.

In general OECD countries tend to reduce the corporate tax burden in order to compensate for investors the potential loss of their profits. But this policy has its limits, since the taxes cannot be reduced incessantly. Thus, the low-efficient economies risk to face the underpayment of taxes and/or problems with provision of social benefits or to face the significant budget deficit. So, the these governments try to ensure the certain required level of budget revenue, notably, by increasing the corporate tax burden in order to collect more taxes.



When the country achieves the minimum required level of budget revenue the government attempts to improve the investment climate in the economy, so the trend changes to the opposite, i.e. to the reduction of the tax burden.

This behavior is typical for countries with moderate economic efficiency, while a large number of developed (the most efficient) countries are satisfied with this situation, maintaining the current CIT rates. Consequently, one part of the most efficient economies similarly reduces the CIT rate aiming to improve the tax climate and to increase the tax base, while the rest of them does not consider the reasons for changing taxes and they keep the status quo. So the behavior of the most efficient economies varies from maximizers to satisfiers.

And the opposite is true: the most of states with fixed CIT rates are among the most effective ones; the greater part of countries which increase the corporate tax burden are among the less efficient ones and the majority of countries with reduced tax pressure have the intermediate efficiency. In each of the above cases “majority” means the 60% and more of the total number of countries.

In other words, it is sufficiently obvious that the efficiency of the economy is the main factor which influences on decision making on reduction, increase or maintaining the tax burden. The trend is the following: if the country is not among the economically efficient leaders and at the same time the risks of budget imbalances are insignificant, it tends to attract investment by reducing the corporate tax burden. Almost 40% of OECD countries (13 of 34 countries) adopted this policy.

## 5. Conclusion

1. In order to study the government's tax behavior, the factors and conditions determining the decision-making, we analyzed its possible correlation with set of indicators of economic efficiency, i.e. the GDP indicators normalized in various ways on the level of domestic prices, on per capita data and on per hour worked.
2. We found the correlation between the government's tax behavior (defined as the difference between corporate tax burden at the beginning and the end of period) and each of selected indicators.
3. We find out that the government's tax behavior depends more on such labor productivity indicators as GDP per capita per hour worked and GDP (PPPs) per capita per hour worked per capita
4. The analysis allowed us to divide all OECD countries into three groups according their tax behavior: those who increase their corporate tax burden, those who reduce it and those who does not use the tax instruments, notably, in order to attract the foreign investors.
5. It is arguably that the government tax behavior can be characterized as satisfying, i.e. governments in general act as satisfiers. In less efficient economies governments primarily aim to achieve the required level of budget revenue, so they tend to increase the tax burden. Governments of the economies with moderate efficiency which do not face the acute problem of budget fulfillment, consider the improvement of the economic climate and attraction of new investors by reducing the corporate tax burden as one of their main goals.
6. The more "satisfied" are governments of the most efficient countries, many of whom does not use the regulatory function of the corporate tax.
7. But in general there is a trend related to the reduction of the tax burden, which can be considered not only as intention to attract the new investment, but also as the fight for investors. Under specific conditions such fight could lead to a "race to the bottom" situation, i.e. to the inefficient state of all economic systems participated in this race. Thus, determining the reasons, factors and conditions favoring the race to the bottom between OECD and other countries require the further investigation.

## Reference

1. Afonso, A., Hauptmeier, S. 2009 Fiscal behaviour in the European Union rules, fiscal decentralization and government indebtedness. Working Paper Series No 1054. European Central Bank.
2. Avi-Yonah, R. S. 2011. Taxation as Regulation: Carbon Tax, Health Care Tax, Bank Tax and Other Regulatory Taxes. *Accounting, Economics, and Law*, 1(1), 6, pp.1-10.
3. Bessard, P. 2009. Tax burden and individual rights in the OECD: an international comparison. Lausanne: Institut Constant de Rebecque.
4. Daianu D., Kallai, E. and Lungu, L. 2012. Tax Policy under the Curse of Low Revenues: The Case of Romania, *Romanian Journal of Economic Forecasting*, 15(1), pp.156-186; 15(2), pp.143-162.
5. Freedman, J. 2015. Managing tax complexity: the institutional framework for tax policy-making and oversight. In: *Tax Simplification* (ed C. Evans and R. Krever) Kluwer Law International, forthcoming
6. Joumard, I., Kongsrud, P.M. 2003. Fiscal relations across government levels. *OECD Journal: Economic Studies*, 36(1), pp.155-229.
7. Krishna, A., Slemrod, J. 2003. Behavioral Public Finance: Tax Design as Price Presentation. *International Tax and Public Finance*, 10, pp.189-203.
8. Laffer, A. B., Winegarden, W. and Childs, J. 2011 The Economic Burden Caused by Tax Code Complexity. The Laffer Center for Supply-Side Economics.
9. Leicester, A., Levell, P., and Rasul, I. 2012. Tax and benefit policy: insights from behavioural economics. IFS Commentary C125. The Institute for Fiscal Studies.
10. Mirrlees, J., Adam, S., Besley, T., Blundell, R., Bond, S., Chote, R., Gammie, M., Johnson, P., Myles, G., and Poterba J. 2011. The Economic Approach to Tax Design. In: *Tax by design*. Oxford: Oxford University Press.
11. Simon, H. 1955. A Behavioral Model of Rational Choice, *The Quarterly Journal of Economics*, 69(1), pp.99-118.
12. Simon, H. 1956. Rational Choice and the Structure of the Environment, *Psychological Review*, 63(2), pp.129-138.
13. Stănică, C.N. 2011. Modeling Government Policies used for Sustaining Economic Growth in Romania, *Romanian Journal of Economic Forecasting*, 14(4), pp.90-105.
14. Weber, O., Fooker, J. and Herrmann, B., 2014. Behavioural Economics and Taxation. Working paper No 41. Luxembourg: Office for Official Publications of the European Communities.

# **Factors influencing tax behavior in OECD countries**

## **Abstract**

The article deals with investigation of principles, factors and conditions of the government's tax behavior, notably by means of changing the tax burden.

We define a set of potential indicators of the economic efficiency, based on the GDP and normalized in various ways on the level of consumer prices in the country, on per capita data and on per hour worked. By using the statistical analysis techniques we found the statistical dependence between government's behavior and each of the selected indicators. We argued that the factor of labor of productivity per capita has the biggest impact on the government's tax decisions. Also we showed that the governments mostly act as satisfiers. The obtained results allow to understand the principles of governments' decision-making, and, therefore, to forecast in some way their behavior in certain economic conditions. Moreover, it could help to understand the reasons why the "race to the bottom" situation appears.

The present paper differs from previous studies both by the topic, studying the relations between government's tax behavior and economic efficiency of their jurisdictions and by the approach to define this dependence, since the latest can be observed only when each variant of government's tax reaction is analyzed separately.

**Keywords:** economic efficiency; corporate tax burden; tax compliance; satisfying behavior; GDP; labor productivity

**JEL Codes:** C12, E22, G38, H30