

Tax Losses due to Shadow Economy Activities in OECD Countries from 2011 to 2013: A preliminary calculation

By Friedrich SCHNEIDER [†]

Abstract. In this short paper an attempt is undertaken to calculate the tax losses which result from shadow economy activities in a country. These calculations are done for the 28 EU countries, for 3 non-EU countries and for 2 other highly-developed OECD countries. The total tax losses over all 28 EU-countries make up 450.8 billion euros or 3.6% of EU-28-GDP in 2011. In 2012 it were 457.3 billion euros or 3.5% of EU-28-GDP and in 2013 454.2 billion euros or 3.4% of EU-28-GDP. For the whole country sample used in this paper the tax losses amounted to 698.7 billion euros or 2.4% of GDP of these 33 countries in 2011. In 2012 the value of tax losses was 737.2 billion euros or 2.3% of GDP and in 2013 it was 713.1 billion euros or also 2.3% of total GDP of these 33 countries.

Keywords. Tax losses, Shadow economy, Tax and social security contribution burden.

JEL. E26, H26, K42, O17.

1. Introduction

In this short paper a calculation of the tax losses due to the shadow economy activities of highly developed OECD countries is undertaken. The procedure, which was used, is the following: From the shadow economy estimates, which are shown in column (2) in % of GDP and in column (3) in million euros, 33.0% of legal (i.e. already taxed) material and double counting are subtracted, as the MIMIC measure provides an overall measure of shadow economy activities, including legally bought material. Moreover, as some statistical offices add some shadow economy activities to the official GDP, this is also accounted for in the 33.0% (both legally bought material and double counting activities).

(1) From these corrected shadow economy activities 10.0% of illegal transactions, which are mostly transferred abroad, are deducted, too. What remains is the part of the shadow economy which contributes to the value-added of a country and which consists of mostly value-added of black labor.

(2) These values from point (2) are finally multiplied with the taxes and social security contribution burden in % of GDP in order to arrive at the tax (including social security) loss in million euros (column (7)), and in column (8) the tax loss is given in % of GDP. Here I made the assumption that, if there were no shadow economy activities, all (100%) shadow economy activities are “produced” in the official one. I am aware that this is unrealistic, but as I do not know how large the actual percentage share (30%, 50%, 60%?) is, I assume 100%. This means that these are upper bound values.

[†] Department of Economics, Johannes Kepler University of Linz Altenbergerstrasse 69 A-4040 Linz Austria.

☎. +43-732-2468-8210

✉. friedrich.schneider@jku.at

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(3) Furthermore, in column (9) the total tax loss due to shadow economy activities in % of the total receipts from taxes and social security contributions was calculated.

2. Results

In the tables 1 to 3 these calculations are shown in euros (and in % of GDP as well as in % of total tax and social security contribution revenues) for the 28 EU countries, for the 3 non-EU countries Norway, Switzerland and Turkey and for Japan and the United States for the years 2011, 2012 and 2013. If we take for example Germany, it had a shadow economy of 13.7% of GDP or of 355.2 billion euros in 2011 (table 1). The tax loss (including social security contributions) is 82.9 billion euros or 3.2% of GDP. Comparing these figures with a smaller economy like Austria, Austria had a shadow economy of 7.9% of GDP or 23.8 billion euros in 2011 with resulting tax losses for the economy of 6.0 billion euros or 2.0% of GDP. In the year 2012 Austria's shadow economy was 7.6% of GDP or 23.6 billion euros and Germany's shadow economy amounted to 13.3% of GDP or 351.6 billion euros. The tax losses due to the shadow economy in 2012 were 6.0 billion euros for Austria and 83.5 billion euros for Germany. In % of GDP the tax losses for Austria were 1.9% of GDP and for Germany 3.2% of GDP (table 2). In the year 2013 the tax losses due to the shadow economy increased for both countries in absolute value, to 6.3 billion euros for Austria and 83.7 billion euros for Germany. However, in % of GDP the tax losses increased again for Austria to 2.0% of GDP and decreased slightly for Germany with 3.1% of GDP (table 3).

For the sample of all 28 EU countries an average value of the shadow economy of 19.6% of GDP can be observed in 2011 as well as a total shadow economy of 1,917.0 billion euros. This results in a total tax loss of 450.8 billion euros or 3.6% of EU GDP. In the year 2012 the shadow economy was lower with only 19.3% of GDP or 1,915.2 billion euros. The tax loss in 2012 in the 28 EU countries amounted to 457.3 billion euros or 3.5% of GDP. Until the year 2013 the average shadow economy for all EU countries has further decreased to 18.8% of GDP or 1,883.2 billion euros. The tax losses in 2013 for the subsample of 28 EU countries have also decreased again to 454.2 billion euros or 3.4% of GDP. The total shadow economy for the country sample used in this calculation (28 EU, 3 non-EU and 2 other highly-developed OECD countries) was 18.6% of GDP or 3,322.8 billion euros in 2011. These values also decreased over time to 18.3% and 17.8% of GDP in 2012 and 2013, respectively. In absolute values the shadow economy increased from 2011 to 2012 to 3,463.1 billion euros and then decreased to 3,285.9 billion euros in 2013. The total tax losses (including social security contributions) amounted to 698.7 billion euros or 2.4% of GDP in 2011, to 737.2 billion euros or 2.3% in 2012 and to 713.1 billion euros and 2.3% of GDP in 2013.

With regard to the tax loss in % of the total receipts from taxes and social security contributions, the tax losses in Austria were 4.8% of total receipts in the year 2011, 4.6% in 2012 and 4.5% in 2013. In Germany tax losses in % of total tax receipts amounted to 8.3% in 2011, to 8.0% in 2012 and 7.8% in 2013. Hence, we have a decreasing trend for Austria and Germany. This decreasing trend can also be found for the total of all 28 EU countries as well as for all 33 countries in this sample. For the EU countries (all 33 sample countries), the tax losses as a share of total tax and social security contribution receipts were 9.1% (6.8%) in 2011, 8.9% (6.6%) in 2012 and 8.6% (6.4%) in 2013.

Table 4 provides a summary of the most important results and shows some aggregate values of the calculated tax losses for the years 2011 to 2013. The figures 1a to 2b graphically illustrate the size of the tax (and social security

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contribution) losses in % of GDP as well as in % of the total tax and social security contribution receipts for the 31 European countries in 2013.

Finally, in table 5 a comparison is made between my calculations in this paper and the calculated tax losses by Richard Murphy for the Tax Justice Network in his paper “The Cost of Tax Abuse” from November 2011. The table shows for example, that for the case of the United States my calculations of the tax losses are 112.9 billion euros, for Germany they are 82.9 billion euros and for the United Kingdom they are 39.8 billion euros. However, Murphy calculates a tax loss of 242.3 billion euros for the United States, of 154.5 billion euros for Germany and of 78.5 billion euros for the United Kingdom. Murphy makes the assumption that the total tax and social security contribution losses can be calculated from the total (100%) size of the shadow economy, without first deducting from the size of the shadow economy the legally bought material, double counting issues and illegal transactions. Hence, his calculated tax losses are approximately the double of my figures. This assumption of Murphy can be criticized because, as shown in this paper, only part of the total shadow economy can be used to calculate the tax losses. Therefore, the figures of Murphy are unrealistically high.

3. Tables

Table 1. Calculation of the tax losses in million euros and in % of GDP for 28 EU, 3 non-EU and 2 other highly-developed OECD countries for the year 2011

Country	(1) GDP in Mio. euros	(2) Shadow Economy in % of GDP	(3) Shadow Economy in Mio. euros	(4) Shadow Economy <i>minus</i> 33% material and double counting (in Mio. euros)	(5) Corrected Shadow Economy (4) <i>minus</i> 10% illegal transactions abroad	(6) Taxes and Social Security Contribution Burden in % of GDP	(7) Tax (and soc. sec. contr.) loss due to the shadow economy in Mio. euros	(8) Tax (and soc. sec. contr.) loss due to the shadow economy in % of GDP	(9) Tax loss in % of total tax (and social security contribution) receipts
Austria	300,712	7.9%	23,756	15,917	14,325	41.9%	6,002	2.0%	4.8%
Belgium	369,836	17.1%	63,242	42,372	38,135	46.0%	17,542	4.7%	10.3%
Bulgaria	38,505	32.3%	12,437	8,333	7,500	26.1%	1,957	5.1%	19.5%
Croatia	44,384	29.5%	13,093	8,772	7,895	35.2%	2,779	6.3%	17.8%
Cyprus	17,979	26.0%	4,675	3,132	2,819	32.5%	916	5.1%	15.7%
Czech Republic	156,217	16.4%	25,620	17,165	15,449	33.7%	5,206	3.3%	9.9%
Denmark	240,453	13.8%	33,182	22,232	20,009	46.6%	9,324	3.9%	8.3%
Estonia	15,951	28.6%	4,562	3,057	2,751	32.1%	883	5.5%	17.2%
Finland	189,489	13.7%	25,960	17,393	15,654	42.2%	6,606	3.5%	8.3%
France	1,996,583	11.0%	219,624	147,148	132,433	45.2%	59,860	3.0%	6.6%
Germany	2,592,600	13.7%	355,186	237,975	214,177	38.7%	82,887	3.2%	8.3%
Greece	208,532	24.3%	50,673	33,951	30,556	35.9%	10,970	5.3%	14.7%
Hungary	99,819	22.8%	22,759	15,249	13,724	37.0%	5,078	5.1%	13.7%
Ireland	158,993	12.8%	20,351	13,635	12,272	28.8%	3,534	2.2%	7.7%
Italy	1,578,497	21.2%	334,641	224,209	201,789	41.7%	84,146	5.3%	12.8%
Latvia	20,211	26.5%	5,356	3,589	3,230	27.9%	901	4.5%	16.0%
Lithuania	30,807	29.0%	8,934	5,986	5,387	27.4%	1,476	4.8%	17.5%

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Table 1. Calculation of the tax losses in million euros and in % of GDP for 28 EU, 3 non-EU and 2 other highly-developed OECD countries for the year **2011 (cont.)**

Country	(1) GDP in Mio. euros	(2) Shadow Economy in % of GDP	(3) Shadow Economy in Mio. euros	(4) Shadow Economy minus 33% material and double counting (in Mio. euros)	(5) Corrected Shadow Economy (4) minus 10% illegal transactions abroad	(6) Taxes and Social Security Contribution Burden in % of GDP	(7) Tax (and soc. sec. contr.) loss due to the shadow economy in Mio. euros	(8) Tax (and soc. sec. contr.) loss due to the shadow economy in % of GDP	(9) Tax loss in % of total tax (and social security contribution) receipts
Luxembourg	42,625	8.2%	3,495	2,342	2,107	38.6%	813	1.9%	4.9%
Malta	6,556	25.8%	1,692	1,134	1,020	33.0%	337	5.1%	15.6%
Netherlands	601,973	9.8%	58,993	39,525	35,573	36.4%	12,948	2.2%	5.9%
Poland	369,666	25.0%	92,416	61,919	55,727	32.7%	18,223	4.9%	15.1%
Portugal	171,065	19.4%	33,187	22,235	20,012	35.6%	7,124	4.2%	11.7%
Romania	131,327	29.6%	38,873	26,045	23,440	28.1%	6,587	5.0%	17.8%
Slovenia	36,172	24.1%	8,717	5,840	5,256	36.8%	1,934	5.3%	14.5%
Spain	1,063,355	19.2%	204,164	136,790	123,111	31.9%	39,272	3.7%	11.6%
Slovakia	69,108	16.0%	11,057	7,408	6,667	28.8%	1,920	2.8%	9.6%
Sweden	387,596	14.7%	56,977	38,175	34,357	44.3%	15,220	3.9%	8.9%
United Kingdom	1,746,587	10.5%	183,392	122,873	110,585	36.0%	39,811	2.3%	6.3%
Subtotal (EU-28)	12,685,598	19.6%	1,917,014	1,284,399	1,155,959	39.0%	450,824	3.6%	9.1%
Norway	352,858	14.8%	52,223	34,989	31,490	42.1%	13,257	3.8%	8.9%
Switzerland	476,054	7.8%	37,132	24,878	22,391	27.2%	6,090	1.3%	4.7%
Turkey	555,100	27.7%	153,763	103,021	92,719	27.8%	25,776	4.6%	16.7%
Japan	4,247,574	9.0%	382,282	256,129	230,516	28.6%	65,928	1.6%	5.4%
United States	11,147,917	7.0%	780,354	522,837	470,554	24.0%	112,933	1.0%	4.2%
Total of this country sample	29,465,101	18.6%	3,322,768	2,226,254	2,003,629	34.9%	698,720	2.4%	6.8%

Source: Own calculations (2015) and sources of the official data as given in part 5.

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Table 2: Calculation of the tax losses in million euros and in % of GDP for 28 EU, 3 non-EU and 2 other highly-developed OECD countries for the year 2012

Country	(1) GDP in Mio. euros	(2) Shadow Economy in % of GDP	(3) Shadow Economy in Mio. euros	(4) Shadow Economy <i>minus</i> 33% material and double counting (in Mio. euros)	(5) Corrected Shadow Economy (4) <i>minus</i> 10% illegal transactions abroad	(6) Taxes and Social Security Contribution Burden in % of GDP	(7) Tax (and soc. sec. contr.) loss due to the shadow economy in Mio. euros	(8) Tax (and soc. sec. contr.) loss due to the shadow economy in % of GDP	(9) Tax loss in % of total tax (and social security contribution) receipts
Austria	309,901	7.6%	23,552	15,780	14,202	42.5%	6,036	1.9%	4.6%
Belgium	376,840	16.8%	63,309	42,417	38,175	47.1%	17,981	4.8%	10.1%
Bulgaria	39,668	31.9%	12,654	8,478	7,630	27.2%	2,075	5.2%	19.2%
Croatia	43,904	29.0%	12,732	8,530	7,677	35.9%	2,756	6.3%	17.5%
Cyprus	17,887	25.6%	4,579	3,068	2,761	31.8%	878	4.9%	15.4%
Czech Republic	152,828	16.0%	24,452	16,383	14,745	34.2%	5,043	3.3%	9.6%
Denmark	244,064	13.4%	32,705	21,912	19,721	47.5%	9,368	3.8%	8.1%
Estonia	16,998	28.2%	4,793	3,211	2,890	32.2%	931	5.5%	17.0%
Finland	194,469	13.3%	25,864	17,329	15,596	42.8%	6,675	3.4%	8.0%
France	2,029,877	10.8%	219,227	146,882	132,194	46.4%	61,338	3.0%	6.5%
Germany	2,643,900	13.3%	351,639	235,598	212,038	39.4%	83,543	3.2%	8.0%
Greece	193,749	24.0%	46,500	31,155	28,040	37.4%	10,487	5.4%	14.5%
Hungary	97,756	22.5%	21,995	14,737	13,263	38.7%	5,133	5.3%	13.6%
Ireland	163,595	12.7%	20,777	13,921	12,529	29.5%	3,696	2.3%	7.7%
Italy	1,565,916	21.6%	338,238	226,619	203,958	43.3%	88,314	5.6%	13.0%
Latvia	22,258	26.1%	5,809	3,892	3,503	28.3%	991	4.5%	15.7%
Lithuania	32,782	28.5%	9,343	6,260	5,634	27.2%	1,532	4.7%	17.2%

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Table 2: Calculation of the tax losses in million euros and in % of GDP for 28 EU, 3 non-EU and 2 other highly-developed OECD countries for the year **2012 (cont.)**

Country	(1) GDP in Mio. euros	(2) Shadow Economy in % of GDP	(3) Shadow Economy in Mio. euros	(4) Shadow Economy minus 33% material and double counting (in Mio. euros)	(5) Corrected Shadow Economy (4) minus 10% illegal transactions abroad	(6) Taxes and Social Security Contribution Burden in % of GDP	(7) Tax (and soc. sec. contr.) loss due to the shadow economy in Mio. euros	(8) Tax (and soc. sec. contr.) loss due to the shadow economy in % of GDP	(9) Tax loss in % of total tax (and social security contribution) receipts
Luxembourg	44,219	8.2%	3,626	2,429	2,186	39.5%	864	2.0%	4.9%
Malta	6,756	25.3%	1,709	1,145	1,031	33.2%	342	5.1%	15.3%
Netherlands	600,638	9.5%	57,061	38,231	34,408	36.9%	12,696	2.1%	5.7%
Poland	381,361	24.4%	93,052	62,345	56,110	33.0%	18,516	4.9%	14.7%
Portugal	165,409	19.4%	32,089	21,500	19,350	34.9%	6,753	4.1%	11.7%
Romania	131,740	29.1%	38,336	25,685	23,117	28.1%	6,496	4.9%	17.5%
Slovenia	35,466	23.6%	8,370	5,608	5,047	37.1%	1,872	5.3%	14.2%
Spain	1,048,491	19.2%	201,310	134,878	121,390	32.7%	39,695	3.8%	11.6%
Slovakia	71,463	15.5%	11,077	7,422	6,679	28.4%	1,897	2.7%	9.3%
Sweden	408,467	14.3%	58,411	39,135	35,222	44.4%	15,638	3.8%	8.6%
United Kingdom	1,901,001	10.1%	192,001	128,641	115,777	35.4%	40,985	2.2%	6.1%
Subtotal (EU-28)	12,941,403	19.3%	1,915,210	1,283,191	1,154,872	39.6%	457,329	3.5%	8.9%
Norway	390,009	14.2%	55,381	37,105	33,395	41.5%	13,859	3.6%	8.6%
Switzerland	491,987	7.6%	37,391	25,052	22,547	27.0%	6,088	1.2%	4.6%
Turkey	612,413	27.2%	166,576	111,606	100,445	27.6%	27,723	4.5%	16.4%
Japan	4,635,676	8.8%	407,939	273,319	245,988	29.5%	72,566	1.6%	5.3%
United States	12,580,324	7.0%	880,623	590,017	531,015	24.4%	129,568	1.0%	4.2%
Total of this country sample	31,651,812	18.3%	3,463,120	2,320,291	2,088,261	35.3%	737,220	2.3%	6.6%

Source: Own calculations (2015) and sources of the official data as given in part 5.

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Table 3. Calculation of the tax losses in million euros and in % of GDP for 28 EU, 3 non-EU and 2 other highly-developed OECD countries for the year 2013

Country	(1) GDP in Mio. euros	(2) Shadow Economy in % of GDP	(3) Shadow Economy in Mio. euros	(4) Shadow Economy minus 33% material and double counting (in Mio. euros)	(5) Corrected Shadow Economy (4) minus 10% illegal transactions abroad	(6) Taxes and Social Security Contribution Burden in % of GDP	(7) Tax (and soc. sec. contr.) loss due to the shadow economy in Mio. euros	(8) Tax (and soc. sec. contr.) loss due to the shadow economy in % of GDP	(9) Tax loss in % of total tax (and social security contribution) receipts
Austria	319,074	7.5%	23,931	16,034	14,430	43.4%	6,263	2.0%	4.5%
Belgium	385,201	16.4%	63,173	42,326	38,093	47.8%	18,209	4.7%	9.9%
Bulgaria	41,276	31.2%	12,878	8,628	7,765	28.1%	2,182	5.3%	18.8%
Croatia	44,849	28.4%	12,737	8,534	7,680	36.5%	2,803	6.3%	17.1%
Cyprus	17,536	25.2%	4,419	2,961	2,665	31.6%	842	4.8%	15.2%
Czech Republic	154,394	15.5%	23,931	16,034	14,430	34.9%	5,036	3.3%	9.3%
Denmark	249,725	13.0%	32,464	21,751	19,576	48.6%	9,514	3.8%	7.8%
Estonia	18,040	27.6%	4,979	3,336	3,002	32.0%	961	5.3%	16.6%
Finland	198,702	13.0%	25,831	17,307	15,576	44.0%	6,853	3.4%	7.8%
France	2,061,511	9.9%	204,090	136,740	123,066	47.3%	58,210	2.8%	6.0%
Germany	2,697,835	13.0%	350,719	234,982	211,484	39.6%	83,747	3.1%	7.8%
Greece	182,924	23.6%	43,170	28,924	26,032	37.1%	9,658	5.3%	14.2%
Hungary	102,763	22.1%	22,711	15,216	13,695	38.5%	5,272	5.1%	13.3%
Ireland	167,412	12.2%	20,424	13,684	12,316	30.3%	3,732	2.2%	7.4%
Italy	1,576,575	21.1%	332,657	222,880	200,592	43.4%	87,057	5.5%	12.7%
Latvia	23,546	25.5%	6,004	4,023	3,620	28.1%	1,017	4.3%	15.4%
Lithuania	34,722	28.0%	9,722	6,514	5,862	27.2%	1,595	4.6%	16.9%

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Table 3: Calculation of the tax losses in million euros and in % of GDP for 28 EU, 3 non-EU and 2 other highly-developed OECD countries for the year **2013 (cont.)**

Country	(1) GDP in Mio. euros	(2) Shadow Economy in % of GDP	(3) Shadow Economy in Mio. euros	(4) Shadow Economy <i>minus</i> 33% material and double counting (in Mio. euros)	(5) Corrected Shadow Economy (4) <i>minus</i> 10% illegal transactions abroad	(6) Taxes and Social Security Contribution Burden in % of GDP	(7) Tax (and soc. sec. contr.) loss due to the shadow economy in Mio. euros	(8) Tax (and soc. sec. contr.) loss due to the shadow economy in % of GDP	(9) Tax loss in % of total tax (and social security contribution) receipts
Luxembourg	45,636	8.0%	3,651	2,446	2,202	40.5%	892	2.0%	4.8%
Malta	7,038	24.3%	1,710	1,146	1,031	34.0%	351	5.0%	14.7%
Netherlands	606,967	9.1%	55,234	37,007	33,306	37.7%	12,556	2.1%	5.5%
Poland	400,168	23.8%	95,240	63,811	57,430	32.7%	18,780	4.7%	14.4%
Portugal	163,796	19.0%	31,121	20,851	18,766	37.6%	7,056	4.3%	11.5%
Romania	139,357	28.4%	39,577	26,517	23,865	27.4%	6,539	4.7%	17.1%
Slovenia	35,240	23.1%	8,140	5,454	4,908	37.3%	1,831	5.2%	13.9%
Spain	1,051,833	18.6%	195,641	131,079	117,972	33.2%	39,167	3.7%	11.2%
Slovakia	73,994	15.0%	11,099	7,436	6,693	30.4%	2,035	2.7%	9.0%
Sweden	422,635	13.9%	58,746	39,360	35,424	44.7%	15,834	3.7%	8.4%
United Kingdom	1,950,219	9.7%	189,171	126,745	114,070	35.3%	40,267	2.1%	5.8%
Subtotal (EU-28)	13,172,968	18.8%	1,883,170	1,261,724	1,135,552	40.0%	454,221	3.4%	8.6%
Norway	416,208	13.6%	56,604	37,925	34,132	40.5%	13,824	3.3%	8.2%
Switzerland	507,405	7.1%	36,026	24,137	21,724	27.2%	5,909	1.2%	4.3%
Turkey	667,431	26.5%	176,869	118,502	106,652	29.3%	31,249	4.7%	16.0%
Japan	3,702,977	8.1%	299,941	200,961	180,865	-	-	-	-
United States	12,625,631	6.6%	833,292	558,305	502,475	25.4%	127,629	1.0%	4.0%
Total of this country sample	31,092,620	17.8%	3,285,902	2,201,554	1,981,399	36.0%	713,056	2.3%	6.4%

Source: Own calculations (2015) and sources of the official data as given in part 5.

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Table 4. Summary of the most important results and some aggregate values of the tax losses from 2011 to 2013

Country	2011			2012			2013		
	Tax (and soc. sec. contr.) loss due to the shadow economy in Mio. euros	Tax (and soc. sec. contr.) loss due to the shadow economy in % of GDP	Tax loss in % of total tax (and social security) receipts	Tax (and soc. sec. contr.) loss due to the shadow economy in Mio. euros	Tax (and soc. sec. contr.) loss due to the shadow economy in % of GDP	Tax loss in % of total tax (and social security receipts)	Tax (and soc. sec. contr.) loss due to the shadow economy in Mio. euros	Tax (and soc. sec. contr.) loss due to the shadow economy in % of GDP	Tax loss in % of total tax (and social security contribution) receipts
Subtotal EU-28	450,824	3.6%	9.1%	457,329	3.5%	8.9%	454,221	3.4%	8.6%
Subtotal 3 non-EU countries	47,450	3.4%	10.6%	50,096	3.4%	10.5%	52,544	3.3%	10.2%
Subtotal Japan and the United States	184,381	1.2%	4.6%	209,402	1.2%	4.5%	-	-	-
Total of this country sample with 33 countries	698,720	2.4%	6.8%	737,220	2.3%	6.6%	713,056	2.3%	6.4%

Source: Own calculations (2015) and sources of the official data as given in part 5.

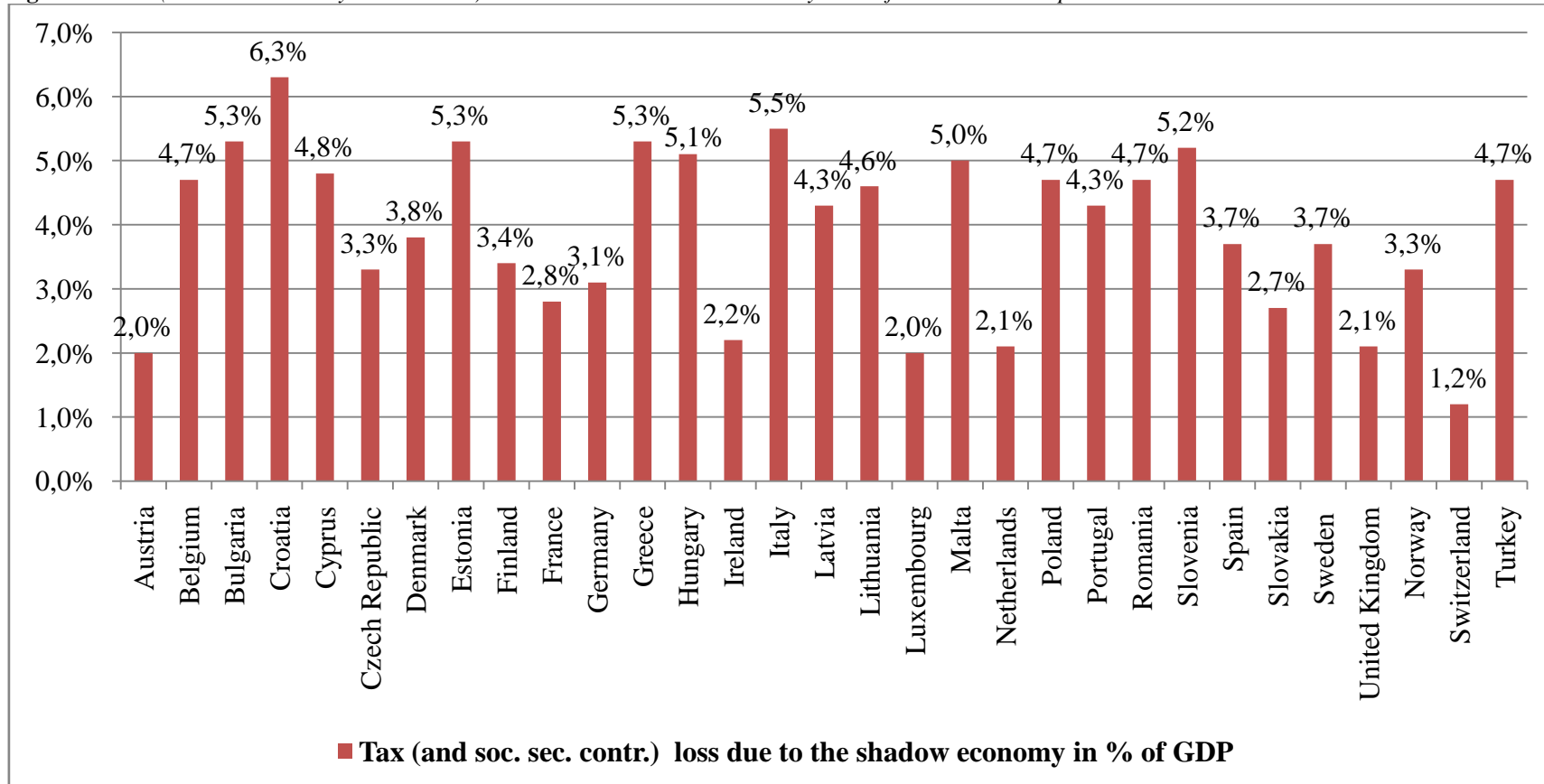
Table 5. Comparison of the calculated tax losses by Schneider with the calculations of the Tax Justice Network (Richard Murphy) for the year 2011

Country	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Shadow Economy in % of GDP	Shadow Economy in % of GDP		Tax (and soc. sec. contr.) loss due to the shadow economy in Mio. euros	Tax (and soc. sec. contr.) loss due to the shadow economy in Mio. euros		
	Schneider	Tax Justice Network	(1)	Schneider	Tax Justice Network		
United States	7.0%	8.6%	+1.6%	112,933	242,348	129,415	46.6%
Italy	21.2%	27.0%	+5.8%	84,146	171,496	87,350	49.1%
Germany	13.7%	16.0%	+2.3%	82,887	154,451	71,564	53.7%
France	11.0%	15.0%	+4.0%	59,860	123,034	63,174	48.7%
Japan	9.0%	11.0%	+2.0%	65,928	122,950	57,022	53.6%
United Kingdom	10.5%	12.5%	+2.0%	39,811	78,459	38,648	50.7%
Spain	19.2%	22.5%	+3.3%	39,272	77,119	37,847	50.9%

Source: Own calculations (2015) and sources of the official data as given in part 5; Richard Murphy, The Tax Justice Network (2011).

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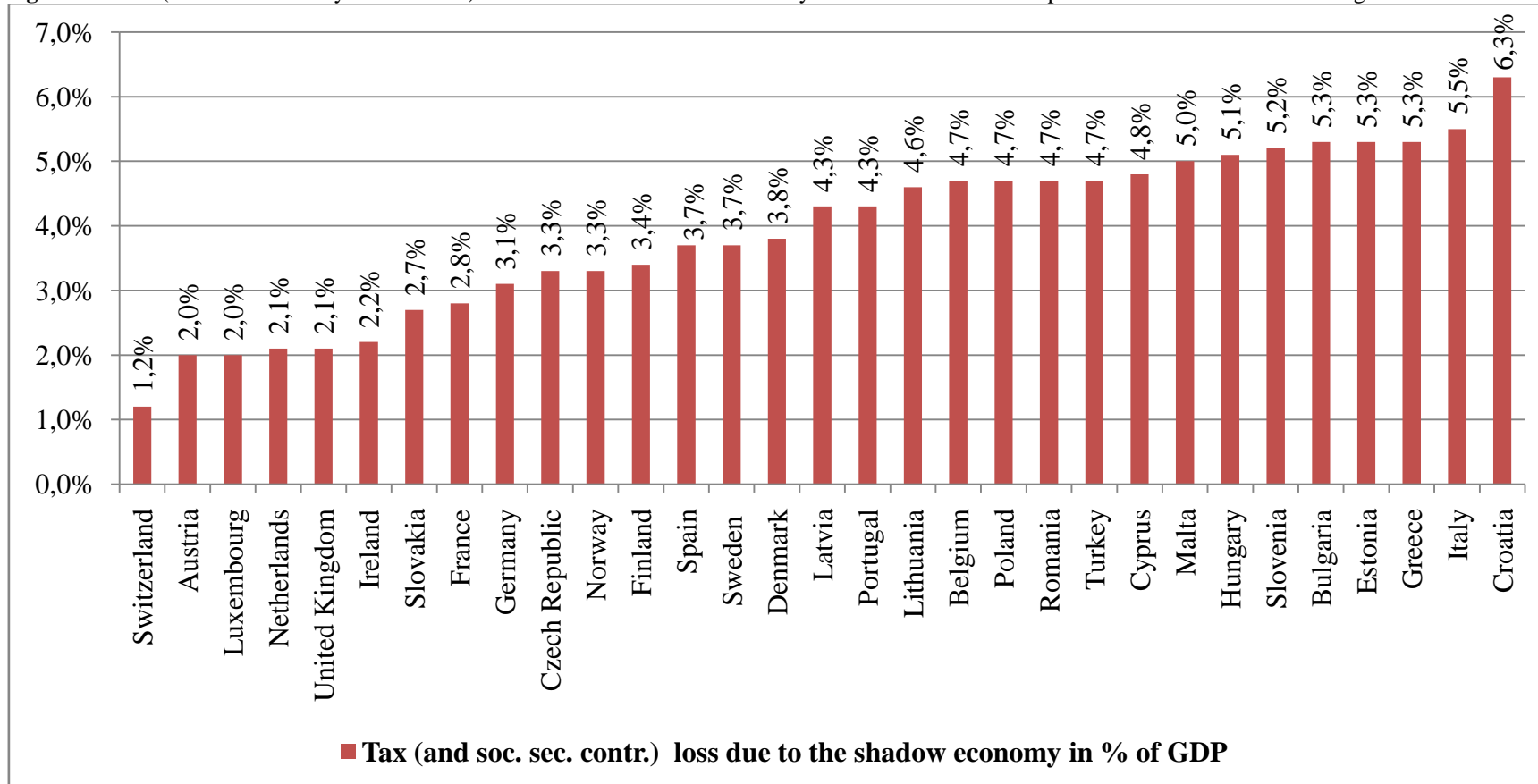
Figure 1a: Tax (and social security contribution) losses due to the shadow economy in % of GDP in 31 European countries in 2013



Source: Own calculations (2015) and sources of the official data as given in part 5.

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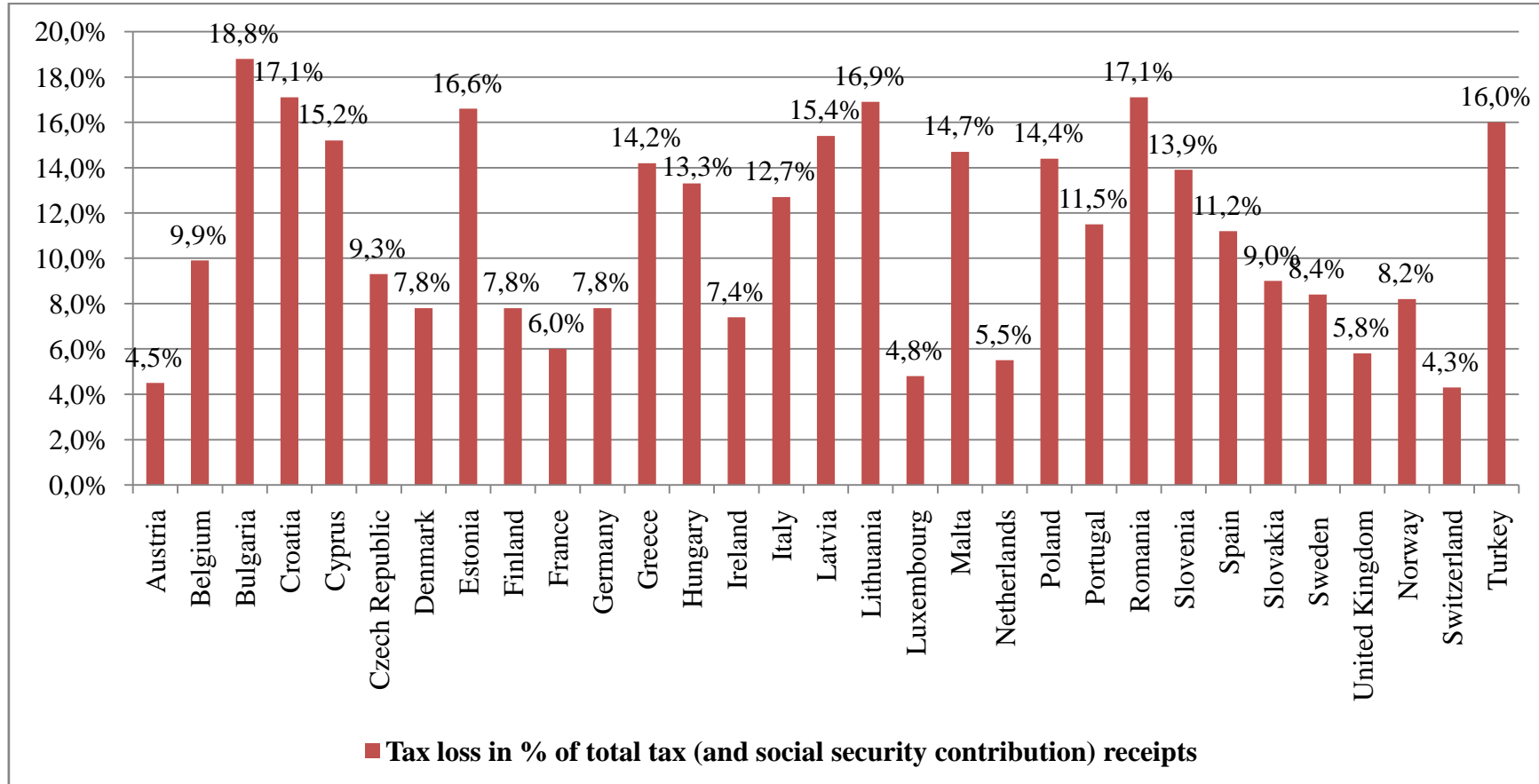
Figure 1b: Tax (and social security contribution) losses due to the shadow economy in % of GDP in 31 European countries in 2013 according to size



Source: Own calculations (2015) and sources of the official data as given in part 5.

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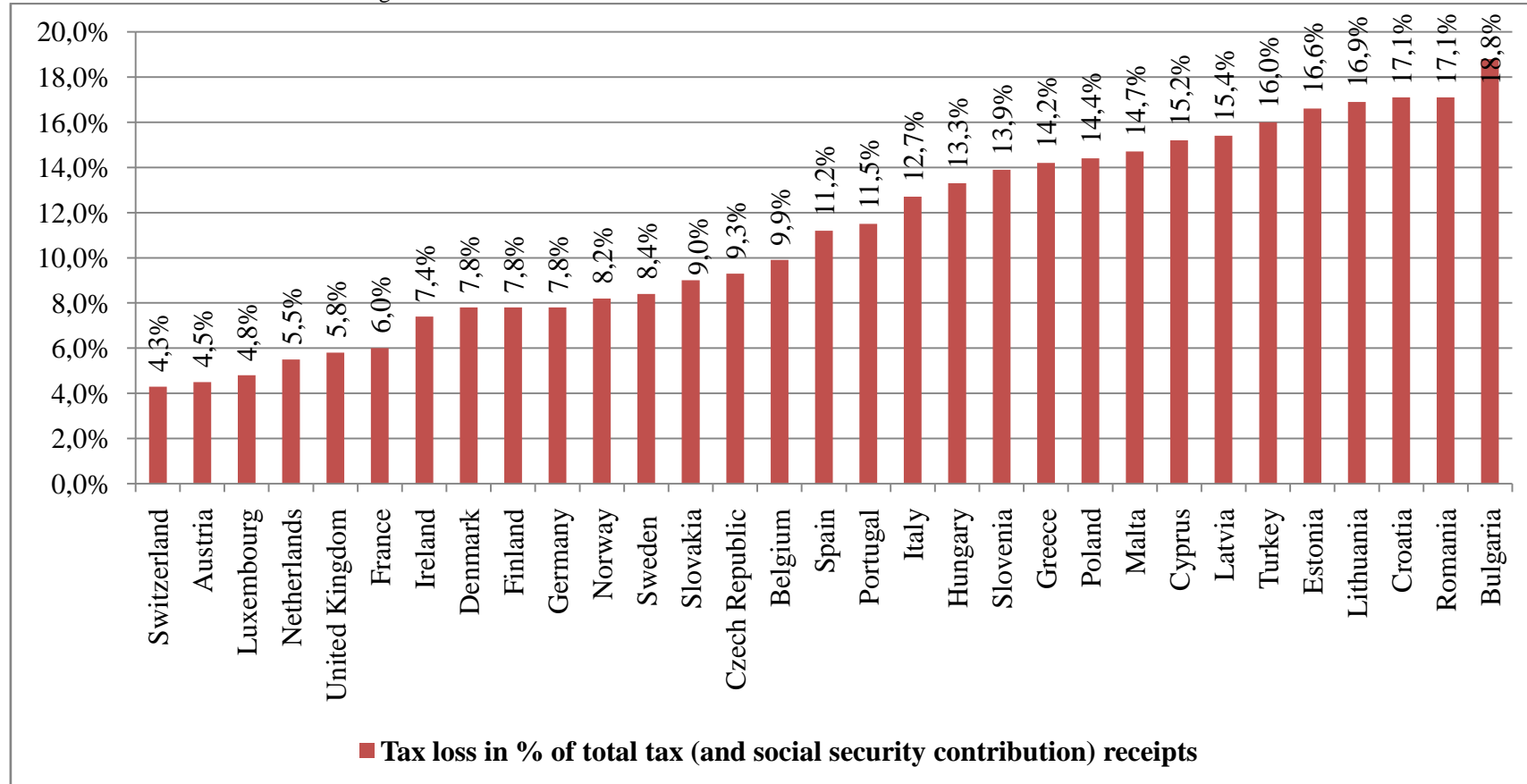
Figure 2a: Tax (and social security contribution) losses due to the shadow economy in % of total tax and social security contribution receipts in 31 European countries in 2013



Source: Own calculations (2015) and sources of the official data as given in part 5.

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Figure 2b: Tax (and social security contribution) losses due to the shadow economy in % of total tax and social security contribution receipts in 31 European countries in 2013 according to size



Source: Own calculations (2015) and sources of the official data as given in part 5.

References

- Feld, L., & Schneider, F. (2010), Survey on the Shadow Economy and Undeclared Earnings in OECD Countries, *German Economic Review*, 11(2), 109-149. doi. [10.1111/j.1468-0475.2010.00509.x](https://doi.org/10.1111/j.1468-0475.2010.00509.x)
- Murphy, R. (2011), *The Cost of Tax Abuse: A briefing paper on the cost of tax evasion worldwide*, The Tax Justice Network, Chesham (UK), November 2011.
- Schneider, F., & Williams, C.C. (2013), *The Shadow Economy*, IEA. *Institute for Economic Affairs*, London.
- Schneider, F. (2015a), Schattenwirtschaft und Schattenarbeitsmärkte: Die Entwicklung der letzten 20 Jahre, *Perspektiven der Wirtschaftspolitik (PWP)*, 16/1, 3-25.
- Schneider, F. (2015b), Size and Development of the Shadow Economy of 31 European and 5 Other OECD Countries from 2003 to 2014: Different Developments?, *Journal of Self-Governance and Management Economics*, 3(4), 7-29.

Source of the Data

- GDP statistics: Eurostat: Main national accounts tax aggregates; GDP data; Brussels, accessed September 3, 2015.
- Tax revenue statistics: OECD: OECD Revenue Statistics 1965-2013; GDP data; Paris, accessed September 3, 2015.
- Shadow economy data: Schneider, F. (2015b), Size and Development of the Shadow Economy of 31 European and 5 Other OECD Countries from 2003 to 2014: Different Developments?, *Journal of Self-Governance and Management Economics*, 3(4), 7-29.
- EUR/USD exchange rate for the year 2011, Austrian National Bank, ECB Reference Rates; Vienna, accessed December 3, 2015.



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