

# A study on the economic effects of the current VAT rates structure

Addendum: Country Analyses

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## **Preface**

Supplementing the main report, this addendum provides more detailed analysis of the effects of the VAT rates structure on households and non-household entities for each country. The 27 country chapters complement the respective sections of the main report. In addition, chapter 28 contains guidance on how the spreadsheets delivered with this report should be read. These spreadsheets contain additional tables on the household analysis. Chapter 29 lists the assumptions we made concerning the mapping of VAT rates to COICOP categories in the household analysis.





## 1 Belgium

Belgium applies a standard rate of 21 %, two reduced rates of 6 % and 12 %, respectively, a parking rate of 12 %, and a zero rate. The zero rate applies to supplies of daily and weekly newspapers of general interest. The reduced rate of 6 % applies to the supply of certain foodstuffs, non-alcoholic beverages, water, firewood and heat energy, some pharmaceutical products, medical products, therapeutic appliances, domestic passenger transport, plants and flowers, recreational and cultural services, some newspapers and periodicals and accommodation services. The reduced rate of 12 % applies to some oils and fats and to food consumed in restaurants or cafés, whereas the parking rate applies to some solid fuels (such as coal, coke or peats) and to tyres and inner tubes.

### 1.1 VAT paid by private households

**Table 1: Belgium – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	6.4%	21.0%	16.9%
CP02	21.0%	21.0%	16.9%
CP03	20.8%	21.0%	16.9%
CP04	4.8%	5.1%	4.1%
CP05	21.0%	21.0%	16.9%
CP06	5.1%	7.9%	6.3%
CP07	19.8%	21.0%	16.9%
CP08	20.1%	20.1%	16.2%
CP09	14.1%	19.9%	16.2%
CP10	0.0%	0.0%	0.0%
CP11	13.6%	21.0%	16.9%
CP12	10.9%	10.9%	8.8%
<b>Average</b>	<b>11.1%</b>	<b>14.6%</b>	<b>11.8%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 16.9 %.

Taking into account all deviations from the standard rate, the average VAT rate in Belgium (according to HBS data) is 11.1 %. Belgium's VAT regime is very heterogeneous with many goods and services being taxed at one of the two reduced rates, the parking rate or the zero rate. Therefore, abolishing these reduced rates

(scenario 1) leads to quite substantial changes as compared to the situation in 2011. But also scenario 2, a reform that is revenue neutral when all contributors to VAT are taken into account, leads to a higher VAT burden of private households.

**Table 2: Belgium – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP07	2.2%	815	CP01	2.6%	991
CP12	1.2%	454	CP07	2.3%	866
CP04	1.2%	433	CP09	1.6%	600
CP09	1.1%	424	CP04	1.2%	465
CP05	0.9%	354	CP12	1.2%	454
CP03	0.8%	304	CP11	1.2%	450
CP01	0.8%	304	CP05	0.9%	354
CP11	0.8%	292	CP03	0.8%	308
CP08	0.4%	136	CP06	0.4%	137
CP02	0.4%	131	CP08	0.4%	136
CP06	0.2%	88	CP02	0.3%	131
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>10.0%</b>	<b>3,735</b>	<b>Sum</b>	<b>12.7%</b>	<b>4,892</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

Table 2 illustrates average VAT paid by households broken down by COICOP categories in 2011. From the table we can see that category CP07 “Transport” accounts for the largest share of VAT payments<sup>1</sup>, followed by CP12 “Miscellaneous goods and services” and CP04 “Housing, water, electricity, gas and other fuels”. The composition of VAT payments changes considerably in scenarios 1 and 2, with no single category (except for education) ranked the same as in 2011: In the scenarios without zero and reduced rates category CP01 “Food and non-alcoholic beverages” accounts for the biggest share of VAT payments.

<sup>1</sup> VAT on transport is mainly paid for CP072 “Operation of personal transport equipment” (59 %), followed by CP071 “Purchase of vehicles” (39 %).

**Table 3: Belgium – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
First	8.8%	+2.9%p	+0.9%p	2,061	+780	+228
Second	9.3%	+2.8%p	+0.7%p	2,889	+1,003	+248
Third	9.7%	+2.8%p	+0.6%p	3,567	+1,159	+242
Fourth	10.2%	+2.8%p	+0.5%p	4,303	+1,349	+253
Fifth	11.1%	+2.4%p	+0.1%p	5,850	+1,487	+62

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 16.9 %.

Table 3 shows VAT payments in 2011 and in both reform scenarios disaggregated by income quintile. The share of VAT payments in total expenditure varies with income: The fifth quintile has the highest and the first quintile the lowest VAT payments as a share of expenditure, at 11.1 % and 8.8 % respectively. The absolute amount paid in VAT increases with income, with the fifth quintile paying more than 2.8 times as much VAT as the first quintile. Abolishing the zero and reduced rates (scenario 1) has a substantial effect on the financial burden households face, as the categories taxed at reduced rates form a large part of total household expenditure. In absolute terms the effect is higher for high-income households, whose VAT bill increases by € 1,487. As a fraction of expenditures low-income households suffer more, facing an increase of 2.9 percentage points. Nonetheless, the VAT rates structure remains progressive, in that it imposes a lower burden in relative and absolute values on low income households. Scenario 2 yields higher VAT bills for all income groups, the relative change being highest for low income households, the absolute change being highest for the fourth quintile, followed by the second and third. Again, although to a lesser extent, the VAT rates structure remains progressive.

**Table 4: Belgium – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Active	10.2%	+2.7%p	+0.6%p	4,442	+1,368	+240
Non-active	9.2%	+2.8%p	+0.7%p	2,596	+890	+213

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 16.9 %.

Breaking down the results by the number of active household members, we find that the current VAT regime favours households without active members. VAT as a share of total expenditure is 1 percentage point lower for them than for households with active members. Scenario 1 leads to an increase in VAT payments that is higher for active households in absolute terms and about the same for both groups as a fraction of expenditure. The same applies to scenario 2.

**Table 5: Belgium – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	9.4%	+2.4%p	+0.4%p	2,258	+662	+96
Single +	9.5%	+2.7%p	+0.5%p	2,893	+928	+187
Multi	9.9%	+2.8%p	+0.6%p	3,919	+1,266	+259
Multi +	10.3%	+2.8%p	+0.5%p	5,211	+1,634	+304

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 16.9 %.

“+” indicates a household with dependent children

Table 5 summarises the effects of the two reform scenarios on different types of households, single and multi-adult, with and without children. As a proportion of expenditure single households pay the least VAT, multi-adult households with children the most. Abolishing zero and reduced rates leads to higher increases for multi-adult households, in absolute terms and in proportion to expenditure. Scenario 2 has quite similar effects on all four groups as a fraction of expenditure.

## 1.2 VAT paid by non-household entities

As shown in the main report, in Belgium, scenario 1 leads to an overall increase in VAT liability of 24 % (corresponding to 2.0 % of GDP). For sectors which are VAT exempt, this translates into an increase of 23 %, while for the category “Others” the increase is 20 %. Table 6 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Belgium, these are: Construction, Manufacture of chemicals and chemical products, Recreational, cultural and sporting activities, Land transport, transport via pipelines, and Other business activities. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 6: Belgium – scenario 1: main product composition, non-households**

Product	Construction		Manufacture of chemicals and chemical products		Recreational, cultural and sporting activities		Land transport; transport via pipelines		Other business activities		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	0	0%	0	0%	0	0%	1	1%	1	20%	2	44%	4
Real Estate Activities	490	24%	1	0%	1	0%	5	0%	17	31%	24	8%	536
Financial Intermediation	0	0%	0	0%	7	0%	13	0%	41	49%	27	15%	89
Public Admin and Defence; Compulsory Social Security	74	3%	9	2%	13	1%	15	1%	19	26%	85	13%	216
Education	22	3%	3	3%	2	0%	3	0%	4	21%	27	17%	60
Health and Social Work	36	1%	199	32%	0	0%	6	0%	21	23%	179	18%	441
Other Community, Social and Personal Services	16	2%	5	3%	67	8%	6	1%	7	30%	23	14%	124
Other sectors	2	0%	2	1%	7	1%	8	1%	22	71%	15	7%	58
Government final consumption	0	0%	126	0%	196	0%	201	0%	0	0%	19	0%	542
NPISH	0	0%	0	0%	23	0%	0	0%	0	0%	0	0%	23
<b>Total increase by product</b>	<b>640</b>		<b>345</b>		<b>317</b>		<b>258</b>		<b>131</b>		<b>403</b>		
<b>% increase in VAT liability by product</b>	<b>207%</b>		<b>37%</b>		<b>190%</b>		<b>207%</b>		<b>6%</b>		<b>42%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## 2 Bulgaria

The standard VAT rate in Bulgaria is 20 % and there is one reduced rate of 9 %, however, the latter affects only the supply of accommodation services.<sup>2</sup> In addition to the supplies listed in section 2.1 in the main report, the supply of cultural, recreational and sporting services is exempted from VAT if they are provided by a public body.

### 2.1 VAT paid by private households

Taking into account all deviations from the standard rate, the average VAT rate in Bulgaria is 14.8 %.

**Table 7: Bulgaria – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	20.0%	20.0%	20.0%
CP02	20.0%	20.0%	20.0%
CP03	20.0%	20.0%	20.0%
CP04	6.4%	6.4%	6.4%
CP05	20.0%	20.0%	20.0%
CP06	16.0%	16.0%	16.0%
CP07	18.8%	20.0%	20.0%
CP08	19.9%	19.9%	19.9%
CP09	14.1%	14.1%	14.1%
CP10	0.0%	0.0%	0.0%
CP11	19.3%	20.0%	20.0%
CP12	16.8%	16.8%	16.8%
<b>Average</b>	<b>14.8%</b>	<b>14.9%</b>	<b>14.9%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 20.0 %.

Exchange rate of 1.956 Leva to 1 Euro.

Abolishing the reduced rate has little effect on this average VAT rate, in scenario 1 it changes marginally to 14.9 %. Scenario 2 stipulates the abolition of the reduced rate, and a new standard rate such that the reform rate is budget neutral. In the case of

<sup>2</sup> The reduced rate for accommodation services was 7 % in the beginning of 2011, in May it was increased to 9 %. We used a weighted average of 8.5 % for the analysis.

Bulgaria, the standard rate of 20 % changes only marginally to 19.96 %<sup>3</sup>. Given the Bulgarian VAT rates structure and the average VAT rates shown above, it is easy to see that abolishing the reduced rate will not greatly impact households' VAT payments. We nevertheless show the relevant tables, but concentrate the analysis on the situation in 2011.

**Table 8: Bulgaria – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP01	4.7%	232	CP01	4.7%	232
CP04	1.8%	90	CP04	1.8%	90
CP02	1.2%	62	CP02	1.2%	62
CP05	1.0%	48	CP05	1.0%	48
CP07	0.8%	38	CP07	0.8%	40
CP08	0.7%	36	CP08	0.7%	36
CP06	0.6%	32	CP06	0.6%	32
CP12	0.6%	29	CP12	0.6%	29
CP03	0.5%	24	CP03	0.5%	24
CP09	0.5%	27	CP09	0.5%	27
CP11	0.4%	21	CP11	0.4%	21
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>12.9%</b>	<b>639</b>	<b>Sum</b>	<b>12.9%</b>	<b>642</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
Exchange rate of 1.956 Leva to 1 Euro.

Table 8 illustrates average VAT bills of households according to COICOP category in 2011. With 36 % of all VAT payments, the category CP01 “Food and non-alcoholic beverages” accounts for the biggest share, followed by “Housing, water, electricity, gas and other fuels” (CP04) with 14 % and “Alcohol and tobacco” (CP02) with 10 %.

Table 9 shows VAT payments broken down by income quintile. The share of VAT payments in relation to total expenditure ranges from 12.6 % for the third quintile to 13.2 % for the poorest quintile. In absolute values, the 20 % richest households pay about 3 times as much VAT as the 20 % poorest households. Abolishing the reduced rate for accommodation services (scenario 1) and introducing a budget neutral VAT rate (scenario 2) have negligible effects on the financial burden of households, as

<sup>3</sup> As we use only one digit for the new standard rate in scenario 2, no change occurs for private households.

accommodation services only account for a small part of total household expenditure and the budget neutral VAT rate is the same as the existing standard rate.

**Table 9: Bulgaria – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	13.2%	+0.0%p	+0.0%p	342	+1	+1
<b>Second</b>	13.1%	+0.0%p	+0.0%p	490	+2	+2
<b>Third</b>	12.6%	+0.1%p	+0.1%p	604	+3	+3
<b>Fourth</b>	12.7%	+0.1%p	+0.1%p	729	+4	+4
<b>Fifth</b>	12.9%	+0.1%p	+0.1%p	1,030	+6	+6

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 20.0 %.

Exchange rate of 1.956 Leva to 1 Euro.

**Table 10: Bulgaria – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	13.3%	+0.1%p	+0.1%p	806	+4	+4
<b>Non-active</b>	12.0%	+0.0%p	+0.0%p	395	+1	+1

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 20.0 %.

Exchange rate of 1.956 Leva to 1 Euro.

Broken down according to the number of active household members (Table 10), we find that on average, households with active members pay more VAT than households without active members (13.3 % of expenditures compared to 12 %). Comparing household types (Table 5) we find that the VAT burden is highest in multi-adult households with children (13.6 % of expenditures) and lowest in single households without children (11.1 %).

We find that, although almost no reductions apply, VAT payments are not equally distributed across household types. Exemptions, especially for rents, are responsible for this pattern: Single households and households without active members spend much more of their expenditures on the category CP04, especially on rents.



**Table 11: Bulgaria – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	11.1%	+0.0%p	+0.0%p	311	+1	+1
Single +	12.4%	+0.1%p	+0.1%p	627	+4	+4
Multi	13.0%	+0.1%p	+0.1%p	700	+3	+3
Multi +	13.6%	+0.1%p	+0.1%p	928	+4	+4

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 20 %.

Exchange rate of 1.956 Leva to 1 Euro.

“+” indicates a household with dependent children

## 2.2 VAT paid by non-household entities

Scenario 1 has a negligible effect on the VAT liability for Bulgaria, given the extremely low number of zero and reduced goods and services (see Table 12). As a result, small increases are only recorded for Hotels and Restaurants and Air Transport.

**Table 12: Bulgaria – scenario 1: main product composition, non-households**

Product	Hotels and Restaurants		Air Transport		Total increase in 1,000 €
	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	
Real Estate Activities	11	0%	0	0%	11
Financial Intermediation	7	0%	5	0%	12
Public Admin and Defence; Compulsory Social Security	26	1%	38	0%	63
Education	5	0%	1	0%	6
Health and Social Work	1	0%	11	0%	12
Other Community, Social and Personal Services	5	0%	9	0%	14
Government final consumption	98	4%	0	0%	98
<b>Total increase by product</b>	<b>153</b>		<b>64</b>		
<b>% increase in VAT liability by product</b>	<b>3%</b>		<b>0%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

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### 3 Czech Republic

The Czech Republic applies a standard rate of 20 % and a reduced rate of 10 %. The reduced rate covers food and non-alcoholic beverages, services for the maintenance of dwellings, water, refuse and sewerage collection, firewood, pharmaceutical and other medical products, domestic passenger transport, flowers and seeds, cultural, recreational and sporting services, books, newspapers and other printed material and accommodation services. Supplies that are VAT exempt are listed in section 2.1 in the main report.

#### 3.1 VAT paid by private households

Taking into account all deviations from the standard rate, the average VAT rate in the Czech Republic is 13.8 %.<sup>4</sup> Following scenario 1, the average VAT rate in the Czech Republic raises from 13.8 % to 17.0 %. This effect is primarily due to changes in the VAT rate applying to categories CP01 “Food and non-alcoholic beverages”, CP06 “Health” and CP09 “Recreation and culture”. In these categories the VAT rates double, rise by two thirds or by one fourth, respectively. Scenario 2, in which the reduced rate is abolished and a revenue neutral rate is introduced, also leads to a considerable increase in the average VAT rate for private households from 13.8 % to 14.9 %, again due to large changes in the VAT rates for the aforementioned expenditure categories.

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<sup>4</sup> This average rate on household consumption deviates from the rate mentioned in section 2.2 in the main report. The reason is that HBS data for the Czech Republic do not contain information on imputed rents as do NA and WIOD data. Therefore, NA and WIOD data contain a higher share of exempt goods and thus a lower average VAT rate in all scenarios.

**Table 13: Czech Republic – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	10.0%	20.0%	17.5%
CP02	20.0%	20.0%	17.5%
CP03	20.0%	20.0%	17.5%
CP04	13.3%	14.9%	13.0%
CP05	20.0%	20.0%	17.5%
CP06	9.3%	15.4%	13.5%
CP07	18.4%	20.0%	17.5%
CP08	19.5%	19.5%	17.1%
CP09	15.8%	19.6%	17.2%
CP10	0.0%	0.0%	0.0%
CP11	18.6%	20.0%	17.5%
CP12	7.3%	7.3%	6.4%
<b>Average</b>	<b>13.8%</b>	<b>17.0%</b>	<b>14.9%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 17.5 %.

Exchange rate of 24.570 Czech Koruna to 1 Euro.

The HBS data for the Czech Republic do not contain imputed rents.

Table 14 illustrates average VAT paid by households broken down by COICOP categories in 2011. As we can see, the list is headed by the category CP04 “Housing, water, electricity, gas and other fuels”, accounting for 22 % of total VAT payments. Actual rents for private households are exempt from VAT, maintenance work and water and sewerage collection are taxed at the reduced rate. The large amount of VAT paid in CP04 is due to a very high share of expenditures on CP045 “Electricity, gas and other fuels” according to the HBS data. In scenario 1, CP01 “Food and non-alcoholic beverages” becomes the quantitatively most important category for VAT payments for private households, accounting for 3.6 % of total expenditure. This is because all supplies in CP01 – formerly subject to the reduced rate of 10 % – are now taxed at the standard rate.

**Table 14: Czech Republic – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP04	2.6%	278	CP01	3.6%	386
CP01	1.8%	193	CP04	2.9%	312
CP07	1.6%	165	CP07	1.7%	179
CP09	1.3%	132	CP09	1.5%	164
CP05	1.1%	118	CP05	1.1%	118
CP11	0.8%	86	CP11	0.9%	93
CP12	0.8%	81	CP12	0.8%	81
CP08	0.7%	75	CP08	0.7%	75
CP03	0.6%	67	CP03	0.6%	67
CP02	0.6%	60	CP02	0.6%	60
CP06	0.2%	21	CP06	0.3%	35
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>12.1%</b>	<b>1,275</b>	<b>Sum</b>	<b>14.5%</b>	<b>1,569</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

Exchange rate of 24.570 Czech Koruna to 1 Euro.

The HBS data for the Czech Republic do not contain imputed rents.

**Table 15: Czech Republic – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
First	12.0%	+2.7%p	+1.1%p	1,155	+302	+120
Second	12.1%	+2.6%p	+1.0%p	1,081	+274	+105
Third	12.0%	+2.5%p	+1.0%p	1,109	+274	+101
Fourth	12.2%	+2.3%p	+0.8%p	1,393	+313	+100
Fifth	12.3%	+2.0%p	+0.4%p	1,639	+306	+63

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 17.5 %.

Exchange rate of 24.570 Czech Koruna to 1 Euro.

The HBS data for the Czech Republic do not contain imputed rents.

Table 15 shows VAT payments in 2011 and in both reform scenarios broken down according to income quintile. In the base scenario average VAT payments as a share of total household expenditure is almost the same for all quintiles, ranging from 12 % in the first quintile to 12.3 % in the fifth quintile. In absolute terms, the top 20 % of the income distribution pay 1.4 times as much VAT as the bottom 20 %. In relative terms,

both reform scenarios have greater effects on the VAT bills of the lower income quintiles. Scenario 1 leads to an increase of 26 % or € 302 of VAT payments in the first quintile, whereas the increase in the fifth quintile amounts to 19 % or € 306. Scenario 2 even leads to poorer households paying more VAT in absolute terms as do households in the second or third quintile. This effect is mainly due to the fact that lower income quintiles spend a larger proportion of their income on the category CP01 “Food and non-alcoholic beverages”, the category affected most by both scenarios. Still, VAT paid in absolute terms is higher for higher income households, with the fifth quintile paying € 1,946 and € 1,702 in scenarios 1 and 2, respectively, compared to € 1,457 and € 1,275 paid by the first quintile.

**Table 16: Czech Republic – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Active	12.3%	+2.3%p	+0.8%p	1,756	+378	+111
Non-active	11.9%	+2.9%p	+1.3%p	755	+213	+92

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 17.5 %.

Exchange rate of 24.570 Czech Koruna to 1 Euro.

The HBS data for the Czech Republic do not contain imputed rents.

Turning to the impact of the current VAT structure on households with and without active members, it emerges that VAT payments as a share of total household expenditure is lower for households with non-active members than for households with active members. The former spend a greater share of their expenditures on supplies taxed at the reduced rate, especially on category CP01, but also on goods exempted from VAT such as rents. Because they spend more on supplies taxed at the reduced rate, scenarios 1 and 2 have a greater impact on these households. Their VAT payments rise by 28 % and 12 % in scenarios 1 and 2, respectively, compared to a 21 % and 6 % rise for households with active members. In absolute terms the change in VAT payments is higher for households with active members in scenario 1 and similar for both types in scenario 2.

**Table 17: Czech Republic – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	11.7%	+2.4%p	+0.9%p	660	+160	+58
Single +	11.7%	+2.6%p	+1.1%p	1,077	+283	+113
Multi	12.4%	+2.3%p	+0.7%p	1,720	+380	+117
Multi +	12.2%	+2.2%p	+0.7%p	1,975	+425	+125

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 17.5 %.

Exchange rate of 24.570 Czech Koruna to 1 Euro.

“+” indicates a household with dependent children

The HBS data for the Czech Republic do not contain imputed rents.

Table 17 summarises the effects of the two reform scenarios on different types of households. Relative to expenditure, VAT payments differ somewhat; they are lower for singles than for multi-adult households. This is mainly because exempt supplies such as rents make up a higher share of their total expenditure share and not so much because they consume more goods and services taxed at the reduced rate. Scenario 1 and 2 nevertheless affect single households slightly more relative to expenditures.

### 3.2 VAT paid by non-household entities

As discussed in the main report, scenario 1 in the Czech Republic leads to an overall increase in VAT liability of 14 % (corresponding to 1.4 % of GDP). For sectors exempt from VAT, this translates into an increase of 5 %, while for the sector “Others” the increase is 15 %. Table 18 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of the Czech Republic, these are: Recreational, cultural and sporting activities, sewage and refuse disposal, sanitation and similar activities, manufacture of chemicals and chemical products, manufacture of medical, precision and optical instruments, watches and clocks, and publishing, printing and reproduction of recorded media. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 18: Czech Republic – scenario 1: main product composition, non-households**

Product	Recreational, cultural and sporting activities		Sewage and refuse disposal, sanitation and similar activities		Manufacture of chemicals and chemical products		Manufacture of medical, precision and optical instruments, watches and clocks		Publishing, printing and reproduction of recorded media		Other products		Total increase in 1,000 €
	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	
Post and Telecommunications	0	0%	57	0%	0	0%	2	0%	29	0%	512	59%	<b>599</b>
Real Estate Activities	2,097	0%	9,187	1%	5,006	2%	861	0%	1,804	0%	8,446	3%	<b>27,402</b>
Financial Intermediation	409	0%	1,109	0%	109	0%	56	0%	8,169	2%	5,343	9%	<b>15,195</b>
Public Admin and Defence; Compulsory Social Security	56	0%	36	0%	446	0%	5	0%	3,662	1%	8,087	17%	<b>12,292</b>
Education	423	0%	994	0%	355	1%	15	0%	12,056	7%	9,090	11%	<b>22,933</b>
Health and Social Work	6,259	1%	6,272	1%	24,347	23%	20,921	9%	1,599	0%	27,263	16%	<b>86,662</b>
Other Community, Social and Personal Services	20,209	15%	5,648	4%	579	2%	142	0%	1,900	2%	3,589	8%	<b>32,067</b>
Government final consumption	53,666	0%	43,799	0%	33,044	0%	6,980	0%	91	0%	17,424	0%	<b>155,003</b>
NPISH	24,037	0%	19	0%	0	0%	1,387	0%	132	0%	1,818	0%	<b>27,393</b>
<b>Total increase by product</b>	<b>107,157</b>		<b>67,121</b>		<b>63,888</b>		<b>30,368</b>		<b>29,442</b>		<b>81,572</b>		
<b>% increase in VAT liability by product</b>	<b>84%</b>		<b>83%</b>		<b>17%</b>		<b>38%</b>		<b>72%</b>		<b>21%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding



## 4 Denmark

The Danish VAT system is characterised by a standard rate of 25 %, there is no reduced rate. However, there is a zero rate on newspapers published more than once a month.<sup>5</sup> In addition to the supplies listed in section 2.1 in the main report, Denmark exempts passenger transport services, veterinary services, recreational and sporting services and cultural services.

### 4.1 VAT paid by private households

**Table 19: Denmark – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	25.0%	25.0%	24.7%
CP02	25.0%	25.0%	24.7%
CP03	25.0%	25.0%	24.7%
CP04	8.0%	8.0%	7.9%
CP05	25.0%	25.0%	24.7%
CP06	10.4%	10.4%	10.3%
CP07	21.9%	21.3%	21.1%
CP08	23.4%	23.4%	23.1%
CP09	14.7%	16.6%	16.4%
CP10	0.0%	0.0%	0.0%
CP11	25.0%	25.0%	24.7%
CP12	7.7%	7.7%	7.7%
<b>Average</b>	<b>15.4%</b>	<b>15.5%</b>	<b>15.3%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 24.7 %.

Exchange rate of 7.452 Danish Kroner to 1 Euro.

Because of the exemptions, the average VAT rate in Denmark is 15.4 %. However, as the reduced rate only applies to newspapers, a change in the VAT regime does not have

<sup>5</sup> This zero rate is not relevant for non-household entities. Hence, their situation remains unchanged by the reform scenarios.

a large effect on the average VAT rate or on VAT payments. We do show the tables for all scenarios, but concentrate the analysis on the situation in 2011.<sup>6</sup>

Even though there are no reduced rates, not all categories of goods and services are entirely taxed at the standard rate. Only CP01, CP02, CP03, CP05 and CP11 are taxed at 25 % on average. In all other categories some goods and services are exempt. CP01 “Food and non-alcoholic beverages” is the category on which households spend the most VAT (18 %), followed by CP04 (18 %) and CP07 (17 %).

**Table 20: Denmark – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP01	2.4%	920	CP01	2.4%	920
CP04	2.4%	897	CP04	2.4%	897
CP07	2.3%	880	CP07	2.3%	855
CP09	1.4%	525	CP09	1.6%	590
CP05	1.1%	405	CP05	1.1%	405
CP03	0.9%	359	CP03	0.9%	359
CP11	0.8%	320	CP11	0.8%	320
CP12	0.7%	249	CP12	0.7%	249
CP02	0.6%	234	CP02	0.6%	234
CP08	0.4%	147	CP08	0.4%	147
CP06	0.3%	99	CP06	0.3%	99
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>13.3%</b>	<b>5,035</b>	<b>Sum</b>	<b>13.4%</b>	<b>5,076</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
Exchange rate of 7.452 Danish Kroner to 1 Euro.

Table 21 shows VAT payments in 2011 and in both reform scenarios broken down by income quintile. The distribution of payments is not equal but progressive, with the first quintile spending 12.5 % of expenditures on VAT and the fifth quintile spending 13.9 %. This is because for lower income households, the exempt category rent makes up a higher share of total expenditures. Lower income households also face a lower average VAT rate in other categories, such as category CP07 “Transport”. (Lower

<sup>6</sup> According to our data scenario 2 leads to a (very small) decrease in VAT payments for private households. As explained in section 2.1 in the main report this result is not true when calculations are based on WIOD data.

income households spend a higher share of their expenditures on transport on exempted services, than on standard rated supplies such as operation of a vehicle.) Abolishing the zero rate on newspapers does not change this distribution – VAT payments in relation to total expenditures rise by 0.1 percentage points for all income quintiles.

**Table 21: Denmark – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	12.5%	+0.1%p	-0.1%p	2,654	+16	-16
<b>Second</b>	12.5%	+0.1%p	0.0%p	3,563	+38	-5
<b>Third</b>	13.0%	+0.1%p	0.0%p	5,043	+56	-5
<b>Fourth</b>	13.7%	+0.1%p	-0.1%p	6,195	+45	-30
<b>Fifth</b>	13.9%	+0.1%p	-0.1%p	7,697	+51	-42

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 24.7 %.

Exchange rate of 7.452 Danish Kroner to 1 Euro.

**Table 22 Denmark – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	13.7%	+0.1%p	-0.1%p	5,896	+35	-36
<b>Non-active</b>	12.2%	+0.2%p	+0.0%p	3,149	+50	+12

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 24.7 %.

Exchange rate of 7.452 Danish Kroner to 1 Euro.

Households with non-active members spend relatively more on supplies exempted from VAT than households with active members. Both before and after the abolition of the zero rate, VAT payments as a share of expenditure are smaller for households with non-active members.

Table 23 summarises the effects of the two reform scenarios on different types of households. As a proportion of total expenditures, single households with children pay less in VAT than multi-adult households with children – 12.2 % compared to 14.2 %.

This is because, like low-income households or households without active members, they devote a larger share of their total expenditure on supplies that are VAT exempt.

**Table 23: Denmark – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	12.4%	+0.1%p	0.0%p	2,972	+29	-8
Single +	12.2%	+0.1%p	0.0%p	3,810	+33	-13
Multi	13.9%	+0.1%p	0.0%p	6,944	+71	-14
Multi +	14.2%	+0.0%p	-0.1%p	7,874	+25	-70

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 24.7 %.

Exchange rate of 7.452 Danish Kroner to 1 Euro.

“+” indicates a household with dependent children

## 5 Germany

Germany's VAT regime is characterised by a standard rate of 19 % and a reduced rate of 7 %. The reduced rate applies to foodstuffs (excluding beverages), water, firewood, domestic passenger transport, books, newspapers and other printed matter. Supplies exempted from VAT in Germany are listed in section 2.1 in the main report.

### 5.1 VAT paid by private households

**Table 24: Germany – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	7.8%	19.0%	16.8%
CP02	19.0%	19.0%	16.8%
CP03	19.0%	19.0%	16.8%
CP04	5.1%	5.4%	4.8%
CP05	19.0%	19.0%	16.8%
CP06	9.2%	9.2%	8.1%
CP07	18.4%	19.0%	16.8%
CP08	18.5%	18.5%	16.3%
CP09	12.5%	14.2%	11.9%
CP10	0.0%	0.0%	0.0%
CP11	10.8%	19.0%	16.8%
CP12	6.1%	6.1%	5.4%
<b>Average</b>	<b>10.1%</b>	<b>12.1%</b>	<b>10.7%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 16.8 %.

Taking into account all deviations from the standard rate, the average VAT rate in Germany is 10.1 %. The standard rate applies to only three of the twelve COICOP categories. Abolishing the reduced rate in scenario 1 increases the average VAT rate for private households to 12.1 %. Scenario 2, which is designed to be revenue neutral after taking all VAT payments into account, also leads to an increase in the average VAT rate faced by private households.

**Table 25: Germany – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP07	2.0%	689	CP07	2.1%	710
CP04	1.5%	493	CP01	2.0%	692
CP09	1.2%	397	CP04	1.5%	521
CP01	0.8%	283	CP09	1.3%	453
CP05	0.8%	273	CP05	0.8%	273
CP03	0.7%	241	CP11	0.8%	267
CP12	0.6%	217	CP03	0.7%	241
CP11	0.5%	152	CP12	0.6%	217
CP08	0.4%	137	CP06	0.3%	112
CP06	0.3%	112	CP08	0.4%	137
CP02	0.3%	85	CP02	0.2%	85
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>9.2%</b>	<b>3,078</b>	<b>Sum</b>	<b>10.8%</b>	<b>3,709</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

Category CP07 “Transport” accounts for the largest share of VAT payments because expenditure in this category is high, and many goods and services in this category are taxed at the standard rate.<sup>7</sup> After the abolition of the reduced rate, CP07 remains the category that accounts for the biggest share of VAT payments, but its share of total VAT payments decreases from 22 % to 19 %. VAT payments for supplies in category CP01 become more important, ranking second with 19 % of all VAT payments, followed by CP04 (14 %).

Table 26 shows VAT payments in 2011 and in both reform scenarios broken down by income quintiles. VAT bills as a fraction of household expenditure differ across income quintiles; the first quintile pays 7.7 % of their expenditures on VAT and the fifth 8.5 %. In absolute values the 20 % households with the highest incomes pay 3.6 times as much VAT as the 20 % with the lowest incomes. Scenario 1 leads to an increase of VAT payments in all quintiles; however, the relative increase is highest for lower income households. In absolute terms, high income households are the most affected income group. The results concerning VAT bills as a fraction of total expenditure are similar in

<sup>7</sup> Most of these payments accrue to CP072 “Operation of personal transport equipment” (62 % of VAT payments in CP07), the second most important category is CP071 “Purchase of vehicles” (33 %).

scenario 2, but in absolute terms, scenario 2 affects the third and fourth income quintile the most. In both scenarios, the system changes from progressive to proportional.

**Table 26: Germany – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	7.7%	+2.3%p	+1.1%p	1,315	+430	+211
<b>Second</b>	8.2%	+2.2%p	+1.0%p	2,017	+602	+270
<b>Third</b>	8.5%	+2.0%p	+0.8%p	2,694	+721	+291
<b>Fourth</b>	8.5%	+1.8%p	+0.7%p	3,335	+803	+281
<b>Fifth</b>	8.5%	+1.5%p	+0.4%p	4,714	+945	+238

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 16.8 %.

**Table 27 Germany – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	8.7%	+1.8%p	+0.7%p	3,727	+872	+295
<b>Non-active</b>	8.2%	+1.9%p	+0.8%p	2,172	+567	+224

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 16.8 %.

Concerning the activity status of household members, there are small differences between households with and without active members: on average, measured as a fraction of expenditures, households with no active member pay less VAT (8.2 %) than households with active members (8.7 %). Scenarios 1 and 2 have a similar effect on both groups relative to expenditure. Households with active members face a higher absolute increase in VAT payments.

Table 28 summarises the effects of the two reform scenarios on different types of households. Larger households pay more VAT in absolute terms and as a proportion of expenditure (7.8 % of expenditures in single households compared to 8.9 % in multi-adult households without children). The reform scenarios have a similar average effect on all household types, with the largest relative increase in VAT faced by single households with children (28 % in scenario 1 and 12 % in scenario 2).

**Table 28 Germany – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	7.8%	+1.9%p	+0.7%p	1,604	+426	+167
Single +	8.0%	+2.0%p	+0.9%p	2,137	+602	+253
Multi	8.9%	+1.8%p	+0.6%p	3,887	+878	+286
Multi +	8.6%	+1.9%p	+0.7%p	4,341	+1,082	+399

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 16.8 %.

“+” indicates a household with dependent children

## 5.2 VAT paid by non-household entities

As discussed in the main report, scenario 1 leads to an overall increase in VAT liability of 13 % (corresponding to 1.1 % of GDP). For sectors exempt from VAT, this translates into an increase of 8 %, while for the category “Others” the increase is 1 %. Table 29 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Germany, these are: Manufacture of food products and beverages, Manufacture of medical, precision and optical instruments, watches and clocks, Recreational, cultural and sporting activities, Publishing, printing and reproduction of recorded media, Agriculture, hunting and related service activities. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.



**Table 29: Germany – scenario 1: main product composition, non-households**

Product	Manufacture of food products and beverages		Manufacture of medical, precision and optical instruments, watches and clocks		Recreational, cultural and sporting activities		Publishing, printing and reproduction of recorded media		Agriculture, hunting and related service activities		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	0	0%	0	0%	1	0%	13	1%	0	0%	28	48%	<b>43</b>
Real Estate Activities	0	0%	0	0%	0	0%	30	0%	70	1%	9	1%	<b>109</b>
Financial Intermediation	0	0%	2	0%	10	0%	82	1%	1	0%	54	5%	<b>150</b>
Public Admin and Defence; Compulsory Social Security	158	2%	32	1%	51	2%	139	1%	171	1%	190	8%	<b>741</b>
Education	39	2%	17	1%	16	2%	92	3%	8	0%	257	9%	<b>430</b>
Health and Social Work	655	7%	415	8%	13	0%	88	1%	120	1%	84	3%	<b>1,375</b>
Other Community, Social and Personal Services	5	0%	0	0%	88	20%	13	1%	3	0%	20	5%	<b>129</b>
Government final consumption	33	0%	273	0%	313	0%	0	0%	0	0%	15	0%	<b>634</b>
NPISH	0	0%	0	0%	131	0%	0	0%	0	0%	0		<b>131</b>
<b>Total increase by product</b>	<b>891</b>		<b>740</b>		<b>622</b>		<b>458</b>		<b>373</b>		<b>657</b>		
<b>% increase in VAT liability by product</b>	<b>106%</b>		<b>61%</b>		<b>30%</b>		<b>144%</b>		<b>144%</b>		<b>29%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## 6 Estonia

In Estonia there is a standard VAT rate of 20 % and a reduced VAT rate of 9 %. The reduced rate applies to the supply of pharmaceutical products, books, newspapers and periodicals, accommodation services and sanitary and toiletry products. The supplies listed in section 2.1 in the main report are exempted from VAT.

### 6.1 VAT paid by private households

**Table 30: Estonia – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	20.0%	20.0%	19.4%
CP02	20.0%	20.0%	19.4%
CP03	20.0%	20.0%	19.4%
CP04	7.2%	7.2%	7.0%
CP05	20.0%	20.0%	19.4%
CP06	7.6%	14.4%	14.0%
CP07	19.5%	20.0%	19.4%
CP08	19.8%	19.8%	19.2%
CP09	18.4%	19.8%	19.2%
CP10	0.0%	0.0%	0.0%
CP11	19.6%	20.0%	19.4%
CP12	9.0%	12.3%	11.9%
<b>Average</b>	<b>14.5%</b>	<b>15.0%</b>	<b>14.5%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 19.4 %.

Taking into account all deviations from the standard rate and exempt supplies, the average VAT rate for private households is 14.5 % in 2011. The change in the average VAT rate on private consumption from the status quo in 2011 to scenario 1 is not substantial because the reduced rate in Estonia does not apply to many supplies. Following the reform, we observe a considerable increase in the average VAT rates in the categories CP06 “Health” and CP12 “Miscellaneous goods and services” which contain most goods and services that are taxed at the reduced rate. However, these categories do not make up a large share of total expenditure (2.3 % and 4.7 %, respectively).

respectively). In scenario 2, the new standard rate is 19.4 %, which leaves the average VAT bill of private households unchanged.

**Table 31: Estonia – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP01	3.9%	354	CP01	3.9%	354
CP04	2.1%	192	CP04	2.1%	192
CP07	1.8%	159	CP07	1.8%	164
CP08	1.0%	87	CP08	1.0%	87
CP03	0.9%	79	CP03	0.9%	79
CP05	0.7%	63	CP09	0.7%	67
CP09	0.7%	62	CP05	0.7%	63
CP11	0.6%	50	CP11	0.6%	51
CP02	0.5%	46	CP12	0.5%	47
CP12	0.4%	34	CP02	0.5%	46
CP06	0.2%	14	CP06	0.3%	26
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>12.7%</b>	<b>1,139</b>	<b>Sum</b>	<b>13.0%</b>	<b>1,174</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

Table 31 illustrates average VAT rates paid by households broken down by COICOP categories in 2011. Both in 2011 and in the reform scenarios, category CP01 “Food and non-alcoholic beverages” accounts for the largest share of VAT payments. CP04 “Housing, water, electricity, gas and other fuels” ranks second and CP07 third both in 2011 and the reform scenarios. We do not observe major changes in the overall VAT payments structure following the reform scenarios.

Table 32 shows VAT payments in 2011 and in both reform scenarios broken down by income quintile. In the base scenario, VAT payments make up 13 % of expenditure for the lowest income quintile. This share decreases for the second and third quintile and increases again for the fourth and fifth. As a fraction of expenditure, the fifth quintile is affected in a similar way as the first. In absolute values the amount paid in VAT increases with income, with the highest income households paying more than 3.4 times as much VAT as households at the bottom of the income distribution.

**Table 32: Estonia – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	13.0%	+0.4%p	0.0%p	607	+20	1
<b>Second</b>	12.3%	+0.3%p	0.0%p	752	+23	0
<b>Third</b>	12.3%	+0.4%p	0.0%p	915	+30	2
<b>Fourth</b>	12.6%	+0.3%p	0.0%p	1,327	+40	-1
<b>Fifth</b>	13.0%	+0.3%p	0.0%p	2,090	+60	-4

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 19.4 %.

Abolishing the reduced rate (scenario 1) has the same effect on all income quintiles when measured as a share of total expenditure: an increase between 0.3 to 0.4 percentage points. In absolute values, additional VAT amounts to € 20 for the lowest income households and to € 60 for those with the highest incomes. This effect is very small because few supplies are taxed at the reduced rate in the current VAT structure. In scenario 2, the new standard rate of 19.4 % leads to hardly any changes in VAT payments for all income quintiles.

**Table 33 Estonia – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	12.9%	+0.3%p	0.0%p	1,507	+43	-4
<b>Non-active</b>	11.3%	+0.4%p	0.1%p	545	+23	6

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 19.4 %.

Concerning the impact of the current VAT structure on households with and without active members, it emerges that the current regime favours non-active households, see Table 33. However, the effect of changing this structure by abolishing the reduced rate is very small (€ 23 per year for households with no active member, € 43 for households with active members). The distributional pattern is mainly driven by exemptions, while reduced rates contribute to a lesser extent. Households with no active member consume relatively more supplies belonging to categories that contain exempt supplies, such as housing or health. Scenario 2 lowers VAT payments for active households while it increases the burden for inactive households, however, both to a very small extent.

**Table 34 Estonia – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	11.6%	+0.4%p	+0.1%p	552	+24	+7
Single +	12.5%	+0.5%p	+0.1%p	952	+40	+10
Multi	12.9%	+0.4%p	+0.0%p	1,380	+48	+5
Multi +	12.9%	+0.4%p	+0.0%p	1,703	+59	+7

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 19.4 %.

“+” indicates a household with dependent children

Table 34 summarises the effects of the two reform scenarios on different types of households. As a fraction of expenditure, single-adult households (especially those without children) have the lowest VAT bills. Again, exempt supplies are more important drivers of this pattern than reduced rates. Abolishing the reduced rate does not significantly change the picture: The effect ranges from € 24 a year for single households without children (4.4 % of VAT payments in 2011) to € 50 a year for non-single households with children (3.5 % of VAT payments in 2011). Scenario 2 slightly increases VAT payments for all households.

## 6.2 VAT paid by non-household entities

As discussed in the main report, in Estonia, scenario 1 leads to an overall increase in VAT liability of 3 % (corresponding to 0.3 % of GDP). For VAT exempt sectors, this translates into an increase of 5 %, while for the sector “Others”, the increase is 2 %. Table 35 shows the six categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Estonia, these are, in order of importance, Manufacture of chemicals and chemical products; Publishing, printing and reproduction of recorded media; Manufacture of medical, precision and optical instruments, watches and clocks; Hotels and restaurants; Post and telecommunications. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 35: Estonia – scenario 1: main product composition, non-households**

Product	Manufacture of chemicals and chemical products		Publishing, printing and reproduction of recorded media		Manufacture of medical, precision and optical instruments, watches and clocks		Hotels and restaurants		Post and tele-communications		Total increase in 1,000 €
	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	
Post and Telecommunications	3	0%	54	1%	2	0%	1	0%	188	59%	<b>247</b>
Real Estate Activities	141	6%	35	1%	4	0%	4	0%	14	3%	<b>198</b>
Financial Intermediation	60	1%	463	2%	36	1%	52	1%	170	10%	<b>781</b>
Public Admin and Defence; Compulsory Social Security	299	1%	1,016	1%	172	1%	521	4%	302	6%	<b>2,309</b>
Education	187	2%	1,871	7%	118	1%	336	6%	64	3%	<b>2,576</b>
Health and Social Work	3,198	26%	334	1%	2,650	23%	154	2%	49	2%	<b>6,384</b>
Other Community, Social and Personal Services	219	3%	779	3%	53	1%	55	1%	121	7%	<b>1,227</b>
Government final consumption	3,009	0%	0	0%	237	0%	0	0%	0	0%	<b>3,245</b>
<b>Total increase by product</b>	<b>7,114</b>		<b>4,552</b>		<b>3,271</b>		<b>1,123</b>		<b>907</b>		
<b>% increase in VAT liability by product</b>	<b>23%</b>		<b>71%</b>		<b>21%</b>		<b>14%</b>		<b>5%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## 7 Greece

In Greece the VAT standard rate is 23 %, and there are two reduced rates of 6.5 % and 13 %. The reduced rate of 6.5 % applies to theatre services, books, newspapers and other printed matter, and accommodation services. The reduced rate of 13 % applies to food and non-alcoholic beverages (from the 1<sup>st</sup> of September onwards, all beverages but mineral waters are taxed at 23 %), the repair of clothing and footwear, renovation services for old, private dwellings, water, refuse and sewerage collection, electricity, firewood, gas, pharmaceutical products, passenger transport, plants and cultural, recreational and sporting services. Supplies that are VAT exempt include those listed in section 2.1 in the main report and also the supply of water and refuse and sewerage collection, provided they are performed by a public authority.

### 7.1 VAT paid by private households

**Table 36: Greece – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	13.1%	23.0%	18.9%
CP02	23.0%	23.0%	18.9%
CP03	22.7%	23.0%	18.9%
CP04	6.3%	8.2%	6.8%
CP05	23.0%	23.0%	18.9%
CP06	10.3%	16.4%	13.5%
CP07	21.2%	23.0%	18.9%
CP08	22.7%	22.7%	18.7%
CP09	16.9%	22.5%	18.7%
CP10	0.0%	0.0%	0.0%
CP11	16.2%	23.0%	18.9%
CP12	13.7%	13.7%	11.3%
<b>Average</b>	<b>13.0%</b>	<b>16.4%</b>	<b>13.5%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 18.9 %.

Considering all deviations from the standard rate, the average VAT rate in Greece (according to HBS data) is 13.0 %. Greece's VAT system is quite heterogeneous with many goods and services taxed at one of the two reduced rates. Therefore, scenario 1

leads to quite substantial changes to the 2011 base scenario. Scenario 2 leads to an increase in the average VAT rates faced by private households in the magnitude of 0.5 percentage points.

**Table 37: Greece – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011	VAT payments		Scenario 1	VAT payments	
	COICOP (2-digit)	in %		in €	COICOP (2-digit)
CP01	1.8%	543	CP01	3.0%	955
CP04	1.8%	545	CP04	2.3%	710
CP07	1.7%	515	CP07	1.8%	557
CP11	1.1%	321	CP11	1.5%	457
CP12	1.0%	295	CP12	0.9%	295
CP05	0.9%	280	CP06	0.9%	287
CP03	0.9%	266	CP05	0.9%	280
CP08	0.7%	200	CP03	0.9%	270
CP02	0.6%	196	CP09	0.8%	239
CP06	0.6%	180	CP08	0.6%	200
CP09	0.6%	179	CP02	0.6%	196
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>11.5%</b>	<b>3,521</b>	<b>Sum</b>	<b>14.1%</b>	<b>4,447</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

Table 37 illustrates average VAT paid by households broken down by COICOP categories in 2011. The table shows that category CP01 “Food and non-alcoholic beverages” makes up the biggest share of VAT payments. CP04 ranks second accounting for 15 % of VAT payments, followed by CP07 (also 15 %, most of it relating to CP072 “Operation of personal transport equipment”). The composition of VAT payments changes considerably in scenarios 1 and 2, with only half of the categories ranked the same as in 2011. However, in both reform scenarios, CP01 continues to account for the largest share of VAT payments (21 % in scenario 1 and 16 % in 2011).

Table 38 shows VAT payments in 2011 and in both reform scenarios broken down by income quintile. We can see that the share of VAT payments in total expenditure is roughly the same in all groups, ranging from 10.4 % to 10.6 %. The absolute amount paid in VAT increases with income, leading to the fifth quintile paying more than 2.6 times as much VAT as the first quintile. Abolishing the reduced rates (scenario 1) has



substantial effects on the financial burden of households, as the categories taxed at reduced rates form a considerable part of total household expenditure. Especially low income households face a sharp increase in their VAT payments in relative terms and compared to their total expenditures (+30 % of VAT paid in 2011 and +2.7 percentage points of VAT payments as a fraction of expenditure, respectively). The fifth quintile faces the highest increase in absolute terms, but the increase relative to expenditure is comparatively modest (+1.9 percentage points or +21 % of VAT payments). Introducing a budget neutral VAT rate (scenario 2) affects all income quintiles but the fifth negatively; that is, the richest 20 % of the population benefit from the reform. Both reform scenarios change the Greek VAT rates structure from proportional to regressive, as far as VAT payments as a fraction of expenditures are concerned.<sup>8</sup>

**Table 38: Greece – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
First	10.4%	+2.7%p	+0.7%p	1,939	+579	+150
Second	10.5%	+2.5%p	+0.5%p	2,387	+665	+122
Third	10.5%	+2.4%p	+0.4%p	2,876	+759	+111
Fourth	10.6%	+2.2%p	+0.2%p	3,711	+895	+75
Fifth	10.5%	+1.9%p	-0.0%p	5,148	+1,086	-21

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 18.9 %.

**Table 39: Greece – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Active	11.0%	+2.2%p	+0.2%p	4,189	+981	+62
Non-active	9.5%	+2.5%p	+0.6%p	1,760	+519	+113

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 18.9 %.

Table 39 shows that households without active members pay less in VAT than households with active members, both in absolute terms and as a fraction of

<sup>8</sup> The Validation Exercise in the main text (section A.3) shows different results for Greece in IFS et al. (2011). There, the Greek VAT rates structure is progressive, with by and large higher VAT payments as a fraction of total expenditures.

expenditure. Again, we observe considerable changes from 2011 to reform scenario 1. Relative to expenditures these changes are similar for both groups. In scenario 2, non-active households face a higher increase in absolute and in relative terms.

**Table 40: Greece – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	9.7%	+2.2%p	+0.3%p	1,625	+408	+47
Single +	9.9%	+2.0%p	+0.1%p	3,133	+734	+46
Multi	11.0%	+2.2%p	+0.1%p	3,386	+789	+47
Multi +	10.9%	+2.2%p	+0.1%p	4,444	+1,022	+49

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 18.9 %.

“+” indicates a household with dependent children

Table 40 summarises the effects on different types of households. As a fraction of total household expenditure, multi-adult households without dependent children face the largest VAT bill, single households without children the lowest. Reform scenario 1 again has a substantial impact on the VAT structure of all household types; in relation to expenditures the increase is similar in size for all household types. Scenario 2 shows only small average increases for all household types.

## 7.2 VAT paid by non-household entities

As shown in the main report, in Greece, scenario 1 leads to an overall increase in VAT liability of 22 % (corresponding to 2.6 % of GDP). For sectors exempt from VAT, this translates into an increase of 12 %, while for the sector “Others” the increase is 2 %. Table 41 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. For Greece, these are, in order of (quantitative) importance: Manufacture of chemicals and chemical products, Recreational, cultural and sporting activities, Manufacture of medical, precision and optical instruments, watches and clocks, Publishing, printing and reproduction of recorded media, and Electricity, gas, steam and hot water supply. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 41: Greece – scenario 1: main product composition, non-households**

Product	Manufacture of chemicals and chemical products		Recreational, cultural and sporting activities		Manufacture of medical, precision and optical instruments, watches and clocks		Publishing, printing and reproduction of recorded media		Electricity, gas, steam and hot water supply		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	0	0%	0	0%	0	0%	0	0%	0	5%	0	50%	<b>0</b>
Real Estate Activities	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	<b>0</b>
Financial Intermediation	1	0%	15	5%	0	0%	4	1%	4	1%	3	11%	<b>27</b>
Public Admin and Defence; Compulsory Social Security	9	2%	1	0%	4	2%	20	1%	11	1%	21	13%	<b>67</b>
Education	1	2%	1	1%	0	0%	9	6%	1	1%	18	22%	<b>29</b>
Health and Social Work	163	56%	1	0%	50	29%	3	0%	6	1%	11	3%	<b>233</b>
Other Community, Social and Personal Services	4	4%	15	10%	0	0%	9	3%	5	3%	19	14%	<b>52</b>
Government final consumption	0	0%	11	0%	0	0%	0	0%	0	0%	0	0%	<b>11</b>
NPISH	0	0%	23	100%	0	0%	0	0%	0	0%	0	0%	<b>23</b>
<b>Total increase by product</b>	<b>178</b>		<b>66</b>		<b>54</b>		<b>45</b>		<b>27</b>		<b>73</b>		
<b>% increase in VAT liability by product</b>	<b>36%</b>		<b>58%</b>		<b>22%</b>		<b>110%</b>		<b>63%</b>		<b>24%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## **8 Spain**

The Spanish VAT system is characterised by a standard rate of 18 %, a reduced rate of 8 % and a super reduced rate of 4 %. The super reduced rate applies to the supply of some foodstuffs (such as bread and cereals, milk, cheese and eggs, fruits, and vegetables), pharmaceutical and other medical products, books, newspapers, periodicals, and miscellaneous printed matter. The reduced rate applies to some foodstuffs (specifically those foodstuffs not mentioned above), non-alcoholic beverages, services for the maintenance and repair of dwellings, water supply, refuse collection, sewerage collection, therapeutic appliances and equipment, domestic passenger transport, plants and flowers, pets, certain recreational and cultural services, goods and services provided by restaurants, cafés or canteens and accommodation services. In addition to the supplies listed in section 2.1 in the main report, Spain also exempts cultural services provided by public institutions from VAT.

### **8.1 VAT paid by private households**

Considering all deviations from the standard rate, the average VAT rate in Spain (according to HBS data) is 7.7 %. The Spanish VAT regime is fairly heterogeneous, with many goods and services taxed at the reduced or the super reduced rate. Therefore, in scenario 1, we observe quite substantial changes to the situation in 2011. The average VAT rate faced by private households increases to 11.4 %. According to HBS data the revenue neutral new standard rate in scenario 2 increases the average VAT rate faced by private households by 0.3 percentage points.

**Table 42: Spain – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	6.1%	18.0%	12.6%
CP02	18.0%	18.0%	12.6%
CP03	18.0%	18.0%	12.6%
CP04	2.6%	3.0%	2.1%
CP05	18.0%	18.0%	12.6%
CP06	2.8%	9.6%	6.7%
CP07	17.2%	18.0%	12.6%
CP08	17.9%	17.9%	12.5%
CP09	10.0%	15.5%	10.9%
CP10	0.0%	0.0%	0.0%
CP11	8.0%	18.0%	12.6%
CP12	6.7%	8.6%	6.0%
<b>Average</b>	<b>7.7%</b>	<b>11.4%</b>	<b>8.0%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 12.6 %.

Table 43 illustrates average VAT payments by households broken down by COICOP categories in 2011. From the table we can see that category CP07 “Transport” makes up the largest share of VAT payments. Within CP07 most VAT (53 %) is spent on “Operation of personal transport equipment”, followed by “Purchase of vehicles” (43 %). CP01 “Food and non-alcoholic beverages” ranks second, accounting for 14 % of VAT payments. CP03 “Clothing and footwear” ranks third, making up 13 % of total VAT payments in this category. The composition of VAT payments changes considerably in scenarios 1 and 2, with more than half of all categories changing position compared to the 2011 ranking. Abolishing the reduced rates leads to CP01 ranking first, accounting for 28 % of all VAT payments, followed by CP07 (14 %) and CP11 “Restaurants and hotels” (13 %).

**Table 43: Spain – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP07	1.4%	382	CP01	2.8%	787
CP01	1.0%	268	CP07	1.4%	399
CP03	0.9%	250	CP11	1.3%	373
CP04	0.9%	240	CP04	1.0%	277
CP11	0.6%	166	CP03	0.9%	250
CP05	0.6%	166	CP09	0.8%	214
CP09	0.5%	138	CP05	0.6%	166
CP08	0.4%	112	CP08	0.4%	112
CP02	0.3%	92	CP12	0.4%	108
CP12	0.3%	84	CP02	0.3%	92
CP06	0.1%	16	CP06	0.2%	55
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>7.2%</b>	<b>1,914</b>	<b>Sum</b>	<b>10.2%</b>	<b>2,833</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

**Table 44: Spain – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
First	7.3%	+3.7%p	+0.7%p	1,271	+722	+124
Second	7.2%	+3.4%p	+0.5%p	1,606	+844	+109
Third	7.4%	+3.2%p	+0.2%p	1,903	+909	+66
Fourth	7.2%	+3.0%p	+0.2%p	2,135	+990	+52
Fifth	6.9%	+2.6%p	+0.0%p	2,664	+1,132	-7

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 12.6 %.

Table 44 shows VAT payments in 2011 and in both reform scenarios broken down according to income quintile. In the base scenario VAT payments as a share of total expenditure is roughly the same across income quintiles, ranging from 6.9 % in the fifth quintile to 7.4 % in the third.<sup>9</sup> In absolute terms, the 20 % richest households pay more

<sup>9</sup> IFS et al. (2011) also come to the conclusion that the VAT burden varies little across the income distribution. However, they find a higher average VAT rate (8.2 %); and according to their results it is not the third quintile that faces the highest burden, but VAT payments as a proportion of expenditure decrease monotonously with income. (See the validation exercise in the main report, section A.3.)

than 2 times as much VAT as the poorest 20 % in 2011. Abolishing the reduced rates leads to an increase in VAT payments; as a fraction of expenditure this change is more pronounced among low income households. While the first income quintile suffers from a 3.7 percentage point increase in VAT payments in proportion to expenditures in scenario 1, the fifth quintile experiences a 2.6 percentage point increase. This widens the gap in VAT payments as a fraction of expenditure between high and low income households: In scenario 1, low income households spend more of their total expenditure on VAT than high income households (11.1 % as compared to 9.5 %). Decreasing the standard rate to 12.2 % while simultaneously abolishing reduced rates leads to higher VAT payments, both in absolute terms and as a fraction of expenditure, for low income households, while it marginally decreases VAT payments for the highest income quintile. Although many supplies are subject to a reduced rate in Spain, the VAT regime is not progressive. Abolishing the reductions turns the more or less proportional into a regressive system.

**Table 45: Spain – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Active	7.5%	+3.2%p	+0.3%p	2,332	+1,104	+73
Non-active	6.1%	+3.0%p	+0.4%p	1,076	+582	+84

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 12.6 %.

As can be seen in Table 45, households without active members pay less in VAT than households with active members, both in absolute terms and as a fraction of expenditure. Again, our two reform scenarios introduce considerable changes to the situation in 2011, which affect both groups of households in a similar way. The absolute increase is higher for households with active members in scenario 1. Scenario 2 also leads to higher VAT payments for both household types.

**Table 46: Spain – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	6.0%	+2.5%p	+0.1%p	913	+410	+13
Single +	7.2%	+2.8%p	+0.0%p	1,828	+800	+12
Multi	7.1%	+3.1%p	+0.3%p	1,843	+899	+76
Multi +	7.6%	+3.1%p	+0.2%p	2,541	+1,174	+59

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 12.6 %.

“+” indicates a household with dependent children

As a fraction of household expenditure, multi-adult households with dependent children pay the largest amount of VAT, single-adult households without children the lowest. Scenario 1 leads to higher increases for multi-adult households, increasing the difference in VAT paid as a proportion of expenditure between the two types of households compared to 2011. Scenario 2 leads to small increases in VAT payments for all household types.

## 8.2 VAT paid by non-household entities

As discussed in the main report, in Spain, scenario 1 leads to an overall increase in VAT liability of 43 % (corresponding to 2.9 % of GDP). For sectors exempt from VAT, this translates into an increase of 26 %, while for the sector “Others”, the increase is 50 %. Table 47 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Spain, these are, in order of (quantitative) importance: Construction, Manufacture of chemicals and chemical products, Sewage and refuse disposal, sanitation and similar activities, Recreational, cultural and sporting activities, and Publishing, printing and reproduction of recorded media. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.



**Table 47: Spain – scenario 1: main product composition, non-households**

Product	Construction		Manufacture of chemicals and chemical products		Sewage and refuse disposal, sanitation and similar activities		Recreational, cultural and sporting activities		Publishing, printing and reproduction of recorded media		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	3	2%	0	0%	0	0%	0	0%	0	0%	3	32%	<b>7</b>
Real Estate Activities	916	40%	2	0%	21	1%			30	1%	12	7%	<b>981</b>
Financial Intermediation	87	5%	1	0%	1	0%	3	0%	58	2%	77	16%	<b>228</b>
Public Admin and Defence; Compulsory Social Security	101	3%	15	2%	1	0%	11	1%	120	2%	257	19%	<b>504</b>
Education	66	10%	1	1%	2	0%	0	0%	31	3%	62	16%	<b>162</b>
Health and Social Work	79	2%	187	29%	28	1%	1	0%	41	1%	487	20%	<b>824</b>
Other Community, Social and Personal Services	74	5%	11	4%	142	9%	103	11%	82	3%	114	12%	<b>527</b>
Government final consumption	0	0%	313	100%	324	0%	285	0%	0	0%	170	0%	<b>1,092</b>
NPISH	0	0%	0	0%	0	0%	55	100%	0	0%	0	0%	<b>55</b>
<b>Total increase by product</b>	<b>1,326</b>		<b>531</b>		<b>520</b>		<b>457</b>		<b>362</b>		<b>1,183</b>		
<b>% increase in VAT liability by product</b>	<b>106%</b>		<b>21%</b>		<b>106%</b>		<b>62%</b>		<b>178%</b>		<b>54%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## 9 France

France's VAT system consists of a standard rate of 19.6 %, a super reduced rate of 2.1 %, and a reduced rate of 5.5 %. The super reduced rate applies to the supply of pharmaceutical products and newspapers and periodicals. The reduced rate of 5.5 % applies to foodstuffs (except confectionery), non-alcoholic beverages, water supply, electricity, gas, wood, heat energy, medical products, therapeutic appliances and equipment, domestic passenger transport, plants, flowers, recreational and cultural services, games of chance, books, canteens, and to accommodation services. The supplies exempt from VAT in France correspond to the ones listed in section 2.1 in the main report.

### 9.1 VAT paid by private households

**Table 48: France – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	6.3%	19.6%	16.1%
CP02	19.6%	19.6%	16.1%
CP03	19.6%	19.6%	16.1%
CP04	2.9%	5.3%	4.3%
CP05	19.6%	19.6%	16.1%
CP06	1.9%	10.5%	8.6%
CP07	17.8%	19.6%	16.1%
CP08	18.9%	18.9%	15.5%
CP09	10.5%	19.6%	16.2%
CP10	0.0%	0.0%	0.0%
CP11	7.6%	19.6%	16.1%
CP12	7.3%	7.3%	6.0%
<b>Average</b>	<b>9.0%</b>	<b>13.3%</b>	<b>10.9%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 16.1 %.

Taking into account all deviations from the standard rate, the average VAT rate in France (according to HBS data) is 9.0 %. The VAT regime in France is quite heterogeneous with many goods and services being taxed at the reduced rate. Thus, the VAT regime changes considerably as compared to the situation in 2011 when reduced

rates are abolished. In scenario 1, the average VAT rate rises to 13.3 %. The highest increase occurs for the category food and non-alcoholic beverages, where the VAT rate rises from 6.3 % to the standard rate. We observe a similar increase for CP11 “Restaurants and hotels”. Scenario 2 leads to lower VAT rates in some categories (CP02, CP03, CP07, CP08 and CP12), but overall to a higher average VAT rate of 10.9 %.

**Table 49: France – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP07	2.0%	686	CP01	2.4%	820
CP05	1.0%	324	CP07	2.2%	757
CP03	1.0%	319	CP04	1.4%	472
CP12	0.8%	285	CP09	1.1%	384
CP01	0.8%	263	CP05	0.9%	324
CP04	0.8%	262	CP03	0.9%	319
CP09	0.6%	206	CP12	0.8%	285
CP08	0.5%	161	CP11	0.8%	274
CP02	0.4%	126	CP08	0.5%	161
CP11	0.3%	107	CP06	0.4%	156
CP06	0.1%	28	CP02	0.4%	126
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>8.3%</b>	<b>2,767</b>	<b>Sum</b>	<b>11.7%</b>	<b>4,078</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

Table 49 illustrates average VAT paid by households broken down by COICOP categories in 2011. Category CP07 “Transport” accounts for the largest share of total VAT payments. Most VAT paid in this category is paid on CP071 “Purchase of vehicles” (53 %), followed by CP072 “Operation of personal transport equipment” (43 %). The composition of VAT payments changes considerably after implementing reform scenarios 1 and 2, with no single category (except for education, which is exempt) ranked the same as in 2011: in scenario 1 and in scenario 2, category CP01 “Food and non-alcoholic beverages” accounts for the biggest share of VAT payments (20 % in both scenarios), followed by transport and CP04 “Housing, water, electricity, gas and other fuels”.

**Table 50: France – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	7.6%	+3.6%p	+1.8%p	1,654	+879	+427
<b>Second</b>	7.9%	+3.5%p	+1.7%p	2,203	+1,103	+514
<b>Third</b>	8.3%	+3.4%p	+1.6%p	2,682	+1,267	+564
<b>Fourth</b>	8.4%	+3.4%p	+1.5%p	3,156	+1,462	+641
<b>Fifth</b>	8.6%	+3.4%p	+1.5%p	4,145	+1,851	+784

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 16.1 %.

Table 50 shows VAT payments in 2011 and in both reform scenarios broken down by income quintile. VAT payments as a share of total expenditures are lowest for the first quintile (7.6 %) and highest for the fifth quintile (8.6 %), indicating a progressive VAT regime.<sup>10</sup> The absolute amount paid in VAT increases even more sharply with income; the fifth quintile spends about 2.5 times as much VAT as the first quintile. Both scenarios substantially increase the VAT burden of households, with relatively higher increases for low-income households. The system nevertheless remains progressive in both reform scenarios. In both scenarios, the households with the highest incomes face the highest increase in VAT payments in absolute values.

**Table 51: France – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	8.8%	+3.4%p	+1.6%p	3,543	+1,560	+652
<b>Non-active</b>	7.2%	+3.7%p	+2.0%p	1,811	+1,055	+545

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 16.1 %.

Separating households with and without active members, we can see that the current VAT regime favours households without active members. As a fraction of expenditure, they pay 1.6 percentage points less VAT than households with active members. VAT

<sup>10</sup> The Validation Exercise in the main text (section A.3) shows different results for France in IFS et al. (2011). In this study, the French VAT rates structure is proportional. (VAT as a fraction of total expenditure is similar to our results for the lower quintiles, but does not rise in the higher quintiles.)

increases in scenario 1 are higher for active households in absolute terms and for non-active households as a fraction of expenditure. The same holds for scenario 2.

**Table 52: France – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	7.5%	+3.2%p	+1.5%p	1,568	+757	+343
Single +	8.3%	+3.2%p	+1.3%p	2,391	+1,041	+431
Multi	8.5%	+3.4%p	+1.5%p	3,197	+1,467	+637
Multi +	9.0%	+3.2%p	+1.3%p	4,212	+1,721	+665

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 16.1 %.

“+” indicates a household with dependent children

As a fraction of expenditure, single-adult households (especially those without children) pay the least VAT (Table 52). As a fraction of expenditure, the increase in VAT in scenario 1 is similar for all groups, although single households face a higher increase compared to the pre-reform VAT regime (48 % compared to 41 % for multi-adult households with children).

## 9.2 VAT paid by non-household entities

As mentioned in the main report, in France, scenario 1 leads to an overall increase in VAT liability of 22 % (corresponding to 1.9 % of GDP). For sectors exempt from VAT, this translates into an increase of 10 %, while for the sector “Others”, the increase is 23 %. Table 53 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of France, these are, in order of (quantitative) importance: Recreational, cultural and sporting activities, Manufacture of chemicals and chemical products, Land transport, transport via pipelines, Manufacture of food products and beverages, and Publishing, printing and reproduction of recorded media. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 53: France – scenario 1: main product composition, non-households**

Product	Recreational, cultural and sporting activities		Manufacture of chemicals and chemical products		Land transport; transport via pipelines		Manufacture of food products and beverages		Publishing, printing and reproduction of recorded media		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	0	0%	0	0%	1	0%	1	0%	2	2%	9	37%	<b>13</b>
Real Estate Activities	37	2%	2	0%	6	0%	6	0%	11	1%	11	6%	<b>74</b>
Financial Intermediation	0	0%	2	0%	13	0%	4	0%	106	4%	73	14%	<b>199</b>
Public Admin and Defence; Compulsory Social Security	16	0%	10	0%	130	1%	27	0%	67	2%	114	7%	<b>364</b>
Education	6	1%	8	1%	77	2%	204	11%	42	5%	27	9%	<b>364</b>
Health and Social Work	10	0%	263	15%	63	1%	261	5%	34	1%	95	10%	<b>725</b>
Other Community, Social and Personal Services	434	12%	41	2%	48	0%	80	1%	139	5%	74	7%	<b>815</b>
Government final consumption	1,462	0%	1,505	0%	313	0%	0	0%	1	0%	5	0%	<b>3,285</b>
NPISH	530	100%	0	0%	0	0%	0	0%	0	0%	0	0%	<b>530</b>
<b>Total increase by product</b>	<b>2,494</b>		<b>1,830</b>		<b>651</b>		<b>583</b>		<b>402</b>		<b>408</b>		
<b>% increase in VAT liability by product</b>	<b>69%</b>		<b>38%</b>		<b>214%</b>		<b>125%</b>		<b>56%</b>		<b>16%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## 10 Ireland

In Ireland, the standard VAT rate is 21 %, there is a super reduced rate of 4.5 %, a reduced rate of 13.5 %, a parking rate of 13.5 %, and a zero rate. On July 1<sup>st</sup>, 2011, an additional reduced rate of 9 % was introduced. The zero rate applies to foodstuffs (including some non-alcoholic beverages), clothing materials and shoes for children aged under 11 years, sewerage collection, pharmaceutical products, certain therapeutic appliances, plants, flowers, and books. The reduced rates of 13.5 % and 9 % apply to electricity, gas and other fuels, medical and paramedical services, recreational and cultural services, newspapers, periodicals, and food prepared in restaurants, hotels, hairdressing salons, whereas the parking rate applies to heat energy, the repair and maintenance of movable property, veterinary services, and services of photographers. In addition to the supplies listed in section 2.1 in the main report, Ireland also exempts the following goods and services from VAT: domestic passenger transport, water (if supplied by local authorities), cultural services (as long as no food nor beverages are served), catering services supplied to patients of a hospital or to students of a school, and accommodation services other than hotels.

### 10.1 VAT paid by private households

Taking all deviations from the standard rate into account, the average VAT rate in Ireland (according to HBS data) is 9.7 %. Abolishing the zero, parking and reduced rates has a large impact on the average VAT rate faced by private households – it rises by 4.6 percentage points to 14.3 %. Those categories of goods and services that were taxed at preferential rates are particularly affected: The average VAT rate for food and non-alcoholic beverages (CP01) rises by 18.2 percentage points to the standard rate, the VAT rate on health rises by 9.1 percentage points, the rate on recreation and culture by 5.7 percentage points. The revenue neutral standard rate from scenario 2 (15.2 %) leads to a modest increase in the average VAT rate for households to 10.3 %.

**Table 54: Ireland – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	2.8%	21.0%	15.2%
CP02	21.0%	21.0%	15.2%
CP03	18.4%	21.0%	15.2%
CP04	4.4%	5.9%	4.3%
CP05	20.7%	21.0%	15.2%
CP06	7.5%	16.6%	12.0%
CP07	17.4%	18.9%	13.7%
CP08	20.4%	20.4%	14.8%
CP09	13.1%	18.8%	13.6%
CP10	0.0%	0.0%	0.0%
CP11	11.8%	17.4%	12.6%
CP12	6.6%	7.4%	5.3%
<b>Average</b>	<b>9.7%</b>	<b>14.3%</b>	<b>10.3%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 15.2 %.

Table 55 illustrates average VAT paid by households broken down by COICOP categories in 2011. The table shows that category CP07 “Transport” makes up the largest share of VAT payments (21 %). Within this category, most VAT is paid in CP071 “Purchase of vehicles” (55 %) followed by CP072 “Operation of personal transport equipment” (44 %; no VAT is spent on transport services). Scenarios 1 and 2 trigger a considerable change in the VAT structure; only two categories ranked the same as in 2011, CP06 and CP10. After the abolition of all reduced and parking rates, the category food and non-alcoholic beverages accounts for the biggest share of VAT payments (21 %), followed by transport and recreation and culture.



**Table 55: Ireland – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP07	1.9%	772	CP01	2.6%	1,148
CP09	1.2%	483	CP07	1.9%	840
CP04	1.1%	443	CP09	1.6%	693
CP02	1.0%	417	CP04	1.4%	590
CP05	0.9%	360	CP02	1.0%	417
CP03	0.7%	284	CP11	0.9%	372
CP11	0.6%	252	CP05	0.8%	366
CP12	0.5%	214	CP03	0.8%	325
CP08	0.5%	213	CP12	0.5%	238
CP01	0.4%	150	CP08	0.5%	213
CP06	0.2%	95	CP06	0.5%	208
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>8.9%</b>	<b>3,684</b>	<b>Sum</b>	<b>12.5%</b>	<b>5,410</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

**Table 56: Ireland – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
First	7.8%	+4.4%p	+1.3%p	1,658	+1,065	+313
Second	8.1%	+4.0%p	+1.0%p	2,409	+1,368	+325
Third	8.7%	+3.8%p	+0.7%p	3,780	+1,875	+314
Fourth	9.1%	+3.5%p	+0.4%p	4,794	+2,125	+214
Fifth	9.5%	+3.2%p	+0.0%p	5,763	+2,216	+12

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 15.2 %.

Table 56 shows VAT payments as a proportion of expenditures in 2011 and in both reform scenarios broken down according to income quintile. Average VAT payments increase with income: the fifth quintile has the highest share of VAT payments as a fraction of expenditure (9.5%), the first quintile the lowest (7.8%). Thus, the Irish VAT system is progressive; low income households benefit overproportionally from zero and reduced rates. Abolishing these zero and reduced rates therefore has varying effects on households across the income distribution: While in 2011, high income households pay almost 3.5 times as much VAT as low income households, in scenario 1, this factor

shrinks to 2.9 in scenario 1. In scenario 1, the first quintile faces a 64 % increase in VAT payments; the fifth quintile experiences an increase of only 38 %. Scenario 2, where the standard rate is reduced from 21 % to 15.2 %, leads to higher increases in VAT payments for low-income households in absolute terms as well as a fraction of expenditure. Both scenarios change the progressive VAT system to a proportional one.

**Table 57: Ireland – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	9.3%	+3.5%p	+0.5%p	5,121	+2,235	+203
<b>Non-active</b>	7.4%	+4.0%p	+1.1%p	1,671	+1,027	+282

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 15.2 %.

Looking at Table 57, we can see that households without active members pay less in VAT than households with active members, both in absolute terms and as a fraction of expenditure. Again, we can observe considerable changes from the 2011 base scenario to the reform scenarios (especially in scenario 1), with active households facing a smaller increase as a fraction of expenditure in scenario 1, and both in absolute values and as a fraction of expenditure in scenario 2. Recall that the unemployed are defined as active in this definition.

**Table 58: Ireland – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Single</b>	8.0%	+3.4%p	+0.5%p	1,666	+795	+115
<b>Single +</b>	8.1%	+3.9%p	+0.9%p	2,235	+1,226	+271
<b>Multi</b>	9.1%	+3.6%p	+0.4%p	4,400	+1,977	+216
<b>Multi +</b>	9.1%	+3.7%p	+0.5%p	5,305	+2,481	+330

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 15.2 %.

“+” indicates a household with dependent children

As a fraction of total household expenditure as well as in absolute values, multi-adult households (with and without dependent children) pay the most VAT, single-person households without children the least. The reform scenarios (especially scenario 1) again increase the VAT payments of all households substantially, with only minor

differences between household types. Nevertheless, it is worth mentioning that single parents face a particularly strong increase in their VAT payments.

## **10.2 VAT paid by non-household entities**

As shown in the main report, in Ireland, scenario 1 leads to an overall increase in VAT liability of 38 % (corresponding to 2.6 % of GDP). For sectors exempt from VAT, this translates into an increase of 18 %, while for the sector “Others”, the increase is 38 %. Table 59 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Ireland, these are, in order of (quantitative) importance: Manufacture of chemicals and chemical products, Land transport, transport via pipelines, Construction; Publishing, printing and reproduction of recorded media, and Manufacture of food products and beverages. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 59: Ireland – scenario 1: main product composition, non-households**

Product	Manufacture of chemicals and chemical products		Land transport; transport via pipelines		Construction		Publishing, printing and reproduction of recorded media		Manufacture of food products and beverages		Manufacture of chemicals and chemical products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	0	0%	1	0%	0	1%	0	1%	0	0%	1	64%	2
Real Estate Activities	4	5%	3	0%	32	27%	6	3%	0	0%	4	12%	49
Financial Intermediation	0	0%	8	0%	5	2%	22	6%	4	0%	11	24%	50
Public Admin and Defence; Compulsory Social Security	4	3%	41	0%	30	16%	8	3%	11	1%	20	19%	114
Education	1	2%	5	0%	7	7%	21	12%	0	0%	19	21%	54
Health and Social Work	64	29%	29	0%	2	1%	6	1%	10	0%	25	5%	136
Other Community, Social and Personal Services	2	4%	3	0%	1	1%	4	3%	4	1%	15	25%	29
Other sectors	0	0%	14	0%	1	0%	3	0%	1	0%	13	0%	32
Government final consumption	65	100%	34	0%	0	0%	0	0%	5	0%	12	0%	116
NPISH	0	0%	0	0%	0	0%	0	0%	13	0%	0	0%	13
<b>Total increase by product</b>	<b>141</b>		<b>138</b>		<b>77</b>		<b>70</b>		<b>48</b>		<b>120</b>		
<b>% increase in VAT liability by product</b>	<b>31%</b>		<b>-</b>		<b>46%</b>		<b>77%</b>		<b>303%</b>		<b>27%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

“-“ indicates that the % increase in VAT liability by product is not-available for zero rated goods.

## 11 Italy

On 16 September 2011, Italy raised the standard VAT rate from 20 % to 21 %. We assume the expenditure data to be equally distributed across the year, and therefore use a weighted average rate of 20.3 % for 2011. In addition to this (artificial) standard rate, Italy has a super reduced rate of 4 % that applies to basic food products (bread, cereals, milk, cheese, oil, fruit, vegetables), food in canteens, medical products, books, newspapers, and magazines and stationary, and a reduced rate of 10 % that applies to other food products (meat, fish, eggs, sugar), to some non-alcoholic beverages (water, tea), the operating costs of dwellings and maintenance work, energy (not fuel), pharmaceutical products, passenger transport, plants and cultural and gastronomic services. For private households, rents are exempted from VAT. Further exemptions are listed in section 2.1 in the main report.

### 11.1 VAT paid by private households

**Table 60: Italy – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	7.8%	20.3%	15.1%
CP02	20.3%	20.3%	15.1%
CP03	20.3%	20.3%	15.1%
CP04	2.8%	4.8%	3.6%
CP05	20.3%	20.3%	15.1%
CP06	4.5%	10.4%	7.7%
CP07	19.3%	20.1%	15.0%
CP08	19.1%	19.1%	14.2%
CP09	13.6%	19.3%	14.4%
CP10	0.0%	0.0%	0.0%
CP11	9.8%	20.3%	15.1%
CP12	10.6%	10.6%	7.9%
<b>Average</b>	<b>9.4%</b>	<b>13.6%</b>	<b>10.1%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 15.1 %.

The average VAT rate for households in Italy in 2011 was 9.4 %. The (artificial) standard rate of 20.3 % only applied to three categories of supplies (CP02, CP03 and

CP05); in all other categories of goods and services some supplies are either exempt, or taxed at the reduced or super reduced rate. Abolishing the super reduced and reduced rates increases the average VAT rate for private households to 13.6 %. CP01 “Food and non-alcoholic beverages” experiences the highest increase (12.5 percentage points), followed by CP11 “Restaurants and hotels” (10.5 percentage points). Average VAT rates also change in CP06 and CP04. In scenario 2 the new revenue neutral standard rate is 15.1 %. According to the HBS data, private households are made somewhat worse off by this new rate, as it increases the average VAT rate to 10.1 %.<sup>11</sup>

**Table 61: Italy – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011	VAT payments		Scenario 1	VAT payments			
	COICOP (2-digit)	in %		in €	COICOP (2-digit)	in %	in €
CP07		1.8%	553	CP01		3.2%	1,037
CP01		1.3%	398	CP07		1.8%	576
CP03		1.1%	334	CP04		1.5%	470
CP05		0.9%	287	CP03		1.0%	334
CP04		0.9%	278	CP09		1.0%	314
CP12		0.7%	224	CP11		0.9%	305
CP09		0.7%	221	CP05		0.9%	287
CP11		0.5%	147	CP12		0.7%	224
CP08		0.3%	94	CP06		0.4%	118
CP02		0.3%	93	CP08		0.3%	94
CP06		0.2%	52	CP02		0.3%	93
CP10		0.0%	0	CP10		0.0%	0
<b>Sum</b>		<b>8.6%</b>	<b>2,682</b>	<b>Sum</b>		<b>11.9%</b>	<b>3,852</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

Table 61 illustrates average VAT payments by households in 2011 broken down according to COICOP categories. The categories are ranked according to the amount of VAT paid. Most VAT is paid on CP07 “Transport”, on average € 553 per year. Within this category, CP072 “Operation of personal transport vehicle” accounts for the largest share of VAT (70 % of all VAT in this category), followed by CP071 “Purchase of vehicles” (26 %). Although they are taxed at super reduced and reduced rates, VAT

<sup>11</sup> The results obtained from the WIOD database show a different picture, with VAT burden decreasing for private households in scenario 2. The difference arises from different expenditure structures for households in the HBS data compared to other data sources. Scenario 2 resulting in a lower VAT burden for households, however, seems to be only true for WIOD data. Both HBS microdata as well as NA data show a higher average VAT rate for private households.

paid for the purchase of food and non-alcoholic beverages amounts to almost € 400. Clothing and footwear (CP03) is the third most important category for VAT payments. Abolishing reduced rates changes the relative importance of a number of categories: CP01 comes first (with 27 % of total VAT paid), followed by CP07 “Transport” (15 %) and CP04 “Housing, water, electricity, gas and other fuels” (12 %).

**Table 62: Italy – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile<sup>12</sup>**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	7.0%	+3.8%p	+1.2%p	1,011	+612	+193
<b>Second</b>	7.8%	+3.4%p	+0.8%p	1,891	+934	+205
<b>Third</b>	8.1%	+3.3%p	+0.6%p	2,269	+1,054	+197
<b>Fourth</b>	8.7%	+3.1%p	+0.3%p	3,282	+1,333	+143
<b>Fifth</b>	9.3%	+2.7%p	-0.1%p	5,140	+1,695	-66

Source: Italian Household Budget Survey 2005, Italian EU-SILC 2006, Bank of Italy Survey on Household Income and Wealth 2006, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 15.1 %.

Table 62 shows average VAT payments in 2011 and in both reform scenarios broken down by income quintile. We can see that the share of VAT payments in total expenditure increases with income. The fifth quintile has the highest share of VAT payments as a fraction of total expenditure (9.3 %) and the first quintile has the lowest (7 %).<sup>13</sup> VAT payments in absolute terms also increase with income; the fifth quintile pays more than 5 times as much VAT as the first quintile. Abolishing the reduced rates (scenario 1) leads to bigger increases in VAT bills as a fraction of expenditure for lower income quintiles than for higher income quintiles. The VAT system, however, remains progressive, although to a lesser extent. In absolute terms, the increase in VAT payments faced by the fifth quintile is 2.8 times higher than the respective increase faced by the first quintile. The introduction of a budget neutral uniform VAT rate (scenario 2), produces very similar results, although the fifth income quintile slightly benefits from the reform.

<sup>12</sup> As the Household Budgets Survey for Italy does not contain information on incomes this result is obtained by a match of HBS 2005 with EU-SILC 2006, performed by CAPP. It is shown to give an impression on the proportionality of the Italian VAT rates structure. However, one has to take into consideration the different sources of information compared to the other tables. More on the comparability of results obtained from aggregated HBS data and microdata matched with the EU-SILC can be found in 0.3 in the main report.

<sup>13</sup> IFS et al. (2011) also find that the VAT as a fraction of expenditure rises with income, however, with a smaller gap between the first and fifth quintile.

**Table 63: Italy – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	9.1%	+3.2%p	+0.4%p	3,987	+1,587	+161
<b>Non-active</b>	7.6%	+3.6%p	+0.9%p	1,703	+897	+231

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 15.1 %.

With respect to the impact of the current VAT structure on households with and without active members, we find that the current regime favours non-active households whose share of VAT payments in total expenditures is 7.6 % on average, while it is 9.1 % for households with active members. Scenario 1 increases VAT as a fraction of expenditure by 3.2 and 3.6 percentage points for households with and without active members respectively. In absolute values, VAT increases by € 1.587 and € 897, respectively; a considerable increase in VAT payments by 40 % and 53 %. Scenario 2 leads to an increase of € 161 (4 %) and € 231 (14 %) for households with and without active members respectively.

**Table 64: Italy – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Single</b>	7.9%	+3.1%p	+0.5%p	1,643	+729	+122
<b>Single +</b>	8.7%	+3.2%p	+0.5%p	2,620	+1,112	+157
<b>Multi</b>	8.8%	+3.2%p	+0.4%p	2,965	+1,209	+141
<b>Multi +</b>	9.3%	+3.2%p	+0.3%p	3,654	+1,436	+134

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 15.1 %.

“+” indicates a household with dependent children

Table 64 summarises the effects of the two reform scenarios on different types of households – single and multi-adult households with and without children. In both absolute terms and as a fraction of expenditure, single households without children pay the least VAT, multi-adult households with children the most. This structure does not change across reform scenarios; VAT as a fraction of expenditures increases by 3.1 or 3.2 percentage points for all household types. In absolute terms, larger households suffer more from the reforms. In scenario 1, the percentage increase in VAT is highest for singles households without children (44 %).



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## **11.2 VAT paid by non-household entities**

As discussed in the main report, in Italy, scenario 1 leads to an overall increase in VAT liability of 35 % (3.0 % of GDP). For sectors exempt from VAT, this translates into an increase of 23 %; while for the sector “Others” the increase is 44 %. Table 65 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. For Italy, these are, in order of importance: Manufacture of chemicals and chemical products, Construction, Electricity, gas, steam and hot water supply, Manufacture of medical, precision and optical instruments, watches and clocks, and Recreational, cultural and sporting activities. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 65: Italy – scenario 1: main product composition, non-households**

Product	Manufacture of chemicals and chemical products		Construction		Electricity, gas, steam and hot water supply		Manufacture of medical, precision and optical instruments, watches and clocks		Recreational, cultural and sporting activities		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	0	0%	17	11%	4	3%	2	0%	2	2%	13	13%	<b>38</b>
Real Estate Activities	0	0%	43	14%	22	7%	0	0%	1	0%	17	10%	<b>82</b>
Financial Intermediation	1	0%	60	2%	56	2%	0	0%	11	1%	178	20%	<b>307</b>
Public Admin and Defence; Compulsory Social Security	36	2%	315	7%	271	6%	20	0%	71	3%	380	23%	<b>1,092</b>
Education	0	0%	9	2%	72	17%	0	0%	2	1%	6	2%	<b>89</b>
Health and Social Work	431	22%	101	2%	171	4%	515	3%	2	0%	535	16%	<b>1,756</b>
Other Community, Social and Personal Services	7	4%	5	1%	12	3%	0	0%	42	17%	39	19%	<b>106</b>
Other sectors	1	0%	42	0%	2	0%	0	0%	1	0%	12	0%	<b>58</b>
Government final consumption	543	0%	44	0%	0	0%	0	0%	229	0%	104	0%	<b>920</b>
NPISH	0	0%	0	0%	0	0%	0	0%	46	0%	5	0%	<b>50</b>
<b>Total increase by product</b>	<b>1,021</b>		<b>638</b>		<b>609</b>		<b>538</b>		<b>405</b>		<b>1,288</b>		
<b>% increase in VAT liability by product</b>	<b>39%</b>		<b>86%</b>		<b>86%</b>		<b>329%</b>		<b>46%</b>		<b>44%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## 12 Cyprus

Cyprus has a standard rate of 15 % and two reduced rates of 5 % and 8 %. The lower 5 % rate applies to foodstuffs (including non-alcoholic beverages, but excluding soft drinks), services for the maintenance of the dwelling, water, refuse and sewerage collection, pharmaceutical products, certain recreational and sporting services, books, newspapers and other printing matter and hairdressing services. The reduced rate of 8 % applies to domestic passenger transport on roads and waterways and restaurants, canteen and accommodation services. In addition to the exemptions listed in section 2.1 in the main report, Cyprus also grants exemptions from VAT to the supply of cultural services and certain recreational and sporting services (if provided by a non-profit organisation).

### 12.1 VAT paid by private households

**Table 66: Cyprus – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	5.5%	15.0%	12.1%
CP02	15.0%	15.0%	12.1%
CP03	15.0%	15.0%	12.1%
CP04	2.7%	3.5%	2.8%
CP05	15.0%	15.0%	12.1%
CP06	2.0%	4.9%	4.0%
CP07	13.9%	15.0%	12.1%
CP08	14.7%	14.7%	11.9%
CP09	7.9%	9.7%	7.9%
CP10	0.0%	0.0%	0.0%
CP11	8.0%	15.0%	12.1%
CP12	7.8%	10.1%	8.2%
<b>Average</b>	<b>7.2%</b>	<b>9.9%</b>	<b>8.0%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 12.1 %.

Taking into account all deviations from the standard rate, the average VAT rate in Cyprus faced by private households according to HBS data is 7.2%. In Cyprus, reduced rates are rather prevalent; as a consequence, in scenario 1, the average VAT rate for

private households increases by 2.7 percentage points to 9.9 %. Category CP01 “Food and non-alcoholic beverages” is especially affected by this change, as almost all supplies belonging to this category are subject to the reduced rate of 5% (only soft drinks are taxed at the standard rate of 15%). Thus, scenario 1 almost triples the average VAT rate for this category. According to the expenditure structure in the HBS data, also the overall revenue neutral rate from scenario 1 increases the VAT burden on private households, the average VAT rates increases to 8.0 %.

**Table 67: Cyprus – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP07	1.4%	512	CP01	2.0%	729
CP03	0.9%	334	CP07	1.5%	554
CP01	0.7%	267	CP11	1.1%	396
CP04	0.7%	246	CP03	0.9%	334
CP05	0.7%	245	CP04	0.9%	323
CP11	0.6%	211	CP05	0.7%	245
CP12	0.4%	158	CP12	0.6%	205
CP09	0.4%	155	CP09	0.5%	191
CP08	0.4%	155	CP08	0.4%	155
CP02	0.3%	96	CP02	0.3%	96
CP06	0.1%	38	CP06	0.3%	92
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>6.8%</b>	<b>2,417</b>	<b>Sum</b>	<b>9.0%</b>	<b>3,321</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

Table 67 illustrates average VAT paid by households broken down by COICOP categories in 2011. CP07 “Transport” accounts for the biggest share of VAT payments, as almost all supplies belonging to this category are taxed at the standard rate. Scenarios 1 and 2 lead to significant changes in the VAT payments structure: In both scenarios, CP01 “Food and non-alcoholic beverages” now account for the largest share of VAT payments, which increase by 173 % and 120 % in scenario 1 and 2 respectively. Also category CP11 “Restaurants and hotels” experiences a significant increase (+88% and +51% in scenarios 1 and 2, respectively).

Table 68 shows VAT payments in 2011 and in both reform scenarios broken down by income quintile. In 2011, VAT payments range from 6.4% of expenditure for the first

quintile to 6.8% for the fourth quintile. Abolishing all reduced rates (scenario 1) leads to a three percentage point increase of VAT as a share of total expenditure for the first quintile. Households further up the income distribution face lower increases (the fifth quintile faces an increase of 2 percentage points of VAT payments as a fraction of expenditures) and the system turns from proportional to regressive. In absolute terms, the increase is highest for the richest income quintile, their VAT payments rise by about € 1.300 on average. Scenario 2 produces similar results but with smaller increases of VAT as a fraction of total expenditures. In absolute terms, however, the increase in VAT paid is highest among quintiles 3 and 4

**Table 68: Cyprus – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	6.4%	+3.0%p	+1.3%p	933	+481	+208
<b>Second</b>	6.7%	+2.6%p	+0.9%p	1,731	+739	+261
<b>Third</b>	6.8%	+2.4%p	+0.7%p	2,447	+931	+278
<b>Fourth</b>	6.8%	+2.3%p	+0.6%p	2,931	+1,063	+291
<b>Fifth</b>	6.8%	+2.0%p	+0.4%p	4,047	+1,303	+269

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 12.1 %.

Compared to households with active members, households with non-active members benefit from the diversified VAT regime in place in 2011 (Table 69). Abolishing reduced rates changes VAT payments in proportion to expenditures such that households without any active member now face a slightly higher tax burden than those with active members. Abolishing all reduced rates leads to an increase in VAT payments of 51 % or € 535 for non-active households and an increase of 35 % or € 1,079 for active households – households without an active member suffer more from the increase, because they consume relatively more reduced supplies. Scenario 2, in which reduced rates are abolished and the standard rate is replaced with a revenue neutral rate, provides a similar picture but to a lesser extent. VAT payments rise by 21 % or € 228 and by 9 % or € 278 for non-active and active households respectively.

**Table 69: Cyprus – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	6.9%	+2.2%p	+0.6%p	3,065	+1,079	+278
<b>Non-active</b>	6.3%	+2.9%p	+1.3%p	1,057	+535	+228

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 12.1 %.

Table 70 summarises the results disaggregated by household types. The VAT burden as a fraction of expenditures is slightly smaller for households with dependent children compared to households without children. Multi-adult households without children face the highest burden. Scenario 1 increases the VAT payments as a fraction of expenditure to a lesser extent for households with children than for other types of households, because households without dependent children spend a larger share of their income on supplies taxed at one of the reduced rates. In absolute terms, however, larger households are more strongly affected.

**Table 70: Cyprus – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Single</b>	6.8%	+2.5%p	+0.8%p	1,027	+413	+134
<b>Single +</b>	6.5%	+2.2%p	+0.6%p	1,914	+696	+191
<b>Multi</b>	7.1%	+2.4%p	+0.7%p	2,264	+852	+249
<b>Multi +</b>	6.8%	+2.1%p	+0.5%p	3,479	+1,210	+303

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 12.1 %.

“+” indicates a household with dependent children

## 12.2 VAT paid by non-household entities

As shown in the main report, in Cyprus, scenario 1 leads to an overall increase in VAT liability of 24 % (corresponding to 1.9 % of GDP). For sectors exempt from VAT, this translates into an increase of 42 %, while for the sector “Others”, the increase is 1 %. Table 71 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Cyprus, these are, in order of importance: Construction; Collection, purification and distribution of water,

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Manufacture of medical, precision and optical instruments, watches and clocks, Recreational, cultural and sporting activities, and Sewage and refuse disposal, sanitation and similar activities. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 71: Cyprus – scenario 1: main product composition, non-households**

Product	Construction		Collection, purification and distribution of water		Manufacture of medical, precision and optical instruments, watches and clocks		Recreational, cultural and sporting activities		Sewage and refuse disposal, sanitation and similar activities		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	<b>0</b>
Real Estate Activities	47	96%	0	0%	0	0%	0	0%	0	0%	0	0%	<b>47</b>
Financial Intermediation	0.5	1%	0	1%	0	0%	0	0%	1	2%	0	3%	<b>2</b>
Public Admin and Defence; Compulsory Social Security	0.7	1%	1	1%	1	1%	0	0%	0	0%	1	2%	<b>3</b>
Education	0.5	3%	3	18%	0	0%	0	0%	0	1%	0	2%	<b>4</b>
Health and Social Work	0.5	1%	0	1%	3	8%	0	0%	0	0%	1	4%	<b>4</b>
Other Community, Social and Personal Services	0.3	2%	0	1%	0	0%	0.5	15%	0	0%	1	10%	<b>2</b>
Government final consumption	0	0%	0	0%	0	0%	0.7	36%	0	0%	0	0%	<b>0.7</b>
NPISH	0	0%	0	0%	0	0%	0.6	100%	0	0%	0	0%	<b>0.6</b>
<b>Total increase by product</b>	<b>49</b>		<b>5</b>		<b>3</b>		<b>2</b>		<b>1</b>		<b>3</b>		
<b>% increase in VAT liability by product</b>	<b>174%</b>		<b>174%</b>		<b>145%</b>		<b>43%</b>		<b>174%</b>		<b>85%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding



## 13 Latvia

Latvia's VAT system is characterised by a standard rate of 22 % and a reduced rate of 12 %. The reduced rate of 12 % applies to the supply of pharmaceutical and medical products, therapeutic appliances and equipment, domestic passenger transport, books, newspapers and accommodation services. Latvia grants exemptions from VAT to the supply of cultural services (excluding cinemas) and to the supplies listed in section 2.1 in the main report.

### 13.1 VAT paid by private households

**Table 72: Latvia – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	22.0%	22.0%	20.7%
CP02	22.0%	22.0%	20.7%
CP03	22.0%	22.0%	20.7%
CP04	12.3%	12.3%	11.5%
CP05	22.0%	22.0%	20.7%
CP06	7.8%	14.4%	13.5%
CP07	19.9%	22.0%	20.7%
CP08	21.8%	21.8%	20.5%
CP09	17.6%	19.2%	18.1%
CP10	0.0%	0.0%	0.0%
CP11	21.8%	22.0%	20.7%
CP12	15.4%	15.4%	14.5%
<b>Average</b>	<b>18.1%</b>	<b>18.8%</b>	<b>17.6%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 20.7 %.

Exchange rate of 0.706 Latvian lats to 1 Euro.

Taking into account all deviations from the standard rate, the average VAT rate for households in Latvia (according to HBS data) is 18.1 %. This high average VAT rate already shows that the reduced rate does not apply to many goods and services. Therefore, scenario 1 does not substantially change the average VAT bill. Scenario 2 –

revenue neutral when all components of VAT are taken into account – lowers the VAT burden of private households according to HBS data.<sup>14</sup>

**Table 73: Latvia – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011	VAT payments		Scenario 1	VAT payments	
	COICOP (2-digit)	in %		in €	COICOP (2-digit)
CP01	4.8%	496	CP01	4.7%	496
CP07	2.2%	231	CP07	2.4%	255
CP04	2.2%	231	CP04	2.2%	231
CP03	0.9%	97	CP09	1.0%	103
CP09	0.9%	94	CP03	0.9%	97
CP05	0.9%	94	CP05	0.9%	94
CP11	0.8%	88	CP11	0.9%	89
CP12	0.8%	88	CP12	0.8%	88
CP08	0.8%	85	CP08	0.8%	85
CP02	0.6%	62	CP02	0.6%	62
CP06	0.3%	28	CP06	0.5%	52
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>15.3%</b>	<b>1,595</b>	<b>Sum</b>	<b>15.8%</b>	<b>1,652</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
Exchange rate of 0.706 Lavian lats to 1 Euro.

Table 73 illustrates average VAT paid by households broken down by COICOP categories in 2011. From the table we can see that category CP01 “Food and non-alcoholic beverages” accounts for the largest share of VAT (31 %). The structure of VAT payments remains almost unaltered for scenarios 1 and 2 (ranking differently after the reform), because VAT rates do not change substantially.

<sup>14</sup> The results obtained from the WIOD database show a different picture, with the VAT burden remaining more or less constant for households when changing from 2011 to scenario 2. This difference (and the difference in the average VAT rate in 2011 when comparing HBS and WIOD data) arises from different expenditure structures for households in the HBS data compared to other data sources. Comparing HBS data with NA data (which form the base for WIOD data, among others, a comparison to WIOD data is difficult as a different categorization of goods and services is used) shows large differences in the average VAT rates for 2011 (18.1 % in HBS, 15.7 % in NA data). This difference is again based on different expenditure structures leading to different VAT rates for certain COICOP categories (e.g. CP04 with a higher share of exempt rents or CP12 with a higher share of exempt insurance and banking services in NA data) and in total (more CP04 and less CP01 in NA data).

**Table 74: Latvia – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	15.2%	+0.5%p	-0.3%p	868	+31	-22
<b>Second</b>	15.1%	+0.6%p	-0.2%p	1,026	+47	-17
<b>Third</b>	15.2%	+0.5%p	-0.3%p	1,377	+56	-29
<b>Fourth</b>	15.2%	+0.5%p	-0.3%p	1,851	+72	-42
<b>Fifth</b>	15.6%	+0.4%p	-0.4%p	2,854	+79	-94

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 20.7 %.

Exchange rate of 0.706 Lavian lats to 1 Euro.

Table 74 shows average VAT payments in 2011 and in both reform scenarios broken down by income quintile. VAT payments as a share of total expenditure are roughly the same across income quintiles: The fifth quintile has the highest share (15.6 %), the second quintile the lowest (15.1 %). The absolute amount paid in VAT increases with income, leading to the fifth quintile paying more than three times as much VAT as the first quintile. Abolishing the reduced rate (scenario 1) and introducing a budget neutral VAT rate (scenario 2) both have negligible effects on the financial burden for households, as the categories taxed at the reduced rate only account for a small share of total household expenditure. The relative change is similar for all quintiles.

**Table 75: Latvia – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	15.6%	+0.4%p	-0.3%p	2,095	+70	-58
<b>Non-active</b>	14.3%	+0.7%p	0.0%p	715	+43	-2

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 20.7 %.

Exchange rate of 0.706 Lavian lats to 1 Euro.

From Table 75, we learn that households without active members pay less VAT than households with active members, both in absolute terms and as a fraction of expenditure. The difference in VAT bills as a fraction of expenditure arises because households with inactive members spend relatively more on exempt goods, especially on rents. But also the share of expenditures for CP06 “Health” is higher for non-active

households, explaining why those are slightly more affected by the abolition of the reduced rate.

**Table 76: Latvia – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	14.3%	+0.6%p	-0.1%p	726	+36	-9
Single +	15.0%	+0.5%p	-0.3%p	1,296	+54	-26
Multi	15.4%	+0.5%p	-0.3%p	1,718	+65	-40
Multi +	15.7%	+0.4%p	-0.4%p	2,325	+71	-71

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 20.7 %.

Exchange rate of 0.706 Latvian lats to 1 Euro.

“+” indicates a household with dependent children

Table 76 summarises the effects on different types of households, single and multi-adult, with and without children. As a proportion of total household expenditure, multi-adult households with dependent children pay the largest amount of VAT and single-person households without children the lowest. Again, higher expenditure shares for exempt rent (and on a smaller scale for reduced pharmaceutical products) are responsible for this. Reform scenarios 1 and 2 do not change the distributional effect of the VAT system on different types of households.

### 13.2 VAT paid by non-household entities

As discussed in the main report, in Latvia, scenario 1 leads to a modest overall increase in VAT liability of 6 % (corresponding to 0.7 % of GDP). For sectors exempt from VAT, this translates into an increase of 7 %, while for the sector “Others”, the increase is 3 %. Table 77 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Latvia, these are, in order of (quantitative) importance: Sewage and refuse disposal, sanitation and similar activities, Collection, purification and distribution of water, Recreational, cultural and sporting activities, Manufacture of chemicals and chemical products, and Publishing, printing and reproduction of recorded media. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 77: Latvia – scenario 1: main product composition, non-households**

Product	Sewage and refuse disposal, sanitation and similar activities		Collection, purification and distribution of water		Recreational, cultural and sporting activities		Manufacture of chemicals and chemical products		Publishing, printing and reproduction of recorded media		Other products		Total increase in 1,000 €
	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	
Post and Telecommunications	5	0%	0	0%	0	0%	0	0%	11	2%	4	45%	<b>21</b>
Real Estate Activities	3,034	1%	3,416	1%	54	0%	228	1%	331	0%	1,405	11%	<b>8,468</b>
Financial Intermediation	54	0%	57	0%	238	2%	33	1%	673	3%	541	25%	<b>1,597</b>
Public Admin and Defence; Compulsory Social Security	7,350	5%	630	0%	465	1%	200	1%	1,647	3%	2,215	13%	<b>12,508</b>
Education	513	1%	660	1%	49	0%	160	3%	388	2%	253	7%	<b>2,023</b>
Health and Social Work	367	0%	641	0%	10	0%	2,737	30%	100	0%	490	7%	<b>4,346</b>
Other Community, Social and Personal Services	528	1%	278	0%	1,119	9%	423	7%	199	1%	280	6%	<b>2,827</b>
Government final consumption	2,888	7%	1,362	2%	4,776	51%	0	0%	2	0%	46	1%	<b>9,073</b>
<b>Total increase by product</b>	<b>14,740</b>		<b>7,045</b>		<b>6,712</b>		<b>3,782</b>		<b>3,351</b>		<b>5,234</b>		
<b>% increase in VAT liability by product</b>	<b>152%</b>		<b>279%</b>		<b>36%</b>		<b>17%</b>		<b>59%</b>		<b>10%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## 14 Lithuania

Lithuania's VAT system consists of a standard rate of 21 % and two reduced rates of 5 % and 9 %. The lower 5 % rate applies to the supply of pharmaceutical and medical products if the recipient is entitled to reimbursement. The 9 % applies to the supply of heat energy, domestic passenger transport, books and accommodation services. In addition to the supplies listed in section 2.1 in the main report, Lithuania also grants exemptions from VAT to the supply of cultural, recreational and sporting services if they are provided by a non-profit organization. In contrast to the list in section 2.1 Lithuania does not exempt actual rents from VAT, they are taxed at the standard rate.

### 14.1 VAT paid by private households

**Table 78: Lithuania – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	21.0%	21.0%	20.6%
CP02	21.0%	21.0%	20.6%
CP03	21.0%	21.0%	20.6%
CP04	11.3%	11.3%	11.1%
CP05	21.0%	21.0%	20.6%
CP06	8.3%	18.1%	17.7%
CP07	18.7%	21.0%	20.6%
CP08	20.9%	20.9%	20.5%
CP09	15.9%	16.7%	16.3%
CP10	0.0%	0.0%	0.0%
CP11	20.6%	21.0%	20.6%
CP12	16.2%	16.2%	15.9%
<b>Average</b>	<b>17.2%</b>	<b>17.9%</b>	<b>17.6%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 20.6 %.

Exchange rate of 3.453 Lithuanian Litas to 1 Euro.

Considering all deviations from the standard rate, the average VAT rate in Lithuania (according to HBS data) is 17.2 %. The VAT regime applied in Lithuania is rather

homogenous; only few supplies are taxed at the reduced rate. Therefore, the reform scenarios lead to only negligible changes compared to the situation in 2011.<sup>15</sup>

**Table 79: Lithuania – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011	VAT payments		Scenario 1	VAT payments	
	COICOP (2-digit)	in %		in €	COICOP (2-digit)
CP01	5.7%	492	CP01	5.6%	492
CP04	2.2%	187	CP04	2.1%	187
CP07	1.3%	110	CP07	1.4%	124
CP03	1.1%	96	CP03	1.1%	96
CP08	0.9%	74	CP08	0.9%	74
CP11	0.7%	64	CP11	0.8%	66
CP05	0.7%	61	CP06	0.7%	65
CP02	0.7%	57	CP05	0.7%	61
CP12	0.7%	57	CP02	0.6%	57
CP09	0.6%	48	CP12	0.6%	57
CP06	0.3%	30	CP09	0.6%	50
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>14.7%</b>	<b>1,275</b>	<b>Sum</b>	<b>15.2%</b>	<b>1,328</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
Exchange rate of 3.453 Lithuanian Litas to 1 Euro.

Table 79 illustrates average VAT paid by households broken down by COICOP categories in 2011. Category CP01 “Food and non-alcoholic beverages” accounts for the largest share of VAT payments (39 % of the average VAT bill), followed by CP04 “Housing, water, electricity, gas and other fuel” (15 %<sup>16</sup>) and CP07 “Transport” (9 %). The structure of VAT payments remains almost unchanged for scenarios 1 and 2 (with only two categories ranking differently in the reform scenarios).

<sup>15</sup> The results obtained from the WIOD database show a different picture, with VAT burden decreasing for private households in scenario 2.

<sup>16</sup> As one of few countries actual rents are not exempted in Lithuania but are taxed at the standard rate.

**Table 80: Lithuania – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	15.0%	+0.4%p	+0.2%p	697	+24	+11
<b>Second</b>	14.9%	+0.6%p	+0.3%p	913	+41	+22
<b>Third</b>	14.6%	+0.6%p	+0.4%p	1,183	+57	+33
<b>Fourth</b>	14.6%	+0.5%p	+0.3%p	1,490	+66	+36
<b>Fifth</b>	14.7%	+0.5%p	+0.2%p	2,098	+78	+37

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 20.6 %.

Exchange rate of 3.453 Lithuanian Litas to 1 Euro.

Table 80 shows VAT payments in 2011 and in both reform scenarios broken down according to income quintile. VAT payments as a share of total expenditure are roughly the same across income quintiles: The first quintile has the highest share with 15 %, the third and fourth quintile the lowest share with 14.6 %. The absolute amount paid in VAT increases with income, with the fifth quintile paying more than three times as much VAT as the first quintile. Abolishing the reduced rate (scenario 1) and introducing a budget neutral VAT rate (scenario 2) both have only minor effects on the financial burden of households, as the categories taxed at the reduced rate make up only a small part of total household expenditure.

**Table 81: Lithuania – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	15.0%	+0.4%p	+0.2%p	1,659	+57	+24
<b>Non-active</b>	13.6%	+1.0%p	+0.7%p	705	+59	+45

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 20.6 %.

Exchange rate of 3.453 Lithuanian litas to 1 Euro.

Households without active members pay less in VAT than households with active members, both in absolute terms and as a fraction of expenditure (Table 81). Households without active members spend a larger fraction of their expenditure on exempt supplies, especially imputed rents, as well as on supplies belonging to CP06 “Health”, that are either exempt (services) or taxed at the reduced rate (pharmaceutical



products). Scenario 1 leads to similar increases in VAT payments in absolute terms both for active and inactive households. As a fraction of expenditure, VAT increases more for non-active households.

**Table 82: Lithuania – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	13.9%	+0.7%p	+0.4%p	726	+41	+27
Single +	14.6%	+0.4%p	+0.2%p	1,244	+40	+16
Multi	14.8%	+0.6%p	+0.4%p	1,450	+70	+41
Multi +	15.1%	+0.4%p	+0.1%p	1,879	+58	+21

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 20.6 %.

Exchange rate of 3.453 Lithuanian Litas to 1 Euro.

“+” indicates a household with dependent children

Table 82 summarises the effects on different types of households, single and multi-adult, with and without children. Single-adult households without dependent children face the lowest VAT payments both in absolute terms and as a fraction of expenditure, while multi-adult households with dependent children have the highest VAT payments. Reform scenarios 1 and 2 have roughly the same effect on all household types, with only marginal differences to 2011.

#### 14.2 VAT paid by non-household entities

As discussed in the main report, in Lithuania, scenario 1 leads to a modest overall increase in VAT liability of 2 % (corresponding to 0.2 % of GDP). For sectors exempt from VAT, this translates into an increase of 6 %, while for the sector “Others” the increase is 1 %. Table 83 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Lithuania, these are: Publishing, printing and reproduction of recorded media, Manufacture of chemicals and chemical products, Manufacture of medical, precision and optical instruments, watches and clocks, Hotels and restaurants, Post and telecommunications. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 83: Lithuania – scenario 1: main product composition, non-households**

Product	Publishing, printing and reproduction of recorded media		Manufacture of chemicals and chemical products		Manufacture of medical, precision and optical instruments, watches and clocks		Hotels and restaurants		Post and tele-communications		Other products		Total increase in 1,000 €
	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	
Post and Telecommunications	1	0%	0	0%	0	0%	0	0%	1	29%	0	0%	2
Real Estate Activities	2,856	1%	85	0%	60	0%	13	0%	70	5%	2	0%	3,086
Financial Intermediation	5,615	5%	33	0%	0	0%	312	5%	74	12%	10	0%	6,044
Public Admin and Defence; Compulsory Social Security	3,685	3%	152	1%	73	0%	93	1%	40	5%	19	0%	4,062
Education	8,322	9%	10	0%	2	0%	30	1%	4	1%	1	0%	8,369
Health and Social Work	592	0%	675	3%	281	1%	65	1%	45	4%	19	0%	1,677
Other Community, Social and Personal Services	1,858	4%	66	1%	62	1%	6	0%	15	5%	35	0%	2,043
Government final consumption	0	0%	1,339	0%	1,647	0%	469	0%	0	0%	0	0%	3,455
<b>Total increase by product</b>	<b>22,929</b>		<b>2,361</b>		<b>2,125</b>		<b>988</b>		<b>249</b>		<b>87</b>		
<b>% increase in VAT liability by product</b>	<b>196%</b>		<b>26%</b>		<b>39%</b>		<b>10%</b>		<b>1%</b>		<b>-</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

“-“ indicates that the % increase in VAT liability by product is not-available for zero rated goods

## 15 Luxembourg

Luxembourg's VAT has a standard VAT rate of 15 %, a super reduced rate of 3 %, two reduced rates of 6 % and 12 %, respectively, and a parking rate of 12 %. The super reduced rate applies to foodstuffs and non-alcoholic beverages, clothing materials and shoes for children, water supply, refuse collection, sewerage collection, pharmaceutical and other medical products, therapeutic appliances and equipment, some animal drawn vehicles, domestic passenger transport, recreational and cultural services, books, newspapers, periodicals, goods and services provided by restaurants, cafés or canteens, and accommodation services. The reduced rate of 6 % applies to the repair and hire of footwear, electricity, gas, solid fuels and heat energy, to domestic services and household services, bicycles, plants, flowers, services provided by hairdressing salons and personal grooming establishments, and electrical appliances for personal care. The reduced rate of 12 % applies to tobacco, liquid fuels, and some animal drawn vehicles, whereas the parking rate applies to wine and miscellaneous printed matter. In addition to the supplies listed in section 2.1 in the main report, Luxembourg also exempts veterinary services from VAT.

### 15.1 VAT paid by private households

Considering all deviations from the standard rate, the average VAT rate in Luxembourg (according to HBS data) is 6.6 %. As many goods and services are subject to super reduced, reduced or parking rates, abolishing these reductions leads to a sharp increase in average VAT rates faced by private households. We observe the largest increases in VAT payments in the categories CP01 "Food and non-alcoholic beverages" and CP11 "Restaurants and hotels", where average VAT rates increase from 3 % to the standard rate. The new standard rate in scenario 2 is 12.5 %, and the average VAT rate increases to 8.4 %.

**Table 84: Luxembourg – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	3.0%	15.0%	12.5%
CP02	12.5%	15.0%	12.5%
CP03	12.6%	15.0%	12.5%
CP04	2.1%	3.2%	2.7%
CP05	13.6%	15.0%	12.5%
CP06	1.8%	8.9%	7.4%
CP07	14.3%	15.0%	12.5%
CP08	14.8%	14.8%	12.3%
CP09	10.0%	14.2%	11.8%
CP10	0.0%	0.0%	0.0%
CP11	3.0%	15.0%	12.5%
CP12	5.4%	7.6%	6.3%
<b>Average</b>	<b>6.6%</b>	<b>10.1%</b>	<b>8.4%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 12.5 %.

**Table 85: Luxembourg – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP07	2.1%	1,280	CP07	2.1%	1,343
CP05	0.8%	485	CP01	1.3%	821
CP03	0.8%	478	CP11	1.0%	656
CP04	0.6%	400	CP04	1.0%	618
CP09	0.6%	347	CP03	0.9%	569
CP12	0.4%	277	CP05	0.8%	533
CP01	0.3%	164	CP09	0.8%	494
CP08	0.3%	159	CP12	0.6%	385
CP11	0.2%	131	CP06	0.3%	163
CP02	0.1%	87	CP08	0.2%	159
CP06	0.1%	33	CP02	0.2%	105
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>6.2%</b>	<b>3,841</b>	<b>Sum</b>	<b>9.2%</b>	<b>5,846</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

Table 85 illustrates average VAT paid by households broken down by COICOP categories in 2011. Category CP07 “Transport” accounts for the biggest share of VAT payments (33 % of the VAT bill in 2011), with subcategories CP071 “Purchase of vehicles” and CP072 “Operation of personal transport equipment” making up 62 % and 38 % of all VAT payments in this category. CP05 ranks second, followed by CP03 (accounting for 13 % and 12 % of total VAT payments, respectively). Scenarios 1 and 2 change the composition of VAT payments considerably, with only two categories ranked the same as in the 2011, CP07 and CP10 on the first and last rank, respectively. VAT payments in category CP01 and CP11 rise sharply, and these categories rank second and third respectively in both reform scenarios.

**Table 86: Luxembourg – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	4.6%	+3.6%p	+2.3%p	1,156	+980	+624
<b>Second</b>	5.0%	+3.3%p	+2.0%p	1,966	+1,408	+846
<b>Third</b>	5.6%	+3.2%p	+1.8%p	2,989	+1,858	+1,050
<b>Fourth</b>	6.2%	+2.9%p	+1.5%p	4,459	+2,318	+1,189
<b>Fifth</b>	7.0%	+2.6%p	+1.2%p	8,317	+3,473	+1,508

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 12.5 %.

Table 86 shows VAT payments as a fraction of total expenditure in 2011 and in both reform scenarios broken down by income quintile. VAT payments as a share of total expenditure vary across the income distribution: While the poorest 20 % face a VAT bill of 4.6 % of their total expenditures, the 20 % richest households pay 7.0 %. In absolute values, the fifth quintile pays more than 7 times as much VAT as the first quintile. The abolition of super reduced, reduced and parking rates causes a considerable increase in the VAT bill of all income groups. In absolute terms, high income households lose the most – they face a 3.5 times higher increase in their VAT bill compared to households in the poorest quintile. Concerning relative increases, however, poor households are affected more: Scenario 1 triggers an increase in VAT payments of 85 % for the first quintile, while the respective increase for the fifth quintile is only 42 %. Scenario 2 has similar effects, although to a lesser extent than scenario 1. Although the gap in VAT payments as a percentage of expenditure between rich and poor households decreases, the VAT system remains progressive in both reform scenarios.

**Table 87: Luxembourg – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Active	6.4%	+2.9%p	+1.6%p	4,444	+2,238	+1,125
Non-active	5.5%	+3.1%p	+1.8%p	2,693	+1,689	+959

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 12.5 %.

Table 87 indicates that the current VAT regime favours households without active members. VAT payments as a percentage of expenditure is 0.9 percentage points lower for households without than for households with active members. Both reform scenarios lead to an increase in VAT bills for both household types, in absolute terms the increase is higher for active households, as a fraction of expenditure it is slightly higher for inactive households.

**Table 88: Luxembourg – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	5.7%	+2.9%p	+1.5%p	2,373	+1,308	+695
Single +	5.7%	+2.8%p	+1.5%p	3,028	+1,623	+848
Multi	6.3%	+2.9%p	+1.5%p	4,194	+2,144	+1,087
Multi +	6.4%	+2.9%p	+1.4%p	5,375	+2,645	+1,308

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 12.5 %.

“+” indicates a household with dependent children

Table 88 summarises the effects on different types of households – single and multi-adult, with and without children. As a proportion of total household expenditure, multi-adult households with dependent children pay the most in VAT, and single-adult households (with and without children) the lowest. Reform scenarios 1 and 2 again have a substantial impact on the VAT bills of all household types.

## 15.2 VAT paid by non-household entities

As discussed the main report, in Luxembourg, scenario 1 leads to an overall increase in VAT liability of 20 % (corresponding to 1.5 % of GDP). For sectors exempt from VAT,

this translates into an increase of 11 %, while for the sector “Others” the increase is 15 %. Table 89 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Luxembourg, these are: Construction, Recreational, cultural and sporting activities, Electricity, gas, steam and hot water supply, Hotels and restaurants and Manufacture of food products and beverages. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 89: Luxembourg – scenario 1: main product composition, non-households**

Product	Construction		Recreational, cultural and sporting activities		Electricity, gas, steam and hot water supply		Hotels and restaurants		Manufacture of food products and beverages		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	0	1%	0	0%	0	0%	0	0%	0	0%	0	47%	<b>0</b>
Real Estate Activities	3	10%	0	0%	1	1%	0	0%	0	0%	0	3%	<b>4</b>
Financial Intermediation	8	2%	0	0%	10	0%	11	0%	0	0%	3	15%	<b>32</b>
Public Admin and Defence; Compulsory Social Security	20	35%	0	0%	6	2%	2	1%	0	0%	0	9%	<b>28</b>
Education	3	33%	0	0%	1	2%	0	0%	4	13%	0	6%	<b>9</b>
Health and Social Work	5	10%	0	0%	3	1%	4	1%	11	8%	5	20%	<b>28</b>
Other Community, Social and Personal Services	0	4%	3	15%	0	1%	0	0%	0	0%	0	8%	<b>4</b>
Government final consumption	0	0%	18	0%	0	0%	0	0%	0	0%	22	100%	<b>40</b>
NPISH	0	0%	2	0%	0	0%	1	0%	0	0%	0	0%	<b>3</b>
<b>Total increase by product</b>	<b>39</b>		<b>23</b>		<b>20</b>		<b>19</b>		<b>16</b>		<b>31</b>		
<b>% increase in VAT liability by product</b>	<b>58%</b>		<b>357%</b>		<b>348%</b>		<b>348%</b>		<b>174%</b>		<b>20%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding



## 16 Hungary

Hungary's VAT system consists of a standard rate of 25 % and two reduced rates of 5 % and 18 %. The lower reduced rate of 5 % covers the supply of pharmaceutical and medical products, therapeutic appliances equipment, books and newspapers. The reduced rate of 18 % applies to the supply of bread, cereals, dairy products and accommodation services. Rents are not exempted from VAT in Hungary, but taxed at the standard rate of 25 %. In addition to the other supplies listed in section 2.1 in the main report, the supply of recreational and sporting services is also exempt from VAT, as is the supply of cultural services, as long as they are classified as folk art.

### 16.1 VAT paid by private households

**Table 90: Hungary – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	22.8%	25.0%	22.1%
CP02	25.0%	25.0%	22.1%
CP03	25.0%	25.0%	22.1%
CP04	25.0%	25.0%	22.1%
CP05	25.0%	25.0%	22.1%
CP06	3.8%	18.9%	16.7%
CP07	24.9%	25.0%	22.1%
CP08	24.9%	24.9%	22.0%
CP09	18.2%	21.9%	20.5%
CP10	0.0%	0.0%	0.0%
CP11	24.6%	25.0%	22.1%
CP12	9.5%	9.5%	8.4%
<b>Average</b>	<b>21.2%</b>	<b>22.7%</b>	<b>20.2%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 22.1 %.

Exchange rate of 277.778 Forint to 1 Euro.

Considering all deviations from the standard rate, the average VAT rate in Hungary (according to HBS data) is 21.2 %. As not many supplies are subject to the reduced rates, abolishing them only leads to an increase in the average VAT rate from 21.2 % to

22.7 %. The new standard rate in scenario 2 is 22.1 %, leading to a lower average VAT rate on household consumption according to HBS data (20.2 %).<sup>17</sup>

**Table 91: Hungary – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011	VAT payments		Scenario 1	VAT payments	
	COICOP (2-digit)	in %		in €	COICOP (2-digit)
CP04	4.6%	342	CP01	4.7%	354
CP01	4.3%	323	CP04	4.5%	342
CP07	2.4%	176	CP07	2.3%	176
CP08	1.1%	86	CP09	1.3%	101
CP09	1.1%	84	CP08	1.1%	86
CP02	0.9%	64	CP02	0.8%	64
CP03	0.8%	62	CP03	0.8%	62
CP12	0.7%	55	CP06	0.8%	60
CP11	0.7%	51	CP12	0.7%	55
CP05	0.6%	48	CP11	0.7%	52
CP06	0.2%	12	CP05	0.6%	48
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>17.5%</b>	<b>1,303</b>	<b>Sum</b>	<b>18.5%</b>	<b>1,399</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
Exchange rate of 277.778 Forint to 1 Euro.

Table 91 illustrates average VAT paid by households broken down by COICOP categories in 2011. We can see that category CP04 “Housing, water, electricity, gas and other fuels” accounts for the biggest share of VAT payments.<sup>18</sup> Reform scenarios 1 and 2 leave the composition of VAT payments almost unaltered, as they cause no major changes to the existing VAT regime. However, in both reform scenarios, because of the abolition of the reduced rate on certain food products, CP01 “Food and non-alcoholic beverages” ranks first.

<sup>17</sup> This average rate on household consumption deviates from the one given in section 2.2 in the main report. This is because, in contrast to NA and WIOD data, HBS data for Hungary do not contain information on imputed rents. Therefore, NA and WIOD data contain a higher share of exempt goods and thus a lower average VAT rate in all scenarios. Also the decrease in average VAT rate when changing from the situation in 2011 to scenario 2 is not depicted by WIOD data. It is, however, also the case when analysing the scenario based on NA data.

<sup>18</sup> Recall that for Hungary, in contrast to most other countries, this category, does not contain information on imputed rent. In addition, again in contrast to most other Member States, actual rents are not exempt from VAT but taxed at the standard rate.

**Table 92: Hungary – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	17.9%	+1.2%p	-0.6%p	871	+73	-34
<b>Second</b>	17.7%	+1.2%p	-0.5%p	984	+86	-35
<b>Third</b>	17.4%	+1.2%p	-0.6%p	1,192	+98	-47
<b>Fourth</b>	17.1%	+1.0%p	-0.7%p	1,393	+101	-66
<b>Fifth</b>	16.4%	+0.9%p	-0.8%p	1,954	+125	-106

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 22.1 %.

Exchange rate of 277.778 Forint to 1 Euro.

Table 92 shows VAT payments as a proportion of expenditure in 2011 and in both reform scenarios, broken down by income quintile. VAT payments as a share of total expenditure are higher for low income households (17.9 % in the first quintile) than for higher income ones (16.4 % in the fifth quintile). The VAT system in place in 2011 is therefore regressive.<sup>19</sup> The absolute amount paid in VAT increases with income, leading to the fifth quintile paying more than two times as much VAT as the first quintile. Abolishing the reduced rates (scenario 1) and introducing a budget neutral VAT rate (scenario 2) both do not have very large effects on the financial burden of households, as the categories taxed at the reduced rate only account for a small fraction of total household expenditure. While scenario 1 leads to a slight increase in VAT bills in all income quintiles, as a fraction of expenditure, increases are higher for low income households already disproportionately burdened in the status quo. Scenario 2 triggers marginal decreases in VAT bills in all quintiles. Both reform scenarios make the VAT rates structure more regressive.

Households without active members spend on average less on VAT as a proportion of expenditure than households with active members (Table 93). In scenario 1, the increase for non-active households is higher as a fraction of expenditure, and similar to active households in absolute terms, although changes are modest overall. Scenario 2, which decreases average VAT rates according to HBS data, decreases VAT bills more for households with active members.

<sup>19</sup> The Validation Exercise in the main text (section A.3) shows different results for Hungary in IFS et al. (2011). There, the Hungary VAT rates structure is proportional.

**Table 93 Hungary – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	17.6%	+0.9%p	-0.8%p	1,667	+101	-97
<b>Non-active</b>	17.1%	+1.5%p	-0.3%p	888	+94	-16

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 22.1 %.

Exchange rate of 277.778 Forint to 1 Euro.

**Table 94: Hungary – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Single</b>	17.0%	+1.3%p	-0.4%p	694	+67	-17
<b>Single +</b>	17.5%	+0.9%p	-0.8%p	1,292	+81	-72
<b>Multi</b>	17.5%	+1.1%p	-0.6%p	1,421	+110	-62
<b>Multi +</b>	17.6%	+0.9%p	-0.8%p	1,780	+112	-101

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 22.1 %.

Exchange rate of 277.778 Forint to 1 Euro.

“+” indicates a household with dependent children

Table 94 summarises the effects on different types of households, single and multi-adult, with and without children. As a proportion of total household expenditure, multi-adult households with dependent children pay the most in VAT (17.6 %), single households without children the least (17.0 %). The reform scenarios change the distributional structure such that the (already small) differences in VAT as a proportion of expenditure across household types decreases even more.

## 16.2 VAT paid by non-household entities

As shown in the main report, in Hungary, scenario 1 leads to an overall increase in VAT liability of 13 % (corresponding to 1.5 % of GDP). For sectors exempt from VAT, this translates into an increase of 8 %, while for the sector “Others” the increase is 10%. Table 95 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Hungary, these are: Manufacture of chemicals and chemical products, Hotels and restaurants, Publishing, printing and

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reproduction of recorded media, Agriculture, hunting and related service activities, and Other service activities. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 95: Hungary – scenario 1: main product composition, non-households**

Product	Manufacture of chemicals and chemical products		Publishing, printing and reproduction of recorded media		Hotels and restaurants		Agriculture, hunting and related service activities		Other service activities		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	0	0%	0	1%	0	1%	0	0%	0	1%	0	11%	<b>0</b>
Real Estate Activities	8	3%	32	3%	0	1%	0	0%	0	0%	1	4%	<b>45</b>
Financial Intermediation	1	0%	14	2%	0	0%	0	0%	0	0%	1	15%	<b>17</b>
Public Admin and Defence; Compulsory Social Security	4	2%	15	2%	0	1%	2	3%	1	0%	2	14%	<b>28</b>
Education	2	3%	10	3%	0	1%	0	0%	0	0%	0	11%	<b>14</b>
Health and Social Work	37	22%	3	1%	1	2%	2	2%	0	0%	4	16%	<b>54</b>
Other Community, Social and Personal Services	1	3%	1	1%	0	1%	0	1%	1	6%	0	12%	<b>4</b>
Government final consumption	87	0%	2	0%	9	8%	2	0%	3	0%	0	0%	<b>167</b>
<b>Total increase by product</b>	<b>140</b>		<b>77</b>		<b>11</b>		<b>7</b>		<b>5</b>		<b>8</b>		
<b>% increase in VAT liability by product</b>	<b>49%</b>		<b>181%</b>		<b>13%</b>		<b>20%</b>		<b>41%</b>		<b>4%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## 17 Malta

The standard VAT rate in Malta is 18 %, there are two reduced rates of 5 % and 7 %, and a zero rate. The zero rate applies to foodstuffs (excluding some confectioneries like chocolate and ice cream), water provided by a public authority, pharmaceuticals, domestic and scheduled passenger transport by bus and passenger transport by air and waterway. The reduced rate of 5 % applies to minor repairs of shoes, electricity, contact lenses, cultural services and books and newspapers and other printed matter. The reduced rate of 7 % only applies to accommodation services. Malta grants exemptions from VAT to supplies listed in section 2.1 in the main report and also to the supply of recreational and sporting services if they are provided by a non-profit seeking organization.

### 17.1 VAT paid by private households

**Table 96: Malta – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	1.9%	18.0%	13.5%
CP02	18.0%	18.0%	13.5%
CP03	18.0%	18.0%	13.5%
CP04	12.9%	16.4%	12.3%
CP05	18.0%	18.0%	13.5%
CP06	2.4%	10.9%	8.2%
CP07	15.2%	18.0%	13.5%
CP08	16.9%	16.9%	12.7%
CP09	11.8%	16.4%	12.3%
CP10	0.0%	0.0%	0.0%
CP11	16.0%	18.0%	13.5%
CP12	11.3%	11.3%	8.4%
<b>Average</b>	<b>11.2%</b>	<b>16.6%</b>	<b>12.4%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 13.5 %.

Considering all deviations from the standard rate, the average VAT rate in Malta (according to HBS data) is 11.2 %.<sup>20</sup> The VAT regime in Malta taxes many supplies at a reduced rate, therefore, changing this regime leads to a considerable increase in the average VAT rate. Scenario 1 pushes the average rate up to 16.6 %, scenario 2 (with a new standard rate of 13.5 %) increases the average rate to 12.4 %. In scenario 1, the VAT increase is highest in category CP01 “Food and non-alcoholic beverages”, where the rate changes from 1.9 % to the standard rate. CP06 “Health” also experiences a large increase (change from 2.4 % to 10.9 %).

**Table 97: Malta – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011	VAT payments		Scenario 1	VAT payments	
	COICOP (2-digit)	in %		in €	COICOP (2-digit)
CP07	2.2%	517	CP01	3.5%	839
CP05	1.4%	321	CP07	2.5%	613
CP04	1.3%	289	CP04	1.5%	366
CP11	1.1%	254	CP09	1.4%	349
CP09	1.1%	253	CP05	1.3%	321
CP03	0.9%	200	CP11	1.2%	287
CP12	0.8%	194	CP03	0.8%	200
CP02	0.4%	94	CP12	0.8%	194
CP08	0.4%	92	CP02	0.4%	94
CP01	0.4%	86	CP08	0.4%	92
CP06	0.1%	19	CP06	0.4%	87
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>10.0%</b>	<b>2,321</b>	<b>Sum</b>	<b>14.2%</b>	<b>3,443</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

Table 97 illustrates average VAT paid by households broken down by COICOP categories in 2011. Category CP07 “Transport” accounts for the biggest share of VAT payments in 2011 (22 % of the total VAT bill). Within this category, CP071 “Purchase of vehicles” accounts for the largest share of VAT liabilities (54 %), followed by CP072 “Operation of personal transport equipment” (45 %). Due to the zero rate applied on most transport services (and comparatively low expenditures on this

<sup>20</sup> This average rate on household consumption deviates from the numbers given in section 2.2 in the main report. This is because, in contrast to NA and WIOD data, HBS data for Malta do not contain information on imputed rents. Therefore, NA and WIOD data contain a higher share of exempt supplies, and therefore lead to a lower average VAT rate in all scenarios.



category) VAT on CP073 plays almost no role. The composition of VAT payments changes considerably in scenarios 1 and 2, with only three categories ranked the same as in the 2011. CP01 now ranks first accounting for 24 % of the VAT bill, the share of CP07 decreases to 18 %, followed by CP04 with 11 %.

**Table 98: Malta – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	8.5%	+5.9%p	2.7%p	938	+763	338
<b>Second</b>	9.8%	+4.6%p	1.4%p	1,762	+969	286
<b>Third</b>	10.1%	+4.2%p	1.0%p	2,362	+1,154	275
<b>Fourth</b>	10.2%	+3.9%p	0.8%p	2,898	+1,297	249
<b>Fifth</b>	10.5%	+3.5%p	0.4%p	3,642	+1,430	162

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 13.5 %.

Table 98 shows VAT payments in 2011 and in both reform scenarios broken down by income quintile. VAT payments as a share of total expenditure increase with income. Thus, the fifth quintile has the highest share of VAT payments in total expenditure, 10.5 %, and the first quintile has the lowest, 8.5 %. The absolute amount paid in VAT increases with income, with the fifth quintile paying almost four times as much VAT as the first quintile. Abolishing the zero and reduced rates (scenario 1) and introducing a budget neutral VAT rate (scenario 2) both have substantial effects on the VAT bills of private households, as there are numerous goods and services taxed at the zero rate or one of the two reduced rates, and the reduced rates are much lower than the standard rate. In absolute terms, the average VAT bill in the fifth income quintile increases almost twice as much as the average VAT bill in the first quintile. In relative terms, however, low income households face a much higher increase (81 % of VAT payments in quintile 1, 39 % in quintile 5). Also as a fraction of expenditure the increase is much higher for lower income households, which leads to a higher VAT burden for low income households in scenario 1 (14.4 % of total expenditure for quintile 1 compared to 14.1 % for quintile 5). Scenario 2 has similar effects, although to a lesser extent. In both scenarios the former quite progressive system becomes proportional.

Households without active members pay less in VAT than households with active members, both in absolute terms and as a fraction of expenditure (Table 99). Again, our two reform scenarios lead to considerable changes compared to 2011. Abolishing zero

and reduced rates leads to a change in the distributional structure, resulting in both household types facing the same VAT burden as a fraction of expenditure

**Table 99: Malta – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Active	10.4%	+3.7%p	+0.8%p	3,133	+1,312	+201
Non-active	8.7%	+5.6%p	+2.4%p	1,129	+852	+357

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 13.5 %.

**Table 100: Malta – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	9.4%	+5.0%p	+1.8%p	1,130	+703	+245
Single +	9.6%	+4.5%p	+1.4%p	1,746	+955	+280
Multi	10.2%	+4.0%p	+0.9%p	2,375	+1,094	+227
Multi +	10.1%	+4.0%p	+0.9%p	3,012	+1,384	+285

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 13.5 %.

“+” indicates a household with dependent children

Table 100 summarises the effects on different types of households. As a fraction of total household expenditure, multi-adult households without dependent children pay the most in VAT (10.2 %), single households without children the least (9.4 %). Again this distribution changes in the reform scenarios: Scenario 1 leads to a higher burden for single-adult households (14.4 % compared to 14.2 % for multi-adult households without children); however, the relative differences are not substantial, although in absolute terms, VAT payments increase by 62 % for single households and by 46 % for multi-adult households with dependent children.

## 17.2 VAT paid by non-household entities

As discussed in the main report, in Malta, scenario 1 leads to an overall increase in VAT liability of 34% (corresponding to 2.8% of GDP). For sectors exempt from VAT, this translates into an increase of 25%, while for the sector “Others” the increase is 11%. Table 101 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption,

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Government Consumption and NPISHs. In the case of Malta, these are, in order of (qualitative) importance: Electricity, gas, steam and hot water supply, Collection, purification and distribution of water, Manufacture of chemicals and chemical products, Agriculture, hunting and related service activities, Land transport and transport via pipelines. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 101: Malta – scenario 1: main product composition, non-households**

Product	Electricity, gas, steam and hot water supply		Collection, purification and distribution of water		Manufacture of chemicals and chemical products		Agriculture, hunting and related service activities		Land transport; transport via pipelines		Other products		Total increase in 1,000 €
	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	
Post and Telecommunications	20	2%	4	0%	0	0%	0	0%	9	0%	13	36%	<b>46</b>
Financial Intermediation	2,046	5%	907	0%	1	0%	0	0%	0	0%	99	21%	<b>3,053</b>
Public Admin and Defence; Compulsory Social Security	1,579	3%	556	0%	468	4%	4	0%	816	0%	405	11%	<b>3,828</b>
Education	248	4%	230	0%	194	15%	0	0%	455	0%	261	30%	<b>1,388</b>
Health and Social Work	606	2%	812	0%	2,897	53%	0	0%	94	0%	428	6%	<b>4,837</b>
Other Community, Social and Personal Services	3,627	5%	2,879	0%	240	1%	31	0%	1,106	0%	1,710	15%	<b>9,593</b>
Government final consumption	0	0%	0	0%	0	0%	3,332	0%	0	0%	171	9%	<b>3,503</b>
NPISH	0	0%	0	0%	1	0%	0	0%	5	0%	47	100%	<b>53</b>
<b>Total increase by product</b>	<b>8,126</b>		<b>5,388</b>		<b>3,801</b>		<b>3,367</b>		<b>2,486</b>		<b>3,134</b>		
<b>% increase in VAT liability by product</b>	<b>220%</b>		<b>-</b>		<b>48%</b>		<b>-</b>		<b>-</b>		<b>18%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

“-“ indicates that the % increase in VAT liability by product is not-available for zero rated goods

## 18 Netherlands

In the Netherlands, the standard VAT rate is 19 %, and there is one reduced rate of 6 %. The reduced rate applies to foodstuffs (including non-alcoholic beverages), water, pharmaceutical products, domestic passenger transport, flowers and plants, cultural, recreational and sporting services, books, newspapers, other printed matter and stationary, hairdressing and restaurant, canteen and accommodation services. In addition to the supplies listed in section 2.1 in the main report, the Netherlands also exempts refuse and sewerage collection and telephone and telefax services from VAT.

### 18.1 VAT paid by private households

**Table 102: Netherlands – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	6.0%	19.0%	16.1%
CP02	19.0%	19.0%	16.1%
CP03	19.0%	19.0%	16.1%
CP04	4.2%	4.5%	3.8%
CP05	19.0%	19.0%	16.1%
CP06	7.1%	10.3%	8.7%
CP07	17.2%	19.0%	16.1%
CP08	0.7%	0.7%	0.6%
CP09	13.7%	18.5%	15.7%
CP10	0.0%	0.0%	0.0%
CP11	6.0%	19.0%	16.1%
CP12	2.4%	3.0%	2.6%
<b>Average</b>	<b>8.3%</b>	<b>11.5%</b>	<b>9.7%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 16.1 %.

Taking into account all exemptions and deviations from the standard rate, the average VAT rate in the Netherlands on the expenditure of private households is 8.3 % (according to HBS data). Abolishing the reduced rate leads to an average VAT rate of 11.5 %. In 2011, categories CP02, CP03 and CP05 were the only categories of goods and services that only contained supplies that were taxed at the standard rate – their average tax rate was thus the standard rate. With the abolition of the reduced rate, this is

also true for the categories CP01, CP07 and CP11; in all other categories, exemptions decrease the average tax rate. The new, uniform budget closing standard rate is 16.1 %; for households, this is not neutral as they face a higher overall average VAT rate of 9.7 %.

**Table 103: Netherlands – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP07	1.7%	558	CP01	2.0%	680
CP09	1.3%	421	CP07	1.8%	617
CP04	1.1%	365	CP09	1.7%	568
CP05	1.0%	317	CP04	1.1%	389
CP03	0.9%	310	CP11	1.0%	328
CP01	0.6%	215	CP05	0.9%	317
CP02	0.4%	119	CP03	0.9%	310
CP12	0.4%	119	CP12	0.4%	150
CP11	0.3%	104	CP02	0.3%	119
CP06	0.0%	14	CP06	0.1%	21
CP08	0.0%	6	CP08	0.0%	6
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>7.7%</b>	<b>2,548</b>	<b>Sum</b>	<b>10.3%</b>	<b>3,505</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

In 2011, 22 % of the average VAT payments (€ 2,548) relate to goods and services belonging to the category CP07 “Transport”.<sup>21</sup> Accounting for 17 % of total VAT payments, CP09 ranks second, followed by CP04 (14 %). Although the average VAT rate on “Housing, water, electricity, gas and other fuels” is relatively low at 4.2 %, <sup>22</sup> VAT payments relating to this category are quite important, because net expenditures on this category are high (on average 28 % of total net expenditure). Abolishing the reduced rate changes this structure: “Food and non-alcoholic beverages” becomes the most important category in terms of VAT payments; its average tax rate rises from 6 % to 19 %.

<sup>21</sup> The most important sub-categories are CP072 “Operation of personal transport equipment“, followed by CP071 „Purchase of vehicles“(56 % and 39 % of all VAT payments in this category, respectively).

<sup>22</sup> Actual and imputed rents are exempted, some more exemptions and reduced rates apply to CP044 “Water supply and miscellaneous services related to the dwelling”.

**Table 104: Netherlands – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	7.2%	+2.6%p	1.3%p	1,859	+755	+356
<b>Second</b>	7.1%	+2.6%p	1.3%p	1,831	+747	+353
<b>Third</b>	7.4%	+2.6%p	1.2%p	2,286	+876	+394
<b>Fourth</b>	7.9%	+2.5%p	1.1%p	2,941	+1,054	+444
<b>Fifth</b>	8.3%	+2.6%p	1.1%p	3,815	+1,352	+563

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 16.1 %.

Table 104 shows VAT payments in 2011 and in both reform scenarios broken down by income quintile. In the base scenario, VAT payments make up 7.2 % of expenditure for the lowest and 8.3 % for the highest income quintile. In absolute values, the richest households pay twice as much VAT as the poorest ones. Abolishing the reduced rates leads to homogenous increases as a proportion of expenditure across the income distribution: For all income quintiles VAT paid as a percentage of expenditure increases by about 2.6 percentage points. Compared to own VAT payments in 2011, poor households face a larger increase (41 % and 35 % for the first and fifth income quintile, respectively). In absolute terms, on the other hand, high income households have the highest increase in VAT payments. Scenario 2 also leads to a higher increase in VAT payments for low-income households as a proportion of expenditure. Both absolute and relative increases in scenario 2 correspond to about half of the increases in scenario 1. In both scenarios, the VAT rates structure remains progressive.

**Table 105: Netherlands – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without an active head<sup>23</sup>**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	7.8%	+2.4%p	+1.0%p	2,831	+994	+410
<b>Non-active</b>	7.3%	+2.5%p	+1.2%p	1,860	+721	+327

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 16.1 %.

<sup>23</sup> In the Eurostat database breakdowns of household consumption by number of active persons and households type do not exist for the Netherlands. This table is constructed using the information on the employment status of the households head.

Looking at Table 105 we can see that households with active members pay more in VAT than households without active members, both in absolute terms and as a fraction of expenditure, although the latter difference is rather small. Active households are affected more in both reform scenarios in absolute terms, although the increase in VAT as a proportion of expenditure is roughly the same in both scenarios.

## **18.2 VAT paid by non-household entities**

As discussed in the main report, in the Netherlands, scenario 1 leads to an overall increase in VAT liability of 18 % (corresponding to 1.4 % of GDP). For sectors exempt from VAT, this translates into an increase of 8 %, while for the sector “Others”, the increase is 7 %. Table 106 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of the Netherlands, these are, in order of (quantitative) importance: Recreational, cultural and sporting activities, Publishing, printing and reproduction of recorded media, Hotels and restaurants, Manufacture of food products and beverages and Manufacture of chemicals and chemical products. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.



**Table 106: Netherlands – scenario 1: main product composition, non-households**

Product	Recreational, cultural and sporting activities		Publishing, printing and reproduction of recorded media		Hotels and restaurants		Manufacture of food products and beverages		Manufacture of chemicals and chemical products		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	0	0%	14	1%	9	0%	0	0%	0	0%	14	1%	<b>38</b>
Real Estate Activities	0	0%	10	0%	13	0%	1	0%	0	0%	27	0%	<b>50</b>
Financial Intermediation	1	0%	90	3%	57	1%	1	0%	0	0%	18	0%	<b>167</b>
Public Admin and Defence; Compulsory Social Security	9	0%	87	1%	77	1%	25	0%	3	1%	80	1%	<b>282</b>
Education	4	0%	54	5%	9	1%	1	0%	2	3%	10	2%	<b>82</b>
Health and Social Work	4	0%	53	2%	64	2%	111	4%	47	20%	112	8%	<b>391</b>
Other Community, Social and Personal Services	60	10%	6	1%	6	1%	25	4%	1	2%	12	2%	<b>109</b>
Government final consumption	98	0%	0	0%	3	0%	0	0%	91	0%	118	0%	<b>310</b>
NPISH	185	100%	0	0%	0	0%	0	0%	0	0%	0	0%	<b>185</b>
<b>Total increase by product</b>	<b>361</b>		<b>314</b>		<b>239</b>		<b>164</b>		<b>145</b>		<b>391</b>		
<b>% increase in VAT liability by product</b>	<b>140%</b>		<b>156%</b>		<b>182%</b>		<b>149%</b>		<b>12%</b>		<b>90%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## 19 Austria

Austria has a standard VAT rate of 20 %, a reduced rate of 10 % and a parking rate of 12 %. The reduced rate of 10 % applies to foodstuffs (also in restaurants), rents, pharmaceutical and medical products, personal transport, agricultural products, books, newspapers and services provided by hotels and recreational or cultural facilities. The parking rate of 12 % applies to wine purchased directly from farmers.<sup>24</sup> Supplies exempted from VAT are listed in section 2.1 in the main report, actual rents are not exempted but are taxed at the reduced rate.

### 19.1 VAT paid by private households

**Table 107: Austria – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	11.0%	20.0%	16.8%
CP02	20.0%	20.0%	16.8%
CP03	20.0%	20.0%	16.8%
CP04	8.6%	12.0%	10.1%
CP05	20.0%	20.0%	16.8%
CP06	5.1%	12.7%	10.7%
CP07	19.5%	20.0%	16.8%
CP08	19.5%	19.5%	16.3%
CP09	13.0%	19.3%	16.2%
CP10	0.0%	0.0%	0.0%
CP11	13.1%	20.0%	16.8%
CP12	7.5%	8.8%	7.4%
<b>Average</b>	<b>12.8%</b>	<b>16.5%</b>	<b>13.9%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 16.8 %.

Taking all supplies that are taxed at a reduced rate or exempt from VAT into account, the average VAT rate for private households in Austria in 2011 is 12.8 %. Only a couple of entire categories of supplies are taxed at the standard rate: CP02, CP03 and CP05. In all other categories exemptions or the reduced rate lower the average VAT

<sup>24</sup> We do not incorporate this rate into our analysis.

rate below the standard rate. Abolishing the reduced rate (scenario 1) leads to an increase in the average VAT rate to 16.5 %. Now, also CP01, CP07 and CP11 are taxed entirely at the standard rate. We observe the highest increase in the average VAT rate in the category food and non-alcoholic beverages (CP01, +9 percentage points). Implementing a revenue neutral uniform VAT rate (scenario 2) leads to an increase of the average VAT rate faced by private households by one percentage point to 13.9 %.<sup>25</sup>

**Table 108: Austria – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP07	2.7%	972	CP07	2.7%	997
CP04	1.8%	645	CP04	2.4%	904
CP09	1.5%	528	CP01	2.2%	817
CP01	1.2%	448	CP09	2.1%	787
CP05	1.0%	366	CP11	1.0%	379
CP03	0.9%	311	CP05	1.0%	366
CP11	0.7%	248	CP03	0.8%	311
CP12	0.7%	236	CP12	0.7%	277
CP02	0.5%	165	CP02	0.4%	165
CP08	0.3%	117	CP06	0.4%	133
CP06	0.1%	54	CP08	0.3%	117
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>11.4%</b>	<b>4,089</b>	<b>Sum</b>	<b>14.2%</b>	<b>5,253</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

In 2011, CP07 “Transport” accounts for the biggest share in total VAT payments (2.7 % of average total expenditure or 24 % of average VAT payments). 51 % of the VAT payments pertaining to this category relate to CP072 “Operation of personal transport equipment”, 46 % to CP071 “Purchase of vehicles” and the remaining 3 % to CP073 “Transport services”. This category is important for VAT because expenditures in this category are relatively high, and the average VAT rate of 19.5 % is very close to the standard rate. With 1.8 % of total expenditure, CP04 “Housing, water, electricity, gas and other fuels” ranks second among the most important categories of supplies for

<sup>25</sup> As mentioned in the main report, this average VAT rate on the consumption of private households is 1.5 percentage points higher than the one obtained from the WIOD database (see section 2.2 in the main report).

VAT, followed by CP09 “Recreation and culture”. In the reform scenarios transport and housing rank first and second, CP01 “Food and non-alcoholic beverages” ranks third.

**Table 109: Austria – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	11.3%	+2.9%p	+0.9%p	3,324	+1,002	+310
<b>Second</b>	11.3%	+3.0%p	+1.0%p	3,183	+1,001	+331
<b>Third</b>	11.4%	+2.8%p	+0.8%p	3,850	+1,107	+314
<b>Fourth</b>	11.5%	+2.7%p	+0.7%p	4,449	+1,195	+292
<b>Fifth</b>	11.4%	+2.6%p	+0.6%p	5,646	+1,501	+357

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 16.8 %.

Table 111 shows VAT payments in 2011 and in both reform scenarios broken down by income quintile. Measured as a proportion of expenditure, VAT payments are almost equally distributed across the income distribution, 11.3 % of total expenditure for the poorest quintile and 11.4 % for the richest.<sup>26</sup> Abolishing the reduced rate leads to larger increases in VAT as a percentage of expenditure for the poorer quintiles, with the second quintile experiences the largest increase as a fraction of expenditure (+ 3 percentage points). In absolute terms, the increase is bigger for richer households, with VAT bill increases of about € 1,500 per year. Scenario 2 also leads to an increase in VAT payments for all quintiles. In absolute terms, the increase is biggest for the fifth quintile, followed by the second quintile. As a fraction of expenditure, the second quintile again faces the biggest increase.

Concerning the impact of the current VAT structure on households with and without active members, households with no active members pay less in VAT than households with active members (10.8 % versus 11.6 %). Abolishing the reduced rate decreases this difference, because non-active households face a higher increase of VAT payments as a fraction of total expenditure than active households. Scenario 2 also leads to higher absolute VAT payments for both household types. However, in absolute as well as in relative terms, the additional amount paid is higher for households without active members.

<sup>26</sup> The analysis based on micro data (section A.3 in the main report) paints a different picture. As mentioned in that section, we suspect that households are assigned to income quintiles differently in the aggregate data provided by Eurostat and in the micro data.

**Table 110 Austria – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	11.6%	+2.6%p	+0.7%p	5,131	+1,342	+306
<b>Non-active</b>	10.8%	+3.1%p	+1.1%p	2,815	+925	+326

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 16.8 %.

**Table 111 Austria – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Single</b>	11.4%	+3.1%p	1.1%p	2,642	+851	+292
<b>Single +</b>	11.5%	+2.9%p	0.9%p	3,938	+1,163	+347
<b>Multi</b>	11.5%	+2.5%p	0.5%p	4,843	+1,225	+254
<b>Multi +</b>	11.4%	+2.5%p	0.5%p	5,599	+1,402	+282

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 16.8 %.

“+” indicates a household with dependent children

Regarding the impact of the VAT rates structure on various household types, there are no big differences in VAT paid as a proportion of expenditure. In absolute terms, larger households pay more in VAT. Abolishing the reduced rate leads to higher VAT bills as a fraction of expenditure for single-adult households (with and without children) than for multi-adult households. In scenario 2 these household types even face the largest absolute increase in VAT payments, with single parents losing the most from this revenue neutral reform in absolute terms.

## 19.2 VAT paid by non-household entities

As discussed in the main report, in Austria, scenario 1 leads to an overall increase in VAT liability of 19 % (corresponding to 1.7 % of GDP). For sectors exempt from VAT, this translates into an increase of 13 % while for the sector “Others” the increase is 10 %. Table 112 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Austria, these are, in order of importance: Sewage and refuse disposal, sanitation and similar activities, Real estate activities, Manufacture of chemicals and chemical products, Recreational, cultural and

sporting activities and Publishing, printing and reproduction of recorded media. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 112: Austria – scenario 1: main product composition, non-households**

Product	Sewage and refuse disposal, sanitation and similar activities		Real estate activities		Manufacture of chemicals and chemical products		Recreational, cultural and sporting activities		Publishing, printing and reproduction of recorded media		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	0	0%	1	1%	0	0%	0	0%	1	3%	1	1%	3
Real Estate Activities	140	11%	68	4%	4	1%	0	0%	8	1%	27	2%	248
Financial Intermediation	21	2%	16	2%	2	1%	3	0%	31	6%	27	4%	99
Public Admin and Defence; Compulsory Social Security	7	1%	44	5%	3	1%	2	0%	15	3%	22	3%	93
Education	2	1%	10	3%	2	2%	0	0%	3	2%	17	8%	35
Health and Social Work	13	1%	18	2%	53	19%	0	0%	6	1%	52	8%	143
Other Community, Social and Personal Services	32	12%	6	2%	2	3%	27	6%	6	4%	8	3%	81
Government final consumption	17	0%	0	0	91	0%	92	0%	5	0%	102	0%	308
NPISH	0	0%	0	0%	0	0%	13	0%	0	0%	5	0%	18
<b>Total increase by product</b>	<b>233</b>		<b>164</b>		<b>156</b>		<b>138</b>		<b>76</b>		<b>261</b>		
<b>% increase in VAT liability by product</b>	<b>83%</b>		<b>99%</b>		<b>25%</b>		<b>134%</b>		<b>48%</b>		<b>66%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## 20 Poland

The Polish VAT system is characterised by a standard rate of 23 % and two reduced rates of 5 % and 8 %. The reduced rate of 5 % applies to bread and cereals, meat, fish and seafood, milk, cheese and eggs, oils and fats and books. The higher reduced rate of 8 % applies to the supply of fruit, vegetables, sugar, jam, honey, chocolate and confectionary, salt, spices, culinary herbs and condiments, coffee, tea and cocoa, fruit and vegetable juices, baby clothing, children's footwear, services for the maintenance and repair of dwellings, water, refuse and sewerage collection, firewood, pharmaceutical and other medical products, bicycles, passenger transport, cultural, recreational and sporting services, newspapers, canteens, accommodation and hairdressing. All supplies that are exempted from VAT in Poland are listed in section 2.1 in the main report.

### 20.1 VAT paid by private households

**Table 113: Poland – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	6.4%	23.0%	17.0%
CP02	23.0%	23.0%	17.0%
CP03	21.8%	23.0%	17.0%
CP04	9.7%	11.7%	8.6%
CP05	23.0%	23.0%	17.0%
CP06	6.2%	15.9%	11.7%
CP07	19.0%	23.0%	17.0%
CP08	22.7%	22.7%	16.8%
CP09	14.7%	22.8%	16.8%
CP10	0.0%	0.0%	0.0%
CP11	11.1%	23.0%	17.0%
CP12	15.6%	16.6%	12.3%
<b>Average</b>	<b>11.9%</b>	<b>18.2%</b>	<b>13.4%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 17.0 %.

Exchange rate of 4.120 Polish Zloty to 1 Euro.



Taking into account all deviations from the standard rate, the average VAT rate in Poland is 11.9 %. The Polish VAT regime is quite heterogeneous with a broad range of goods and services being taxed at one of the two reduced rates. Therefore, we observe quite a substantial change to the situation in 2011 in both scenarios. In scenario 1 the average VAT rate for private households increases to 18.2 %, with the largest changes in category CP01 (plus 17 percentage points) and CP11 (plus 12 percentage points). Scenario 2 introduces a new standard rate of 17.0 %. For private households this leads to an increase in the average VAT rate to 13.4 %.

**Table 114: Poland – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011	VAT payments		Scenario 1	VAT payments	
	COICOP (2-digit)	in %		in €	COICOP (2-digit)
CP04	2.8%	265	CP01	4.7%	462
CP07	1.5%	139	CP04	3.2%	319
CP01	1.4%	128	CP07	1.7%	168
CP05	0.9%	80	CP09	1.2%	118
CP09	0.8%	76	CP05	0.8%	80
CP08	0.8%	72	CP12	0.8%	77
CP12	0.8%	72	CP03	0.8%	74
CP03	0.8%	70	CP08	0.7%	72
CP02	0.5%	42	CP06	0.7%	71
CP06	0.3%	27	CP02	0.4%	42
CP11	0.2%	16	CP11	0.3%	32
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>10.6%</b>	<b>988</b>	<b>Sum</b>	<b>15.4%</b>	<b>1,516</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
Exchange rate of 4.120 Polish Zloty to 1 Euro.

Table 114 illustrates average VAT paid by households broken down by COICOP categories in 2011. Category CP04 “Housing, water, electricity, gas and other fuels” accounts for the largest share of VAT payments (27 % of total VAT payments), although the average VAT rate on this category is comparatively low (9.7 %) – this is because expenditures are high in this category, accounting for one third of all net expenditures. The composition of VAT payments changes considerably as a consequence of implementing scenarios 1 and 2, with only two categories ranked the same as in the 2011. After the abolition of the reduced rates, CP01 accounts for the largest share of the average VAT bill (30 %).

**Table 115: Poland – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	9.3%	+5.6%p	2.1%p	427	+301	112
<b>Second</b>	9.7%	+5.4%p	1.9%p	622	+408	139
<b>Third</b>	10.1%	+5.2%p	1.7%p	832	+504	155
<b>Fourth</b>	10.7%	+4.9%p	1.3%p	1,133	+610	155
<b>Fifth</b>	11.5%	+4.1%p	0.5%p	1,885	+796	97

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 17.0 %.

Exchange rate of 4.120 Polish Zloty to 1 Euro.

Table 115 shows average VAT payments in 2011 and in both reform scenarios broken down by income quintile. VAT payments as a share of total expenditure rise with income: the fifth quintile has the highest share (11.5 %), the first quintile the lowest (9.3 %).<sup>27</sup> VAT in absolute terms also increases with income, with the fifth quintile paying more than four times as much VAT as the first quintile. Scenario 1 decreases the gap in VAT payments as a proportion of total expenditure, as low income households face a larger increase than high income households. The same occurs in scenario 2, although with smaller effects. The VAT rates structure remains progressive, but to a much lesser extent than in 2011. The absolute increase in the average VAT bill is higher for high income households in scenario 1; in scenario 2, households in the third and fourth quintile face the highest increase.

**Table 116: Poland – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	10.8%	+4.8%p	+1.4%p	1,143	+596	+143
<b>Non-active</b>	9.7%	+5.2%p	+1.8%p	633	+403	+133

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 17.0 %.

Exchange rate of 4.120 Polish Zloty to 1 Euro.

<sup>27</sup> The Validation Exercise in the main text (section A.3) shows similar results for Poland in IFS et al. (2011), and they also conclude that the VAT system is progressive. The level of the VAT burden, though, is higher according to our results.

Households without active members pay less in VAT than households with active members, both in absolute terms and as a fraction of expenditure (Table 116). Again, our two reform scenarios produce considerable changes compared to 2011, with higher relative increases for non-active households and higher absolute increases for active households.

**Table 117: Poland – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	10.0%	+4.6%p	+1.3%p	588	+320	+83
Single +	10.6%	+4.8%p	+1.2%p	865	+462	+116
Multi	10.6%	+4.8%p	+1.3%p	1,034	+552	+138
Multi +	10.8%	+4.8%p	+1.2%p	1,226	+647	+158

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 17.0 %.

Exchange rate of 4.120 Polish Zloty to 1 Euro.

“+” indicates a household with dependent children

Table 117 summarises the effects on different types of households. As a proportion of total household expenditure, multi-adult households with dependent children face the highest VAT burden, single households without children the lowest. The increase in VAT as a proportion of expenditure is similar across all household types in both scenarios.

## 20.2 VAT paid by non-household entities

As discussed in the main report, in Poland scenario 1 leads to an overall increase in VAT liability of 35 % (corresponding to 3.3 % of GDP). For sectors exempt from VAT, this translates into an increase of 26 %, while for the sector “Others” the increase is 27 %. Table 118 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Poland, these are, in order of (quantitative) importance: Construction, Manufacture of chemicals and chemical products, Sewage and refuse disposal, sanitation and similar activities, Publishing, printing and reproduction of recorded media, Land transport and transport via pipelines. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 118: Poland – scenario 1: main product composition, non-households**

Product	Construction		Manufacture of chemicals and chemical products		Sewage and refuse disposal, sanitation and similar activities		Publishing, printing and reproduction of recorded media		Land transport; transport via pipelines		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	0	2%	0	0%	0	0%	0	1%	0	1%	0	20%	<b>1</b>
Real Estate Activities	411	11%	27	1%	153	4%	5	0%	20	1%	84	6%	<b>700</b>
Financial Intermediation	6	0%	8	1%	1	0%	82	5%	9	1%	28	26%	<b>134</b>
Public Admin and Defence; Compulsory Social Security	58	4%	13	1%	10	1%	16	1%	21	1%	44	10%	<b>162</b>
Education	11	2%	7	2%	1	0%	52	8%	10	2%	29	12%	<b>110</b>
Health and Social Work	20	2%	195	27%	7	1%	12	1%	8	1%	91	19%	<b>333</b>
Other Community, Social and Personal Services	29	3%	18	3%	30	3%	37	3%	13	1%	39	16%	<b>167</b>
Government final consumption	168	0%	191	0%	120	0%	14	0%	134	0%	188	23%	<b>816</b>
NPISH	0	0%	0	0%	0	0%	0	0%	0	0%	30	69%	<b>30</b>
<b>Total increase by product</b>	<b>702</b>		<b>460</b>		<b>322</b>		<b>219</b>		<b>214</b>		<b>534</b>		
<b>% increase in VAT liability by product</b>	<b>152%</b>		<b>99%</b>		<b>152%</b>		<b>166%</b>		<b>152%</b>		<b>46%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

“-“ indicates that the % increase in VAT liability by product is not-available for zero rated goods

## **21 Portugal**

The Portuguese VAT system consists of a standard rate of 23 %, reduced rates of 6 % and 13 % and a parking rate of 13 %. The lower reduced rate of 6 % applies to food (excluding oils and fats), non-alcoholic beverages (excluding tea, coffee and cocoa), services for the maintenance and repair of dwellings, water, refuse collection (if not provided by a public authority), sewerage collection (if provided by a public authority), electricity and gas (both only until the 1<sup>st</sup> of October), heat energy, prescribed pharmaceutical products, domestic passenger transport, cultural, recreational and sporting services, books, newspapers, other printed matter and stationary, and accommodation services. The higher reduced rate of 13 % applies to oils and fats, coffee, tea and cocoa, domestic heating and lightning oils, restaurants and canteens. The parking rate applies to wine, heating oil and diesel for agricultural uses and appliances, machinery and other equipment used for the collection and production of forms of alternative energy. In addition to the supplies listed in section 2.1 in the main report, Portugal grants exemptions from VAT to refuse collection services if provided by a public authority.

### **21.1 VAT paid by private households**

Taking into account all deviations from the standard rate, the average VAT rate faced by private households in Portugal is 9.9 %. Abolishing the reduced rates and the parking rate leads to a considerable increase in the average VAT rate to 15.3 %. Categories CP01, CP11 and CP09 are especially affected. Scenario 2 establishes a revenue neutral new standard rate of 17.2 %. The average VAT rate increases by 1.5 percentage points compared to 2011 for private households. Categories of goods and services formerly taxed at the standard rate (CP03, CP05) are now taxed at a lower rate than before, as are categories that were taxed just below the standard rate in 2011 (CP02, CP07, CP08).

**Table 119: Portugal – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	6.4%	23.0%	17.2%
CP02	20.7%	23.0%	17.2%
CP03	23.0%	23.0%	17.2%
CP04	2.3%	4.8%	3.6%
CP05	23.0%	23.0%	17.2%
CP06	9.6%	12.3%	9.2%
CP07	20.8%	23.0%	17.2%
CP08	22.9%	22.9%	17.1%
CP09	11.8%	19.9%	14.9%
CP10	0.0%	0.0%	0.0%
CP11	12.8%	23.0%	17.2%
CP12	10.7%	10.7%	8.0%
<b>Average</b>	<b>9.9%</b>	<b>15.3%</b>	<b>11.4%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 17.2 %.

**Table 120: Portugal – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP07	1.9%	385	CP01	3.2%	692
CP11	1.2%	253	CP11	2.1%	456
CP01	0.9%	192	CP07	2.0%	425
CP05	0.8%	161	CP04	1.2%	266
CP03	0.8%	154	CP09	0.9%	190
CP12	0.7%	142	CP05	0.8%	161
CP04	0.6%	127	CP06	0.7%	160
CP06	0.6%	125	CP03	0.7%	154
CP09	0.6%	113	CP12	0.7%	142
CP08	0.5%	106	CP08	0.5%	106
CP02	0.3%	69	CP02	0.4%	77
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>9.0%</b>	<b>1,827</b>	<b>Sum</b>	<b>13.2%</b>	<b>2,829</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

Table 120 illustrates average VAT paid by households broken down by COICOP categories in 2011 and in scenario 1. In 2011, the category CP07 “Transport” accounts for the biggest share in VAT payments (21 % of average VAT payments; the most important sub-category is operation of personal transport equipment, followed by the purchase of vehicles). Category CP11 “Restaurants and hotels” ranks second (14 % of average VAT payments). Scenario 1 changes this ranking. Transport, ranked third, now accounts for 15 % of VAT paid, while food and non-alcoholic beverages now rank first, accounting for 24 % of all VAT payments.

**Table 121: Portugal – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
First	8.3%	+5.3%p	2.2%p	691	+510	+207
Second	8.4%	+4.8%p	1.8%p	1,145	+751	+273
Third	8.8%	+4.5%p	1.5%p	1,592	+931	+295
Fourth	9.0%	+4.2%p	1.2%p	2,139	+1,151	+322
Fifth	9.4%	+3.8%p	0.8%p	3,561	+1,665	+347

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 17.2 %.

Table 121 shows VAT payments in 2011 and in both reform scenarios broken down by income quintile. In the base scenario, VAT payments account for 8.3 % of expenditure for the lowest income quintile. This share increases with the income, for households in the fifth quintile VAT payments make up 9.4 % of total expenditure. Scenario 1 considerably increases VAT payments for all income quintiles. The effects on low income households are much stronger, though, and the system changes from progressive to proportional. Scenario 2 also increases VAT payments for all income quintiles. As in scenario 1, the poorest 20 % of households face the highest VAT burden as a proportion of expenditure. In absolute terms, however, the increase in VAT in both reform scenarios increases with income.

**Table 122: Portugal – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Active	9.4%	+4.2%p	+1.3%p	2,320	+1,217	+325
Non-active	8.2%	+4.6%p	+1.7%p	1,053	+678	+241

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 17.2 %.

Concerning the impact of the current VAT rates structure on households with and without active members, households without active members pay less VAT as a fraction of expenditures. This pattern remains unaltered in scenario 1, even though non-active households face a slightly stronger increase in VAT payments as a proportion of expenditure. Scenario 2 produces the same result, although less pronounced.

**Table 123: Portugal – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	8.3%	+4.0%p	1.2%p	931	+516	+151
Single +	8.5%	+3.8%p	1.0%p	1,761	+890	+221
Multi	9.4%	+4.2%p	1.2%p	1,894	+994	+266
Multi +	9.4%	+4.1%p	1.1%p	2,419	+1,228	+308

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 17.1 %.

“+” indicates a household with dependent children

Table 123 summarises the effects of the reform scenarios on different types of households. As a proportion of expenditure, single households with and without children pay less VAT than multi-adult households. Scenarios 1 and 2 leave this pattern unchanged, because the increase in average VAT payments as a proportion of expenditure is similar across all groups. In absolute terms, larger households are more affected than single households in both scenarios 1 and 2.

## 21.2 VAT paid by non-household entities

As discussed in the main report, in Portugal, scenario 1 leads to an overall increase in VAT liability of 34% (corresponding to 3.3 % of GDP). For sectors exempt from VAT,



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this translates into an increase of 27 %, while the increase for the sector “Others” is 26%. Table 124 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Portugal, these are: Construction, Electricity, gas, steam and hot water supply, Recreational, cultural and sporting activities, Manufacture of chemicals and chemical products, and Manufacture of food products and beverages. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 124: Portugal – scenario 1: main product composition, non-households**

Product	Construction		Electricity, gas, steam and hot water supply		Recreational, cultural and sporting activities		Manufacture of chemicals and chemical products		Manufacture of food products and beverages		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	2	1%	1	0%	1	2%	0	0%	0	0%	2	2%	5
Real Estate Activities	95	31%	7	2%	0	0%	0	0%	0	0%	5	4%	107
Financial Intermediation	9	1%	9	1%	1	0%	0	0%	0	0%	24	4%	42
Public Admin and Defence; Compulsory Social Security	17	1%	39	3%	3	1%	1	1%	9	1%	70	8%	139
Education	5	1%	15	4%	0	0%	0	1%	3	1%	19	7%	43
Health and Social Work	4	0%	17	1%	0	0%	35	28%	60	6%	81	7%	198
Other Community, Social and Personal Services	17	2%	26	3%	33	10%	2	3%	0	0%	49	9%	128
Other sectors	222	0%	7	0%	0	0%	2	0%	0	0%	5	0%	236
Government final consumption	0	0%	0	0%	12	0%	40	100%	0	0%	16	0%	68
NPISH	0	0%	0	0%	39	100%	1	0%	0	0%	0	0%	40
<b>Total increase by product</b>	<b>371</b>		<b>121</b>		<b>89</b>		<b>82</b>		<b>72</b>		<b>271</b>		
<b>% increase in VAT liability by product</b>	<b>230%</b>		<b>230%</b>		<b>74%</b>		<b>16%</b>		<b>137%</b>		<b>136%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## 22 Romania

The VAT system in Romania consists of a standard rate of 24 % and reduced rates of 5 % and 9 %. The reduced rate of 5 % applies only to social housing. The reduced rate of 9 % covers the supply of pharmaceutical products (also for animals), services provided by amusement parks, cultural services (if not carried out by a non-profit seeking institution), books, newspapers and accommodation services. Romania grants VAT exemptions to the supply of cultural, recreational and sporting services (if they are provided by non-profit seeking institutions), veterinary services and all supplies listed in section 2.1 in the main report, except for actual rents, which are taxed at the standard rate.

### 22.1 VAT paid by private households

**Table 125: Romania – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	24.0%	24.0%	22.9%
CP02	24.0%	24.0%	22.9%
CP03	24.0%	24.0%	22.9%
CP04	24.0%	24.0%	22.9%
CP05	24.0%	24.0%	22.9%
CP06	7.5%	19.3%	18.5%
CP07	23.9%	24.0%	22.9%
CP08	24.0%	24.0%	22.9%
CP09	11.2%	15.5%	14.8%
CP10	0.0%	0.0%	0.0%
CP11	18.2%	24.0%	22.9%
CP12	20.3%	20.3%	19.4%
<b>Average</b>	<b>21.7%</b>	<b>22.8%</b>	<b>21.8%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 22.9 %.

Exchange rate of 4.212 Romanian Lei to 1 Euro.

Taking into account all deviations from the standard rate, the average VAT rate faced by private households in Romania is 21.7 %.<sup>28</sup> The Romanian VAT system is quite homogenous with very few goods and services taxed at the reduced rates. Therefore, we observe only small changes to the 2011 status quo in scenario 1 and scenario 2.

**Table 126: Romania – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011	VAT payments		Scenario 1	VAT payments	
	COICOP (2-digit)	in %		in €	COICOP (2-digit)
CP01	7.2%	343	CP01	7.1%	343
CP04	2.9%	140	CP04	2.9%	140
CP08	2.1%	99	CP08	2.1%	99
CP03	1.2%	57	CP03	1.2%	57
CP02	1.2%	56	CP02	1.2%	56
CP12	0.8%	38	CP06	1.1%	54
CP07	0.7%	34	CP12	0.8%	38
CP05	0.7%	32	CP09	0.8%	37
CP09	0.6%	27	CP07	0.7%	34
CP06	0.4%	21	CP05	0.7%	32
CP11	0.1%	5	CP11	0.1%	6
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>17.8%</b>	<b>853</b>	<b>Sum</b>	<b>18.6%</b>	<b>898</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
Exchange rate of 4.212 Romanian Lei to 1 Euro.

Table 126 illustrates average VAT payments by households broken down by COICOP categories in 2011. Category CP01 “Food and non-alcoholic beverages” makes up the largest share of VAT payments, 40 % of all VAT payments of private households. The structures of VAT payments changes only marginally in scenarios 1 and 2, because they cause no major changes in the VAT regime.

Table 127 shows average VAT payments in 2011 and in both reform scenarios broken down by income quintile. VAT payments as a share of total expenditure are roughly the

<sup>28</sup> This average rate on household consumption deviates significantly from the numbers stated at the section 2.2 in the main report. This is because in contrast to NA and WIOD data, HBS data for Romania do not contain information on imputed rents. Therefore, NA and WIOD data contain a higher share of exempt goods, which is why they suggest a lower average VAT rate in all scenarios. The results obtained from the WIOD database also show a different picture for scenario 2: VAT payments decrease for private households.

same for all quintiles – the first quintile has the highest share in VAT payments (18.1 %), the fifth quintile the lowest (17.7 %). Absolute VAT payments increase with income, with the fifth quintile paying more than three times as much VAT as the first quintile. Abolishing the reduced rates (scenario 1) has only small effects on the VAT bills of households, as the categories taxed at the reduced rates account for only a small share of total household expenditure. As the average VAT rate in scenario 2 is almost the same as the average VAT rate in 2011, there is almost no change.

**Table 127: Romania – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	18.1%	+0.6%p	-0.1%p	441	+19	-2
<b>Second</b>	18.0%	+0.7%p	0.0%p	611	+31	1
<b>Third</b>	17.9%	+0.8%p	0.1%p	777	+43	5
<b>Fourth</b>	17.8%	+0.8%p	0.1%p	983	+54	7
<b>Fifth</b>	17.7%	+0.8%p	0.1%p	1,452	+77	7

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 22.9 %.

Exchange rate of 4.212 Romanian Lei to 1 Euro.

**Table 128: Romania – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	18.0%	+0.6%p	-0.3%p	1,009	+39	-21
<b>Non-active</b>	17.1%	+1.5%p	-0.1%p	516	+55	-4

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 22.9 %.

Exchange rate of 4.212 Romanian Lei to 1 Euro.

Households without active members pay less in VAT than households with active members, both in absolute and relative terms (see Table 128). We see that in in scenario 1, VAT as a fraction of expenditures increases more for households without active members, and both types of households have the same VAT bill in proportion to expenditure in scenario 1.

Table 129 summarises the effects on different types of households. As a proportion of total household expenditure, multi-adult households with dependent children have the highest VAT burden (18.1 %), single households without children the lowest (17.5 %). Again, the changes due to the reform scenarios are not large, but it can be seen that formerly somewhat advantaged single households face a higher proportional increase than the other household types. Scenario 1 results in all household types paying the same share of VAT as a percentage of expenditure, and so does scenario 2.

**Table 129: Romania – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	17.5%	+1.1%p	+0.4%p	415	+33	+12
Single +	17.9%	+0.6%p	-0.1%p	718	+28	-6
Multi	17.7%	+0.9%p	+0.2%p	869	+53	+11
Multi +	18.1%	+0.6%p	-0.1%p	1,083	+42	-10

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 22.9 %.

Exchange rate of 4.212 Romanian Lei to 1 Euro.

“+” indicates a household with dependent children

## 22.2 VAT paid by non-household entities

As discussed in the main report, in Romania, scenario 1 leads to a modest overall increase in VAT liability of 5 % (corresponding to 0.8 % of GDP). For sectors exempt from VAT, this translates into an increase of 12%, while for the sector “Others” increases are 3 %. Table 130 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Romania, these are, in order of (quantitative) importance: Sewage and refuse disposal, sanitation and similar activities, Manufacture of chemicals and chemical products, Publishing, printing and reproduction of recorded media, Post and telecommunications and Hotels and restaurants. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 130: Romania – scenario 1: main product composition, non-households**

Product	Sewage and refuse disposal, sanitation and similar activities		Manufacture of chemicals and chemical products		Publishing, printing and reproduction of recorded media		Post and telecommunications		Hotels and restaurants		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	1	5%	0	1%	0	0%	6	45%	0	1%	0	1%	9
Real Estate Activities	9	3%	24	6%	1	0%	12	6%	1	0%	0	0%	46
Financial Intermediation	13	11%	6	5%	4	1%	9	13%	6	6%	0	0%	38
Public Admin and Defence; Compulsory Social Security	2	2%	5	4%	10	3%	2	4%	5	6%	0	0%	25
Education	3	5%	3	3%	26	10%	2	5%	3	6%	0	0%	37
Health and Social Work	6	2%	112	38%	6	1%	5	3%	9	4%	1	2%	139
Government final consumption	83	31%	0	0%	1	0%	1	1%	0	0%	0	0%	85
NPISH	95	100%	0	0%	0	0%	0	0%	0	0%	0	0%	95
<b>Total increase by product</b>	<b>213</b>		<b>150</b>		<b>48</b>		<b>38</b>		<b>24</b>		<b>2</b>		
<b>% increase in VAT liability by product</b>	<b>37%</b>		<b>42%</b>		<b>134%</b>		<b>21%</b>		<b>31%</b>		<b>9%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## **23 Slovenia**

The VAT regime in Slovenia consists of a standard rate of 20 % and a reduced rate of 8.5 %. The reduced rate applies to the supply of food (including pet food) and non-alcoholic beverages, clothing materials, mending and alteration of clothing, repair and hire of footwear, services for the maintenance and repair of dwellings, water, refuse and sewerage collection, domestic and household services, pharmaceutical products (including veterinary medicine), domestic passenger transport, plants and flowers, cultural, recreational and sporting services (if provided by a non-profit organization), books, newspapers and other printed matter, accommodation and hairdressing. In addition to the supplies listed in section 2.1 in the main report, Slovenia also grants exemptions to the supply of cultural, recreational and sporting services, if they are provided by a non-profit organization.

### **23.1 VAT paid by private households**

Taking into account all deviations from the standard rate, private households face an average VAT rate of 11.7 %. The VAT regime in Slovenia is rather heterogeneous, with a broad range of goods and services taxed at the reduced rate. Therefore, we observe a substantial change in VAT payments in scenario 1; the average VAT rate increases to 14.8 %. The categories most affected by this increase are CP01 (+ 11.5 percentage points) and CP11 (+ 9.1 percentage points). Scenario 2, which introduces a new uniform, revenue neutral standard VAT rate leads to a small increase in the average VAT rate on private households' consumption as compared to 2011 (12.1 %).



**Table 131: Slovenia – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	8.5%	20.0%	16.3%
CP02	20.0%	20.0%	16.3%
CP03	19.8%	20.0%	16.3%
CP04	6.6%	7.7%	6.3%
CP05	19.8%	20.0%	16.3%
CP06	7.0%	10.7%	8.7%
CP07	19.3%	20.0%	16.3%
CP08	19.8%	19.8%	16.1%
CP09	12.9%	16.0%	12.8%
CP10	0.0%	0.0%	0.0%
CP11	10.9%	20.0%	16.3%
CP12	5.8%	6.5%	5.3%
<b>Average</b>	<b>11.7%</b>	<b>14.8%</b>	<b>12.1%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 16.3 %.

**Table 132: Slovenia – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP07	2.5%	581	CP01	3.0%	713
CP04	1.5%	342	CP07	2.5%	601
CP01	1.3%	303	CP04	1.7%	399
CP03	1.1%	262	CP03	1.1%	265
CP05	1.0%	232	CP09	1.0%	248
CP09	0.9%	200	CP05	1.0%	234
CP08	0.6%	142	CP11	0.8%	194
CP12	0.6%	129	CP12	0.6%	145
CP11	0.5%	106	CP08	0.6%	142
CP02	0.4%	103	CP02	0.4%	103
CP06	0.1%	24	CP06	0.2%	37
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>10.5%</b>	<b>2,426</b>	<b>Sum</b>	<b>12.9%</b>	<b>3,083</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

Table 132 illustrates average VAT payments by households broken down by COICOP categories in 2011. Category CP07 “Transport” makes up the largest share of VAT payments (24 % of total VAT payments). The most important sub-categories within this category are the purchase of vehicles (50 % of VAT payments relating to CP07), followed by expenditures on the operation of vehicles (48 %). The composition of VAT payments changes considerably following scenarios 1 and 2, with only half of the categories ranked the same as in the 2011: Following the abolition of the reduced rate, category CP01 “Food and non-alcoholic beverages” accounts for the largest share (23 %) of total VAT payments.

**Table 133: Slovenia – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	9.0%	+3.0%p	+1.0%p	938	+351	+110
<b>Second</b>	10.2%	+2.7%p	+0.5%p	1,823	+546	+105
<b>Third</b>	10.3%	+2.6%p	+0.4%p	2,295	+658	+109
<b>Fourth</b>	10.6%	+2.4%p	+0.2%p	2,985	+774	+75
<b>Fifth</b>	11.0%	+2.3%p	+0.1%p	4,100	+968	+26

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 16.3 %.

Table 133 shows average VAT payments in 2011 and in both reform scenarios broken down by income quintile. VAT payments as a share of total expenditure increase with income. The fifth quintile has the highest and the first quintile the lowest VAT payments as a share of expenditure, at 11 % and 9 %, respectively. The absolute amount paid in VAT also increases with income, with the fifth quintile paying more than four times as much on VAT as the first quintile. Abolishing the reduced rates (scenario 1) has a substantial effect on the financial burden of households, as the categories taxed at the reduced rate form a large part of total household expenditure. In relative terms low income households face a higher increase (37 % in the first compared to 24 % in the fifth quintile). The structure of the VAT system remains progressive, although to a slightly lesser extent. In scenario 2, the VAT bill of lower income households increases by more than that of high income households, both as a fraction of income and in absolute terms, but again, the VAT system remains progressive.

**Table 134: Slovenia – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Active	10.7%	+2.4%p	+0.3%p	2,924	+759	+68
Non-active	9.3%	+2.8%p	+0.8%p	1,358	+474	+132

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 16.3 %.

Households without active members pay less VAT than households with active members, both in absolute terms and as a fraction of expenditures (Table 134). Again, we can observe considerable changes in reform scenario 1. As a fraction of expenditure, the changes are slightly higher for non-active households.

Unfortunately, there is no data available for Slovenia for different household types.

### **23.2 VAT paid by non-household entities**

As discussed in the main report, scenario 1 leads to an overall increase in VAT liability of 23 % (corresponding to 2.1 % of GDP). For sectors exempt from VAT, this translates into an increase of 19 %, while for the sector “Others”, the increase is 17 %. Table 135 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Slovenia, these are: Construction, Recreational, cultural and sporting activities, Manufacture of food products and beverages, Manufacture of chemicals and chemical products, and Publishing, printing and reproduction of recorded media. The table displays the change in the liability pertaining to each good or service, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 135: Slovenia – scenario 1: main product composition, non-households**

Product	Construction		Recreational, cultural and sporting activities		Manufacture of food products and beverages		Manufacture of chemicals and chemical products		Publishing, printing and reproduction of recorded media		Other products		Total increase in 1,000 €
	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	Increase in 1,000 €	Share in VAT by sector	
Post and Telecommunications	130	3%	30	1%	7	0%	0	0%	7	0%	92	58%	<b>266</b>
Real Estate Activities	18,869	21%	465	1%	3,629	4%	141	2%	884	1%	2,115	9%	<b>26,104</b>
Financial Intermediation	660	1%	1,007	1%	192	0%	12	0%	860	1%	1,561	16%	<b>4,293</b>
Public Admin and Defence; Compulsory Social Security	11,957	8%	258	0%	951	1%	238	2%	4,650	4%	3,100	16%	<b>21,154</b>
Education	1,655	2%	1,126	2%	5,338	8%	226	3%	1,971	3%	4,162	15%	<b>14,479</b>
Health and Social Work	1,958	1%	1,142	1%	5,155	4%	5,172	39%	872	1%	8,404	19%	<b>22,703</b>
Other Community, Social and Personal Services	845	2%	3,324	9%	540	1%	47	1%	710	2%	1,817	14%	<b>7,283</b>
Government final consumption	0	0%	18,309	0%	0	0%	5,730	0%	29	0%	5,918	0%	<b>29,987</b>
NPISH	0	0%	4,799	100%	0	0%	0	0%	27	0%	54	0%	<b>4,880</b>
<b>Total increase by product</b>	<b>36,074</b>		<b>30,462</b>		<b>15,812</b>		<b>11,566</b>		<b>10,010</b>		<b>27,225</b>		
<b>% increase in VAT liability by product</b>	<b>113%</b>		<b>114%</b>		<b>113%</b>		<b>11%</b>		<b>97%</b>		<b>29%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## 24 Slovakia

The VAT system in Slovakia consists of a standard rate of 20 % and a reduced rate of 10 %. The reduced rate of 10 % applies to the supply of pharmaceutical and other medical products, therapeutic appliances and equipment, and books and other printed matter (newspapers are subject to the standard rate). In addition to the supplies listed in section 2.1 in the main report, cultural services (if provided by a non-profit organization) and recreational and sporting services are exempt from VAT.

### 24.1 VAT paid by private households

**Table 136: Slovakia – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	20.0%	20.0%	19.8%
CP02	20.0%	20.0%	19.8%
CP03	20.0%	20.0%	19.8%
CP04	12.0%	12.0%	11.9%
CP05	20.0%	20.0%	19.8%
CP06	7.3%	14.6%	14.5%
CP07	19.2%	20.0%	19.8%
CP08	19.5%	19.5%	19.3%
CP09	15.0%	15.6%	15.4%
CP10	0.0%	0.0%	0.0%
CP11	20.0%	20.0%	19.8%
CP12	12.1%	12.1%	12.0%
<b>Average</b>	<b>15.8%</b>	<b>16.2%</b>	<b>16.0%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 19.8 %.

Taking into account all deviations from the standard rate, the average VAT rate for private households is 15.8 %. The VAT regime in Slovakia is very homogenous. Therefore, scenario 1 causes only marginal changes to the 2011 status quo. The introduction of the new uniform standard rate in scenario 2 (19.8 %) barely changes the average VAT rate for private households compared to 2011.

**Table 137: Slovakia – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP01	3.9%	459	CP01	3.9%	459
CP04	3.2%	376	CP04	3.2%	376
CP07	1.2%	141	CP07	1.3%	147
CP03	0.9%	102	CP09	0.9%	104
CP09	0.9%	100	CP03	0.9%	102
CP05	0.8%	92	CP05	0.8%	92
CP12	0.8%	89	CP12	0.8%	89
CP08	0.7%	83	CP08	0.7%	83
CP11	0.6%	69	CP11	0.6%	69
CP02	0.4%	52	CP06	0.5%	54
CP06	0.2%	27	CP02	0.4%	52
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>13.7%</b>	<b>1,591</b>	<b>Sum</b>	<b>13.9%</b>	<b>1,627</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

Table 137 illustrates average VAT paid by households broken down by COICOP categories in 2011. Category CP01 “Food and non-alcoholic beverages” accounts for the biggest share of VAT payments (29 %), followed by CP04 (24 %) and CP07 (9 %). The structure of VAT payments remains the same for scenarios 1 and 2, as they hardly change the existing VAT structure.

**Table 138: Slovakia – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
First	13.8%	+0.3%p	+0.2%p	1,028	+26	+16
Second	13.8%	+0.3%p	+0.2%p	1,292	+33	+19
Third	13.6%	+0.3%p	+0.2%p	1,510	+36	+21
Fourth	13.6%	+0.3%p	+0.1%p	1,717	+38	+20
Fifth	13.7%	+0.2%p	+0.1%p	2,401	+48	+24

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 19.8 %.

Table 138 shows VAT payments in 2011 and in both reform scenarios broken down by income quintile. VAT payments as a share of total expenditure is roughly the same for

all income quintiles (ranging from 13.8 % for the first to 13.6 % for the fourth quintile). VAT payments in absolute terms increase with income, with the fifth quintile paying more than twice as much VAT as the first quintile. Abolishing the reduced rate (scenario 1) and introducing a budget neutral uniform VAT rate (scenario 2) both have negligible effects on the financial burden of households, as the categories taxed at the reduced rate only account for a small share of total household expenditure and the budget neutral VAT rate is only marginally different from the existing standard rate.

**Table 139: Slovakia – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Active	13.8%	+0.2%p	+0.1%p	1,711	+33	+16
Non-active	13.3%	+0.4%p	+0.3%p	1,029	+35	+24

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 19.8 %.

From Table 139, we can see that households without active members pay less in VAT than households with active members, both in absolute terms and as a fraction of expenditure. Again, we do not observe any significant changes compared to the status quo in 2011 in our two reform scenarios.

**Table 140: Slovakia – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	12.8%	+0.4%p	0.2%p	815	+26	17
Single +	13.7%	+0.2%p	0.1%p	1,187	+20	8
Multi	13.7%	+0.3%p	0.2%p	1,732	+43	26
Multi +	13.9%	+0.2%p	0.1%p	1,986	+37	17

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 19.8 %.

“+” indicates a household with dependent children

Table 140 summarises the effects on different types of households. As a proportion of household expenditure, VAT payments are highest for multi-adult households with children (13.9 %) and lowest for single households without children (12.8 %). This pattern remains unchanged in the reform scenarios.

## **24.2 VAT paid by non-household entities**

As discussed in the main report, scenario 1 leads to a very modest overall increase in VAT liability of 1 % (corresponding to 0.1 % of GDP). For sectors exempt from VAT, this translates into an increase of 1 %, while the sector “Others” face almost no increase. Table 141 shows the four categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Slovakia, these are: Publishing, printing and reproduction of recorded media, Post and telecommunications, Manufacture of medical, precision and optical instruments, watches and clocks and Manufacture of other non-metallic mineral products. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.



Table 141: Slovakia – scenario 1: main product composition, non-households

Product	Publishing, printing and reproduction of recorded media		Post and tele-communications		Manufacture of medical, precision and optical instruments, watches and clocks		Manufacture of other non -metallic mineral products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	0	0%	0	50%	0	0%	0	0%	<b>0</b>
Real Estate Activities	0	0%	0	1%	0	0%	1	3%	<b>1</b>
Financial Intermediation	2	2%	1	12%	0	0%	0	0%	<b>3</b>
Public Admin and Defence; Compulsory Social Security	2	1%	2	7%	0	0%	0	0%	<b>4</b>
Education	1	2%	0	3%	0	0%	0	0%	<b>2</b>
Health and Social Work	0	0%	0	2%	0	4%	0	0%	<b>1</b>
Other Community, Social and Personal Services	2	2%	0	6%	0	0%	0	0%	<b>2</b>
Government final consumption	0	0%	0	0%	1	0%	0	0%	<b>1</b>
<b>Total increase by product</b>	<b>8</b>		<b>4</b>		<b>2</b>		<b>1</b>		
<b>% increase in VAT liability by product</b>	<b>83%</b>		<b>5%</b>		<b>5%</b>		<b>24%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## 25 Finland

The Finnish VAT system consists of a standard rate of 23 %, reduced rates of 9 % and 13 %, and a zero rate. The zero rate applies to printing services for membership publications of non-profit making organisations (not considered in this analysis). The lower reduced rate of 9 % applies to pharmaceutical products, passenger transport, cultural, recreational and sporting services, books and accommodation services. The reduced rate of 13 % applies to the supply of food and non-alcoholic beverages, and restaurant and canteen services. A list of exempt supplies can be found in section 2.1 in the main report.

### 25.1 VAT paid by private households

**Table 142: Finland – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	13.0%	23.0%	20.2%
CP02	23.0%	23.0%	20.2%
CP03	23.0%	23.0%	20.2%
CP04	2.9%	2.9%	2.6%
CP05	23.0%	23.0%	20.2%
CP06	6.5%	11.9%	10.5%
CP07	21.2%	23.0%	20.2%
CP08	22.1%	22.1%	19.4%
CP09	15.2%	21.3%	18.7%
CP10	0.0%	0.0%	0.0%
CP11	12.5%	23.0%	20.2%
CP12	15.4%	15.4%	13.5%
<b>Average</b>	<b>12.3%</b>	<b>15.1%</b>	<b>13.3%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 20.2 %.

Taking into account all deviations from the standard rate, the average VAT rate for private households in Finland is 12.3 %. The Finnish VAT regime is quite heterogeneous, taxing numerous goods and services at one of the two reduced rates. Therefore, scenario 1 triggers quite substantial changes to the 2011 status quo; the average VAT rate increases by almost 3 percentage points. Scenario 2, introducing a

new, uniform standard rate of 20.2 %, leads to a higher average VAT rate of 13.3 % for households.

**Table 143: Finland – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011	VAT payments		Scenario 1	VAT payments	
	COICOP (2-digit)	in %		in €	COICOP (2-digit)
CP07	2.4%	906	CP07	2.6%	982
CP12	1.6%	616	CP01	2.5%	974
CP01	1.5%	551	CP09	1.9%	748
CP09	1.4%	533	CP12	1.6%	616
CP05	0.9%	354	CP05	0.9%	354
CP04	0.8%	309	CP04	0.8%	309
CP03	0.7%	273	CP11	0.8%	303
CP11	0.4%	165	CP03	0.7%	273
CP02	0.4%	160	CP02	0.4%	160
CP08	0.4%	152	CP06	0.4%	159
CP06	0.2%	86	CP08	0.4%	152
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>11.0%</b>	<b>4,105</b>	<b>Sum</b>	<b>13.1%</b>	<b>5,032</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

Table 143 shows average VAT paid by households broken down by COICOP categories in 2011. Category CP07 “Transport” accounts for the largest share of VAT payments (22 % of total VAT payments), followed by CP12 “Miscellaneous goods and services” (15 %) and CP01 “Food and non-alcoholic beverages” (13 %). The composition of VAT payments changes considerably in scenarios 1 and 2, with only five categories ranked the same as in 2011. However, in both reform scenarios, CP07 continues to make up the biggest share of VAT payments, although the difference to CP01 is very small.

**Table 144: Finland – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	9.8%	+2.4%p	+1.1%p	1,980	+559	+250
<b>Second</b>	10.4%	+2.3%p	+0.9%p	2,966	+737	+286
<b>Third</b>	10.8%	+2.2%p	+0.8%p	3,896	+893	+310
<b>Fourth</b>	11.1%	+2.1%p	+0.7%p	4,892	+1,073	+347
<b>Fifth</b>	11.6%	+2.0%p	+0.6%p	6,784	+1,365	+373

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 20.2 %.

Table 144 shows VAT payments in 2011 and in both reform scenarios broken down by income quintile. VAT payments as a share of total expenditure increase with income. The fifth quintile has the highest share of VAT payments (11.6 %) and the first quintile the lowest (9.8 %). The absolute amount paid in VAT increases with income, with the fifth quintile paying more than 3 times as much VAT as the first quintile. Abolishing the reduced rates (scenario 1) has substantial effects on the financial burden of households, as the categories taxed at reduced rates account for a large part of total household expenditure. As a fraction of total expenditure, VAT bills of low income households increase more than those of high income households. But because of the exempt goods and services, low income households continue to face a lower VAT burden as a proportion of expenditures than richer households. In absolute values, richer households face a higher increase in VAT payments. Scenario 2 also has a negative impact on all income groups, but to a lesser extent than scenario 1. In both reform scenarios the system remains progressive.

**Table 145 Finland – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	11.8%	+2.1%p	+0.7%p	6,071	+1,243	+353
<b>Non-active</b>	9.5%	+2.3%p	+1.0%p	2,365	+657	+289

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 20.2 %.

Households without active members pay less in VAT than households with active members, both as a proportion of expenditure and in absolute terms (Table 145). Again,

our two reform scenarios produce considerable changes as compared to 2011. As a fraction of expenditure, the increase in VAT bills is higher for non-active households, while in absolute terms active households face a higher increase.

**Table 146 Finland – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	9.7%	+2.2%p	+0.9%p	2,135	+544	+217
Single +	10.0%	+2.2%p	+0.9%p	3,367	+862	+347
Multi	11.4%	+2.1%p	+0.7%p	5,072	+1,084	+334
Multi +	12.1%	+2.0%p	+0.5%p	7,841	+1,485	+349

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 20.2 %.

“+” indicates a household with dependent children

Table 146 summarises the effects on different types of households. As a proportion of expenditure, single households without children face the lowest VAT burden (9.7 %), multi-adult households with children the highest (12.1 %). The same holds for VAT payments in absolute terms. Both scenario 1 and scenario 2 keep this pattern unchanged.

## 25.2 VAT paid by non-household entities

As discussed in the main report, scenario 1 leads to an overall increase in VAT liability of 14 % (corresponding to 1.4 % of GDP). For sectors exempt from VAT, this translates into an increase of 8 %, while for the sector “Others”, the increase is 6 %. Table 147 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Finland, these are, in order of (quantitative) importance: Manufacture of chemicals and chemical products, Recreational, cultural and sporting activities, Hotels and restaurants, Land transport, transport via pipelines and Manufacture of food products and beverages. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 147: Finland – scenario 1: main product composition, non-households**

Product	Manufacture of chemicals and chemical products		Recreational, cultural and sporting activities		Hotels and restaurants		Land transport; transport via pipelines		Manufacture of food products and beverages		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Real Estate Activities	0	0%	1	0%	3	0%	2	0%	3	0%	1	0%	<b>12</b>
Financial Intermediation	0	0%	1	0%	12	4%	8	1%	5	2%	2	1%	<b>28</b>
Public Admin and Defence; Compulsory Social Security	3	1%	1	0%	19	2%	19	1%	24	5%	16	3%	<b>82</b>
Education	2	1%	4	2%	18	8%	17	4%	9	6%	9	8%	<b>59</b>
Health and Social Work	62	18%	1	0%	46	8%	35	3%	22	6%	12	3%	<b>179</b>
Other Community, Social and Personal Services	2	2%	17	8%	9	4%	11	3%	4	3%	5	5%	<b>49</b>
Government final consumption	68	21%	74	13%	0	0%	5	0%	0	0%	1	0%	<b>148</b>
NPISH	0	0%	26	0%	0	0%	0	0%	0	0%	0	0%	<b>26</b>
<b>Total increase by product</b>	<b>138</b>		<b>127</b>		<b>106</b>		<b>97</b>		<b>67</b>		<b>47</b>		
<b>% increase in VAT liability by product</b>	<b>38%</b>		<b>68%</b>		<b>66%</b>		<b>126%</b>		<b>41%</b>		<b>38%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## **26 Sweden**

The Swedish VAT system consists of a standard rate of 25 %, reduced rates of 6 % and 12 % and a zero rate. The zero rate applies to the supply of prescribed medicines or medicines sold to hospitals, production services and services linked to production (such as distribution) of membership and staff periodicals and periodicals issued by non-profit organisations. The lower reduced rate of 6 % applies to the supply of domestic passenger transport, cultural services, recreational and sporting services (if they are provided by a profit seeking institution or if the activities provided serve another purpose than physical exercise and competition), and books, newspapers and other printed matter. The higher reduced rate of 12 % applies to the supply of food, non-alcoholic beverages, low-alcoholic beer, canteens and accommodation services. Sweden does not grant exemptions from VAT to the supply of postal services, but to recreational and sporting services provided by non-profit institutions and to all other supplies listed in section 2.1 in the main report.

### **26.1 VAT paid by private households**

Taking into account all deviations from the standard rate, the average VAT rate for private households in Sweden is 13.3 %. Abolishing zero and reduced rates pushes the average VAT rate up to 16.2 %. Especially the average VAT rates of categories CP01, CP11 and CP09 increase sharply. The overall revenue neutral rate of 21.6 % (scenario 2) is not revenue neutral for private households. Their average VAT rate increases to 14.0 %, although the average VAT rate decreases for the categories CP02, CP03, CP04, CP05, CP07, CP08 and CP12.

**Table 148: Sweden – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	12.0%	25.0%	21.6%
CP02	23.8%	25.0%	21.6%
CP03	25.0%	25.0%	21.6%
CP04	4.7%	4.7%	4.0%
CP05	25.0%	25.0%	21.6%
CP06	8.7%	11.2%	9.7%
CP07	22.8%	25.0%	21.6%
CP08	25.0%	25.0%	21.6%
CP09	17.3%	22.4%	19.4%
CP10	0.0%	0.0%	0.0%
CP11	15.5%	25.0%	21.6%
CP12	10.3%	10.3%	8.9%
<b>Average</b>	<b>13.3%</b>	<b>16.2%</b>	<b>14.0%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 21.6 %.

Exchange rate of 9.03 Swedish Krona to 1 Euro.

Table 149 shows that the category CP07 “Transport” accounts for the biggest share of total VAT payments (21 %). The most important sub-categories here are CP072 “Operation of personal transport equipment” (53 % of all VAT relating to CP07), closely followed by CP071 “Purchase of vehicles” (also 44 %). In scenario 1, the share of the category transport decreases to 19 % of total VAT payments, but it remains the most important category. CP01 “Food and non-alcoholic beverages” becomes the second most important category with a share of 18 % of total VAT payments.



**Table 149: Sweden – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP07	2.4%	904	CP07	2.6%	991
CP09	1.9%	711	CP01	2.5%	964
CP04	1.4%	534	CP09	2.4%	920
CP05	1.3%	488	CP04	1.4%	534
CP01	1.2%	463	CP05	1.3%	488
CP03	1.0%	369	CP03	1.0%	369
CP12	0.6%	233	CP11	0.9%	347
CP11	0.6%	215	CP12	0.6%	233
CP08	0.6%	215	CP08	0.6%	215
CP02	0.4%	147	CP02	0.4%	155
CP06	0.2%	75	CP06	0.3%	97
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>11.7%</b>	<b>4,355</b>	<b>Sum</b>	<b>14.0%</b>	<b>5,313</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
Exchange rate of 9.03 Swedish Krona to 1 Euro.

**Table 150: Sweden – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
First	11.0%	+2.5%p	+0.9%p	2,636	+694	+241
Second	11.0%	+2.4%p	+0.8%p	3,216	+796	+250
Third	11.6%	+2.2%p	+0.6%p	4,210	+929	+230
Fourth	12.1%	+2.2%p	+0.5%p	5,131	+1,077	+232
Fifth	12.3%	+2.1%p	+0.4%p	6,595	+1,303	+229

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
New standard rate in scenario 2: 21.6 %.  
Exchange rate of 9.03 Swedish Krona to 1 Euro.

Table 150 shows VAT payments in 2011 and in both reform scenarios broken down by income quintile. In the base scenario, VAT payments make up 11 % of total expenditure for the two poorest income quintiles, and 12.3 % for the richest quintile. Abolishing zero and reduced rates leads to higher increases of VAT as a proportion of total expenditure for poorer households: 2.5 percentage points for the poorest and 2.1 percentage points for the richest households. In absolute terms richer households face a

higher increase – about € 1.300 per year. Scenario 2 leads to higher increases for lower income households both in absolute terms and as a fraction of expenditure.

**Table 151 Sweden – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Active</b>	11.8%	+2.1%p	+0.5%p	4,096	+864	+190
<b>Non-active</b>	10.6%	+2.5%p	+1.0%p	2,807	+779	+291

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 21.6 %.

Exchange rate of 9.03 Swedish Krona to 1 Euro.

Households without active members have a lower VAT bill than households with active members (Table 151), both in absolute terms and as a fraction of expenditure. Scenario 1 leads to a considerable increase in VAT payments for both groups, but households without active members experience an increase of 28 % (as compared to their status quo VAT payments), while households with active members face an increase of 21 %.

**Table 152: Sweden – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>Single</b>	10.4%	+2.2%p	+0.7%p	2,473	+601	+183
<b>Single +</b>	11.2%	+2.0%p	+0.4%p	3,582	+745	+156
<b>Multi</b>	12.4%	+2.0%p	+0.3%p	5,535	+1,064	+166
<b>Multi +</b>	12.3%	+2.2%p	+0.5%p	6,376	+1,315	+269

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 21.6 %.

Exchange rate of 9.03 Swedish Krona to 1 Euro.

“+” indicates a household with dependent children

Table 152 summarises the effects of the two reform scenarios on different types of households – single and multi-adult, with and without children. In the 2011 status quo, single households, especially those without children, pay less in VAT as a proportion of expenditures than multi-adult households. In scenario 1, the increase in average VAT payments as a proportion of expenditure is similar for all household types, ranging from 2.0 to 2.2 percentage points.

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## 26.2 VAT paid by non-household entities

In Sweden, scenario 1 leads to an overall increase in VAT liability of 16 % (corresponding to 1.6 % of GDP). For sectors exempt from VAT, this translates into an increase of 7 %, while for the sector “Others”, the increase is 8 %. Table 153 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of Sweden, these are: Recreational, cultural and sporting activities, Land transport; transport via pipelines, Manufacture of chemicals and chemical products, Publishing, printing and reproduction of recorded media and Hotels and restaurants. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 153: Sweden – scenario 1: main product composition, non-households**

Product	Recreational, cultural and sporting activities		Land transport; transport via pipelines		Manufacture of chemicals and chemical products		Publishing, printing and reproduction of recorded media		Hotels and restaurants		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Real Estate Activities	7	0%	9	0%	5	0%	22	0%	14	1%	9	0%	<b>65</b>
Financial Intermediation	5	0%	6	0%	0	0%	31	2%	16	3%	1	0%	<b>60</b>
Public Admin and Defence; Compulsory Social Security	10	0%	30	1%	2	0%	17	1%	16	1%	18	1%	<b>93</b>
Education	3	0%	84	5%	2	1%	72	8%	14	4%	25	6%	<b>200</b>
Health and Social Work	4	0%	13	0%	55	10%	14	1%	25	3%	53	5%	<b>164</b>
Other Community, Social and Personal Services	64	2%	30	1%	4	1%	34	3%	16	3%	28	3%	<b>175</b>
Government final consumption	254	5%	50	1%	128	23%	0	0%	0	0%	2	0%	<b>433</b>
<b>Total increase by product</b>	<b>347</b>		<b>221</b>		<b>196</b>		<b>190</b>		<b>100</b>		<b>135</b>		
<b>% increase in VAT liability by product</b>	<b>281%</b>		<b>253%</b>		<b>34%</b>		<b>138%</b>		<b>55%</b>		<b>74%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

## 27 United Kingdom

The VAT system in the United Kingdom consists of a standard rate of 20 %, a reduced rate of 5 %, and a zero rate. The reduced rate of 5 % applies mainly to domestic energy. Many products are zero-rated – (most) food products, books and newspapers, children's clothes, new housing, passenger transport, water and sewerage services, prescribed drugs, etc. Exemptions apply to the items listed in section 2.1 in the main report.

### 27.1 VAT paid by private households

**Table 154: United Kingdom – average VAT rates for private households broken down by categories of goods and services according to COICOP**

COICOP (2-digit)	2011	Scenario 1	Scenario 2
CP01	2.1%	20.0%	16.3%
CP02	20.0%	20.0%	16.3%
CP03	19.2%	20.0%	16.3%
CP04	1.6%	3.9%	3.1%
CP05	20.0%	20.0%	16.3%
CP06	0.0%	10.8%	8.8%
CP07	17.0%	20.0%	16.3%
CP08	19.0%	19.0%	15.5%
CP09	12.9%	16.6%	13.5%
CP10	0.0%	0.0%	0.0%
CP11	20.0%	20.0%	16.3%
CP12	6.5%	6.5%	5.3%
<b>Average</b>	<b>8.7%</b>	<b>12.3%</b>	<b>10.1%</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 16.3 %.

Exchange rate of 0.868 British Pounds to 1 Euro.

Taking into account all deviations from the standard rate, the average VAT rate households in the United Kingdom face is 8.7 %. The categories CP02 “Alcohol and tobacco”, CP05 “Furnishing and maintenance work” and CP11 “Restaurants and hotels”<sup>29</sup> are the only categories that only contain goods and services taxed at the standard rate of 20 %. Abolishing the zero and reduced rates adds CP01, CP03 and

<sup>29</sup> Cold take-aways face a VAT rate of 0 %, a fact we have not taken into consideration.

CP07 to this list. Because exempt goods account for a large share of expenditures, the average VAT rate remains low. In scenario 1, it increases from 8.7 % to 12.3 %. Scenario 2, which is designed to be overall revenue neutral, is not revenue neutral for private households. The average VAT rate increases to 10.1 %, leading to a considerable increase in VAT payments for private households (from an average of € 2,609 in 2011 to € 3,029 in scenario 2).

**Table 155: United Kingdom – average VAT paid in Euros and as share of total expenditure, ranked by amount**

2011 COICOP (2-digit)	VAT payments		Scenario 1 COICOP (2-digit)	VAT payments	
	in %	in €		in %	in €
CP07	1.8%	596	CP07	2.1%	699
CP09	1.3%	411	CP01	1.9%	637
CP11	1.2%	409	CP09	1.6%	530
CP05	0.9%	305	CP04	1.3%	432
CP03	0.8%	266	CP11	1.2%	409
CP04	0.5%	175	CP05	0.9%	305
CP08	0.4%	138	CP03	0.8%	277
CP02	0.4%	124	CP08	0.4%	138
CP12	0.4%	119	CP02	0.4%	124
CP01	0.2%	67	CP12	0.4%	119
CP06	0.0%	0	CP06	0.1%	46
CP10	0.0%	0	CP10	0.0%	0
<b>Sum</b>	<b>8.0%</b>	<b>2,609</b>	<b>Sum</b>	<b>11.0%</b>	<b>3,717</b>

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.  
Exchange rate of 0.868 British Pounds to 1 Euro.

Table 155 illustrates average VAT paid by households broken down by COICOP categories in 2011 and scenario 1. From the average VAT payments of € 2609, CP07 “Transport” accounts for the largest share (23 % of total VAT payments); with purchase of a vehicle (CP071) and operation of the personal transport equipment (CP072) being the most important sub-categories (45 % and 55 % of all VAT payments relating to this category, respectively). Passenger transport services are zero rated. CP09 “Recreation and culture” and CP11 “Restaurants and hotels” both account for 16 % of VAT payments in 2011. Abolishing the zero and reduced rate has considerable effects on this structure. CP01 “Food and non-alcoholic beverages”, which, in 2011 ranked on the tenth of twelve places with an average VAT rate of 2.1 %, ranks second in scenario 1, accounting for 17 % of average VAT payments. CP07 continues to rank first and CP09 ranks third.

**Table 156: United Kingdom – average VAT bill of private households as a proportion of expenditure and in Euros per year, by income quintile**

Income Quintiles	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
<b>First</b>	6.3%	+3.6%p	+1.9%p	1,257	+799	+418
<b>Second</b>	7.1%	+3.4%p	+1.6%p	1,797	+960	+450
<b>Third</b>	7.7%	+3.2%p	+1.4%p	2,341	+1,086	+452
<b>Fourth</b>	8.4%	+2.9%p	+1.0%p	3,119	+1,209	+408
<b>Fifth</b>	8.9%	+2.6%p	+0.7%p	4,527	+1,513	+396

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 16.3 %.

Exchange rate of 0.868 British Pounds to 1 Euro.

Table 156 shows VAT payments in 2011 and in both reform scenarios broken down by income quintile. In the base scenario, VAT payments make up 6.3 % and 8.9 % of the total expenditure of the poorest and the richest income quintile, respectively. Low income households spend a higher share of their expenditure on goods taxed at reduced rates (food, energy) than higher income households.<sup>30</sup> In absolute terms, the 20 % richest households pay 3.6 times as much VAT as the poorest 20 %. Scenario 1 leads to an overall increase in VAT bills. As a fraction of expenditure, the increase is larger for low income households; however, the VAT bill as a proportion of expenditure is still 1.7 percentage points higher for the fifth than for the first income quintile. This is due to exemptions, especially for rents. Scenario 2 (decreasing the standard rate to 16.3 % while abolishing the zero and the reduced rate) has a larger effect on the average VAT bills of low- and middle-income households than on those of high income households, both in absolute terms and as a fraction of expenditure. Both reform scenarios leave the VAT rates structure progressive, although to a lesser extent compared to the situation in 2011.

<sup>30</sup> IFS et al. (2011) find that the VAT rates structure in the UK is proportional. VAT as a fraction of total expenditure is similar to our results for higher income quintiles, but our results show a much lower VAT burden for lower quintiles, see also the detailed discussion in section A.3. However, the micro analysis performed in this study (see section A.3) also shows a progressive VAT system for the UK.

**Table 157: United Kingdom – average VAT bill of private households as a proportion of expenditure and in Euros per year, separately for households with and without active members**

Activity status	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Active	8.7%	+2.9%p	+1.1%p	3,575	+1,362	+448
Non-active	6.3%	+3.3%p	+1.7%p	1,415	+824	+410

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 16.3 %.

Exchange rate of 0.868 British Pounds to 1 Euro.

Separating the households according to whether or not they have active members, we see that the current VAT regime favours households without active members. These pay 2.4 percentage points less VAT as a proportion of expenditure than households with active members.<sup>31</sup> Scenario 1 raises the VAT payments of active households more than those without active members in absolute values; while as a proportion of expenditure, the increase is larger for households without active members. The results for scenario 2 are very similar; however, the difference between the groups in absolute terms is much smaller.

**Table 158: United Kingdom – average VAT bill of private households as a proportion of expenditure and in Euros per year, by household type**

Household Size	VAT payments (in %)			VAT payments (in €)		
	2011	Scenario 1	Scenario 2	2011	Scenario 1	Scenario 2
Single	6.2%	+3.0%p	+1.4%p	1,243	+666	+313
Single +	7.1%	+3.1%p	+1.3%p	1,872	+899	+386
Multi	8.6%	+3.0%p	+1.1%p	3,422	+1,360	+475
Multi +	8.7%	+3.1%p	+1.2%p	4,055	+1,652	+596

Source: Household Budget Surveys, National Accounts (Eurostat), own calculations.

New standard rate in scenario 2: 16.3 %.

Exchange rate of 0.868 British Pounds to 1 Euro.

“+” indicates a household with dependent children

Table 158 summarises the effects of the two reform scenarios on different types of households – single and multi-adult, with and without dependent children. As a proportion of expenditure, single households (especially those without children) pay the least VAT. As a proportion of expenditure, the increase in VAT in scenario 1 is similar

<sup>31</sup> Households with an unemployed head (in this break-down part of the active households) are more comparable to non-active households with on average 6.4 % of expenditures spent on VAT.



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for all groups, even a bit higher for multi-adult households with children (driven by households with more than two adults). Scenario 2 also leads to higher expenditures for all household types. Compared to previous VAT bills in absolute terms, the average VAT bill increases by 25 % for single households without children, 21 % for single households with children, 14 % for multi-adult households without children and 15 % for multi-adult households with children.

## **27.2 VAT paid by non-household entities**

As discussed in the main report, scenario 1 in the United Kingdom leads to an overall increase in VAT liability of 23 % (corresponding to 2 % of GDP). For sectors exempt from VAT, this translates into an increase of 15 %, while for the sector “Others”, the increase is 6 %. Table 159 shows the five categories of goods and services that, taken together, make up the largest share of the expenditure of the sectors Intermediate Consumption, Government Consumption and NPISHs. In the case of the United Kingdom, these are: Manufacture of medical, precision and optical instruments, watches and clocks, Land transport; transport via pipelines, Sewage and refuse disposal, sanitation and similar activities, Publishing, printing and reproduction of recorded media and Manufacture of food products and beverages. The table documents the change in the liability associated with the various goods and services, as well as the percentage share of each good in the total VAT bill of the sector in question.

**Table 159: United Kingdom – scenario 1: main product composition, non-households**

Product	Manufacture of medical, precision and optical instruments, watches and clocks		Land transport; transport via pipelines		Sewage and refuse disposal, sanitation and similar activities		Publishing, printing and reproduction of recorded media		Manufacture of food products and beverages		Other products		Total increase in million €
	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	Increase in million €	Share in VAT by sector	
Post and Telecommunications	4	0%	15	0%	1	0%	2	0%	4	0%	6	1%	<b>32</b>
Real Estate Activities	1	0%	19	0%	6	0%	20	0%	0	0%	12	0%	<b>57</b>
Financial Intermediation	5	0%	168	0%	13	0%	225	2%	52	0%	106	0%	<b>567</b>
Public Admin and Defence; Compulsory Social Security	326	1%	283	0%	156	2%	145	1%	20	0%	211	2%	<b>1,141</b>
Education	11	0%	210	0%	23	1%	173	4%	80	1%	137	4%	<b>634</b>
Health and Social Work	1,171	2%	518	0%	113	1%	197	1%	489	2%	558	30%	<b>3,046</b>
Other Community, Social and Personal Services	1	0%	15	0%	51	6%	14	1%	26	1%	21	4%	<b>128</b>
Government final consumption	0	0%	0	0%	636	0%	0	0%	0	0%	0	0%	<b>636</b>
<b>Total increase by product</b>	<b>1,519</b>		<b>1,227</b>		<b>999</b>		<b>775</b>		<b>670</b>		<b>1,051</b>		
<b>% increase in VAT liability by product</b>	<b>499%</b>		<b>-</b>		<b>83%</b>		<b>167%</b>		<b>250%</b>		<b>29%</b>		

Source: WIOD, EUROSTAT, IBFD, European Commission, Own Submissions and own calculations.

Note: Differences in totals may occur due to rounding

“-“ indicates that the % increase in VAT liability by product is not-available for zero rated goods

## 28 A short guide for the use of the result spreadsheets (Estonia)

The spreadsheets for each country delivered with the report contain the tables produced to answer research task 1 (effects of the current VAT rates structure on private households). The results discussed in the report are based on these tables. Some are reproduced within the report.

Results on private households are presented broken-down by categories of goods and services according to COICOP (see section A.2 in the main report). Average VAT payments per household, both in absolute values and as a fraction of household expenditure, are presented on the 2-digit level (12 groups of supplies) in worksheet 1.0, for the base scenario 2001, and scenarios 1 and 2. The expenditure structure differs across household types. Therefore, also average VAT payments differ across household types. Worksheets 1.1-1.5 contain the average VAT payments for different categories of households on the 2-digit COICOP level, again in absolute values and as a fraction of household expenditures, for the base scenario 2011 and reform scenarios 1 and 2. For example, worksheet 1.3 contains the breakdown by income quintile. In 2011, on average, VAT payments on “CP04 Housing, water, electricity, gas and other fuels” make up 2.6 % of household expenditure in the first and second quintile in Estonia, 2.4 % in the third, 2.0 % in the fourth and 1.8 % in the fifth quintile. These differences are due to differing compositions of expenditures taxed at different rates (actual<sup>32</sup> and imputed rents are exempted, maintenance work, supply of water, energy and services are taxed at 20 %). As households in the first and second quintile have a lower share of rents compared to other expenditures, their average VAT payments for the expenditure category CP04 is higher than the average VAT payments of households in higher quintiles, who have a higher share of exempted rents compared to supplies taxed at the standard rate.

### Tables in the spreadsheet

Analysis for the average private household (HBS data)

EE average VAT payments in Estonia, broken down to the two digit COICOP level

1.0 Average VAT payments

1.1 Average VAT payments by activity status of the household head

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<sup>32</sup> According to the HBS data there are almost no expenditures on actual rents in Estonia.

- 1.2 Average VAT payments by number of active persons in the household
- 1.3 Average VAT payments by income quintile
- 1.4 Average VAT payments by household type
- 1.5 Average VAT payments by age of the household head

## 29 Assumptions for VAT Rates Application

### **Belgium (BE)**

- CP0113 „fish and seafood“: fresh, chilled or frozen fish is taxed at 6 %, all other kind of fish at 21 %. It is assumed that fresh, chilled or frozen fish makes up 50 % of all fish consumption.
- CP0115 „oils and fats“: margarine (including "diet" margarine) and other vegetable fats (including peanut butter) are taxed at 12 %, whereas the other products relevant for this category, i.e. butter and butter products, edible oils, and edible animal fats are taxed at 6 %. It is assumed that those taxed at 12 % constitute 25 % of the total consumption of the category, implying that the latter make up 75 % of it.
- CP0314 „cleaning, repair and hire of clothing“ was taxed at 6 % until June 30<sup>th</sup>, 2011, and at the standard rate of 21 % afterwards. It is assumed that the consumption relevant for this category is equally distributed between those two periods.
- CP0322 „repair and hire of footwear“: the same assumption as for CP0314 is made.
- CP0432 “Services for the maintenance and repair of the dwelling”: renovation and repairing services of private dwellings completed more than 5 years ago were taxed at 6 % until June 30<sup>th</sup>, and at the standard rate of 21 % from then onwards. It is assumed that (a) out of all private dwellings 50 % were completed more than 5 years ago, and (b) the consumption of these services is equally distributed between those two periods.
- CP0454 „solid fuels“: firewood is taxed at 6 %, whereas the other goods relevant for this category are taxed at 12 %. It is assumed that firewood makes up 50 % of the total consumption in this category.
- CP0721 “Spare parts and accessories for personal transport equipment”: tyres and inner tubes are taxed at 12 %, whereas the other products relevant for this category, i.e. spark plugs, batteries, shock absorbers, filters, pumps and other spare parts or accessories for personal transport equipment are taxed at the standard rate of 21 %. It is assumed that tyres and inner tubes make up 75 % of the total consumption in this category.

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- CP0952 “newspapers and periodicals”: supplies of daily and weekly newspapers of general information are taxed at the zero rate, whereas all other kinds of newspapers and periodicals are taxed at the standard rate of 21 %. It is assumed that the former make up 80 % of the total consumption in this category.
  - CP1111 “restaurants, cafes and the like”: food is taxed at 12 %, whereas beverages are taxed at 21 %. It is assumed that the former make up 65 % and the latter make up 35 % of the total consumption in this category.

#### ***Bulgaria (BG)***

- CP1121 “accommodation services”: these services were taxed at the reduced rate of 7 % until March, 31<sup>st</sup>, 2011, and at the reduced rate of 9 % from then onwards. It is assumed that the consumption relevant for this category is uniformly distributed over the year.
- CP094 “recreational and cultural services”: services provided by public bodies are exempted from VAT, services provided by other institutions are taxed at the standard rate of 20 %. It is assumed that the latter make up 25 % of the total consumption in this category.

#### ***Czech Republic (CZ)***

- CP0454 “solid fuels“: firewood is taxed at 10 %, all other products in this category are taxed at 20 %. It is assumed that firewood makes up 50 % of the consumption in this category.
- CP0933 “gardens, plants and flowers”: natural or artificial flowers and seeds are taxed at the reduced rate of 10 %, whereas foliage, shrubs, bulbs, tubers, fertilizers, composts, garden peat, turf for lawns, specially treated soils for ornamental gardens, horticultural preparations, and pots and pot holders are taxed at the standard rate of 20 %. It is assumed that the latter make up 80 % of the total consumption in this category.

#### ***Germany (DE)***

- CP0121 “coffee, tea and cocoa”: cocoa is taxed at the standard rate of 19 %, whereas coffee and tea are taxed at the reduced rate of 7 %. It is assumed that the latter make up 90 % of the total consumption in this category.

- CP0454 “solid fuels:” firewood is taxed at 7 %, all other products in this category are taxed at 19 %. It is assumed that firewood makes up 50 % of the consumption in this category.
- CP073 “transport”: long distance transport is taxed at the standard rate of 19 %, whereas short distance transport (<50 km) is taxed at the reduced rate of 7 %. It is assumed that the latter makes up 60 % of the total consumption in this category.
- CP0942 “cultural services”: services supplied by bodies governed by public law and other cultural bodies recognised by the state are exempted from VAT, all other services are taxed at the standard rate of 19 %. It is assumed that the latter make up 25 % of consumption in this category.
- CP0943 “games of chance”: lottery and betting winnings are exempted from VAT, whereas the rest of this category is taxed at the standard rate of 19 %. It is assumed that the latter makes up 30 % of the total consumption in this category.
- CP096 “package holidays”: international package holidays are taxed at the zero rate, whereas domestic packaged holidays are taxed at the standard rate of 19 %. It is assumed that the latter make up 20 % of the total consumption in this category.
- CP1111 “restaurants, cafes and the like”: food is taxed at the reduced rate of 7 %, whereas beverages are taxed at the standard rate of 19 %. It is assumed that the former make up 65 % and the latter make up 35 % of the total consumption in this category.
- CP1112 “canteens”: food is taxed at the reduced rate of 7 %, whereas beverages are taxed at the standard rate of 19 %. It is assumed that the former make up 85 % and the latter make up 15 % of the total consumption in this category.

***Estonia (EE)***

- CP0951 “books”: pornographic material is taxed at the standard rate of 20 %, whereas all other goods relevant for this category are taxed at the reduced rate of 9 %. It is assumed that the latter make up 99 % of the total consumption in this category.
- CP0952 “newspapers and periodicals”: the same assumption as for CP0951 is made.

***Greece (EL)***

- CP0121 “coffee, tea and cocoa”: the products relevant for this category were taxed at the reduced rate of 13 % until August, 31<sup>st</sup>, 2011, and at the standard rate of 23 %

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from then onwards. It is assumed that the consumption relevant for this category is uniformly distributed over the year.

- CP0122 “mineral waters, soft drinks, fruit and vegetable juices”: all products relevant for this category but mineral waters were taxed at the reduced rate of 13 % until August, 31<sup>st</sup>, 2011, and at the standard rate of 23 % from then onwards. Mineral waters were taxed at 13 % throughout the whole year. It is assumed that the consumption of all products is uniformly distributed over the year and that mineral waters make up 35 % of the consumption in this category
- CP0432 “Services for the maintenance and repair of the dwelling”: services for the renovation of an “old private dwelling” are taxed at the reduced rate of 13 %, whereas all other services provided within this category are taxed at the standard rate of 23 %. It is assumed that the latter make up 90 % of the total consumption in this category.
- CP0441 “water supply”: if provided by public authority, water supply is exempted from VAT, otherwise it is taxed at the reduced rate of 13 %. It is assumed that the latter makes up 50 % of the total consumption in this category.
- CP0442 “refuse collection”: the same assumption as for CP0441 is made.
- CP0443 “sewerage collection”: the same assumption as for CP0441 is made.
- CP0454 “solid fuels”: firewood is taxed at the reduced rate of 13 %, whereas the rest of this category, i.e. coal, coke, briquettes, charcoal, peat and the like, is taxed at the standard rate of 23 %. It is assumed that the latter makes up 50 % of the total consumption in this category.
- CP0933 “gardens, plants and flowers”: plants and fertilizers are taxed at the reduced rate of 13 %, whereas the rest of this category, i.e. shrubs, bulbs, tubers, seeds, composts, garden peat, turf for lawns, specially treated soils for ornamental gardens, horticultural preparations, pots and pot holders are taxed at the standard rate of 23 %. It is assumed that the latter makes up 50 % of the total consumption in this category.
- CP0942 “cultural services”: services provided by theatres are taxed at the reduced rate of 6.5 %, whereas the rest of this category is taxed at the reduced rate of 13 %. It is assumed that the latter makes up 85 % of the total consumption in this category.
- CP1111 “restaurants, cafés and the like”: until August 31<sup>st</sup>, 2011, alcoholic beverages were taxed at the standard rate of 23 % and the rest of the category at the reduced rate of 13 %, from then onwards everything was taxed at the standard rate. It is assumed that the consumption relevant for this category is uniformly distributed over the year and that alcoholic beverages make up 30 % of the total consumption in this category.

- CP1112 “canteens”: from September 1<sup>st</sup> onward, food, non-alcoholic and alcoholic beverages are taxed at the standard rate of 23 %. However, this change does not affect canteens used by medical, educational or social welfare organizations (i.e. only alcoholic beverages are taxed at 23 %). It is assumed that 65 % of all canteens are excluded from the rate change and that the consumption of alcoholic beverages makes up 5 % in each group.

**Spain (ES)**

- CP0942 „cultural services“: Cultural services provided by public institutions are exempted, whereas cultural services provided by private institutions are taxed at the reduced rate of 8 %. It is assumed that the former make up 25 % and the latter make up 75 % of the total consumption in this category.

**France (FR)**

- CP0454 “solid fuels”: wood is taxed at the reduced rate of 5.5 %, whereas coal is taxed at the standard rate of 19.6 %. It is assumed that the former makes up 50 % and the latter makes up 50 % of the total consumption in this category.
- CP0942 “cultural services”: the goods and services relevant for this category are basically taxed at the reduced rate of 5.5 %, except pornography, which is taxed at the standard rate of 19.6 %. It is assumed that pornography makes up 1 % of the total consumption in this category.
- CP1111 “restaurants, cafes, and the like”: food and non-alcoholic beverages are taxed at the reduced rate of 5.5 %, whereas alcoholic beverages are taxed at the standard rate of 19.6 %. It is assumed that the former make up 70 % and the latter make up 30 % of the total consumption in this category.

**Ireland (IE)**

- CP0311 „clothing materials“: clothing materials for children aged under 11 years are taxed at the zero rate, whereas clothing materials for the rest of the population are taxed at the standard rate of 21 %. It is assumed that children aged under 11 years make up 1/8 of the whole population.
- CP0312 “garments”: the same assumption as for CP0311 is made.
- CP0313 “other articles of clothing and clothing accessories”: the same assumption as for CP0311 is made.



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- CP0314 “cleaning, repair and hire of clothing”: the cleaning and the repair of clothing are taxed at the reduced rate of 13.5 %, whereas the hire of clothing is taxed at the standard rate of 21 %. It is assumed that the hire of clothing makes up 30 % of the total consumption in this category.
  - CP0321 „shoes and other footwear“: the same assumption as for CP0311 is made.
  - CP0441 “water supply”: if provided by public authority, water supply is exempted from VAT, if otherwise it is taxed at the reduced rate of 13 %. It is assumed that the latter makes up 50 % of the total consumption in this category.
  - CP0611 “pharmaceutical products”: medicine of a kind used for human oral consumption is taxed at the zero rate, the rest of this category is taxed at the standard rate of 21 %. It is assumed that medicine of a kind used for human oral consumption makes up 90 % of the total consumption in this category.
  - CP0613 “therapeutic appliances and equipment”: hearing aids, artificial limbs and other prosthetic devices, orthopaedic braces and supports, orthopaedic footwear, surgical belts, trusses and supports, neck braces, medical massage equipment and health lamps, powered and unpowered wheelchairs and invalid carriages, "special" beds, crutches, electronic and other devices for monitoring blood pressure are taxed at the zero rate, whereas artificial teeth, corrective spectacles and contact lenses are taxed at the standard rate of 21 %. It is assumed that the latter make up 50 % of the total consumption in this category.
  - CP0621 “medical services”: until June 30<sup>th</sup>, 2011, these services were taxed at the standard rate of 21 %, from then onwards at the reduced rate of 13.5 %. It is assumed that the consumption relevant for this category is equally distributed between those two periods.
  - CP0623 “paramedical services”: the same assumption as for CP0621 is made
  - CP08 “communications”: as there is no NA-data on the relevant consumption available, it is assumed that the relevant NA-data correspond to the relevant HBS-data.
  - CP0933 „gardens, plants and flowers“: natural or artificial flowers and foliage, plants, bulbs, tubers, fertilizers, composts, garden peat, turf for lawns, specially treated soils for ornamental gardens, horticultural preparations, pots and pot holders are taxed at the zero rate, whereas flower seeds and shrubs are taxed at the standard rate of 21 %. It is assumed that the latter make up 30 % of the total consumption in this category.
  - CP0941 “recreational and cultural services”: these services were taxed at the reduced rate of 13.5 % until June, 30<sup>th</sup>, 2011, and at the reduced rate of 9 % from then onwards. The same assumption as for CP0621 is made.

- CP0942 „cultural services“: this category is divided into (a) different kinds of performances, and (b) services of photographers (taxed at the parking rate of 13.5 %). It is assumed that (a) makes up 80 % of the total consumption in this category, whereas (b) makes up 20 %. (a) itself is again divided into (i) performances, in the framework of which food and beverages are being offered (taxed at 13.5 % until June 30<sup>th</sup>, 2011, and at 9 % from then onwards) and (ii) those, in the framework of which the latter is not the case (exempted from VAT). It is assumed that the consumption relevant for this category is equally distributed between the two halves of the year and that the subcategory (ii) makes up 20 % of the total consumption of category (a).
- CP0952 “newspapers and periodicals”: these goods were taxed at the reduced rate of 13.5 % until June, 30<sup>th</sup>, 2011, and at the reduced rate of 9 % from then onwards. The same assumption as for CP0621 is made.
- CP1111 “restaurants, cafés and the like”: beverages are taxed at the standard rate of 21 %, whereas food is taxed at the reduced rate of 13.5 % until June 30<sup>th</sup>, 2011, and at the reduced rate of 9 % from then onwards. It is assumed that the consumption relevant for this category is equally distributed between the two halves of the year and that food makes up 65 % of the total consumption in this category.
- CP1112 “canteens”: catering services supplied- (a) to patients of a hospital or nursing home in the hospital or nursing home, and (b) to students of a school in the school are exempted from VAT, whereas the rest of the services consumed within this category are taxed at the standard rate of 21 %. It is assumed that the latter makes up 35 % of the total consumption in this category.
- CP1121 “accommodation services”: accommodation services other than hotels are exempted from VAT, whereas accommodation services provided by hotels are taxed at the reduced rate of 13.5 % until June, 30<sup>th</sup>, 2011, and at the reduced rate of 9 % from then onwards. It is assumed that the consumption relevant for this category is equally distributed between the two halves of the year and that the latter make up 75 % of the total consumption in this category.
- CP1211 “hairdressing salons and personal grooming establishments”: these services were taxed at the reduced rate of 13.5 % until June, 30<sup>th</sup>, 2011, and at the reduced rate of 9 % from then onwards. The same assumption as for CP0621 is made.

### **Italy (IT)**

- The standard rate changed from 20 % to 21 % on the 16<sup>th</sup> of September 2011. We use a weighted average of 20.2932 %, assuming total consumption is equally split among the days of the year.

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- CP0114 “milk, cheese and eggs”: milk and cheese are taxed at the super reduced rate of 4 %, whereas yoghurt and eggs are taxed at the reduced rate of 10 %. It is assumed that the latter make up 50 % of the total consumption in this category.
  - CP0121 “coffee, tea and cocoa”: coffee is taxed at the standard rate, whereas tea and cocoa are taxed at the reduced rate. It is assumed that the latter make up 20 % of the total consumption in this category.
  - CP0122 “mineral waters, soft drinks, fruit and vegetable juices”: water is taxed at the reduced rate of 10 %, whereas all other goods relevant for this category are taxed at the standard rate of 20 %. It is assumed that the latter make up 75 % of the total consumption in this category.
  - CP0731 “passenger transport by railway”: urban passenger transport is exempt from VAT, whereas non-urban transport is taxed at 10 %. It is assumed that the latter makes up 90 % of this category.
  - CP0732 “passenger transport by road”: again urban transport is exempt from VAT and non-urban transport is taxed at 10 %. It is assumed that the latter makes up 50 % of this category.
  - CP0934 „pets and related products“: pet food is taxed at the super reduced rate of 4 %, whereas all other goods relevant for this category are taxed at the reduced rate of 10 %. It is assumed that the latter make up 60 % of the total consumption in this category.

#### **Cyprus (CY)**

- CP0122 “mineral waters, soft drinks, fruit and vegetable juices”: lemonade and juices are taxed at the standard rate of 15 %, whereas mineral waters are charged at the reduced rate of 5 %. It is assumed that the latter make up 35 % of the total consumption in this category.
- CP0941 “recreational and sporting services”: services provided by NPOs are exempted from VAT, services provided by other institutions are taxed at the reduced rate of 5 %. It is assumed that the latter make up 25 % of the total consumption in this category.

#### **Latvia (LV)**

- CP0942 “cultural services”: services provided by cinemas are taxed at the standard rate of 22 %, whereas all other services relevant for this category are exempted from VAT. It is assumed that the latter make up 75 % of the total consumption in this category.

**Lithuania (LT)**

- CP0611 “pharmaceutical products”: the consumption of such products by people who have the right to partial or total reimbursement is taxed at the reduced rate of 5 %, whereas the consumption of such products by all other people is taxed at the standard rate of 21 %. It is assumed that the latter makes up 25 % of the total consumption in this category.
- CP0612 “other medical products”: the same assumption as for CP0611 is made.
- CP0941 “recreational and sporting services”: services provided by NPOs are exempted from VAT, other services are taxed at the standard rate. It is assumed that 75 % of the services are supplied by NPOs.
- CP0942 “cultural services”: services provided by NPOs are exempted from VAT, services provided by other institutions are taxed at the standard rate of 21 %. It is assumed that the latter make up 25 % of the total consumption in this category

**Luxembourg (LU)**

- CP0311 “clothing materials“: clothing materials for children are taxed at the super reduced rate of 3 %, whereas clothing materials for adults are taxed at the standard rate of 15 %, with no precise definition of which age interval “children” refers to being mentioned in the VAT law. It is assumed that “children” refers to the age interval 0 – 14, making up 20 % of the whole population.
- CP0312 “garments”: the same assumption as for CP0311 is made.
- CP0313 “other articles of clothing and clothing accessories”: the same assumption as for CP0311 is made.
- CP0321 “shoes and other footwear”: the same assumption as for CP0311 is made.

**Hungary (HU)**

- CP0114 “milk, cheese and eggs”: dairy products are taxed at the reduced rate of 18 %, whereas eggs are taxed at the standard rate of 25 %. It is assumed that the latter make up 8 % of the total consumption in this category.
- CP0942 “cultural services”: folk art is exempted from VAT, whereas the rest of services relevant for this category are taxed at the standard rate of 25 %. It is assumed that the latter makes up 75 % of the total consumption in this category

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**Malta (MT)**

- CP0118 “sugar, jam, honey, chocolate and confectionery”: some confectionery, like chocolate and ice cream, is taxed at 5 %. All other products in this category are liable to a zero rate. It is assumed that 60 % of the consumption in this category is subject to the zero rate.
- CP0314 “cleaning, repair and hire of clothing”: the repair of clothing is taxed at the reduced rate of 5 %, whereas the rest of the services relevant for this category is taxed at the standard rate of 18 %. It is assumed that the latter makes up 85 % of the total consumption in this category.
- CP0322 “repair and hire of footwear”: the repair of footwear is taxed at the reduced rate of 5 %, whereas the rest of the services relevant for this category is taxed at the standard rate of 18 %. It is assumed that the latter makes up 95 % of the total consumption in this category.
- CP0613 “therapeutic appliances and equipment”: contact lenses are taxed at the reduced rate of 5 %, whereas the rest of the goods relevant for this category is taxed at the standard rate of 18 %. It is assumed that the latter makes up 95 % of the total consumption in this category.
- CP0732 “passenger transport by road”: bus services are taxed at the zero rate, whereas all other services relevant for this category are taxed at the standard rate of 18 %. It is assumed that the latter make up 25 % of the total consumption in this category.
- CP0941 “recreational and sporting services”: services provided by NPOs are exempted from VAT, services provided by other institutions are taxed at the standard rate of 18 %. It is assumed that the latter make up 25 % of the total consumption in this category.

**Netherlands (NL)**

- CP0432 “services for the maintenance and repair of the dwelling”: such services concerning dwellings being 15 years or older are taxed at the reduced rate of 6 % if the service relates to the painting or plastering of the dwelling. All other services relevant for this category are taxed at the standard rate of 19 %. It is assumed that the latter make up 85 % of the total consumption in this category.
- CP0933 “gardens, plants and flowers”: flowers and plants are taxed at the reduced rate of 6 %, whereas all other goods relevant for this category are taxed at the standard rate of 19 %. It is assumed that the latter make up 40 % of the total consumption in this category.

**Austria (AT)**

- CP0454 “solid fuels”: firewood is taxed at 10 %, whereas the other goods relevant for this category, i.e. coal, coke, briquettes, charcoal, peat and the like, are taxed at 20 %. It is assumed that firewood makes up 50 % of the total consumption in this category.
- CP0611 “pharmaceutical products”: pharmaceuticals sold on prescription are taxed at the zero rate, all other pharmaceuticals are taxed at the reduced rate of 10 %. It is assumed that the former make up 37 % and that the latter make up 63 % of the total consumption relevant for this category<sup>33</sup>.
- CP0933 “gardens, plants and flowers”: plants are taxed at the reduced rate of 10 %, whereas plant accessories are taxed at the standard rate of 20 %. It is assumed that the latter make up 20 % of the total consumption in this category.
- CP0934 “pets and related products”: the acquisition of pets and pet food is taxed at the reduced rate of 10 %, pet accessories and other products in this category are taxed at the standard rate of 20 %. It is assumed that the latter make up 5 % of consumption in this category.
- CP1111 “restaurants, cafés and the like”: food is taxed at the reduced rate of 10 %, whereas beverages in general are taxed the standard rate of 20 %. It is assumed that the latter make up 35 % of consumption in this category.

**Poland (PL)**

- CP0122 “mineral waters, soft drinks, fruit and vegetable juices”: fruit juice is taxed at the reduced rate of 8 %, whereas all other goods relevant for this category are taxed at the standard rate of 23 %. It is assumed that the latter make up 75 % of the total consumption in this category.
- CP0312 “garments”: baby clothing is taxed at the reduced rate of 8 %, whereas all other goods relevant for this category are taxed at the standard rate of 23 %. It is assumed that the latter make up 98 % of the total consumption in this category.
- CP0321 “shoes and other footwear”: children (i.e. people aged under 18 years) footwear is taxed at the reduced rate of 8 %, whereas all other goods relevant for this category are taxed at the standard rate of 23 %. It is assumed that the latter make up 76 % of the total consumption in this category<sup>34</sup>.

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<sup>33</sup> Source: micro data HBS 2004/05 for Austria

<sup>34</sup> Source: <http://en.poland.gov.pl/Age.Structure.and.growth.rate.314.html> [12.06.2013]

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- CP0454 “solid fuels”: firewood is taxed at the reduced rate of 8 %, all other goods in this category are taxed at the standard rate of 23 %. It is assumed that the latter make up 50 % of consumption in this category.
  - CP1111 “restaurants, cafes, and the like”: food and non-alcoholic beverages are taxed at the reduced rate of 8 %, whereas alcoholic beverages are taxed at the standard rate of 23 %. It is assumed that the former make up 70 % and the latter make up 30 % of the total consumption in this category.

### **Portugal (PT)**

- CP0442 “refuse collection”: if done by public authority, water refuse collection is exempted from VAT, if otherwise it is taxed at the reduced rate of 6 %. It is assumed that the latter makes up 50 % of the total consumption in this category.
- CP0443 „sewerage collection“: the same assumption as for CP0442 is made.
- CP0451 “electricity”: electricity is taxed at the reduced rate of 6 % until September, 30<sup>th</sup>, 2011, and at the standard rate of 23 % from then onwards. It is assumed that the consumption relevant for this category is uniformly distributed over the year.
- CP0452 “gas”: the same assumption as for CP0451 is made.
- CP0611 „pharmaceutical products“: if prescribed, pharmaceutical products are taxed at the reduced rate of 6 %, if not, they are taxed at the standard rate of 23 %. It is assumed that the latter case makes up 63 % of the total consumption in this category.

### **Romania (RO)**

- CP0934 “pets and related products”: medicine for pets is taxed at 9 %, whereas the rest of this category is taxed at the standard rate of 24 %. It is assumed that medicine for pets makes up 15 % of the total consumption in this category.
- CP0935 “veterinary and other services for pets”: veterinary services are exempted from VAT, all other services are taxed at the standard rate. It is assumed that the latter make up 50 % of the consumption in this category.
- CP0941 “recreational and sporting services”: if these services are supplied by NPOs, they are exempted from VAT, otherwise they are taxed at the standard rate of 24 %, excluding services supplied by amusement parks which are taxed at 9 %. It is assumed that 75 % of these services are supplied by NPOs and the other 25 % by other institutions of which amusement parks make up 10 %.

CP0942 “cultural services”: services provided by NPOs are exempted from VAT, services provided by other institutions are taxed at the reduced rate of 9 %. It is assumed that the latter make up 25 % of the total consumption in this category.

### **Slovenia (SI)**

- CP0314 “cleaning, repair and hire of clothing”: mending and alteration services are taxed at the reduced rate of 8.5 %, whereas all other services relevant for this category are taxed at the standard rate of 20 %. It is assumed that the latter make up 50 % of the total consumption in this category.
- CP0933 “gardens, plants and flowers”: flowers and plants are taxed at the reduced rate of 8.5 %, whereas all other goods relevant for this category are taxed at the standard rate of 20 %. It is assumed that the latter make up 50 % of the total consumption in this category.
- CP0934 “pets and related products”: pet food and veterinary medicine are taxed at the reduced rate of 8.5 %, whereas all other goods relevant for this category are taxed at the standard rate of 20 %. It is assumed that the latter make up 30 % of the total consumption in this category.
- CP0941 “recreational and sporting services”: services provided by NPOs are exempted from VAT, services provided by other institutions are taxed at the reduced rate of 8.5 %. It is assumed that the latter make up 25 % of the total consumption in this category.
- CP0942 “cultural services”: the same assumption as for CP0941 is made.
- CP1111 “restaurants, cafés and the like”: food is taxed at the reduced rate of 8.5 %, whereas beverages are taxed at the standard rate of 20 %. It is assumed that the former make up 65 % and the latter make up 35 % of the total consumption in this category.
- CP1112 “canteens”: food is taxed at the reduced rate of 8.5 %, whereas beverages are taxed at the standard rate of 20 %. It is assumed that the former make up 90 % and the latter make up 10 % of the total consumption in this category.

### **Slovakia (SK)**

- CP0942 “cultural services”: services provided by NPOs are exempted from VAT, services provided by other institutions are taxed at the standard rate of 20 %. It is assumed that the latter make up 25 % of the total consumption in this category.



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**Finland (FI)**

- CP0933 “gardens, plants and flowers”: flowers that serve a decorative use are taxed at 23 %, seed, flowers and plants for food production are taxed at the reduced rate of 13 %. It is assumed that the latter make up 25 % of consumption in this category.
- CP0935 “veterinary and other services for pets”: Veterinary services are exempted from VAT, all other services are taxed at the standard rate of 23 %. It is assumed that the latter make up 50 % of consumption in this category.
- CP0952 „newspapers and periodicals“: Subscriptions to newspapers and periodicals are exempted from VAT, otherwise they are taxed at 23 %. It is assumed that subscriptions make up 88 % of consumption in this category<sup>35</sup>.

**Sweden (SE)**

- CP0213 “beer”: low alcohol beer is taxed at the reduced rate of 12 %, whereas high alcohol beer is taxed at the standard rate of 25 %. It is assumed that the latter makes up 50 % of the total consumption in this category.
- CP0611 “pharmaceutical products”: if prescribed, pharmaceutical products are liable to a zero rate, if not, they are taxed at the standard rate of 25 %. It is assumed that the latter case makes up 63 % of the total consumption in this category.
- CP0941 “recreational and sporting services”: supplies in this category provided by NPOs are exempted from VAT. All other institutions and supplies not intended for physical exercise and competition are taxed at the reduced rate of 6 %. It is assumed that the latter make up 25 % of consumption in this category.
- CP1111 “restaurants, cafés and the like”: food and non-alcoholic beverages are taxed at the reduced rate of 12 %, whereas alcoholic beverages are taxed at the standard rate of 25 %. It is assumed that the former make up 70 % and the latter make up 30 % of the total consumption in this category.

**United Kingdom (UK)**

- CP0311 “clothing materials”: clothing materials for children aged under 14 are taxed at the zero rate, whereas clothing materials for the rest of the population are taxed at the standard rate of 20 %. It is assumed that the latter make up 80 % of the total consumption in this category.
- CP0321 “shoes and other footwear”: the same assumption as for CP0311 is made.

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<sup>35</sup> <http://finland.fi/Public/default.aspx?contentid=162833&nodeid=41808&culture=en-US> [04.04.2013]

- CP0322 “repair and hire of footwear”: the hire of footwear is taxed at the standard rate of 20 %, whereas the repair of footwear is taxed at the reduced rate of 5 %. It is assumed that the latter makes up 50 % of the total consumption in this category.
- CP0732 “passenger transport by road”: transport services using vehicles that fit ten or more passengers are taxed at the zero rate, whereas services using other vehicles are taxed at the standard rate of 20 %. It is assumed that 75 % of on road transport services use vehicles which fit ten or more passengers.