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TAXING HIGH INCOMES

A comparison of 41 countries

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Contents

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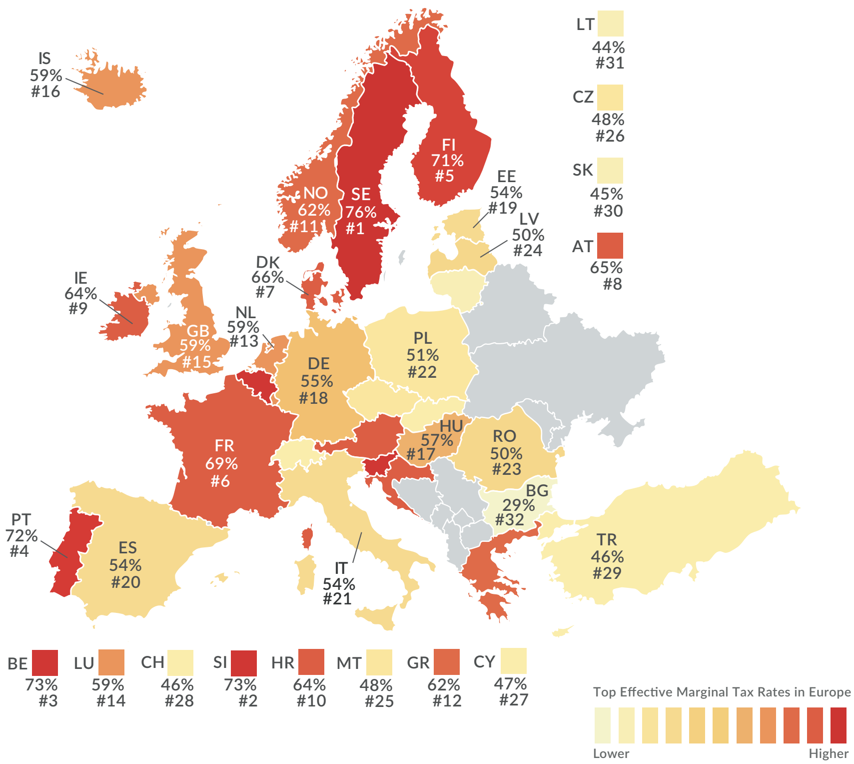
Summary

- This report compares top effective marginal tax rates on labour income in 41 OECD and EU countries.
- The top effective marginal tax rate is the total tax paid on the last dollar earned by a high-earning worker, taking social security contributions and consumption taxes into account in addition to income taxes. It is a measure of the degree of progressivity and redistribution in the tax system, and is of great policy interest.
- The highest marginal tax rate is found in Sweden, 76 percent, and the lowest in Bulgaria, 29 percent.
- In general, the Nordic and the Western European countries have the highest effective tax rates.

Top effective marginal tax rates in Europe



Introduction

High marginal tax rates on personal income have received renewed interest in recent years. For example, left-of-centre economists Emmanuel Saez and Thomas Piketty have proposed raising taxes on high earners to 80 percent (Saez & Piketty, 2013). American Congresswoman Alexandria Ocasio-Cortez has suggested a 70 percent top marginal tax rate (Kapur, 2019). The taxation of high-income earners is indicative of the overall level of redistribution in the tax system and of the magnitude of distortions the system causes. As such, it is perhaps the prime example of the conflict—central in public economics—between efficiency and equity in tax systems. Top marginal tax rates are therefore the subject of much academic interest (e.g., Saez, 2001).

The political discussion around taxing high-earners usually revolves around the income tax, but in order to get a complete picture of the tax burden high-income earners face, it is important to consider effective marginal tax rates. The effective marginal tax rate answers the question, "If a worker gets a raise such that the total cost to the employer increases by one dollar, how much of that is appropriated by the government in the form of income tax, social security contributions, and consumption taxes?" In principle, it does not matter how the tax burden is distributed among the various taxes—all taxes that affect the return to work should be taken into account.

Despite their policy importance, data on effective marginal tax rates is not readily available, since they are complicated to research and compute. To our knowledge, this is the only recent comprehensive compilation of top effective marginal tax rates in advanced economies.[1] Combining data mainly from international accounting firms, the OECD, and the European Commission, we are able to calculate marginal tax rates in the 41 members of the OECD and/or EU. The methodology is described below.

The full country ranking is shown in Figure 1. There is wide variation in the effective marginal tax rates: from Bulgaria, at 29 percent, to Sweden, at 76 percent. Twenty-nine countries have effective marginal tax rates higher than 50 percent. The average of all countries is 56 percent. Regional differences are analyzed in more detail in the next section.

Countries should be cautious about placing excessive tax burdens on high-income earners, for several reasons. In the short run, high marginal tax rates induce tax avoidance and tax evasion, and can cause high-income earners to reduce their work effort or hours. Under reasonable assumptions about behavioural responses to taxation, the Laffer curve—which shows the relationship between the tax rate and tax revenues—peaks around 60–75 percent for high incomes. This implies that many OECD countries are close to the tax revenue peak or have surpassed it (Lundberg, 2017a). In the long run, high marginal tax rates can affect career choices and migration decisions. They also lower the return to education and entrepreneurship.

Governments differ in the type of taxes they levy (see Table 1 below). All countries in the sample have a central income tax and some sort of consumption tax (state sales taxes in the United States and VAT in all other countries), but apart from that, they do not have much in common in how they tax high-income earners. Eleven countries impose local or regional income taxes and 13 have solidarity contributions or similar surtaxes on high incomes. Twenty-three levy uncapped social security contributions on employees and 26 on employers.

This underscores the need to consider the full spectrum of taxes when comparing marginal tax burdens across countries. For example, Hungary has a flat income tax of 15 percent while the United States has a progressive federal income tax with a top marginal tax rate of 37 percent. As payroll and consumption taxes are low in the United States, the effective marginal tax rate is not much higher, at 47 percent. In Hungary, on the other hand,

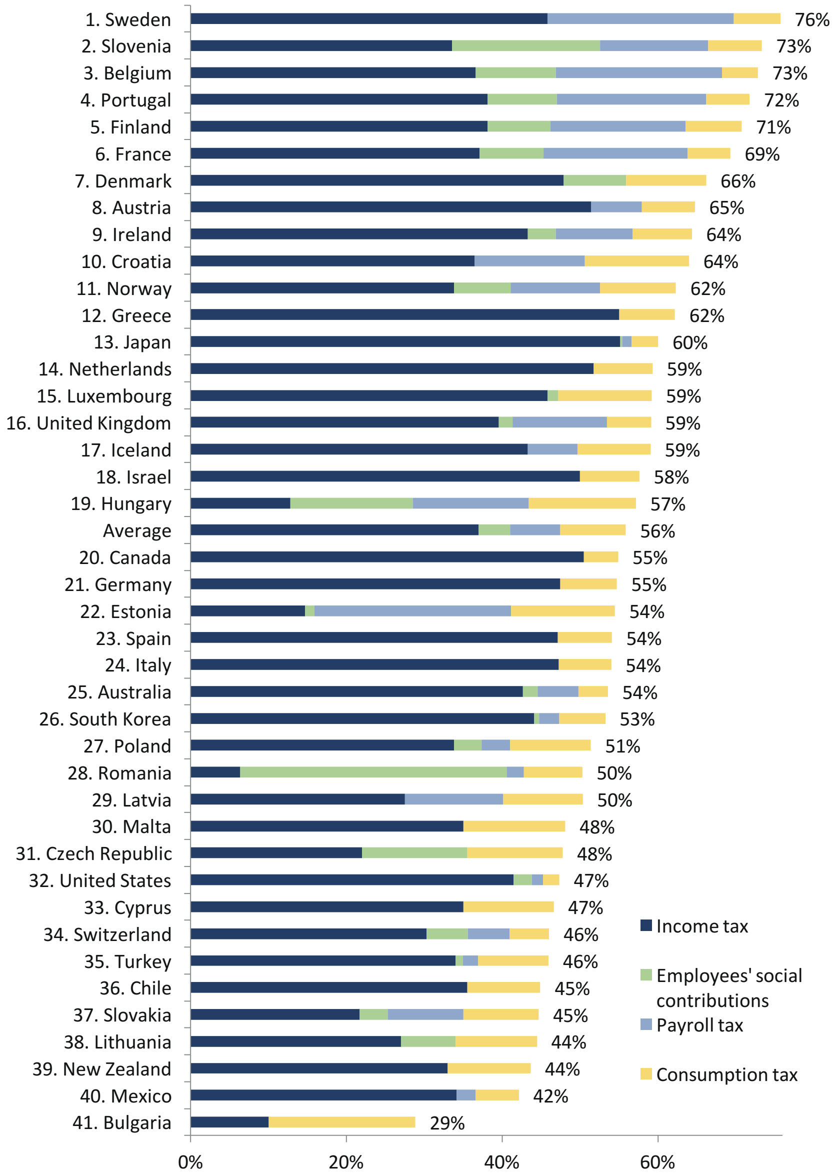
1 This report is an updated version of Fritz Englund & Lundberg (2017), which compared top marginal tax rates in 31 countries. OECD (2019a) calculates effective marginal tax rates, but not for top incomes and excluding consumption taxes.

substantial social security contributions are paid by both employers and employees. In addition, the country has the world's highest VAT. The result is an effective tax rate of 57 percent—13 places higher than the United States in the country rankings.

The six countries with the highest effective marginal tax rates all have high payroll taxes. This is in contrast to most countries, where for high-income earners payroll taxes are low or zero at the margin, as the social security benefits that they are often associated with have earnings ceilings. The levying of high payroll taxes has been criticized as a way of obfuscating true tax burdens, as payroll taxes are not included in taxable income and typically not reported to employees (Sanandaji & Wallace, 2011).

Countries also differ in where the top marginal tax rate starts to apply. Mapping this would be very complicated, as taxes may have different thresholds. For example, the threshold for solidarity taxes may be different from the top income tax bracket. It should also be noted that the top marginal tax rate is by no means always the highest tax rate, since social security contributions often only apply up to a ceiling.

Figure 1. Top effective marginal tax rates in 2019 and their composition.



Source: Own calculations, see text.

Table 1. Top-bracket tax rates for 2019 in percentages.

Country	Income tax			Employee social contributions		Payroll tax	Consump-tion tax*	Effective marginal tax rate
	Central	Local/ regional	Surtaxes	Deduc-tible	Nondeduc-tible			
Australia	45				2	5.52	8	53.59
Austria	55					6.9	16	64.73
Belgium	50	3.5		13.07		27.13	15	72.85
Bulgaria	10						21	28.83
Canada	33	17.46					9	54.88
Chile	35.5					0.02	15	44.88
Croatia	36		6.48			16.5	27	63.97
Cyprus	35						18	46.60
Czech Republic	15		7		13.5		19	47.77
Denmark	52.05			8			23	66.19
Estonia	20			1.6		33.8	23	54.48
Finland	31.25	19.88		9.79		21.04	20	70.74
France	45		4	7.2	2.9	22.67	15	69.29
Germany	45		2.48				14	54.73
Greece	45		10				16	62.18
Hungary	15				18.5	17.5	24	57.18
Iceland	31.8	14.44				6.85	19	59.04
Ireland	40		8		4	10.95	18	64.35
Israel	47		3				15	57.63
Italy	43	4.23					13	54.02
Japan	45	10	0.95	0.3		1.19	8	60.02
Latvia	23		8.47			14.5	17	50.35
Lithuania	27				6.98		16	44.45
Luxembourg	42		3.78		1.4		23	59.18
Malta	35						20	48.08
Mexico	35					2.49	9	42.13
Netherlands	51.75						16	59.29
New Zealand	33						16	43.64
Norway	38.2				8.2	13	21	62.32
Poland	32		4	2.45	1.22	3.81	18	51.37
Portugal	48		5	11		23.75	16	71.77
Romania	10			35		2.25	13	50.29
Slovakia	25			4		10.8	15	44.67
Slovenia	50			22.1		16.1	20	73.33
South Korea	41.16	4.12			0.65	2.6	11	53.23
Spain	22.5	24.61					13	54.10
Sweden	25	32.19	3			31.42	20	75.70
Switzerland	11.5	22.39		5.63		5.63	9	46.02
Turkey	35			1		2	14	45.95
United Kingdom	45				2	13.8	12	59.10
United States	37	5.08			2.35	1.45	4	47.33

See methodology and country notes for details.

Source: Own calculations based on PwC (2019), KPMG (2019b, 2019c), European Commission (2019), OECD (2019a) and country-specific sources (see country notes).

* Average tax rate on consumption in 2017, as a percentage of tax-inclusive prices.

Results by region

As illustrated in Figure 2, the Nordic and the Western European (narrowly defined) countries have the highest marginal tax rates, with an average of 67 and 61 percent, respectively.[2] However, there is substantial heterogeneity within these country groups. For example, in Western Europe, the highest marginal tax rate is 73 percent (Belgium) and the lowest is 46 percent (Switzerland). There are also large differences in how those taxes are levied. For example, among the Nordic countries, Sweden has an extraordinarily high payroll tax (31 percent) whereas Iceland and Denmark primarily collect their revenues via the ordinary income tax.

The Eastern European and the non-European, non-Anglo-Saxon countries surveyed (such as Mexico, Turkey, and Chile—not shown in Figure 2) boast the lowest marginal tax rates. The averages conceal the fact that ex-communist states have pursued radically different economic models and systems of taxation—so that the group contains both Slovenia (73 percent effective marginal tax rate, second only to Sweden) and Bulgaria (29 percent effective marginal tax rate, the lowest among all countries surveyed).

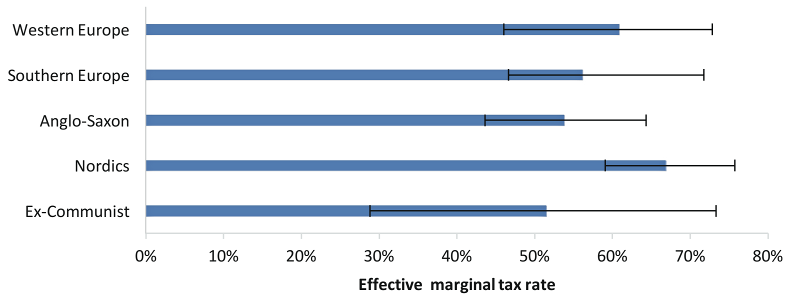
2 Countries are grouped by geography or historical pedigree. **Western Europe**: Austria, Belgium, France, Germany, Luxembourg, the Netherlands, Switzerland. **Southern Europe**: Greece, Italy, Portugal, Spain, Cyprus, Malta. **Anglo-Saxon**: the United Kingdom, Ireland, the United States, New Zealand, Australia, Canada. **Nordic**: Denmark, Finland, Iceland, Norway, Sweden. **Ex-Communist**: Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia, Latvia, Lithuania, Estonia, Slovenia, Croatia.

This is an updated version of a report that computed effective tax rates for 31 advanced economies in 2016 (Fritz Englund & Lundberg, 2017). Comparing the effective tax rates found in that report with the updated results we have found here, one can conclude that there has not been any observable overall trend in the effective marginal tax rates in the countries studied. Of the 31 countries studied in 2016, 16 had lower effective marginal tax rates in 2019 and 15 have raised their marginal tax rates during th period.

The largest decrease can be seen in the Anglo-Saxon countries, with an overall average decrease of one percentage point (see Figure 3). Around half of the Anglo-Saxon countries experienced this downward trend. In the United States, the top federal tax rate was lowered from 39.6 to 37 percent by the Tax Cuts and Jobs Act of 2017, but as the deduction for state and local taxes was capped at the same time, the effective marginal tax rate was only slightly reduced. New Zealand and Ireland saw small tax hikes. All Nordic countries except for one (Sweden) saw slight rate decreases.

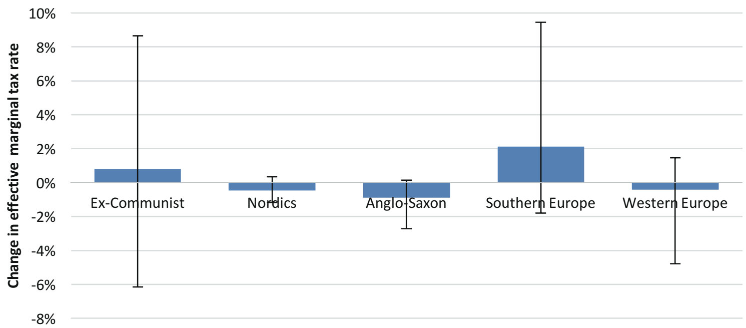
Some of the larger changes took place in Slovakia, which saw a five percentage-point increase in the top marginal tax rate due to the removal of its cap on employer's health insurance contributions; in Greece, which introduced a 10 percent solidarity contribution since the last report; and in Lithuania, which undertook major tax reforms that both restructured how taxes are collected (shifting from payroll tax to personal income tax) and lowered the overall tax burden on high-income earners. These changes greatly affect the average rate change for the ex-communist and Southern European countries.

Figure 2. Effective marginal tax rates in 2019 among the 41 countries surveyed grouped by geography or historical pedigree, showing the average, lowest, and highest tax rate for each group.



Source: Own calculations.

Figure 3. Percentage-point change in the effective marginal tax rates 2016-2019 among the 31 countries surveyed by Fritz Englund & Lundberg (2017) grouped by geography or historical pedigree.



Error bars represent max-min values in respective nation category.

Source: Own calculations.

Methodology

For each country and tax, we identify the tax rate in the highest tax bracket. Often, social security contributions (SSC) are only payable up to a ceiling. In this case, the marginal tax rate for high-income earners is zero. We use the national average of local and regional taxes, unless otherwise specified.

The main sources used are PwC (2019), KPMG (2019b, 2019c), European Commission (2019), and OECD (2019a). We have crosschecked multiple sources to minimize the risk of error. All tax rates are for 2019 except the average consumption tax rates, which are for 2017, or 2016 in a few cases.

We account for interactions between taxes. For example, solidarity surcharges and similar taxes are often levied as a percentage of the income tax liability. This implies that the effective marginal tax rate is increased by the solidarity surcharge percentage multiplied by the tax rate in the top income tax bracket.

We also take into account whether employee social security contributions are deductible from income tax. If they are deductible, taxable income for income tax purposes is reduced by the amount of the social security contribution. Therefore, the personal tax rate is computed in this way:

personal tax = income tax × (1 − deductible employee SSC's) + deductible employee SSC's + non-deductible employee SSC's.

Tax rates are expressed as a percentage of the gross wage, not including payroll taxes (also called employer social security contributions). Therefore, tax rates need to be calculated in relation to the employer's total labour cost, including payroll tax.

We include consumption taxes because they reduce the purchasing power of wage earners and thus affect the return to earning more. In principle, it does not matter whether taxation takes place when income is earned or when it is consumed, as the ultimate purpose of work is consumption. Consumption taxes are calculated as a fixed proportion of disposable income.

$$\text{EMTR}= \frac{\text{personal tax + consumption tax} \times (1 - \text{personal tax}) + \text{payroll tax}}{1 + \text{payroll tax}}$$

To summarize, the effective marginal tax rate (EMTR) is calculated as The effective marginal tax rate can also be called the marginal tax wedge, because it drives a wedge between what the employer pays and how much the employee can consume.

For example, in Sweden, the top income tax rate is 60 percent, the payroll tax rate 31 percent, and the average consumption tax rate 20 percent. There are no social security contributions on the employee side. Hence the effective marginal tax rate can be calculated as

$$\text{EMTR}= \frac{60\% + 20\% \times (1 - 60\%) + 31\%}{1 + 31\%} = 76\%$$

This is illustrated in Figure 4.

We compute the consumption tax rate from aggregate data, unlike the other taxes, where the rates we present are the ones given by law. The reason is that taxes on consumption vary by type of good. It is therefore necessary to use an average. As it is complicated to calculate the average consumption tax faced specifically by high-income earners, we use the average for all consumption. The assumption is that high-income earners pay the same average consumption tax as the rest of the population. Calculations on Swedish data by Lundberg (2017b) indicate that this is not too far from the truth.

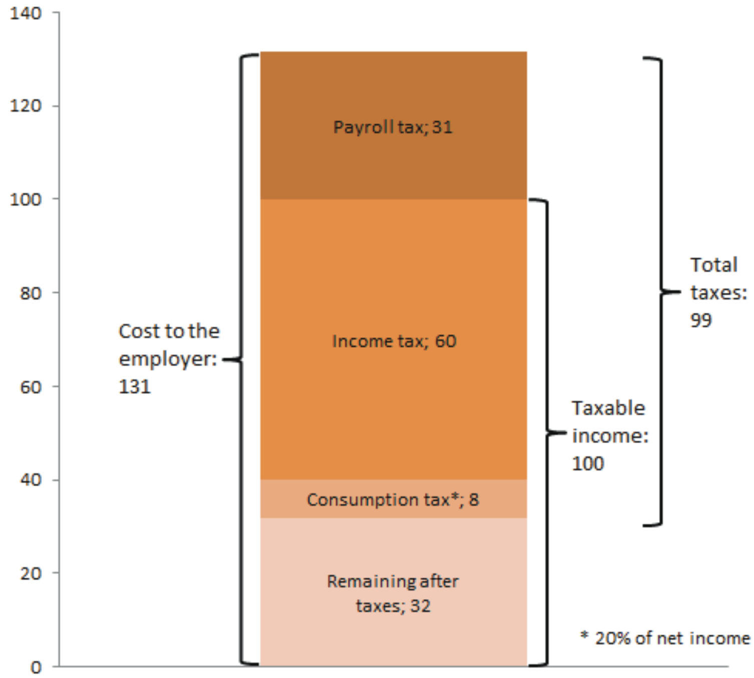
The consumption tax rate is calculated from OECD data using the well-used formula proposed by Mendoza et al. (1994): (general sales taxes + excise duties) / (private consumption expenditure + government consumption expenditure − government employee compensation). This takes into account the fact that some consumption taxes are paid by the government to itself. The consumption tax rate is expressed as tax-inclusive, i.e., as a proportion of post-tax prices. Revenue and employee compensation data for non-OECD members Bulgaria, Croatia, Cyprus, Malta, and Romania was obtained from Eurostat. All consumption tax data is for 2017 except Australia, Greece, and Mexico, where the data is for 2016.

In defining what a tax is, we follow OECD (2019a) and include “compulsory social security contributions paid by employees and employers to general government or to social security funds under the effective control of government”. Thus, compulsory payments to entities outside of government control, such as pension funds or labour unions, are not included. Such payments have more of a character of compulsory insurance or saving than taxation.

The level of social insurance benefits—notably, public pensions—a taxpayer receives often depends on previous income. This increases the return to work at the margin and could be regarded as a reduction of the effective marginal tax rate. However, social insurance benefits are capped in most cases. Therefore, any social security contributions paid on high incomes can usually be regarded as pure taxes.

However, a small number of countries—of the OECD members, the Czech Republic, Finland, Estonia, and Portugal (OECD, 2017a)—have no caps on pensionable earnings in their public pension schemes. We have not attempted to calculate the implicit value of such benefits to top earners due to the complexity associated with that approach. This feature of the pension system should be considered when drawing conclusions from our results.

Figure 4. Illustration of the total tax burden on a 100 kronor income increase in Sweden. Total taxes are 99 kronor out of the 131 kronor paid by the employer; hence the effective marginal tax rate is 76 percent.



Total taxes are 99 kronor out of the 131 kronor paid by the employer; hence the effective marginal tax rate is 76 percent.

Source: Own calculations.

Country notes

The country notes consist of two parts. First, the calculation of the effective marginal tax rate is described in plain language. Refer to the table for the exact tax rates. Second, the sources and methodology for obtaining the tax rates are clarified, if necessary. For example, it is important to establish whether social security contributions are capped or not, and, on the employee side, deductible or not. In each scenario, the employee described is earning income in the top tax bracket.

Australia

In Australia, the payroll tax on a 100 dollar raise is 6 dollars. The employee pays 2 dollars in social security contributions and 45 dollars in income tax. The employee now has 53 dollars to spend. The average consumption tax rate in Australia is 8 percent, so approximately 4 dollars of this will be consumption taxes. Total taxes are therefore 57 dollars, which is 54 percent of the cost to the employer, 106 dollars. The top effective marginal tax rate is therefore 54 percent.

The employee social contribution refers to the Medicare levy (2 percent) payable by all taxpayers with taxable income greater than $21,980. In addition, a Medicare levy surcharge of 1–1.5 percent is payable by those with incomes greater than $90,000 (singles) or $180,000 (couples or families), unless one holds an appropriate level of private hospital cover with a registered health fund. We do not include this surcharge in the table.

The payroll tax rate is the simple average of the states' top rates (information taken from state websites), computed as follows:

- New South Wales: 5.45%
- Victoria: 4.85%
- Queensland: 4.95% (large employers)
- South Australia: 4.95% (large employers)
- Western Australia: 5.5% (for payrolls between $850,000 and 100 million)
- Tasmania: 6.1% (large employers)
- Northern Territory: 5.5%
- Australian Capital Territory: 6.85%

Simple average: 5.52%

When computing the average consumption tax, no employee compensation data was available, so this was assumed to correspond to 56 percent of government expenditures, which is the average for all countries (and close to New Zealand's number).

Austria

In Austria, the payroll tax on a 100 euro raise is 7 euros. The employee pays 55 euros in income tax. The employee now has 45 euros to spend. The average consumption tax rate in Austria is 16 percent, so approximately 7 euros of this will be consumption taxes. Total taxes are therefore 69 euros, which is 65 percent of the cost to the employer, 107 euros. The top effective marginal tax rate is therefore 65 percent.

The payroll tax is the sum of the 3.9 percent Family Burdens Equalisation Levy and the 3 percent municipal payroll tax on monthly gross salaries and wages (PwC, 2019; OECD, 2019a).

Social security contributions are paid by both employers and employees, but are capped.

Belgium

In Belgium, the payroll tax on a 100 euro raise is 27 euros. The employee pays 13 euros in social security contributions. These can be deducted, bringing taxable income to 87 euros. The top income tax rate is 54 percent, so the income tax liability is 47 euros. The employee now has 40 euros to spend. The average consumption tax rate in Belgium is 15 percent, so approximately 6 euros of this will be consumption taxes. Total taxes are therefore 93 euros, which is 73 percent of the cost to the employer, 127 euros. The top effective marginal tax rate is therefore 73 percent.

Personal income is taxed both on the federal (national) and the regional (Flanders, Wallonia or Brussels) levels. Federal rates are progressive up to 50 percent and are increased by communal surcharges ranging from 0 percent to 9 percent of the federal tax bill. OECD (2019a) calculates the average marginal income tax rate to be 53.5 percent.

However, the base used to calculate the regional tax liability varies across regions. Regional authorities are since 2015 permitted to apply surcharges on the "reduced federal rate"—equaling the federal tax liability (after federal tax deductions, but before federal tax credits) less an "autonomy factor" of 24.957 percent. The varying surcharges (equaling 33.257 percent in Flanders and Wallonia, and 32.591 percent in Brussels) applied by regional authorities on this "reduced rate" has the effect that the 50 percent federal tax rate in practice varies by around half a percentage point. (Deloitte, 2019)

Employees pay 13.07 percent of total gross compensation, with no cap, in social security tax. This consists of a 0.87 percent unemployment insurance contribution, a 1.15 percent health insurance indemnities contribution, a 3.55 percent health care contribution, and a 7.50 percent pensions contribution. Employers pay 27.13 percent (EC, 2019) of gross compensation, without cap, in social security tax.

Bulgaria

On a 100 lev raise, the employee pays 10 levs in income tax. The employee now has 90 levs to spend. The average consumption tax rate in Bulgaria is 21 percent, so approximately 19 levs of this will be consumption taxes. Total taxes are therefore 29 levs, and the top effective marginal tax rate is 29 percent.

Both the deductible employee social contribution (13.78 percent) and the payroll tax (18.92 percent) are capped at an income of BGN 3,000 per month.

Canada

On a 100 dollar raise, the employee pays 50 dollars in income tax. The employee now has 50 dollars to spend. The average consumption tax rate in Canada is 9 percent, so approximately 4 dollars of this will be consumption taxes. Total taxes are therefore 55 dollars, and the top effective marginal tax rate is 55 percent.

The regional tax rate chosen (17.46 percent) is a simple average of the provincial top marginal tax rates. Two provinces, Ontario and British Columbia, have additional surtaxes which apply to the regional tax. These surtaxes have been included when calculating the average regional tax, as shown below.

The regional Ontario surtax is the product of the cumulative surtaxes (36 percent and 20 percent, totalling 56 percent) and the Ontario regional tax (13.16 percent of net income), hence (20% + 36%) × 13.16% = 7.37 percent. For our purposes, Ontario therefore levies a regional income tax totaling 20.53 percent (7.37% + 13.16%) on the marginal income of high income earners.

British Columbia's local surtax simply adds an additional tax bracket of 16.8 percent on incomes greater than C$150,000.

A 6.72 percent deductible employee social security tax is capped at approximately C$3,609 per annum (KPMG, 2019c).

Chile

On a 100 peso raise, the employee pays 36 pesos in income tax. The employee now has 65 pesos to spend. The average consumption tax rate in Chile is 15 percent, so approximately 9 pesos of this will be consumption taxes. Total taxes are therefore 45 pesos, and the top effective marginal tax rate is 45 percent.

As of 25 July 2019, the Chilean top income tax rate is 35.5 percent (PwC, 2019; Santander, 2019).

The employee social security contribution rate ranges from 17.41 percent to 18.48 percent. It is capped at CLP 26,205 per annum. In addition, employees pay a 0.6 percent unemployment insurance contribution, which is capped at CLP 39,324 per annum.

The employer is required to contribute to unemployment insurance (2.4 percent), accidental and work diseases insurance (between 0.95 percent and 3.4 percent), and survival and disability insurance (1.41 percent). The first is capped at approximately CLP 39,324 per annum and the latter two at approximately CLP 26,205 per annum. Lastly, employers make contributions to the social assistance fund (Fondo SANNA). As of 2019, the uncapped contribution rate is 0.02 percent of the employee gross income.

Croatia

In Croatia, the payroll tax on a 100 kuna raise is 17 kuna. The employee pays 42 kuna in income tax. The employee now has 58 kuna to spend. The average consumption tax rate in Croatia is 27 percent, so approximately 16 kuna of this will be consumption taxes. Total taxes are therefore 75 kuna, which is 64 percent of the cost to the employer, 117 kuna. The top effective marginal tax rate is therefore 64 percent.

The surtax (18 percent) is local, and applicable to Zagreb. It is calculated on the central tax liability, hence: 18% × 36% = 6.48 percent.

Employee social security contributions are levied at a rate of 20 percent of gross salaries (15 percent Pillar I payments, 5 percent Pillar II payments). These contributions are capped monthly at HRK 50,688 for Pillar I and II payments, and annually at HRK 608,256 for Pillar I payments. The employer health insurance contribution (16.5 percent of gross salary) is not capped.

Cyprus

On a 100 euro raise, the employee pays 35 euros in income tax. The employee now has 65 euros to spend. The average consumption tax rate in Cyprus is 18 percent, so approximately 12 euros of this will be consumption taxes. Total taxes are therefore 47 euros, and the top effective marginal tax rate is 47 percent.

Both employers and employees are subject to an 8.3 percent social security tax on gross salary—capped at €4,554 per month.

Czech Republic

On a 100 koruna raise, the employee pays 14 korun in social security contributions and 22 korun in income tax. The employee now has 65 korun to spend. The average consumption tax rate in Czech Republic is 19 percent, so approximately 12 korun of this will be consumption taxes. Total taxes are therefore 48 korun, and the top effective marginal tax rate is 48 percent.

On top of a 15 percent flat personal income tax, a 7 percent solidarity contribution surtax is due on income over the social security cap (PwC, 2019).

The social insurance contribution is 6.5 percent for the employee and 25 percent for the employer, both capped at CZK 1,569,552 annually (KPMG, 2019b). The scheme has two components. First, a basic flat-rate pension contribution, and second, an earnings-related contribution. Although the earnings-related part is strongly distributional, so that only 10 percent of income above CZK 20,500 is used to calculate the base on which pensions are assessed, the scheme technically lacks a benefits ceiling.

The uncapped health insurance contribution stands at 4.5 percent for the employee and 9 percent for the employer, in total 13.5 percent. Uniquely for the Czech Republic, the income tax base includes employer social contributions. Computationally, this is equivalent to viewing employer social contributions as non-deductible employee social contributions. Therefore, we show the full 13.5 percent health insurance contribution in this column in the table.

Denmark

On a 100 krona raise, the employee pays 8 kronor in social security contributions. These can be deducted, bringing taxable income to 92 kronor. The top income tax rate is 52 percent, so the income tax liability is 48 kronor. The employee now has 44 kronor to spend. The average consumption tax rate in Denmark is 23 percent, so approximately 10 kronor of this will be consumption taxes. Total taxes are therefore 66 kronor, and the top effective marginal tax rate 66 percent.

The average municipal income tax is 24.93 percent of gross income (PwC, 2019) and the top national marginal tax rate is 27.16 percent. However, the sum of central and local tax rates is capped at 52.05 percent. We show this number in the central income tax column.

The employee pays a deductible labour market contribution of 8 percent, and contributes approximately DKK 1,080 per year to the labour market supplementary pension fund (ATP). In general, the employer also pays a number of minor contributions, including to the ATP, amounting to approximately DKK 9,000 per year.

Estonia

In Estonia, the payroll tax on a 100 euro raise is 34 euros. The employee pays 2 euros in social security contributions. These can be deducted, bringing taxable income to 98 euros. The top income tax rate is 20 percent, so the income tax liability is 20 euros. The employee now has 79 euros to spend. The average consumption tax rate in Estonia is 23 percent, so approximately 18 euros of this will be consumption taxes. Total taxes are therefore 73 euros, which is 54 percent of the cost to the employer, 134 euros. The top effective marginal tax rate is therefore 54 percent.

Employer social contributions consist of an old-age, work-incapacity and survivors' pension contribution (20 percent), a health care contribution (13 percent), and an unemployment contribution (0.8 percent)—totaling 33.8 percent, with no earnings cap on contributions.

The employee pays a 1.6 percent unemployment insurance contribution, which is uncapped and deductible from the income tax base (PwC, 2019).

Finland

In Finland, the payroll tax on a 100 euro raise is 21 euros. The employee pays 10 euros in social security contributions. These can be deducted, bringing taxable income to 90 euros. The top income tax rate is 51 percent, so the income tax liability is 46 euros. The employee now has 44 euros to spend. The average consumption tax rate in Finland is 20 percent, so approximately 9 euros of this will be consumption taxes. Total taxes are therefore 86 euros, which is 71 percent of the cost to the employer, 121 euros. The top effective marginal tax rate is therefore 71 percent.

The local tax refers to the weighted average municipal tax rate, 19.88 percent (ETK, 2019b).

The deductible employee social security contribution consists of a pension insurance contribution which amounts to 6.75 percent of gross income for employees ages 17 to 52 years or 63 to 67 years and 8.25 percent for employees ages 53 to 62 years, as well as an employment insurance contribution of 1.5 percent (Nordisk eTax, 2017; EC, 2019). Employees also pay a health insurance contribution, amounting to 1.54 percent (ETK, 2019c). This brings the total employee social security contribution for people ages 17 to 52 years to 9.79 percent, which is deductible from the income tax base (Vero, 2018).

In addition, employers are required to contribute 20.32 percent of gross wages to a social security scheme, covering pensions (17.35 percent average for the private sector), health insurance (0.77 percent), unemployment insurance (2.05 percent average), accident insurance (0.8 percent average), and group life insurance (0.07 percent average). (EC, 2019; ETK, 2019a).

France

In France, the payroll tax on a 100 euro raise is 23 euros. The employee pays 7 euros in deductible social security contributions, bringing taxable income to 93 euros. The top income tax rate is 49 percent, so the income tax liability is 45 euros. The employee also pays 3 euros in non-deductible social security contributions. The employee now has 44 euros to spend. The average consumption tax rate in France is 15 percent, so approximately 7 euros of this will be consumption taxes. Total taxes are therefore 85 euros, which is 69 percent of the cost to the employer, 123 euros. The top effective marginal tax rate is therefore 69 percent.

On top of the 45 percent personal income tax rate, a 4 percent surtax (*revenu fiscal de référence*) applies to high incomes.

The employee social security contribution consists of three parts: First, the 9.2 percent Social Contribution (*contribution sociale généralisée*). Of this contribution, 6.8 percent is deductible and 2.4 percent is non-deductible (URSAF, 2019). Second, the 0.5 percent social security debt reimbursement contribution (*contribution pour le remboursement de la dette sociale*). This is non-deductible. Up to four times the social security ceiling, both of these rates only apply to 98.25 percent of the gross salary. Third, a deductible 0.4 percent old-age insurance contribution (EC, 2019). This brings total employee social security contributions to a deductible contribution of 7.2 percent plus a non-deductible contribution of 2.9 percent (Cleiss, 2019).

At the margin, the employer social security contribution rate consists of a compulsory old-age insurance contribution amounting to 1.9 percent of total earnings, a family benefits contribution of 5.25 percent, an accidents at work insurance contribution which varies based on company size and risks but averages 2.22 percent (OECD, 2019a), a health-maternity-disability-death contribution of 13 percent, and an additional 0.3 percent contribution known as the *contribution solidarité autonomie* (CSA)—for a total of 22.67 percent.

Other social security contributions, such as the unemployment contribution (4.05 percent up to €13,508), the contribution for workplace accidents (on average 2.22 percent), the wage guarantee insurance (ASG, 0.15 percent up to €13,508), and the supplementary retirement pension contribution under the Agirc-Arrco scheme (14.57 percent up to €27,016), are all capped.

Germany

On a 100 euro raise, the employee pays 47 euros in income tax. The employee now has 53 euros to spend. The average consumption tax rate in Germany is 14 percent, so approximately 7 euros of this will be consumption taxes. Total taxes are therefore 55 euros, and the top effective marginal tax rate is 55 percent.

Employees are subject to a 5.5 percent solidarity surcharge tax. This is imposed as a percentage of total income tax liability (where the top tax rate is 45 percent), for an effective top surtax rate of 2.48 percent.

Both employers and employees make a 9.3 percent contribution to the employee pension fund (up to €78,000), a 1.5 percent sickness insurance contribution (up to €78,000), a 1.5 percent unemployment insurance contribution (up to €78,000), and a long-term care insurance contribution of 1.275 percent (up to €53,100).

The employer is also required to pay a statutory occupational accident insurance (*Berufsgenossenschaften*). According to the German Social Accident Insurance organisation (DGUV), 1.16 percent is an indicative average contribution rate (GTAI, 2019). The rate varies depending on the employee annual pay, the hazard level of the work, and the merit rating of the enterprise itself. This scheme is managed by private insurance companies that have “their own approach to their policy towards economic and noneconomic incentives (various premium rates, special awards)” (OECD, 2019b). These vary by sector. Like OECD (2019b), we do not classify this as a tax and therefore do not include it in the table.

Greece

On a 100 euro raise, the employee pays 55 euros in income tax. The employee now has 45 euros to spend. The average consumption tax rate in Greece is 16 percent, so approximately 7 euros of this will be consumption taxes. Total taxes are therefore 62 euros, and the top effective marginal tax rate is 62 percent.

The great majority of individuals are compulsorily insured under the Unified Social Security Fund (EFKA). Employers pay 25.06 percent of the employee gross earnings into this scheme. In addition, employees pay 16 percent of gross earnings into the scheme. The maximum insurable earnings used to calculate the monthly insurance contributions is capped at €5,860.

Hungary

In Hungary, the payroll tax on a 100 forint raise is 18 forints. The employee pays 19 forints in social security contributions and 15 forints in income tax. The employee now has 67 forints to spend. The average consumption tax rate in Hungary is 24 percent, so approximately 16 forints of this will be consumption taxes. Total taxes are therefore 67 forints, which is 57 percent of the cost to the employer, 118 forints. The top effective marginal tax rate is therefore 57 percent.

Employees pay an 18.5 percent social security contribution, which cannot be deducted for income tax purposes. As of 1 July 2019, employers pay a 17.5 percent social contribution, without ceiling (PwC, 2019).

Iceland

In Iceland, the payroll tax on a 100 króna raise is 7 krónur. The employee pays 46 krónur in income tax. The employee now has 54 krónur to spend. The average consumption tax rate in Iceland is 19 percent, so approximately 10 krónur of this will be consumption taxes. Total taxes are therefore 63 krónur, which is 59 percent of the cost to the employer, 107 krónur. The top effective marginal tax rate is therefore 59 percent.

The local government income tax rate is flat, but varies among municipalities. The lowest rate is 12.44 percent, the highest is 14.52 percent, and the average rate in 2018 is 14.44 percent (OECD, 2019a).

Employees are subject to a mandatory fixed tax of ISK 11,454 provided that their incomes are sufficiently high.

The mandatory employee pension contribution (4 percent, PwC, 2019) is not included as a social contribution for our purposes, as we regard it as compulsory saving rather than taxation.

Beyond a 6.75 percent social security tax on total wages, employers are subject to pay the “Promote Iceland Market Fee” and the “Wage Guarantee Fund Fee”—both of which amount to 0.05 percent, bringing the total employer social security contribution to 6.85 percent.

Ireland

In Ireland, the payroll tax on a 100 euro raise is 11 euros. The employee pays 4 euros in social security contributions and 48 euros in income tax. The employee now has 48 euros to spend. The average consumption tax rate in Ireland is 18 percent, so approximately 8 euros of this will be consumption taxes. Total taxes are therefore 71 euros, which is 64 percent of the cost to the employer, 111 euros. The top effective marginal tax rate is therefore 64 percent.

On top of the 40 percent top-bracket personal income tax, employees are subject to a progressive surtax known as the Universal Social Charge. On incomes over €70,044.01, the applicable rate is 8 percent.

The employee social security contribution (Pay-Related Social Insurance, PRSI) is 4 percent of gross income, without cap, and cannot be deducted from taxable income. For the employer, the PRSI contribution rate is 10.95 percent (PwC, 2019) as of 2019.

Israel

On a 100 shekel raise, the employee pays 50 shekels in income tax. The employee now has 50 shekels to spend. The average consumption tax rate in Israel is 15 percent, so approximately 8 shekels of this will be consumption taxes. Total taxes are therefore 58 shekels, and the top effective marginal tax rate is 58 percent.

The top marginal tax rate is 47 percent (OECD, 2019a). In addition, incomes above ILS 641,880 per year are subject to a 3 percent surtax on gross income (KPMG, 2019b). In effect, this raises the top marginal tax rate to 50 percent.

Employers are required to make a 7 percent contribution of gross earnings to the National Insurance scheme and a 5 percent health insurance contribution for incomes exceeding 60 percent of the national average wage. For incomes exceeding 60 percent of the average wage, employees make a 7.5 percent contribution of gross wage to the National Insurance

Scheme. All of these contributions are capped at an income of ILS 43,370 per month.

Italy

On a 100 euro raise, the employee pays 47 euros in income tax. The employee now has 53 euros to spend. The average consumption tax rate in Italy is 13 percent, so approximately 7 euros of this will be consumption taxes. Total taxes are therefore 54 euros, and the top effective marginal tax rate is 54 percent.

The regional surtax ranges from 1.23 to 3.33 percent and the municipal surtax from 0 to 0.9 percent. We use the tax rate that applies in Rome—3.33 and 0.9 percent, respectively—totaling 4.23 percent.

Employee social security contributions are on average 9.49 percent on incomes up to €46,630. On incomes ranging between €46,630 and €101,427, contributions are on average 10.49 percent. On incomes above €101,427 per year, the employee pays a fixed amount. Employers make 31.58 percent contributions on salaries up to €101,427, and a fixed amount on salaries above that threshold. Thus, all social security contributions are effectively capped.

Japan

In Japan, the payroll tax on a 100 yen raise is 1.19 yen. The employee pays 0.3 yen in social security contributions. These can be deducted, bringing taxable income to 99.7 yen. The top income tax rate is 56 percent, so the income tax liability is 56 yen. The employee now has 44 yen to spend. The average consumption tax rate in Japan is 8 percent, so approximately 3 yen of this will be consumption taxes. Total taxes are therefore 61 yen, which is 60 percent of the cost to the employer, 101 yen. The top effective marginal tax rate is therefore 60 percent.

The local income tax is imposed at a flat rate of 10 percent across all regions.

The 2.1 percent surtax is computed as a proportion of the central tax liability, for an effective rate of 2.1% × 45% = 0.945 percent.

Employees are required to contribute 9.15 percent of total remuneration to the social security pension scheme (capped at JPY 620,000), 5 percent to the sickness insurance scheme (capped at JPY 1,390,000), and 0.3 percent to the unemployment insurance scheme (uncapped). These social contributions are all deductible (PwC, 2019).

Employers are required to contribute 9.15 percent of total remuneration to the pension scheme (capped at JPY 620,000), and 4.95 percent to the sickness insurance scheme (capped at 1,390,000) (PwC, 2019). Additionally, employers make an uncapped contribution ranging from 0.25 percent to 8.8 percent of total remuneration to the work injury insurance scheme depending on the industry's accident rate (OECD, 2019a). We have chosen 0.30 percent as a premium representative of most service jobs with no particular levels of danger, like finance, insurance, and real estate (HTM, 2019) (PwC, 2019). Lastly, employers pay 0.6 percent of earnings to the unemployment insurance scheme (varies among industries, uncapped), and 0.29 percent to the family allowance scheme (OECD, 2019a). The latter three contributions bring the total uncapped employer contribution to 1.19 percent.

Latvia

In Latvia, the payroll tax on a 100 euro raise is 15 euros. The employee pays 31 euros in income tax. The employee now has 69 euros to spend. The average consumption tax rate in Latvia is 17 percent, so approximately 12 euros of this will be consumption taxes. Total taxes are therefore 58 euros, which is 50 percent of the cost to the employer, 115 euros. The top effective marginal tax rate is therefore 50 percent.

As of 2019, the top marginal tax rate for ordinary wage earners is 23 percent.

Both employee and employer social security contributions are capped at EUR 62,800. However, a 25.5 percent solidarity tax is levied on incomes above this ceiling. This tax is split between the employer (14.5 percent) and the employee (11 percent, deductible) (Email communication, Latvian Ministry of Finance).

We present the employee solidarity tax as a surtax. As it is deductible, the effective rate is 11% × (1 – 23%) = 8.47 percent.

Adding complexity, the solidarity tax actually paid in 2019 equals the prior year's higher rate (35.09 percent). The overpaid amount is refunded to the employer in 2020.

Lithuania

On a 100 euro raise, the employee pays 7 euros in social security contributions and 27 euros in income tax. The employee now has 66 euros to spend. The average consumption tax rate in Lithuania is 16 percent, so approximately 10 euros of this will be consumption taxes. Total taxes are therefore 44 euros, and the top effective marginal tax rate is 44 percent.

In 2019, the top marginal tax rate is 27 percent (EC, 2019). The tax rate increased as a result of a 2018 tax reform, which included a tax shift from social security contributions to personal income taxes.

The employee pays a capped social insurance contribution of 12.52 percent and an uncapped 6.98 percent health insurance contribution, both of which are non-deductible (EC, 2019). Since the tax reform, payroll taxes are low and capped (1.45 percent up to €136,344) (EC, 2019; KPMG, 2019; PwC, 2019).

Luxembourg

On a 100 euro raise, the employee pays 1 euro in social security contributions and 46 euros in income tax. The employee now has 53 euros to spend. The average consumption tax rate in Luxembourg is 23 percent, so approximately 12 euros of this will be consumption taxes. Total taxes are therefore 59 euros, and the top effective marginal tax rate is 59 percent.

The solidarity surcharge is 9 percent of central income tax liability, for an effective rate of 42% × 9% = 3.78 percent.

The employee contribution to the sickness insurance scheme (3.05 percent) and the pension scheme (8 percent) are payable up to an annual salary of €124,266. Additionally, employees are subject to a non-deductible dependence insurance fee (1.4 percent, uncapped) calculated on gross salaries minus an annual deduction of €6,213.

Employers pay into to the sickness scheme (3.05 percent), the health at work scheme (0.11 percent), the accident insurance scheme (ranging between 0.72 percent and 1.04 percent), the pension fund (8 percent), and the mutual insurance scheme (ranging between 0.72 percent and 2.79 percent). These taxes are capped at an annual salary of €124,266.

Malta

On a 100 euro raise, the employee pays 35 euros in income tax. The employee now has 65 euros to spend. The average consumption tax rate in Malta is 20 percent, so approximately 13 euros of this will be consumption taxes. Total taxes are therefore 48 euros, and the top effective marginal tax rate is 48 percent.

Both employee and employer make social security contributions amounting to 10 percent of the gross wage. The employer is also required to make an additional 0.3 percent contribution to the maternity leave fund. These contributions are all capped (Government of Malta: Office of the Commissioner for Revenue, 2019).

Mexico

In Mexico, the payroll tax on a 100 peso raise is 2 pesos. The employee pays 35 pesos in income tax. The employee now has 65 pesos to spend. The average consumption tax rate in Mexico is 9 percent, so approximately 6 pesos of this will be consumption taxes. Total taxes are therefore 43 pesos, which is 42 percent of the cost to the employer, 102 pesos. The top effective marginal tax rate is therefore 42 percent.

The employee social security contribution for sickness and maternity insurance amounts to 0.625 percent of the worker's monthly wage plus 0.4 percent of the amount in excess of three times the inflation indexing benchmark, UMA. The salary used to calculate the social security contribution is capped at 25 times the UMA.

For sickness and maternity insurance, employers pay 20.40 percent of the UMA, plus 1.10 percent of gross salaries in excess of 3 UMAs, plus 1.75 percent of the employee monthly wage. For disability and life insurance, employers pay 1.75 percent of the wage and for the social services and nursery scheme, 1 percent of the wage. These social security contributions are calculated on a salary no greater than 25 UMAs, and are thus capped.

Although no federal payroll tax applies, most states apply a local payroll tax with an average rate of 2.49 percent in 2018 (OECD, 2019a).

Netherlands

On a 100 euro raise, the employee pays 52 euros in income tax. The employee now has 48 euros to spend. The average consumption tax rate in the Netherlands is 16 percent, so approximately 8 euros of this will be consumption taxes. Total taxes are therefore 59 euros, and the top effective marginal tax rate is 59 percent.

The employee social contribution is made up of a 17.9 percent contribution to the old age pension scheme, a 0.10 percent contribution to the orphans and widows pension scheme, and a 9.65 percent contribution to the long-term care scheme, for a total of 27.65 percent. These contributions are all capped at an income of €34,300 (Schalekamp, 2019).

Employers pay 6.95 percent to the Health Insurance fund (Zvw), 3.60 percent to the Unemployment Insurance fund (WW), 0.77 percent to the WW Sector Fund, 6.96 percent for Disability Insurance (WAO/WIA), and 1.25 percent to the return to Work Fund, for a total of 19.53 percent. All employer social contributions are capped at an income of €55,927 (Schalekamp, 2019).

New Zealand

On a 100 dollar raise, the employee pays 33 dollars in income tax. The employee now has 67 dollars to spend. The average consumption tax rate in New Zealand is 16 percent, so approximately 11 dollars of this will be consumption taxes. Total taxes are therefore 44 dollars, and the top effective marginal tax rate is 44 percent.

New Zealand has no payroll tax or social security contributions, although employers pay a small, capped accident insurance fee.

Norway

In Norway, the payroll tax on a 100 krone raise is 13 kroner. The employee pays 8 kroner in social security contributions and 38 kroner in income tax. The employee now has 54 kroner to spend. The average consumption tax rate in Norway is 21 percent, so approximately 11 kroner of this will be consumption taxes. Total taxes are therefore 70 kroner, which is 62 percent of the cost to the employer, 113 kroner. The top effective marginal tax rate is therefore 62 percent.

Ordinary income (*alminnelig inntekt*), which consists of all taxable income (wages, pensions, business income, taxable share income, and other income) minus deductions (losses, debt interest, etc.), is taxed at a flat rate of 22 percent (PwC, 2019). This is split among a county tax, a municipal tax, and a state tax. In addition, a progressive “bracket tax” (*trinnskatt*) is levied on “personal income” (mainly generated from employment). Personal income exceeding NOK 964,800 is subject to a bracket tax of 16.2 percent. Thus, in total, the marginal income tax rate for high-income earners amounts to 38.20 percent.

Employees also pay a non-deductible social security contribution at a rate of 8.2 percent.

The payroll tax varies by region—13 percent represents a weighted average (OECD, 2019a).

Poland

In Poland, the payroll tax on a 100 zloty raise is 4 zlotys. The employee pays 2 zlotys in social security contributions. These can be deducted, bringing taxable income to 98 zlotys. The top income tax rate is 36 percent, so the income tax liability is 35 zlotys. The employee pays 1 zloty in non-deductible social security contributions and 36 zlotys in income tax. The employee now has 61 zlotys to spend. The average consumption tax rate in Poland is 18 percent, so approximately 11 zlotys of this will be consumption taxes. Total taxes are therefore 53 zlotys, which is 51 percent of the cost to the employer, 104 zlotys. The top effective marginal tax rate is therefore 51 percent.

On top of the 32 percent top income tax bracket, high income earners are subject to a 4 percent solidarity tax on income exceeding PLN 1 million per year – effectively taking the top income tax bracket to 36 percent (Szwed-Ziemichód, 2019; PwC, 2019).

The employee social security tax consists of a pension insurance contribution amounting to 9.76 percent of gross wages capped at PLN 133,290, and an uncapped sickness/maternity insurance contribution of 2.45 percent of gross wages. These contributions can be deducted from taxable income.

Furthermore, employees pay 1.25 percent of taxable income net of social contributions, without a cap, as a health insurance fee (EC, 2019; PwC, 2019). The effective rate is therefore 1.25% × (1 – 2.45%) = 1.219 percent. This is not deductible from taxable income. The health insurance fee is nominally 9 percent, but 7.75 percentage points is offset by a tax credit.

Employers contribute 9.76 percent of gross wage to a pension insurance scheme and 6.5 percent of gross wage to a disability insurance scheme. These contributions are capped at PLN 133,290. In addition, employers make an uncapped contribution of 3.81 percent to other insurance schemes, comprised of a 1.26 percent accidents insurance contribution, a 2.45 percent "Labour Found" contribution, and a 0.1 percent Guaranteed Employee Benefit Fund contribution. These rates are averages calculated by OECD (2019a).

Portugal

In Portugal, the payroll tax on a 100 euro raise is 24 euros. The employee pays 11 euros in social security contributions. These can be deducted, bringing taxable income to 89 euros. The top income tax rate is 53 percent, so the income tax liability is 47 euros. The employee now has 42 euros to spend. The average consumption tax rate in Portugal is 16 percent, so approximately 7 euros of this will be consumption taxes. Total taxes are therefore 89 euros, which is 72 percent of the cost to the employer, 124 euros. The top effective marginal tax rate is therefore 72 percent.

On top of the top-bracket personal income tax of 48 percent, a 5 percent solidarity surtax is payable on incomes exceeding €80,000 (PwC, 2019).

Employees pay 11 percent and employers 23.75 percent of earnings in social security contributions. These contributions cover family, pension, and unemployment benefits.

Contributions to the pension scheme varies based on individual earnings relative to the value of the IAS (*Indexante dos Apoios Sociais* – Social Support Index; EUR 419.22 in 2012). At the margin (for incomes greater than eight times the AIS), pension accrues at 2 percent of the average lifetime salary for each year of contributions, up to 40 years (OECD, 2017c). Thus, the amount of public pension benefits available is without a ceiling.

Romania

In Romania, the payroll tax on a 100 leu raise is 2 lei. The employee pays 35 lei in social security contributions. These can be deducted, bringing taxable income to 65 lei. The top income tax rate is 10 percent, so the income tax liability is 7 lei. The employee now has 59 lei to spend. The average consumption tax rate in Romania is 13 percent, so approximately 8 lei of this will be consumption taxes. Total taxes are therefore 51 lei, which is 50 percent of the cost to the employer, 102 lei. The top effective marginal tax rate is therefore 50 percent.

The employee pays a 25 percent pension contribution and a 10 percent health care contribution, both of which are uncapped and deductible.

The 2.25 percent payroll tax refers to the labour insurance contribution payable by employers on gross income. Depending on the nature of the work, an additional social security contribution (from 4 percent to 8 percent) may be due—however, no such contribution applies under normal working conditions.

Slovakia

In Slovakia, the payroll tax on a 100 euro raise is 11 euros. The employee pays 4 euros in social security contributions. These can be deducted, bringing taxable income to 96 euros. The top income tax rate is 25 percent, so the income tax liability is 24 euros. The employee now has 72 euros to spend. The average consumption tax rate in Slovakia is 15 percent, so approximately 11 euros of this will be consumption taxes. Total taxes are therefore 49 euros, which is 45 percent of the cost to the employer, 111 euros. The top effective marginal tax rate is therefore 45 percent.

The employee social security tax consists of a 9.4 percent social insurance contribution capped with reference to the average wage and a 4 percent deductible uncapped health insurance contribution (PwC, 2019).

The employer social security contribution consists of a health insurance contribution amounting to 10 percent of gross wages and a social insurance contribution amounting to 25.2 percent of gross wages. The latter social insurance contribution in turn consists of a 1.4 percent contribution to the sickness insurance scheme, a 3 percent contribution for disability insurance, a 14 percent contribution for retirement insurance, a 0.25 percent contribution to the “Guaranteed Fund”, a 0.8 percent accident insurance contribution, a 1 percent unemployment insurance contribution, and a 4.75 percent contribution to the Reserve Fund. Of these contributions, the health insurance contribution, amounting to 10 percent of gross salary, and the accident insurance contribution, amounting to 0.8 percent of gross salary, are uncapped—for a total employer social security contribution of 10.8 percent. Remaining contributions have a maximum income ceiling (€76,608 per year).

Slovenia

In Slovenia, the payroll tax on a 100 euro raise is 16 euros. The employee pays 22 euros in social security contributions. These can be deducted, bringing taxable income to 78 euros. The top income tax rate is 50 percent, so the income tax liability is 39 euros. The employee now has 39 euros to spend. The average consumption tax rate in Slovenia is 20 percent, so approximately 8 euros of this will be consumption taxes. Total taxes are therefore 85 euros, which is 73 percent of the cost to the employer, 116 euros. The top effective marginal tax rate is therefore 73 percent.

Employers make a 16.10 percent uncapped social insurance contribution, which consists of a 8.85 percent pension insurance contribution, a 7.09 percent health insurance contribution, a 0.06 percent unemployment insurance contribution, and a 0.10 percent contribution to the maternity leave scheme.

Employees pay a 22.10 percent uncapped social security tax, which, like the employer social security contribution, is split among pension insurance (15.50 percent), health insurance (6.36 percent), unemployment insurance (0.14 percent), and maternity leave (0.10 percent). Employee social contributions are deductible for income tax purposes (KPMG, 2019b).

South Korea

In South Korea, the payroll tax on a 100 won raise is 3 won. The employee pays 1 won in social security contributions and 45 wons in income tax. The employee now has 54 won to spend. The average consumption tax rate in South Korea is 11 percent, so approximately 6 wons of this will be consumption taxes. Total taxes are therefore 55 won, which is 53 percent of the cost to the employer, 103 won. The top effective marginal tax rate is therefore 53 percent.

Personal income is taxed at 42 percent federally. Across South Korea, a local tax amounting to 10 percent of the national tax payable applies. A progressive Employment Income Deduction is available to all employees, reducing the taxable gross income. At the margin (on incomes greater than KRW 100 million) the deduction rate is 2 percent. Thus, the effective personal income tax is (1 – 2%) × 42% = 41.16%, and the local tax is 10 percent of that.

Employees contribute 4.5 percent of the average monthly wage to the national pension scheme and pay 3.35 percent of the average monthly wage as a medical insurance premium. Both contributions are fixed, and thus capped. Additionally, employees are compelled to pay 0.65 percent of gross income, without limit, for unemployment insurance.

Employers contribute 4.5 percent of the standardised average monthly wage to the national pension scheme and 3.35 percent of the average monthly wage as a medical insurance premium—both contributions are capped. Unemployment insurance premiums range from 0.9 to 1.5 percent of the total wage. OECD (2019a) chooses 0.9 percent as a representative average premium. Employers also pay into a work injury insurance scheme, which varies across industries. The average rate selected by OECD (2019a) is 1.70 percent. This brings total employer social security contributions payable to 2.6 percent.

Spain

On a 100 euro raise, the employee pays 47 euros in income tax. The employee now has 53 euros to spend. The average consumption tax rate in Spain is 13 percent, so approximately 7 euros of this will be consumption taxes. Total taxes are therefore 54 euros, and the top effective marginal tax rate is 54 percent.

The regional tax rate (24.61 percent) is a simple average of the top marginal tax rate in the 17 Autonomous Communities (Cerezal, 2019).

Employees contribute 4.7 percent of gross earnings to an old-age pension/sickness and disability scheme, 1.55 percent for unemployment insurance, and 0.1 percent to a professional training scheme. Employers contribute 23.6 percent of gross earnings to the old-age pension/sickness and disability scheme, 5.5 percent for workplace injuries and unemployment insurance, 0.2 percent to a wages fund, and 0.6 percent to the professional training scheme. These contributions are all subject to a ceiling of about €50,000.

Sweden

In Sweden, the payroll tax on a 100 krona raise is 31 kronor. The employee pays 60 kronor in income tax. The employee now has 40 kronor to spend. The average consumption tax rate in Sweden is 20 percent, so approximately 8 kronor of this will be consumption taxes. Total taxes are therefore 99 kronor, which is 76 percent of the cost to the employer, 131 kronor. The top effective marginal tax rate is therefore 76 percent.

The regional tax consists of a county tax (around 11 percent) and a municipal tax (around 21 percent). The chosen regional tax rate (32.19 percent, Statistics Sweden, 2019) is a weighted average of the regional flat rates.

The surtax refers to the phaseout of the earned income tax credit for incomes between SEK 630,000 and SEK 1,640,000. More than 90 percent of top-bracket taxpayers are in this interval.

Employees nominally pay a 7 percent pension fee, but this is capped and fully offset by a tax credit. Employer social security contributions are levied at a flat rate of 31.42 percent on all wages.

Switzerland

In Switzerland, the payroll tax on a 100 franc raise is 6 francs. The employee pays 6 francs in social security contributions. These can be deducted, bringing taxable income to 94 francs. The top income tax rate is 34 percent, so the income tax liability is 32 francs. The employee now has 62 francs to spend. The average consumption tax rate in Switzerland is 9 percent, so approximately 5 francs of this will be consumption taxes. Total taxes are therefore 49 francs, which is 46 percent of the cost to the employer, 106 francs. The top effective marginal tax rate is therefore 46 percent.

The regional tax rate refers to a simple average of the maximum tax rates in the cantons for single taxpayers with no children and no religious denomination living in the respective cantonal capital (KPMG, 2019a).
Both the employee and employer social security contribution consists of a 5.125 percent contribution of gross income for old age insurance, and a 0.5 percent contribution on income over CHF 148,200 for unemployment insurance. Employees can deduct social contributions on their tax returns.

Turkey

In Turkey, the payroll tax on a 100 lira raise is 2 lira. The employee pays 1 lira in social security contributions. These can be deducted, bringing taxable income to 99 lira. The top income tax rate is 35 percent, so the income tax liability is 35 lira. The employee now has 64 lira to spend. The average consumption tax rate in Turkey is 14 percent, so approximately 9 lira of this will be consumption taxes. Total taxes are therefore 47 lira, which is 46 percent of the cost to the employer, 102 lira. The top effective marginal tax rate is therefore 46 percent.

For employers, social security contribution amounts to 20.5 percent of gross earnings (11 percent for pensions, 7.5 percent for sickness insurance, and 2 percent for unemployment insurance). For employees, the contribution is 14 percent of gross earnings (9 percent for pensions and 5 percent for sickness insurance). All these contributions are due on incomes no greater than TRY 639 per day.

Additionally, employers contribute 2 percent and employees 1 percent to an unemployment insurance scheme. These contributions are uncapped. Employee contributions are deductible from the income tax base.

A stamp duty applies to employment contracts, but is capped.

United Kingdom

In the United Kingdom, the payroll tax on a 100 pound raise is 14 pounds. The employee pays 2 pounds in social security contributions and 45 pounds in income tax. The employee now has 53 pounds to spend. The average consumption tax rate in the United Kingdom is 12 percent, so approximately 6 pounds of this will be consumption taxes. Total taxes are therefore 67 pounds, which is 59 percent of the cost to the employer, 114 pounds. The top effective marginal tax rate is therefore 59 percent.

The top marginal tax rate (45 percent) applies in England, Wales, and Northern Ireland. The top marginal tax rate in Scotland is 46 percent.

The National Insurance rate for employees is 2 percent over £4,167 per month. It is not deductible. Employers pay 13.8 percent to National Insurance, without cap.

United States

In the United States, the payroll tax on a 100 dollar raise is 1.45 dollars. The employee pays 2.35 dollars in social security contributions and 42 dollars in income tax. The employee now has 56 dollars to spend. The average consumption tax rate in the United States is 4 percent, so approximately 2 dollars of this will be consumption taxes. Total taxes are therefore 48 dollars, which is 47 percent of the cost to the employer, 101 dollars. The top effective marginal tax rate is therefore 47 percent.

The regional tax rate represents a simple average of top state income tax rates obtained from the Federation of Tax Administrators (2019), adjusting for the fact that federal taxes can be deducted from state taxable income in Alabama, Iowa, and Louisiana (three other states allow federal taxes to be deducted, but only up to a ceiling). City and county income taxes are disregarded, as they are quite rare. In light of the $10,000 cap on the state and local tax (SALT) deduction introduced in 2018, the state income tax is not adjusted for deductibility from federal income tax.

Employees contribute 6.2 percent of gross income for Social Security (old-age, survivors and disability insurance) and 1.45 percent for Medicare. The former tax applies to earnings up to $128,400, while the latter is uncapped. High-income earners pay an additional 0.9 percent Medicare tax on wages exceeding $200,000, bringing the marginal tax rate to 2.35 percent. This cannot be deducted from income tax.

Employers also contribute 6.2 percent of earnings up to $128,400 to Social Security and 1.45 percent of all earnings to Medicare. In addition, employers pay a 6 percent unemployment tax on earnings up to $7,000. Various capped state-sponsored unemployment plans exist in tandem.

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