



ISSN 2443-8030 (online)

# Mortgage Tax Reforms in Sweden: Scope for a Double Dividend?

Isabelle Justo, Julien Hartley, Fidel Picos  
and Sara Riscado

ECONOMIC BRIEF 049 | SEPTEMBER 2019

EUROPEAN ECONOMY

*Economic and  
Financial Affairs*



**European Economy Economic Briefs** are written by the staff of the European Commission's Directorate-General for Economic and Financial Affairs to inform discussion on economic policy and to stimulate debate.

The views expressed in this document are solely those of the author(s) and do not necessarily represent the official views of the European Commission.

Authorised for publication by Carlos Martínez Mongay, Deputy Director-General for Economic and Financial Affairs.

## LEGAL NOTICE

Neither the European Commission nor any person acting on behalf of the European Commission is responsible for the use that might be made of the information contained in this publication.

This paper exists in English only and can be downloaded from [https://ec.europa.eu/info/publications/economic-and-financial-affairs-publications\\_en](https://ec.europa.eu/info/publications/economic-and-financial-affairs-publications_en).

Luxembourg: Publications Office of the European Union, 2019

PDF ISBN 978-92-79-77378-5 ISSN 2443-8030 doi:10.2765/703170 KC-BE-18-017-EN-N

---

© European Union, 2019

Non-commercial reproduction is authorised provided the source is acknowledged. For any use or reproduction of material that is not under the EU copyright, permission must be sought directly from the copyright holders.

# Mortgage Tax Reforms in Sweden: Scope for a Double Dividend?

By Isabelle Justo, Julien Hartley, Fidel Picos and Sara Riscado

## Summary

Since the inception of the macroeconomic imbalance procedure in 2011, Sweden has been identified as having an imbalance related to increasing house prices and private indebtedness. Tax incentives for property ownership and mortgage debt are widely seen as important structural drivers behind household debt growth and overvalued house prices. Against this backdrop, the Council of the EU has asked Sweden to limit mortgage interest deductibility (MID). At the same time, despite a strong labour market with the highest employment rate in the EU, not all groups have benefited from job opportunities to the same extent. In particular, low-skilled workers have lower participation and employment rates, while their unemployment rate was, with 18.5% in 2017, well above the overall unemployment rate of 6.7%.

Against this background, this economic brief considers shifting taxes from labour to property as a way to tackle macroeconomic vulnerabilities in the housing sector and labour market challenges in Sweden. We use the EUROMOD tax-benefit microsimulation model and the European Commission QUEST model to show that eliminating the MID, and using the additional tax revenues (around 0.3% of GDP) created to reduce, in a targeted way, labour taxes for vulnerable groups, could support their employment, while removing a structural driver of household debt growth.

**Acknowledgements:** Useful comments and suggestions from Patrick D'Souza, Norbert Gaal, Marie-Luise Schmitz, Janos Varga, Geert Vermeulen and Melanie Ward-Warmedinger (European Commission, Directorate-General for Economic and Financial Affairs) are gratefully acknowledged.

**Contact:** Isabelle Justo, European Commission, Directorate-General for Economic and Financial Affairs, [isabelle.justo@ec.europa.eu](mailto:isabelle.justo@ec.europa.eu); Julien Hartley, International Monetary Fund [jhartley@imf.org](mailto:jhartley@imf.org) (this work was completed during Julien Hartley's time at Directorate-General for Economic and Financial Affairs of the European Commission); Fidel Picos and Sara Riscado, European Commission, Joint Research Centre – Fiscal Policy Analysis, [fidel.picos@ec.europa.eu](mailto:fidel.picos@ec.europa.eu), [sara.riscado@ec.europa.eu](mailto:sara.riscado@ec.europa.eu).

## Introduction

Since the inception of the macroeconomic imbalance procedure in 2011, Sweden has been identified as having an imbalance related to increasing house prices and private indebtedness. In its 2019 Country Report, the Commission reiterated that these developments pose risks to the economy, financial stability and also have implications for social fairness (European Commission, 2019).

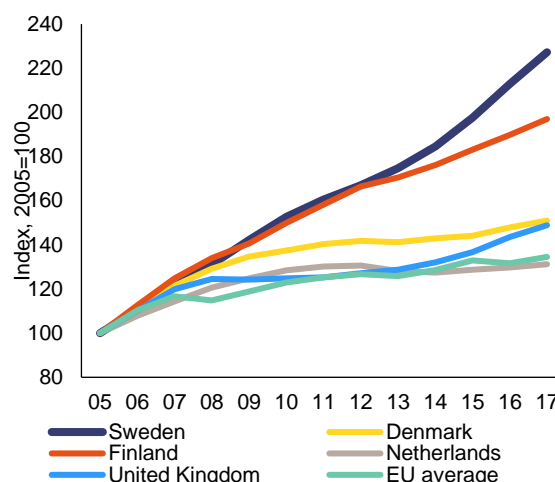
Since 2010, Sweden has gradually introduced a number of measures to contain mortgage debt growth. Steps taken include setting loan-to-value limits, adjusting banks' risk weight floors, and introducing a formal mortgage amortisation rule in June 2016. In addition, an enhanced amortisation requirement for borrowers with high debt-to-income ratios was introduced in March 2018. The 2016 amortisation requirement appears to have had some modest impact to the recent slowdown in house price growth<sup>1</sup>.

However, structural problems in the Swedish housing market remain. Real house prices have more than tripled in Sweden since the early 1990s, significantly outpacing income growth as well as house price rises in other EU countries. This fast-paced property boom has gone hand in hand with a steep rise in mortgage debt supported by generous tax incentives including uncapped tax deduction for mortgage interest. While household debt in most Member States with similar dynamics stabilised after the financial crisis, it has continued to grow apace in Sweden (Graph 1), reaching over 180 % of disposable income at the end of 2017 (Swedish central bank, 2019).

The Commission, international institutions (IMF, OECD), as well as the Swedish central bank (*Sverige Riksbank*) and the Financial Supervisor (*Finansinspektionen*) in their assessments, concur that tax incentives for property ownership and mortgage debt remain important structural drivers behind household debt growth and overvalued house prices. Against this backdrop, the Council – following a recommendation from the Commission – has asked Sweden in a country-specific recommendation to limit mortgage interest deductibility (MID)<sup>2</sup>.

Reforming MID could address one cause of Sweden's macroeconomic imbalance. Furthermore, the additional tax revenues generated by such a step could be used to support reforms in other policy areas.

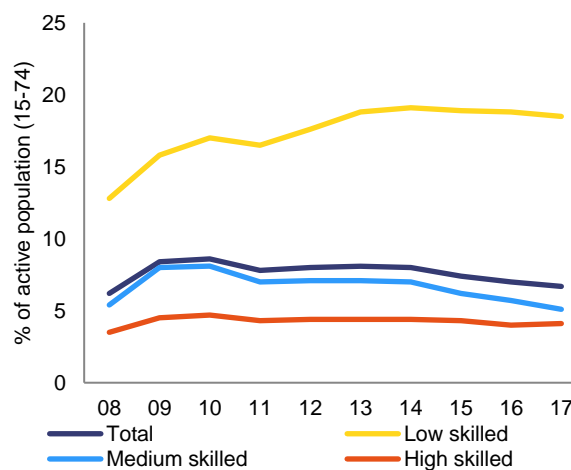
Graph 1: Household debt evolution



Source: European Commission

One potential reform area could be related to the labour market. Despite strong job creation and a continuous decline in unemployment on the back of economic growth, low-skilled workers have unemployment rates three times as high as the average one (Graph 2). Integrating these groups into the labour market could therefore improve potential growth, increase social cohesion and equality, while reducing public expenditure on social benefits in the medium-term.

Graph 2: Unemployment rates by skills level



Source: European Commission

Against this backdrop, we use the static EUROMOD microsimulation model<sup>3</sup> to simulate a tax shift from labour to property. The microsimulation model allows studying the impact of a tax policy reform on taxes paid and benefits received by individuals and households. This enables us to describe the impact of a potential tax shift on disposable income distribution, before investigating its potential employment effects.

## Eliminating mortgage interest tax deductibility in Sweden

The Swedish tax system provides strong incentives for home ownership. Sweden is one of the very few EU countries where uncapped tax deduction is granted for mortgage interest paid by owner-occupiers. Interest payments are deducted from the capital income tax base and if the full amount is not used it can be deducted against the employment tax liability through a 30 % capital income tax credit (21 % for amounts over SEK 100 000).

In a first step, we use EUROMOD to estimate the amount of additional tax revenues that would be available if one were to fully eliminate the mortgage interest tax deductibility. In turn this additional revenue is used to reduce the tax burden on labour in order to stimulate job creation.

EUROMOD utilises the Swedish component of the 2015 vintage of the European Survey on Income and Living Conditions (EU-SILC). This extensive micro database includes information on personal and household characteristics, several types of income, certain expenditures and other variables related to living conditions.

We are using the survey's income data which has been updated using 2017 uprating indices. Based on the survey's sample, 50 % of Swedish households (or 2.4 million) are benefitting from MID and would be affected by its removal.

Overall, the MID reduces total tax receipts/revenue by about SEK 13 billion or 0.28 % of GDP<sup>4</sup>. While the tax savings are spread across the entire income scale, households with the highest incomes benefit the most as more than half of the savings is concentrated on the top three deciles (Table 1).

Removing the MID would reduce household disposable income by on average 0.7 %. The distributional impact would be progressive (see Graph 3), because the higher the income the higher mortgage interest payments and capital income. Thus, for equal interest payments, high income households have more possibilities to use the interest deduction (from capital income) and/or the capital income tax credit (from the labour income tax liability).

This progressivity is also reflected in the Gini coefficients of equivalised disposable income<sup>5</sup>. In the baseline tax and benefit system, the Gini is 0.23865, while after removing MID it declines to

0.23812, reflecting a slightly more equal income distribution.

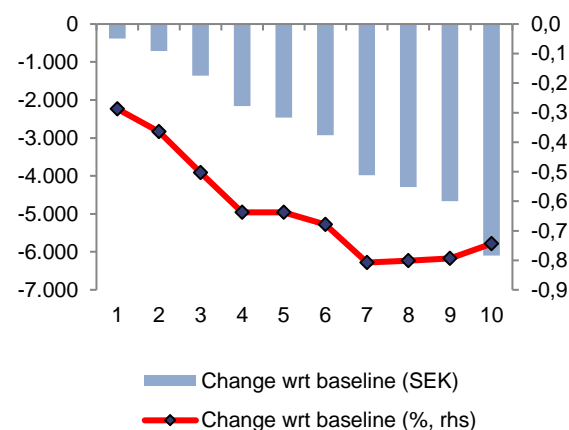
Table 1: **Distribution of capital income, mortgage interest payments and reliefs by decile (2017)**

Decile	Mean equivalised disposable income (SEK)	Total capital income (million SEK)	Total mortgage interest payments (million SEK)	Total mortgage interest reliefs (million SEK)
1	106 905	1 602	1 244	261
2	156 648	1 660	1 584	451
3	189 498	2 837	2 360	686
4	219 329	3 214	3 170	941
5	244 709	3 621	3 580	1 043
6	271 751	3 755	4 152	1 243
7	300 243	5 524	5 392	1 590
8	335 313	6 957	6 087	1 823
9	382 279	8 858	7 181	2 133
10	535 255	52 552	9 491	2 840
<b>All</b>	<b>284 263</b>	<b>90 580</b>	<b>44 241</b>	<b>13 012</b>

Source: European Commission Joint Research Centre, calculations based on the EUROMOD model.

Note: Individuals are put into deciles according to their pre-reform household equivalised disposable income. "1" represents the 10 % lowest-income, "10" the 10 % highest-income individuals in the sample. Mortgage interest reliefs are the total final savings in the personal income tax due to the mortgage interest deductibility.

Graph 3: **Change in disposable income from removing mortgage interest tax deductibility, by decile**



Source: European Commission Joint Research Centre, calculations based on the EUROMOD model.

Note: Values are calculated on average, for all households, on an annual basis.

Without MID, the respective tax base for personal income tax on capital income and labour income would be larger, resulting in higher tax revenues (Table 2). At the same time, however, some individuals would see their disposable income decrease below the threshold at which they become eligible to receive means-tested benefits. This would result in an increase in means-tested benefits estimated at SEK 38 million (0.01 % of GDP) and a decrease in the total tax revenues raised with the



MID. The total net budgetary impact from removing MID is therefore slightly lower than SEK 13 billion.

Overall, these results are in line with earlier analysis done by the Swedish Fiscal Policy Council (*Finanspolitiska rådet*) and that reducing mortgage interest deductibility would have a broadly progressive impact, as these tax incentives tend to be largest for higher-income households (Swedish Fiscal Policy Council, 2016).

**Table 2: Budgetary impact of the MID removal scenario**

	<b>Million SEK</b>
Personal income tax - labour income	9 849
Personal income tax - capital income	3 162
Means-tested benefits	-38
<b>Net budgetary impact</b>	<b>12 971</b>

Source: European Commission Joint Research Centre, calculations based on the EUROMOD model.

## Lowering the tax burden on labour

With the additional revenue the government would have at its disposal through a removal of the MID, we can now simulate a reduction in labour taxes to see if such a tax shift could increase the employability of low-skilled workers. In 2017, close to one fifth of the Swedish working-age population (15-64 years-old) had, at most, lower secondary education and is considered low-skilled.

Although the Swedish labour market has been performing strongly and achieved the highest employment rate in the EU, not all groups have benefited to the same extent. Because job creation has been concentrated in high-skill occupations, this has - combined with higher entry wages than in other Member States – resulted in lower participation and employment rates for low-skilled workers. In addition, low-skilled workers had an unemployment rate of 18.5 % in 2017, well above the overall unemployment rate of 6.7 %.

Employment rate of low-skilled people could benefit from a lower tax burden (OECD 2011) or tax wedge. The tax wedge on labour is a measure of the difference between the employers' cost of hiring a worker and the worker's disposable income. It could therefore be reduced in such a way that it affects the demand and/or the supply side of the labour market. A higher take-home pay for example could trigger additional labour supply, while lower labour costs for employers should affect the relative price of labour to capital, incentivising companies to employ more workers. Higher employment can increase

potential growth and – if related to groups currently distanced from the labour market – can reduce income inequality and help sustain inclusive growth, a key medium-term policy objective for Sweden<sup>6</sup>.

Sweden had the fourth highest tax wedge<sup>7</sup> among EU countries in 2018. A single worker earning 50 % of the average wage faced a tax wedge of 39.4 %, versus 32.6 % on average across EU Member States. In addition, the share of labour taxes in total tax collection represented 58.4 % in 2017, 9 percentage points above the EU average.

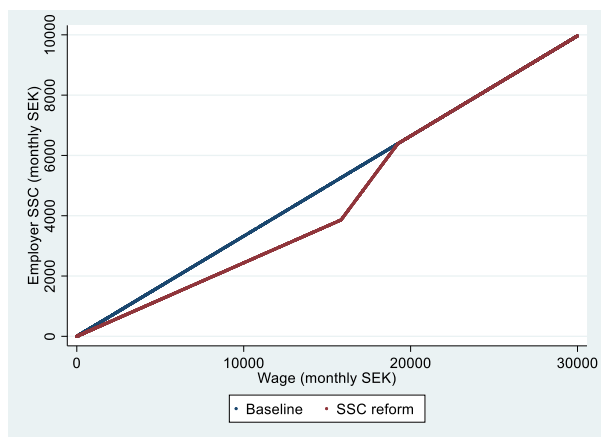
The International Monetary Fund showed, using an endogenous growth model for advanced economies, that reducing tax on labour income by 5 percentage points (pps.) could potentially lead to higher long-run economic growth of about 0.2-0.3 percentage point (pp.), as the increase in the after-tax wage induces higher labour supply (International Monetary Fund, 2015). Moreover, the impact would be higher for low-skilled workers, as they typically exhibit higher labour supply elasticities than high-skilled ones. Such targeted tax cuts already proved effective in Sweden in the past decade, leading to faster growth in youth employment than non-youth employment (International Monetary Fund, 2014).

The structure of labour taxes and its interplay with other taxes and benefits did not allow to simulate a meaningful cut in employee's social security contributions to get a potential shift in labour supply without altering in a much deeper way the Swedish tax system, which is outside our scope<sup>8</sup>. We instead estimate the impact of reducing the rate of employers' social security contributions (SSC), i.e. labour demand. We focus on low-wage earners (as a proxy for low-skilled) to shift taxes from labour to property using the additional tax revenues generated by the removal of the MID, thereby keeping it budget neutral so as to safeguard Sweden's fiscal buffers.

We therefore simulate the reduction of the rate of employers' SSC from 33.2 % to 24.3 % for earners whose monthly wages are equal to or less than SEK 15 833.30 (equivalent to earning 50 % of the average wage). Such a reduction is calibrated so that the sum of additional personal income taxes collected on labour and on capital incomes is used to reduce the employers' SSC.

This SSC reduction is progressively phased-out at 50 % rate after this amount (by reducing it by SEK 0.5 for each SEK 1 earned extra) to smooth the distribution of tax rates along wage levels (Graph 4).

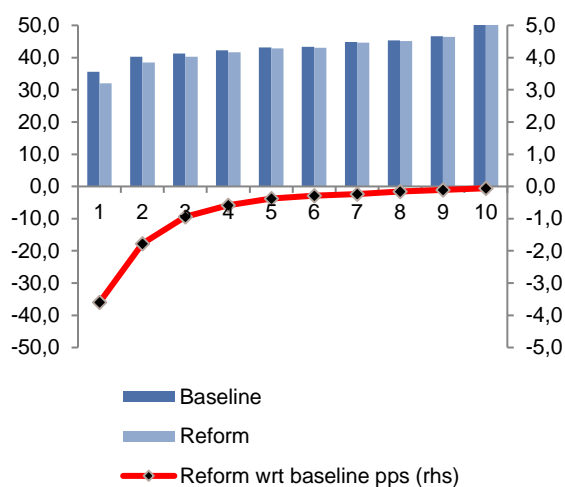
**Graph 4: Impact on employers' social security contributions**



Source: European Commission Joint Research Centre, calculations based on the EUROMOD model.

Note: the graphs plots the monthly amounts of social insurance contribution paid by the employer for each wage level up to SEK 30 000, for baseline and reform scenario.

**Graph 5: Implicit tax rates on labour by decile (percent)**



Source: European Commission Joint Research Centre, calculations based on the EUROMOD model.

Note: Values are calculated on average, for all households, on an annual and equivalised basis.

This potential measure lowers the implicit tax rate, a metric used in the EUROMOD model similar to the tax wedge<sup>9</sup>, on labour income by 0.8 % on average. Given the focus on low-wage earners, the impact is particularly pronounced for the lower end of the income distribution with reductions of up to 4 pps. (Graph 5).

However, the extent to which reduced social security contributions could result in higher employment will depend on the behavioural reaction of employers.

In principle (and holding everything else constant), lower SSC for employers reduce their costs and increase profits, while the price of one unit of labour becomes cheaper relative to capital. Assuming that the benefits from the SSC reduction are not shared with employees, such a change in relative prices could result in higher employment. In the Swedish context this could be the case in the short run when the tax change was not anticipated in wage negotiations agreed by social partners generally for 3 years and covering about 90% of the workforce (Swedish National Mediation Office, 2013).

We calculate that the 8.9 pps. reduction of the SSC of employers decreases the total compensation of employees<sup>10</sup> that employers have to pay to the low-income workers affected by the reform by 6.7 %<sup>11</sup>. Potential labour market effects depend then basically on the firms' labour demand response to labour costs changes (i.e. the magnitude of the labour demand elasticities).

Because the EUROMOD microsimulation model is static, it ignores how tax reforms endogenously affect wages and employment. We therefore estimate the labour market effects of the tax cut using an approximation of the price elasticity of labour demand. Lichter et al (2015)<sup>12</sup> derived an average price elasticity of labour demand of -0.493 for the Swedish economy. When we focus only on the nine studies that limit their estimation sample to the low-wage segments, the average elasticity is -0.616. This slightly more elastic demand reaction seems intuitively correct because low-skilled labour is a closer substitute to machinery or outsourcing processes than skilled-labour. The reduction in SSC would therefore result, at most, in an additional demand for 4.1 %<sup>13</sup> low-income workers in the short run, before any further adjustments in the economy in wages and employment – so-called second round effects.

One can capture these effects of tax reforms with dynamic general equilibrium models. The European Commission has such a model, QUEST, at its disposal. Thus, we can look at the impact of the tax cut, taking into account its full effect on the supply side of the labour market (*dynamic scoring practice*<sup>14</sup>).

Calibrated to match essential properties of the Swedish economy, we used QUEST to simulate a reduction of SSC for low-skilled employees of a magnitude of 0.28 % GDP (equivalent to the revenue from the MID removal). The tax cut

increases employment of low-skilled workers by up to 2.6 % after 2 years.

As expected, in equilibrium, the employment effect of the tax shift is lower. Initially, the compensation of employees falls and firms' labour demand is higher at all levels of the gross wage. However, economic agents will adjust to the lower SSC and workers will demand higher wages. Once this adjustment process is over, gross wages are higher again and firms are willing to employ still more labour, but less than initially in the short run. Employment would then increase around 1.4 % after 5 years.

## Discussion and Conclusion

In this economic brief, we consider shifting taxes as a way to mitigate macroeconomic vulnerabilities in the housing sector and labour market challenges in Sweden using the European Commission EUROMOD model.

We first estimate the revenue effect on the budget of abolishing the current mortgage interest tax deductibility for households. In a second step, while keeping the fiscal impact broadly neutral, we consider reducing employers' social security contributions for low-wage earners and the positive impact this could potentially have for the low-skilled unemployed.

We show that eliminating the MID, and using the additional tax revenues (around 0.3 % of GDP) created to reduce labour taxes, could boost employment. We target low-skilled workers for which unemployment rates are relatively higher in Sweden. By reducing the tax wedge for these workers, we expect that the adjustment of their relative wages will incentivise firms to hire them.

Our simulations show that targeted tax reductions on labour income could result in positive net employment effects for low-skilled workers. Using empirical estimates on labour demand elasticities, we find that, everything else equal, at most firms would offer jobs to an additional 4.1 % low-skilled workers. Taking into account second round effects, the effect is lower, but still between 1.4% and 2.6 % (depending on the time horizon) whereby both wages and employment increase.

An earlier study on the impact of eliminating mortgage interest rate deductibility and the impact on employment pointed in the same direction (European Commission, 2016). It also gives an idea about the potential impact on GDP, indebtedness and house prices, which we have not modelled in

our simulation. The analysis, using the QUEST model, concluded that the additional tax revenues could be used to reduce personal income taxes, which would boost labour supply through increased consumption and ultimately GDP. In addition, household indebtedness would drop relative to the baseline scenario by 1.3 % of GDP with house prices broadly unchanged.

However, these quantitative outcomes should be interpreted with care:

- We used EUROMOD to provide QUEST with the policy shock, i.e. the tax cut on labour. Because QUEST has limited disaggregation of the housing market, we have not been able to undertake comprehensive distributional analysis by combining EUROMOD and QUEST.
- Importantly, the simulation does not take into account recent active labour market policy measures adopted by the Swedish government to address unemployment among low-skilled.

In addition, other options could be considered for reducing the tax wedge such as changing the earned income tax credit scheme (EITC). The EITC aims at incentivising take-up of work in low-income groups, notably from unemployment to at least part-time work. However, given the complex design of this scheme, a change would imply amending the mean-tested benefits system, an exercise that goes beyond the scope of this brief and would no longer be budget neutral.

Overall, the tax shift scenario in this brief offers support to enhancing the Swedish model. Full tax deductibility on interest payments has remained a salient feature of the mortgage market as successive governments considered that access to property should be an essential element of the strong social model. Thus, removing the MID has always been a sensitive issue. However, households at the upper end of the income distribution capture a disproportionate share of total expenditure on mortgage interest tax relief, so its abolishment would be equity-improving. In addition, in the context of ample liquidity and exceptionally low interest rates, removing this tax exemption would be less painful.

While the MID reform has proven politically unpalatable as a stand-alone proposal, combining it with targeted tax cuts in the labour market could result in more inclusive growth while maintaining sound public finances. Indeed, Sweden is already



strengthening active labour market programmes and several employment subsidy programmes are available. In addition, the government together with social partners has developed a new form of employment contract, combining education, training while decreasing the overall employers' payroll expenditures to stimulate employment for newly-arrived immigrants and long-term unemployed people ("*entry agreements*"), an idea similar to the one put forward in this brief.

In conclusion, we find that removing the mortgage interest deductibility and using the additional tax revenues generated to reduce the tax wedge on the low-skilled workers could generate additional employment while strengthening the Swedish social model. Current economic conditions suggest an opportune time to explore such reforms.

## References

- Barrios, S., Dolls, M., Maftai, A., Peichl, A., Riscado, S., Varga, J., & Wittneben, C. (2019). Dynamic scoring of tax reforms in the European Union. *Journal of Policy Analysis and Management*, 38(1), 239-262.
- European Commission (2016), "House Prices and Indebtedness in Sweden: a Model-based Assessment of Policy Options", Economic Brief 021.
- European Commission (2019), "Country Report Sweden 2019", Commission Staff Working Document (2019).
- European Commission (2018a), "Country Report Sweden 2018", Commission Staff Working Document (2018).
- European Commission (2018b), "Quarterly Report on the Euro Area", Vol. 17 No 2.
- European Commission (2017), "Country Report Sweden 2017", Commission Staff Working Document (2017).
- Council recommendation 9953/19 of 2 July 2019
- International Monetary Fund (2014), Back to Work, How Fiscal Policy Can Help, Fiscal Monitor, October 2014.
- International Monetary Fund (2015), Fiscal Policy and Long-Term Growth, IMF Policy Paper.
- Lichter, A., Peichl, A., & Siegloch, S. (2015). The own-wage elasticity of labor demand: A meta-regression analysis. *European Economic Review*, 80, 94-119.
- OECD (2011), Taxation and Employment, OECD Tax Policy Studies, No. 21, OECD Publishing. <http://dx.doi.org/10.1787/9789264120808-en>
- Sutherland, H., & Figari, F. (2013). EUROMOD: the European Union tax-benefit microsimulation model. *International Journal of Microsimulation*, 6(1), 4-26.
- Swedish central bank (Financial Stability Department) (2019). Financial Stability Report 2019:1.
- Swedish Fiscal Policy Council (FPC) (2016), Swedish Fiscal Policy Council Report 2016.
- Swedish National Mediation Office, Annual report 2013.

## Annex 1: Technical appendix

EUROMOD is a microsimulation model that embeds the tax and benefit systems of all EU Member States. It allows the quantification, at individual and household level, of the most relevant income taxes, social contributions and benefits, as well as disposable incomes. More specifically, EUROMOD encodes the policies and the corresponding parameters of the tax-benefit systems currently in force, and also those of recent years. It allows implementing tax and benefit reforms and obtaining the corresponding budgetary impact and distributional effects. The outcome provided by EUROMOD is static, i.e., it does not address any behavioural response induced by policy changes implemented.

EUROMOD captures the interaction of the tax-benefit systems, in the sense that changes in one policy may affect other policies, i.e., tax liabilities paid and benefits amounts received may change. This is especially relevant for the analysis of the fiscal and equity impact of tax-benefit reforms. An example can be found in this brief, since a change in the mortgage tax deductibility affects the eligibility for means-tested benefits.

The micro-data behind EUROMOD comes from the EU Statistics on Income and Living Conditions survey (EU-SILC) which is harmonised by Eurostat. EU-SILC gathers information on socio-demographic characteristics, labour status and income information for individuals and households of a representative sample of the population of each country.

The baseline scenario of this brief uses the Swedish tax-benefit calculation rules in place in 2017, using EU-SILC 2015 as input data. This sample covers 5,859 households composed of 14 183 individuals representative of 10 059 028 individuals living in 4 780 332 million households in Sweden. The income reference period is 2014, therefore in order to align 2014 monetary values with the policy year used (2017), uprating factors are applied to update income components. In particular, capital income and mortgage interest payments of each individual are uprated according to the real evolution in the 2014-2017 period of their corresponding aggregates (+9.14% and -22% respectively).

---

<sup>1</sup> European Commission (2018a) and European Commission (2019)

<sup>2</sup> Council recommendation 9953/19 of 2 July 2019.

<sup>3</sup> EUROMOD integrates taxes, social contributions and benefits based on a common framework of the policy systems for the EU-28. See Annex I for more details.

<sup>4</sup> The budgetary impact is estimated based on the current low interest rate environment and might therefore underestimate the potential revenues which could be used for a tax shift. In a different paper (European Commission, 2016) the budgetary impact was calculated using an estimated model of the Swedish economy taking into account a longer time horizon for the respective parameters. In that case a MID elimination resulted in 0.6 % of GDP.

<sup>5</sup> Equivalised household disposable income corresponds to total household income adjusted by the household composition, using the OECD scale (weighting system: 1 to the household head, 0.5 to other adults, 0.3 to children younger than 14 year-old).

<sup>6</sup> Sweden has one of the lowest levels of income inequality in the in the EU and is actively pursuing policies towards maintaining this achievement (European Commission, 2018a).

<sup>7</sup> Calculated as the sum of all taxes and contributions paid on labour (in general personal income taxes and SSC), divided by the total labour cost (basically gross wages plus employers' SSC).

<sup>8</sup> Indeed, the amount paid by the employee is already deducted in the personal income tax liability as a (non-refundable) tax credit.

<sup>9</sup> The implicit tax rate is calculated in a similar way as the tax wedge, but does not take cash benefits into account.

<sup>10</sup> The total compensation of employees is defined as the sum of wages and employers' SSC.

<sup>11</sup> For each euro of wage, the total cost drops from 1.332 to 1.243, a 6.7% reduction.

<sup>12</sup> Lichter et al (2015) provide a detailed summary of labour market elasticities estimated across years and countries, notably covering 74 published studies for Sweden between 1988-2010.

<sup>13</sup> 4.1% is the result of multiplying the 6.7% reduction of labour cost by the 0.616 elasticity.

<sup>14</sup> For instance, see Quarterly Report on the Euro Area, European Commission (2018b) chapter IV and Barrios et al (2018).



## **EUROPEAN ECONOMY ECONOMIC BRIEFS**

European Economy Economic Briefs can be accessed and downloaded free of charge from the following address:

[https://ec.europa.eu/info/publications-0/economy-finance-and-euro-publications\\_en?field\\_eurovoc\\_taxonomy\\_target\\_id\\_selective=All&field\\_core\\_nal\\_countries\\_tid\\_selective=All&field\\_core\\_flex\\_publication\\_date\[value\]\[year\]=All&field\\_core\\_tags\\_tid\\_i18n=22614](https://ec.europa.eu/info/publications-0/economy-finance-and-euro-publications_en?field_eurovoc_taxonomy_target_id_selective=All&field_core_nal_countries_tid_selective=All&field_core_flex_publication_date[value][year]=All&field_core_tags_tid_i18n=22614)

Titles published before July 2015 can be accessed and downloaded free of charge from:

- [http://ec.europa.eu/economy\\_finance/publications/economic\\_briefs/index\\_en.htm](http://ec.europa.eu/economy_finance/publications/economic_briefs/index_en.htm)  
(ECFIN Economic Briefs)
- [http://ec.europa.eu/economy\\_finance/publications/country\\_focus/index\\_en.htm](http://ec.europa.eu/economy_finance/publications/country_focus/index_en.htm)  
(ECFIN Country Focus)



## **GETTING IN TOUCH WITH THE EU**

### **In person**

All over the European Union there are hundreds of Europe Direct Information Centres. You can find the address of the centre nearest you at: <http://europa.eu/contact>.

### **On the phone or by e-mail**

Europe Direct is a service that answers your questions about the European Union. You can contact this service:

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696 or
- by electronic mail via: <http://europa.eu/contact>.

## **FINDING INFORMATION ABOUT THE EU**

### **Online**

Information about the European Union in all the official languages of the EU is available on the Europa website at: <http://europa.eu>.

### **EU Publications**

You can download or order free and priced EU publications from EU Bookshop at: <http://publications.europa.eu/bookshop>. Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see <http://europa.eu/contact>).

### **EU law and related documents**

For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex at: <http://eur-lex.europa.eu>.

### **Open data from the EU**

The EU Open Data Portal (<http://data.europa.eu/euodp/en/data>) provides access to datasets from the EU. Data can be downloaded and reused for free, both for commercial and non-commercial purposes.

