Clemens Fuest, Florian Neumeier, Michael Stimmelmayr and Daniel Stöhlker

The Economic Effects of a Wealth Tax in Germany

Clemens Fuest
ifo Institute, CESifo, Ludwig-Maximilians-University Munich.

Florian Neumeier
ifo Institute.

Michael Stimmelmayr
ETH Zurich, CESifo.

Daniel Stöhlker
ifo Institute.

In recent years, the calls for a (re-)introduction of a wealth tax in Germany have become louder for at least two reasons.[1] Firstly, the proponents of a wealth tax emphasise that the share of public revenues from wealth-related taxes collected in Germany is far below the OECD average and that a net wealth tax could create additional fiscal leeway. Secondly, wealth taxes are often claimed to be an effective instrument for fostering equity within societies. Lately, this view has received prominent support from French economist Thomas Piketty, who has turned out to be a fierce opponent to abolishing the wealth tax in France.

In the context of a recent policy report prepared on behalf of the German Federal Ministry for Economic Affairs and Energy (BMWi), we assess the economic and fiscal consequences of the introduction of a wealth tax in Germany. This study represents a shortened version of that report. Special emphasis is placed on the short and long-term impact of a wealth tax on important macroeconomic aggregates, such as Gross Domestic Product (GDP), private investment, employment as well as several other key economic variables. Moreover, we also estimate the expected revenues from a wealth tax, as well as the effect a wealth tax would have on revenues from other taxes, especially the consumption and income tax. Our computations are based on a dynamic computable general equilibrium (CGE) model that depicts the German economy and tax system in detail. In the course of our analysis, we compare the economic and fiscal effects of different wealth tax concepts and wealth tax rates.

DISTRIBUTION OF PRIVATE WEALTH IN GERMANY

Despite being only poorly documented empirically, the distribution of wealth and income in Germany and its development has taken centre stage in the discussions over wealth taxation. The argument has been triggered by recent studies from the *International Monetary Fund* (IMF) (Ostry et al. 2014) as well as the *Organisation for Economic Co-operation and Development* (OECD) (Cingano 2014) who claim to have found a negative link between economic inequality and economic growth – a result that we show to be flawed for advanced economies.

[1] In Germany, a wealth tax was in effect until 1996 when the federal constitutional court declared it to be unconstitutional because of the differences in the valuation practices of real estate property compared to other assets.

Data from the *German Panel on Household Finances* (PHF) – a survey based on 3,500 households that was conducted in 2014 – provided by the German Bundesbank offer a snapshot of wealth distribution in Germany. We summarise several types of wealth that would probably be subject to a wealth tax, including cash, equity, firm and government bonds, real estate holdings and tangible assets such as yachts and art collections, before subtracting the stock of debt in order to obtain a figure for current net household wealth – the relevant tax base for a wealth tax. Average and total net wealth for each net-wealth-decile is depicted in Figure 1. A mere glance at the Figure suggests that private wealth is highly unequally distributed, with the wealthiest individuals holding a significantly larger amount on average than less wealthy households. For example, the wealthiest 10% of households hold an average 1.4 million euros of net-wealth, which is 27 times more than the median household. The share of aggregate wealth in Germany held by the wealthiest decile accounts for over 60% of total net private wealth. By contrast, the least wealthy 10% in Germany tend to have a negative stock of wealth, i.e. their debts exceed their assets.

The distribution of wealth in Germany is often shown to be relatively unequal compared to international standards, judging from various measures such as the Gini-coefficient and ratios of different wealth deciles (Pham-Dao 2016). Important motives for accumulating wealth are to provide for old age, i.e. stabilise consumption levels after retiring, and to insure against several types of unforeseeable life risks, e.g., the loss of employment. Based on cross-country data from the *Household Finance and Consumption Survey* (HFCS), Fessler and Schürz (2015) show that more generous welfare states are generally characterised by higher wealth accumulation by those individuals with only limited or no access to social transfer systems and pension claims. For example, the social insurance scheme in Germany is mostly tailored to 'regularly' employed workers, while self-employed individuals mostly need to provide for risks and retirement on their own. Figure 2 shows that the difference in the average wealth holdings of self-employed and non-self-employed individuals increases with age before peaking at the usual retirement age of 65.

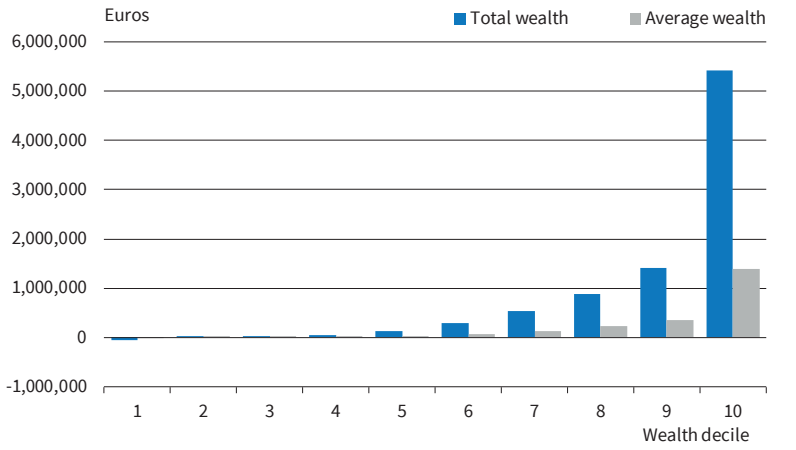
An assessment of the extent of inequality, especially as part of a cross-country comparison, without properly accounting for country-specific rules for accessing social security schemes provides an incomplete picture only and is likely to overstate the inequality that actually exists.

MODELLING A WEALTH TAX: THE CGE MODEL

The economic effects of a tax reform are very complex and include more obvious first-order effects, but also less obvious second-order and feedback effects that can be substantial in size. Computable general equilibrium (CGE) models have proven to be a useful instru-

Figure 1

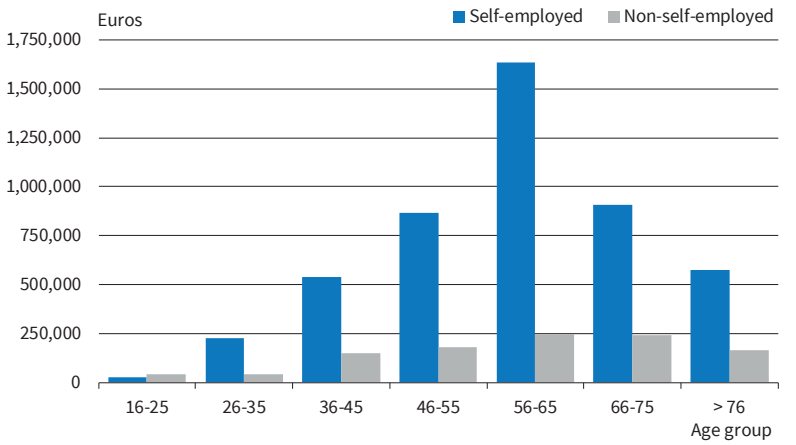
Distribution of Net Wealth in Germany



Source: Bundesbank, 2nd wave of PHD data (2014). © ifo Institute

Figure 2

Comparison of Wealth Holdings among Self-Employed and Non-Self-Employed Workers



Source: Bundesbank, 2nd wave of PHD data (2014). © ifo Institute

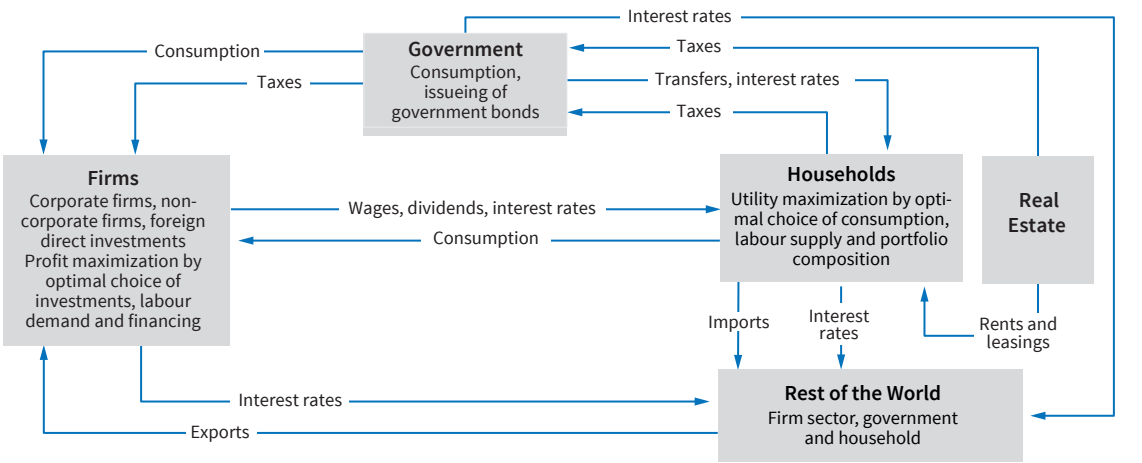
ment to simulate the consequences of counterfactual tax reforms. CGE models make it possible to quantify the economic and fiscal effects of tax reforms taking behavioural responses as well as the interactions and interdependencies between economic agents and sectors into account. Figure 3 illustrates the most important building blocks of the CGE model used in our analysis, which is based on Radulescu and Stimmelmayr (2010).

The CGE model builds on neoclassical growth theory and incorporates several tax sensitive behavioural margins on the firm and household level. In detail, the model incorporates firms with different legal forms, i.e., corporate and non-corporate firms, which differ with regard to their economic characteristics and their legal tax treatment. Each firm faces an inter-temporal investment problem, an optimal financing problem of investments and a labour input problem.

The household is modelled by a representative agent who maximises her life-time utility by choosing the optimal inter-temporal consumption and savings paths and optimal labour supply in the presence of various tax distortions. With regard to the savings decision, the household faces a portfolio choice problem. There are six different types of assets the household can invest in, grouped into three asset classes, namely firm equity/bonds, government bonds, as well as real estate holdings. In the applied model, the wealth tax is levied on these six assets. While the different assets within each class are perfect substitutes, the different asset classes themselves are imperfect substitutes, reflecting, for example, differences in default probabilities. The model also features a government and a foreign sector allowing for links between the domestic economy and the rest of the world. The government consumes, imposes taxes and collects tax revenues and pays transfers to the household sector in a lump-sum fashion. The government's budget is required to be balanced. Like the domestic economy, the foreign economy also comprises a representative firm, a representative household and a government sector. The two economies engage in trade with each other and the model allows for cross-country ownership of the different types of assets.

Overall, the CGE model represents a dynamic, micro-based two-country macroeconomic model, where the foreign economy is relatively large compared to the domestic economy. The dynamic nature of the model makes it possible to study the adjustment process from the initial to the final steady state equilibrium. This is particularly important since investment and savings decisions are, by nature, forward-looking. It is worth noting that the introduction of a wealth tax is effectively equivalent to an increase in the tax rate on the return of those assets that are subject to the wealth tax. If we assume that the (average) return on those assets is 4%, then a wealth tax rate of 1% is equivalent to an increase in the tax rate on asset returns of 25 percentage points. Thus we can expect even seemingly small wealth tax rates to have a significant economic impact.

Figure 3
Stylized Depiction of the CGE-Model



Source: Authors' illustration.

THE ECONOMIC EFFECTS OF A WEALTH TAX IN GERMANY

We consider three different scenarios to study the consequences of different wealth tax concepts and to test the sensitivity of the estimated effects with regard to different tax rates. In the *baseline scenario*, we model a comprehensive wealth tax with a uniform tax rate on all assets. In the *policy scenario*, we assume that the tax burden on corporate equity is lower than for the other assets. This scenario better reflects the actual proposals made by some German political parties. Most of these proposals foresee lower taxes on corporate assets to protect jobs. In the CGE model, we account for the lower tax burden on firm equity by applying a lower wealth tax rate. In a third scenario, we move from a synthetic to what we call a *dual wealth tax* and let the tax rate vary across assets according to their degree of mobility or tax elasticity, respectively. That way, the welfare loss associated with the introduction of a wealth tax can be reduced. In this instance, we apply a relatively lower tax rate to financial assets and firm equity; and a relatively higher tax rate to real estate property. In our simulation exercise, we set the wealth tax rate equal to 0.8% in the baseline scenario. In the policy scenario, the tax rate is 0.4% for firm equity and 1.0% for all other assets. For the dual wealth tax, the tax rate is 0.4% on financial assets and firm equity and 1% for real estate property. The tax rates are chosen so that the (gross) revenues from the wealth tax are roughly equal across the scenarios. In all three scenarios, we assume a tax-free amount of 1 million euros for singles and 2 million euros for married couples. Thus, the wealth tax concepts considered in our analysis would only target the 2-3% wealthiest households in Germany.

Table 1 shows the results of the simulations. It is important to note that caution is required when interpreting the estimates. The numbers indicate the relative deviation (measured in percent) between the realisation of a variable when accounting for the introduction of a wealth tax and a reference value that is computed based on the assumption the status quo is maintained. Furthermore, the figures refer to the long-run effects of a wealth tax after economic agents have fully adjusted to the new situation. In this respect, we assume that without the introduction of a wealth tax, potential GDP in Germany would grow at an annual rate of 1.25% (Bundesbank 2012). The estimates set out in Table 1 make clear that the introduction of a wealth tax – no matter what form it takes – would have a noticeable adverse effect on economic activity in Germany. In the case of a comprehensive wealth tax with a uniform tax rate on all assets (baseline scenario), long-run GDP is expected to be roughly 5% lower than without a wealth tax. Assuming that half of the adjustment process is completed after eight years (Cummins et al. 1996), this implies that the annual growth rate of potential GDP declines by about 0.33 percentage points in response to the introduction of a wealth tax. On the firm side, we observe a significant decline in production by over 5% and investments by over 10%. The reason for this is that the wealth tax dampens the rate of return on investments, as the introduction of the wealth tax is equivalent to a substantial increase in the income tax. The effect is particularly pronounced among foreign investors, since they find it easier to withdraw capital from Germany in order to avoid being subject to the wealth tax. Similarly, turning to the financing of projects within firms, we can see an increase in the debt ratio of around three percentage points, as firms can avoid paying the wealth tax when they use borrowed capital instead of their own retained wealth to finance investments. The slump in production and investment has important implications for the labour market, too. The estimated long term drop in employment due to the introduction of a wealth tax is about 2%.

Turning to the household sector, we find a drop in the stock of wealth by almost 25% and aggregate sav-

ings by over 40%. The reason for this finding is twofold: firstly, the adverse effect of the wealth tax on economic activity is associated with a decline in income per capita, involving lower savings. Secondly, as the wealth tax reduces the income from wealth, the incentives to save part of their income and accumulate wealth decreases. Instead, households tend to consume a larger share of their income, which is why the effect of the wealth tax on consumption is rather modest.

The estimates presented in Table 1 also reveal that the economic costs associated with the introduction of a wealth tax are somewhat lower in the policy scenario, as well as in the case of a dual wealth tax. The reason for this is that the tax burden on firm equity (policy scenario), as well as on financial wealth (dual wealth tax), is lower than in the baseline scenario. Both firm equity and financial wealth are particularly sensitive to taxation and important for production. The adverse effect on economic activity is nevertheless still notable. The estimated long-run decline in GDP is about 4.5% in the policy scenario and 4% in the case of a dual wealth tax. Assuming again that half of the adjustment process is completed after eight years, this implies a reduction in the annual growth rate of potential GDP of about 0.29 (policy scenario) and 0.25 percentage points (dual wealth tax), respectively. The adverse effect of the two alternative wealth tax concepts on the other macroeconomic aggregates is smaller as well.

TAX REVENUES FROM WEALTH TAXATION

Does the wealth tax pay off in fiscal terms, as often suggested in the current debate? Considering the wealth tax in isolation, we can see that is does indeed have a substantial revenue potential (Table 2). The (gross) annual wealth tax revenues vary across the three scenarios between 16 and 18 billion euros in the short-run and 13 to 15 billion euros in the long-run. At the same time, though, we find that the public revenue increase stemming from the wealth tax is more than offset by a decline in revenues from other taxes. The drop in revenues from the labour income tax and the sales tax in particular are substantial. As a result, the overall fiscal effect of introducing a wealth tax is expected to be negative, generating a loss of around 24 billion to 31 billion euros annually, depending on the wealth tax concept. The main reason for this is that, while the wealth tax revenue itself is generated only by a small number of taxpayers – only around 2-3% of the German population have wealth holdings that are higher than the tax-free allowance of 1 million or 2 million euros, respectively – its burden is carried by virtually everyone, as indicated by the decline in GDP, investment, and employment. It is important to note that the administrative costs, as well as the compliance costs associated with a wealth tax, are not included in our estimates.

Table 1

Economic Implications of a Wealth Tax in Germany

Variable (in %)	Baseline Scenario Uniform wealth tax = 0.8%	Policy Scenario Wealth tax = 1.0% Tax on firm equity = 0.4%	Dual Wealth Tax Wealth tax = 1.0% Favoured wealth tax = 0.4%
Gross Domestic Product (GDP)	−5.14	−4.49	−3.96
Firm Sector			
Production	−5.16	−4.50	−3.95
Domestic Firms	−4.30	−4.94	−4.20
Foreign Firms	−11.99	−0.98	−1.95
Investments	−10.25	−8.82	−7.79
Domestic Firms	−9.22	−9.47	−8.18
Foreign Direct Investments	−16.97	−4.59	−5.24
Employment	−2.08	−1.86	−1.63
Debt Ratio (in % points)	+3.81	+3.17	+2.89
Real Estate Sector			
Property & Housing	−1.27	−1.46	−1.32
Household Sector			
Consumption of Households	−4.07	−4.24	−3.50
Savings of Households	−41.33	−39.48	−31.26
Wealth of Households	−24.65	−26.92	−23.28

Source: Authors' computations.

Table 2

Fiscal Consequences of a Wealth Tax in Germany

Variable (in bn. €)	Baseline Scenario Uniform wealth tax = 0.8%	Policy Scenario Wealth tax = 1.0% Tax on firm equity = 0.4%	Dual Wealth Tax Wealth tax = 1.0% Favoured wealth tax = 0.4%
Wealth tax revenues (short-run)	+18.12	+17.90	+15.85
Wealth tax revenues (long-run)	+14.74	+14.04	+13.11
Revenues from other taxes	−46.10	−43.55	−37.26
Labour income tax	−22.13	−19.84	−17.36
Value added tax (incl. indirect taxes)	−12.76	−13.29	−10.98
Corporate taxes	−6.78	−5.26	−4.59
Capital gains taxes	−4.39	−5.13	−4.29
Net (long-run)	**−31.36**	**−29.52**	**−24.14**

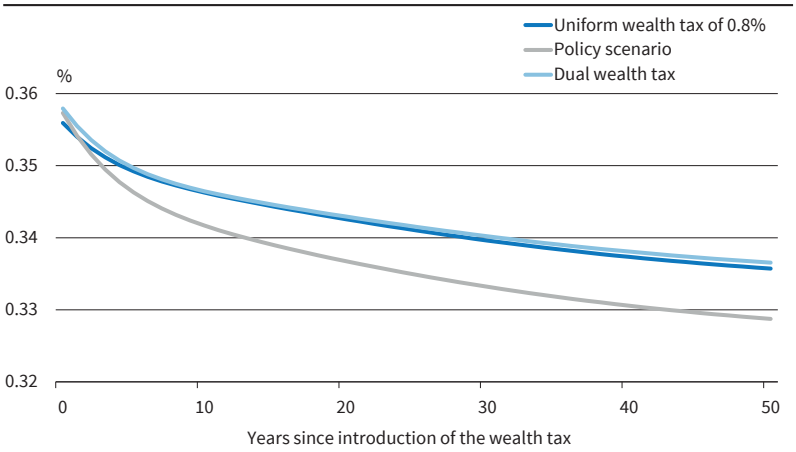
Source: Authors' computations.

RE-DISTRIBUTIONAL EFFECTS OF THE WEALTH TAX

Our analysis also sheds light on the redistributive effects of a wealth tax in the sense that it allows us to assess how introducing a wealth tax affects the ratio between capital and labour income. Since the wealthiest households typically mostly receive income from capital rents and business profits, the capital/labour income ratio tells us how effective the wealth tax is in pro-

Figure 4

Functional Distribution of Income after the Introduction of a Wealth Tax
(Firm profits + interest income) / labour income



Source: Authors' computations.

moting economic inequality. Figure 4 illustrates the development of the ratio between capital income – or, more precisely, corporate profits and capital rents – and labour income. The ratio decreases in all three scenarios, indicating that the gap between capital and labour income diminishes over time. A smaller ratio can be explained by the fact that capital income growth is reduced more than labour income growth – it does not reflect a re-distributive effect of the wealth tax in the strictest sense of the term. To put it bluntly, instead of giving wage earners a larger piece of a given cake, the cake becomes smaller and wage earners lose a smaller piece than capital earners. It is interesting to note that this effect is most pronounced in the policy scenario, despite the reduced wealth tax rate for firm equity.

SUMMARY AND CONCLUDING REMARKS

Taxing wealth in order to alleviate economic inequality and to generate additional public revenues is a recurrent theme in the political debate. However, our analysis demonstrates that a wealth tax can have a notable adverse impact on economic activity, reducing economic growth, investment and employment. As a result, the burden of a wealth tax is practically borne by every citizen, even if the wealth tax is designed to target only the wealthiest individuals in society, via high tax-free allowances, for instance. Moreover, the introduction of a wealth tax in the form considered in our analysis would actually lead to a decline in total tax revenue, as the revenue gains from a wealth tax are notably lower than the decline in revenues from other taxes, especially the labour income tax and the sales tax. Thus, a wealth tax fails to significantly promote economic equality or create additional fiscal leeway.

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