

THE SCOPE FOR PROGRESSIVE TAX REFORM IN THE OECD COUNTRIES

A MACROECONOMIC PERSPECTIVE WITH A CASE STUDY FOR GERMANY¹

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The trend of increasing inequality in the distribution of income and wealth in most developed countries has led to calls for corrective tax increases for the rich and wealthy. Such calls are often confronted with the claim that higher taxes on top personal incomes, corporate income and wealth are detrimental to growth and employment and/or will foster tax avoidance. This paper argues that even the dominating theoretical framework leaves substantial leeway for redistributive taxation. Furthermore, from a Keynesian macroeconomic perspective redistribution may even be systematically conducive to growth and employment. At the same time a change towards such a policy of redistribution may for some economies, particularly the German one, well be the prerequisite for compliance with the European Fiscal Compact if an increase of the macroeconomic imbalances that have come to be seen as a root cause of the global financial and economic crisis 2008/2009 and also the euro crisis by many observers is to be avoided. Therefore, besides attempts at international tax coordination and harmonisation, national tax policies should actively use their room of manoeuvre for progressive taxation to correct the disparities in the income distribution and at the same time to increase the fiscal space.

Keywords: macroeconomic effects of taxation, redistribution and macroeconomic performance, macroeconomic imbalances.

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1. Introduction

In most OECD countries, the redistributive effect of the tax system has been substantially weakened by deliberate tax policies over the last decades. However, the trend of increasing inequality in the distribution of income and wealth in most developed countries, has led to calls for corrective tax increases for the rich and wealthy. Such calls are often confronted with the claim that there was a serious trade-off between equity and efficiency: according to the dominant view, higher taxes on top personal incomes, corporate income and wealth are detrimental to growth and employment and/or lead to increased tax avoidance. In fact, within the field of public economics usually a more or less strong trade-off between (re-)distribution and efficiency is assumed.

First, this paper argues that even the dominating theoretical framework offers substantial leeway for redistributive taxation. In the light of the standard – and above all the recent – literature the arguments against raising marginal personal or corporate income tax rates because of allegedly negative effects on work intensity, career decisions, tax avoidance and other behavioural responses are not convincing neither from a theoretical nor from an empirical point of view.

Second, it will be demonstrated that a macroeconomic perspective may even systematically change the picture and make the whole trade-off disappear. Redistribution may be conducive to output and employment both in the short and in the long run. In addition, if (part of) the generated revenue is used to increase public expenditure recent empirical estimates suggest that the balanced budget multiplier may be substantially positive leading to strongly positive growth and employment effects. These results are highly relevant, because they suggest, that a change towards a policy of redistribution may well be the prerequisite for compliance with the constitutional debt brakes that are called for by the fiscal compact if an increase of the international macroeconomic imbalances that have come to be seen by many observers as a root cause of the global financial and economic crisis 2008/2009 and also the euro crisis is to be avoided.

Third, in a brief case study applying some of the results to Germany it will be argued that the regressive German tax reforms and the concomitant revenue losses in the early 2000s may be seen as a major reason for the German stagnation until 2005. The impressive recovery of the German economy was only possible because the expenditure side consolidation strategy was given up. For the future, using the revenues generated by progressive tax reforms may be used to finance major investment projects thereby boosting domestic demand and contributing to the necessary rebalancing within the Euro area. This insight is of particular importance in the current situation in which both France and Italy seem to be trying to copy the opposite strategy of cutting taxes and expenditures simultaneously – although it failed spectacularly in the German example.

We start with an overview of the regressive taxation trends since the 1980s in section 2, and show that despite some progressive changes in current trends and policy proposals there are no signs of a comprehensive trend reversal. In section 3 we turn to the scrutiny of the standard wisdom regarding the negative economic effects of progressive tax reforms. After having enriched the analysis by the macroeconomic perspective in section 4 we turn to a brief case study trying to apply some of the findings to the German economy in section 5. In section 6 we draw some conclusions for future tax policy on the national and international level.

2. Taxation trends since the 1980s: Traditional standards of tax justice under pressure²

Matters of income distribution and redistributive taxation require normative standards of equity or tax justice. Although the traditional distributional goals of taxation were never uncontested, there used to be a widespread consensus as to employing the “ability to pay” principle in the determination of the tax burden. The criterion of horizontal equity implies that tax payers with the same ability to pay should be treated equally by the tax system. The ability to pay can be measured in terms of income, wealth, and expenditure. According to the Haig-Simons definition “income is

2. For a more extensive overview see Godar and Truger (2015a).

the money value of the net increase in an individual's power to consume during a period" (Rosen and Gayer, 2008, p. 382), i.e. also savings and capital income are included in the determination of the ability to pay, as they represent an increase in potential consumption. Although difficult to apply in practice in a completely consistent manner (Boadway, 2004, p. 3), this was interpreted to call for the comprehensive income approach to taxation excluding systematic tax privileges for specific sources of income. According to the sacrifice approach used to operationalize the dimension of vertical equity (Prest, 1960, pp. 115) a tax system should impose the same sacrifice on the taxpayers whose individual utility is reduced by the tax. Due to the diversity of possible sacrifice approaches no overall conclusion can be drawn for the desirability of progressivity, so that an additional value judgement is required (Prest, 1960, p. 117). However, in the past it was widely accepted that some – and indeed a high – degree of progressivity was socially desirable in rich industrialised countries.

However, since the 1980s, the distributive goal of fiscal policy was increasingly seen as an obstacle to efficient tax design rather than a goal by itself. Indeed, according to the OECD (2011, pp. 267) since the mid-1980s market incomes have become more unequal in most OECD countries (Table 1). Additionally, on average redistribution by the state has become less effective since the mid-1990s. The redistributive impact of the tax and transfer system can be estimated by comparing the development of Gini values for market incomes (G_m) and the Gini value for disposable income (G_d). As can be seen in column 7 "between the mid-1980s and the mid-1990s, redistribution systems compensated nearly three quarters of the increase in market-income inequality" (OECD, 2011, p. 268). Even though the rise in market-income inequality was less pronounced in the following decade (columns 1 and 2), the redistribution "became less effective at offsetting growing inequalities" (Ibid.). Consequently, taxes and transfers compensated only 53 percent of the total increase of inequality between the mid-1980s and the mid-2000s.

**Table 1. Redistribution: general country trend
Inequality before and after taxes and transfers¹**

		Market income		Disposable income	Redistribution			
		Gm	Change, % of base-period	Gd	Gm-Gd	% of Gm [4]/[1]	Change, % of base-period Gm	[6]/[2]
		[1]	[2]	[3]	[4]	[5]	[6]	[7]
12-country average²	mid-1980s	36.2		26.7	9.5	26.4		
	mid-1990s	39.2	8.2	27.4	11.7	29.9	6	73
	mid-2000s	39.8	9.8	28.3	11.4	28.7	5	53

1. Households headed by a working-age individual (15-64, except in Sweden where 25 was chosen as the cut-off age in order to minimise the impact of a change in the definition of a household that occurred in the mid-1990s). Gini values (G) are shown in percent. All measures are based on equivalised household income using the square-root equivalence scale. Standard LIS practice was followed for top- and bottom-coding (see www.lisproject.org).

2. Countries with full tax and benefit information for mid-1980s, mid-1990s and mid-2000s: Australia, Canada, Denmark, Finland, West Germany, Israel, Netherlands, Norway, Sweden, Switzerland, United Kingdom, United States.

Source : OECD (2011, p. 268).

It is impossible to trace exactly to what extent the changes in the tax systems are responsible for the fall in redistribution for all OECD countries in a consistent manner. However, the general taxation trends as reflected in some important indicators can be used to establish a plausible connection: Strongly falling trends in the top marginal income tax rate, in the corporate income tax rate, as well as an increasing trend of dualisation of the income tax, i.e. increasing privileges for capital income and a lower tax burden on wealth, demonstrate that the traditional standards of tax justice have come under severe pressure in recent decades Godar *et al.* (2014, pp. 96).

In the face of rising inequality and strong budgetary pressures, in many OECD countries since the Great Recession there have been some signs that the downward trend in redistributive taxation may have come to a halt, recently.³ At the same time, a number of international institutions have commented in a roughly progressive way on how to respond to the need for fiscal consolidation in terms of socially acceptable tax reforms. Whereas those recent developments are steps in the direction of increased tax justice, some steps in the other direction must also be noticed: since 2009 many European governments have raised their value added tax and excise tax rates in order to generate additional revenues (EC, 2013a,

3. For a more extensive overview see Godar and Truger (2015a).

p. 31; IMF, 2013, p. 26). As pointed out by the European Commission (EC, 2013a., p. 30), the revenue increasing measures since 2009 have heavily focused on usually regressive consumption taxes – a clear move away from tax justice and redistribution.

Within the last few years many important international institutions have presented proposals on how to respond to the need for fiscal consolidation in terms of socially acceptable tax reforms. While it seems to be a widely-held view that combating tax evasion, limiting tax avoidance and the introduction of a financial transaction tax should enjoy high priority, opinions differ much more when it comes to the need for truly progressive tax reforms. The trade unions, ILO, UNCTAD and some NGOs more or less call for such reforms whereas the dominant mainstream institutions European Commission, IMF, and OECD are very reluctant if not openly opposed to such reforms.⁴

Based on de Mooij and Keen (2013) and IMF (2010a, 2010b), the IMF (2013, p. 25) states its understanding of the conventional wisdom regarding revenue side consolidation in the sense of broadening the tax base of the value added tax as well as the personal and corporate income tax, increasing recurrent taxes on residential property as well as increasing environmental taxation. Obviously, the focus is primarily on raising additional revenues without affecting low-income households too much, a view exactly shared by the OECD (2012c). Although some of the proposed measures may be able to reduce the disparity in the income distribution or at least show a concern for negative distributional side effects; it is striking that more fundamental reforms, i.e. a direct reversal of the downward trend in tax rates is not called for: increasing the tax rates of personal and corporate taxation as well higher general taxation of wealth are not on the agenda, although the former is discussed extensively and not ruled out per se by the IMF (2013, pp. 33). The major reason for not proposing such a more fundamental change consists in the perceived trade-off between equity and efficiency: as the OECD (2012d, p. 39) puts it: “Simply raising marginal personal income tax rates on high earners will not necessarily bring in much additional revenue, because of effects on work intensity, career decisions, tax avoidance and other behavioural responses.”

4. For a more extensive overview see Godar and Truger (2015b).

3. Standard arguments against progressive taxation under scrutiny⁵

As the above statement suggests the standard arguments against progressive taxation rely on negative incentive effects on private households' and firms' decisions and on an increase in tax avoidance. There can be no denying that those effects may potentially pose a serious threat to a comprehensive move towards more progressive taxation. However, on the basis of standard mainstream textbook knowledge (e.g. Rosen and Gayer, 2008; Salanié, 2011) and literature, it can be argued that these effects need not necessarily be large so that the equity efficiency trade-off alluded to may actually be rather small. In addition, government spending financed with the additional revenue may offset or even overcompensate for the negative effects of taxation on output and employment.

Analysing first the private household sector, the most important negative incentive effects discussed refer to labour supply, savings and – more recently – tax avoidance. The typical argument raised against progressive income taxation is that taxes reduce the hourly compensation for work and thus lower the opportunity cost of leisure. Theoretically however, the overall effect on labour supply is indeterminate: it can decrease because leisure time becomes relatively more attractive (substitution effect) or it can increase because for the same amount of hours worked the overall income will be lower and the economic agent may want to compensate for this loss (income effect) (Salanié, 2011, pp. 18). Since high-income earners are often assumed to be high-productivity workers, Salanié argues that discouraging their labour supply may cause a greater welfare loss than discouraging the labour supply by the low-productivity worker (*ibid.*, pp. 88). However, the idea that top executives really face the type of decision may be unrealistic. As Corneo (2005, p. 17) puts it: the substitution effect is only relevant as long as a person's working potential is not exhausted. In general the preoccupation with labour supply seems exaggerated.

Therefore, it hardly comes as a surprise that empirically, the labour supply seems to be rather inelastic with respect to wages.

5. For a more extensive overview and discussion see Godar and Truger (2015c).

In a meta-study Evers *et al.* (2008) review empirical estimates of the uncompensated wage elasticity of labour supply. The mean of the empirical distribution of estimated elasticities for the labour supply of men is 0.07 and the median is 0.08. The respective values for women are 0.43 and 0.27 or 0.34 and 0.26 excluding outliers (pp. 32). This would imply that on average, a percentage change in the net hourly wage rate, *ceteris paribus*, leads to a 0.07 percentage change in hours worked by men and 0.43 (0.34) by women. The evidence that female labour supply is more sensitive to the wage can partially be explained by the fact that on average women still “undertake a much higher load of unpaid work than men” (OECD, 2012e, p. 73). According to the OECD, in countries with high child-care cost women are much more likely to work part-time (*ibid.*, p. 84). In addition, Alvaredo *et al.* (2013, p. 9) suggest that the model of pay determination used in much of the optimal tax literature may be oversimplified. They consider the possibility that top income earners’ growing bargaining power may help them to increase their compensation at the expense of other income groups. From this perspective lower top marginal tax rates provide an incentive to increase bargaining efforts which have nothing to do with productivity enhancing work efforts. Higher top incomes may thus be the result of redistribution in between income groups rather than of additional economic activity. Including the effect of top marginal tax rates on bargaining efforts may allow for a higher marginal tax rate as discouraging bargaining efforts can have positive effects on economic efficiency. This is the case if due to their bargaining power, top income earners manage to raise their remuneration above marginal productivity and at the expense of the remaining incomes. As Kleven *et al.* (2010), and Young and Varner (2011), point out, despite individual examples of migrating millionaires, it is also improbable that rich households will try to avoid taxation by changing their country of residence.

Although it is often argued that taxes on capital income discourage savings and therefore investment and growth, economic theory does not provide clear results supporting this view. This is not astonishing since even in a simple life-cycle model of consumption the income effect can outweigh the negative substitution effect of taxation on saving (Salanié, 2011, p. 289). Banks and Diamond (2010) review different versions of

models, commonly applied in optimal tax theory, which predict that the optimal tax rate on capital income is zero. They find that “at present, the literature has only little to say about how to combine the two sources of income to determine taxes” (ibid, p. 6).

Instead of actually changing behaviour in real terms, another way of responding to high taxes, especially for wealthy households, is to avoid the tax for example by formally becoming a resident of a tax haven or by opening a bank account in a tax haven sheltered by intricate legal structures to conceal its true ownership. Apparently, tax planning and tax evasion might represent a certain threat to the governments’ ability to effectively redistribute income and wealth. However, Piketty *et al.* (2011) estimate an average long-run elasticity of top incomes with respect to the net-of-tax rate of about 0.3-0.4. In order to compute the optimal top marginal tax rate they develop a model integrating three different components of this overall elasticity: a supply side effect (real behavioural adjustments), a tax avoidance effect, and a compensation bargaining effect. For the U.S. Piketty *et al.* (2011) estimate that the top marginal tax rate is well below its revenue maximising point, suggesting potential for much higher tax rates. With a similar approach, the IMF (2013, pp. 34-37) calculates a range of revenue-maximising top personal income tax rates for 16 OECD countries. In 12 countries the actual top rate is below or in the lower half of that range indicating substantial leeway for increased tax rates.

The tax that according to standard mainstream reasoning is seen as the most detrimental to economic growth is the Corporate Income Tax (CIT). “Corporate income taxes are the most harmful for growth as they discourage the activities of firms that are most important for growth: investment in capital and productivity improvements” (OECD, 2010, p. 20). Furthermore high corporate tax rates are supposed to induce firms to move their production abroad and thus decrease domestic employment. The theoretical mechanism behind these effects runs through the effect of the CIT on the cost of capital: “As a broad rule of thumb, a lower cost of capital encourages investment, while a high cost of capital discourages it” Vermeend *et al.* (2008, p. 150). The basic neo-classical argument is that “firms accumulate capital as long as the return to investment exceeds the cost of finance and depreciation. Due to decreasing returns to scale, there is a marginal project that just

breaks even, i.e. which earns a return that precisely matches the costs (pre-tax rate of return on the marginal investment project is defined as the cost of capital)" (de Mooij and Ederveen, 2008, p. 684). As it turns out, however, this standard approach relies on some very narrow theoretical assumptions. The fact that firms invest as long as the return to investment is *higher* than the cost of capital does not offer any answer to the question of *how much* higher the return on investment must be. The neoclassical break-even point is only reached under perfect competition and it implies that firms do not realise profits on their marginal investment project. However, with imperfectly competitive markets firms realise more than zero profit on the marginal investment project so that, as long as the corporate tax does not completely deplete this economic profit there will still be an incentive to invest.

Furthermore, as Musgrave and Musgrave (1989, p. 306) point out, the effects of corporate taxes on investment depend on the specification of the investment function, i.e. on the underlying theory of investment. Although investment may, *ceteris paribus*, depend inversely on the interest rate and therefore on taxation through its effect on the cost of capital, relaxing the *ceteris paribus* assumption a multitude of other variables, including past sales, the business climate or unit labour cost, also play a role and on their part may positively be affected by sound public finances. Therefore, for example the potentially positive long-run effects of public funding of R&D expenditures and human capital accumulation should be considered; as well as potential positive agglomeration effects that may compensate for the negative effects of taxation Brühlhart *et al.* (2012).

Empirical evidence suggests that investment behaviour is affected by corporate taxation but it is hard to get reliable estimates of the magnitude and thus the relevance of this effect. There is not much empirical evidence of tax effects on aggregate real investment. Evidence from micro-level studies hints at negative effects of taxes on investment ranging from rather inelastic (-0.25) to more elastic (-1) responses of investment but it is difficult to transfer these results to aggregate investment on the macroeconomic level (Hanlon and Heitzman, 2010, p. 148). A meta-study, by de Mooij and Ederveen (2008), on the impact of taxation on foreign direct investment shows varying effects: on average "a 1-percentage point

increase in a tax measure in a certain location reduces foreign capital by 3.3 per cent” (p. 689). However, the standard deviation of 4.4 is high and foreign direct investment cannot be used as a proxy for aggregate real investment as it also includes portfolio investment. Two recent studies trying to assess investment effects of corporate tax cuts in Germany (Reinhard and Li, 2011), and the UK (Maffini, 2013), come to the sobering result that there is no convincing evidence that the goal of encouraging investment was reached. Reinhard and Li (2011, p. 735) even conclude that “market opportunities and competitive pressures appear to be more important for investment decisions than domestic tax changes”. In a different strand of the literature on the effects of the tax mix on long term growth the CIT is usually estimated to have the most negative effect (IMF, 2013, p. 30). However, the IMF (2013, p. 30) stresses citing Xing (2012) that these results are not robust and that Acosta-Ormaechea and Yoo (2012) find almost no negative effect of a tax mix relying more on the CIT.

Besides the real behavioural reactions to taxation discussed in the literature, a much debated issue today are firms’ avoidance strategies which aim at manipulating the tax base without actually changing the level of economic activity in a country. According to the OECD (2013b) multiple opportunities exist for corporations to shift income among entities and thereby to countries where lower tax rates or special exemptions are applied. Examples for such opportunities are using licences for brands, patents, or other financial services provided by a foreign subsidiary in a low tax jurisdiction as well as the manipulation of transfer pricing. Although there are no reliable numbers about how much profit shifting actually occurs (Ibid., p. 15), the existence of profit-shifting activities is “largely unquestioned” (Heckemeyer and Overesch, 2013, p. 1). Heckemeyer and Overesch (2013), review the empirical literature on profit-shifting behaviour of multinational firms. On average, the 25 studies estimate a semi-elasticity of reported profit or earnings before interest and taxes with respect to the international tax differential between a country and other subsidiary locations of 1.55 with a relatively high standard deviation of 2.23. (ibid. p.8). Although at first sight the number seems substantial, it implies that on average a country with an overall tax rate on corporate profits of 20% may increase its rate by 5 percentage points or

one quarter at a cost of losing only 7.75% of its tax base. Hence it would not receive the full revenue benefits of the tax increase in the absence of tax avoidance, but after all, more than two thirds of it.

All in all, therefore, the case against progressive taxation turns out to be substantially weaker than often claimed. Both from a theoretical and an empirical point of view, the negative effects on growth and employment and the erosion of the tax base may not be large. And although we cannot know the counterfactual, average growth rates in many industrialised countries tended to decrease over the last three decades, despite all the cuts in the tax rates. Furthermore, factors other than taxation (cyclical condition of the economy, infrastructure investment, research and development expenditures, the educational system as a provider of a qualified workforce) may be much more important for the overall economic effects of taxation. If those factors can be enhanced by government expenditures financed through progressive taxation then the overall economic effect of the latter may well be positive.

4. Macroeconomic arguments in favour of progressive taxation

The trade-off between progressive taxation and growth and employment need not be too important even from a neoclassical microeconomic perspective. However, the problem remains that within neoclassical microeconomic tax theory, progressive taxation is always automatically in a defensive position as the standard assumption is that progressive taxation is detrimental to growth and employment. The picture may change, however, from a more Keynesian macroeconomic perspective. In what follows, therefore we briefly sketch a macroeconomic view that may lead to completely different results as progressive taxation may be systematically conducive to growth and employment both in the short and in the long run under certain conditions.

4.1. Inequality, progressive taxation and private consumption

The conflict between equity and efficiency derived in neoclassical public finance is by no means necessary if one goes back to the traditional stabilisation branch of public finance as Musgrave (1959), and takes into account the essential role of aggregate

demand. According to Keynes (1936, chapter 2; 1937, pp. 219) effective demand consists of private consumption demand and investment demand. Keynes put particular emphasis on the importance of investment demand, because he was convinced that its high volatility in combination with the multiplier process was the most important source of fluctuations in overall economic activity (Keynes 1937; 221). Investment demand depends on the fluctuating subjective expectations of firms in terms of profitability of real investment and the monetary interest rate, which in turn is influenced by the fluctuating liquidity preference of economic agents. However, private consumption also plays a central role in the argument, especially the fact that it is assumed to be dependent on current disposable income. Keynes assumes that private consumption is positively related to overall disposable income in the economy. The marginal propensity to consume indicates how large the part of income is which flows into additional consumption, and thus, automatically, how large the residual is that goes into savings. If overall income increases because of an increase in investment activity, then this leads to an additional increase in private consumption according to the marginal propensity to consume, which in turn leads to an additional increase in income, etc. The induced multiplier process will be the stronger the higher the marginal propensity to consume and hence, the lower the marginal propensity to save.

Based on these theoretical assumptions one can obviously derive a negative relationship between the degree of inequality in the distribution of income and private consumption. Since the marginal propensity to consume tends to decrease with increasing disposable income at the household level, redistribution from households with lower incomes to households with higher incomes should result in a lower rate of consumption in the aggregate, or a higher savings rate vice versa. In this case, the increasing inequality in the recent past would have led to a weakening of private consumption. Conversely, a (tax) correction of the disparity in income distribution would lead to a strengthening of private consumption and hence, *ceteris paribus*, to an increase of growth and employment. If the increase of demand has also a positive impact on firms' sales and profitability expectations, one can

additionally expect investment to increase and thereby even further reinforce the positive growth dynamics.⁶

There is a second aspect of redistribution and inequality that may also lead to negative growth and employment effects which is related to the functional income distribution. Of course, the negative trend in the labour income share to be observed within many economies may also show up in increased disparities in the personal income distribution. Additionally, in post-Kaleckian models of distribution and growth usually redistribution from workers to capitalists is seen as detrimental to growth because the propensity to consume out of profit income is assumed to be lower than the propensity to consume out of labour income (see e.g. Hein 2008 and 2012). As Behringer and van Treeck (2013) and Belabed *et al.* (2013) have argued this result may critically depend on retained profits and the existence of the 'corporate veil' which prevents an increase in capital owners' wealth from increasing their private consumption expenditures. Also there seems to be a systematic relationship according to which countries with a more stable personal income distribution – mostly in continental Europe – also tend to be those countries with the strongest decline in the labour income share, whereas the countries with a large increase in income dispari-

6. The underlying assumptions of this result regarding private consumption behaviour are certainly not uncontroversial (see van Treeck and Sturm, 2012, especially pp. 13). The validity of the Keynesian consumption function is assumed, which states that private consumption depends on current real disposable income. In addition, it is assumed that the marginal propensity to consume or to save in different income classes remains unchanged with a change in income distribution. However, other consumption theories could certainly lead to different results. If one follows Friedman's (1957) permanent income hypothesis, it would depend on whether the increase in inequality is permanent or temporary. Only in the latter case, private households would under risk aversion reduce their marginal propensity to consume. In the former case, however, households would leave their consumption behaviour unchanged. If the validity of Duesenberry's (1949) relative income hypothesis is assumed, private households which are affected by a relative reduction of their income will increase their marginal propensity to consume, in order not to fall too far behind the example given by the consumption of higher income classes. The expected result of the Keynesian consumption hypothesis, a fall in private consumption due to an increase in inequality, would at least be mitigated, avoided or in the extreme case even overcompensated. Indeed, there is some evidence for the validity of the relative income hypothesis, especially for the United States (Frank, 2005; Frank *et al.* 2010). Overall, the response of private consumption to increasing income inequality seems to depend on country-specific factors, mainly the access of lower and middle income groups to credit (van Treeck and Sturm 2012). However, it is hardly conceivable that a paradoxical positive relationship between inequality and private consumption will go on forever, as lower income households would ultimately be forced into piling up debt and there are limits to the sustainable debt level in the long run. Moreover, in countries in which the traditional Keynesian consumption function holds, increased disparities in the income distribution will be directly detrimental in growth terms due to their negative effect on private consumption.

ties tend to have experienced a less dramatic shift in the functional income distribution. Therefore, theoretically both an increase in the personal as well as the functional income distribution may lead to a decrease in private consumption. Accordingly, a more progressive taxation of personal income as well as higher taxes on corporate profits may be growth enhancing.

4.2. Exploiting the balanced budget multiplier

In the preceding section, a revenue-neutral shift of the tax burden away from the lower and middle income households towards high income households has been assumed. The relatively higher marginal propensity to consume of the lower and middle income classes can then lead to an increase in private consumption and therefore also to higher growth and employment. Alternatively, the increase in the tax revenue due to more progressive taxation could also be used to finance additional government spending. Following the standard textbook example of the Haavelmo-Theorem this policy should be expansionary as usually the multiplier of additional government spending can be assumed to be higher than the negative revenue multiplier – a result that is broadly confirmed by most empirical multiplier estimates (see Bouthevillain *et al.* 2009; Gechert and Will 2012, and section 5.6). As the multiplier for government spending on investment and consumption is most probably larger than the multiplier for tax cuts and transfers for low and middle income households, the expansionary effect would most likely be even stronger than by revenue-neutral redistribution within the tax system. Of course, one may question the effectiveness of fiscal policy due to Ricardian equivalence or even non-Keynesian effects. However, these counterarguments have certainly not gained much strength in recent times (see section 5.6) and it is questionable whether they apply to revenue neutral shifts in taxation or fully compensated increases in government spending.

4.3. Inequality as a root cause of macroeconomic imbalances and the crisis

Especially current account imbalances, large deficits as well as surpluses, quickly moved into the centre of criticism after the global financial and economic crisis, as a cause of the crisis or at

least as an accelerator.⁷ In this view, above all China, Japan, Germany and the oil-producing countries can be seen as main representatives of surplus economies, while the United States can be considered as the main representative of the deficit countries, together with the United Kingdom and Spain. The U.S. produced significant imbalances since the early 1980s under the surface of a seemingly robust and dynamic development, which were essential for the deepness of the global financial and economic crisis and the speed of its spreading. Despite weak private investment demand after the collapse of the New Economy boom in 2000/2001, the balance of the private sector was negative, which is evidence for a debt financed consumption boom. The government balance was negative, also because of deliberately countercyclical fiscal policy. Consequently, the balance of the external sector had to be positive. High and rising current account deficits meant increasing capital inflows which financed the U.S. consumer boom and the government deficits. Such a situation, however, is extremely fragile because it relies on steadily rising asset prices in the domestic economy, thereby allowing increasing consumer demand under conditions of low wages and high inequality of household income through an expansion of household debt. Externally, a drastic devaluation of the U.S. dollar has to be prevented, which would have been required to improve the international price competitiveness of U.S. producers and thus the current account under normal circumstances. In that way, steady capital inflows were provided without the need to significantly increase domestic interest rates, which in turn would have involved the danger of the collapse of domestic demand. If such a fragile situation finally collapses, not only the U.S. and other deficit countries are affected but also the rest of the world. After all, the surplus countries have to suffer twice. First, capital exports, which are associated with current account surpluses, were devalued in the highly speculative U.S. market within the financial crisis. Therefore the financial crisis rapidly affected the surplus countries. Second, they will also be quickly affected by the real crisis due to the collapse of export markets. While the dynamic model, driven by the consumption of the U.S., was dependent on the will and the ability of households to

7. The argument in this section is based on Hein and Truger (2011, section 3). See in more detail the monograph by Hein (2012) and van Treeck and Sturm (2012).

go into debt, as well as on the will of foreign countries to lend, the (stagnating) export-driven model of the surplus economies like Germany and Japan was based on the will and ability of foreign economies to go into debt. The export-driven model was therefore just as fragile as the American one. On the one hand the only moderate growth rates were already reliant on dynamic export markets and thus the expansion of the world economy. On the other hand increasing capital exports to more dynamic economies brought the risk of contagion in the event of financial crises in these markets. During the global economic and financial crisis, these two dependencies and their associated transmission channels for the crisis were visible in a dramatic way. The extreme increase in inequality in the US thus went hand in hand with a strong long term debt-financed development of private consumption and a significant increase in household debt which triggered the financial market bubble, until it burst. However, in countries with less accessible credit markets, where households with relative losses were unable to get credit due to credit rationing by banks, the Keynesian consumption theory seemed to hold, even in the short term.

From this perspective a decrease in inequality would be necessary both for the surplus economies to boost domestic demand and for the deficit economies to dampen domestic demand and the tendencies towards a debt-led consumption boom – all of this with the goal of mitigating the global economic imbalances.⁸

4.4. Theoretical considerations: the macroeconomic relevance of changes in aggregate demand

The potential harmony of redistribution via taxes and fiscal policy on the one hand and growth and employment on the other hand depends on increases in aggregate demand. This raises the question under which conditions such an increase in demand will actually be transformed into higher overall economic activity. Obviously the answer to this question depends very much on the underlying macroeconomic paradigm.

8. In the case of the deficit economies, however, this is most probably only a second-best strategy, as the first-best strategy would consist in reregulating financial markets and in removing the factors that led to the unsustainable consumption boom in the first place.

In the microeconomic view of the New Public Finance the question is not even an issue, the economy is ultimately modelled as a pure barter economy in which Say's law inevitably applies and aggregate demand does not appear as a relevant category (see Hein 2008, pp. 30). In the neoclassical paradigm the situation is quite similar, higher private consumption could result at best as an outcome of private households' increased preferences for present consumption and would merely change the composition of overall output in favour of consumption and at the expense of investment.⁹ Also a tax-financed increase of government spending would remain without any expansionary effect for the level of output and would, at the most, modify its composition.

Different results may be derived from the currently dominating literature, the so called New Consensus Macroeconomics (NCM) (Clarida *et al.*, 1999; Woodford, 2003; Carlin and Soskice, 2006 and 2009; critique by Arestis, 2011). These approaches combine a function of aggregate demand (IS curve), which is negatively dependent on the real interest rate, and decreasing short-run Phillips curve – due to nominal wage rigidities (for example due to duration of collective agreements) – with a central bank reaction function. In the long-run, the Phillips curve is vertical at the so-called NAIRU (non-accelerating inflation rate of unemployment) and the associated output and employment equilibrium.

However, the limitation of the effectiveness of demand side changes in the NCM approach depends on very restrictive and sometimes unrealistic assumptions. If one modifies these assumptions, the scope for demand-side effects increases significantly. The first modification deals with the assumptions underlying the NAIRU model and its short-run trade-off between inflation and unemployment (Hein, 2002, Lavoie, 2009). The implied wage bargaining behaviour of workers and/or unions assumes that any positive or negative deviation from the NAIRU mechanically immediately causes lower or respectively higher real wage demands, which then lead to cumulative deflationary or inflationary processes in the absence of central bank intervention. However, if the bargaining parties follow a macroeconomic wage

9. In the long term however, once lower investment has reduced effective capacities, future production will decrease due to a lower capital stock.

policy, taking as a guideline the development of productivity and the target inflation rate of the central bank for example, the NAIRU would not be one unique equilibrium point, but there would be a whole range of unemployment rates that are consistent with a stable inflation rate.

If there is hysteresis, for example due to processes of disqualification of the long-term unemployed, an increase in the actual unemployment rate automatically leads to a partial increase of the NAIRU and vice versa. The consideration of both modifications lead to the recommendation of a less restrictive monetary policy, which in turn leaves more room for positive demand side effects by redistributive tax and fiscal policy.

The second type of modifications questions the central bank's ability to control the economy through interest rate policy. First, the central bank might not be legally responsible for the national inflation and demand policy of the economy, as in a monetary union for example (Allsopp and Vines, 2005). Second, the effectiveness of the central bank's interest rate policy may be asymmetric: while the central bank may be able to fight any expansionary process by corresponding increases in interest rates, there is absolutely no guarantee that it is actually able to effectively combat a downturn: the monetary transmission mechanism may be disrupted if banks do not pass on lower costs induced by interest rate cuts by the central bank due to higher risk premiums or pessimistic expectations decrease creditworthy demand for loans. In addition, investment demand may collapse due to pessimistic expectations of investors. If the key interest rate is already at (near) zero, and/or when the economy slides even further into deflation, the interest rate policy of the central bank has completely lost its ability to stabilise the economy. This situation is dramatic within the NCM approach because the economy loses its central stabilization mechanism and moves further away from equilibrium via cumulative inflationary or disinflationary processes. In such a situation, the economy is dependent on tax and fiscal policy measures in order to effectively support the level of aggregate demand.

4.5. Empirical considerations: traditional and more recent estimates of the multiplier

Maybe one of the very few and small positive side effects of the Great Recession and austerity crises in many countries is that it has strongly encouraged empirical research on fiscal policy effectiveness and the size of the multiplier. And, in fact, many of the recent studies support the more Keynesian views of a sizeable multiplier. Firstly, the case for expansionary consolidation has severely been damaged by Guajardo *et al.* (2011) and Perotti (2012). Secondly, especially under the current conditions in the euro area with monetary policy at the lower bound, fixed exchange rates within the currency union and simultaneous consolidation, the multiplier tends to be large and (sometimes well) above one (Auerbach and Gorodnichenko, 2012; Batini *et al.*, 2012; Blanchard and Leigh, 2013; Baum *et al.*, 2012; Coenen *et al.*, 2012; DeLong and Summers, 2012; Holland and Portes, 2012). Thirdly, as suggested by the standard Keynesian textbook models and the Haavelmo-Theorem, the expenditure multiplier tends to be larger than the revenue side multiplier (Auerbach and Gorodnichenko, 2012; Batini *et al.*, 2012; Gechert and Will, 2012). Fourthly, multipliers tend to be higher during strong recessions (Auerbach and Gorodnichenko, 2012; Batini *et al.*, 2012; Baum and Koester, 2011; Baum *et al.*, 2012; Creel *et al.*, 2011; and Fazzari *et al.*, 2012). According to Batini *et al.* (2012, p. 23), the expenditure multiplier during recessions may be in the range of 1.6 to 2.6 whereas the tax multiplier only in the range of 0.16 to 0.35.

Of course, the recent studies are interesting in themselves and they may even constitute considerable progress from an econometric or methodological perspective. However, it should be noted that most of their conclusions – most notably that there tend to be sizeable multipliers and that expenditure multipliers are larger than revenue side ones – could easily also have been drawn on the basis of the earlier literature well before the crisis (see e.g. the overviews by Hemming *et al.*, 2002, Arestis and Sawyer, 2003, Bouthevillain *et al.*, 2009, and Creel *et al.*, 2011).

However, there is still a central point missing within the empirical literature on multiplier values: to our knowledge, there are no comprehensive studies on macroeconomic effects of redistributive tax policies. With respect to revenue-side multipliers the empirical

literature provides not many results for different tax categories. Coenen *et al.* (2012) as an exception state average multipliers of their results from 7 widely used DSGE models for changes in consumption, corporate and labour taxes for the United States (US) and the European Union (EU) and find that a change in the consumption tax rate yields a first-year multiplier of 0.61 for the US and 0.66 for the EU. According to Coenen *et al.* (2012) the corporate tax multiplier is 0.24 in the US and only 0.15 in the EU. So, a corporate income tax increase would only have a small negative effect on GDP, especially in countries of the EU. A different picture arises with respect to their labour income tax multiplier, where they calculated 0.23 for the US and 0.53 for the EU. Coenen *et al.* (2012) also present values for transfer shocks. They differentiate between general and targeted transfers and found a magnitude of 0.42 for the US and 0.29 for the EU with respect to the former and values as high as 1.30 for the US and 1.12 for the EU regarding the latter. Using a macroeconometric model for Germany Truger *et al.* (2010), also differentiate between tax categories. For Germany, they estimated a value added tax multiplier of 0.8. A one percentage point change of indirect taxes will have an GDP effect of 1.0%. However, they found a lower effect for income taxes with 0.3 to 0.7. Moreover, Truger *et al.* (2010) calculated a multiplier for contributions to social security with 0.8 and government transfers with 0.4 to 0.9.

Future research should focus more on the comparative effects of increases of the tax burden for the rich and a simultaneous reduction of the tax burden for households at the lower end of the income distribution. Nonetheless, as pointed out by Coenen *et al.* (2012, p. 52) tax multipliers are very much dependent on the degree and the behaviour of financially constrained households within an economy and these, usually low income households, have a higher propensity to consume out of their income, thus one can expect in line with their results high positive output effects from a redistributive policy from high to low income households. Nevertheless, from the empirical perspective the output effects of redistributive tax policies among different classes of income remain a rather open question.

5. Tax policy, macroeconomic performance and perspectives of rebalancing under the debt brake in Germany

Although the disparity of income distribution in Germany is still far away from the degree of inequality in the United States, it has grown strongly over the last decade (OECD 2008, 2011a). The top income range has achieved particularly strong gains Bach *et al.* (2009), which seem to have been caused by significant tax cuts in the recent past (Haan and Steiner, 2004; Truger, 2004 and 2009; Bach *et al.*, 2011). In what follows we try to connect two of the aspects raised in the previous section for the German case. In particular, firstly, we argue that the regressive German tax reforms and the concomitant revenue losses in the early 2000s may be seen as a major reason for the German stagnation until 2005 through the working of the balanced budget multiplier. Secondly, for the future, the revenues generated by progressive tax reforms may be used to finance major public investment projects thereby boosting domestic demand and contributing to the necessary rebalancing within the euro area.

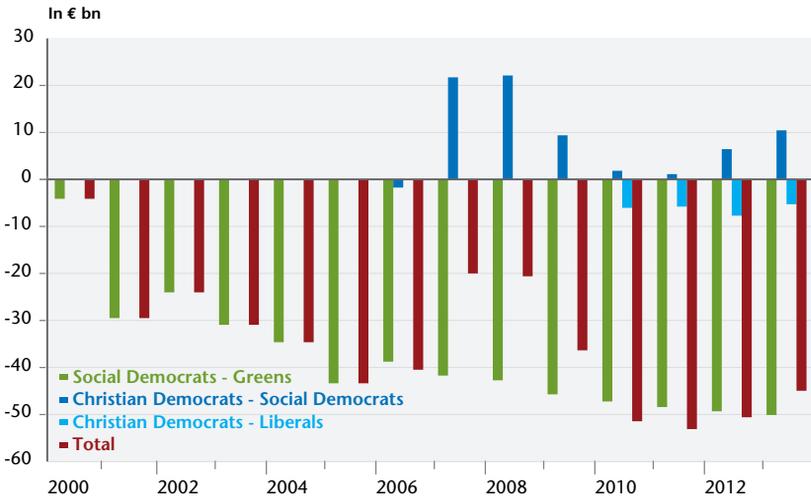
5.1. Tax cuts, induced expenditure cuts and the sick man of Europe

It is often forgotten today, that not too long ago Germany, currently seemingly the “economic powerhouse” of the euro area, used to be the “sick man” of Europe, namely in the long stagnation period from 2001 to 2005 with strongly rising unemployment and the famous “Agenda 2000” reforms of the red-green government in order to overcome what was perceived as a deep structural crisis by way of deregulation and dismantling of the welfare state. We have argued elsewhere that this view of the German crisis is seriously flawed and that, instead, a macroeconomic explanation in terms of the restrictive effects of the ECB’s monetary policy, slow wage growth and a procyclically restrictive fiscal policy is much more plausible (Hein and Truger, 2005). An important part of this restrictive policy mix, namely fiscal policy, can in turn be explained by the inadequate and rather aggressive tax cuts (Truger, 2004 and 2009).

German government budgets had, from 2001 to 2005, been weakened by drastic, permanent tax cuts – particularly in the personal as well as the corporate income taxes. Figure 1 shows the net fiscal effects in 2000-2013 of the changes made in the tax laws

since 1998, and assigns them to the particular federal government in office at each date. The effects were calculated by adding up and projecting the data from the finance table published by the Federal Finance Ministry. These are indeed net effects – i.e. tax increases introduced in the meantime are taken into account and are offset against the quantitatively much larger tax cuts.

Figure 1. Impact of tax law changes by the various coalition governments since 1998, 2000-2013



Sources: Federal Finance Ministry, authors' own calculations.

After drastic tax cuts by the Social Democratic-Green federal government, there were compensatory increased revenues from 2006 onwards, starting with the Grand Coalition's consolidation drive and primarily attributable to the increase in the value added tax by three percentage points from 16 to 19 per cent. If there had been no further changes, the revenue losses would have stabilized at about half the figure brought about by the Social Democratic-Green reforms. However, within the framework of the economic packages, further tax cuts were then adopted, so that by 2009, the revenue increases from the measures brought in by the Grand Coalition had almost all been eaten away again. Nevertheless, the Christian Democrat – Liberal Democrat coalition, which had taken office in the autumn of 2009, opted for further tax cuts via the so-called Growth Acceleration Law. Overall, the revenue loss to all levels of government from 1998 onwards, due to past tax-cutting policies,

was running at about €45bn (1.7 per cent of GDP) in 2013. Alongside transitory, cyclically induced declines in revenue, the drastic tax cuts described in the previous section are also the main cause of the budget deficits that have arisen over the past twelve years.

Figure 2. Overall government revenues and expenditures*, 1991-2012



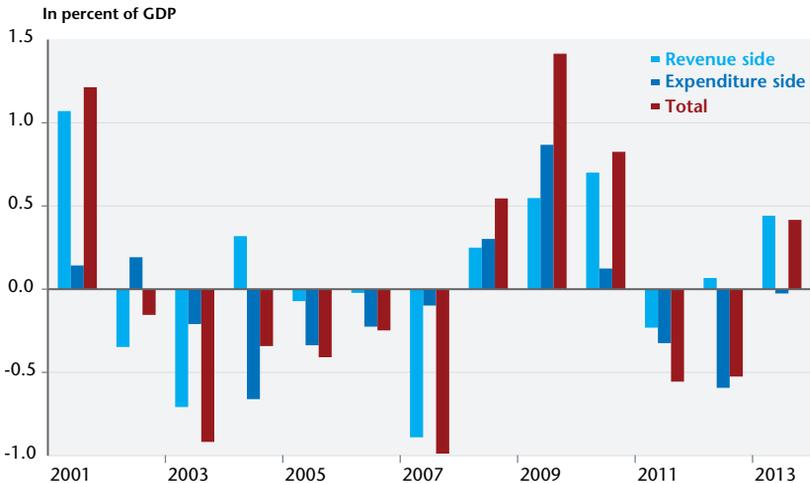
* Expenditure in 1995 excluding debt assumption by the Treuhandanstalt (privatization agency for Eastern Germany) and by the housing sector of the former GDR (totalling €119.6bn) and in 2000 excluding the proceeds from the auctioning of UMTS licences (€50.8bn)

Source: Federal Statistical Office.

What is most important for the German stagnation period under review is that the German government after some time lag reacted to the revenue losses caused by the economic crisis after the bursting of the dotcom bubble and by the tax cuts by increases in social security contributions and by sharp expenditure cuts in order to control the budget deficit. As Figure 2 shows, the overall government revenue ratio has dropped dramatically since 2000 (due mainly, as has been seen, to tax-cutting policies), and this led to a rise in the overall government budget deficit. Hence an even steeper drop in the expenditure ratio from 2003 onwards, i.e. in order to consolidate the budget, the State – except during the brief economic package phase in 2009 and 2010 – made a lasting reduction of some three percentage points in its claims on GDP, from around 48 per cent in the early 1990s to only about 45 per cent since 2005.

The negative and pro-cyclical fiscal policy stance as a reaction to the crisis and the self-inflicted revenue losses can be shown more clearly and in more detail both by looking at the discretionary stance (Figure 3). From 2003 the expenditure side stance turned negative with the most severe cuts in 2004. We already used the argument at the time (Jacoby and Truger, 2002 and Truger, 2004) and elaborated on it in Truger *et al.* (2010). Using standard multiplier values and simulations with a macroeconomic model, it can be shown that the result of this simultaneous exercise in tax and expenditure cuts during a recession/stagnation period was bound to produce severely and often overlooked negative effects for the German economy. Interpreted in the light of the new results from the multiplier literature, maybe the argument should be better understood today than it was a few years ago. The recovery was only allowed to gain momentum when the strong expenditure side consolidation strategy was loosened and government consumption and above all investment started to recover in 2006.

Figure 3. Discretionary fiscal stance, 2001-2013



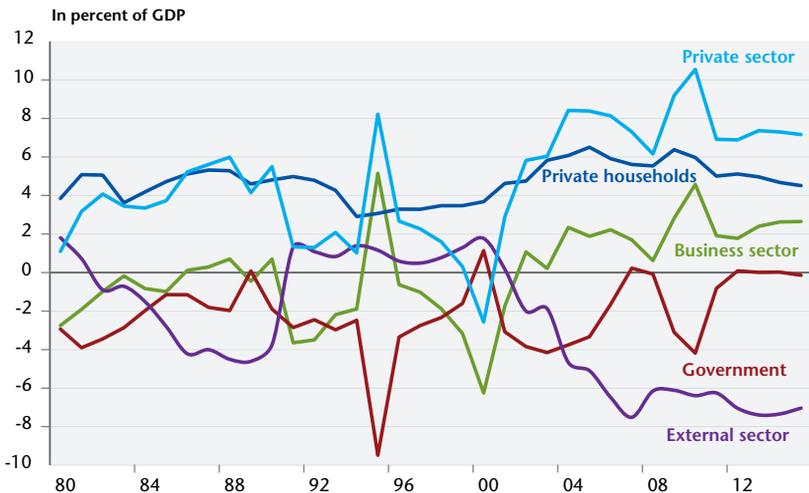
Source: Horn *et al.* (2013, p.18).

5.2. Redistribution and perspectives of rebalancing under the debt brake

The potential macroeconomic advantage – or given the constraints of the debt brake probably the necessity – of a more

progressive taxation in Germany can be illustrated by the development of the financial balances of economic sectors (Figure 4). By definition, the sum of the balances of the private sector (consolidated balance of private households and firms), the public sector and the external sector must – apart from statistical discrepancies – always be zero. Over the period from 1980 to 2013, the balances show the usual economic fluctuations. The balance which developed most constantly over time has been the one of the public sector which is usually in the focus of public debate. Apart from the exceptional years 1995 and 2000 (inclusion of debt related to German unification into the government sector and UMTS auction revenues), the government budget balance ranged from 0 to -4% of GDP and moved quite smoothly around an average deficit of 2% of GDP.

Figure 4. Sectoral financial balances in Germany, 1980-2015



Source: Ameco database of European Commission, Spring 2014; Authors' calculations.

However, the balance of the private sector has undergone a rather spectacular development. After a period of temporarily low surpluses of about 1% of GDP in the wake of German reunification, the private sector balance has increased steeply since the economic slump at the beginning of the new century varying around values of 8% of GDP since then. This is due to both an increase of the surplus of private households from previously 4% to over 6% of GDP as well as the transformation of the traditional deficit making

firm sector to a sectoral balance with a surplus of just over 2% of GDP.

The increase of private household surpluses since the beginning of the new century can be explained plausibly with the accelerating increase in the disparity of income distribution since then (Bach *et al.*, 2009; OECD, 2008 and 2011) and the consequential increase in the savings rate. The hypothesis that the increase in income inequality in Germany had a negative impact on private consumption was raised by various authors (Deutsche Bundesbank 2005, p. 26; ARGE, 2006, pp. 263; Meinhardt *et al.*, 2009, pp. 57). Therefore, it is reasonable to expect an increase in consumer spending via a (fiscal) reduction of income inequality in Germany. There has also been a massive shift in functional income distribution at the expense of (low) labour income and in favour of profits which is observable in the labour income share. As one could have expected, all this had a negative effect on private consumption demand: private consumption to GDP crashed by about 3 percentage points compared to the situation at the beginning of the century and has not reached its former level since then.

What is much more difficult to interpret is the amazing development of the business sector balance over the same switching from a previously typical deficit to persistent surpluses. Apparently, a substantial proportion of rising profits of companies, which can be derived from the declining labour income share, have not been distributed to households, which in turn is likely to have weakened private consumption even further. But most importantly, the increase in retained earnings – differently as one could expect from the neoclassical perspective – was accompanied by a clear weakness of real investment, which in parallel to the drop in private consumption also barely made positive growth contributions anymore.¹⁰

Since the mid-1990s, and especially after the recession in 2000/01 to 2006/2007 domestic demand and thus growth and employment in Germany has been very weak and it has been intensified by a dysfunctional macroeconomic policy (Hein and Truger, 2005,

10. This development can be seen in the context of the so-called process of “financialisation”, i.e. an increasing importance of financial markets within and for the real economy (see Epstein and Power, 2003, Epstein and Jayadev, 2005).

2007, 2009). Labour market deregulation and pressure on unions led to extremely moderate wage increases, thus contributing to inflation rates below the euro area average which then led to unusually high real interest rates. This made Germany particularly sensitive to the restrictive monetary policy of the European Central Bank (ECB). Attempts of fiscal policy to balance the budget in times of weak private demand via spending cuts led to a further weakening of domestic demand, however, without achieving the original goal of consolidation (Truger 2004 and 2009). This left the high and ever-increasing export surpluses as the only driving force of the weak growth environment. The current account surplus (=deficit of the foreign sector) quickly reached values of more than 4% of GDP after the recession of 2000/2001, at its peak in 2007 it rose to 7.5% of GDP. The reason behind the increasing export and current account surpluses was on the one hand the extreme wage restraint, which significantly improved the price competitiveness of German companies, and on the other hand the low domestic demand, which dampened imports compared to exports. From a financial balances perspective, the huge surpluses of the private sector were not absorbed domestically due to the lack of willingness of the public sector to take on debt, which in the end led to correspondingly severe deficits of foreign countries against Germany, currently still more than 6% of GDP.

For these reasons, the current sectoral balance structure of the German economy (Figure 4) is most likely not sustainable and economic policy alternatives must be considered in order to reduce the persistently high current account surpluses¹¹. There are only two ways to achieve this. First, with consistently high surpluses of the private sector, a greater part of them could be absorbed by a larger public budget deficit. However, this solution is precluded due to the debt brake in the German Constitution and also the Stability and Growth Pact on the European level. The debt brake even further intensifies the problem, because it limits the average government budget deficit to only 0.35% of GDP over the economic cycle, which is almost 2 percentage points lower than the average of the last three decades. That leaves only the possi-

11. The hope that a sustainable balance will be reached through automatic adjustment processes is quite low from a Keynesian point of view (see Sawyer, 2011).

bility of a significant reduction of the surplus of the private sector, whether it is the balance of private households or firms or both.

The exact consequences of a policy designed to correct the sectoral balances cannot be determined precisely without an explicit macroeconomic model.¹² However, it seems clear that progressive redistribution policies and mechanisms described in Section 4 should be used for the correction of the sectoral balances. A revenue-neutral tax reform, which increases the tax burden on high incomes and wealth as well as corporate profits, and reduces the tax burden on low and middle incomes, would reduce the surplus of the private sector via the expected reduction of the savings rate. If redistribution leads to higher private consumption, it can be associated with increasing demand and profit expectations of firms which will also lead to a strengthening of firms' real investment, hence once would even reduce the surplus of the corporate sector. The increase of domestic demand would lead to a partial improvement of the government budget balance, but also to a reduction of current account surpluses. If at least part of the gained revenue from a progressive tax reform was used to expand public investment, purchases of goods and services as well as transfers, one could expect stronger domestic growth due to higher expenditure-side multipliers, which should also lead to a correspondingly stronger correction of sectoral balances.

6. Conclusions for tax policy¹³

The perspectives for a truly progressive reform of the tax system, i.e. reversing the long run international trend of decreasing tax justice and increasing disparities in the distribution of income and wealth, while at the same time raising urgently needed revenues for government budgets, have developed in a rather favourable way over the last few years. There are some signs that the downward trend in redistributive taxation may have come to a halt recently. At the same time, a number of international institutions have commented in a more or less progressive way on how to

12. However, the role of redistribution in the development of international macroeconomic imbalances is now analysed in extended NCM models as well (see Kumhof *et al.*, 2012).

13. For a more extensive discussion of reform proposals and alternatives, see Godar and Truger (2015b).

respond to the need for fiscal consolidation in terms of socially acceptable tax reforms. Against this background the conclusions to be drawn from this paper for tax policy are at least twofold.

First, on the international level the widespread consensus as to the need for combating tax evasion and limiting tax avoidance as well as the introduction of a Financial Transaction Tax should be used to implement reforms in the most ambitious way possible. The EU commission's revision of the Savings Directive making "financial products that have similar characteristics to debt claims" and income from investment funds subject to an automatic exchange of information among member states (EC, 2014) as well as the new global standard of automatic information exchange as suggested by the OECD and the G20 (OECD, 2014, p. 3) are important steps against tax evasion by individuals. In the area of corporate taxation, the same applies for the OECD Action Plan in Base Erosion and Profit Shifting (OECD, 2013c).

However, much more could be achieved, for example by the more comprehensive approach of Unitary Taxation which would make multinational companies submit their worldwide consolidated accounts (covering all parts of the company engaged in a unitary business) to local tax authorities so that their internal transfers would no longer be of interest (Picciotto, 2012). This should be complemented with minimum tax rates to prevent harmful tax competition. In general, the harmonisation of tax rates, especially with respect to capital income, would be extremely helpful in reducing the pressure for national tax policies. A global wealth tax as proposed by Piketty (2013, chapter 15) could be the ultimate goal for the international taxation of extremely rich private households. A Financial Transaction Tax covering both spot and derivative assets could help reduce size and volatility of financial markets while at the same time generating substantial revenue (Schulmeister *et al.* 2008). However, as has become clear especially with the Financial transaction tax (Schulmeister, 2015), for all of these proposals there is the serious danger that they will be delayed, watered down or not be implemented at all due to political pressure by some individual states or partisan interests.

Second, quite independently of the success of the measures on the international level, national tax policies should seek to achieve a substantially higher level of redistributive taxation even without

international coordination. The scope for redistributive tax policies on the national level has been shown to be considerably larger than claimed by the dominant mainstream view and institutions. Therefore, there is no need for national tax policies to restrict their efforts to the rather faint-hearted measures proposed by many influential international institutions like broadening the tax base and increasing taxation of residential property. Instead, for many national governments, there seems to be substantial leeway to increase top personal income tax rates, the corporate income tax and the taxation of capital in general. This leeway can substantially be increased by determined efforts at increasing tax compliance. National governments should use this leeway, as it would increase revenues for essential public uses, decrease inequality while at the same time encouraging progressive reforms on the international level.

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