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**Low Income Inequality, High Wealth
Inequality.**

**The Puzzle of the Rhineland Welfare
States**

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Low Income Inequality, High Wealth Inequality. The Puzzle of the Rhineland Welfare States

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Abstract: Inequality studies tend to assume a positive correlation between income and wealth inequality. We doubt whether this holds for Rhineland welfare states as they seem to combine low income inequality with high wealth inequality levels. We hypothesize that publicly funded *life-time income security*, which is so typical for Rhineland welfare states, enhances private debt creation, while the redistributive taxes required to finance this system are targeting income rather than wealth.

Keywords: keyword, keyword, keyword

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1. INTRODUCTION

Comparative studies of economic inequality focus mainly on income inequality and tend to treat wealth inequality only cursorily. In the past two decades major survey studies have combined international, intra-national and inter-temporal income distribution data to analyse the long term evolution of global income inequality (Lindert, 2000; Bourguignon and Morrisson, 2002; Milanovic, 2005; Milanovic et al., 2008). Compared to this achievement, research on wealth inequality has been modest (Davies and Shorrocks, 2000; Sierminska et al., 2006; Davies, 2008, Maestri et al., 2013). Given the great limitations of the available wealth data, the recent attempt of Davies et al. (2009) to construct a global distribution of household wealth, based on wealth tax and household survey data around the year 2000, is courageous and necessary to stimulate further research into comparative wealth inequality.

Despite the international variation in wealth concepts, definitions, coverage and estimation methods, the literature is in broad agreement that two things generally hold. First, wealth inequality is bigger than income inequality. Wealth concerns a stock, which allows for indefinite accumulation, whereas income earnings consist of flows which are naturally limited. In addition, while it is virtually impossible to have negative income, it is possible to have a net debt position, thereby enlarging the inequality potential of the wealth distribution in comparison to the income distribution (Davies and Shorrocks, 2000: p. 607).

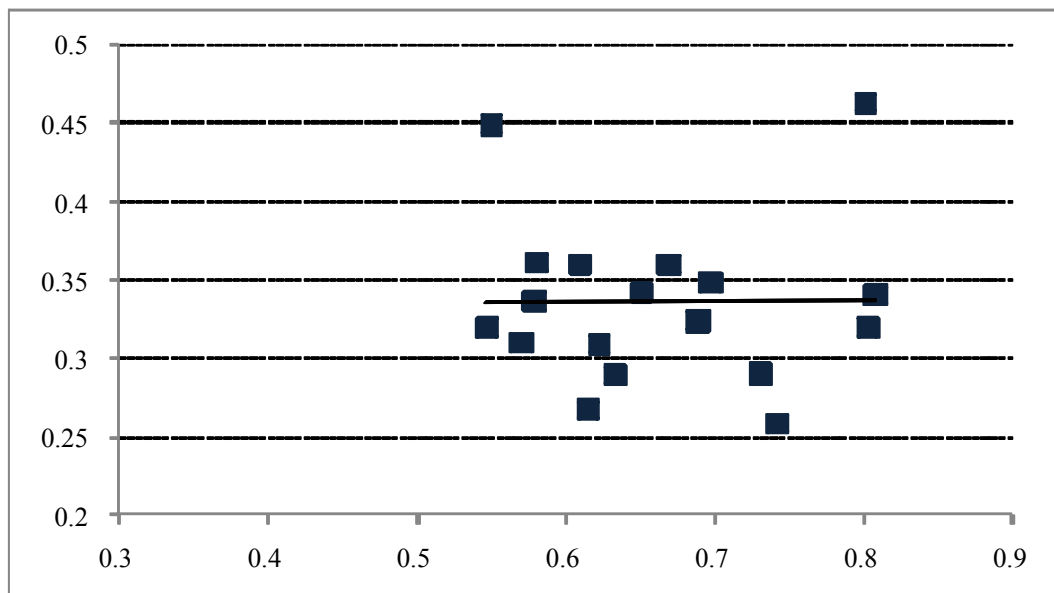
Second, there seems to be widespread agreement that income and wealth inequality are positively correlated. The economic logic is simple and runs in both directions: high income earners have more opportunities to save part of their income and accumulate wealth assets. Wealth conversely, generates additional income. Davies et al. employ this logic to directly infer wealth inequality estimates from income inequality estimates for the many countries for which wealth data are absent, assuming a fixed ratio of the Lorenz ordinates for income and wealth distributions (Davies et al., 2009: p. 21).

This research note probes into the supposed cross-country correlation between income and wealth inequality. A first indication that this correlation may be rather weak -

at least where it concerns private wealth -, follows from an inspection of the limited set of countries for which Davies et al. were able to collect ‘hard data’ on both the income and wealth distribution (p. 17). Figure 1 plots the Gini coefficients of wealth inequality from these 18 countries against the gross household income inequality Gini coefficients from the WIID database used by Davies et al.¹ Figure 1 does not show any correlation. Perhaps even more surprisingly, the four countries at the top end of wealth inequality are Denmark (0.808), the US (0.801), Switzerland (0.803) and Sweden (0.742). Three of them are typical examples of Western European welfare states with low (Switzerland), or even very low (Denmark, Sweden), levels of income inequality, in contrast to their comparative wealth inequality levels.

Figure 1

Wealth inequality (horizontal axis) versus gross household income inequality (vertical axis), c. 2000: 18 countries for which ‘hard data’ is available



Sources: Davies et al. 2009, Table 7 and 9; World Income Inequality Database V2.0c May 2008, gross household income inequality, national coverage, same year or nearest available, http://www.wider.unu.edu/research/Database/en_GB/database/ (accessed 21-03-2010). Countries included are: Australia, Canada, China, Denmark, Finland, France, India, Ireland, Italy, Japan, New Zealand, Norway, Spain, South Korea, Sweden, Switzerland, UK and USA.

¹ Germany and Indonesia were excluded because there was no gross household income inequality estimate.

Denmark, Sweden and Switzerland are part of the nine ‘Rhineland welfare states’, also dubbed ‘coordinated market economies’ or ‘social market economies’ (Hall and Soskice, 2001: pp. 18-21; Pontusson, 2006: pp. 3-6). Together with Austria, Germany, Belgium, the Netherlands, Norway and Finland, these welfare states are characterized by socio-economic policies that prioritize employment protection, income redistribution and encompassing systems of social security based on political cooperation between various stakeholders in the labour market. These policies have contributed to the notable contrast of their income inequality levels with ‘Anglo-Saxon’ or ‘English-speaking countries’ such as the UK and US (Atkinson and Piketty, 2007). But why does this contrast not appear in the available wealth inequality estimates?

As long as reliable and comparable wealth distribution data remain so scarce, it will be hard to give a conclusive answer to this question. But the data that is available invites speculation. This research note provides some hypothetical explanations of the puzzle of the Rhineland welfare states. In section 2 we review the estimates available for the nine countries and discuss the major discrepancies in the data. We argue that the tentative evidence suggests that wealth inequality in Rhineland welfare states is much higher than could be assumed on the basis of their income inequality levels. In section 3 we discuss possible causes. We hypothesize that publicly funded *life time income security*, which is typical for Rhineland welfare states, simultaneously enhances private debt and wealth creation, thus skewing the wealth distribution, while the redistributive taxes required to finance social security are targeting income at progressive rates, thus reducing income inequality. Section 4 concludes that, this being the case, we should be careful in relying on the supposed income-wealth inequality correlation to construct global wealth inequality estimates.

2. WEALTH INEQUALITY IN RHINELAND WELFARE STATES: WHAT LITTLE DO WE KNOW?

The international comparability of the wealth inequality estimates of Rhineland welfare states is blurred by many factors. Here we will only briefly address some of the major

available (see UNU-WIDER, WIID V2.0c May 2008).

issues (see also Maestri et al.: [4-11]). The available estimates are usually based on the concept of net private household worth, which includes financial assets such as stocks, bonds and private saving accounts; non-financial assets such as primary residences, real estate, vehicles and other durables; and liabilities such as home-secured mortgage debt, private loans and other debts. Net worth refers to the sum of all assets, less the sum of all liabilities. Some important economic assets are often missing, however. One of these is people's individual stake in collective pension savings (the value of which is often hard to assess on an individual basis) and other public funds allocated to an individual's education or health care provision. Especially in Rhineland welfare states, where these public arrangements are well-developed, the concept of 'private net worth' captures only part of the total wealth citizens can dispose of during their lifetimes. Another factor is that the reporting of personal equity in firms is often hard to assess and, therefore, tends to be incomplete. We will return to these issues in section 3.

The private wealth inequality level estimates we discuss below are presented in Table 1. All figures refer to a year close to 2000. We will briefly discuss the deviations in these estimates, particularly between those of Davies et al. and the much higher figures of several other studies.

For *Sweden* Davies et al. (2009) report a Gini coefficient of wealth inequality of 0.74, based on balance sheets, excluding non-financial assets. However, the Luxembourg Wealth Study (LWS henceforth) reports a Gini of 0.89 (Sierminska et al., 2006), based on sample surveys of net household wealth supplemented with information from wealth tax registers. Klevmarken (2006) finds a Gini of 0.86 using comparable data which largely supports the LWS figure. Moreover, Swedish studies stress problems in assessing households' foreign wealth and private equity in closely-held companies, which is often missing in wealth registrations (Roine and Waldenström, 2009: pp. 159-162).

For *Germany* there is also a substantial gap between the Davies et al. Gini (0.67) and the LWS Gini (0.78). The Davies et al. figure is derived from fairly complete data from wealth tax registers. The LWS figure is based on samples from socio-economic panel surveys. Frick and Grabka arrive at a figure close to the LWS estimate in their recent study of personal wealth inequality (Frick and Grabka, 2009: p. 65). The top wealth share estimates for Germany derived from wealth tax records seem to retain an

uncertain margin of error (Atkinson, 2008: p. 65), which is illustrated by Mierheim and Wicke, who adjusted the wealth inequality estimates for West Germany in 1973 (Mierheim and Wicke, 1978; Hauser and Stein, 2006). In a painstaking and never repeated exercise, the authors corrected for the missing wealth of the richest households and used a source which, exceptionally for Germany, also included the value of equity in private businesses (which is obviously concentrated in the wealthiest group). The result is a Gini of 0.75, considerably higher than calculated without these corrections for 1969 and 1983 (0.68-0.70). A similar exercise performed for the years around 2000 would arguably push the Gini substantially over the 0.80 mark.

For *Finland* Davies et al. report a Gini of 0.61 against 0.68 by LWS. According to Jäntti wealth inequality in Finland has increased sharply during the economic boom of the past decades, starting from a very low level (Jäntti, 2006).

For *Norway*, Davies et al. arrive at a Gini of 0.633, based on wealth tax records. Ohlsson et al. have argued that the estimate derived from wealth tax records in Norway, and similarly in Denmark, suffers from serious underreporting (Ohlsson et al., 2007: p. 3). In particular, the Norwegian Gini of 0.633 seems too low, since Norwegian real estate values are only incorporated up to 30% of their market value. This has led Statistics Norway to exclude non-financial assets from their reports altogether. A separate estimate of financial asset inequality, excluding net debtors, gives a Gini of 0.75.² Since a substantial number of Norwegian households holds a net debt position, this figure is probably an underestimate.

For *Denmark*, with a Gini of 0.808 reported by Davies et al. on the basis of wealth tax records, the same caveat applies to a lesser extent, since underreporting is less obvious here. More material is available from a study in 2009, showing a sharp rise in inequality during the preceding years. In 2006, the top 10 % owns 69 % of total wealth. Also in Denmark the large share of households with a net debt position (approximately 40%!) is striking (AE, 2009: pp. 15-17).

² We refer to several sources that are published on the website of Norwegian Statistics which were kindly brought to our attention and explained by the authors Jon Epland and Vidar Pederson, for which we are grateful: www.ssb.no/english/subjects/05/03/sbolig_en/ ; www.ssb.no/english/subjects/05/01/iformue_en/ ; www.ssb.no/ifhus/arkiv/tab-2001-06-01-14.html

For *Switzerland*, there are no alternatives to the Davies et al. estimate (0.803), as far as we know. Yet, other studies show that in 1997 the top 3 % held about half of total wealth and the top 0.3 % almost a quarter. The richest 100 Swiss households have increased their wealth in the period 1995-2005 by about 450 % (Mäder and Streuli, 2002), and in 2007, the top 0.2 % held more than a quarter of total wealth and the top 2 % about half (EFD, 2010: p. 14).

Wealth inequality in *Belgium* is hardly researched as yet. There appears to be a complete lack of data. One study reports that in 1979-2005 revenues from wealth have increased by 237%, with a sharp concentration at the higher income end of the distribution, against a rise of 134% in labour income and 160 % in social benefits (Cantillon, 2009: p. 13). But this does not tell us much about the Belgian level of wealth inequality.

For *Austria* a recent report of the Ministry of Labour and Social Affairs takes all major financial and non-financial components of privately owned wealth into account and finds a top 1% share of 34% and a top 10% share of 68% in the year 2002 (Beer et al., 2006; Eizinger et al., 2008: pp. 247-248). Exceptionally, this report also includes privately-held company assets, more than 90 % of which turn out to be held by the wealthiest 1 % of Austrians. Although the study contains insufficient detail to compute a Gini coefficient, there is little doubt that the Austrian Gini is much higher than the 0.65 that was derived by Davies et al. from the Lorenz ordinates of Austrian income inequality. A Gini calculation of 0.66 is available for gross financial wealth in 2004, but this calculation based on a household survey suffers from the usual underrepresentation of the super-rich, and the private wealth sheltered in privately-held foundations is also excluded. Inclusion of the latter would raise the Gini to 0.75, but this is still an underestimation of the actual figure (Schürz, 2008: p. 68).

The use of different sources can explain a considerable part of the above differences. Davies et al. rely mainly on wealth tax records, whereas the LWS rely on household survey sample data (Sierminska et al., 2006: p.6). The latter often include a wider range of wealth assets and households from different segments of the overall distribution resulting in seemingly consistent higher LWS estimates. Yet, the final case of the *Netherlands* shows that this is not necessarily true.

Table 1
**Household wealth inequality and net disposable household income inequality in the Rhineland welfare states,
the UK and USA, ca. 2000**

country	Wealth inequality reported by Davies et al. 2009			Alternative wealth inequality estimates			Income Gini
	year	Gini	Data & method	year	Gini	Data & method	Net disposable h.hold income
Austria	2000	0.646	Inferred from income distribution	2002	>0.75	Household survey (Schürz, 2008)	0.257
Belgium	2000	0.662	Inferred from income distribution				0.279
Denmark	1996	0.808	Wealth tax records				0.225
Finland	1998	0.615	Wealth tax records	1998	0.68	Wealth tax records (LWS)	0.246
Germany	1998	0.667	Survey of income & consumption	2002	0.78	Survey of income & consumption (LWS)	0.275
Netherlands	2000	0.650	Inferred from income distribution	1997	0.78	Wealth tax & h.hold surveys (Stat. NL)	0.285
Norway	2000	0.633	Wealth tax records	2000	0.75	Financial assets (Ohlsson et al. 2007)	0.250
Sweden	2002	0.742	Wealth tax & h.hold surveys	2002	0.89	Wealth tax & h.hold surveys (LWS)	0.252
Switzerland	1997	0.803	Wealth tax records	2001	>0.8	Inferred from wealth tax records	0.280
UK	2000	0.697	Wealth tax records	2000	0.66	Household survey	0.347
USA	2001	0.801	Survey of consumer finances	2001	0.84	Survey of consumer finances (Kennickell 2009)	0.368

Sources: The income inequality estimates are from the Luxembourg Income Study lisproject.org/keyfigures.htm (accessed 23-3-2010) (income inequality). The wealth inequality studies are referred to in the Table.

Household surveys including self-reported estimates of individual wealth have been conducted annually by the Dutch Central Bank (DNB) since 1993. The surveys oversample richer households to correct for the usually higher non-response rate among the upper wealth strata. The survey includes around 25 wealth items, which is quite detailed, but excludes collective pension savings. Despite oversampling, the household surveys fail to include the ‘super-rich’ households and suffer from highly fluctuating response rates and sample sizes (between 1,000 and 2,500). The estimated top 10% share of wealth owners is reported to hold roughly 45-50% of total private wealth. The Gini coefficients of net household wealth we computed for the years around 2000 range from 0.64 to 0.68. These figures are in broad correspondence with the 0.65 reported by Davies et al., inferred from Dutch income distribution data. But these estimates of Dutch wealth inequality are far too low.

Statistics Netherlands (CBS) has published markedly higher estimates of wealth inequality as shown in Table 2. These estimates are based on an almost identical concept of net private wealth: excluding collective pension assets, but including the other major components. Yet, the CBS figures are based on a combination of income and tax record data and sample survey data (the *income panel survey* including about 250,000 people and the *social economic panel survey* including some 13,000). Because Statistics Netherlands adjusts sampling errors with the micro-level data of the wealthier segment of the Dutch population from the wealth tax records (including all households owning sufficient wealth to pay wealth tax) their estimates incorporate the upper wealth strata much more accurately, although tax evasion among the top wealth owners may still lead to serious underestimation.

Table 2**Top and Bottom decile shares and Gini Coefficients of Household Wealth according to Statistics Netherlands (CBS), 1991-2009**

	Top 10%	Bottom 10%	Gini coefficient
1991	0.64	-0.015	0.78
1996	0.61	-0.029	0.78
1997	0.61	-0.030	0.78
2006	0.58	-0.049	0.80
2009	0.58	-0.050	0.82

Sources: CBS, Inkomen en vermogen 1992-1994; CBS, Sociaal-Economische Maandstatistiek, July 1996, Jaarboek Welvaartsverdeling 1998 en 2000; CBS, Statline. Data for 2009 from (Claessen, 2010). The original data are retrieved from income and wealth tax records and the CBS, Inkomenspanelonderzoek (IPO) and Sociaal-Economisch Panelonderzoek (SEP).

The Dutch case reflects a pattern which seems to hold for almost all Rhineland welfare states: it has maintained a fairly egalitarian income distribution during the last three decades of the twentieth century, whereas Anglo-Saxon countries experienced a substantial rise in income inequality (Katz and Autor, 1999; Lindert, 2000; Caminada and Goudswaard, 2001; Feenstra and Hanson, 2003; Salverda and Atkinson, 2007; OECD, 2008). Net disposable income inequality around 2000 in these countries ranged between 0.23 and 0.28, that is, below the OECD unweighted average of 0.31. Despite the ongoing implementation of neo-liberal reforms since the early 1980s, these countries still have encompassing systems of social security guaranteeing a certain minimum level of income to all citizens (Soltow and van Zanden, 1998; Lindert, 2004). But private wealth inequality levels do not support the picture of the redistributive welfare state.

Our overview suggests that private wealth inequality in the Rhineland welfare states is high. Levels are much higher than could be assumed on the basis of Davies et al. and largely comparable to the Anglo-Saxon countries, and also high in a global perspective (Davies et al., 2009: Table 9 and appendix V). Furthermore, the discussion of source problems, and especially the absence of reliable data on the wealth of the super-rich, does not rule out the option that even the higher figures are still underestimations of actual levels of private wealth inequality.

3. TENTATIVE EXPLANATIONS FOR THE HIGH LEVEL OF WEALTH INEQUALITY IN RHINELAND WELFARE STATES

Why is private wealth inequality in Rhineland welfare states so high? In search of tentative explanations we focus on factors that may specifically account for the observed contrast between low income and high wealth inequality levels. Our hypothesis consists of two key components. First, because of the importance of collective arrangements for household asset portfolios in welfare states, the concept of ‘private wealth’ misses a substantial part of total household wealth in a broader sense. Second, the organization of such collective arrangements tends to equalize the income distribution in the Rhineland countries via progressive income taxes, but leaves the accumulation of private wealth largely untouched.

The first component relates to the fact that the concept of ‘private net worth’ does not capture the collective and public arrangements that are put in place to guarantee lifetime income security. In Rhineland countries, collective and public funds to a great degree secure people against the income risks of old-age, unemployment or incapacity. Also, the state tends to support human capital accumulation by providing easy and affordable access to education for all strata of society. Part of the ‘inequality’ in the private wealth distribution in Rhineland countries is thus compensated by a relative egalitarian distribution of the claims to collectively held assets.

Therefore, the incentive on the part of lower income groups to save in order to counter the risk of income losses due to unemployment, illness or old age, is lower than in countries without encompassing social security systems. The provision of cheap public education of reasonably quality also lowers the propensity to increase household savings for education of children, potentially enhancing the inter-generational inequality in financial capital accumulation. State-guaranteed income security thus may in part explain the large size of negative wealth ownership in the Rhineland welfare states, both in terms of the percentage share of net debtors as well as the relative size of their debt. In Sweden, for instance, this group comprises 24% of total households, and in Denmark even more.

The inclusion of net debtors has a considerable impact on the skewing of the wealth distribution (Klein, 2000). It is not clear, however, to what extent the size of negative wealth ownership in the Rhineland countries in practice is larger than, for instance, in the Anglo-Saxon countries. The figures assembled in LWS do not indicate a fundamental difference: the percentage of households with negative net wealth ownership around 2000 is also large in Canada (20 %) and the USA (16-19 %), whereas in a Rhineland country like Germany this percentage is rather low (9 %, although no less than 29 % reported with nil net worth) (Sierminska et al., 2006: p. 31).

Where security does play a role is in the decision to save for old age. Of the Dutch households in the social economic panel survey of 1988, when asked for their motives to save, only 2 percent responded to save for their old age (Alessie and Kapteyn, 1999: pp. 11-12). People in the Netherlands and other Rhineland countries are clearly counting on the encompassing nature of state subsidies for old-age (65+) and the vast collective pension schemes to which many employees contribute considerable parts of their labour earnings. Taking claims to these funds into account would have an equalizing effect on the wealth distribution, since much of it is found with the middling classes, and more specifically with the public servants. This effect has been calculated for Finland (2004), with its mainly employment-based schemes, and pension rights making up no less than 47 % of total wealth, and Germany (2007), with its huge pension funds and its pension rights with a total present value of 4,590 billion E in 2007, making up 43 % of total wealth. In both cases, the effect would decrease the Gini by 16 percentage points (Frick and Grabka, 2010; Maunu, 2010). It needs to be stressed, however, that pension wealth is more difficult to quantify at an individual level and also forms a different type of wealth, since it is not directly accessible to the owner.

Welfare policies enhance the incentives for the demand as well as the supply of household indebtedness. Low variability of income caused by tight labour regulations and extensive social security schemes may induce private risk-taking behavior, but financial institutions also have a stronger incentive to supply consumer credits or mortgage loans if household incomes are more secure. They ‘help’ people to incur debts at some points in their life-cycle, especially when starting a family, buying a house or for consumption purposes, especially people in their thirties. This pattern is generally observed, but it is

equally found in the Anglo-Saxon countries like the USA and the UK (Sierminska et al., 2006: p. 34), leaving us again with the question whether this is a distinctive characteristic of the Rhineland countries.

The extent of private debt-creation may be a relatively new phenomenon. Most of the Rhineland countries have built up encompassing systems of social security, including old-age income provisions, labour disability insurances and extensive unemployment benefits, only after the Second World War. It is therefore only recently that the political ideal and the economic practice of state guaranteed 'life time income security' has started to affect the asset management decisions of households. The changes in the anticipation of risk and the different attitude towards incurring debts are arguably affecting mentality changes within our own generation, but do only to a lesser extent apply to our parents' or grandparents' generation.

A second aspect relates to the particularities of the tax regimes that are supporting the heavy weight of social security expenditures on government budgets. In Rhineland welfare states, these press mainly on labour and consumption, and hardly on wealth, and this reduces opportunities for lower income groups to build wealth, while it increases opportunities for wealth owners to expand their wealth. The lion's share of state revenue is derived from taxes on income and consumption (V.A.T.). Wealth taxes contribute a relatively small share, not exceeding a small percentage of total revenues (see Figure 2). Apart from the question whether there is sufficient political leverage to tax wealth, the costs of monitoring and levying wealth taxes are higher than in the case of income or consumption. Asset mobility has increased in the last decades of the twentieth century, which has made it easier to escape wealth taxes. Hence, the rich have clear incentives to have part of their income (i.e. the part not needed to fulfil short-term consumption desires) paid in the form of company shares or other types of assets, in order to subsequently shield them from taxation.

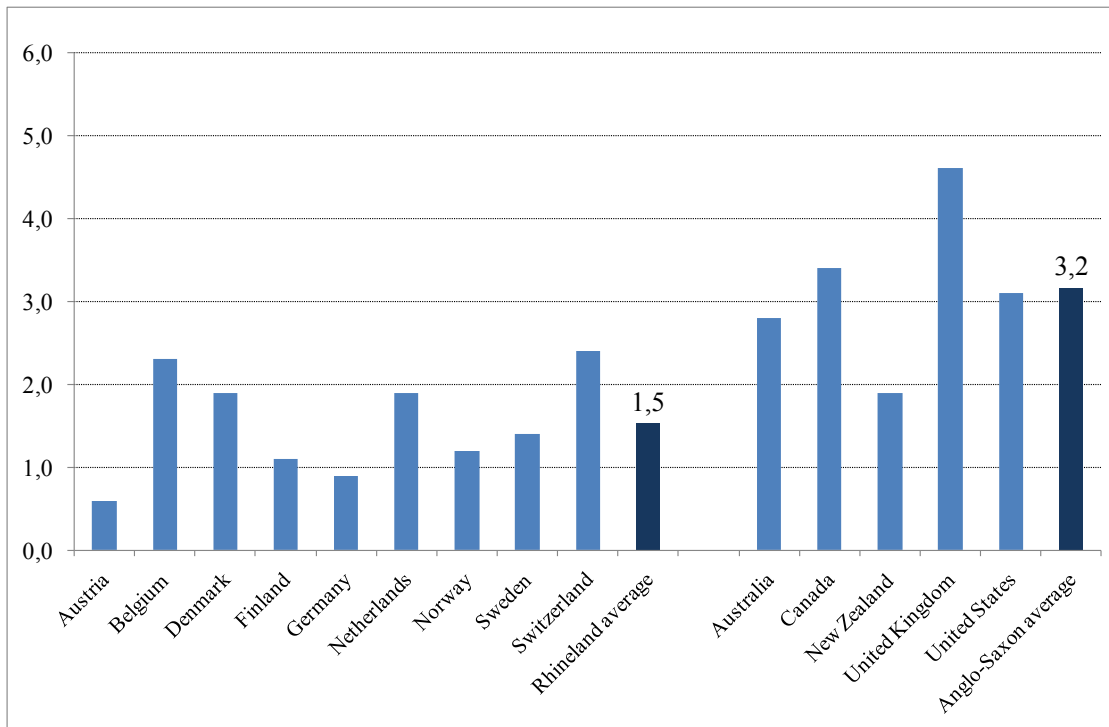
The declining importance of wealth tax revenue, the difficulties in monitoring and possibly also ideological reasons have induced several policy-makers to advocate further reductions in wealth taxation and even fuelled propositions to abolish them altogether. The taxation of wealth revenue was abolished in Austria in 1994, in Denmark and

Germany in 1997 and in the Netherlands in 2001. During the latest tax reform in the Netherlands in that year, the capital levy was raised from 0.7 to 1.2%, but at the same time taxation of actual wealth revenue was abolished. Previously, the larger wealth owners had been paying 60% income tax on income generated from capital or wealth. This implies that in the case of an average annual net return of 4% the fiscal rate has declined from 3.1% ($2.4 + 0.7$) to 1.2%.

In view of the fierce international competition in financial markets, many governments, including those of the Rhineland countries, have been pressed to adopt a relatively mild fiscal regime for businesses and their capital assets. An analysis of changes in the corporate income tax in sixteen countries (part of the EU plus G7) over the period 1982 to 2001 shows that the effective average tax rate was reduced substantially, that is, more than 20 percentage points, in five of these countries. Of these, four are Rhineland countries: Austria, Finland, Germany and Sweden (Devereux et al., 2002). In part, this is a process of convergence with rates in the Anglo-Saxon countries, and the levels reached were broadly similar around 2000, but the Rhineland countries still have to fund their welfare systems and therefore need to find other revenues to do so.

These revenues are hardly found in the realm of property, wealth transfer or wealth revenue taxes. Inheritance taxes, for instance, have also been reduced or even abolished in most Rhineland countries in the past decades. In 2005, succession taxes in the Netherlands amounted to no more than € 1,709 billion or 18% of the € 9,450 billion declared and taxed as net wealth inherited that year and no more than 8% of the total amount of € 22 billion inherited that year (Gilst et al., 2008). This indicates that wealth can be transferred to the next generation to a large extent untouched by taxation. In all Western countries, including both the Rhineland and Anglo-Saxon types, the weight of inheritance taxes has shrunk to insignificance since the 1970s and makes up only a very small share of total state revenues, usually lower than 1 % (Bertocchi, 2011). Inheritances can result in lower wealth inequality (Wolff, 2002), especially when distributed among many children, but this inter-generational effect has decreased as a result of declining birth rates, while wealth can now be transferred to the next generation relatively unaffected by taxation.

Figure 2
Taxes on property as percentage of GDP, 2006



Source: OECD (2008) Revenue Statistics 1965-2007

Notes: The taxes refer to category 4000 in the OECD revenue statistics; it includes recurrent taxes on immovable property, recurrent taxes on net wealth, estate, inheritance and gift taxes, taxes on financial and capital transactions and other (non-) recurrent taxes on property.

The supposed inefficiency of wealth taxation cannot alone explain why income and consumption in the Rhineland countries are increasingly targeted instead of wealth. Figure 2 shows that Rhineland countries in general tend to tax property less than Anglo-Saxon countries such as the US, UK and Australia. As a percentage share of GDP the Anglo-Saxon countries, with the exception of New Zealand, tend to tax wealth at least twice as heavily as the average Rhineland welfare state. Also compared to the OECD

Total (2.0) or the EU15 (2.2), the Rhineland countries remain below average. In other words, the Rhineland welfare states tend to base the additional tax effort required to maintain the supply of social security and collective goods, on income and consumption, but certainly not on private wealth.

There is another set of factors or conditions that are not primarily of a political or fiscal nature, but relate to the absence of major political-military shocks in Western Europe during the past six decades. In many of these countries, the First World War produced a decisive trend break in wealth inequality, which coincided with rapidly changing political ideas about the value of wealth and income redistribution. A similar reduction in wealth inequality occurred as a result of the great depression of the early 1930s and the Second World War. Generally, these wars and crises destroyed large amounts of capital and the rich were hit relatively hard (Piketty and Saez, 2006; Atkinson and Piketty, 2007). But the absence of such shocks in the second half of the twentieth century allowed wealth to grow undisturbed.

Finally, we should not overlook the possibility that wealth inequality in the Rhineland welfare states has increased substantially in the last quarter of the twentieth century. For countries for which comparable data is available for longer periods, including Germany and Sweden, this has indeed been demonstrated (Frick and Grabka, 2009; Roine and Waldenström, 2009). It has already been suggested that increasing asset mobility since the 1980s has contributed to the evasion and relaxation of wealth taxation. But the unprecedented rises in the value of stocks and real estate are also likely to have affected the wealth distribution over the past three to four decades more profoundly than they have affected the income distribution. These categories of wealth are especially over-represented in the asset portfolios of the rich. It is generally assumed that there is a positive relationship between stock price developments and the share of wealth owned by the super-rich, because the latter tend to hold a disproportionately large share of their wealth in company shares (Jäntti, 2006; Torche and Spilerman, 2008: p. 167), and these are taxed only at a low rate and to an ever smaller extent.

4. CONCLUSIONS

This research note has looked more closely into the relationship between income and wealth inequality across countries, and argues that Rhineland welfare states at the turn of the millennium characteristically *combine* low income inequality with high private wealth inequality. We have illustrated this by combining the most recent case studies on wealth inequality and observing levels of private wealth inequality at a Gini of around 0.80, which is much higher than assumed in the literature and also quite high from a global perspective.

It is hypothesized that the large contrast between income and wealth inequality levels is the result of a combination of economic conditions, developments, policy measures and structural characteristics of Rhineland model countries. The great number of credit facilities, its favourable treatment of businesses, the life-long social security and public social and pension schemes, and a relatively mild wealth tax regime all contribute to the inequality potential of the wealth distribution. The effect and relative weight of these elements needs to be further assessed. What is clear, however, is that whereas the redistribution of income has remained fairly strong in Rhineland welfare states to date, households have much more freedom to dispose of their wealth assets as they prefer. In the wake of increasing constraints on wealth taxation (monitoring costs, asset mobility, ideological considerations) wealth became ever less taxed over the decades from 1980 - witness the reduction of the wealth, dividend and succession taxes in several Rhineland countries. This process is likely to proceed further in the coming years, as indicated by the current debate about further reducing or abolishing these taxes in the same countries.

In this research note we have looked at the opportunity to infer private wealth inequality estimates from the far more abundantly available income inequality figures. For several Rhineland countries this method proved to create a bias of nearly 15 percentage points of a Gini. This result has wider implications. It points, for instance, to the possibility that for many developing countries with high income inequality, the inferred wealth inequality figures will be far too high. Our argument that the size and

impact of negative net wealth on the wealth distribution is largely related to the income security of people and the willingness of financial institutions to supply credit beyond the value of household's collateral, applies to developing countries in the other direction: without social security systems, households have to save in order to secure their levels of living standards throughout their life-cycles and wealth accumulation among the poor is a strategy to survive. If it is indeed true that net negative wealth is much less common in developing countries, this will have a serious negative impact on their comparative level of wealth inequality. This qualifies the idea of Davies et al. (Davies et al., 2009) to infer wealth inequality estimates from the far more abundantly available income inequality figures; we would rather advocate an approach starting from different sets of countries with specific socio-economic characteristics. We would also like to stress, however, how important the contribution of Davies et al. is. The great value added of adopting a global perspective as they do, is that it brings up questions, such as those concerning the relationship between income and wealth inequality, that have not been posed in similar ways before. This note is therefore in many respects a fruit of their seminal work.

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