

Financialization and the rentier income share – evidence from the USA and Germany

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During the past two decades, there has been a shift of significance from the real to the financial sector. In the course of (financial) globalization, measures of liberalization and deregulation have contributed to a strengthening of financial capital. The concept of shareholder value orientation has become more powerful, capital income has increased tremendously, while real wages stagnated. Most industrial countries have experienced a decline in the share of labor income.

Based on a review of empirics and literature, this paper seeks to determine who gained from the fall in the labor share of income in the USA and Germany, respectively. If financialization is indeed responsible for the decline, rentiers should be the beneficiaries. In order to identify the relevant effects, the profit share of the two countries under observation is split up between the share of retained earnings and the share of net property income (= rentiers' income) using a modification of the approach chosen by Epstein/Jayadev (2005). The presented evidence shows that the development of the rentier income share indeed corresponds quite well with the stages of development of financialization in the two different countries: In the US, where the important shift towards financialization occurred in the early 1980s, the rentiers' share of income shows a corresponding leap upwards exactly at that time and remains on a higher level until the end of the observation period. In Germany, the process of financialization started much later – in the beginning of the 1990s - and followed a much more gradual transition which is perfectly mirrored by the development of income shares: From the 1990s onwards the rentiers' income share gradually increases over time.

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1 Introduction

However, even among economists highly critical of neoliberal globalization, there is to date no consensus on the appropriate definition of financialization, never mind agreement as to the logic or laws of motion – or even the existence – of a new system of rentier or finance capitalism. (Crotty 2002, p. 13)

Financialization means the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies. (Epstein 2005, p. 3)

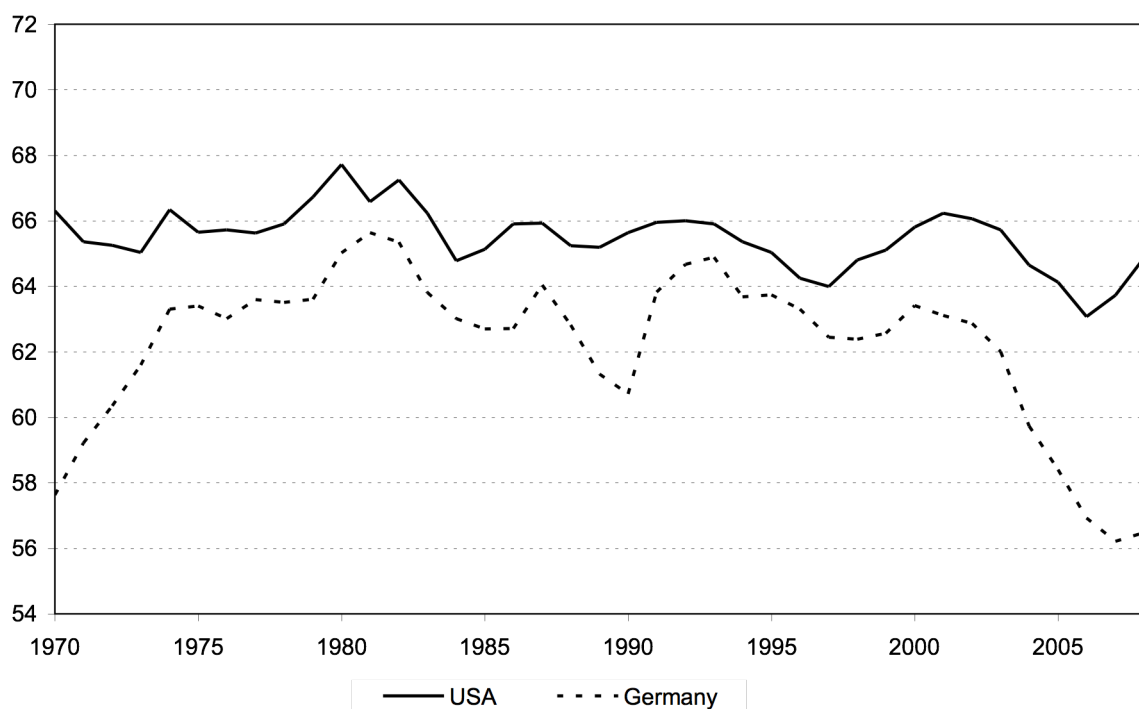
The dynamic development of financial markets has aroused lots of interest in the economics profession even before the recent turmoil in the financial sector. This interest is only too understandable, as in the last decades the role of finance for the overall economy seems to have changed considerably. The creation of new financial instruments, the lifting of capital controls and the development of new communication technologies have all contributed to an increasing importance of finance, but also to an increase in financial fragility. Quite obviously, financial factors influence distribution, consumption, investment and growth at a progressive rate.

The changing role of the financial sector for the real sectors of the economy, as well as the changes within the financial sector itself, have been referred to by some authors as “financialization”. Whereas there is therefore certainly agreement that there is something like financialization out there, there is not much agreement on the exact definition, let alone its effects on the real economy, as can be seen by the quotes mentioned above. While Epsteins’ definition seems rather broad, Crotty, on the other hand, seems to exaggerate the confusion. Krippner (2005) distinguishes five different areas in the academic literature under which she summarizes the main stances: shareholder value orientation (Froud et al. 2000; Lazonick/O’Sullivan 2000; Williams 2000; Stockhammer 2006), finance via capital markets rather than banks (Philips 2002), the (re) emergence of a ‘rentier’ class (Duménil/Lévy 2002; Epstein/Jayadev 2005; Greider 1997), financial trading linked to new financial instruments (Philips 1996) and the supremacy of profit-making via financial rather than real channels (Krippner 2005). Besides these main points mentioned above, there are also some striking developments that coincide with financialization: central bank policy that is devoted mainly to price stability, the tremendous increase in national and cross border financial capital flows owing to the lifting of capital controls, the increase in household indebtedness leading to consumption driven growth as well as the alignment of top managerial pay to stock price movements via share options (Skott/Ryoo 2008). This paper stresses one overarching aspect

of financialization, namely the deregulation and liberalization of formerly highly regulated financial markets as a prerequisite for the occurrence of the aforementioned processes summarized under the label financialization.

The fall in the labor share of income has also attracted a lot of attention in recent years. Not only the public but also academia and policy makers couldn't help but wonder why the share of labor in national income declined steadily, although conventional theory has long suggested that the labor share is roughly constant over the long term¹. Moreover, the fall was more distinctive in continental Europe, especially Germany, than, for example, in the US.² Figure 1 presents the share of wages in net national income for the US and Germany 1970 until 2008. Apart from cyclical fluctuations, the wage share in the US showed a moderate decline, but was relatively stable compared with the German wage share which declined tremendously from 62 to 56 percent of net national income since 2000.

Figure 1: Wage Share (compensation of employees as a percentage of net national income); USA and Germany, 1970 - 2008



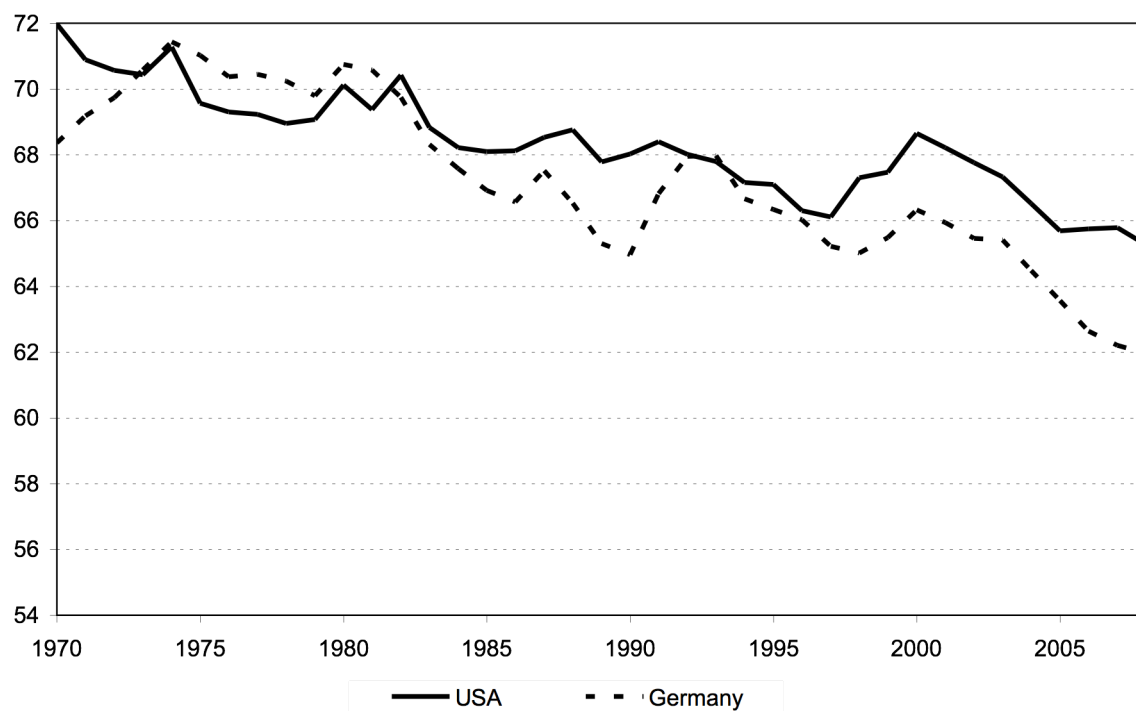
Source: BEA, NIPA Tables; Federal Statistical Office, Germany, National Accounts; author's calculation.

¹ Bowley's Law (Krämer 1996).

² It is important to note that the wage share and profit share fluctuate with economic cycles. Wages tend to be less volatile than profits during economic shocks, so the share of the remaining economic pie going to wages is likely to increase during recessions and decrease during economic expansions.

The shift in the functional income distribution is stressed even more, if one uses the adjusted wage share instead of the ordinary wage share which does not take into account changes in the composition of employment with regard to employees and the number of self-employed and therefore renders an inaccurate picture of the labor income received by the average employee. Figure 2 displays the adjusted wage shares for the same countries for the same period. In this graph, both wage shares declined since the 1980s. However, the decline was more distinctive in Germany with a drop of more than 8 percentage points, whereas the US share decreased in the same period only by 4 points. Although for some purposes the adjusted wage share and its complement the adjusted profit share are preferable measures of functional income distribution, in the rest of the paper only the ordinary wage share will be used as the necessary data to calculate the adjusted shares for the shares of interest here is not available and would be difficult to interpret.

Figure 2: Adjusted Wage Share (percent of GDP at current factor cost); USA and Germany, 1970 - 2008



Source: AMECO data base, European Commission (2009); author's calculation.

Despite the recent interest in both phenomena, financialization on the one hand and the constant decline of the wage share on the other hand, there is only limited empirical work on

the influence of financialization on income distribution. Most research rather focuses on the impact of globalization, technological change, and weakening of labor market institutions.³

However, it seems quite plausible that there is indeed a link of financialization to the distribution of income between labor and capital. Especially the concept of shareholder value seems to be significant, as it changes management's attention from traditional long-term objectives of a firm such as job protection or "empire building" towards short-term economic indicators, because remuneration is more and more aligned to stock price movements via share options. Besides those variable remunerations schemes, managerial pay also became exorbitant. On the flipside, ordinary employees do not only have to bear with a "downsize and distribute" strategy of firms trying to become more and more efficient and lean, but also have to see their share of income shrink as real wages decline.

Bearing all those facets of financialization in mind, it would stand to reason that financialization has an influence on the distribution of income. To be more specific, one would expect that the increase in financial payments goes at the expense of wages. It is the aim of this paper to determine who gained from the fall in the labor share of income in the USA and Germany, respectively. If financialization is indeed responsible for the decline, rentiers should be the beneficiaries; if not, firms' retained earnings should have benefited. In order to identify the relevant effects, the profit share of the two countries under observation is split up between the share of retained earnings and the share of net property income (= rentiers' income) using a modification of the approach chosen by Epstein/Jayadev (2005). Additionally, with the help of a sectoral disaggregation of the approach chosen the paper will try to shed light on the paradoxical comparative development of the wage share in Germany and the US: If wage shares differ significantly in the financial as compared to the nonfinancial sector, the development of the wage share might be attributable to a sectoral shift rather than to changes in distribution within sectors.

Therefore, the paper is organized as follows: Section 2 presents facts about the deregulation and liberalization of financial markets as a prerequisite for the process of financialization. The third section elaborates on potential mechanisms owing to which financialization might influence the functional income distribution. Section 4 presents a short review of the empirical literature on financialization and income distribution. Section 5 focuses on the most

³ See for example Blanchard/Giavazzi (2003), EU-Commission (2007), Guscina (2006), Harrison (2002), IMF (2007) and Tytelle/Jaumotte (2007).

important and comprehensive empirical study by Epstein/Jayadev (2005) and discusses their approach from different angles. In section 6 a consistent alternative approach to calculate rentier income shares is presented which allows to assess whether increasing shares accruing to 'rentiers' are at the expense of corporate profits or of wages. This alternative approach is then applied to the cases of Germany and the US. The seventh and final section presents the study's main conclusions and indicates some directions for future research.

This paper focuses on Germany and the USA for several reasons: First of all, the aim is to find evidence which effects financialization has on the functional income distribution in Germany. In order to do this properly, it is important to define a yardstick for comparison. The US is particularly interesting in this respect, as it seems to be the economy where financialization is most developed, whereas financialization in Germany is a rather new phenomenon. Additionally, Germany and the US are two of the few countries for which the relevant data on functional income distribution was available in an internationally comparable form and for a sufficiently long period of time.

2 Deregulation of financial markets leading to financialization in the USA and Germany

As already mentioned in the introduction, the deregulation of formerly highly regulated financial markets, as a consequence of the great depression in the 1930s and after World War II (Obstfeld 1998), can be seen as a prerequisite for the developments summarized under the label financialization. This process of deregulation evolved in many different steps and it is barely possible to identify the relative contribution of each of these steps to financialization.

There is widespread agreement in the literature that the first deregulatory steps in the US already occurred in the 1970s and by the early 1980s there was a deregulated financial environment that led to the rise of the institutional investor as a holder of corporate stocks which already resulted in some kind of shareholder value orientation (Lazonick/O'Sullivan 2000, p. 18).

The collapse of the Bretton Woods system of fixed exchange rates in 1973 can be seen as the starting point of a wave of deregulation and liberalization measures. However, with the introduction of fluctuating exchange rates also a growing need to hedge against risks emerged. This was done with the help of new financial instruments in the form of derivatives such as currency swaps, options and futures contracts. For the functioning of these risk-hedging instruments, the abolishment of regulatory barriers was essential as it provided an opportunity to spread the risk. All this demanded a restructuring of financial institutions

(Block 2002, p. 214). The breakdown of the Bretton Woods system of fixed exchange rates almost coincided with the oil price shocks in the 1970s, which also put pressure on the existing regulatory framework that was not prepared to deal with high inflation, and also the Latin American debt crisis in the 1980s challenged the existing system (Crotty 2002, p. 8).

In the early 1980s, also the banking sector was altered by measures of deregulation. The five major changes were the expansion of bank powers, a reduction in reserve requirements, the formalization and tightening of capital requirements, the deregulation of deposit accounts and the liberalization of the rules and policies regarding geographic diversification (Berger et al., 1995).

The rise of the shareholder value movement started in the 1970s and was fostered on the theoretical ground of agency theorists. In practice it was fostered by the rise of the institutional investor (mutual and pension funds, life insurance companies, investment companies) that benefited from the lifting of legal restrictions which previously limited the extent to which corporate equity could be added to their portfolios. The concentration of stockholdings in the hand of institutional investors favored not only the takeover movement, but also pressured companies to increase the return from stocks. A major step of deregulation supporting the shareholder value movement was the Employee Retirement Income Security Act (ERISA) of 1974 which, by 1978, authorized pension funds and insurance companies to “invest substantial proportions of their portfolios in corporate equities and other risky securities such as ‘junk bonds’, [which were a major instrument of the takeover movement, P.D.], and venture funds rather than just in high-grade corporate and government securities.” (Lazonick/O’Sullivan 2000, p. 17)

In Germany, the important deregulatory steps which paved the way to financialization occurred at a significantly later point in time, namely at the beginning of the 1990s and gradually proceeded until the current financial crisis (Hein/van Treeck 2008a). In 1990 the futures market was introduced and capital investment companies received the limited right to engage in options trading. In addition, in 1991 the tax on stock market transactions was abolished. These measures were included in a law for the explicit advancement of financial markets (1. Finanzmarktförderungsgesetz). In 1994 a second amendment to such law (2. Finanzmarktförderungsgesetz) was enacted legalizing money market funds. Another important step occurred in 1998 when share buybacks and stock options were legalized as a third amendment to such law. As late as 2004 hedge funds as well as derivative trading and

leveraging for investment funds were legalized. In 2007 finally REITs⁴ were allowed. Throughout the entire time period since the mid-1990s the process of financialization was enhanced and supported by the abolishment or cutting of relevant taxes (1997: wealth tax abolished; 2000 and 2008: reduction of corporate tax rates and capital income taxes; 2002: tax on realized capital gains abolished for corporations and reduced for private households; 2008: tax relief for Private Equity Funds taking over companies worth up to € 20 mil. and less than 10 years old) as well as by explicit public subsidies for private old age pension schemes ("Riester Rente") in 2001.

3 Financialization and the functional income distribution – some theoretical remarks

Financialization may influence the distribution of income between retained earnings and distributed profits on the one hand, and wages on the other hand. Although in detail the different mechanisms may differ substantially, the general pattern of their influence on the functional distribution of income should be very similar. Any kind of financialization, be it an increase in shareholder value orientation or a rising indebtedness, can be seen as a rise in rentiers' distributional claims. Following a Post-Keynesian perspective on firms' price setting (Kalecki 1954), we assume mark-up pricing. The mark-up is determined by the degree of monopoly, which in turn is affected by the degree of competition in the goods market, the importance of price competition in the goods market, the development of overhead costs and the bargaining power of labor unions. Table 1 connects the different determinants of the degree of monopoly as illustrated in the first row and the characteristics of financialization as presented in the first column to illustrate how, in theory, financialization might lead to an increase in the mark-up ($m \uparrow$) under mark-up pricing.

⁴ Real Estate Investment Trust

Table 1: Financialization and mark-up pricing

determinants of the degree of monopoly characteristics of financialization	Degree of competition In the goods market	Importance of price competition in the goods market	Development of overhead costs	Bargaining power of labor unions
Increase in Shareholder-Value orientation (dividend payments, share buybacks)			m ↑	
"Downsize and Distribute"				m ↑
Increase in financial investments (mergers and acquisitions)	m ↑	m ↑		
Variations in the interest rate/ rise in indebtedness			m ↑	

Source: Author's representation.

In the first round such a rise in distributional claims should be at the expense of firms' retained earnings, because in the short run the mark-up should be inelastic with respect to the changed distributional claims. However, in the second step, this can change and the mark-up may become elastic shifting all or part of the firms' burden towards wages and thereby reducing the wage share. Therefore, depending on the relative bargaining power in the medium run, a rise in rentiers' distributional claims due to financialization may be expected to be at the expense of labor income.

An increase in shareholder value orientation might lead to an increase in dividend disbursements and share buybacks for the following reasons: Management remuneration is more and more related to profit and stock market valuation which increases managers' incentives to keep stock prices on a high level. Moreover, high stock prices function as a buffer against hostile takeovers and there is also a growing pressure of institutional investors that demand ever increasing dividend payments. Another aspect worth mentioning is a potential increase in indebtedness of the firm as internal funds might not be sufficient to cover the demand for higher dividend and share buybacks while at the same time financing investment expenditures. Consequently, this would lead to an increase in interest payments due to a rise in the amount of interest bearing debt (Hein/van Treeck 2008b).

As was said before, the rising costs of financialization for firms may have to be compensated by a reduction in firms' retained earnings or by a reduction in labor income if the mark-up turns out to be elastic with respect to these cost categories. With respect to interest rates,

Moore (1989, p. 26) has detected a long-term responsiveness of the mark-up which, according to his findings, is subject to the expected permanence as well as the magnitude in interest changes. Whereas cyclical fluctuations are not likely to be passed on to the mark-up, long-term changes in interest rates do affect the mark-up thereby enabling firms to attain their profit target in the long-run (see also Panico 1985, Pivetti 1985, 1988, 1991 and Sraffa 1960).

Basically, the same effect can be postulated for shareholders' rising distributional demands: It may be expected that shareholders' demand for higher distributed profits will be passed on to workers with the effect of a declining share of wages in national income (Boyer, 2000). Hein (2009) and Hein/van Treeck (2007) have argued that at least in the medium run, when rising dividend payments to rentiers have become a permanent feature, the mark-up in firms' price setting is likely to become dividend-elastic depending on the degree of competition and bargaining power of labor unions, i.e. workers.

Additionally, there may be important indirect effects of financialization on the functional income distribution. Such indirect effects may be caused by the influence of financialization on the degree of competition on the goods market and on the bargaining power of the trade unions. Regarding the former, both mergers and acquisitions as well as hostile takeovers in the corporate sector will tend to improve the conditions for a rising mark-up in the face of a rising dividend rate. With respect to the latter, slow growth and high unemployment in combination with a "downsize and distribute" strategy of firms (Lazonick/O'Sullivan 2000) contribute to a weakening of the bargaining power of employees and thereby to a decrease in the wage share. In addition, the increase in "labour market flexibility" agendas that were established in several countries played a major role in weakening unions and thereby real wages. Parts of these agendas eroded labor market supports like minimum wages, unemployment benefits, employment protection, and employee rights (Palley 2008, p. 22).

Therefore, from a theoretical point of view, in the medium to long run increasing shareholder power would favor redistribution at the expense of the labor income share.

4 Review of the empirical literature

A major motivation for this study stems from the question whether or not financialization has an influence on the distribution of income. So far, there are only a few studies that try to analyze such distributional effects. Some of the studies estimate the impact of financialization on the functional income distribution restricted to the nonfinancial corporate sector directly.

Others try to capture the effects in a more indirect way, as they are not yet interested in financialization, via the effects of monetary policy and interest rates.

Among the latter group of studies, Moore (1989) provides evidence for a distributional effect of monetary policy on income distribution for the USA. According to Moore, the increase in interest rates since the early 1980s was passed on by enterprises through the mark-up at the expense of the wage share. A more recent study by Argitis/Pitelis (2001) for the case of the US states that the increase in interest rates during the 1970s and the 1980s favored financial capital, while the share of industrial capital in total profits declined. However, according to their results, industrial capital has increased its share in income at the expense of labor in the nonfinancial corporate sector since 1992. Applying time series econometrics, Argitis/Pitelis find that the share of industrial profits is negatively affected by the nominal interest rate. According to their results further determinants of the share of industrial profits in income are nominal wages and the bargaining power of labor unions, measured by unemployment and strike intensity. A rise in interest payments to rentiers does not directly harm the wage share but rather seems to compress industrial profits. However, if rising interest payments are accompanied by weakened bargaining power of labor unions and lower wage demands, the redistribution will take place at the expense of labor income. This result is quite close to what one would expect given the theoretical remarks laid out in section 3.

Among the group of studies that try to estimate the impact of financialization on the functional income distribution, Stockhammer (2004) calculates rentier income shares – which he defines as interest and dividend income in relation to total income – for the household and nonfinancial business sector. In his study, which covers West Germany, France, the UK, the US, Italy and France from 1960 to 1996, Stockhammer finds evidence for a rise in rentier income shares. Dividend and interest income as a share of total household income increased in all countries. However, the starting level in Anglo-Saxon countries was much higher than in Continental European countries. Rentiers' shares in household income are still higher in Anglo-Saxon countries, owing to differences in the financial systems. With regard to the nonfinancial business sector, Stockhammer calculates rentier shares as 'interest and dividends received' and 'interest and dividends paid' compared to the operating surplus. Both ratios increased tremendously. Since the 1980s, nonfinancial businesses in the UK and US transformed almost all of their operating surpluses into dividend and interest payments. He even goes so far as to speak of a "rentieralization" of nonfinancial businesses.

Duménil/Lévy (2001, 2005) studied the development of the profit rate of nonfinancial corporations in France and the US from 1960 until 2001. According to their results, the rise in the profit rate since the early 1980s was caused mainly by the rise in net real interest payments. The profit rate of nonfinancial corporations without net real interest payments was constant in France and increased only slightly in the US. Therefore, it can be concluded from their analysis that rising interest payments of nonfinancial corporations had to be paid for by a reduction in the labor income share. Thus, mainly the rentiers' class seems to have benefited from redistribution at the expense of labor.

All of the aforementioned empirical studies give important insights into the effects of financialization on the labor income share. Unfortunately, however, they do not convey the full picture of the story as they are restricted to the nonfinancial sector of the economy and/or focus on interest income which is only one component of rentier income. The first and most comprehensive attempt to cover the whole story by systematically calculating rentier income shares for the entire economy and for various countries is a series of studies by Epstein et al. to which the following section turns.

5 Rentier shares calculated by Power/Epstein/Abrena and Epstein/Jayadev

The most comprehensive study concerned with rentier income shares was conducted by Power/Epstein/Abrena (2003a). In this study, the authors calculated rentier income shares for 29 OECD countries from 1960 until 2000 and found out that rentier shares generally increased between the 1960s and 1970s, and even more between the 1980s and 1990s. Rentier shares are defined as profits realized by firms engaged primarily in financial intermediation plus interest income realized by all nonfinancial non-government resident institutional units, i.e. the rest of the private economy. All rentier income data is presented as shares of GDP (p. 4), where GDP is calculated net of government final consumption expenditure as the government is excluded as recipient of interest income in the numerator. The authors chose this definition, referring to Kalecki who defined rentier income as “incomes accruing to those owning financial institutions and financial assets more generally.” Power/Epstein/Abrena (2003a), p. 4⁵.

⁵ In addition to the working paper, Power/Epstein/Abrena (2003b) published a technical appendix that provides not only country specific information concerning data sources, but also more details about the calculations. However, in this appendix, they reveal that the government sector was subtracted from GDP in the denominator.

A further contribution by Epstein/Power (2003) deals with the determinants of the increase in rentier shares. The authors identify four possible causes for this increase. Firstly, monetary policy devoted to low inflation rates in the form of high interest rates. Secondly, financial liberalization, i.e. the creation of new financial instruments, an increase in nominal interest rates leading to higher real interest rates, and the lifting of capital controls, which led to an increase in financial instability and thereby justified the need for even more new financial instruments to hedge against risks. Thirdly, the lift of capital controls which led to an increase of cross border flows that were highly profitable, and IMF and US treasury bailouts in times of trouble. The fourth factor mentioned by the authors is the decline in government deficits which was rather an obstacle to increases in rentier returns as it reduces interest payments to rentiers.

However, the results of Power/Epstein/Abrena (2003a) were considered to be potentially misleading by Epstein/Jayadev (2005), because they were not corrected for inflation. Rising nominal interest payments may simply compensate for capital losses due to inflation. Epstein/Jayadev (2005) tried to solve this problem for 15 OECD countries for the period 1960 – 2000 by adjusting for inflation. However, the inflation adjustment did not turn out to be significant: the earlier results could be confirmed, which means that in most OECD countries, rentier shares increased between the 1960s and 1970s and the 1980s and 1990s. Quite interestingly, in some cases the increases were even stronger than in nominal terms (p. 2). As the main determinant for this increase, Epstein/Jayadev refer to the raise in real interest rates and weakened labor bargaining power.

Similar to Power/Epstein/Abrena (2003a), Epstein/Jayadev (2005) calculated rentier income as

“profits earned by firms engaged primarily in financial activities plus interest income realized by all nonfinancial non-government resident units, i.e. the rest of the private economy. (...) In turn, the rentier share is the rentier income as defined above divided by gross national product (net of government expenditures since we have excluded the government income from rentier income, the numerator).” (p. 4)

In addition to the definition that is given in the text, Epstein/Jayadev present their calculation in the appendix, which is replicated in Table 2. However, in this table interest receivable by nonfinancial corporations is missing, although according to the text it should be included.

Table 2 : Rentier Income Share calculated by Epstein/Jayadev

Operating surplus		
+ dividends		
+ reinvested earnings		
+ insurance income received		
+ interest received		
- interest payable		
- rent payable		
+ interest received by households		
+ interest received by non-profit organizations		
Gross national product minus government expenditure		

Source: Epstein/Jayadev (2005, p. 22)

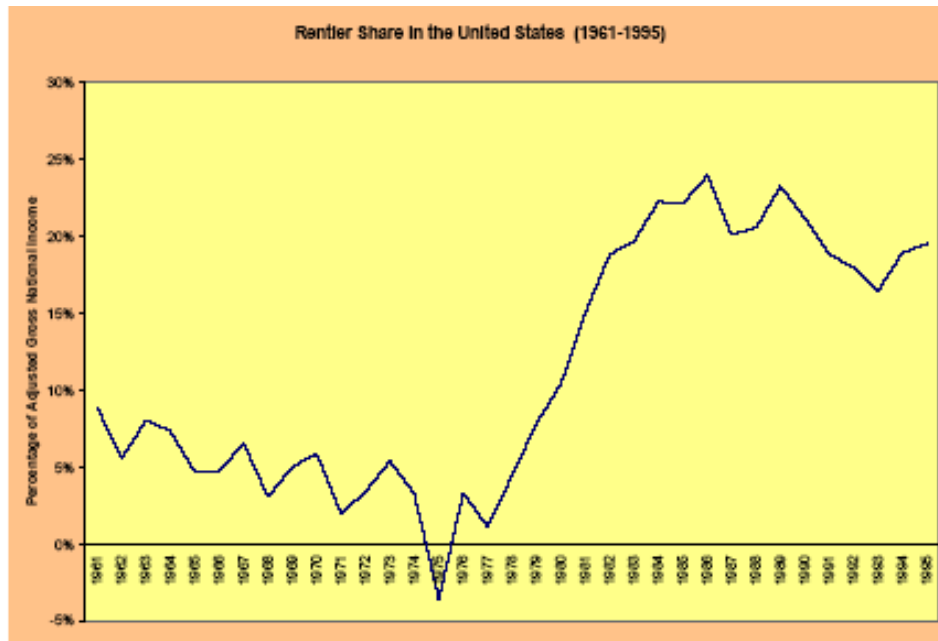
In contrast to the previous study, the authors used the gross national product instead of the gross domestic product in the denominator.

Figure 3 displays the rentier share for the US calculated by Epstein/Jayadev (2005) from 1961 to 1995. In the years 1961 to 1977, the share was relatively stable at a low level. The inflation adjusted average rentier share was about 6 percent during the 1960s and averaged around 3 percent during the 1970s. Then, there was an upswing until the early 1980s, when the rise in the share began to level out again having increased by approximately 20 percentage points higher.

This development corresponds with the financialization hypotheses because in the 1980s, a decade that was characterized by liberalization and deregulation measures and at the same time by rising real interest rates, the calculated rentier share increased.

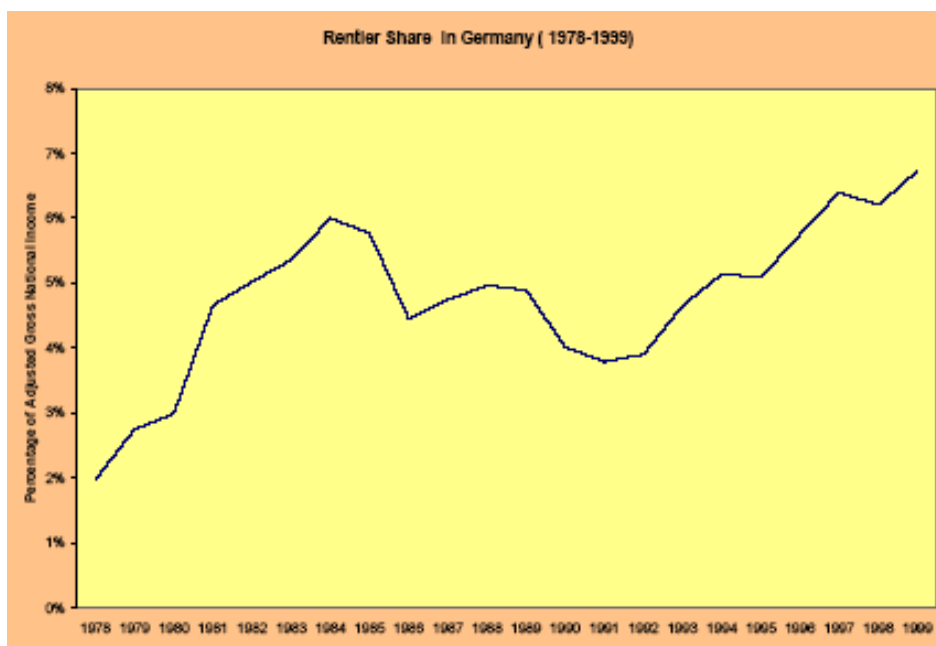
The rentier share for Germany is presented in Figure 4. Unfortunately, the relevant German data was only available from 1978 to 1999, so that no comparison for earlier years is possible. The movement of the rentier share in Germany is by far less spectacular than in the US because the total increase is only 5 percentage points, whereas the increase in the US was over 20 percentage points. However, it is still possible to see an increase in the early 1980s which was probably also caused by the heightened real interest rates. The second upward trend started in the 1990s and can possibly be directly related to the deregulatory changes in law that were mentioned in section 2.

Figure 3: Rentier Share in the USA (1961-1995)



Source: Epstein/Jayadev (2005), p. 18

Figure 4: Rentier Share in Germany (1978-1999)



Source: Epstein/Jayadev (2005), p. 13

Apparently, the results presented by Epstein/Jayadev (2005) seem to correspond quite well with the financialization hypothesis the authors chose as a base and which stresses the increasing importance of the financial sector. In addition, their results also appear to match the developments in the deregulation of financial markets as a prerequisite to financialization in the broad sense as applied in this paper.

However, some strong objections regarding the calculations can be raised, some of which have already been recognized by Epstein/Jayadev (2005) themselves.

Firstly, levels between countries are hardly comparable due to country specific classification methods with respect to residential units. Moreover, calculations of rentier income shares differ because of data limitations, because not all necessary data was available for every country for every year. Secondly, not only the comparison between countries is difficult but also between the rentier income share for a given country at different points in time as different data sources were matched. Most importantly, in general data from 1990 onwards is classified in the SNA 1993 while for earlier data the old classification had to be used. Looking at the example of the United States; When calculating rentier income shares for the United States, the authors merged financial sector profit data by the OECD with original NIPA figures for the years 1995-1999, although the classification of institutional units differ (Power/Epstein/Abrena 2003b, p. 57). In the case of Germany, for the years 1960-1999 interest received by the non-profit institutions serving households sector is missing, and for the years 1991-1999 even the interest received by the household sector, which is relatively significant (Power/Epstein/Abrena 2003b, p. 22). Therefore, it is doubtful whether any meaningful conclusions can be drawn from the calculated levels or even the development of the rentier income shares over time.

Thirdly, the analysis does not only suffer from data limitations but also from conceptual inconsistencies. As mentioned before, the authors eliminated government consumption from the denominator by subtracting government expenditure from gross domestic product and gross national product, arguing that the government was not included in the numerator. However, this procedure is difficult for the following reasons: International comparability is affected because countries that have a “lean government”, i.e. governments following a low public spending policy, in principle have a lower rentier share than countries where public spending is higher, even if the rentier income and their GDP or GNP are the same. Moreover, movements in the share of government expenditure to GDP lead to movements in the rentier income share even if the underlying rentier incomes have not changed at all. If governments cut public spending, for instance by paying lower wages to civil servants or by buying less schoolbooks, the rentier share decreases. Therefore, the comparability of the rentier income share at different points in time within the same country suffers even more.

Fourthly, Epstein and his colleagues do not include dividend income received by the household sector from the nonfinancial corporate sector. This may be consistent given the

definition of rentier income by Epstein and his colleagues as “income received by owners of financial firms, plus the return to holders of financial assets generally.” (Epstein/Jayadev 2005, p. 4). However, from a broader perspective regarding financialization dividend income should be included as it is certainly relevant for example in determining the effects of shareholder value orientation.

Fifthly and perhaps most importantly, while the studies by Power/Epstein/Abrena (2003a) and Epstein/Jayadev (2005) present a comprehensive picture about the evolution of rentier income shares, they do not provide evidence at whose expense rentiers could increase their share in national income. In particular, it is not clear whether rentier income shares increased at the expense of wages or of retained earnings.

In the following, an alternative approach for the calculation of rentier income shares will be presented.

6 Rentier income shares: a consistent alternative approach

6.1 The requirements

In order to tackle the problems mentioned before, rentier shares in this approach have to fulfill certain criteria. First of all, following the broad definition of financialization that was given in the introduction, it is necessary that rentier shares are constructed for the economy as a whole, as all sectors of the economy are affected. A further criterion is that the rentier share, together with the complimentary other income shares, should add up to 100 percent in order to be able to indicate which share has suffered in the case of a redistribution. Next, in order for the calculated income shares to be comparable both internationally and over time, data should be taken from the same source or at least follow the same definition between countries and over time.

6.2 The derivation of rentier income from the national accounts

As the aim of this paper is to calculate the rentier income share as a real share of net national income, the natural starting point is the definitional equation of net national income:

$$NNI_{MP} = W + \Pi + T_{ind} - Z$$

Net national income, measured in market prices, is distributed between wages (W) and profits (Π), both before taxes, and indirect taxes (T_{ind}) net of subsidies (Z).

Net national income, as indicated in Table 3, is distributed between the financial and nonfinancial corporations, the government as well as private households and non-profit institutions. For the individual sectors net national income is defined as follows:

In both the financial and nonfinancial corporation sector net national income is given as the sum of net operating surplus and property income received minus property income paid. Property income as defined by the OECD (SNA 93) in turn can be further split up into interest, distributed income of corporations (i.e. dividends and withdrawals from income of quasi corporations), reinvested earnings on direct foreign investment, property income attributed to insurance policy holders and rent. Therefore, for the corporate sector, net national income of the sector is identical to retained earnings, because, after the deduction of net property income, this is what remains at the disposal of the corporate sector.

For the government sector, net national income is given as the sum of net operating surplus, taxes on production and imports minus subsidies and property income received minus property income paid.

For private households and non-profit institutions net national income of the sector is composed of the operating surplus (which is identical to mixed income) plus the compensation of employees plus property income received minus property income paid.

Table 3: Distribution of Primary Income, National Accounts; Germany, 2007⁶

	Total economy	Nonfinancial corporations	Financial corporations	General government	Households and NPISH ⁷	Rest of the world
2007						
Operating surplus/Mixed Income	600,21	367,73	17,37	– 3,69	218,80	– 177,74
+ Compensation of employees	1 183,55	–	–	–	1 183,55	6,69
– Subsidies, payable	27,09	–	–	27,09	–	5,72
Taxes on production and imports, + received	305,46	–	–	305,46	–	7,82
– Interest, payable	498,61	62,21	304,42	67,35	64,63	149,53
+ Interest, receivable	510,52	44,35	377,57	7,52	81,08	137,62
Distributed income of corporations, – payable	385,65	329,62	56,03	–	–	47,07
Distributed income of corporations, + receivable	393,03	37,01	47,40	9,42	299,20	39,69
Property income attributed to insurance – policy holders, payable	45,18	–	45,18	–	–	–
Property income attributed to insurance + policy holders, receivable	45,16	1,99	0,02	–	43,15	0,02
Reinvested earnings on foreign direct – investment to the rest of the world	6,16	4,86	1,30	–	–	30,20
Reinvested earnings on foreign direct + investment from the rest of the world	30,20	20,34	9,86	–	–	6,16
– Rents payable	2,85	1,12	–	–	1,73	–
+ Rents receivable	2,85	0,01	–	1,05	1,79	–
= Primary Income (Net National Income)	2 105,44	73,62	45,29	225,32	1 761,21	– 212,26
Source:	Federal	Statistical	Office,	Germany;	author's	translation.

⁶ Components that were used in this study are colored in dark grey, whereas the elements that were used by Epstein and colleagues are presented in a light grey.

⁷ NPISH: Non-profit institutions serving households

The aim of this study is to find out if rentiers' income share in national income increased, and moreover, whether redistribution has taken place at the expense of the wage share or of the share of retained earnings in national income. Therefore, net national income has to be split into the corresponding components in an adequate way. Table 3 illustrates the distribution of the primary income account between the sectors, i.e. nonfinancial and financial corporations, government, households and non-profit institutions, the rest of the world, and the total economy. The components used in this study are colored in dark grey, whereas the elements that were used by Epstein and colleagues are highlighted in a light grey.

The table clearly illustrates that wages, i.e. the compensation of employees, and retained earnings can be taken directly from the national accounts primary income table. However, with respect to rentier income matters are a bit more complex. Rentier income within the framework of the chosen approach is set to be identical with net property income of the household sector for the following reasons: For the economy as a whole, net property income adds up to zero, ignoring the rest of the world. That is no surprise, given the fact that payments received and payments on account balance each other out. As can be seen from Table 3, on balance, corporations and the government pay for the rentier income of the household sector with only a very small positive rentier income of the corporations. Therefore, it is the private household sector to which the money ultimately goes.

After the calculation of the rentier income share in the way described the three components of national income under investigation are complete. Divided by net national income they represent the wage share, the share of retained earnings and the rentier income share. What remains is the net national income of the government sector and mixed income of the household sector which will not be considered in the following.

6.3 The data set

A natural starting point for international comparisons of the kind the current paper aims at are the OECD Annual National Accounts (OECD ANA). In fact, they provide comparable data in the SNA 93 system of classification for many countries including the US and Germany. However, while the time series for the US starts in 1970, the German one starts as late as 1995. Therefore, the calculations for Germany are based on original National Accounts data taken from the German Federal Office for Statistics, which is also based on SNA 93 but goes back to 1980. In order to check for consistency, the calculations from 1995 onwards were conducted with both data sets and the results proved to be absolutely identical.

While on the aggregate level the data for the calculation of the three shares under investigation is more or less readily available for both countries, problems arise as soon as one is interested in some kind of disaggregation for the US. On a sectoral level the OECD ANA data for the USA only offers information on corporations and does not distinguish between financial and nonfinancial corporations. Moreover, property income paid and received by the household sector is only available on the aggregate level. That is why in the current study the components of rentier income as well as the sectoral income shares have to be calculated by using original NIPA data, although the data is not completely compatible with OECD data, as the Bureau of Economic Analysis (BEA) does not apply SNA 93 (Mead et al. 2004; OECD 2006).

6.4 The results

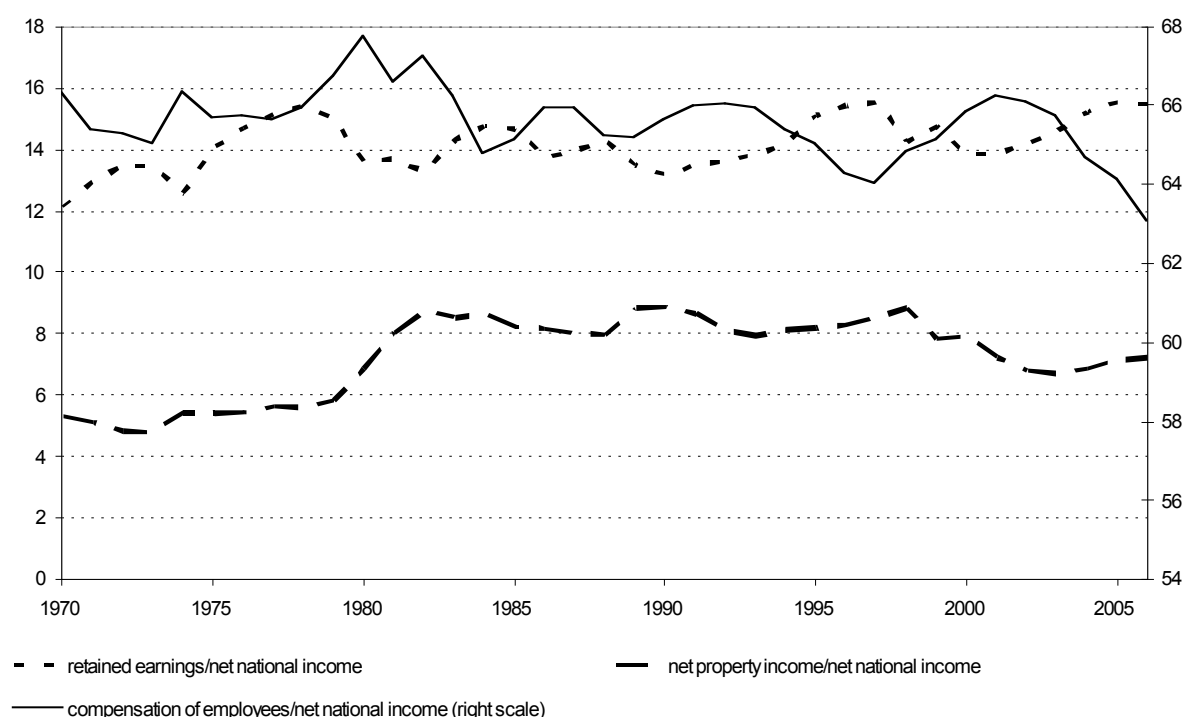
In Figure 5, retained earnings of corporations, net property income and compensation of employees are presented as a share of net national income for the USA from 1970-2006. In the beginning of the 1980s, the rentier income share increased from around 5 percent to more than 8 percent. This level was almost constant until the end of the 1990s, when the share declined until 2006 (the end of the period under observation). However, the share remained above its pre-1980s level. While the increase in the rentier share at the beginning of the 1980s corresponds quite well with the financialization hypothesis and the associated measures of deregulation and liberalization, the development in the recent past seems to be at odds with the aforementioned hypothesis.

In the short run, the increase in the rentier share of income seems to be at the expense of the share of retained earnings in net national income. However, this is not very surprising, given the theoretical observations about dividend- and interest-inelastic mark-ups in the short run presented in section 3. In the medium to long run, however, retained earnings were relatively constant, whereas the wage share decreased slightly until the 1990s, followed by an astonishing increase until 2001, and a subsequent decrease again. Probably, the peak can be attributed to the recession in 2000/01. All in all, in the long run, it seems that the increase in the rentier income share indeed goes hand in hand with a decrease in the share of wages in national income.

A better understanding of the development of the rentier income share can be obtained by looking at its components (compare Figure 6), although the results have to be interpreted with caution because the data employed is taken from NIPA, whereas the data in Figure 5 was taken from OECD ANA.

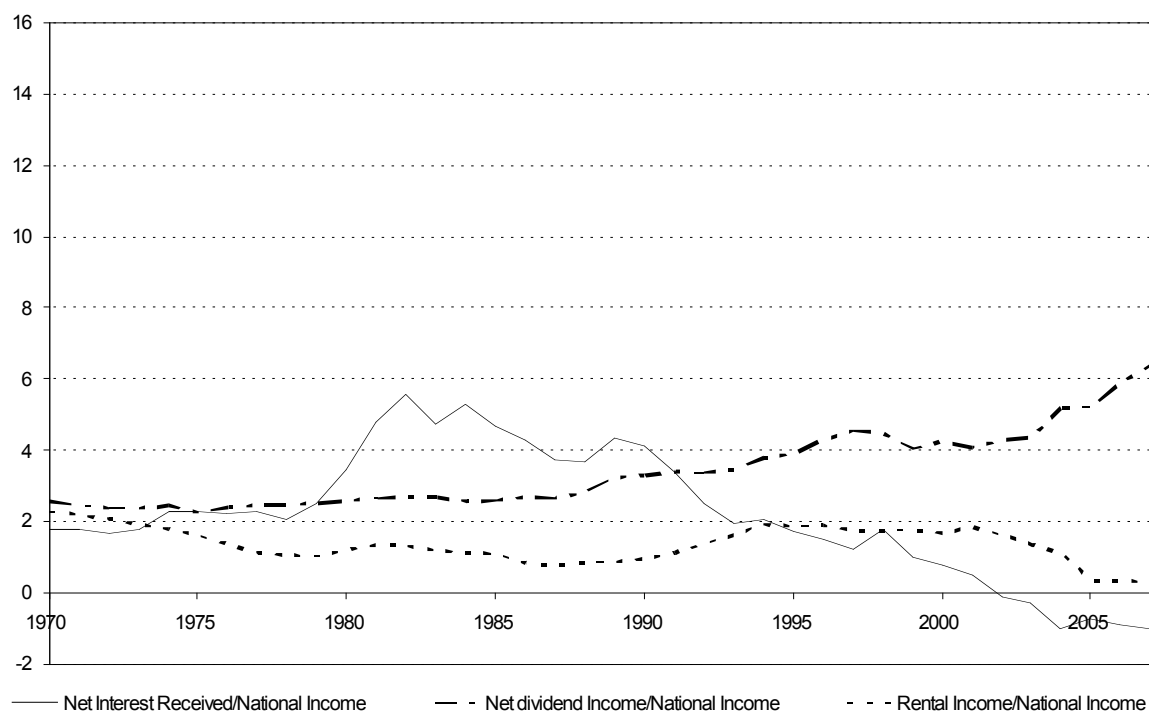
The least important development is the movement of the share of rental income, which saw a general decline. Net dividend income increased since the 1970s and even more in the 1990s, and accelerated since 2002. This corresponds perfectly with the financialization hypothesis, i.e. an increase in shareholder value orientation and thereby an increase in dividend payments of corporations. Looking at net interest income renders a good explanation for the decrease in the overall rentier income share at the end of the observation period in Figure 5, because the increase in the share of dividend income has been overcompensated by a decrease in the net interest share, which, in turn, can readily be attributed as due to the rising (over) indebtedness of private households in the US, i.e. interest payments to the rest of the world.

Figure 5: Income Shares, USA, 1970 - 2006



Source: OECD National Accounts; author's calculation.

Figure 6: Components of rentier income as a share of net national income, USA, 1970 - 2007



Source: Bureau of Economic Analysis (BEA); NIPA Tables; author's calculation.

Figure 7 shows the retained earnings, net property income, and compensation of employees as a share of national income for Germany from 1980-2008. Compared to the US, the movements in the shares are much more accentuated. Net property income increased steadily from almost 11 percent in 1980, to almost 18 percent in 2007. The wage share decreased from 65 to 61 percent in 1990, recovered until 1994 due to German reunification and then constantly decreased until 2000 when it plummeted from more than 63 to 56 percent which is due to excessive wage moderation during the long stagnation period after the 2001 slowdown. Retained earnings increased from 2 percent in 1980, to 6 percent in 1990. From 1990 until 2003, it fluctuated around 2 percent and increased to almost 6 percent afterwards. However, one has to keep in mind the break in the data in 1990, due to unification.

Since the beginning of the 1990s, net property income increased while the wage share decreased, leading to the assumption that since then Germany has followed the example of the US.

Figure 8 shows in more detail the rentier income share by splitting it into its four components, which are: net interest income, dividend income, property income attributed to insurance holders and net rents; again as a share of net national income. With regard to property income attributed to insurance holders, only a small general increase can be recognized. Net rental

income was negligible. Net interest income remained almost constant at around 2 percent of net national income until the 1990s and then decreased significantly to below 1 percent of net national income. The most striking result occurs with respect to dividend income. Since the 1990s it increased steadily and in fact doubled from 7 percent to about 14 percent after 2005. It is certainly not exaggerated to interpret this development as an indicator of growing shareholder value orientation and therefore financialization. It is also quite clear that the increase in the rentier income share in Figure 7 is dominated by the aforementioned strong movement in the dividend income share.

Figure 7: Income Shares, Germany, 1980 - 2008



Source: Federal Statistical Office, Germany; author's calculation.

Figure 8: Components of rentier income as a share of net national income, Germany, 1980 - 2008



Source: Federal Statistical Office, Germany; author's calculation.

6.5 Comparison of the results

Although the rentier income shares by Epstein/Jayadev (2005) and in the current paper were calculated by using substantially different methods⁸ it is interesting to compare the results. What is striking is that the development of the rentier shares over time is rather similar for both the US and Germany over the same time horizon. The rentier share for the US calculated by Epstein/Jayadev increased in the 1980s, as does the share calculated in this paper. For the German case, the trend is also comparable. However, the levels of the two rentier shares differ substantially. For the US the levels differ a lot: Epstein/Jayadev's peak value amounted to 25 percent compared to only 9 percent in our results. In Germany for the same time frame, Epstein's results for the rentier share ranges from only 2 to 7 percent; whereas our rentier share starts at 11 and ends at 15 percent.

Table 3 shows the positions included by Epstein/Jayadev in a light grey form so that some of the conceptual differences to the approach chosen in this paper, which are colored in dark grey, can be identified. Other differences such as the use of the gross operating surplus and

⁸ For a comparison of the differences in the calculation of rentier shares, compare Table 3.

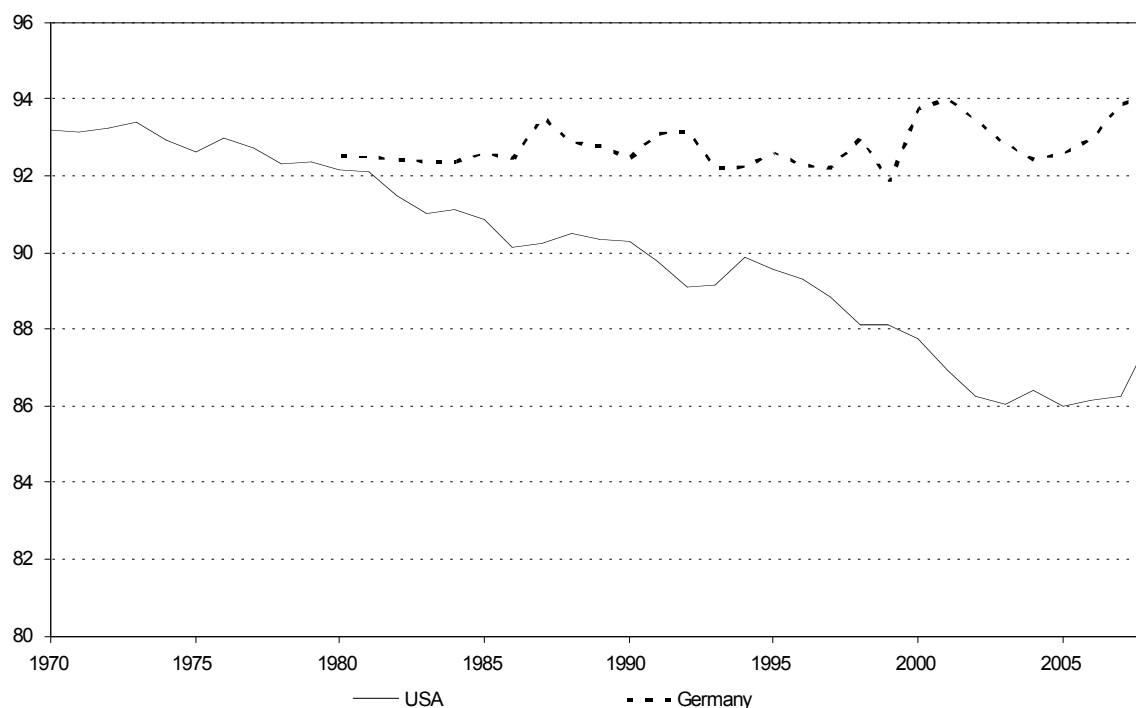
correction for government expenditure and the inflation adjustment cannot be shown in the table. Because dividend income was identified as the main source for the increase in rentier income shares in this study, and given the fact that Epsteins' studies included only the dividend income of financial corporations, it is quite likely that this fact explains the differences in levels. However, as was mentioned before, the schemes of calculation differ substantially, owing to differences in the definition of rentier income shares.

6.6 Sectoral developments and the differences between Germany and the USA

So far, we have only discussed the changes in income distribution at the macroeconomic level. However, one phenomenon that is crucial for financialization is the potential shift of significance from the real to the financial sector of an economy. If income shares differ significantly between the financial and the nonfinancial sector, part of the changes in functional distribution at the aggregate level might be attributable to sectoral shifts.

Figure 9 illustrates the share of net value added of nonfinancial corporations as a share of net value added of corporations for the USA and Germany, 1970-2008 and 1980-2008, respectively. As can be seen from Figure 9, in the USA the share of nonfinancial corporations' net value added to the total net value added of corporations decreased constantly from 93 percent to 86 percent in 2005. This is exactly the astounding rate of expansion of financial markets since 1980 that Crotty (2002, p. 6) observed and that Krippner (2005, p. 174) called the growing weight of finance in the American economy. The corresponding German share, in stark contrast, was remarkably stable and fluctuated at around 93 percent. Therefore, in Germany there simply did not yet occur a sectoral shift towards the financial sector as measured by its share in net value added.

Figure 9: Net value added of nonfinancial corporations as a share of net value added of corporations; USA and Germany, 1970 - 2008

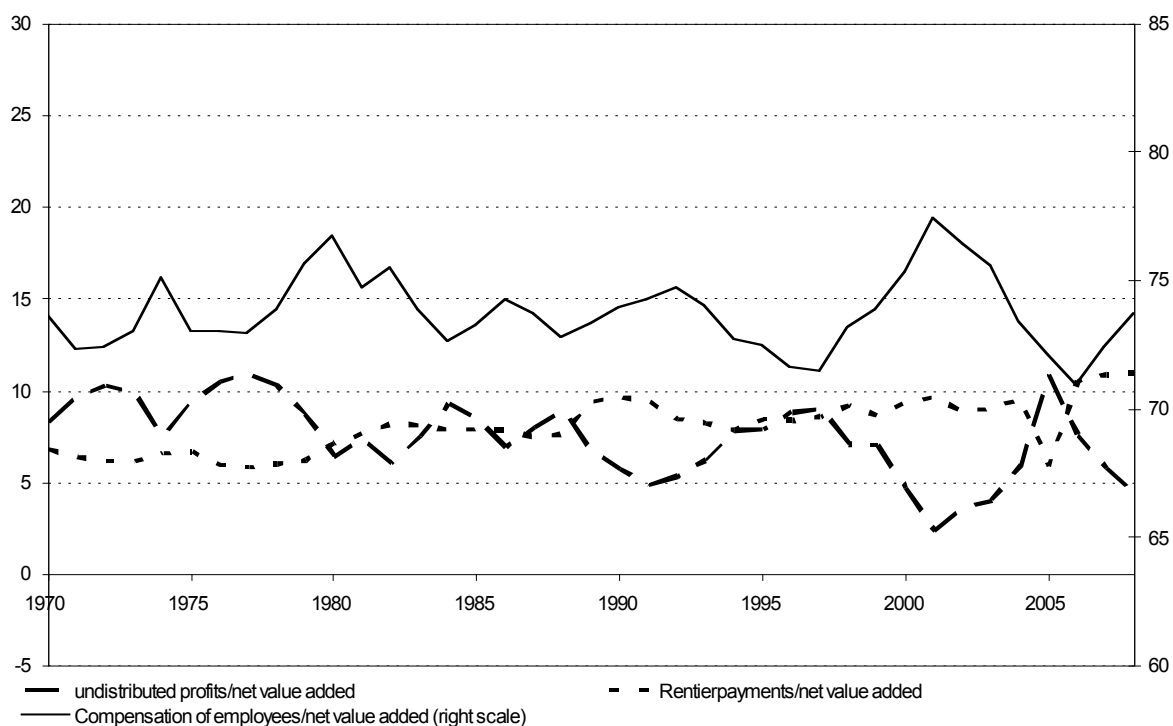


Source: BEA, NIPA Tables; Federal Statistical Office Germany; author's calculation.

6.6.1 USA

Figure 10 and Figure 11 show the components of net value added for nonfinancial- and financial corporations for the USA from 1970 till 2008. Surprisingly, the figures reveal that the share of wages in net value added was relatively constant in both sectors. The wage share in the nonfinancial corporate sector fluctuated at around 75 percent, whereas in the financial sector it fluctuated at around 65 percent. For the nonfinancial corporate sector, the wage share was especially high from the end of the 1990s until 2003. Therefore, although there was a strong increase in the weight of the financial corporations compared to nonfinancial corporations, this shift cannot explain the relative stability of the wage share of the economy as a whole as compared to Germany. On the contrary, this structural change has imposed a downward bias on the overall wage share, because the wage share in the financial sector has been lower than in the nonfinancial sector. Therefore, the stability of the sectoral wage shares in the face of increasing financialization is what remains to be explained.

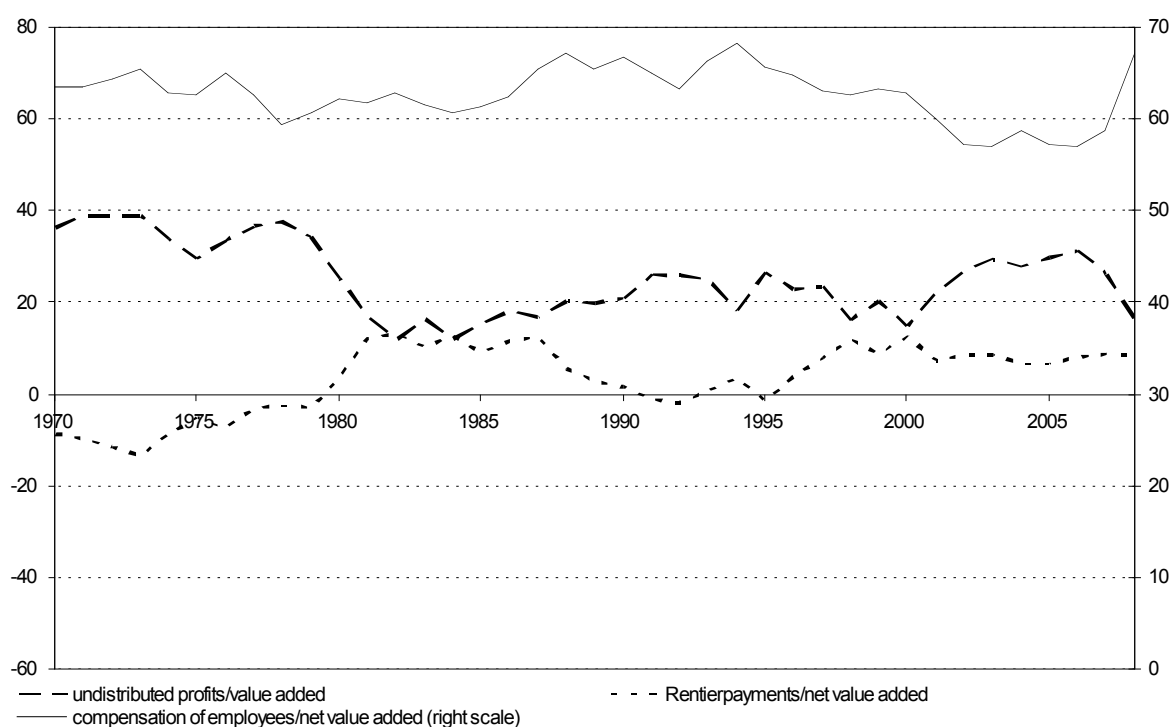
Figure 10: Nonfinancial Corporations, USA, 1970 -2008



Source: BEA, NIPA Table⁹; author's calculation.

⁹ The NIPAs include estimates of value added for the business sector and for corporations. However, neither of these values match the value added of the corporations sector on a SNA basis. ... The value added of the NIPA corporations sector does not include the transactions of Federal Government enterprises and of state and local nontransit utility enterprises. (Mead et al. 2004)

Figure 11: Financial Corporations, USA, 1970 - 2008



Source: BEA, NIPA Table; author's calculation.

6.6.2 Germany

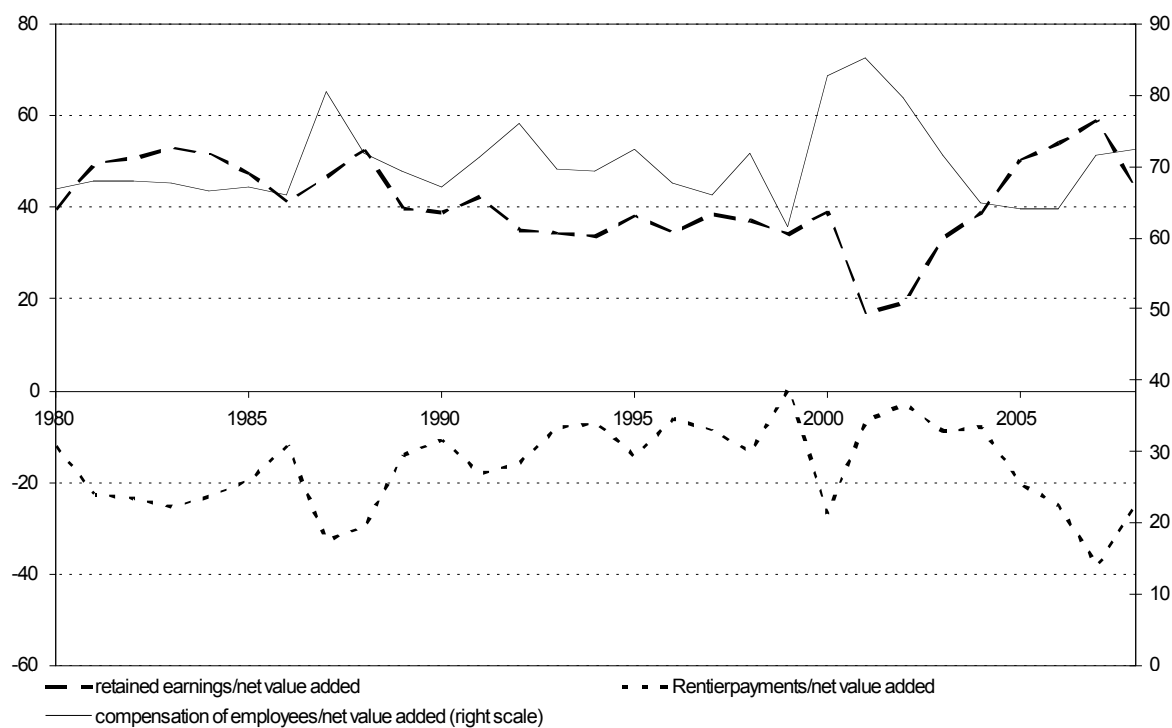
In the case of Germany, there was indeed a decline in the share of wages in the nonfinancial corporate sector. Figure 12 and Figure 13 present the components of net value added for nonfinancial and financial corporations for the years 1980 until 2008. In the nonfinancial sector, the wage share declined tremendously since the 1990s, from 80 percent to 68 of net value added. In contrast, the wage share of the financial sector fluctuated at around 70 percent, with the exception of the years 2000 until 2003, when the share even rocketed to 85 percent of net value added. Even in the absence of a shift in significance towards the financial corporations, the decline in the wage share of the economy as a whole was slowed down by the rather stable wage share in the financial sector.

Figure 12: Nonfinancial Corporations, Germany, 1980 - 2008



Source: Federal Statistical Office, Germany; author's calculation.

Figure 13: Financial Corporations, Germany, 1980 - 2008



Source: Federal Statistical Office, Germany; author's calculation.

Overall, it is therefore not possible to explain the paradox of the relative stability of the US wage share relative to the German wage share by shifts of significance from the nonfinancial to the financial sector of the two economies under investigation. In the USA such a shift of significance can be observed, but since the wage share in the financial sector is smaller than in the nonfinancial sector it should have caused a downward trend in the overall wage share. In Germany there has not been a shift towards the financial sector, and since the wage share in the financial sector is smaller than in the nonfinancial sector this should have stabilized the overall wage share.

7 Conclusion

The main objective of this study was to determine who gained from the fall in the labor share of income in the USA and Germany. The basic assumption was that if there is a link between financialization and income distribution, rentiers should benefit from the fall of the wage share.

The first part of this paper was devoted to a brief review of important institutional changes that paved the way towards financialization. Furthermore, potential channels were identified on how financialization could, in theory, influence the distribution of income.

The question of whether or not there is a link between financialization and income distribution cannot be answered in a straightforward manner. Without a doubt, there is certainly a strong correlation between the increase in rentier shares and the stages of development of financialization in the two different countries. In the US, where the important shift towards financialization occurred in the early 1980s, the rentiers' share of income shows a corresponding leap upwards exactly at that time and remains on a higher level until the end of the observation period. In Germany, where the process of financialization started much later in the beginning of the 1990s and followed a much more gradual transition, this is exactly mirrored by the development of the rentiers' income share: From the 1990s onwards this share gradually increased over time. What is more, some evidence could be presented that the increase in rentier shares was caused by an increase in dividend income, which corresponds quite well with the increase in shareholder value orientation.

In regard to the rather puzzling development of the wage shares in the US and Germany, with the US wage share being more stable than the German, sectoral disaggregation could provide no answer. However, differences that were derived between the US and Germany are quite

interesting. In the US, although there was a strong increase in the significance of the financial corporations compared to nonfinancial corporations, this shift cannot have stabilized the wage share of the economy as a whole, because the wage share in the financial sector was generally lower than in the nonfinancial sector. The sectoral shift has therefore heavily contributed to a downward trend of the wage share which, however, has been leveled-out by compensating factors. Another interesting finding in the US case is the relative stability of sectoral wage shares, as one would have expected a decrease due to the dominance of financialization, shareholder value orientation and to the deregulated US labor market. A potential answer to this phenomenon might be the tremendous increase in top income shares which are part of wage income in the national accounts. According to Piketty/Saez (2006), “top executives (the “working rich”) replaced top capital owners (the “rentiers”) at the top of the income hierarchy during the twentieth century” (p. 204). It is quite possible that these skyrocketing management salaries stabilized the wage shares in both sectors and thus compensated for the downward tendencies imposed on the wage share by financialization.

In the case of Germany, the much more pronounced downward trend in the wage share is entirely caused by a falling wage share in the nonfinancial sector. In the absence of a shift in significance towards the financial corporations, the decline in the wage share of the economy as a whole was even slowed down by the more stable wage share in the financial sector.

One important aspect of financialization that this paper does not cover is the rise in management compensation, and the increase in variable remuneration schemes in the form of stock options. This is an obvious direction for future research. If suitable data on the composition and distribution of household income is available the calculated rentier income shares could be corrected upwards for those income categories and the wage shares downward correspondingly. That there could be substantial effects of such a correction is indicated by the studies by Piketty/Saez (2006) for the US and Bach/Corneo/Steiner (2007) for Germany on personal income distribution. The high increase in top income shares were, at least in the US, due to rising management salaries. If the upward bias in the wage shares caused by the statistical inclusion of the rise in management compensation and variable remuneration schemes can be shown to be relatively stronger for the US than for Germany, then this could also contribute to explaining the puzzle of the relative development of the wage shares in the two countries.

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