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## **The Impact of Financialization on Income Distribution in the USA and Germany: A Proposal for a New Adjusted Wage Share**

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# **The Impact of Financialization on Income Distribution in the USA and Germany: A Proposal for a New Adjusted Wage Share**

*Petra Duenhaupt\**

Over the recent decades, the USA has witnessed major changes in corporate governance partly due to an overall increase in financialization. The most pronounced development is the escalation of management salaries caused by the rise of stock options. On theoretical grounds, this trend was fostered by advances in the economic discipline of agency theory. In practice, changes in tax laws contributed to promoting the change. Empirical evidence shows that income concentration has increased at the top.

This paper contributes to the ongoing debate about income shares by introducing a new adjusted wage share. Arguing that top incomes are closer to profits than to wages, top incomes are removed from the calculation of the indicator. The presented evidence shows that the wage share and the adjusted wage share start to diverge by the end of the 1980s, exactly at the time when the compensation practices of corporations changed considerably. Although shareholder value orientation has increased in Germany as well, business owners are still at the top of the income hierarchy. Therefore, the adjustment of the German wage income share for top management salaries shows only minor discrepancies, which, however, are in the same direction as in the US.

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“[Stockholders], anxious to obtain short-term profits, are more and more able to impose their will on managers, using financial directorates to establish the rules under which managers operate and to shape their policies regarding hiring, employment, and wages.” (Bourdieu 1998)

## 1. Introduction

‘Financialization’, in its broadest sense, can be defined as an:

“(…) increasing importance of financial markets, financial motives, financial institutions, and financial elites in the operation of the economy and its governing institutions, both at the national and international level” (Epstein 2005: 1).

The phenomenon of financialization has its origins in the USA and spread all over then. While there is no exact definition of the term, there are certain developments that are summarized under the label, as for instance: finance via capital markets rather than banks (Philips 2002), the (re)emergence of a ‘rentier’ class (Duménil/Lévy 2002; Epstein/Jayadev 2005), financial trading linked to new financial instruments (Philips 1996) and the supremacy of profit-making via financial rather than real channels (Krippner 2005). Financialization became also visible on the corporate level – the rise of the shareholder value movement, on which this article elaborates.

Throughout the recent decades, the USA has witnessed major changes in corporate governance. Before 1980, corporate governance – meaning the strategy by which companies are directed and controlled – was relatively passive. Then, the 1980s were characterized by a large wave of mergers, takeovers and restructuring. In the 1990s, the activity of corporate governance changed again. Corporations reorganized themselves to move toward shareholder value orientation and to react to the increasing influence of capital markets (Holmstrom/Kaplan 2003). Under the pretence of ‘creating shareholder value’, managers restructured corporations, reduced labor costs through downsizing and wage cuts, and long-term growth strategies were replaced by short-term planning horizons. Moreover, the rise in unemployment weakened labor’s bargaining position; not only by undermining the collective bargaining power but also by the fear of redundancies (Glyn 2006). The strategic orientation of ‘retain and invest’ was substituted by ‘downsize and distribute’ (Lazonick/O’Sullivan 2000). As some authors argue, the most pronounced development is the escalation of management salaries caused by the rise of stock options (e.g. Jensen/Murphy/Wruck 2004). By introducing variable remuneration

schemes, management interests were aligned with the interest of financial investors, i.e. shareholders. On theoretical grounds, this trend was fostered by advances on the economic discipline of agency theory. In practice, changes in tax laws contributed to promoting the change. However, this development encouraged a short-term focus, which in turn manifests itself in an increase in dividend payments and stock buybacks in order to boost share prices (Crotty 2002). Even Rappaport, one of the first proponents of shareholder-value orientation, critically observed:

“Most CEOs champion the goal of maximizing shareholder value but without embracing the essential determinant of value-risk-adjusted long-term cash flows. Instead, they are obsessed with Wall Street’s earnings-expectations machine and short-term share price.”  
(Rappaport 2005: 72)

Yet what are the distributional consequences of these developments? From a theoretical point of view, it is implied that shareholders’ rising demand for dividends will be passed on to workers, and hence result in a decline in the share of income accruing to wages in national income (Boyer 2000). While rentier shares increased indeed in all OECD countries (Power/Epstein/Abrena 2003; Epstein/Jayadev 2005), the labor share in national income decreased since the early 1980s in continental Europe but was only on a mild downward trend in the US (Bentolila/Saint-Paul 1999). The same applies to the US corporate sector: For non-financial corporations’ labor share in value added, there has not been a clear downward trend. The same holds true for the financial sector, albeit the labour income share was lower throughout than in the non-financial sector. Hence, in the US, financialization has manifested itself only in a rising weight of finance, and the sectoral shift has contributed to the mild downward trend of the wage share for the economy as a whole. In the case of Germany, a shift towards the financial sector has not occurred; the falling wage share of the non-financial sector has dominated the falling wage share of the corporate sector (Dünhaupt, forthcoming).

Another phenomenon that could be observed is the rising wage dispersion in the US. As highlighted by Krugman (2002) the pay of CEOs in large American corporations was always a multiple of the ordinary workers wage, but has nowadays reached an extraordinary level. This observation is confirmed by the study of Dew-Becker and Gordon (2005), who found that over the period 1966–2001, only the top 10 percent of the income distribution, to which CEOs apparently belong to, have benefited from the gains in US growth. This might be a potential answer to the question of why the

wage share was more stable in the US than in Continental Europe: in national accounts, stock options are counted as compensation of employees.

In this paper it is argued that the predominance of shareholder value orientation coupled with rising management salaries contributed to a decrease of labor's share in national income. In fact, the decrease in the labor share is regarded as part of the process of financialization, which is not always visible but will be made explicit here.

In the following, three questions are considered. First, why is the share of wages in national income more stable in the USA than in Germany, although financialization and neo-liberalism are more prevalent in the US? Second, is there a link between this development and changes in corporate governance, i.e. an increase in shareholder value orientation and hence executive remuneration practices? Finally, does the wage share look differently if top income shares are removed?

In order to address these questions, the paper is structured as follows. In a first step, agency theory, which can be considered as the theoretical justification for the escalation in stock options, is presented and critically discussed. The second part continues with a discussion of stock options and the development of CEO payment in the USA and Germany. While in the past management remuneration was detached from company performance, the introduction of stock options not only aligned management interests with those of shareholders, but also resulted in skyrocketing salaries. The next section continues with a critical discussion of the wage share. Although it can be considered as a rough indicator for the distribution of national income between labor and capital, it may be misleading because not only do workers nowadays receive capital income themselves in the form of interest and dividends but also, and more importantly, is income in the form of stock options counted as wage income. Hence, the wage share can be a misleading indicator when it comes to the question of distribution of income to different social groups or classes. In order to remove part of these distortions, finally, a new adjusted wage share is presented by removing top management salaries and stock options from the wage share. The last section presents the main conclusions.

## **2. Principal Agent Conflict**

Berle and Means already discussed the problem of the separation of ownership and control in the corporate form of organization in 1932. The authors identified an important agency problem: they were concerned that managers rather manage in

their own interest than of those of the shareholders, who represent the owners. Agency theorists adopted this idea, to which the surge in management remuneration can be traced back. The basic idea goes as follows: one party, the agent, acts on behalf of another party, the principal. It is assumed that both parties have different goals and risk preferences. The principal has difficulties to examine the agents' doings, i.e. to make sure that the agents' behavior is appropriate. This conflict is referred to as the *agency problem*. Moreover, there is the possibility that both parties have different attitudes towards risk, and therefore have a conflict when it comes to actions. Hence, there is the *problem of risk sharing*. Agency theorists present this relationship by using the metaphor of a contract and try to solve the aforementioned problems (Eisenhardt 1989). Jensen and Meckling (1976) brought forward the premise that if a contract is outcome based it is more likely that the agent acts in the interest of the principal.

The relationship between the principal and the agent perfectly fits the conflict arising between shareholders and managers, as managers are supposed to act in the best interest of shareholders. Remuneration schemes were constructed that align the interest of self-interested managers with those of shareholders by linking the pay directly to the stock price in order to mitigate agency problems. It is assumed that stock options give managers a greater incentive to act in the interest of shareholders (Hall/Murphy 2003) and to encourage more risk taking, as managers are rather risk averse to avoid failure and dismissal (Rappaport 2005).

Apart from the incentive aspect, there were also changes in regulation and taxation that contributed to an increase in stock option based remuneration. Since 1992, public companies are required to announce top executive compensation and its relation to the companies' performance, i.e. stock performance. The requirement enhanced stock-based compensation, as it is easier to defend in public. In 1993, a law was passed that promotes performance based compensation by limiting the tax deductibility of management compensation at \$1m if it is not performance based (Holmstrom/Kaplan 2001)<sup>1</sup>. In general, under current US accounting rules, options are not treated as an expense on company's financial statements (Hall/Murphy 2003). Before the increasing interest in shareholder value orientation, management was rather loyal to the corporation than to the shareholders. Before 1980, there was no alignment between managers and shareholders interests; performance based

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<sup>1</sup> Whether or not these changes in regulation and tax rules had indeed an influence on the increase in options is a controversial issue. For a discussion compare Hall/Murphy (2003) p. 62.

compensation was negligible. In times of excess capacity, managers tended to waste free cash flow through unnecessary diversification and investment programs (Jensen/Murphy/Wruck 2004). A takeover and merger boom characterized the 1980s. Through leveraged acquisitions, buyouts, hostile takeovers and stock buybacks, free cash flow was absorbed by interest payments that came along with debt service requirements (Holmstrom/Kaplan 2001). The merger and takeover boom came to an end by the late 1980s. The decline was fostered by anti-takeover legislation and jurisprudence, the collapse of the high yield bond market and a credit crunch (Holmstrom/Kaplan 2001). At the same time, shareholder activism started to increase. According to Hall and Murphy (2003), representatives of shareholders as for instance the United Shareholders Association, the Council of Institutional Investors and a variety of state pension funds criticized the fact that management remuneration was detached from companies' performance. This criticism was stressed further by academic research presenting evidence that managers indeed were neither rewarded for good performance nor penalized for failure. As a result, companies granted more stock options to executives.

Ironically, the recent past showed that the system of incentive based compensation has its limits as it probably exacerbates, not reduces, agency problems (Jensen/Murphy/Wruck 2004). Managers are self-interested, "obsessed with earnings" (Rappaport 2005: 69) and short-term performance rather than to focus on the long-term prospects of the company. In order to meet earning expectations, long-term investments are put off, which in turn reduces the company's earnings potential and value. Managers also tend to decide in ways that decrease total firm value and total social value by increasing shareholder value (Jensen/Murphy/Wruck 2004). Stock-based incentives encouraged fraud and resulted in accounting scandals by managers who reported high earnings that increased stock prices (Hall/Murphy 2003).

### **3. Stock options and CEO pay**

Employee stock options provide employees with the right to buy a share of their company's stock at a set price (the strike or exercise price), within a specified time period. The strike price is usually equal to the market price on the date the option is granted. In general, employee stock options cannot be exercised immediately because of a minimum waiting period, which is also called the "vesting period", of usually 3 years. In case the employee leaves the company before the vesting period

has passed, options lapse. Employee stock options are non-tradable and expire within 10 years. The aforementioned limitation ensures that the options tie employee compensation to firm outcome until the options are exercised. Usually, the company issues a new share when the employee purchases the stock (i.e. exercises the option). “Cashless exercise programs” are a prevalent procedure; the employee receives the value of the spread between the market price and the strike price in cash or in company shares and pays nothing (Hall/Murphy 2003).

Hall and Murphy (2003) find a tremendous increase in CEO pay, driven by an escalation in grants of stock options. From 1992 to 2000, the average real pay for CEOs of S&P 500 firms grew remarkably by 320 percent from \$3.5m to \$14.7m, and decreased to \$9.4m in 2002. According to the authors, the rise in CEO payment is mainly caused by an increase in stock options which grew nine-fold compared to other components that only tripled during the same period. Jensen, Murphy and Wruck (2004) analyze the composition and level of CEO pay in S&P 500 firms from 1992 to 2002, showing that the composition of average remuneration changed considerably.<sup>2</sup> In 1992, base salary made up 38 percent, compared to stock options that accounted for only 24 percent. By 2000, base salary decreased to only 17 percent, whereas stock options made up almost 50 percent. Although the total pay diminished slightly by 2002, options still accounted for almost half of CEO remuneration. In a similar study, Bebchuk and Grinstein (2005) analyze the growth in executive pay between 1993 and 2003. The results show that neither changes in market capitalization nor changes in industry mix during the period under investigation can be accountable for the growth in pay levels.

Although remuneration of German managing boards grew at a similar pace, the levels and the composition differ. A study conducted by Schmidt and Schwalbach (2007) shows that from 1987 to 2005, the average pay in DAX 30 firms increased by 445 percent; and from 1994 to 2005 by 331 percent. In 2008, the average pay was €2.3m (21 percent less than in 2007), of which base salary was accountable for 34 percent (25 percent in 2007), 47 percent bonuses (56 percent in 2007) and 19 percent stock options (the same in 2007) (Friedl et al. 2009). Interestingly, growth rates of management remuneration and stock prices were in line until 2001 when they started to diverge. Hence, there is an asymmetric reward structure for managers: the pay

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<sup>2</sup> Average pay levels (in 2002-constant dollars) taken from the ExecuComp database for S&P 500 CEOs. Average pay is composed of salaries, bonuses, benefits, stock options (valued on date of grant using ExecuComp’s modified Black-Scholes formula), stock grants, and other components.



increases with rising equity prices, but does not react on falling prices. Therefore, Schmidt and Schwalbach (2007) criticize the fact that remuneration is detached from performance.

The results suggest that stock options are much more important in the US compared to Germany. This is not very surprising given the fact that stock options were not introduced before 1998 when German legislation allowed the grant of options as part of management compensation (Bernhard 1999). Even though German firms do not rely as much on stock options as their US counterparts, they do as well rely heavily on short-term performance indicators.

Before presenting wage shares adjusted for the increase in CEO pay levels and thereby the rise in stock options, the next section discusses problems associated with the measurement of wage shares, with a special focus on how to handle changes in the composition of income.

#### **4. The main issues regarding the wage share**

In general, factor shares are calculated from aggregates in national accounts. The standard strategy is to calculate the labor share of national income by taking the share of employee compensation divided by either national income or GDP. The capital share, in turn, is assumed to be the residual. Recently, the simple calculation has received some criticism. While in the past, the long-term stability of factor shares was referred to as one of the “stylized facts” of growth by Nicholas Kaldor (1961: 178), “a bit of a miracle” by John M. Keynes (1939: 48) and “a mirage“ by Robert Solow (1958: 619), lately, the long-term development of the labor income share has become a puzzle to economists, as it appears not to be constant over time. While some studies try to examine the determinants for the decrease in the labor share (e.g. Blanchard/Giavazzi (2003), EU-Commission (2007), Guscina (2006), Harrison (2002), IMF (2007) and Tytelle/Jaumotte (2007)), others suggest that measurement issues may distort the picture. Gomme and Rupert (2004) argue that the falling share of labor in the US is just an artifact of mismeasurement. According to the authors, the “historic lows” in the early 2000s appear only in certain time series. In the same vein, Krueger (1999) and Glyn (2009) present differences in labor shares depending on the chosen numerator or denominator. For example, measuring labor’s share of GDP at market prices rather than factor costs lowers the result, because it adds indirect taxes to non-labor income. Since indirect taxes do not characterize a return to capital, it is more meaningful to measure labor’s share of GDP at factor cost.

Moreover, economists have stressed the fact that the distinction of factor shares as representatives of class income shares, i.e. distinguishing between capitalists' and workers' income shares, is not as simple as postulated by classical economists for two reasons: First, wage differentials have increased substantially in recent years. Labor shares include all form of wage income, from the low-paid worker to the high paid company director. Second, people receive income from different sources, i.e. workers do not only receive income in the form of wages and salaries but also capital income in the form of dividends, rents and interest payments (see, for instance, Palley 2006, 2010, Lavoie 2009, Atkinson 2009). These two facts give the impression that the lines have been blurred.

However, in regard to the second point, one should keep in mind the persistent levels of inequality in the US when it comes to the distribution of wealth, and hence income from wealth. According to a recent study by Wolff (2010), in 2007 the richest 1 percent of US households held about half of all outstanding corporate equity. Moreover, despite the fact that 49 percent of households owned stock shares either directly or indirectly through mutual funds, trusts, or various pension accounts, the richest 10 percent of households accounted for 81 percent of the total value of these stocks, somewhat less than its 89 percent share of directly owned stocks and mutual funds. In Germany, stock ownership in household portfolios appears to be of minor importance. In 2009, only 13.6 percent held stock shares, of which 3.8 percent directly, 7.7 indirectly and 2.1 percent held both (DAI 2010). Combined with the fact that in 2007 the richest 10 percent of German households owned more than 60 percent, and the richest 1 percent 23 percent of total wealth, in contrast to the fact that 2/3 of German households owned none or only little net assets (Frick/Grabka 2009), stock ownership is highly concentrated and exclusive to the rich households. Therefore, even if "labor and capital no longer divide so neatly into mutually exclusive categories" (Krueger 1999: 50), wealth is still highly concentrated and thus contributes to income inequality, because only a small group of households derive income from capital.

Similar to the aforementioned controversy, the question arises how variable remuneration, i.e. stock options and bonus payments are treated in national accounts. This is even more important given the strong surge in stock options in the US, as outlined in Section 3.

Stock options are counted as compensation of employees in national accounts, given that “employees receive ESO [employee stock options] from the employer because of their work – like a bonus for their performance” (Kuhn 2003: 3). It is further argued that ESOs “are no gifts for the employees and consequently have to be seen as part of remuneration” (Kuhn 2003: 3). However, according to Glyn (2009: 112),

“many of those at the top of the pay distribution are more akin to entrepreneurs, employed by shareholders and rewarded with stock options which are literally an entitlement based on future profits and which reduce the future returns to the other shareholders”.

This argument resembles the one put forward by Krueger (1999: 46):

“Because corporate officers control the firm’s capital and in many cases include the owners of the firm, one could argue that much of their compensation should be classified as capital income.”

Even from a theoretical point of view matters are not clear-cut. Given that stock options are generated from a new emission of shares, they rather represent a capital transfer than compensation of employees, because they are not an actual cost for a firm (Kuhn 2003). In addition, stock options could be regarded as some kind of capital gain and hence correspond to capital income rather than compensation (Eurostat undated; Australian Bureau of Statistics 2002). Taken the aforementioned arguments against the treatment of stock options as part of employee compensation together with the fact that from a distributional point of view corporate executives hold a position closer to capital than to labor, as their interests are aligned with the shareholders via variable remuneration schemes, this implies to adjust the wage share accordingly.

## **5. A proposal for creating a new “adjusted” wage share**

This section provides an attempt at constructing wage shares adjusted for the very high manager incomes for the US and Germany, respectively. The calculation follows the examples of Buchele and Christiansen (2007), Glyn (2009) and Atkinson (2009) in taking top wage income shares constructed from tax return statistics and subtracting them from the income share of labor.

Buchele and Christiansen (2007) obtained their “adjusted” wage share for the US by subtracting the top 0.5 percent share of wages, taken from Piketty and Saez (2003), from the NIPA labor’s share. The resulting wage share peaks at around 71 percent in the early 1970s and declines by more than 10 percentage points by 2005. Andrew Glyn (2009) performed a similar calculation in 2009. Based on the same data set, he

removed the top 1 percent wage share from the original labor share and concludes “the share of the ‘bottom 99%’ of US labor has fallen much more sharply over the past couple of decades than labor’s share as a whole” (Glyn 2009: 112). Atkinson (2009) calculated “adjusted” wage shares for the bottom 90 and 50 percent of wages for the time period 1954 to 2006 for the UK.<sup>3</sup> The calculation clearly indicates that the share of the bottom 50 percent decreased since 1975, while the ordinary wage share was relatively stable over time. All these studies highlight the impact of increasing wage dispersion, and hence imply a need to calculate adjusted labor shares in order to derive meaningful conclusions.

In the following calculations, data for the wage shares are taken directly from National Accounts as published by National Statistical Offices; data for the adjustment of the wage shares are taken from Piketty and Saez (2003) for the USA and from Bach, Corneo and Steiner (2009) for Germany.<sup>4</sup>

In the case of the USA, three types of calculations are presented. In a first step, the composition of top income shares is shown, based on the data from Piketty and Saez (2003). The respective share of top wage income is then removed from the share of wages in national income. Although it is not obvious to which group of top income fractiles CEOs belong to, this study exemplifies the impact by taking the top 0.1 percent incomes.<sup>5</sup>

The labor share in national income does, besides employment in the business sector, also include employment by not-for-profit institutions, government employment and direct employment by households. None of these generate profits and stock options, and top management salaries are also of minor importance. To render a more accurate picture of the distributional effects of stock options and top management salaries, a new adjusted wage share for the business sector is calculated in the third step. Given the assumption that none of the top incomes are gained in the non-business sector, the procedure of subtracting the top wage incomes for the economy as a whole from the business sector wages seems to be legitimate. Unfortunately, a distinction between financial and non-financial corporations is not possible, due to data limitations.

Figure 1 displays the top 0.1 percent income share and its composition for the USA, 1960 till 2007. A number of interesting facts emerge. First, the share of income

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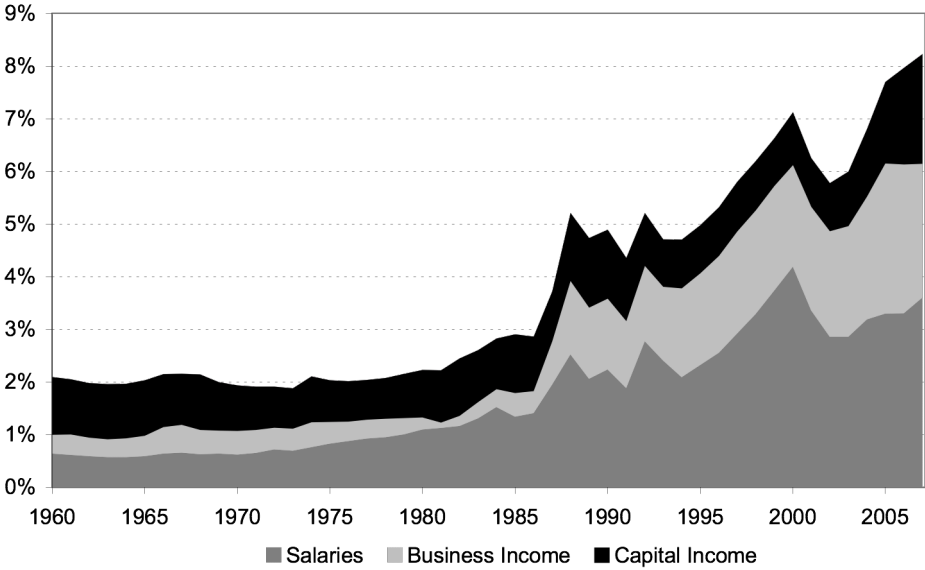
<sup>3</sup> In contrast to Piketty and Saez (2003), the Atkinson’s (2009) data set relates to individual data, not tax units.

<sup>4</sup> More information about the data set is given in Appendix A.

<sup>5</sup> Calculations for the top 0.5 percent and top 0.01 percent can be found in Appendix B.

accruing to the richest 0.1 percent households increased slowly until the 1980s when it started to accelerate. Over the 1980-2007 period, the share rose by more than 6 percentage points. While in 1980, the richest 0.1 percent households held about 2 percent of total income, by 2007, the share was around 8 percent. Second, it can be inferred that this increase is due to rising salaries, because the contribution of the share of wages increased from 1.1 percent in 1980 to 3.6 percent in 2007. Moreover, the share of wages peaked in 2000 before the collapse of the new economy stock market boom, leading to the assumption that the increase in wages was largely caused by stock options, which obviously depend on stock market fluctuations. Third, the results show that since the mid 1980s, business income contributed to the rising share of top-incomes as well, reflecting the fact that high professionals and entrepreneurs have seen their share of income rise too.

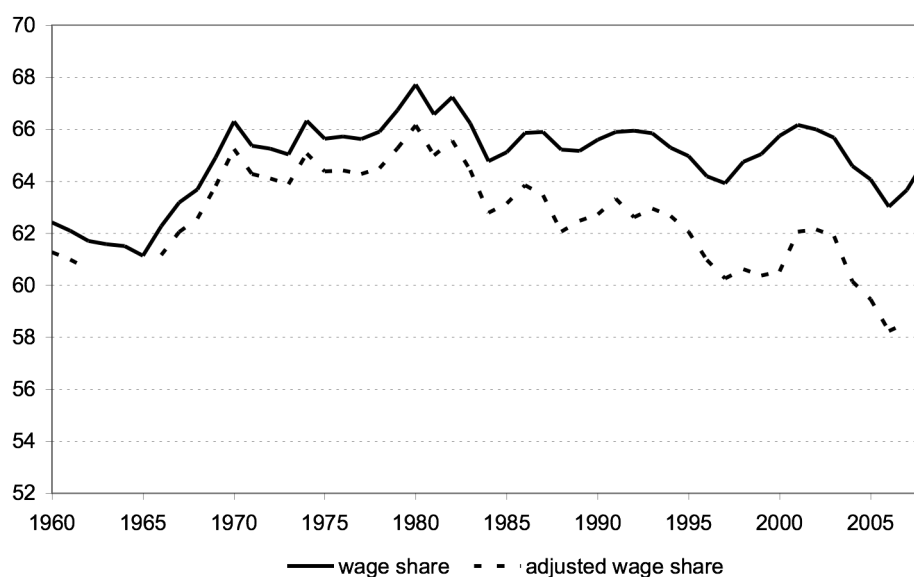
*Figure 1: The top 0.1 percent income share in national income and its composition, USA, 1960-2007*



Source: Piketty and Saez (2003); author’s calculations.

Figure 2 shows the impact of subtracting the wages accruing to the top 0.1 percent from the labor share of net national income for the USA 1960-2008. Indeed, our adjusted wage share shows the implied pronounced downward trend since the 1980s, while the original wage share taken from the national accounts only shows a moderate decline. For our adjusted wage share, the difference between the peak in 1980 and the trough in 2006 amounts to almost 8 percentage points, whereas for the original wage share it reaches only 4.7 percentage points.

Figure 2: The wage share and the wage share adjusted for the top 0.1 percent wage income (as a percentage of net national income), USA, 1960-2008

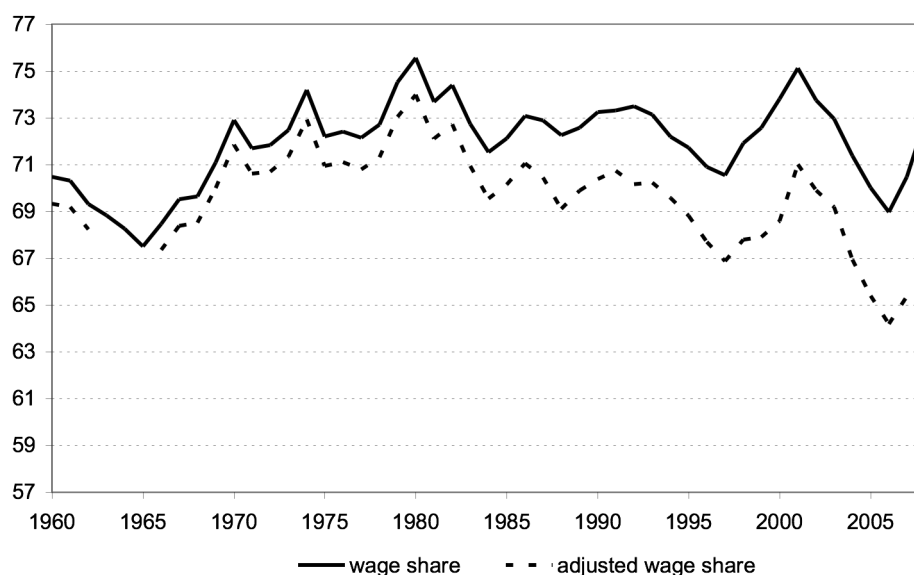


Source: Piketty and Saez (2003); NIPA; author's calculations.

Note: For the years 1963, 1965 and 2008, data for the wage income accruing to the top 0.1 percent is missing.

Figure 3 provides additional evidence by adjusting the share of wages in net value added for the business sector for the wages accruing to the top 0.1 percent for the USA 1960-2008. The results are similar to those in Figure 2. Wage shares were in line until the early 1980s when they started to diverge. The original wage share increased until the 1980s, reaching a peak value of 75.6 percent. Then, it showed a moderate decline, fluctuating at around 72 percent of net value added. The decline of the adjusted wage share is much more pronounced; the difference between peak and trough accounts for almost 10 percentage points compared to 6.6 percent for the original wage share.

Figure 3: The wage share and the wage share adjusted for the top 0.1 percent wage income (as a percentage of net value added), corporate business sector, USA, 1960-2008



Source: Piketty and Saez (2003); NIPA; author's calculations.

Note: For the years 1963, 1965 and 2008, data for the wage income accruing to the top 0.1 percent is missing.

What overall conclusions can be drawn from the empirical evidence presented above?

First, top income shares increased tremendously since the 1980s, and the rising share of wage income mainly contributed to this increase, which is now the main source of income at the very top. To quote Piketty and Saez (2006: 204): “top executives (the working rich) replaced top capital owners (the rentiers) at the top of the income hierarchy during the twentieth century.”<sup>6</sup>

Second, since the 1980s wage shares corrected for the salaries in the top income shares have fallen much more sharply than the wage shares taken from the national accounts, both for the total economy and for the business sector.

In contrast to the case of the USA, the calculations for Germany suffer from several constraints. First of all, comparable time series data for top incomes and its composition are not available. Second, the data provided by Bach, Corneo and Steiner (2009) only cover the years 1992, 1998 and 2003. Therefore, the interim years had to be interpolated to generate a short time series, which, however, covers

<sup>6</sup> In a more recent study, Atkinson, Piketty and Saez (2010) revise this statement. By using a broader measure of income of wealth, it appears that the two groups rather share the top position. However, the calculation incorporates realized capital gains, which are neglected in this study, due to their volatility.

the initial period of financialization and increasing shareholder value orientation in Germany (van Treeck/Hein/Dünhaupt 2007).

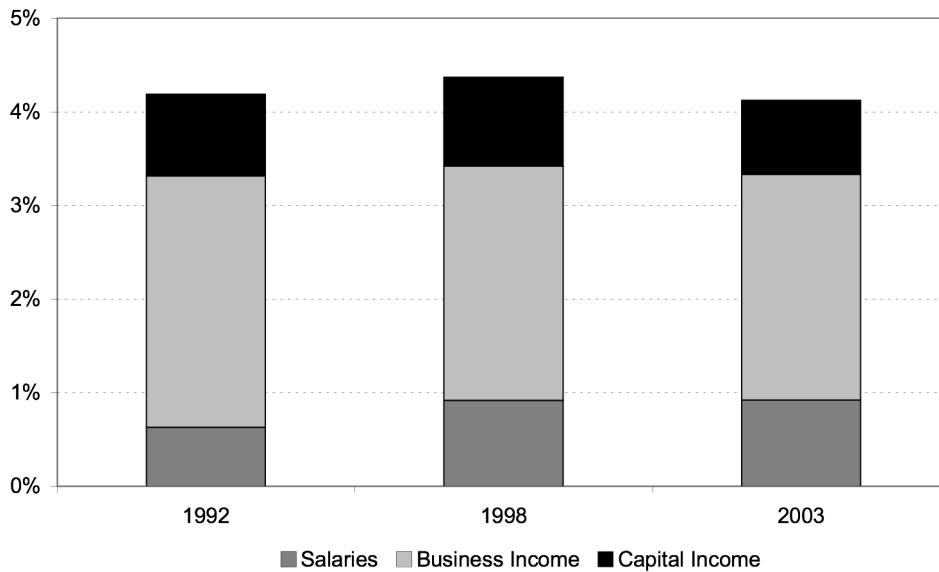
Although limitations of data prevent a detailed comparison between the cases of Germany and the USA, some interesting trends can be presented nonetheless.

Figure 4 provides information about the German top 0.1 percent income share and its composition, 1992, 1998 and 2003. During the observation period, the share of the top 0.1 percent in gross market income slightly decreased from 4.19 percent in 1992 to 4.12 percent in 2003. In 1992, the composition of the top 0.1 income share was as follows: 15 percent wage income, 21 percent capital income, and business activity accounted for the bulk with 64.1 percent. By 2003, the composition changed. The contribution of wage income increased to 22.4 percent, business income decreased to 58.5 percent and capital income accounted for 19.2 percent. Overall the top incomes in Germany mainly derive from business activities. In contrast to the USA, the contribution of wage income is still small, but rapidly increasing.

Why is the composition of the top income share so different from the US? Dell (2007) suggests that the treatment of capital income is more favorable in terms of taxes compared to other countries. Moreover, Bach, Corneo and Steiner (2007) emphasize the still comparatively low remuneration of German CEOs by international standards. According to the authors, the larger size of US firms, the common use of stock options as well as the presence of trade union members in German supervisory boards might be potential answers. Bach, Corneo and Steiner also highlight the fact that the vast majority of German firms are unincorporated, irrespective of firm size. This fact helps explain the importance of income derived from business activity for the highest income fractiles and might be caused by differences in the German system with regard to tax rules, legal framework and the financial system.



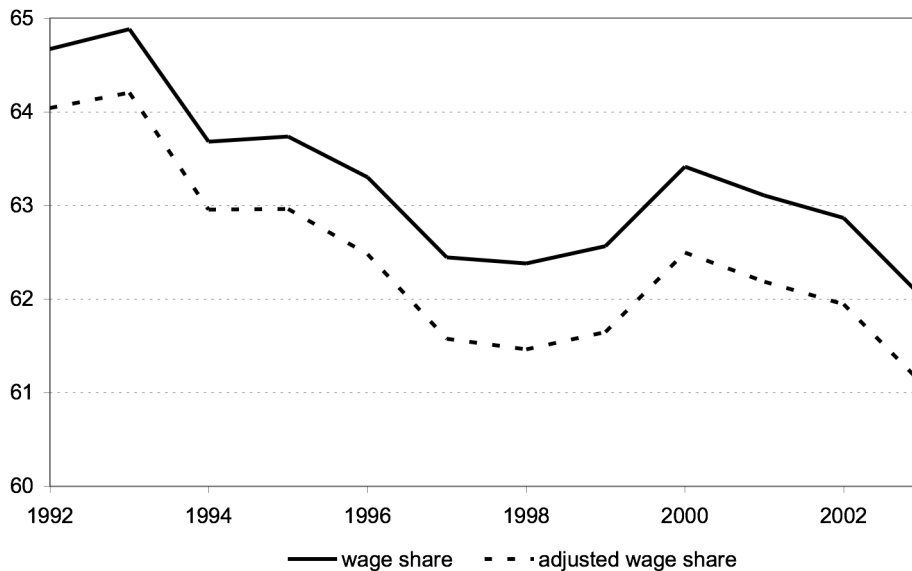
Figure 4: The top 0.1 percent income share in gross market income<sup>1</sup> and its composition, Germany, 1992, 1998 and 2003



<sup>1</sup>Income from business activity, wage income, capital income, exclusive public and private pensions; measured at the individual level.

Source: Bach, Corneo and Steiner (2009); author's calculations

Figure 5: The wage share and the wage share adjusted for the top 0.1 percent wage income (as a percentage of net national income), Germany, 1992-2003



Source: Statistical Office Germany, Bach, Corneo and Steiner (2009); author's calculations

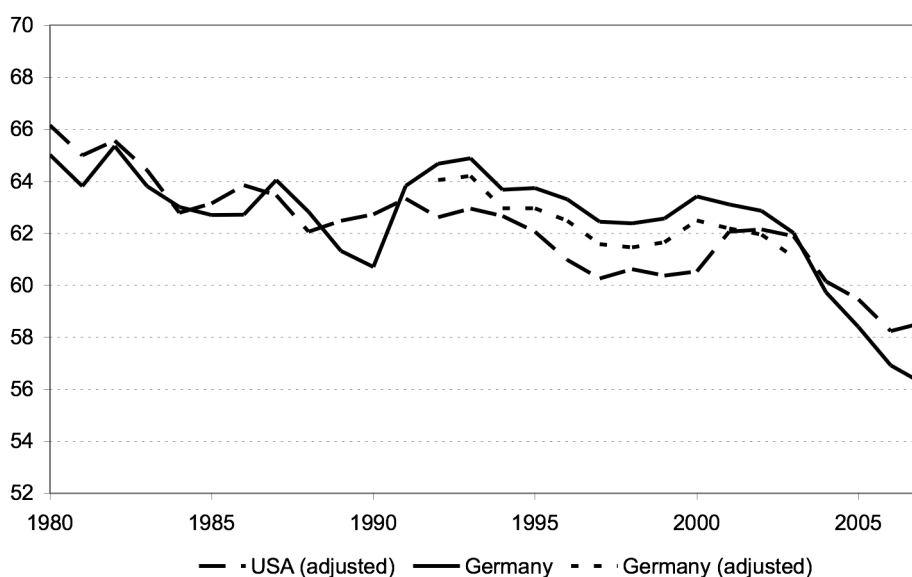
Note: Our "adjusted" wage share is constructed by taking the three data points from figure 4; the missing years are interpolated.

Figure 5 contrasts the evolution of the original wage share (as a percentage of net national income) with the wage share adjusted for wage income accruing to the top

0.1 percent for Germany, 1992 until 2003. Although the observation period is relatively short, some facts become visible. Given the increasing weight of wage income for the high-income group, the wage share adjusted for the high wages shows a stronger decrease than the original wage share. Moreover, the share of wages accruing to the top 0.1 percent as a percentage of the original wage share increased between 1992 and 2003 by a remarkable 53 percent from 0.97 percent in 1992 to 1.49 percent in 2003. As a comparison, during the same time period, the US top share as a percentage of the original wage share could see their share increase by only 14 percent, albeit from a higher level. In 1992, the share amounted to 5.1 percent, and in 2003 it accounted for 5.75 percent of the original wage share. However, in 2007 the top 0.1 percent wage share was up to 8 percent of the original wage share.

Finally, in Figure 6 the original German wage share is juxtaposed with our adjusted wage share for the USA, 1980 until 2008. We chose the original German wage share, because data for the adjusted wage share for Germany is only available for the years 1992 until 2003. For the sake of completeness, our adjusted wage share for Germany is depicted as well. The results are striking: Our adjusted wage share of the USA shows almost the same development as the German wage share. Apart from the upwards shift in the German wage share in 1990, which was related to the German unification, both shares have been on a constant downward trend with cyclical fluctuations, with a pronounced decline since 2003.

Figure 6: The "adjusted wage share" for the USA and Germany and the original wage share for Germany, 1980-2008



Source: NIPA; Piketty and Saez (2003); Statistical Office Germany; Bach, Corneo and Steiner (2009); authors' calculations

## 6. Conclusion

The fundamental changes in the global economy in the last 30 years have been accompanied by pronounced changes in corporate governance. The underlying substance of this change has been the increasing importance of financialization; the mechanisms which have driven this change in corporate governance have been the increasing importance of shareholder value orientation coupled with incentive-based management compensation, with the result that managers have shifted their attention towards short-term objectives and stock prices. In the USA, these shifts have led to a dramatic rise in top income shares, driven by skyrocketing top income wages. An explosion in grants of stock options, in turn, mainly caused the increase in top wages. The relative stability of the labor share in national income in the US no longer appears to be puzzling if one takes the above findings into account. In this paper it was argued that stock options are closer to capital income than to wage income, given the proximity of CEOs position to capital owners rather than to workers. Given this assumption, top income shares were removed from the labor share of income for the total economy as well as for the business sector. The result is striking: Since the 1980s, our adjusted US labor income share has fallen much more sharply than the labor income share taken from the national accounts. Therefore, the period of financialization (Krippner 2005) has been characterized by two types of redistribution: First, there has been an increase in the rentier income share at the

expense of the wage share, as taken from the national accounts and thus including top management salaries, as shown in Dünhaupt (forthcoming). Second, top management salaries have increased relative to workers' incomes further weakening the development of our adjusted wage share.

Limitations of available data prevented an extensive comparison of the development in Germany with the one in the USA. However, some trends could still be observed. The share of top management salaries in national income has increased in Germany too, albeit from a much lower level than in the USA. Therefore, the adjustment of the German wage income share for top management salaries only showed minor discrepancies, which, however, were in the same direction as in the USA. Thus, Germany has also been facing similar redistribution tendencies of financialization as the USA, an increase in the rentier income share as shown in Dünhaupt (forthcoming) and an increase in top management salaries in the wage share as measured by the national accounts.

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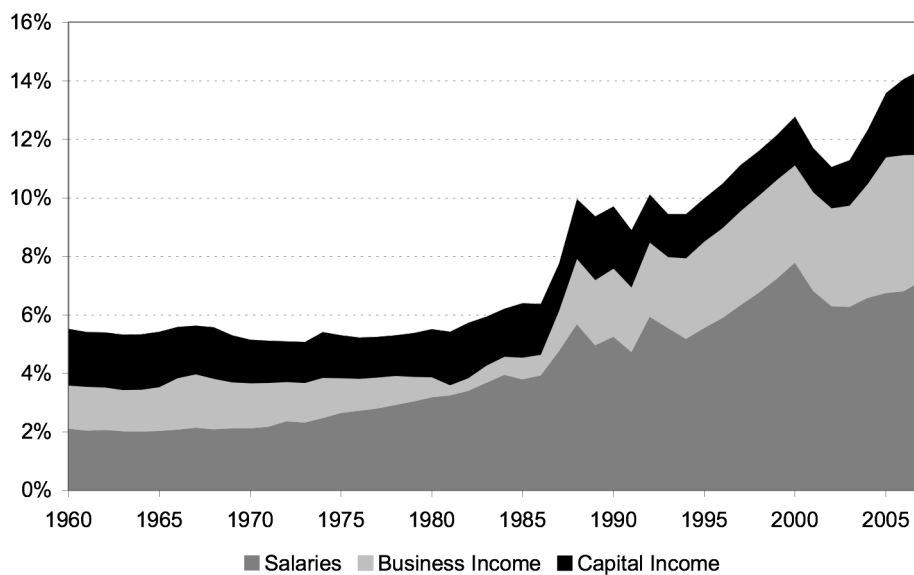


## Appendix A: Information about the data and sources

Figure		Sources	Description
Figure 1, 7 and 10	Top fractile income shares	Piketty/Saez (2003) Table A1	The data series constructed by Piketty and Saez rely on tax return statistics. The series are constructed for tax units and not individuals. However, according to the authors, the time series pattern for individuals should be very similar to that based on tax units. The shares of income are estimated by dividing the income amounts accruing to each fractile by total personal income computed from National Income Accounts.
	Income composition by sources of income and by fractile of total income	Piketty/Saez (2003) Table A7	
Figure 2, 8 and 11	Wage share	National Income and Product Accounts (NIPA) Table 1.12 and 1.7.5	Top wage income shares, constructed by Piketty and Saez, are based on published tables from the Internal Revenue Service that classify tax returns by size of salaries and wages. Fractiles are defined relative to the total number of tax units with positive wage and salaries estimated as the number of part-time and full time workers from National Income Accounts less the number of wives who are employees. The sum of total wages in the economy used to compute shares is obtained from the National Income Accounts.
	Top wage income share	Piketty/Saez (2003) Table B2	
Figure 3, 9 and 12	Wage Share	National Income and Product Accounts (NIPA) Table 1.14	
Figure 4, 13 and 15	Distribution of gross market income	Bach/Corneo/Steiner (2009) Table 3	Bach, Corneo and Steiner (2009) merge information from two sources, i.e. the German Socio-Economic Panel and the official income tax statistic. The authors analyze the evolution of gross market income at the individual level for the entire population aged 20 or older. They chose gross market income, arguing that it is closely related to national income. Moreover, the difference between total wage income in their integrated database and the national accounts appears to be little.
	Composition of top market incomes by income component	Bach/Corneo/Steiner (2009) Table 6	
Figure 5, 14 and 16	Wage share	Statistical Office Germany	
	Top wage income share	Bach/Corneo/Steiner (2009)	

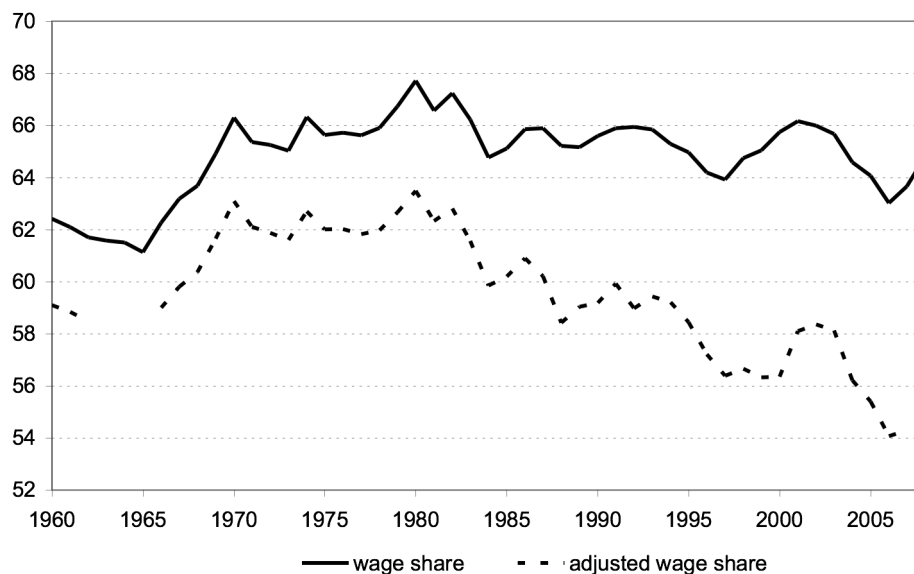
## Appendix B

Figure 7: The top 0.5 percent income share in national income and its composition, USA, 1960-2007



Source: Piketty and Saez (2003); author's calculations.

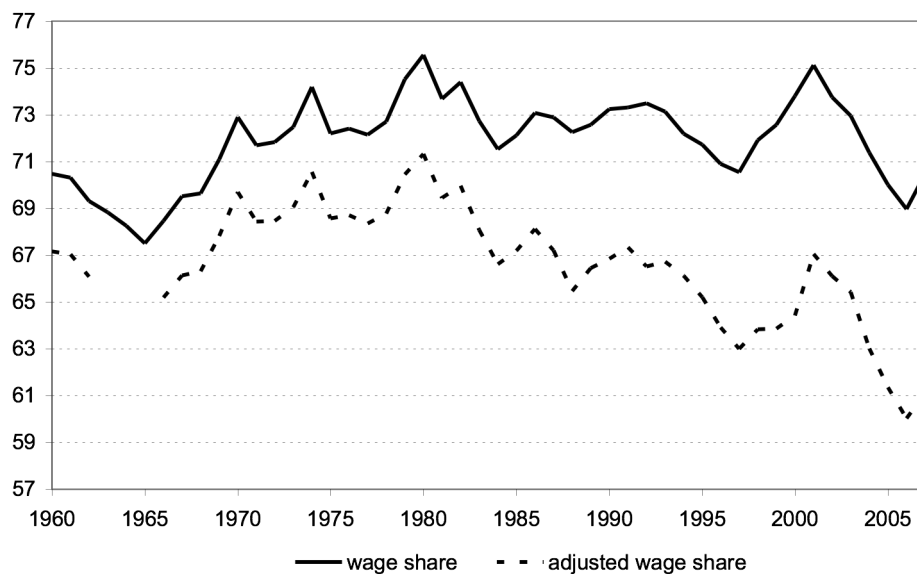
Figure 8: The wage share and the wage share adjusted for the top 0.5 percent wage income (as a percentage of net national income), USA, 1960-2008



Source: Piketty and Saez (2003); NIPA; author's calculations.

Note: For the years 1963, 1965 and 2008, data for the wage income accruing to the top 0.5 percent is missing.

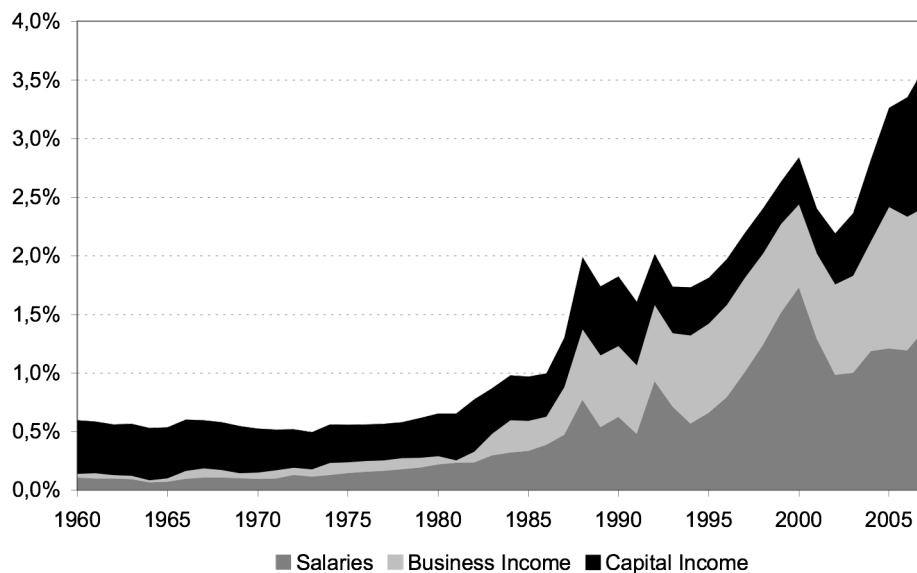
Figure 9: The wage share and the wage share adjusted for the top 0.5 percent wage income (as a percentage of net value added), corporate business sector, USA, 1960-2008



Source: Piketty and Saez (2003); NIPA; author's calculations.

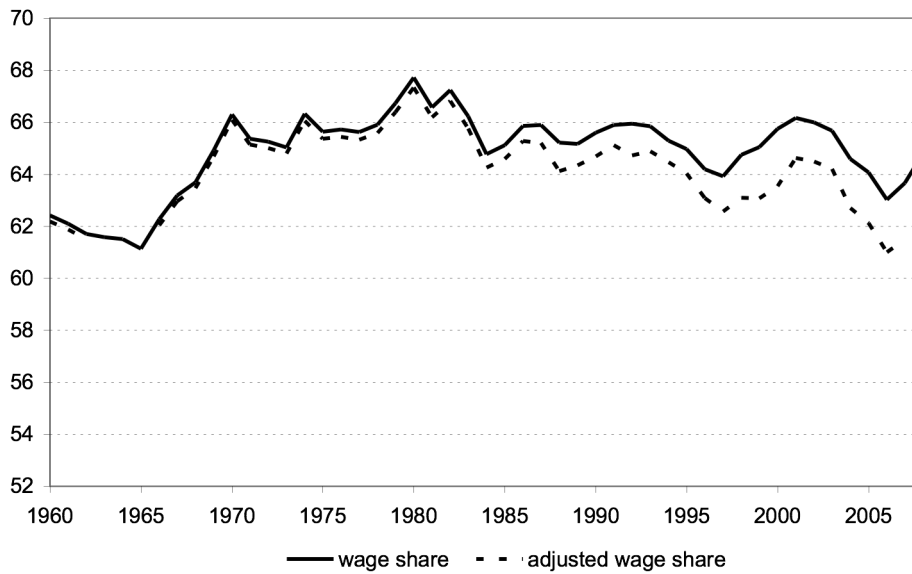
Note: For the years 1963, 1965 and 2008, data for the wage income accruing to the top 0.5 percent is missing.

Figure 10: The top 0.01 percent income share in national income and its composition, USA, 1960-2007



Source: Piketty and Saez (2003); author's calculations.

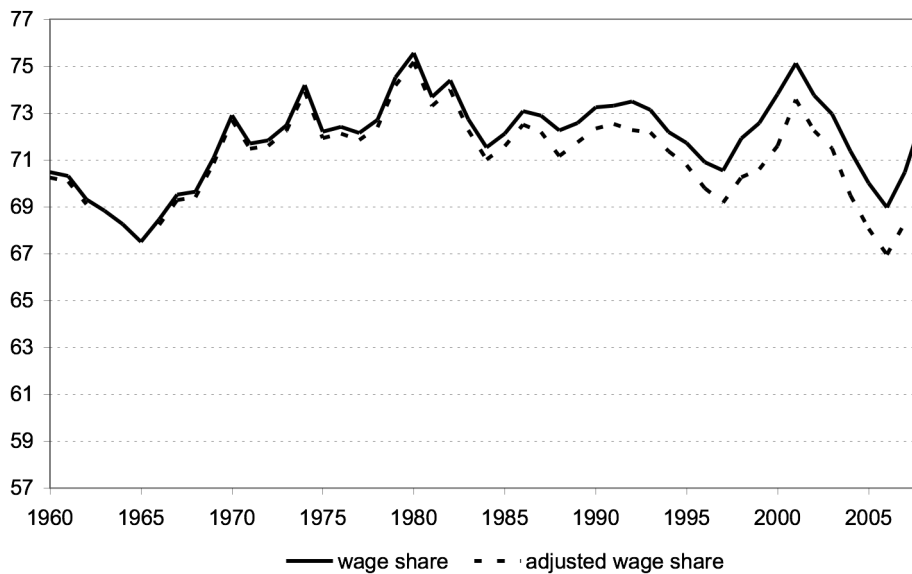
*Figure 11: The wage share and the wage share adjusted for the top 0.01 percent wage income (as a percentage of net national income), USA, 1960-2008*



Source: Piketty and Saez (2003); NIPA; author's calculations.

Note: For the years 1963, 1965 and 2008, data for the wage income accruing to the top 0.01 percent is missing.

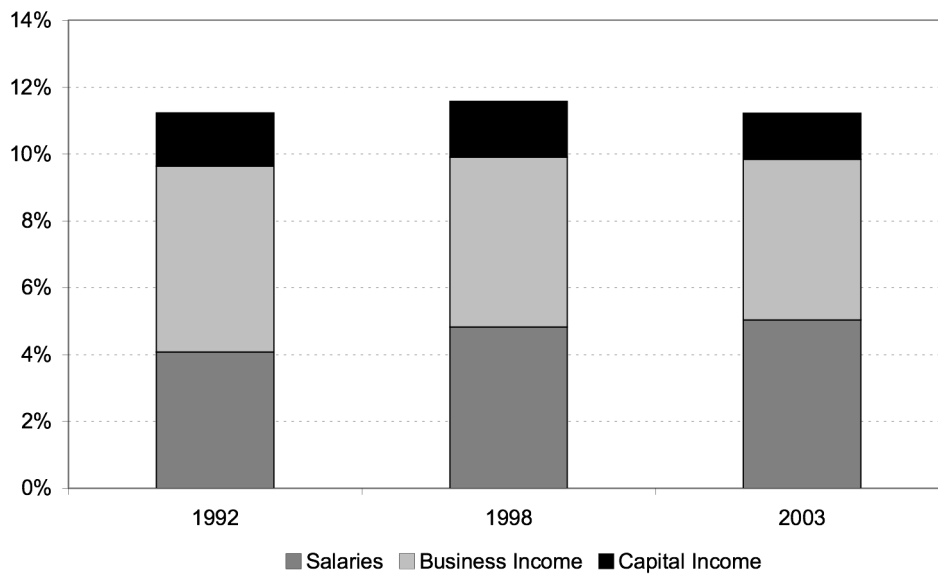
*Figure 12: The wage share and the wage share adjusted for the top 0.01 percent wage income (as a percentage of net value added), corporate business sector, USA, 1960-2008*



Source: Piketty and Saez (2003); NIPA; author's calculations.

Note: For the years 1963, 1965 and 2008, data for the wage income accruing to the top 0.01 percent is missing.

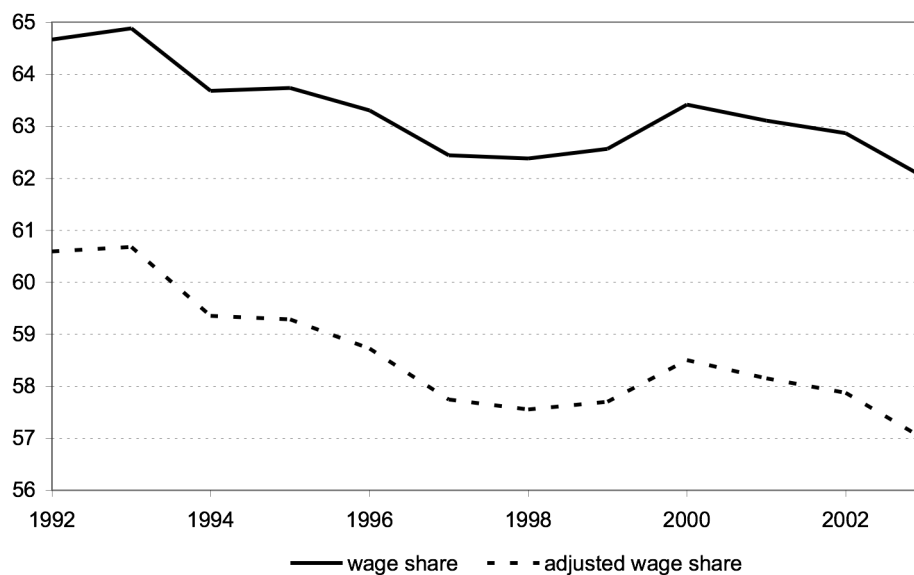
Figure 13: The top 1 percent income share in gross market income<sup>1</sup> and its composition, Germany, 1992, 1998 and 2003



<sup>1</sup>Income from business activity, wage income, capital income, exclusive public and private pensions; measured at the individual level.

Source: Bach, Corneo and Steiner (2009); author's calculations

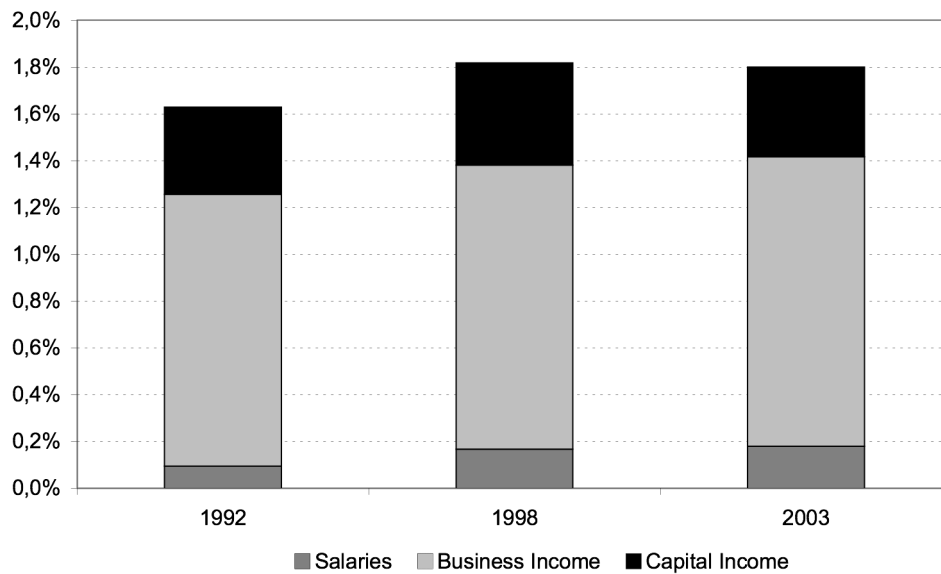
Figure 14: The wage share and the wage share adjusted for the top 1 percent wage income (as a percentage of net national income), Germany, 1992-2003



Source: Statistical Office Germany, Bach, Corneo and Steiner (2009); author's calculations

Note: Our "adjusted" wage share is constructed by taking the three data points from figure 13; the missing years are interpolated.

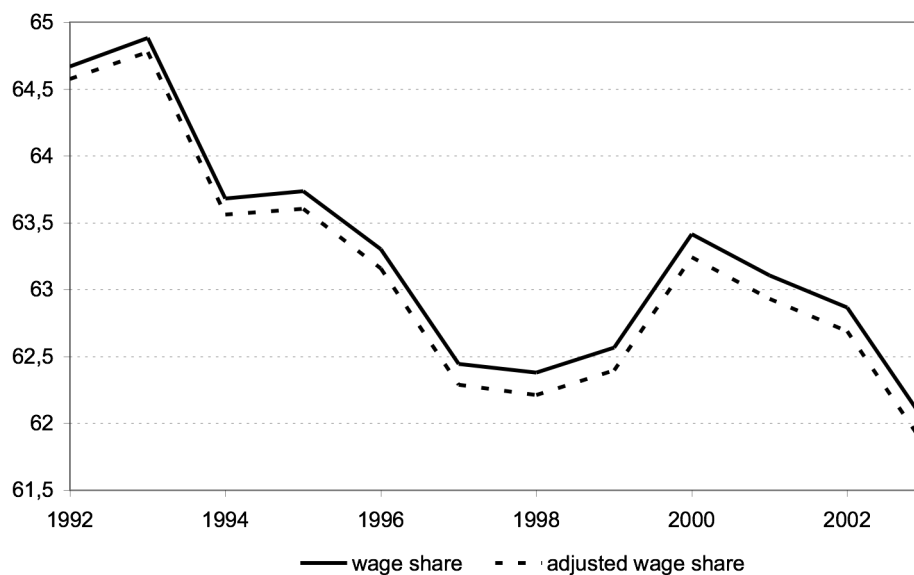
Figure 15: The top 0.01 percent income share in gross market income<sup>1</sup> and its composition, Germany, 1992, 1998 and 2003



<sup>1</sup>Income from business activity, wage income, capital income, exclusive public and private pensions; measured at the individual level.

Source: Bach, Corneo and Steiner (2009); author's calculations

Figure 16: The wage share and the wage share adjusted for the top 0.01 percent wage income (as a percentage of net national income), Germany, 1992-2003



Source: Statistical Office Germany, Bach, Corneo and Steiner (2009); author's calculations

Note: Our "adjusted" wage share is constructed by taking the three data points from figure 15; the missing years are interpolated.

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