

Income Distribution and Growth

A comparison of the UK and the Eurozone 1997 – 2007

Abstract:

The author argues based on Palley (2005) that there is a theoretical relation between the personal and functional income distribution and the economic growth. The extraordinary economic performance of the UK during the first ten years of Labour government seems to support this thesis. Other growth stimulating factors like rising house prices are not sufficient to explain the strongest and largest expansion in British economic history during the observation period from 1997 to 2007. The surprisingly stable personal income distribution in the UK, the significant reduction in poverty and the remarkable wage share increase seem to be responsible for the island's performance to a large extent. Comparable economies of the Eurozone reported a more unequal personal distribution, a rise in poverty and a declining wage share, their economic performance was accordingly weaker.

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1. Theoretical framework

Based on Kaleckian models Tom Palley provides in his paper “Class Conflict and the Cambridge Theory of distribution” (2005) a model that distinguishes the income distribution effects of labour market conflict from those of product market competition. (Post-)Kaleckians subsumed both effects under the notion "degree of monopoly". Palley intends to differentiate between these effects. The division of income between wages and profits is primarily influenced by the extent of product market competition, while the division of the wage bill is determined by labour market bargaining power. In addition to the working class Palley introduces a managerial capitalist class that draws income from both profits and wages.

Due to Marglin/Badhuri (1990) Kaleckian models are either stagnationist or exhilarationist.¹ The former describes a situation where aggregate demand reacts positively to redistribution from profits to wages; the latter describes the opposite relationship.² The main contribution of Palley's model is to introduce personal income distribution in it. As the distribution of wages is pivotal, the strict duality between stagnationist or exhilarationist becomes less important: „[T]he economy can simultaneously exhibit stagnationist and exhilarationist tendencies.“³ For example, shifts in the wage distribution from top earners (manager capitalists) to earners with low income (normal workers), while leaving the profit share unchanged, can increase aggregate demand so that the economy would show stagnationist tendencies. However, simultaneous increases in the profit share can increase investment so that the economy can at the same time be exhilarationist. Palley implicitly presumes that growth may only occur if some resources are not allocated towards consumption goods but towards capital goods. According to Palley, progressive shifts in the wage distribution are always stagnationist so that shifts in the wage-bill from managers toward workers are expansionary. Investment, however, may be exhilarationist, exhibiting such a strong dependence on the profit share so that shifts in the functional distribution from wages to profits raise investment and economic activity.

¹ Marglin/Bhaduri (1990) p.164

² Bhaduri (2004) p. 2-3

³ Palley (2005), p. 2

Table 1: effects of changes in the functional income distribution on growth

functional distribution	growth	Regime
$w\uparrow, \pi\downarrow$	$g\uparrow$	stagnationist
$w\downarrow, \pi\uparrow$	$g\downarrow$	stagnationist
$\pi\uparrow, w\downarrow$	$g\uparrow$	exhilarationist
$\pi\downarrow, w\uparrow$	$g\downarrow$	exhilarationist

- w : wage share, π : profit share, g : GDP growth
- $w(w)$: wage share of workers
- $w(m)$: wage share of capitalist managers

Table 2: effects of changes in the personal income distribution on growth

personal distribution	growth	Regime
$w(w)\uparrow, w(m)\downarrow$	$g\uparrow$	stagnationist / exhilarationist
$w(w)\downarrow, w(m)\uparrow$	$g\downarrow$	stagnationist / exhilarationist

Functional income distribution

Palley assumes a strictly binary situation based on two exactly separated scenarios (stagnationist or exhilarationist). This presupposition will be slightly modified in this paper. It is assumed that for every economy a growth-distribution situation can be observed, which provides an optimum state of distribution concerning the growth performance. The focus is altered from a snapshot to a continuum, which leads graphically to a growth-distribution curve.

The abscissa represents the functional distribution of income. In the zero-point there is only profit income, on the extreme point of the abscissa only wage income. The ordinate shows the growth momentum of the economy. Each distribution situation is assigned a specific growth; the apex of the curve shows the distribution situation that generates optimal growth. If the economy is located right of the apex point, it is exhilarationist, if it is located left of the crest it is stagnationist. If the functional distribution of income is located left or right of the optimum, the economy grows slower than it would be possible.

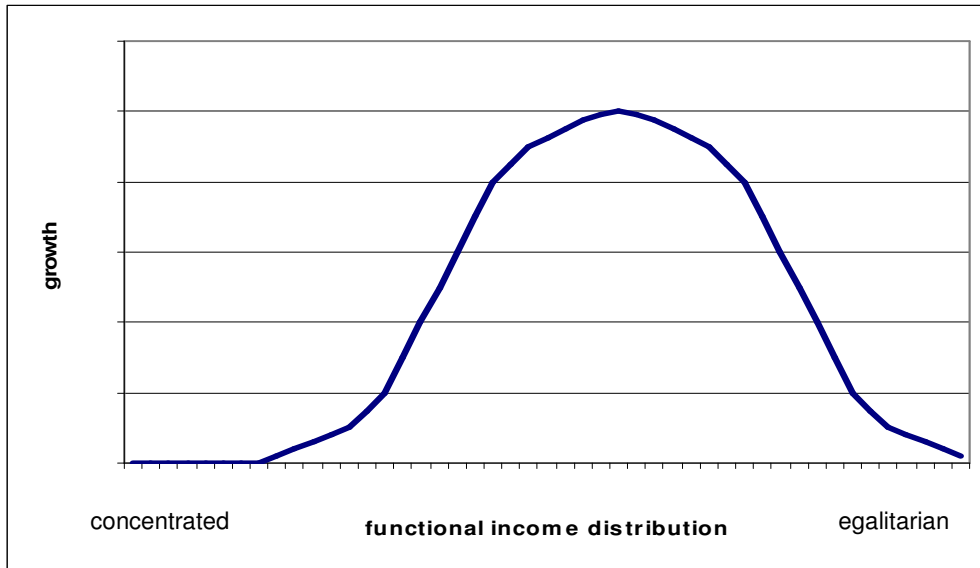


Chart 1: relation between functional income distribution and growth

Personal income distribution

The personal income distribution differs from the functional distribution as a much more egalitarian distribution is still compatible with high growth rates. More than this, an egalitarian distribution appears indeed expansionary. The Palley model is slightly modified in this paper, as not every step towards a more equal distribution within wage share generates automatically expansionary effects. The current distribution level is taken into account. The more equal the present income distribution, the lower the stimulative effect of a further distribution towards lower incomes.

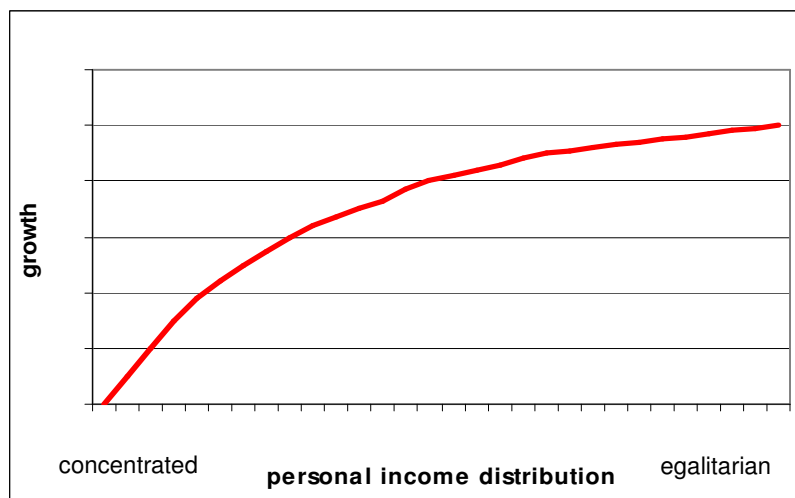


Chart 2: relation between personal income distribution and growth

On the abscissa the personal income distribution is depicted on the ordinate economic growth can be read off. Zero represents the situation in which a person receives the entire income, while the extreme point of the abscissa represents the absolute equality of income distribution.

Hypothesis

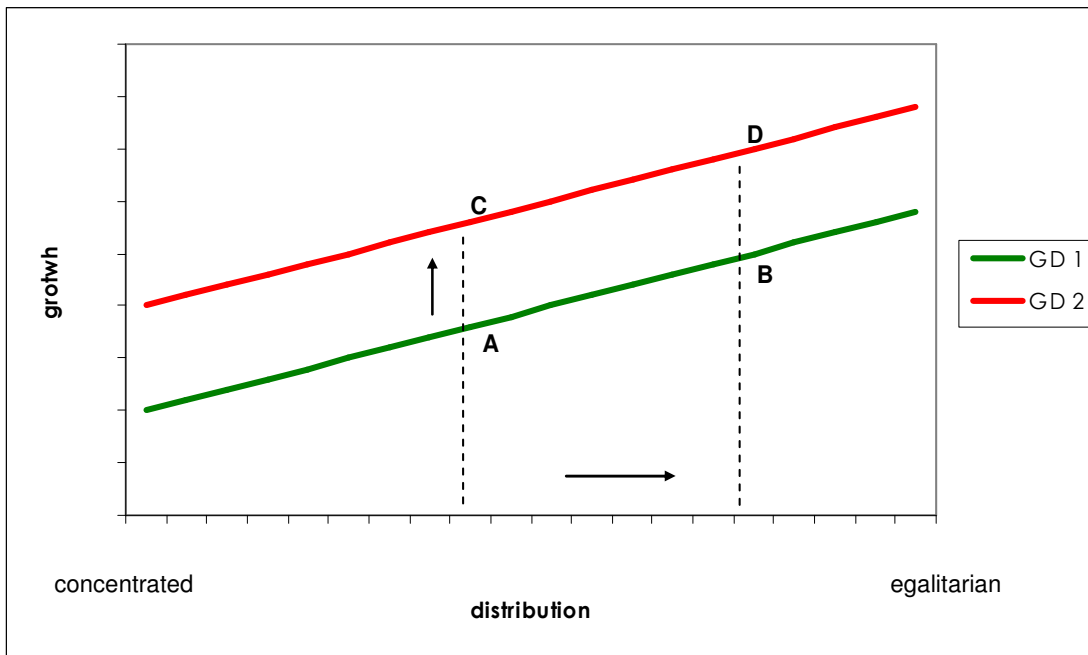


Chart 3: income distribution – growth relation and external factors

Based on the outlined Post-Keynesian models and with emphasis on the personal income distribution, this paper deals with the relationship between income distribution and economic growth. A positive correlation between these two variables is expected, the hypothesis reads as follows: *“The more egalitarian development of both the personal and the functional distribution of income than in comparable economies of the euro zone supported the robust growth performance in Britain”* The relation is described in chart 3. For simplification, the previously developed growth and distribution curve is now presented as a straight line. On the abscissa the distribution is depicted, whereas functional and personal distribution is now subsumed under one aggregated distribution indicator. On the ordinate the growth is applied. Changing only the income distribution in the direction of a more equal distribution or shifting from profits to wages, moves the economy from point A to point B and growth is accordingly stronger. At the same time, other – from the perspective of this work exogenous

– determinants like housing prices or low interest rates also may have had stimulative effects. In chart 3 this would mean a shift of the growth-distribution curve upwards. For the same distribution, the economy would migrate to C and correspondingly grow stronger. Cumulative stimulative effects from the distribution and from external factors move the economy from A to D.

This work wants to prove that these external factors are definitely not sufficient to explain the robust British economy dynamics. Some of them even influenced the British economy in the other direction, hampering its GDP growth. It is likely that the external effects are positive on balance, but there nevertheless remains a gap that can be explained by taking the distribution of income in the UK into account.

2. macroeconomic framework

This paper compares four major European economies. In addition to the UK these are Germany, France and Italy. These countries were chosen for comparison because they are quite comparable with the United Kingdom in terms of population, economic performance and economic output per capita. Table 3 provides information on population, GDP and GDP per capita in the compared states.

Table 3: Population, GDP and GDP/capita in Germany, France, Italy and the UK 2007⁴

Country	Population (million)	GDP (trillion €)	GDP/capita
Germany	82,3	2,24	27.200
France	63,6	1,62	25.500
Italy	59,2	1,28	21.600
UK	60,9	1,68	27.600

Comparison of economic growth

The British economy experienced from 1992 to 2007 the longest and strongest period of economic expansion in the entire economic history of the country.⁵ Indeed, the economy of the United Kingdom denoted until early 2008 continuous growth for over 60 quarters. In 2008 the steady upward trend seems to be stopped, probably as a result of the international financial crisis. In large part this growth phase fell under the government period of Labour but the boom had already begun some years earlier. Between 1992 and 1997 the Conservatives under Prime Minister John Major governed. Chart 4 depicts the economic growth for the four compared nations. Table 4 provides the main results at a glance. The United Kingdom experienced the strongest growth with an average of almost three percent, followed by France with an average of at least 2.3 percent. Growth was remarkably weaker in Germany (+1.6 percent) and Italy (+1.5 percent). Especially during the crisis in the years 2000/01 growth in both the UK as well as France has proved to be more robust than Germany and Italy. The aim of this paper is to identify the reasons why the British economy was better off than comparable countries.

⁴ Amecodata of EU-Commission, own calculations

⁵ The Times, 12th July 2007, p. 17

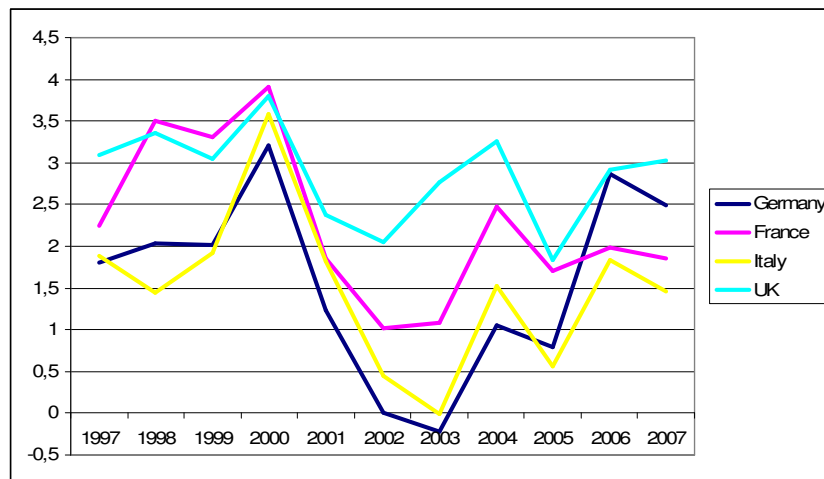


Chart 4: GDP growth in the compared nations from 1997 to 2007 according to the Amecodata of the EU-Commission

Table 4: Average GDP-growth in the compared states from 1997 to 2007⁶

State	GDP growth 1997 - 2007
Germany	+ 1,6
France	+ 2,3
Italy	+ 1,5
UK	+ 2,9

External effects

In the first chapter the effects of external factors on the UK economy were discussed within a theoretical framework. External factors are all variables except changes in the personal or functional distribution. The aim of the following discussion is to identify key external factors and to investigate their significance for the British economic boom empirically. Some impact of external factors on the strong growth performance in the United Kingdom from 1997 to 2007 is likely. For the observation period, the exchange rate of sterling against the euro, the development of real interest rates, the performance of exports, the movements of net exports and the development of house prices will be considered.

Exchange rates: The exchange rate between Sterling and Euro was more or less stable from 1997 to 2007. The Sterling stayed between 0.61 and 0.69 in relation to the Euro. As shown in

⁶ Amecodata of EU-Commission

Chart 5⁷ the exchange rate between Sterling and Dollar fluctuated much more, between the range of 0.7 and 0.5 Pounds per Dollar.⁸ The course can be observed in chart 6. In foreign trade, the UK did not benefit from the exchange rate against the euro countries. Compared to the United States the strong pound even caused a disadvantage in terms of price competitiveness.

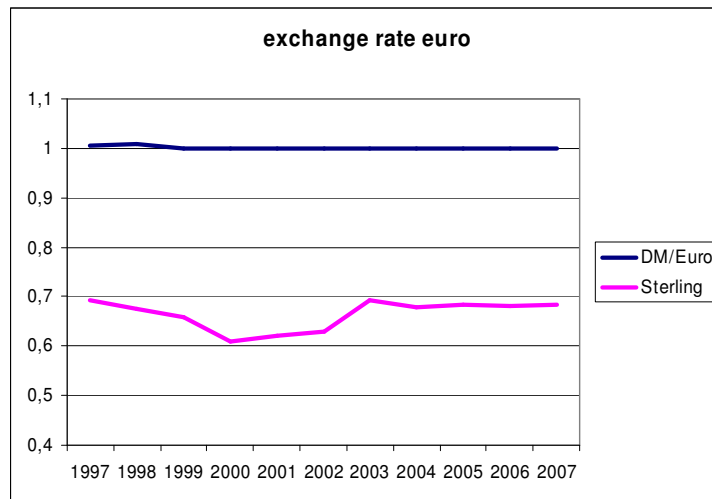


Chart 5: Development between the D-Mark/Euro and the Sterling 1997 to 2007 according to Ameco-Data of the EU-Commission. The Euro is always 1.

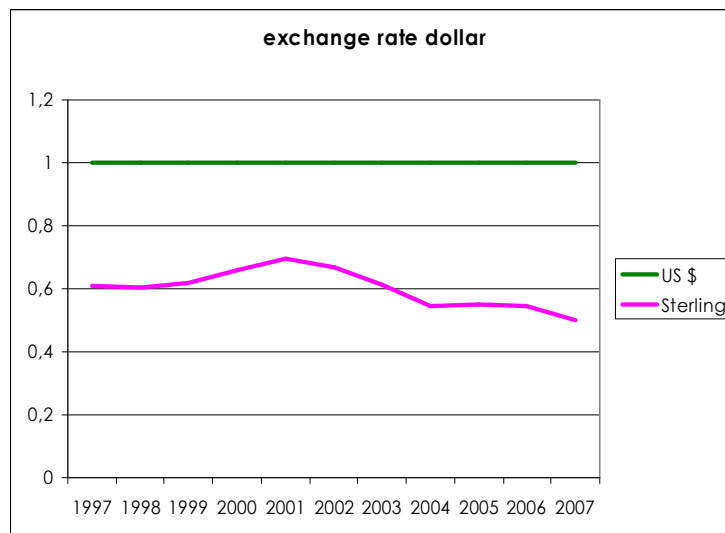


Chart 6: Development between the US-Dollar and the Sterling 1997 to 2007 according to Bank of England. The Dollar is always 1.

⁷ Ameco-Data of EU-Commission

⁸ Bank of England (Website, 2008)

Exports: At the price level of the year 2000 exports from the UK during the observation period rose by 48 percent, which roughly corresponds to the development of France where exports increased by 52 percent. With an increase in exports by 25 percent, Italy only reached half of the British and French increase. In Germany however, Exports exploded during the same period as is shown in chart 7. German exports grew by 111 percent. Based on this data a special stimulative effect of exports on aggregate demand and consumption in the UK can be excluded.

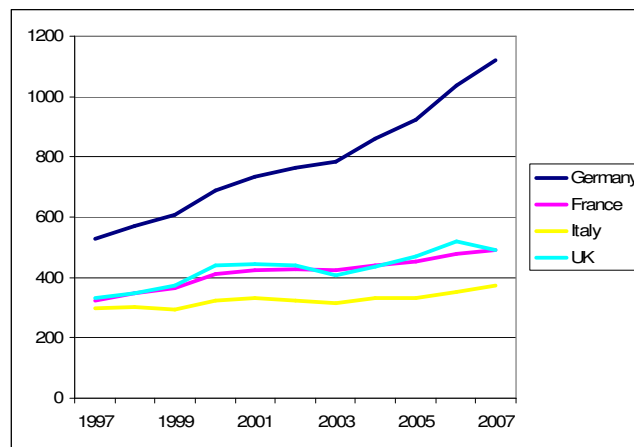


Chart 7: Exports of Goods and Services 1997 to 2007 in Billion Euro at 2000 market prices according to the Ameco-Data of the EU-Commission and own calculations.

Current accounts: The UK reports the weakest development of net exports from 1997 to 2007, as can be seen in chart 8. With an average current account deficit of -2.6 percent of GDP from 1997 to 2007 the UK is ranked last after France, with an average of 0.7 percent. Italy's average net exports amount up to 1.1 percent. Germany reports the highest current account surpluses with an average of 3.5 percent. Evidently, the British current account surplus permanently contributed to a reduction in the British GDP.

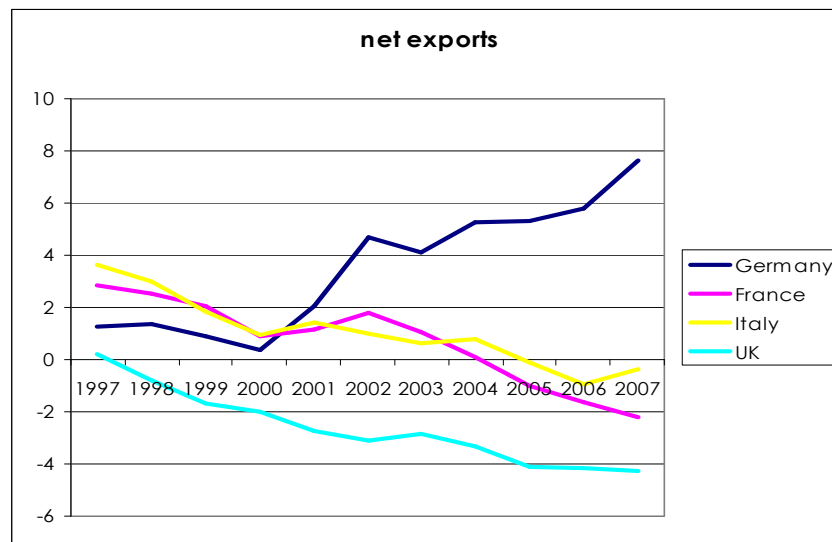


Chart 8: net exports in the comparison states 1997-2007

Monetary policy and interest rates: The primary objective of the Bank of England is “inflation targeting“ to secure price stability. Since 2003 the inflation target was set at two percent with a tolerance of plus or minus one percent.⁹ Comparing the interest rate of the UK with those of other states during the observation period does not suggest any extraordinary macroeconomic impact of interest rates on the UK economy. The development of short-term real interest rates depicted in chart 8 reflects the central bank’s policy best. With a 2.8 percent average the short-term real interest rate from 1997 to 2007 was highest in the UK, followed by Germany with 2.5 percent. France and Italy were well below with 1.7 and 1.3 percent.¹⁰

The European Central Bank (2004) assumes a negative effect of higher short-term real interest rates on GDP - at least for the short period - to be uncontroversial among economists. The ECB compares the estimators of three studies, forecasting the effects of a rate hike of one percentage point by the central bank, for the subsequent years. The strongest impact on GDP emerges in the second year after the hike, with the range of estimates between declines of -0.38 to -0.71 percentage points.¹¹ Whether the British monetary policy from 1997 to 2007 had stimulant or dampening effects on growth, is controversial. To investigate the relationship between interest rates and current economic growth one can calculate growth interest rate differences. A positive value indicates a restrictive, a negative value an expansionary

⁹ Angeriz/Arestis (2007), p. 863-865

¹⁰ Ameco-Data of EU-Commission

¹¹ ECB (2004), p. 48-49

monetary policy. Regarding these growth-rate differentials Hein/Truger (2008) state an expansionary effect of British monetary policy in contrast to the effects of the ECB's policy on Germany. For short-term real interest rates the indicator in Germany from 1996-2000 was on average 0.4 and rose to 0.6 from 2001 to 2005. In France and the UK, however, the indicator fell from 1.6 to 0.5 in the UK and from -0.4 to -0.7 in France.¹² These developments are presented in Table 5. Hein/Truger (2008) conclude from this data: "In the UK immediate monetary policy reactions by the Bank of England in early 2001 contributed to the more favourable development compared to Germany."¹³

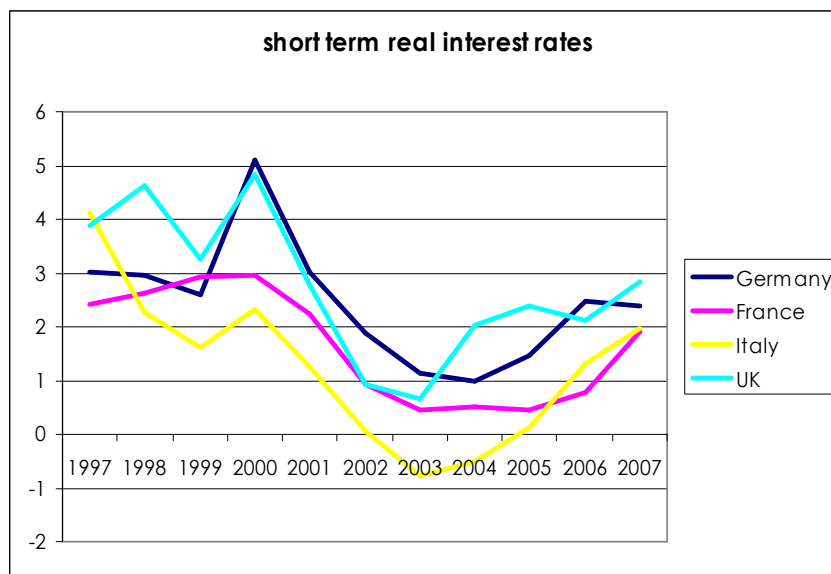


Chart 9: Short term real interest rates (GDP-Deflator) from 1997 to 2007 due to the Ameco-Data of the EU-Commission.

Table 5: growth interest rate differentials in the UK, Germany and France 1996-2000 and 2001-2005

	1996-2000	2001-2005
Germany	0,4	0,6
France	-0,4	0,7
UK	1,6	0,5

Angeriz/Arestis (2007) hold another view on the monetary policy in the United Kingdom. They claim that the interest rate policy in the UK was too "tight" during the observation

¹² Hein/Truger (2008) p. 20-22

¹³ Hein/Truger (2008) p. 21

period. From 1997 to 2005, inflation had never left the framework of two percent plus or minus one percent. Mostly, the inflation rate was even closer to the bottom of the target frame.¹⁴ “This suggests that interest rates in the UK may have been unnecessarily higher than they might have been in the circumstances of the period under scrutiny.”¹⁵ The level of short-term interest rates and the growth interest rate differentials can also be interpreted as follows: The real interest rates were due to the low inflation in Germany too high for the poor economic situation in the first half of the 2000s-years. The German growth was probably indeed slowed down by the high interest rates. In the UK however, interest rates have conspicuously fallen sharply *only* in comparison to Germany. Compared with France and Italy, interest rates were neither conspicuously high nor low and it is therefore very likely that they had no extraordinary effect on the growth of GDP.

House prices: A study of Case/Quigley/Shiller (2001) examines the impact of house prices on private consumption.¹⁶ The effect is in all three used models large and significant. The elasticity amounts in an international comparison between 0.11 and 0.17.¹⁷ A rise in house prices by one percent increases private consumption by 0.11 to 0.17 percent. The development of house prices is expected – in contrast to the previously investigated indicators – to show a noticeable influence on the economic development in the UK. In the observation period, real house prices rose by 145 percent from 78 000 pounds in 1997 to 191 000 pounds in 2007.¹⁸ Chart 10 depicts the development. Real GDP only increased by 33 percent in the same period.¹⁹ A stimulative effect of house prices on private consumption and effective demand is very likely. As discussed in the theoretical section, this equals an exogenous shift in the growth curve upwards. Nevertheless, the house prices only count for a part of the stimulation of aggregate demand. The British consumer spending rose from 1997 to 2007 by 36 percent. Even if the strongest of the previously cited estimators (0.17) was assumed for each year, rise in house prices by 145 percent would have “only” caused a consumption increase of 25 percent. Eleven percentage points of the increase in consumption are even in the high case not explained due to the increase in house prices.

¹⁴ Angeriz/Arestis (2007), p. 868-869

¹⁵ Angeriz/Arestis (2007), p. 869

¹⁶ Case/Quigley/Shiller (2001) p. 10

¹⁷ Case/Quigley/Shiller (2001) p. 13

¹⁸ Nationwide (Website, 2008)

¹⁹ Ameco-Data of EU-Commission

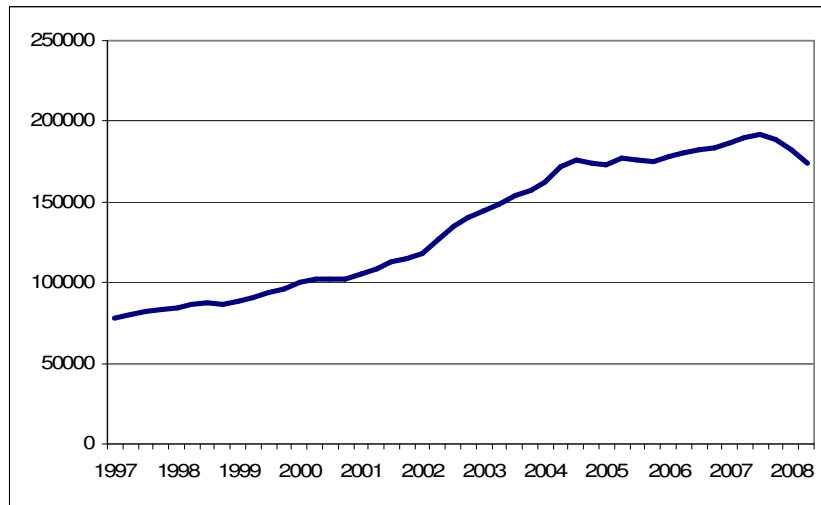


Chart 10: Development of real house prices from 1997 to 2008 (Retail Price Index RPI).²⁰

Even if exchange rates, interest rates and exports did not have any significant impact on GDP growth, there still remain current accounts and house prices. These effects however, influenced the GDP in different directions. Even if the balance is due to the strong rise of house prices positive, this is still a long way from explaining the whole extraordinary growth performance in the United Kingdom. There is still an "explanation gap". This paper provides the income distribution to expound the remaining gap.

²⁰ Nationwide (Website 2008)

3. distribution in the UK

Income growth according to quintiles

The average income of the total population in Britain rose from 1996/97 to 2006/07 on average by 2.1% annually.²¹ The average income growth may also be considered by income classes, whereas one Quintile in Britain represents approximately eleven million people. The average annual development of income classes according to households during the period 1996/97 to 2006/07 can be seen in Table 6.

Table 6: Real income growth according to quintiles 1996/97 – 2006/07²²

	poorest quintile				richest quintile
quintil	1	2	3	4	5
gains	+ 1,8	+ 2,1	+ 1,9	+1,7	+1,9

Table 6 shows that the second poorest quintile experienced the highest income growth with +2.1% followed by the middle and the top quintile with + 1.9%. The differences between the Quintiles are not enormous, but Quintile 2 and 3 are obviously quite well off. The indicator demonstrates that the imbalance in the income distribution has not increased. If the income gains of the sum of the two bottom quintiles are divided by the income gains of the sum of the two top quintile one single indicator can be calculated. If this indicator is above 1 income equality has increased, if it is below 1 it has decreased. A value of 1.083 exhibits, that the personal income distribution can be described as stable according to this income growth coefficient.

Development of incomes by percentiles and the 90:10 ratio

The 90 to 10 indicator measures the income of the 90th percentile by that of the tenth percentile. This indicator decreased slightly from 1997 to 2007, indicating a more equal income distribution at these two points.²³ The development of income gains by percentiles can be demonstrated very well

²¹ Brewer/Muriel/Phillips/Sibieta (2008), p. . 11

²² Brewer/Muriel/Phillips/Sibieta (2008), p. . 22

²³ Brewer/Muriel/Phillips/Sibieta (2008), p. . 29

graphically. The IFS compares in chart 11 the gains for each percentile between 1996/97 and 2006/07, with the period of the conservative governments between 1979 and 1996/97.

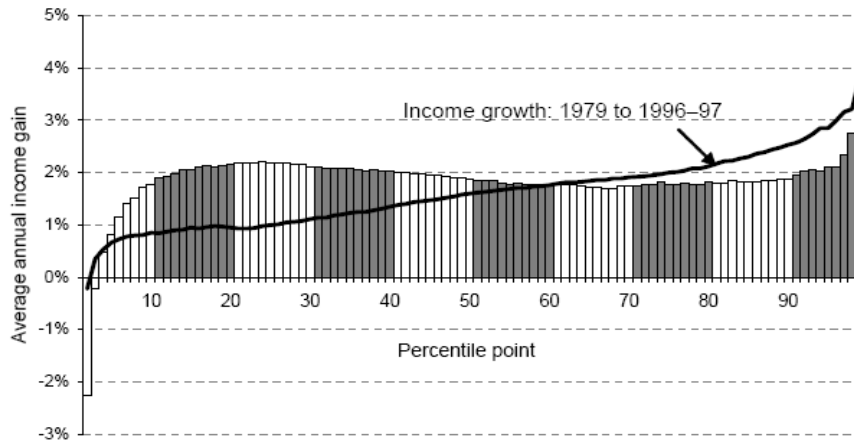


Chart 11: Income gains by percentile from 1996/97 to 2006/07, compared with the gains between 1979 und 1996/97.²⁴

In Chart 11 one can see that between the 20th and the 90th percentile foremost the lower income classes received remarkable gains during the labour period. Below the 15th percentile the gains decline progressively, above the 90sten percentile the gains are rising above the average. A comparison with the period of the Conservatives between 1979 and 1996 however clearly shows that under Labour the bottom six deciles have strongly benefited.

The Gini coefficient

A somewhat different picture emerges when looking at the Gini coefficient. In 1996-97 the Gini amounted 0,33 and rose until the year 2005/06 to 0.35. However, it is no clear trend. As shown in chart 12 the ratio fluctuated during the Labour period always around 0.34. The Gini increased dramatically in the 1980s, when it climbed from 0.25 in 1979 to 0.34 in 1990.²⁵ The income distribution under New Labour was according to the Gini more or less stable, however in contrast to the previous indicators, a slightly stronger unequal distribution can be noted. .

²⁴ Brewer/Muriel/Phillips/Sibieta (2008), p. 24

²⁵ Brewer/Muriel/Phillips/Sibieta (2008), p. . 27-28

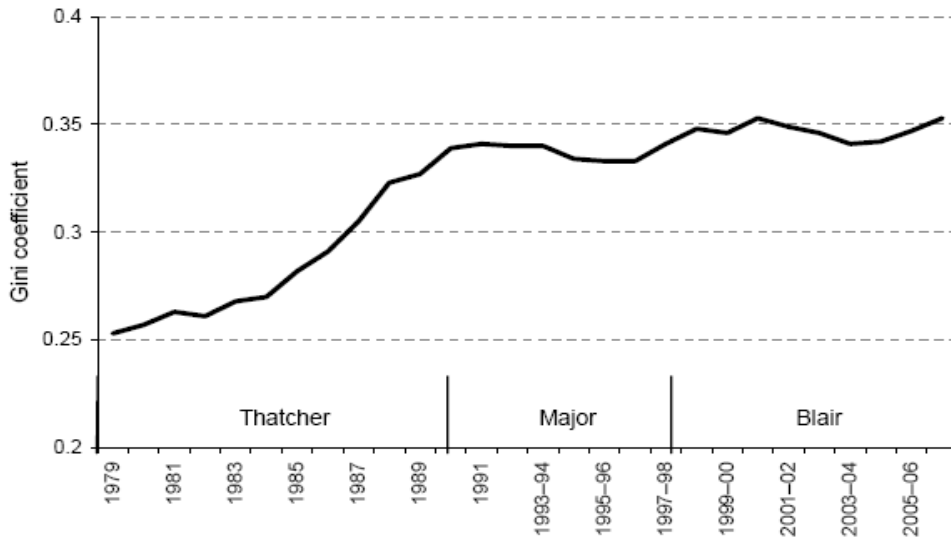


Chart 12: The Gini coefficient in the UK from 1979 to 2006/07²⁶

Poverty

The poverty rate is as usually measured in relation to the median income: Everyone earning less than 60 percent of the median income is considered to be relatively poor. Between 1998/99 and 2004/5 Britain recorded the strongest decrease of poverty since 1961. This trend ended abruptly, however, in 2004/05 and poverty rose again in the last two years.²⁷ Nevertheless, during the Labour period, a decline in overall poverty can be found. As can be seen in Chart 13 Labour inherited in 1996/97 a poverty rate of 25.3% (AHC) and achieved a reduction to 21.6% (AHC) in 2005/6. The decline is clear, but not huge. Again, it is clear that in the lowest range of the income scale efforts towards a more equal distribution have only been partially successful.

²⁶ Brewer/Muriel/Phillips/Sibieta (2008), p. 27

²⁷ Brewer/Muriel/Phillips/Sibieta (2008), p. 33

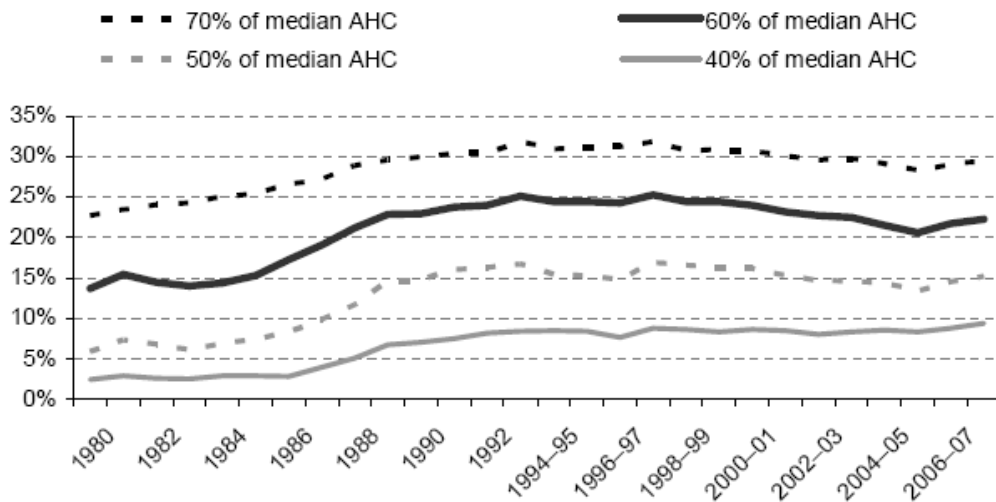


Chart 13: Relative Poverty in the UK from 1979 to 2006/07²⁸

Wage share

During the last 30 years a decline in the wage can be observed in all OECD countries. Nevertheless in different parts of the industrialized world show completely different intensities of the decline, as illustrated in chart 14. The wage share of today's euro zone reached its climax in 1975 with 66.8 percent. Since then a continuous downward trend is detectable with a bottom of 55.6 percent in 2007. Japan experienced the biggest decline in the wage ratio from around 76 percent in the years 1975-77 to below 50 percent in recent years. The wage share in the USA developed more stable with a peak of around 66 percent in 1970 and a low of around 61 percent in 2005.²⁹ Despite a few outliers, interestingly, Britain has the most stable wage ratio of all compared economies. Table 7 illustrates that for the UK the deviation of the value in 2008 from the average between 1960 and 2008 with 1.4 is clearly the lowest of all countries under investigation. The US value (2.4) is not half as big as the difference in the euro zone.³⁰ Therefore, the wage rate decline in the Anglo-Saxon countries can not even be called a trend.

²⁸ Brewer/Muriel/Phillips/Sibieta (2008), p. 27

²⁹ Eu-Commission (2007) p. 240

³⁰ Amecodata of EU-Commission

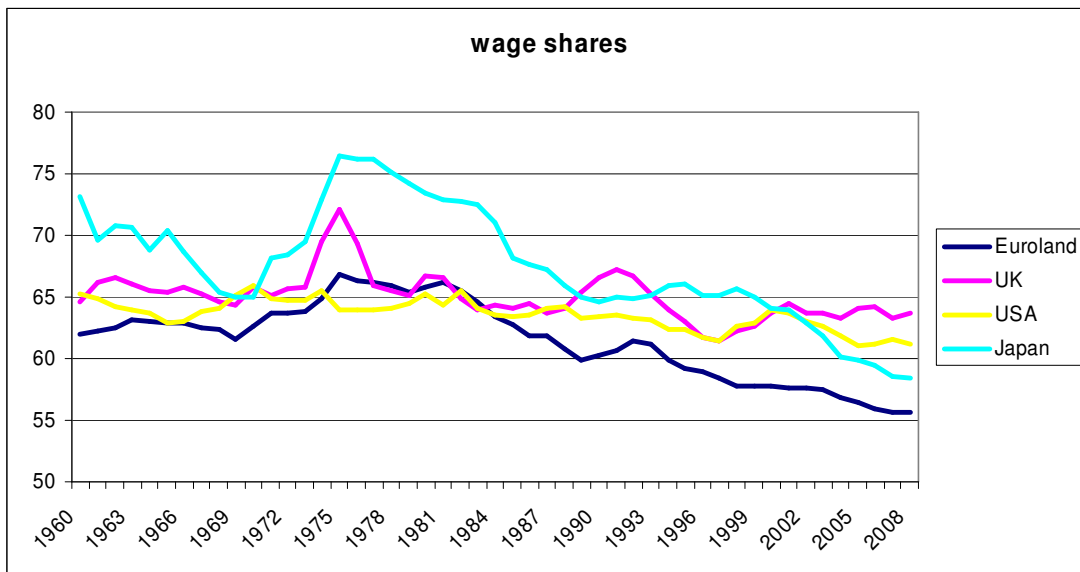


Chart 14: Development of the wage share in Eurozone, UK, USA and Japan 1960 – 2008 according to Ameco-Data of the EU Commission.

Table 7: Deviation of the wage shares of 2008 from the long-time average from 1960 to 2008. Amecodata from the EU Commission and own calculations.

economy	deviation
Japan	- 9,1
Eurozone	- 5,9
USA	- 2,4
UK	- 1,4

The lowest level of the wage share reached the United Kingdom with 61.8 percent in 1997, the inaugural year of the Labour government. Then it climbed back upwards and stabilized at around 64 percent. In its long term average from 1960 to 2006 the wage rate in the UK reaches 65.3 percent compared to 64.2 percent in the Eurozone. The British wage share reached its maximum value in 1975 with 72.2 percent, similar to the EU-15 that reached the highest wage rate in 1975 with 69.6 percent.³¹ Looking at the period from 1960 to 2006 it is clear that the wage rate in all Eurozone countries has been steadily declining from the mid-1970s onwards. Britain records a definitely different pattern as Chart 14 illustrates.³²

³¹ EU-Commission (2007), p. 240

³² EU-Commission (2007), p. 260

Conclusion income distribution in the UK

- The wage share rose in the period from 1997 to 2007 by 1.7 percentage points to over 63 Percent. That means for the functional income distribution a slight shift towards the wage income can be observed. This impression is reinforced due to the fact that the year 2007 value was lower than the wage share level of 2006 and 2008. Measured by the year 2006 the wage share would have increased by 2.8%, measured by the year 2008 by 2.2%.
- For the same period when it comes to the distribution of the personal income distribution we can observe stability. This Constance may perhaps be best explained by regarding an income gain coefficient of 1.083. This coefficient measures the sum of the gains of lower two income quintiles to that of the top two Quintiles. If the indicator is above 1, the distribution increased, if it is below 1, it has declined.

4. Distribution in Eurozone countries

Comparison of the functional income distribution

From 1997 to 2007, the United Kingdom is the only of the compared economies that experiences a rising wage share. The increase is even remarkable, from 61.5 in 1997 to 63.3 percent in 2007. Meanwhile the wage ratio even reached 64.5 percent. In Germany the wage share fell during the same period from 58,8 to 54.9 percent, and in Italy from 56.8 to 54.1 percent. In France, the wage rate remained quite stable and declined from 57.3 to 57 percent.³³ The results are summarized in Table 8. In chart 15 the trends are clearly visible: While the wage share under Labour stabilized at relatively high levels in the UK, it sank dramatically in Germany and remarkably in Italy during the observation period. In France no trend is discernible.

Table 8: Development of the wage share in the compared countries³⁴

country	wage share 97-07
Germany	-3,9
France	-0,3
Italy	-2,7
UK	+1,8

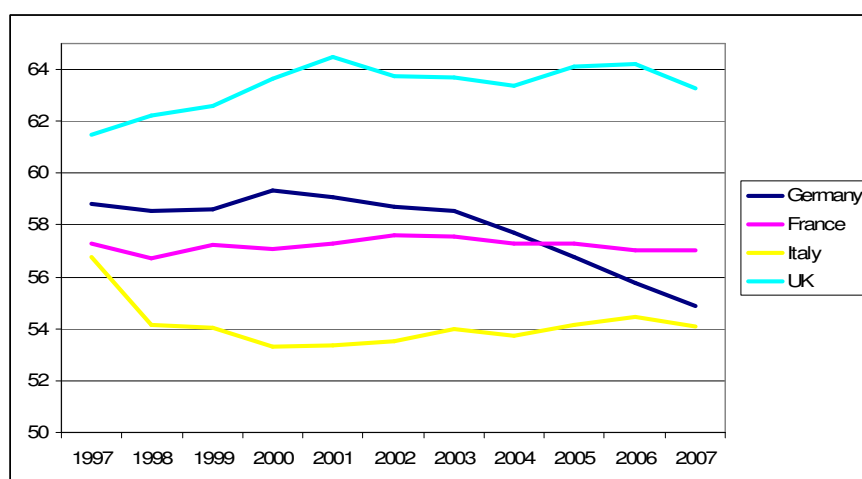


Chart 15: wage shares in Germany, France, Italy and the UK 1997 to 2007 according to the Ameco-Data of the EU-Commission.

³³ Amecodata of EU-Commission

³⁴ Amecodata of EU-Commission

Comparison of the personal income distribution

For comparing the personal income distribution three indicators will be used: the development of household's income by deciles, the development of poverty, and the Gini coefficient. As the data was not uniformly collected and often comes from national sources, only the trends but not the data from Table 9. are directly comparable. Germany experienced a substantial decline in the wage share during the observation period and simultaneously the income distribution of each quintile became markedly more unequal. This is also reflected in Germany's rising Gini coefficient and rapid increase in poverty. France is characterized by a striking stability, wage share, distribution according to deciles and poverty levels have not remarkably changed. The Gini coefficient has been slightly reduced, indicating a slight decrease of distributional inequality. In Italy the wage share decreased significantly, while the Gini coefficient has slightly increased. The distribution according to deciles and poverty rates has been stable. In the United Kingdom, the wage rate has significantly increased and poverty has been significantly reduced. At the same time, the distribution according to Deciles has become slightly more equal, which, however, is not reflected in the slightly growing Gini coefficient.

Table 9: Comparison of the indicators in the states 1997 und 2007

	Wage share	Quantiles	Gini³⁵	Poverty
Germany	-3,9	less equal ³⁶	+ 2	+ 6 ³⁷
France	-0,3	stable ³⁸	- 2	+/- 0 ³⁹
Italy	-2,7	stable ⁴⁰	+1	+/- 0 ⁴¹

³⁵ All Ginis: Eurostat-Data of EU-Commission

³⁶ Jahresgutachten des Sachverständigenrates 2007/08, p. 460

³⁷ Deutsche Bundesregierung 2008, p. 306

³⁸ Insee (2008)

³⁹ Insee (Website, 2008)

⁴⁰ Eurostat-Data of EU-Commission + Survey on household, income and wealth 2006, “.63; 2004, p.61; 2002, p.61; 2000, p. 55, 1998, p. 53

⁴¹ La povertà relativa in Italia 2006 p.1 and 2002 p.1 (Istat) + Survey on household, income and wealth 2006, p.16 and 1998, p.49 (Banca Italia) +Eurostat-Data of EU-Commission

5. Conclusion

In accordance with the hypotheses of this paper, both effects a distribution of profits to wages as well as a more equal distribution of wage income generate a positive impact on economic growth. The growth data of the compared nations should correlate with the distribution data if the strong British growth was to be (at least partly) the result of income redistribution efforts. The still passable French performance should coincide with distributional stability or slight trends towards a more equal income distribution. In Germany and Italy, on the contrary, one would expect to observe a trend toward a more unequal income distribution to evidence consistency between theory and data.

Table 10 gives an overview over the trends of the income distribution and economic growth in the four European economies under study. The states are sorted according to their growth performance, starting from the bottom up. The arrows are to be interpreted as follows: Red downward arrows indicate a decline in wage share or an increase in inequality of the personal income distribution. Blue upward arrows show an increase in wage share and an increase in equality of the personal income distribution. Black arrows indicate that no trend is discernible.

Table 10: Summary of the key indicators

	wage share	quintile	Gini	Poverty	growth 1997-2002
Italy	↓	→	↓	→	+ 1,5
Germany	↓	↓	↓	↓	+ 1,6
France	→	→	↑	→	+ 2,3
UK	↑	↑	↓	↑	+ 2,9

Table 11 depicts how the theoretically deduced expectations match with the data. A plus (“+”) means that the expectation due to the hypothesis is met, a minus (“-“) indicates that the result contradicts the hypothesis and “n” stands for “neutral”. For Germany and Italy all four distribution indicators should, in accordance with the hypothesis show of an increase in inequality and for Germany this assumption fits perfectly. Italy, however, recorded two “+” and two “n”. In France one would expect a slight increase of equality in distribution or values close to zero. This is true for all four indicators. In the

United Kingdom an increase of equality concerning the income distribution would be expected. This is true for three indicators; the UK's Gini coefficient is the only real outlier in Table 11.

Table 11: key indicators compared to the hypothesis

	wageshare	quintile	Gini	Poverty
Germany	+	+	+	+
France	+	+	+	+
Italy	+	n	+	n
UK	+	+	-	+

From 16 observations 13 support the assumptions of the hypothesis, two are neutral and one contradicts the hypothesis. To summarize, it seems that the hypothesis that redeployment from profits to wages and a more equal distribution within wage incomes seems to have a positive impact on growth is consistent with the empirical data from the four largest industrialized nations of the European Union.

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