UK Growth Performance

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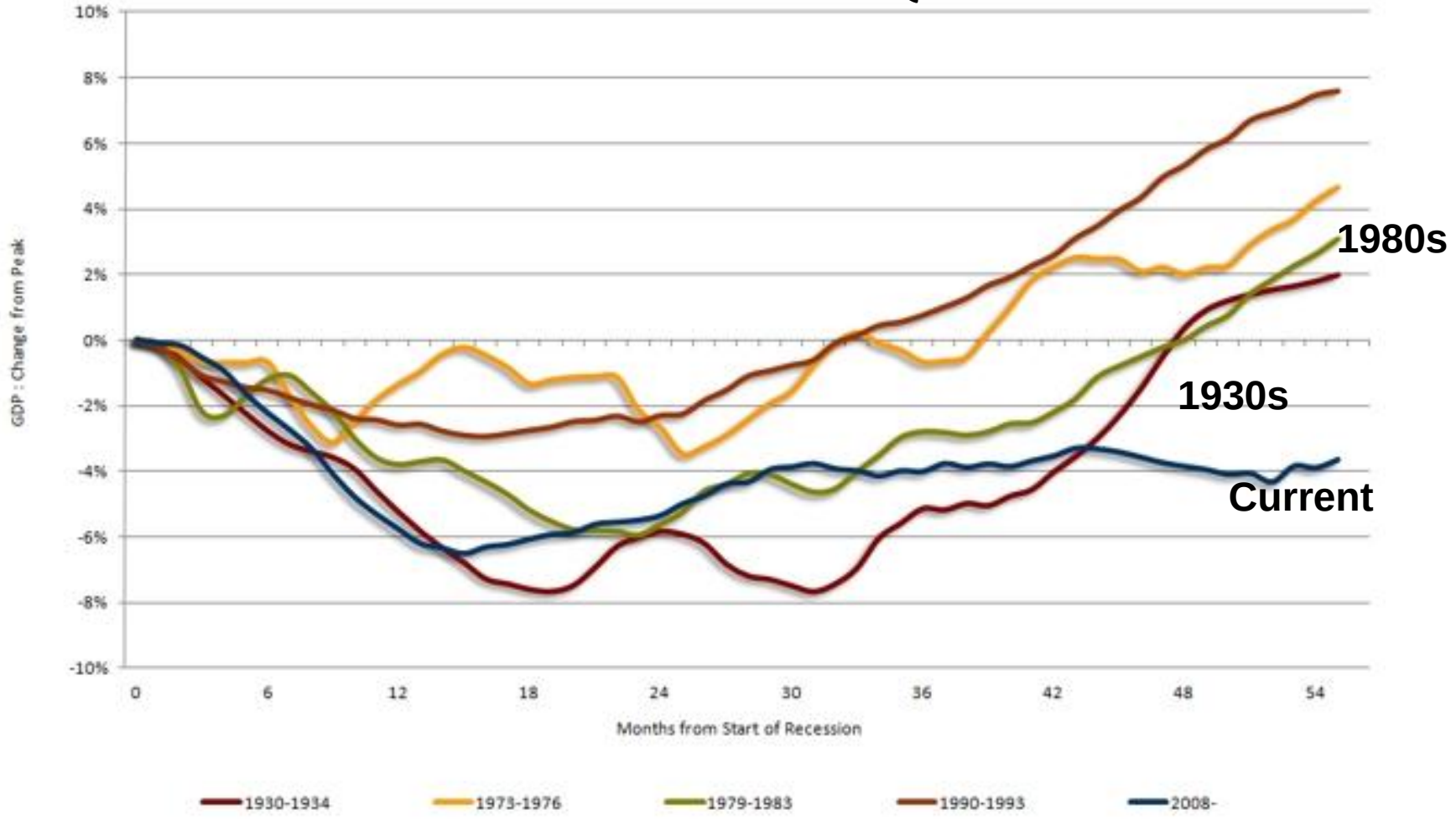
DCLG

October 1st 2012

LSE Growth Commission

CENTRE *for* ECONOMIC PERFORMANCE

RECOVERY FROM THIS RECESSION IS VERY SLOW – UK GDP STILL OVER 4% BELOW 2008Q1 LEVELS IN 2012



Source: NIESR

1 UK Relative Economic Performance in last 130 years

2 Role of Policy?

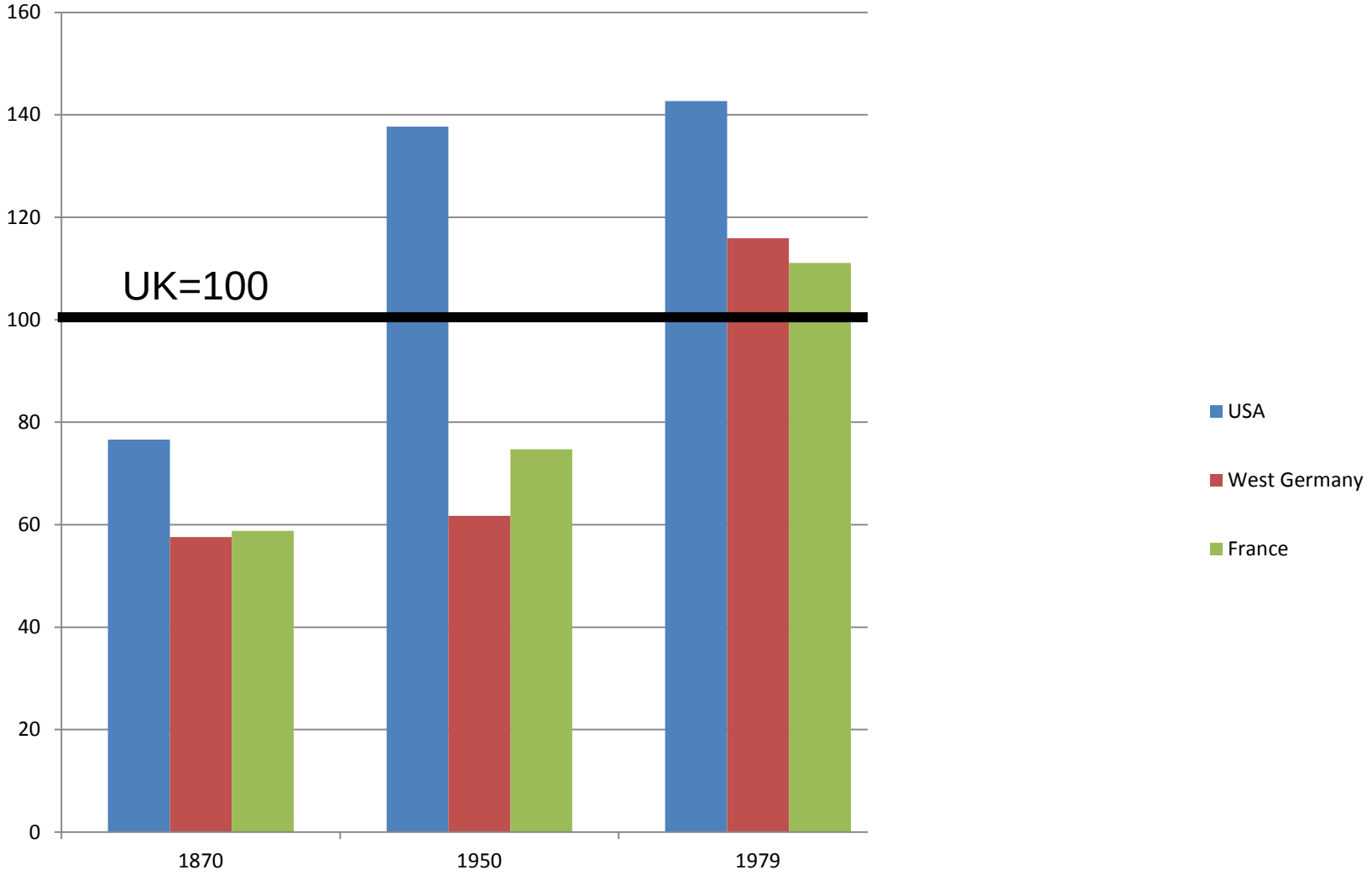
3 The Great Recession and Beyond

4 Policies for Growth

Summary

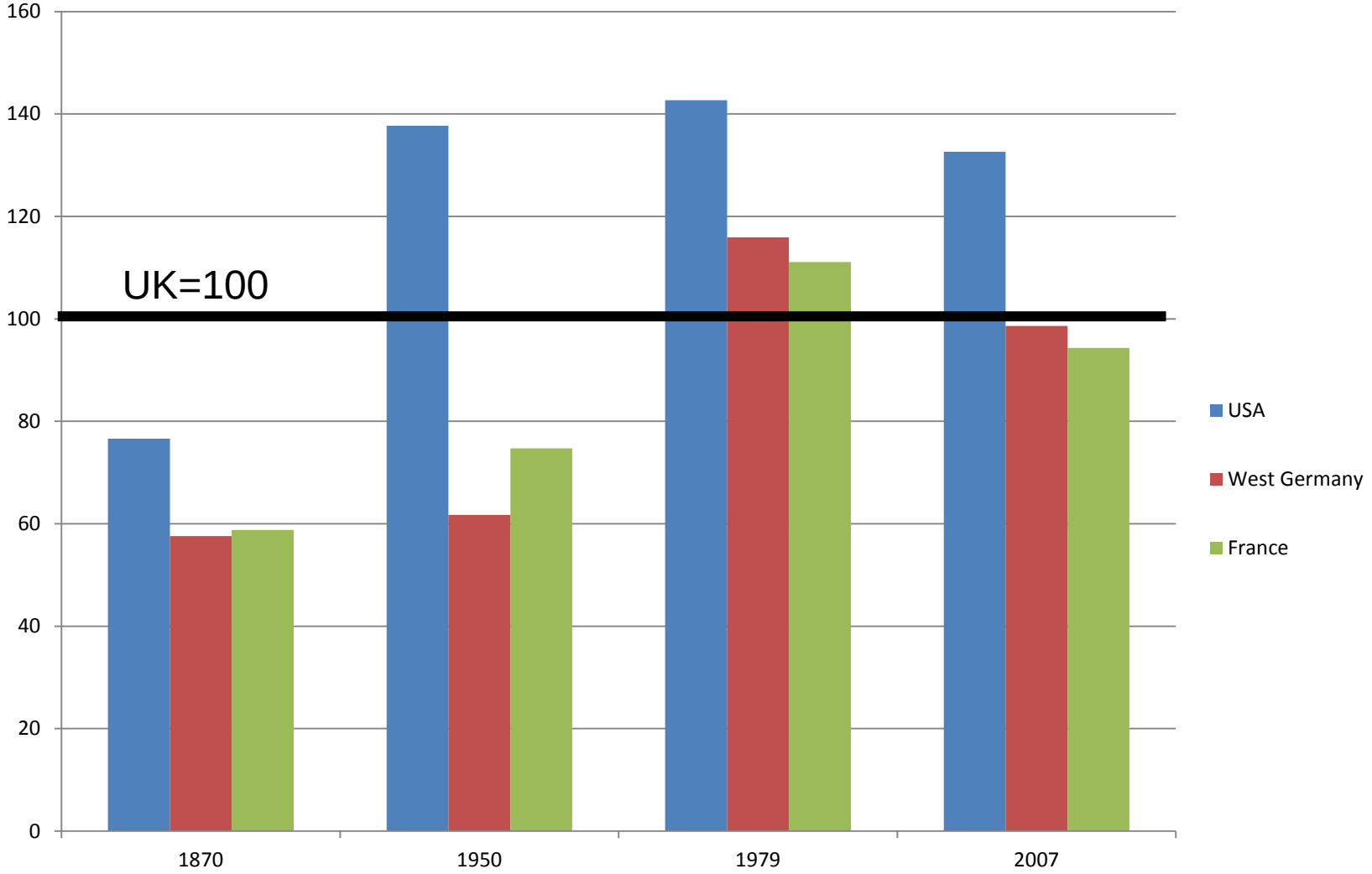
- **Long-Run Economic Performance**
  - Long period of UK *relative* decline from mid 19th Century other major countries caught up & overtook
  - Relative decline reversed around 1979 ("post79 model") & broadly continued post 1997
- **Basic post 1979 model**
  - Flexible labour markets (unions, low firing costs)
  - Privatisation + independent regulation
  - Openness to FDI & immigration
  - Competitive markets (e.g. post 1998 comp policy)
  - General skills (university expansion)
  - Service-based economy
- Did everything change after 2007? GR & Eurocrisis

UK GDP per capita vs. US, Germany & France, 1870-1979

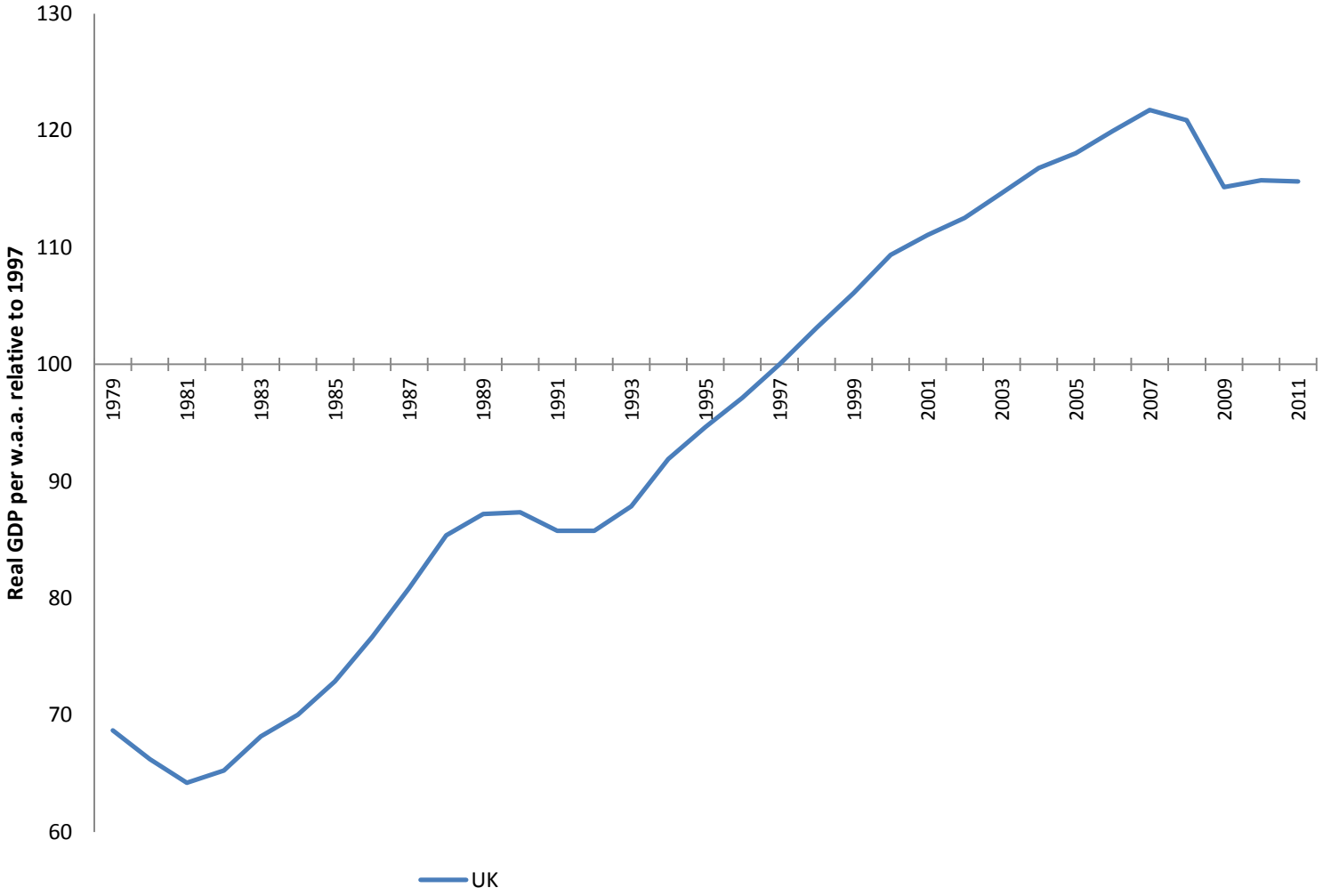


Source: Crafts (2011)

UK GDP per capita vs. US, Germany & France, 1887-2007

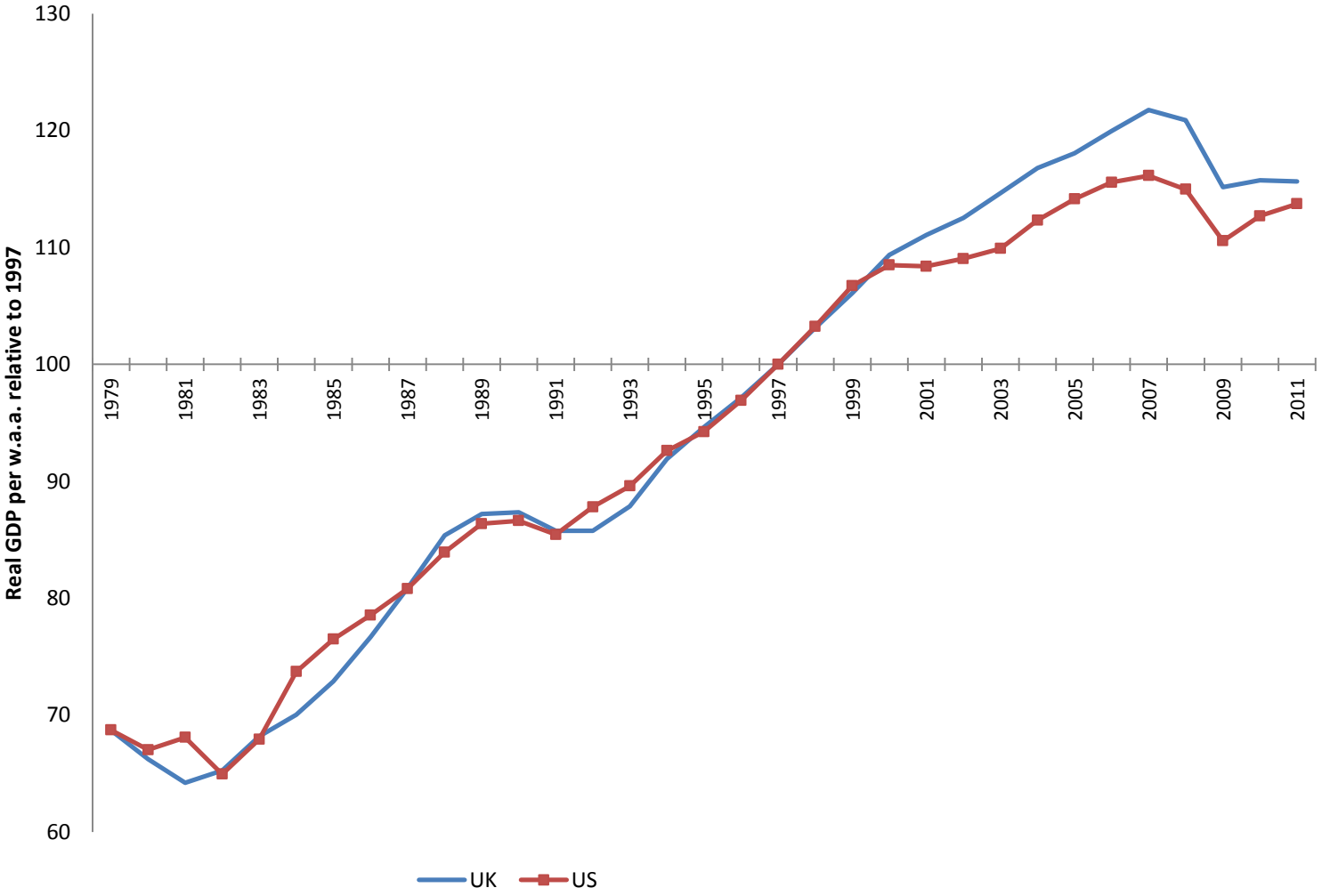


GDP per adult growth (1997=100) in UK



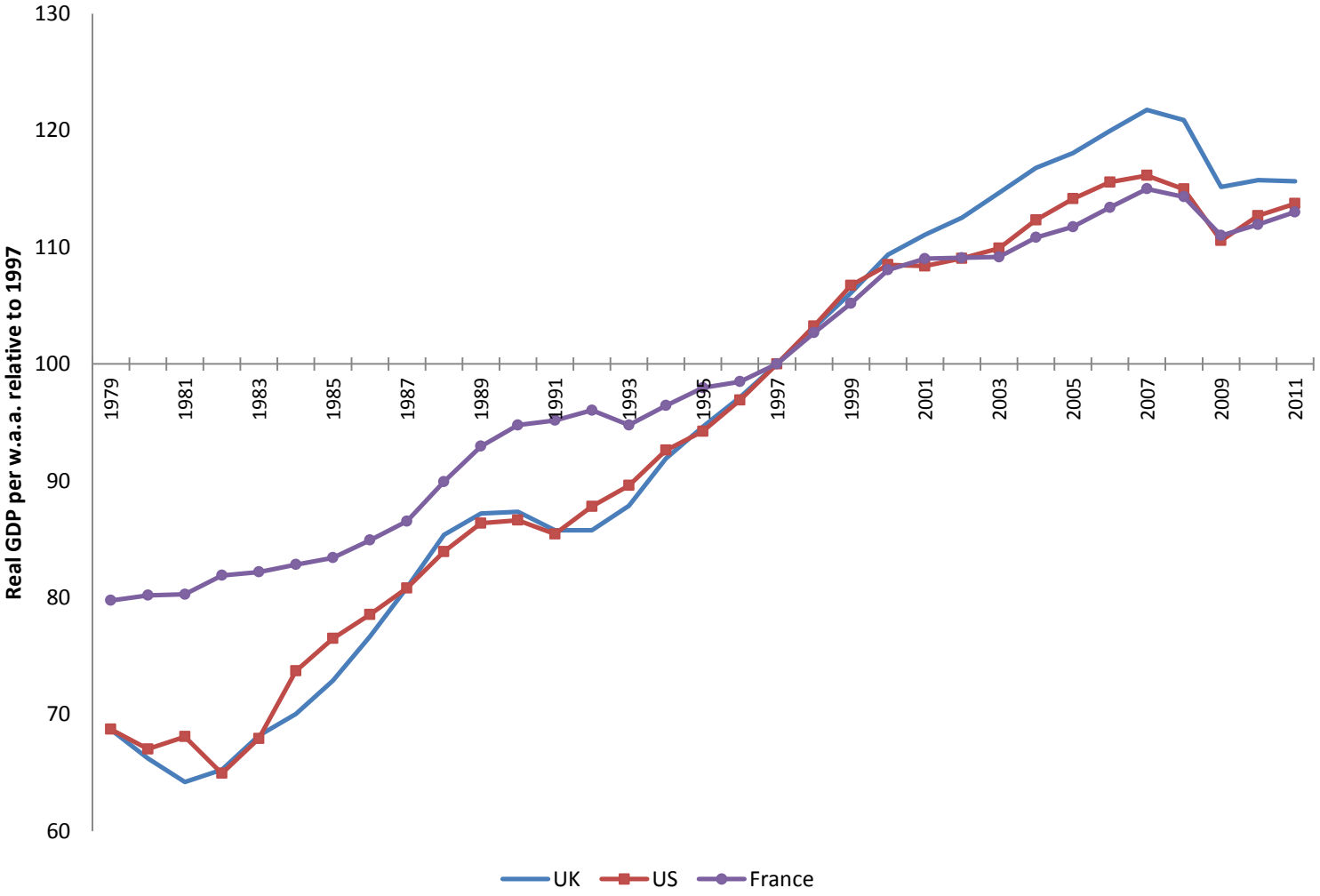
Notes: CB data GDP is US$, constant prices, constant PPPs, (CB based year: 2011). Adults are civilian population over 16. US Bureau of Labour Force Statistics. Data for Unified Germany from 1991.

GDP per adult growth (1997=100) in UK and US



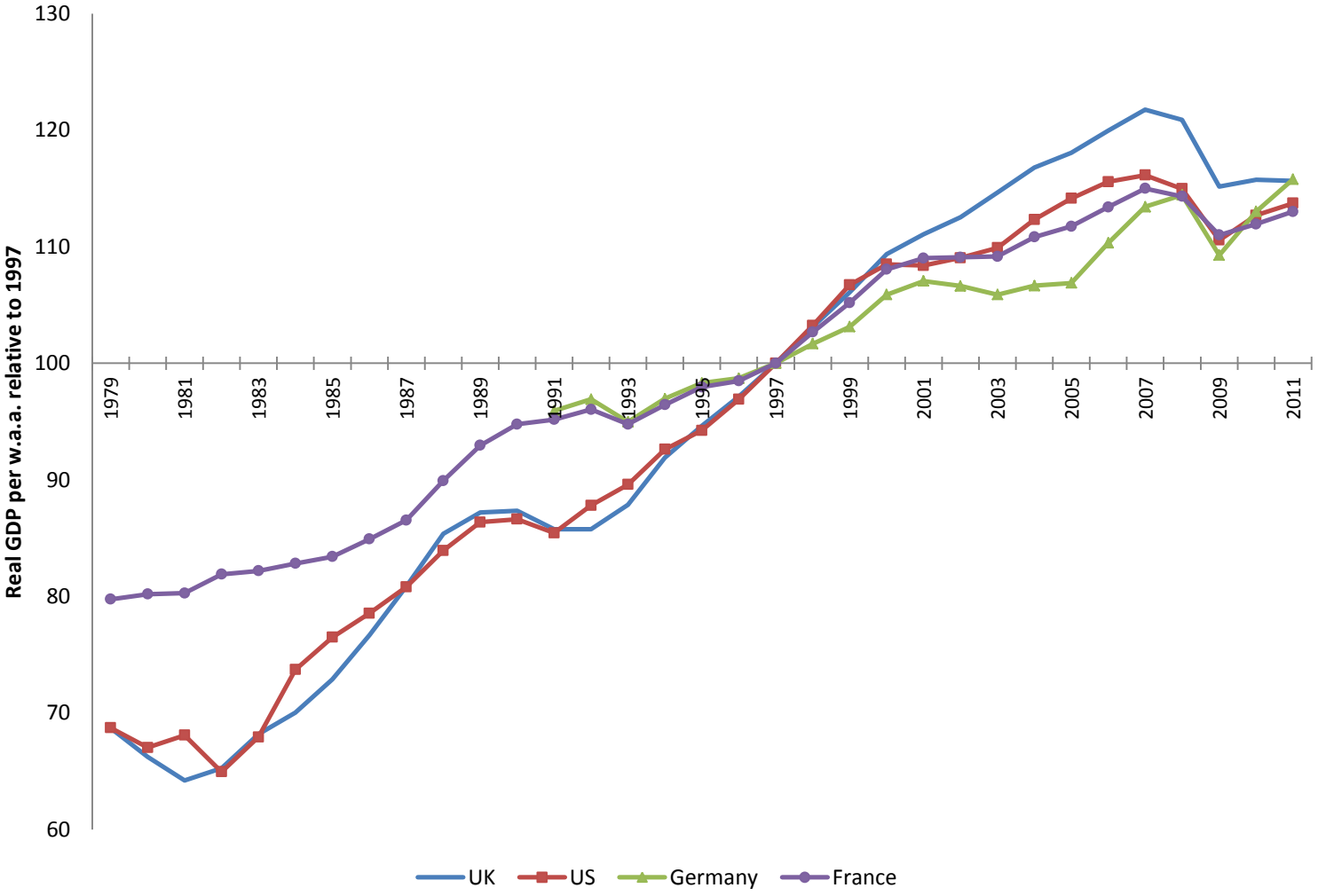
Notes: CB data GDP is US$, constant prices, constant PPPs, (CB based year: 2011). Adults are civilian population over 16. US Bureau of Labour Force Statistics. Data for Unified Germany from 1991.

GDP per adult growth (1997=100) in UK, US, FRA



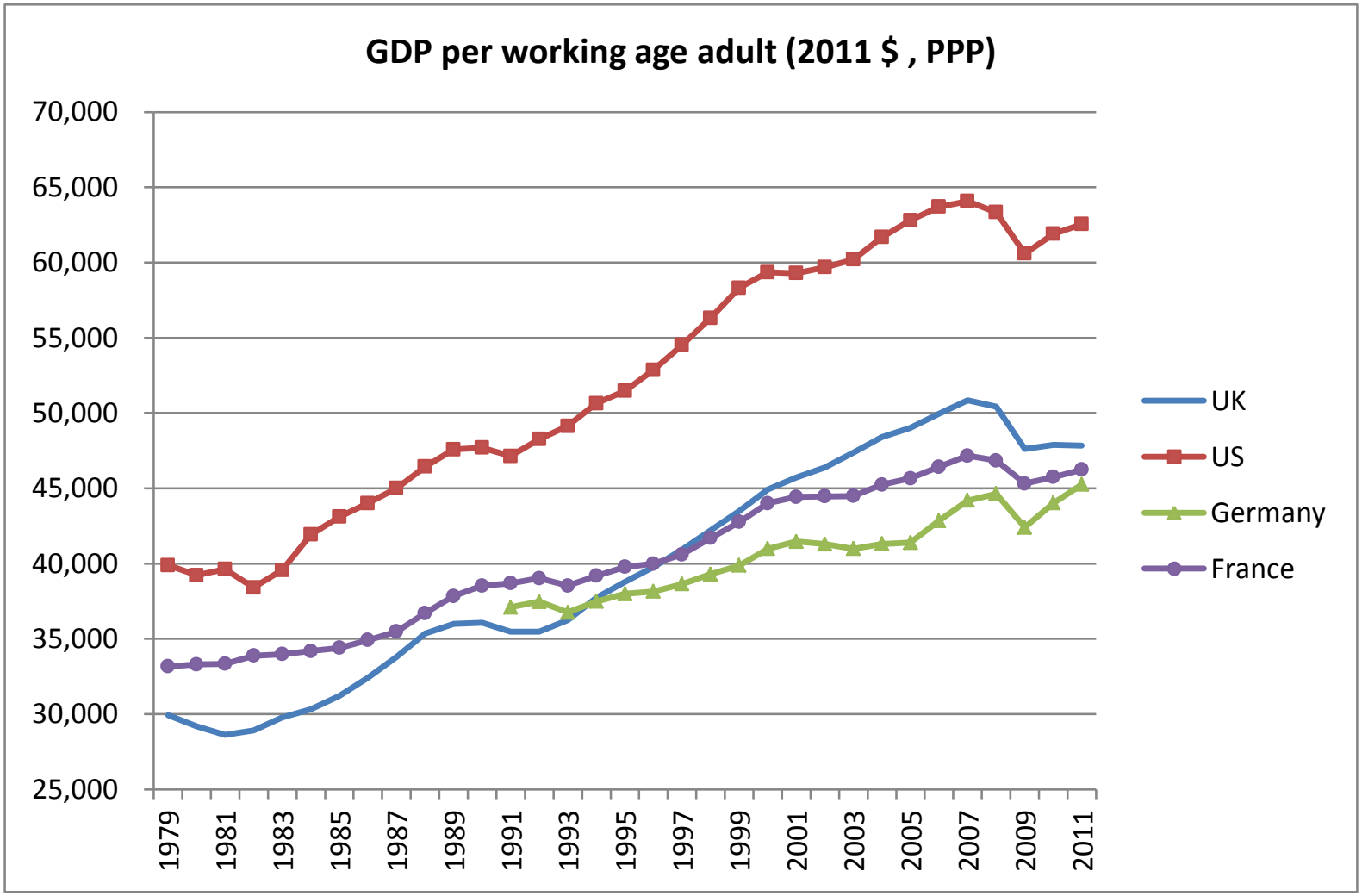
Notes: CB data GDP is US$, constant prices, constant PPPs, (CB based year: 2011). Adults are civilian population over 16. US Bureau of Labour Force Statistics. Data for Unified Germany from 1991.

GDP per adult growth (1997=100) UK,US,FR, GER



Notes: CB data GDP is US$, constant prices, constant PPPs, (CB based year: 2011). Adults are civilian population over 16. US Bureau of Labour Force Statistics. Data for Unified Germany from 1991.

GDP per adult (absolute levels)



Notes: CB data GDP is US$, constant prices, constant PPPs, (CB based year: 2011).

Growth decomposition

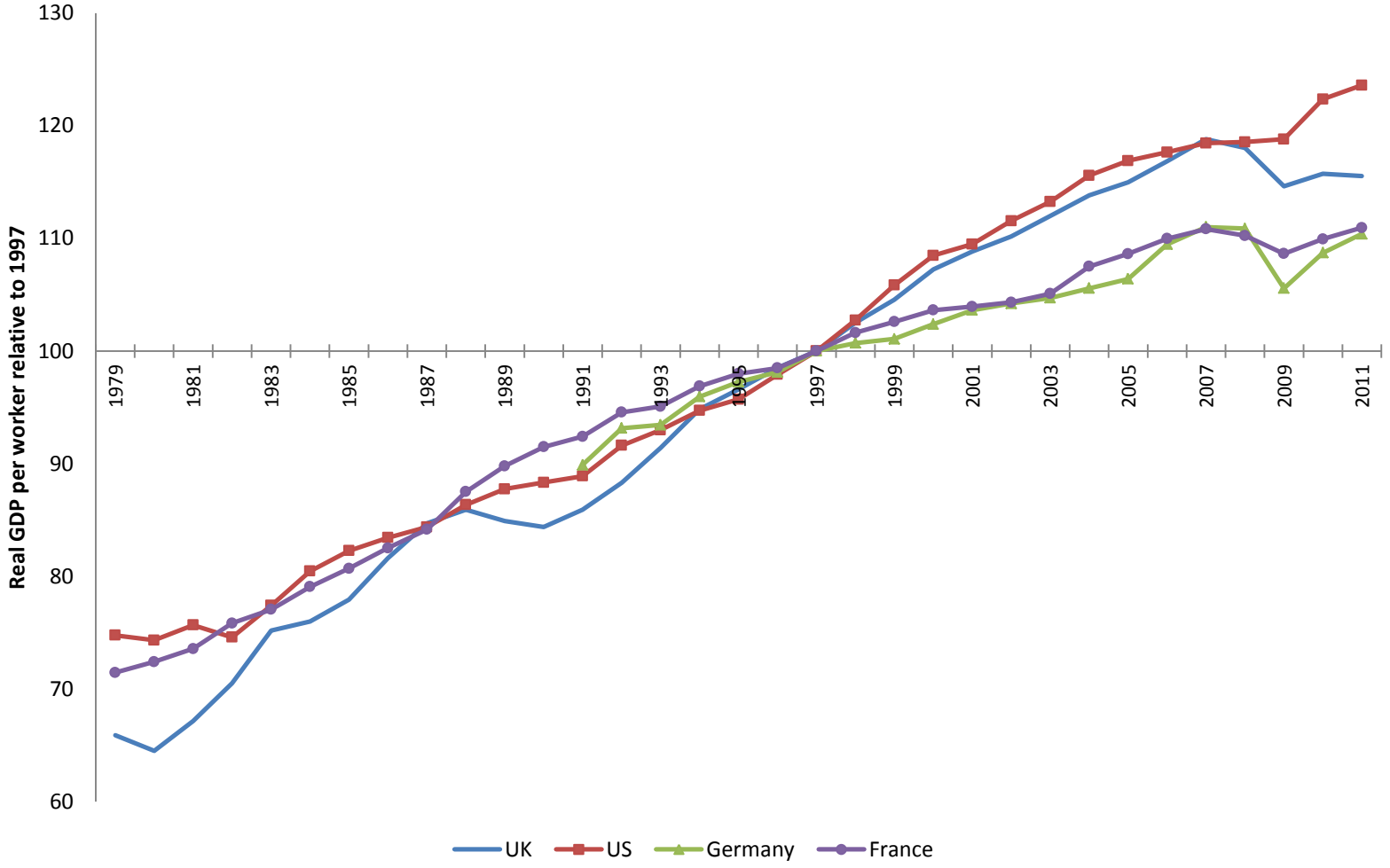
Basic “welfare” measure

$$\frac{GDP}{Capita} = \frac{GDP}{employee} x \frac{Employees}{population}$$

Labour productivity

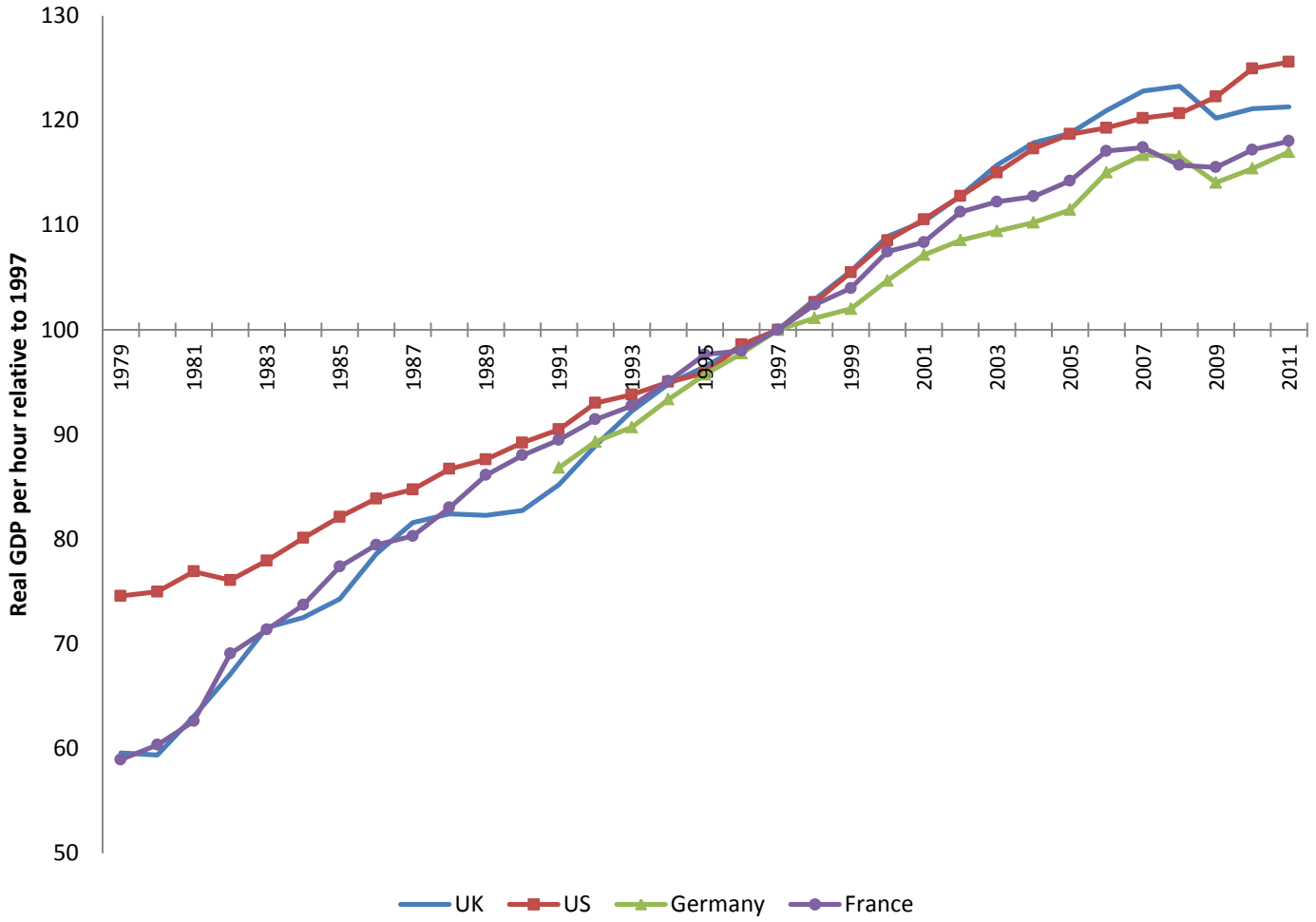
Employment Rate

Productivity: GDP per worker growth (1997=100)



Notes: CB data GDP is US$, constant prices, constant PPPs, (CB based year: 2011).

Productivity: GDP per hour growth (1997=100)



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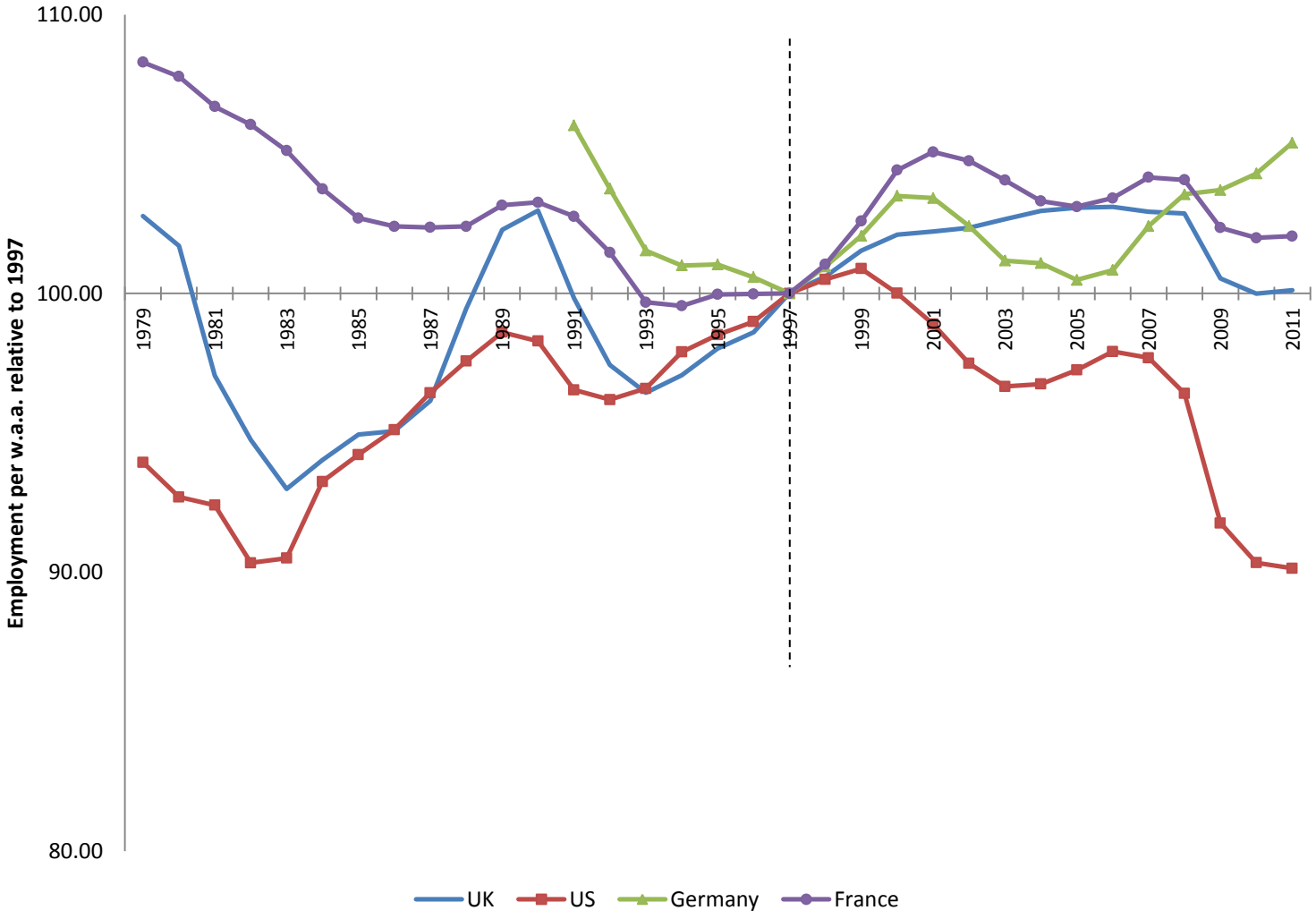
Employment Rate (Workers per adult) growth



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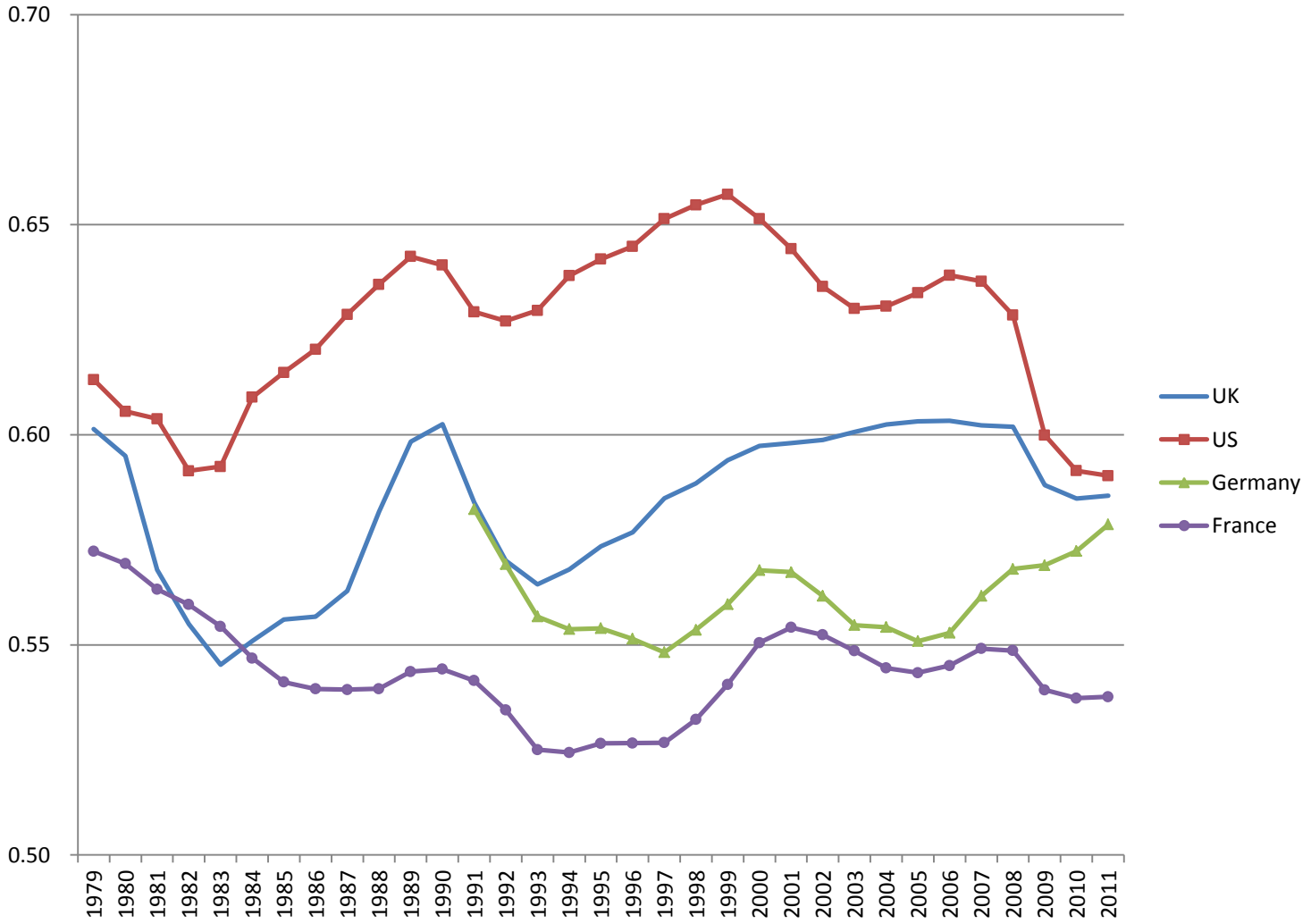
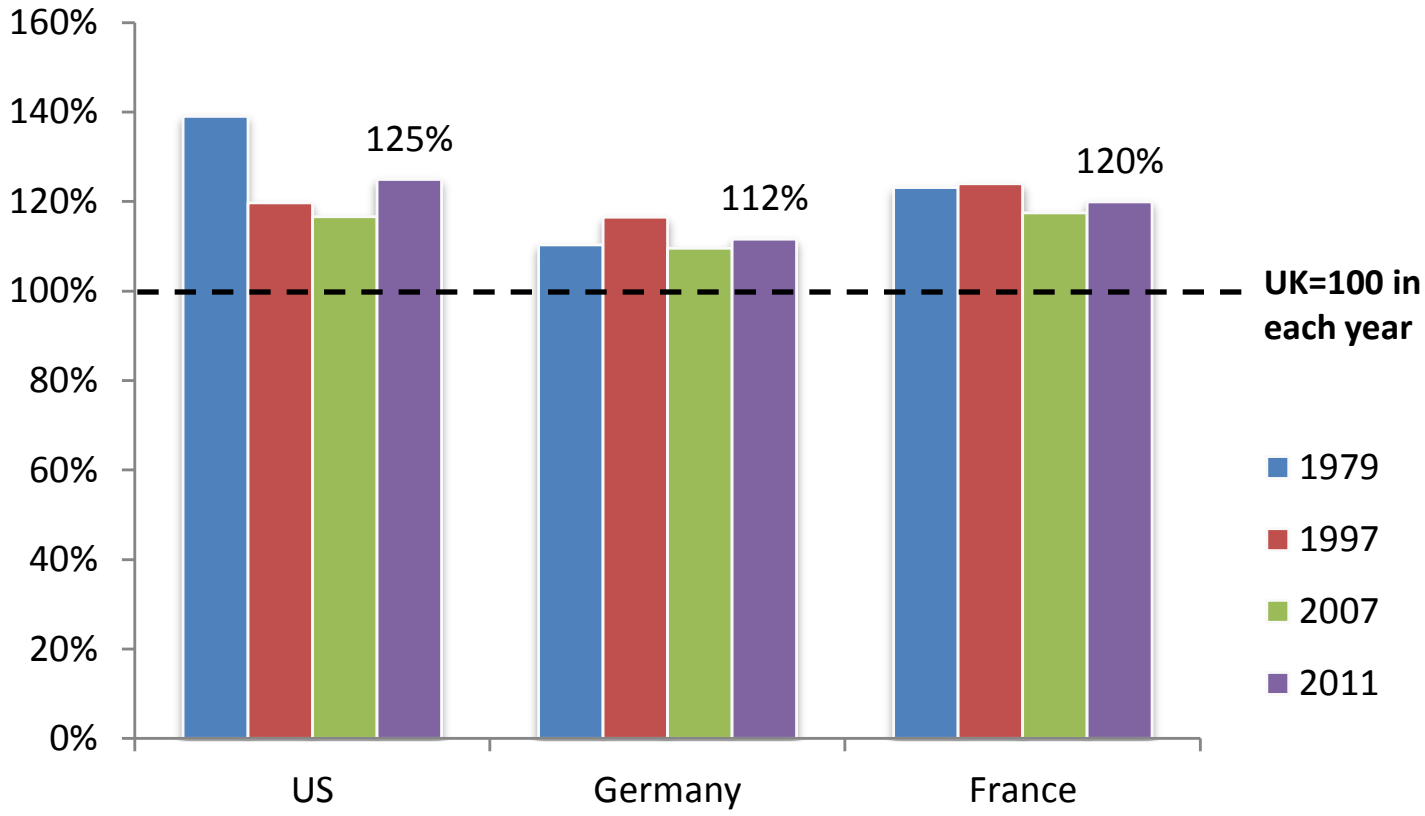
Employment per adult



Notes: CB data GDP is US$, constant prices, constant PPPs, (CB based year: 2011).

UK still lags behind in total economy productivity levels

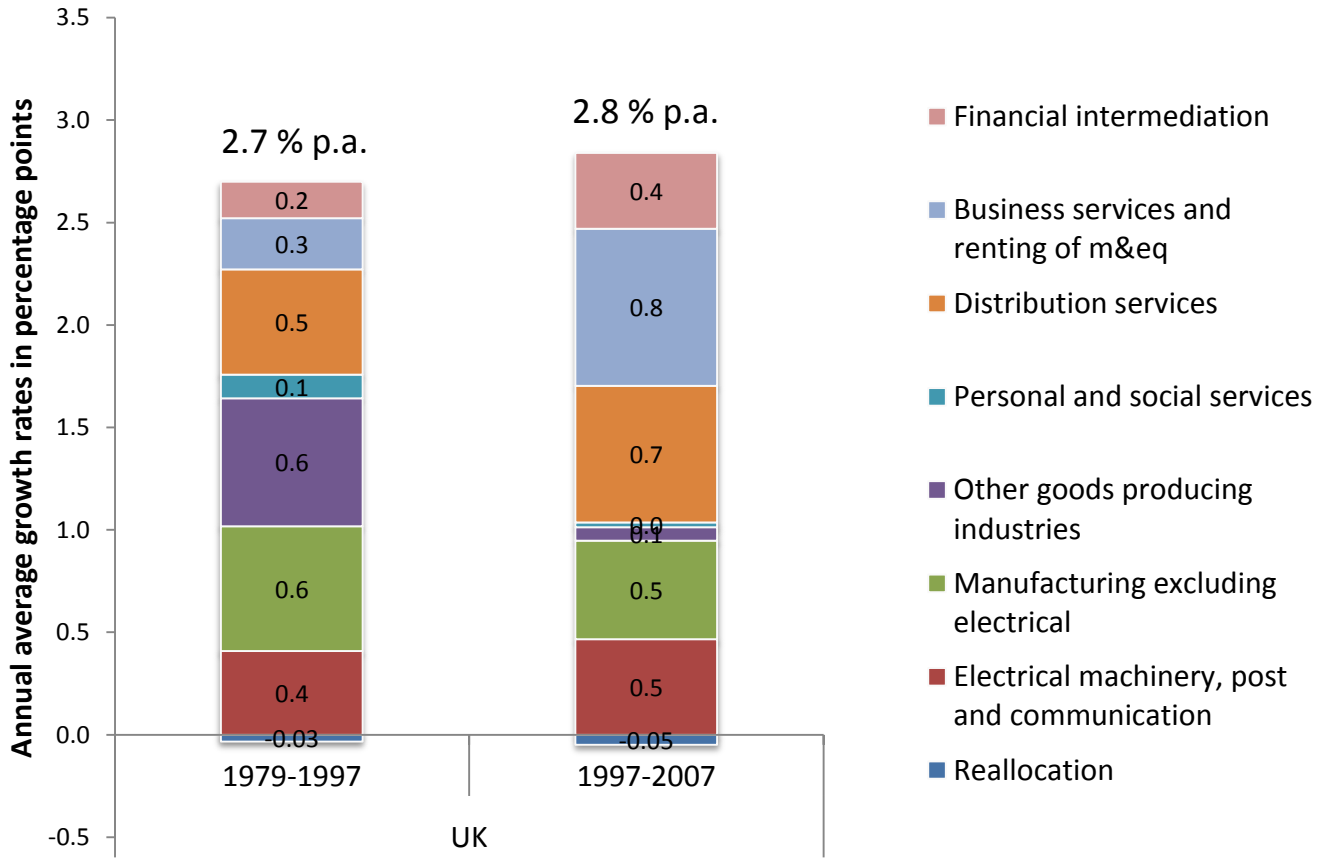
GDP per hour levels (UK=100)



Notes: Analysis based on CB data GDP is US$, constant prices, constant PPPs.

The sources of productivity growth by sector : It wasn't all finance in the 1997-2007 boom

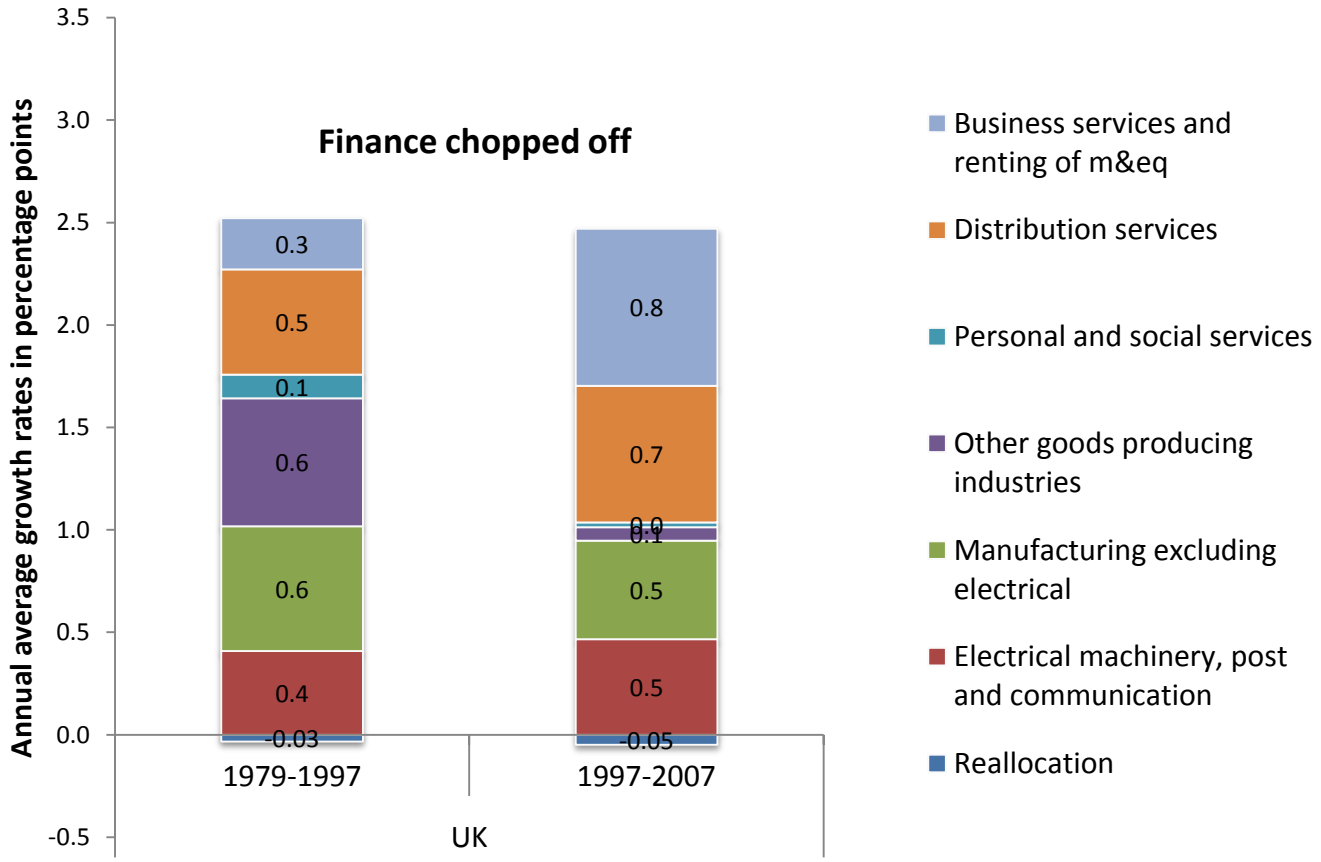
Sector contributions to market economy labour productivity growth (1979-2007)



Notes: Analysis based on EU KLEMS data. Average sectoral growth rates for the periods 1979-1997 and 1997-2007 are weighted by each sector's average share in market economy nominal GVA (GDP less taxes, plus subsidies) over the relevant period. Reallocation effect refers to the labour productivity effects of reallocations of labour between sectors that have different productivity.

The sources of productivity growth by sector : It wasn't all finance in the 1997-2007 boom!

Sector contributions to market economy productivity growth (1979-2007)



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Was UK improvement policy related?

- Product market competition
  - Privatization & independent regulators
  - Subsidies for “lame ducks” removed
  - Openness to FDI (& immigrants in 2000s)
  - Competition Policy
- Labour market deregulation – Welfare reform, anti-union laws
- Education: huge HE expansion
- Innovation (R&D tax credits, science budget)

1 UK Relative Economic Performance since 1997: Growth, productivity and jobs

2 Was the UK's strong post 1997 Performance anything to do with Policy?

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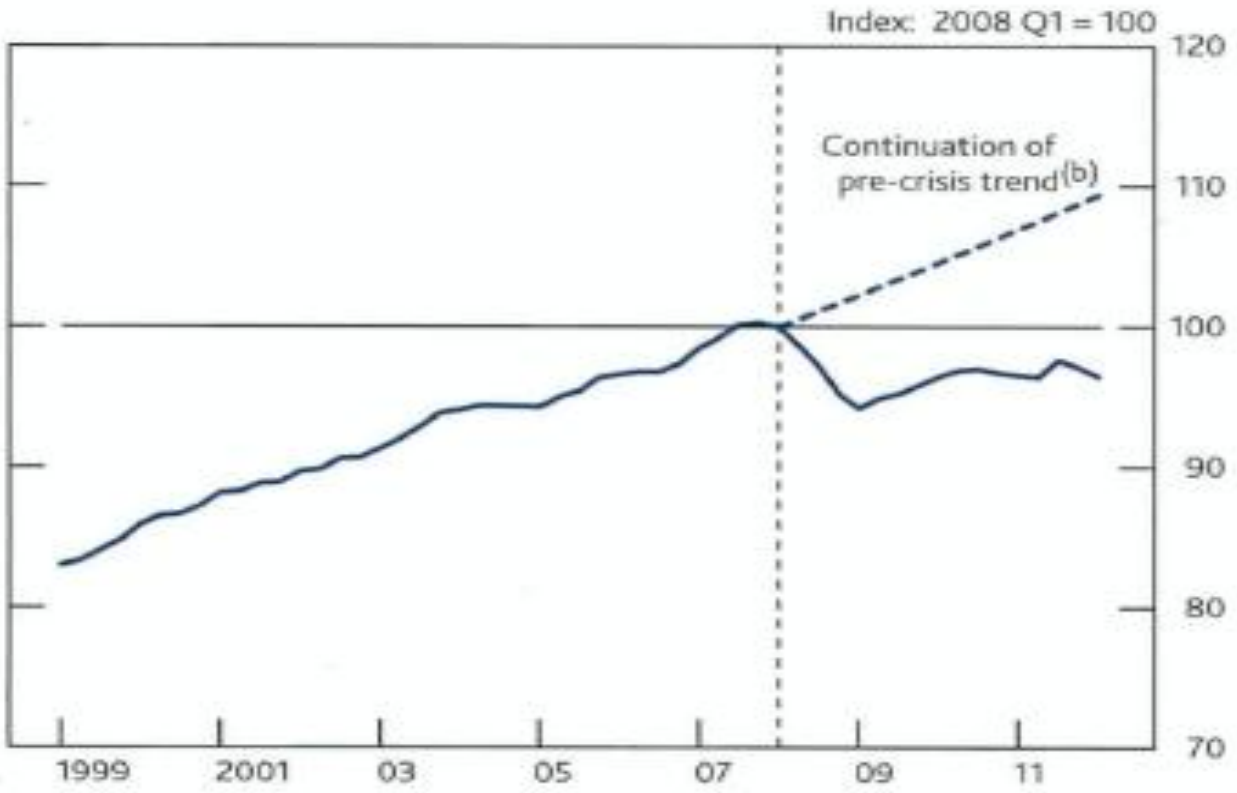
Did the Great Recession change everything?

Did the Great Recession change everything?

GDP PER WORKER, WHAT THE !**&£$&??

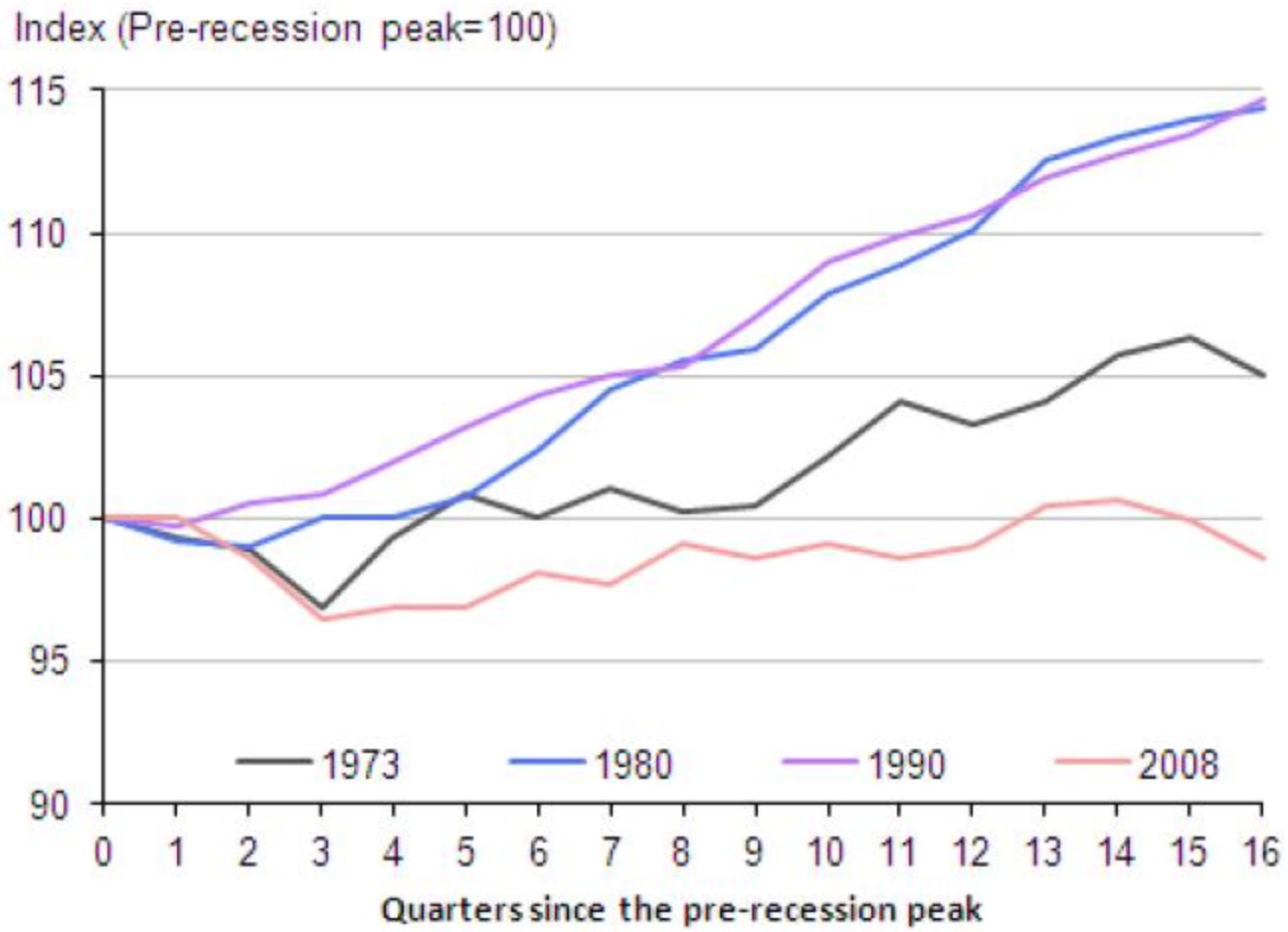


Source: ONS (including the Labour Force Survey).

(a) Dashed line shows 2008 Q1. Final data point is 2012 Q1.
(b) The pre-crisis trend is computed over 1998 Q1–2004 Q4 following the IMF (2009b) method. The trend is given by the average growth rate over a seven-year period that ends three years prior to the start of the crisis; the past three years are excluded to ensure the pre-crisis trend is not boosted by any elevated growth that often precedes a recession.

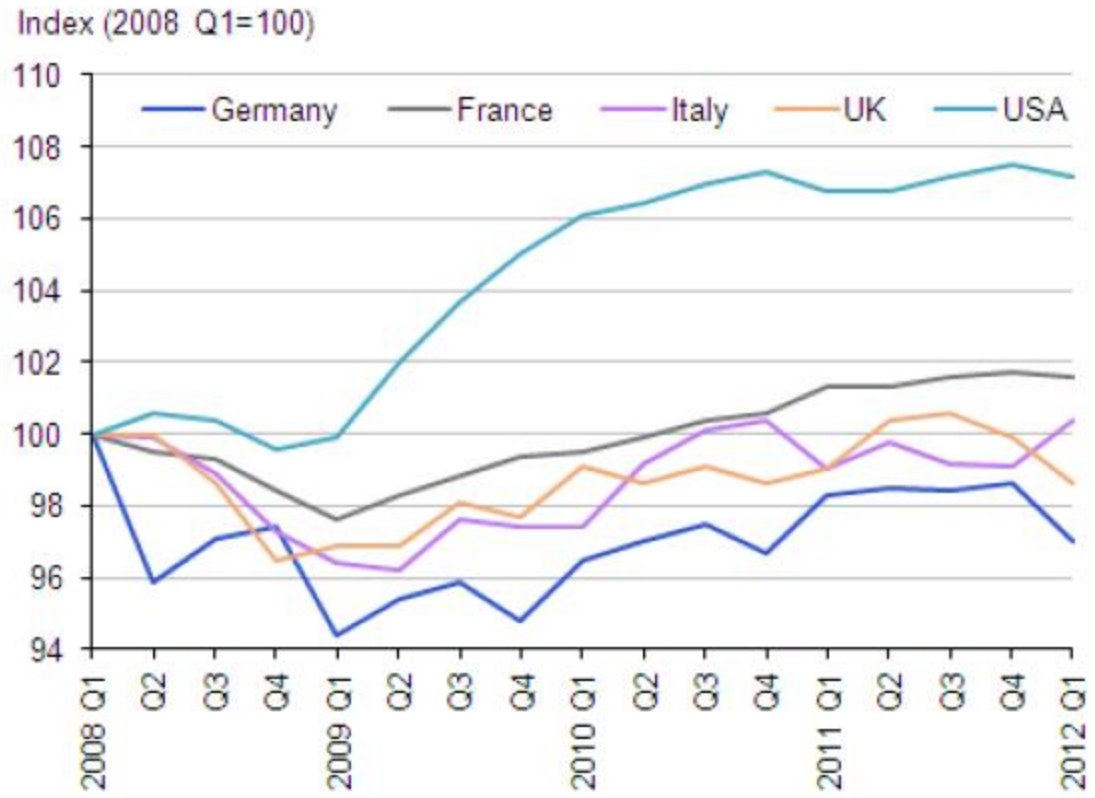
Hughes & Saleheen, BoE, (2012)

GDP/HOUR ACROSS RECESSIONS



Source: Office for National Statistics

GDP/HOUR ACROSS COUNTRIES – US THE OUTLIER



Source: Office for National Statistics

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Policies

- **To promote long term growth we need to:**
  - Expand the potential of the economy via supply side policies (**LSE Growth Commission**)
  - Run the right macro policies: helping recovery from recession by running at current potential
- Many important factors are outside direct influence of UK economic policy (e.g. Eurozone, US debt ceiling, China, ….)
- **Nevertheless, UK domestic policy does matter.**

Some Key Policy Issues for Growth Commission

- State Capacity
- Planning & Infrastructure
- Finance for Investment and Innovation
- Human capital – schools & bottom 1/3
- Beyond GDP

"Plan V" strategies involve the right environment for growth, and some targeted enabling policy

- Economists rightly wary of too interventionist a stance
- Despite this most governments do have a *de facto* industrial policies (e.g. towards exports and FDI).
- Policies should be focused on the intersection between the areas of global growth and local comparative advantage.
  - Areas like: bio-pharmaceuticals, financial and business services, creative industries and some areas of ICT
  - Look at barriers and useful pro-active policies

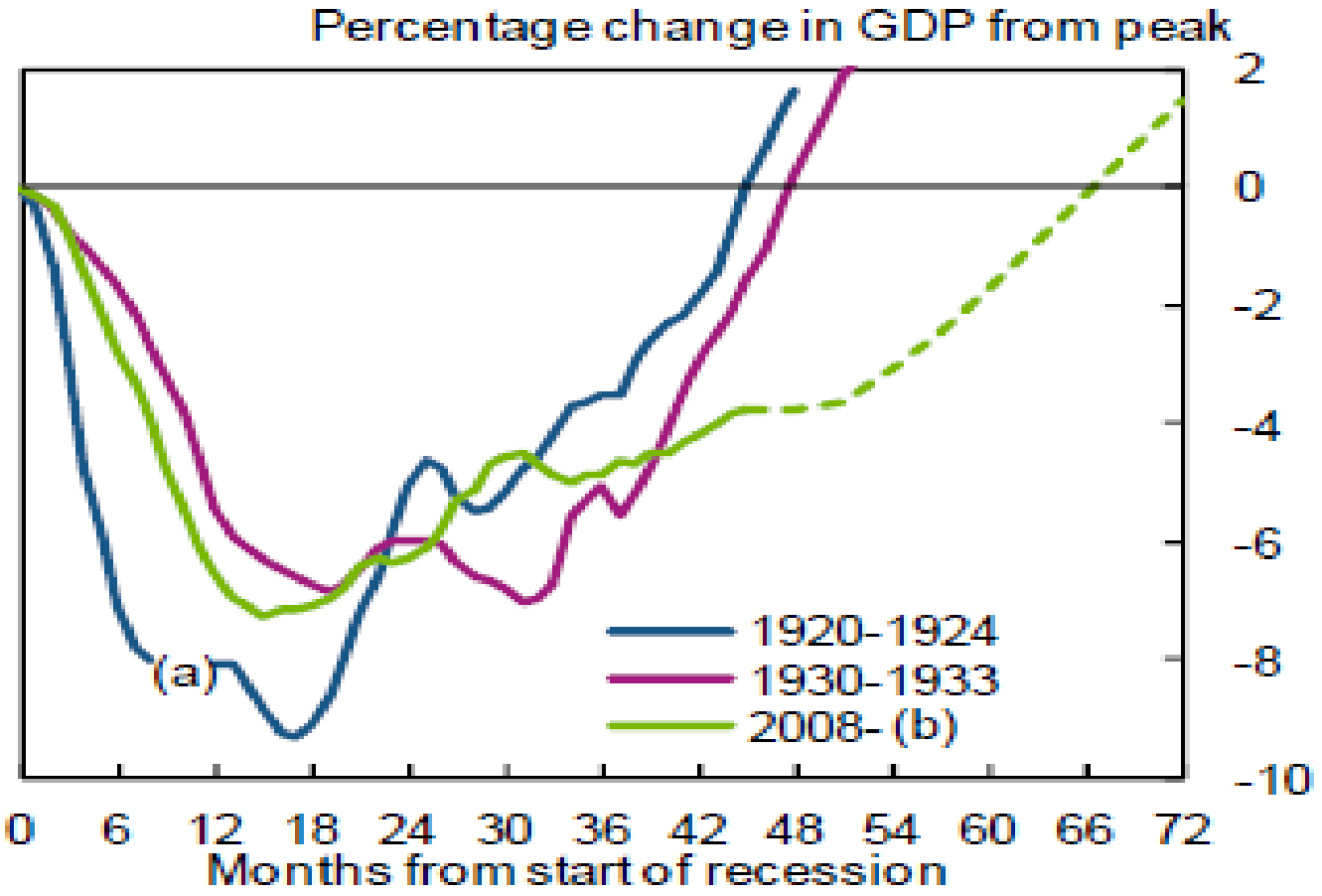
Conclusions and discussion

- UK growth until Crisis pretty good, 1997 continued trend from 1979
- Not solely “unbalanced” bubble from finance, property & government
- Some benefit from policies over competition, education & innovation
- Long term policies need coordinated strategy drawing on lessons from past

References

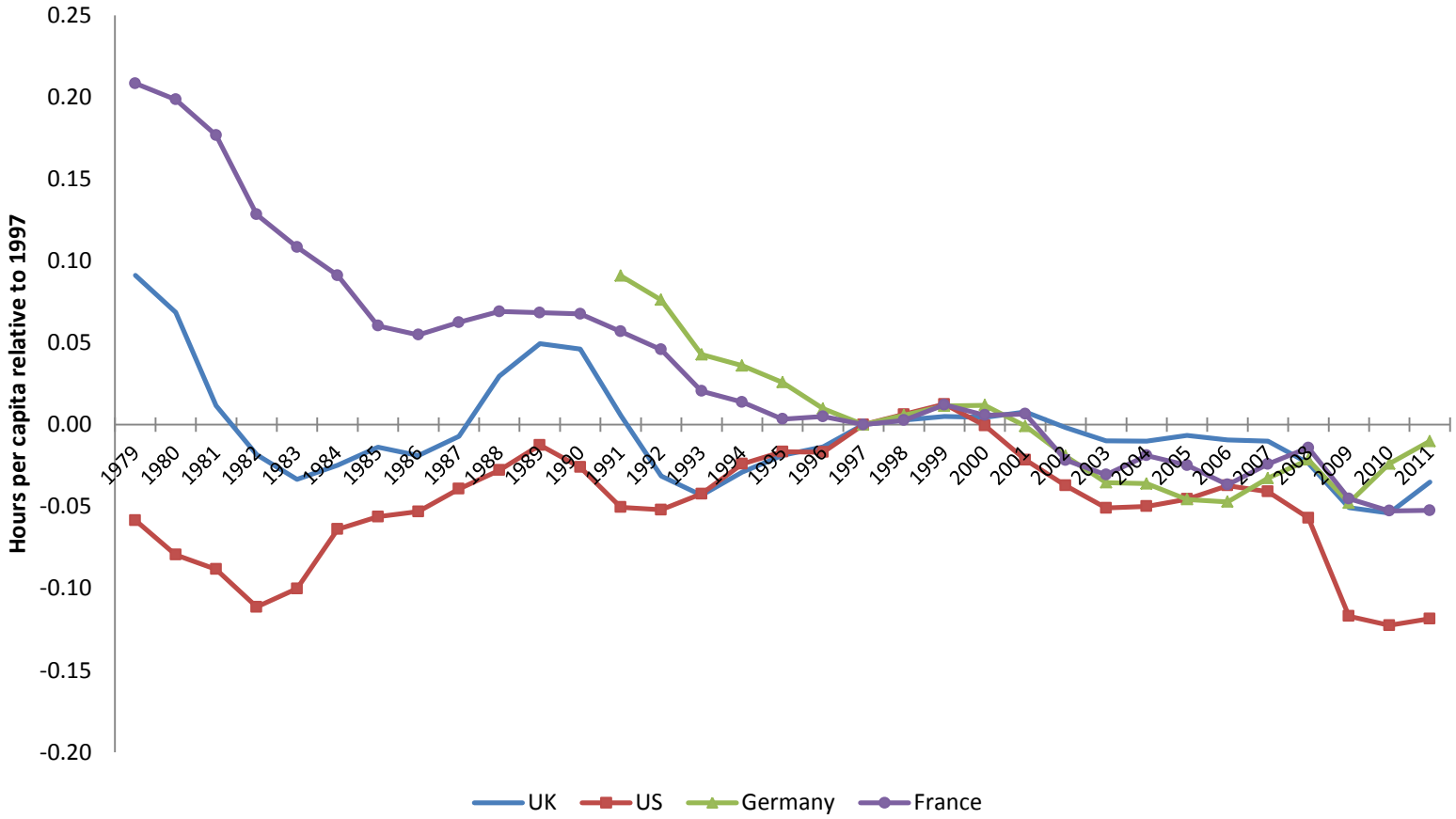
- LSE Growth Commission http://cep.lse.ac.uk/LSEGrowthCommission/
- Full version of the Report
- http://cep.lse.ac.uk/conference_papers/15b_11_2011/CEP_Report_UK_Business_15112011.pdf

Back Up



Sources: Mitchell, Solomou and Weale (2009) and Bank of England.

Hours per adult relative to 1997



Enterprise Bill 2012

- Employment Law (Restrictions on tribunal claims)
- Binding Votes on CEO pay every 3 years
- Green Investment Bank
- Competition and Markets Authority (CC/OFT)
- Copyright & rights in performance

Gap Decomposition: Simple extrapolation vs. OBR (Table 6 in Martin & Rowthorn, 2012)

%, unless stated, 4Q 2011	simple	OBR
Onshore GVA output gap	-13.5	-2.5
of which:		
Employment gap:	-4.7	-1.9*
of which:		
Labour force gap	-1.4	1.4**
Increase in unemployment rate (% pts, reverse sign)	-3.2	-3.0**
Productivity gap (output per worker)	-9.2	-0.6
Memo: other gaps		
Onshore output per hour	-8.5	-0.4
Average weekly hours	-1.1	-0.2
Onshore output per job	-9.5	n.a.

Sources and notes: ONS, authors' calculations, OBR (2012): paragraph 3.22 & Table 1.4 Labour Market, Economy Supplementary Tables. See notes to Table 5. *calculated from ONS estimate of LFS employment and OBR estimate of trend employment. ** inferred from LFS data and OBR estimates of trend employment and of the "long-term" Non-Accelerating Inflation Rate of Unemployment (NAIRU) of 5.35%. The qualification that the assumed NAIRU is "long-term" in nature appeared in the OBR's November 2011 forecast. The assumption is used by the OBR to project potential output, currently from 1Q 2012. We assume the same NAIRU applies to the 4Q 2011 decomposition of the OBR output gap. We calculate onshore output per hour, per worker and per job by dividing onshore GVA by ONS indices of whole economy hours, workers and jobs; ONS data on jobs in the oil and gas sector are no longer published. Average weekly hours are consistent with ONS indices for output per hour and output per job. The OBR calculates onshore output per hour by dividing onshore GVA by whole economy total weekly hours worked. The implied differences between our and the OBR measures of average weekly hours are trivial.

Reasons for huge difference in productivity gap

- Output gap difference is massive 13.5% vs. 2.5%
- Driven by different estimates of “structural” productivity: 9.2 vs. 0.6
- Divergence in employment gap smaller (4.7% vs. 1.9%)
- OBR assumes labour force above trend! (driven by pessimistic assumptions over labour force participation)

Real Wage cuts in this recession (Table 9 in Martin & Rowthorn, 2012)

Relative to pre-contraction peak* % or % point difference	Real wage, %	Output per worker, %	Employment rate, % points
2008 and after	-8.5	-3.4	-2.3
Post-war before 2008			
simple average	5.5	8.2	-3.3
of which:			
early-1990s	3.7	10.6	-3.6
early-1980s	9.2	9.3	-4.4
mid-1970s	3.6*	4.9	-1.8

Source: ONS, authors' calculations. Cycle peaks and troughs are described in the notes to Table 2. * 11 quarters after trough. Output per worker – whole economy real gross value added per worker (see Table 5). Employment rate – number of employed workers as a per cent of adult population. Real consumption wage - whole economy nominal average weekly earnings (including bonuses) relative to consumer price index. Before 2000, average earnings are measured using the former average earnings indices published in *Economic Trends Annual Supplement*, various editions. Consumer price index data before 1988 are taken from Donoghue (1998) back to 1975. * Real wage figures for the mid-1970s recession are of suspect quality. Before 1975, prices are measured using the retail price index. The coverage of the ("older series") average earnings index is confined to production industries, agriculture, transport and a few miscellaneous services (such as laundries and motor repairers).

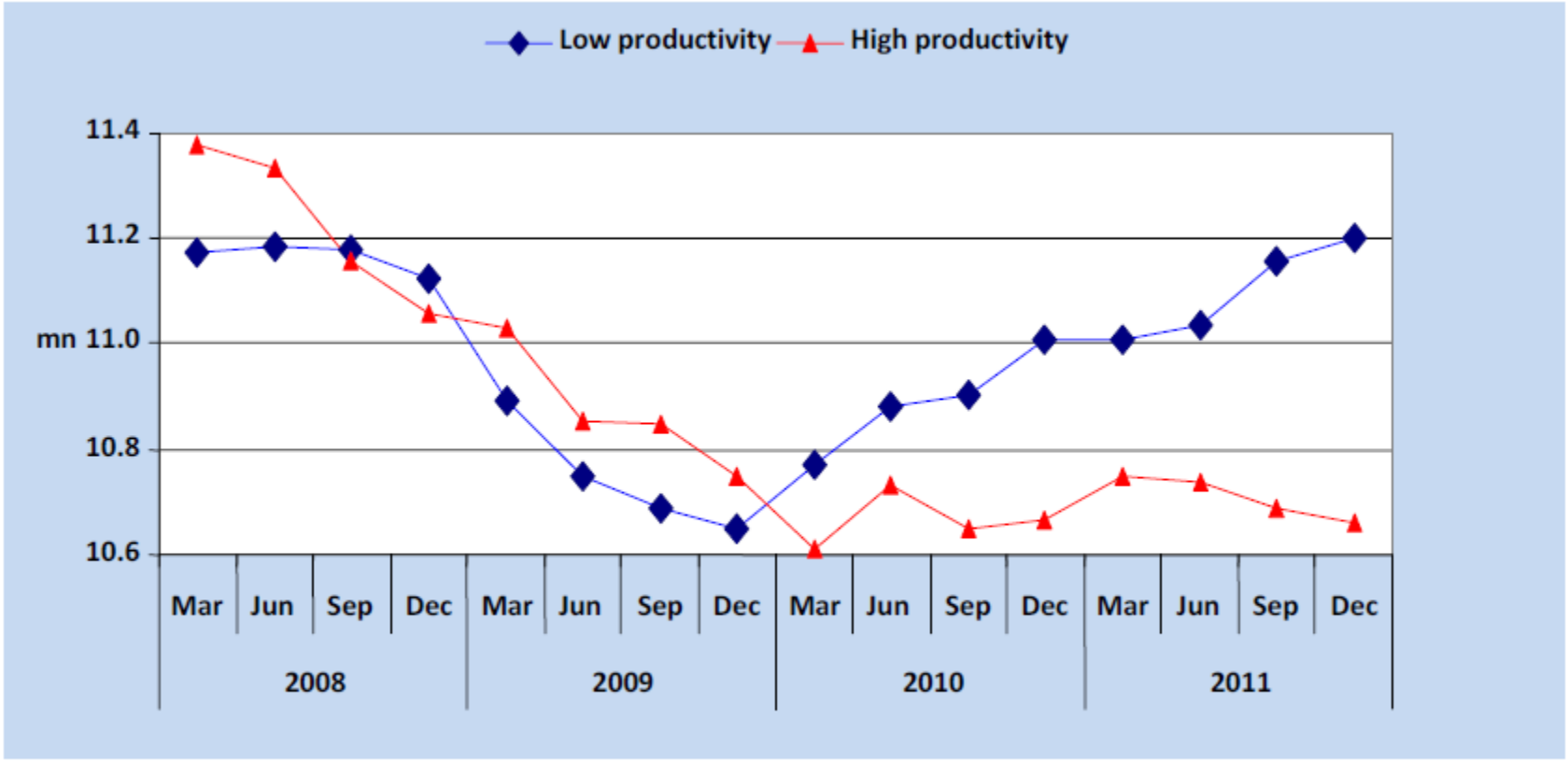
Reasons for real wage cuts

- Wage shortfall vs. pre-crisis trend around 15%
- Unanticipated Price Inflation shock? But wages still low
- Terms of trade adjustment (too small)
- Industry specific? No, widespread.
- Debt overhang implies fear of job loss
- Weaker bargaining power with union decline, etc.
- Shift to part-time work

Labour Hoarding

- **Standard story**: an expectation of demand recovery that has not (yet) materialised, depressing productivity
- Counter: jobs growth too strong in 2010-2011
- BUT (see Martin & Rowthorn, 2012, model)
  - Partial labour hoarding more likely
  - Overhead labour (always kept), but some variable labour shed (depending on hiring & firing costs)
  - This shedding (& re-hiring) stronger in some low productivity/skills sectors
  - Expectations of growth too high in 2010 to first half of 2011. Second half clear slowdown

Job Growth in low productivity sectors



Sources and notes: ONS, authors' calculations. See notes to Table 12.

Source: Martins & Rowthorn, 2012.

Supply side Explanations of productivity slowdown: possible structural explanation

- Contraction of high productivity sectors like banking
  - Productivity falls were widespread (reallocation explains between 0 and 1.4% of the 9% fall in Martin & Rowthorn, 2012; Corry et al, 2011)
- Weaker capital stock growth
  - Capital-labour ratio has risen
  - Low inv because of poor demand expectations
- Loss of skills due to unemployment
  - % in training similar to 2007
  - Again, hysterisis effects part of problem
- Less innovations due to lower entry, credit constraints and inefficient allocation of financial capital
  - Speculative as little direct evidence
  - Allocation of finance poor pre-crisis
  - SMEs account for only 20% of R&D and this is almost all MNC subsidiaries

Other Evidence

- Variance of productivity performance across EU little to do with technology
- US a good comparator (big financial sector): productivity strong, but less of a demand deficit
- Supply side pessimists the same as RBC, even in 1930s
- Banking crisis studies (e.g. Oulton, 2012)
  - Heterogeneous effects
  - Effect of crisis on demand vs. productive potential (Barrell et al, 2010)
  - How countries respond to banking crises (IMF, 2010). If response to crisis is prolonged low demand then capacity endogenously depressed
- Persistent inflation. Not due to domestic pressures
- Business Surveys. Responses endogenous to state of economy

Inflation

Inflation, % p.a. and contributions, percentage points	Low inflation pre-crisis period	Crisis period to 4Q 2011
Consumer prices		
All	1.7	3.3
Excluding indirect taxes*	n.a.	2.9
Retail prices excluding mortgage interest		
All	2.5	3.9
Excluding indirect taxes*	2.5	3.6
Expenditure prices excluding net taxes**	2.2	3.3
Of which, contributions, % points (% weight)		
Import prices (27) ***	0.1	1.6
Domestic incomes per unit of output (73) ****	2.0	1.6
Of which:		
Employees' compensation (45)	1.2	1.3
Profits and other incomes (28)	0.9	0.4
Memo:		
Import prices (goods & services)	0.4	6.4
Domestic incomes per unit of output	2.8	2.1

Sources and notes: ONS, authors' calculations. n.a. – not available. Annual average inflation rates calculated from price levels in 2Q 2000 and 2Q 2007 ("Low inflation pre-crisis period") and 2Q 2007 and 4Q 2011 ("Crisis period to 4Q 2011"). *Official price indices CPIY and RPIY. ** Price deflator for economy total final expenditure (consumption, investment and exports) measured at factor cost (our estimate); that is excluding indirect taxes and subsidies. *** Price deflator for all goods and service imports. **** Nominal gross value added divided by the chain volume measure at factor cost including the national accounts residual error to align with expenditure estimates. Profits and other income is nominal gross value added, as defined, less compensation of employees. The contributions are approximately equal to the 2010 weights shown and the inflation rates of import prices and domestic incomes per unit of output. Figures, calculated from an exact identity, are subject to rounding error.

Productivity falls were widespread across all industries

Annual average growth, %, unless stated	Before Peak	Since peak to 4Q 2011	Change % points
Whole economy:			
Output per hour	2.0	-0.3	-2.3
Output per worker	1.7	-0.8	-2.5
Output per job	1.8	-0.8	-2.6
Economy excluding real estate			
Output per job	1.9	-1.1	-2.9
of which (share of whole economy*):			
Agriculture, forestry & fishing (1)	2.3	-6.0	-8.3
Mining (3)	-3.4	-7.9	-4.5
Electricity & gas supply (1)	-0.7	-9.4	-8.7
Water supply & waste management (1)	1.1	-6.4	-7.5
Manufacturing (10)	4.2	1.6	-2.7
Construction (8)	0.5	1.2	0.7
Wholesale & retail distribution (11)	3.0	-0.6	-3.5
Transport (5)	1.0	-2.5	-3.5
Hotels & restaurants (3)	1.2	-1.5	-2.7
Information & communication (6)	3.2	1.4	-1.8
Finance & insurance (9)	6.5	-1.4	-7.9
Professional services (7)	3.6	-1.8	-5.4
Administrative support services (5)	1.2	-1.7	-2.9
Government-dominated sectors (19)	0.6	0.3	-0.3
Recreation (2)	-0.1	1.0	1.1
Personal services (1)	-0.8	-0.5	0.2
Memo:			
Banking (7) **	6.5	0.8	-5.7
Insurance and other finance (2) **	6.6	-3.6	-10.2

Sources and notes: ONS, authors' calculations. See notes to Table12 and Appendix C: Characteristics of low and high productivity sectors. "Before cycle peak": seven years ending 1Q 2008; "Since cycle peak to 4Q 2011": period from 1Q 2008. * 2008 share, %, of gross value added. ** "Banking" - Division 64 of the Standard Industrial Classification - includes building societies and unit and investment trusts. "Insurance and other finance" - SIC Divisions 65 and 66, includes auxiliary services like fund management. Main sectors' output per job is measured using ONS-supplied high precision gross value added indices and "productivity jobs": largely business payroll-based jobs estimates scaled to align with Labour Force Survey estimates of whole-economy jobs, including workers with second jobs. To estimate the finance and insurance sector split, we emulated detailed ONS methodology. For the provision of data and advice on methodology, we are indebted to Mr John Appleton, Mr Harry Duff, Mr Mark Franklin, Mr Steffan Hess and Ms Ainslie Restieaux.

Estimating the Output Gap ("educated guesses")

- **Most estimates find significant output gap, but seems to be shrinking (last week's EC report)**

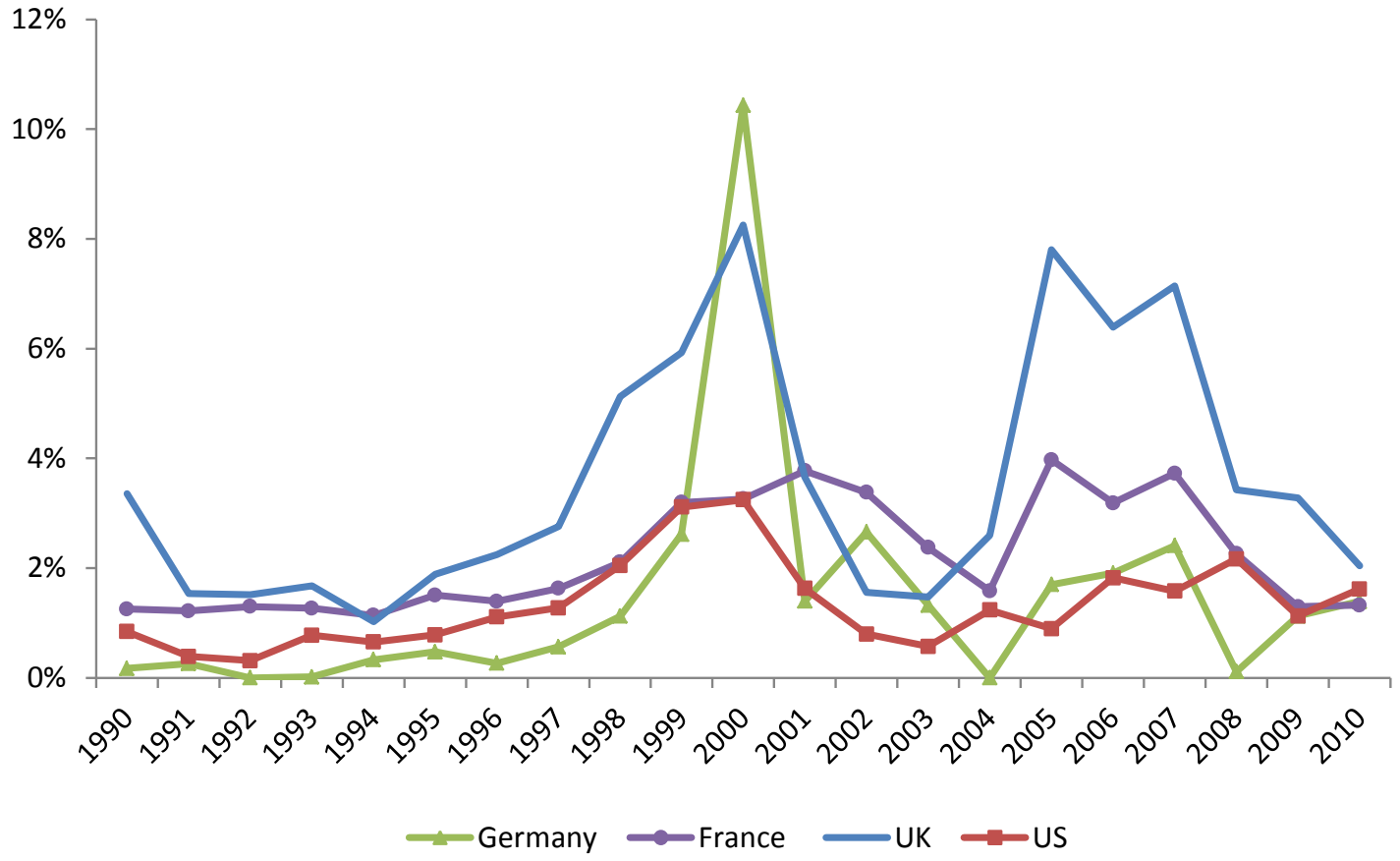
Source	Methodology	Output gap	Year	Trend GDP growth rate assumed
MPC, Adam Posen, 2010	Not specified	3-over 4%	2010	suggests that it is largely unchanged
MPC, Martin Weale, Nov 2010	Not specified	4-6.5%	2010	"trend growth has probably fallen a little"
European Commission, Autumn Forecast, 2010	Production function	just over 5%	2010	n/a
IMF, World Economic Outlook, October, 2010	Semi-structural approach	2.6%	2010	n/a
NIESR, January Economic Review, January 2011	Production function	4% or more	2010	"not much greater than 2%"
OECD, Economic Survey of the United Kingdom, March 2011	Production function	4.6%	2010	n/a
OBR, Economic and Fiscal Outlook, March 2011	Cyclical indicators	3%	2010	2.35% to end 2013, 2.10% after
IMF, World Economic Outlook, October, 2011	Semi-structural approach	2.9%	2011	n/a
Chris Giles, FT, September 2011	Cyclical indicators	2.6%	2011	n/a

Other measures of business performance

- Focus on productivity because it's key measure of long-run performance for economists
- But also look at
  - Investment (overall and FDI)
  - Innovation
  - Education and skills
  - Management
  - Entrepreneurship
  - Profits
  - Trade
  - Regional Inequality
- Overall, more of a mixed bag. Positive trends but still problems in levels

The UK has been successful at attracting FDI, with inward FDI higher than comparators

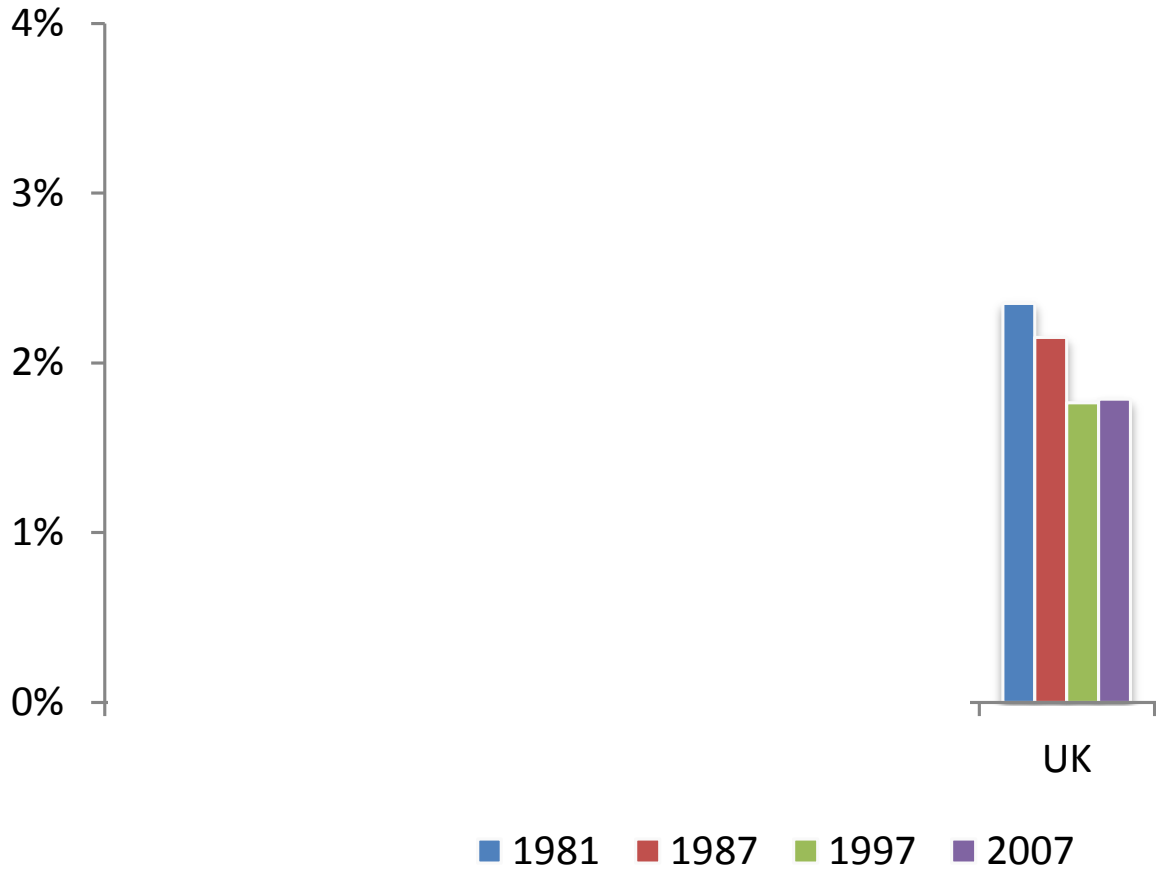
Inward Foreign Direct Investment Flows (% GDP)



Notes: Analysis based on OECD data

R&D has increased slightly as a proportion of GDP between 1997 and 2007 after falling since late 1970s

Gross Domestic Expenditure on R&D (GERD), as a % of GDP



Notes: OECD MSTI June 2010 (data not available on a consistent basic prior to 1981)

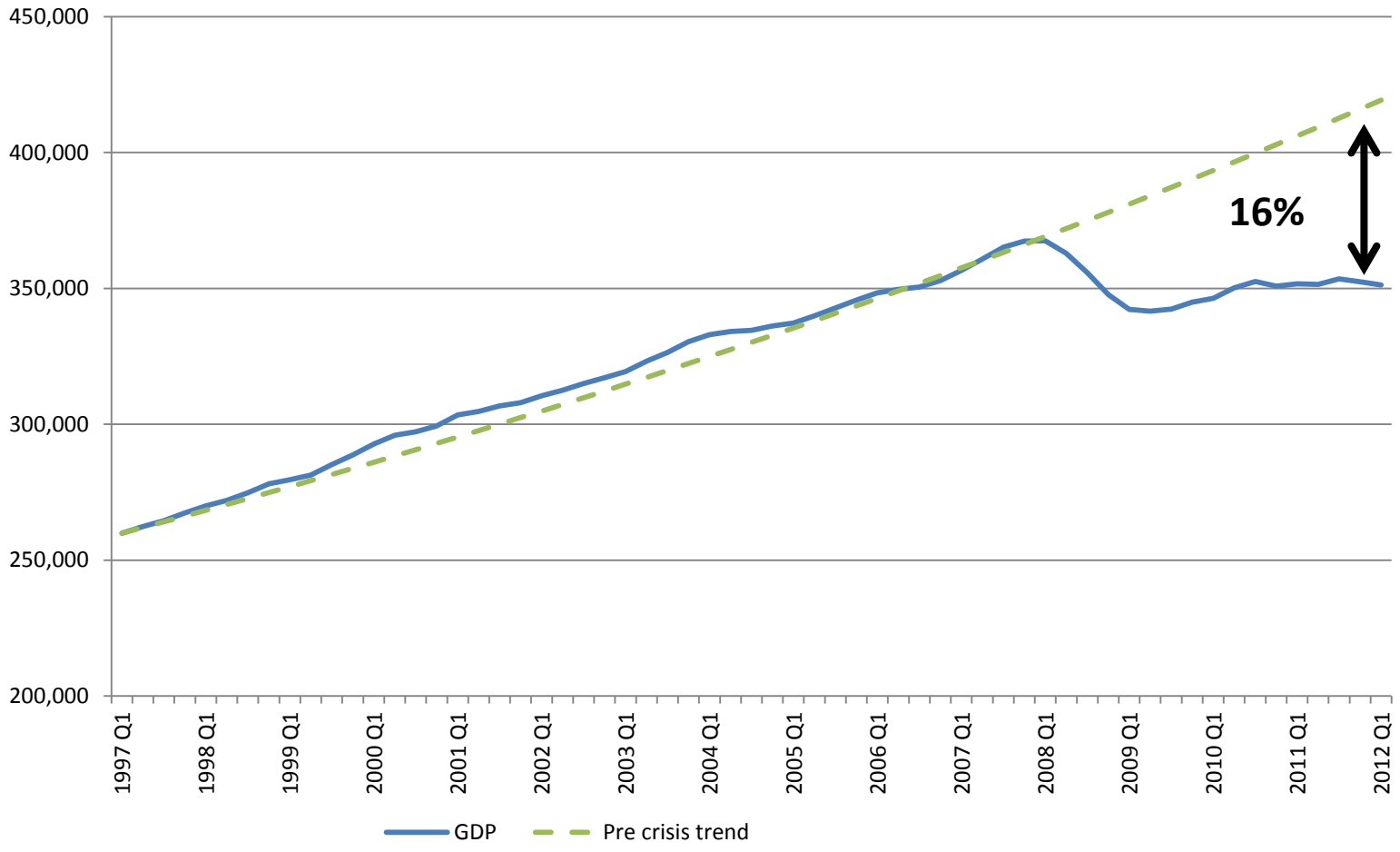
Proportion of workers with a college degree has risen faster in UK than other countries

Percentage of 25-64 year old population by educational level

Notes: Data from OECD Education at a Glance (2010)

The Output Gap Debate

GDP at market prices (2008 £ million)



Notes: ONS Q1 2012 Quarterly National Accounts, GDP in £ million, in real terms at market prices (seasonally adjusted)

Did the Great Recession change everything?

- **What are the effects of Great Recession on potential output**
  - How much output permanently lost?
  - Lower productivity growth? Very unlikely (1930s policies)
- **Low Demand (recession, Eurozone, austerity)**
  - Model of partial Labour hoarding (especially in high productivity sectors) can match trends
  - Labour market performing relatively well in this recession: Wages and matching
- **Supply Side Pessimists**
  - Compositional shift out of high value added sectors like finance not large enough to account for productivity falls
  - Capital-Labour ratio rises
  - Skills & Innovation

The Great Recession and beyond

- What are the effects of Great Recession on **potential output**
  - How much output permanently lost?
  - Is economy on a lower productivity growth trend?

- **"Output Gap"** is difference between potential & current output
  - If economy near full capacity output gap is close to zero, so if demand increases (e.g. Expansionary monetary and fiscal policies translate into higher inflation)
  - Supply side pessimists view that output gap is small/zero
  - OBR 2.5% vs. 14% (or 9.5% in Martin & Rowthorn, 2012)

Estimating the Output Gap ("educated guesses")

1. **Statistical Filters**
   - Transparent, but depends on period over which one "smooths"
2. **Production functions (OECD, EC, NIESR)**
   - Based on economic model, but sensitive to judgements, measurement and data revisions
3. **Business surveys (Office Budget Responsibility)**
   - Uses wider range of timely information, but survey measurement issues & needs scaling to another method
4. **Semi-structural approaches (IMF- Global Projection Model)**
   - More rigorous but very sensitive to econometric specification

Pessimists: banking crisis reason for permanent damage

- **Direct effect** : banking a high productivity sector & shift of workers into other industries dampens aggregate productivity
  - But in long-term better allocation of UK talent to sectors creating positive spillovers (e.g. High tech manufacturing & ICT)
  - Evidence on direct effect suggests only small (e.g. Martin, 2011; BoE, 2011). Productivity fell a lot in in finance, but large falls were witnessed in others sectors too.
- **Indirect effects of banking crisis**
  - Less efficient allocation of capital
  - Fewer new company formations, capital scrapping or [illegible]ons
  - Evidence is unclear (Oulton, 2012). Although crises followed by slow growth (i) depends on policy response, (ii) lots of heterogeneity

Indirect Evidence for Pessimists

- **Recent poor growth performance**
  - Global demand low. Real improvements pre-2007
- **Oil Producing Sector in decline**
  - Long trend, oil not big contribution to productivity 1997-2007
- **High inflation shows we have little spare capacity**
  - Mainly “imported” inflation – domestic wages inflation very low
- **Hiring in 2010-11 evidence for little spare capacity?**
  - Real wage cuts keep jobs up
  - Partial labour hoarding with expansion of low productivity sector based on over-optimistic growth of sales (Martin & Rowthorn, 2012) . Second half of 2011 job growth stalls
- **Business Surveys** – But answers adjust to the cycle

Some specific “Plan V” policies which we will briefly run through…

- Competition
- Education and skills
- Infrastructure
- Financial markets
- Higher education
- Immigration
- Public sector productivity
- Regulation and planning
- Taxation

Long-run growth policies: some thoughts

- Competition
- Education and skills
- Infrastructure
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- Merger of OFT and CC could be a distraction
- Stalling of greater international market integration
- Dangers of trade protection

Long-run growth policies: some thoughts

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- Literacy and numeracy rates
- Education leaving age
- Apprenticeships for under 19 year olds

Long-run growth policies: some thoughts

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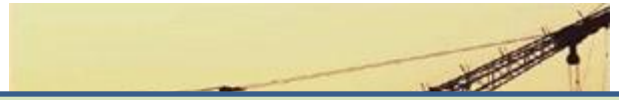

- Public investment (at a time of low interest rates) will not "spook" markets
- Many smaller projects – larger and less risky returns than "grand projet"
- Expand remit of GIB
- Transport (re-read Eddington!)

Long-run growth policies: some thoughts

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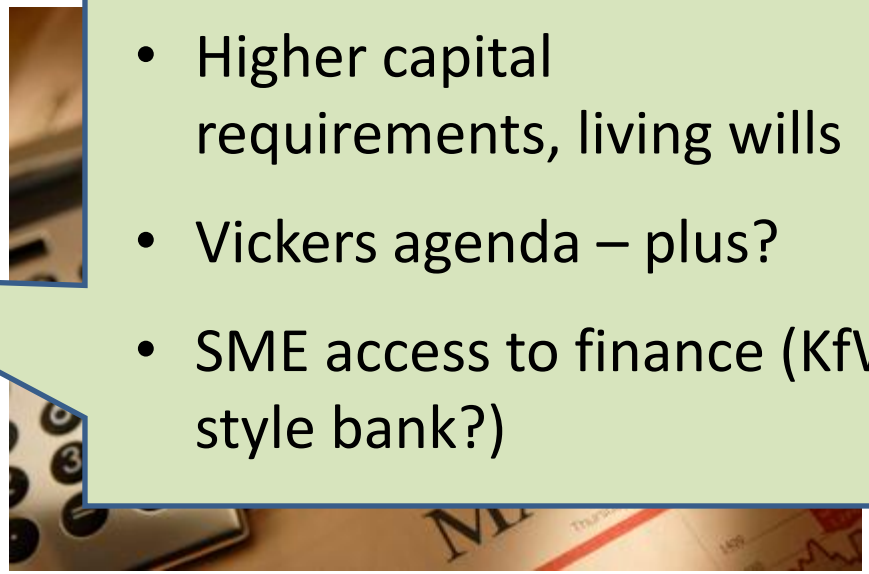

- Higher capital requirements, living wills
- Vickers agenda – plus?
- SME access to finance (KfW style bank?)

Long-run growth policies: some thoughts

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- Human capital, scientific innovation and an export industry
- Risks of tougher immigration policy for highly skilled

Long-run growth policies: some thoughts

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- Direct role on GDP
- Productivity effects of immigration in general unclear
- Free movement of highly skilled workers, including scientists a “no brainer”

Long-run growth policies: some thoughts

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- Competition, information & choice
- Design implementation needs care (e.g. NHS price competition)
- Need more geographical (& individual) variation in public sector pay

Long-run growth policies: some thoughts

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- High tech clusters held back by planning system
- Planning and retail productivity
- Labour market regulation & Beecroft. Not UK's major problem

Long-run growth policies: some thoughts

- Competition
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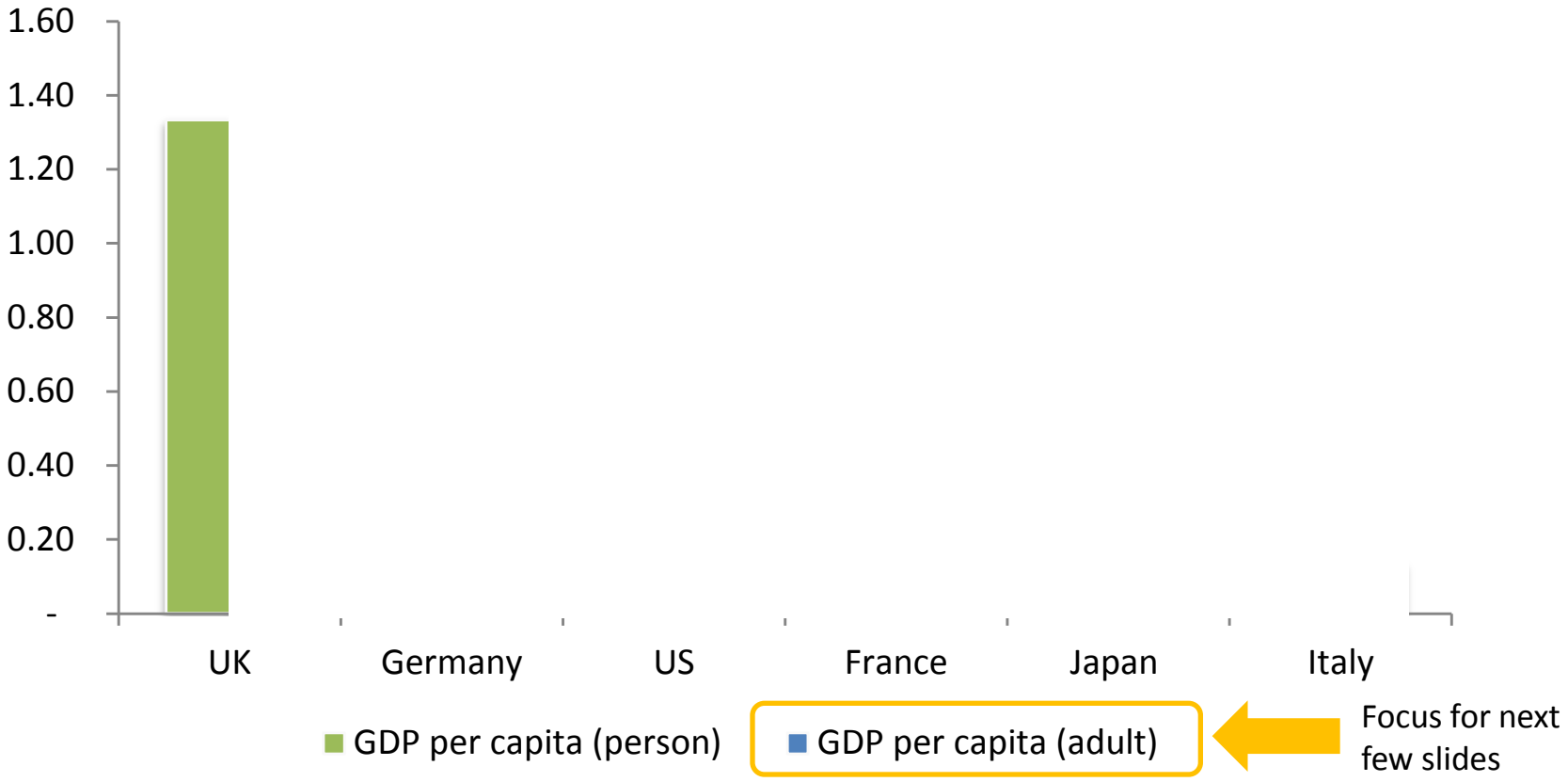
- Agree with thrust of Mirrlees
- Real issues with complexity and instability rather than marginal rates
- Removal of special deductions (e.g. IHT and family firms), removing corporate tax bias towards debt

UK growth in GDP per capita faster than every other G6 country

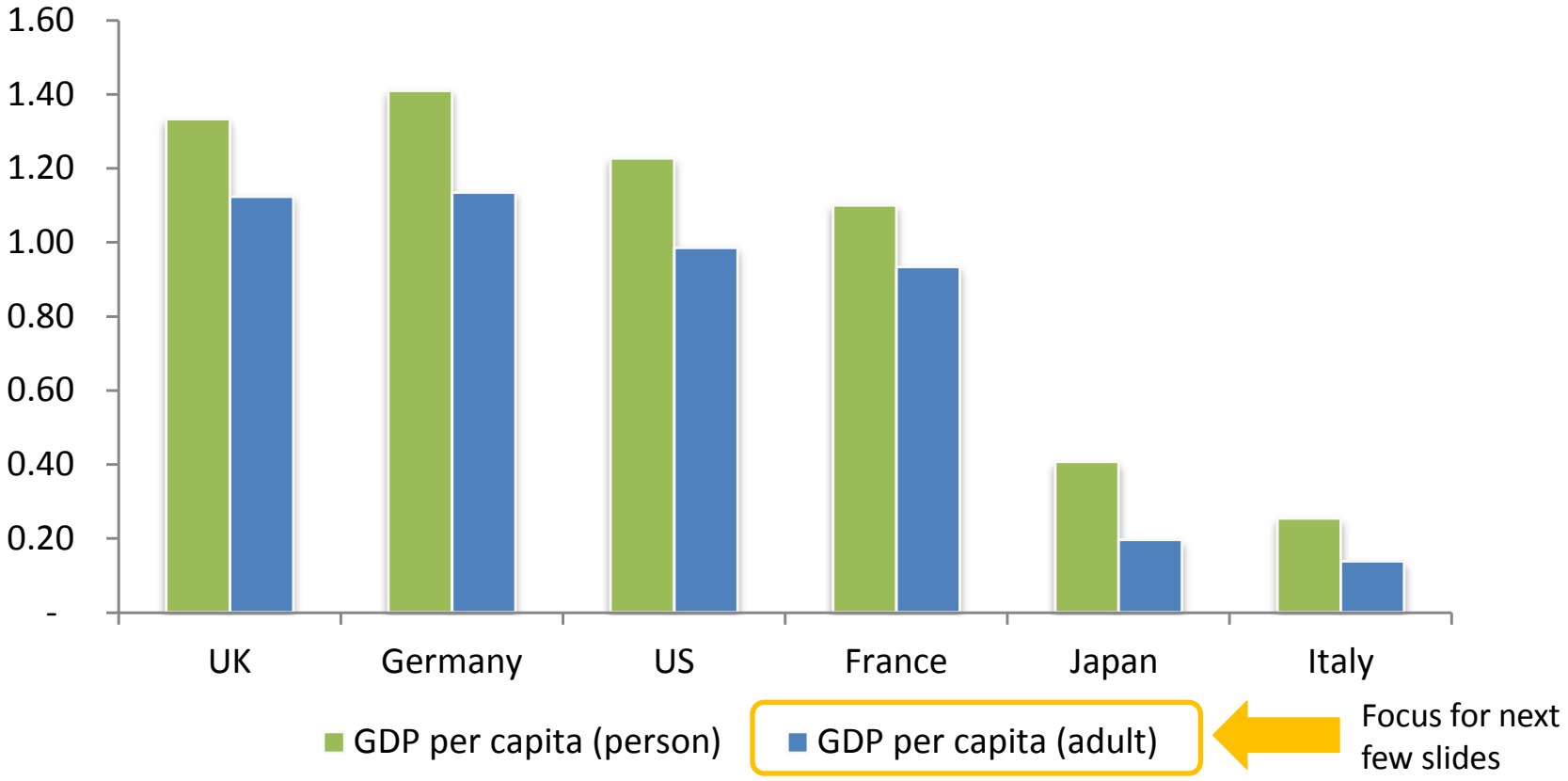
Annual average growth GDP per capita & GDP per adult, 1997-2011



Notes: OECD data GDP is US$, constant prices, constant PPPs, (OECD based year: 2005). Adults are civilian population over 16. US Bureau of Labour Force Statistics.

Growth in GDP per capita since 1997 in G6: UK pretty good

Annual average growth GDP per capita & GDP per adult, 1997-2011



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