

Behind the German job miracle

fRDB Workshop

“Beyond Dual Labour Markets.
Time for Legislation.”

Milan, March 17, 2010

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Is there a German “job miracle” (Krugman)?

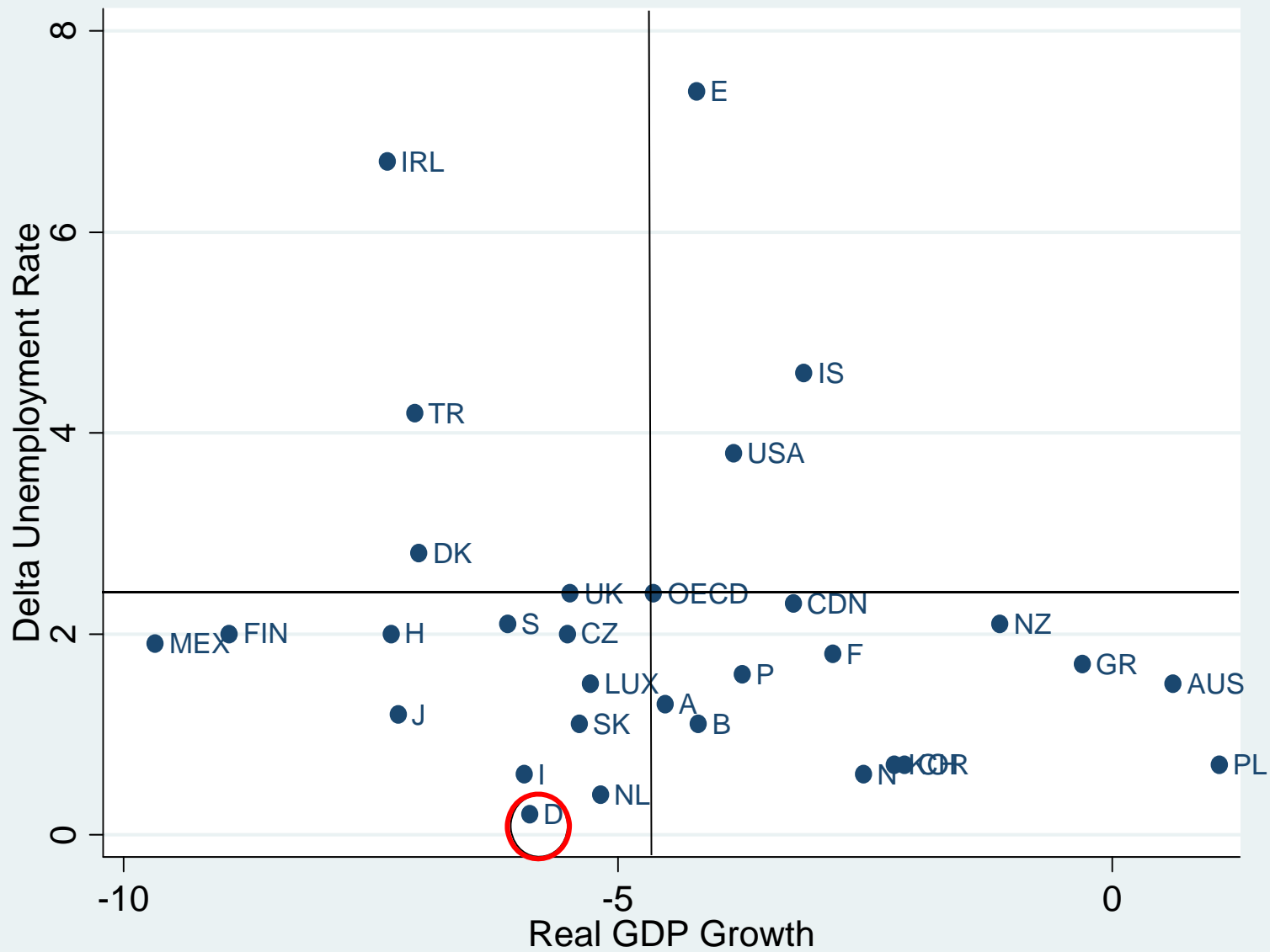
- GDP declined by 5% in 2009, but unemployment rate increased only by 0.2%-points in Germany
- An explanation of this “job miracle” requires understanding the links between the adverse demand shock and internal labour market flexibility in Germany
- There are some lessons to learn for labour market policies supporting internal flexibility, but the specific circumstances of the German “job miracle” have to be kept in mind

This presentation

- Analyses the adjustment of Germany's labour market to the crisis
- Discusses the economic and institutional causes of labour hoarding in German firms
- Describes and analyses the mechanisms of a policy instrument which supports labour hoarding: short-time work benefits

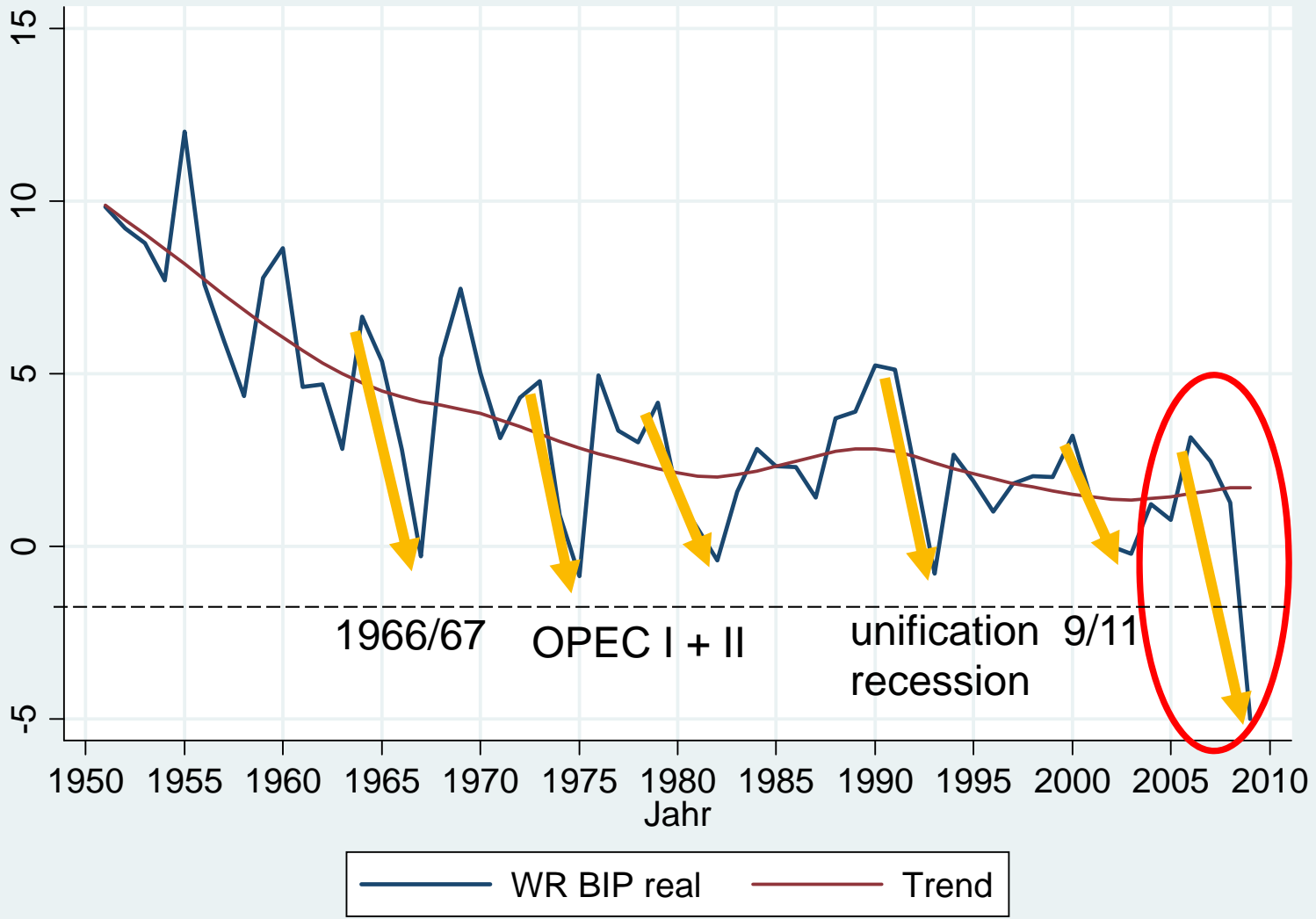
Characteristics of the German shock

- Adverse export demand shock (q2-2008 to q2-2009)
 - Exports declined by almost 40%
 - Manufacturing value added declined by 19.3%
 - total GDP declined by 5.9%
- German financial sector heavily affected
 - Bankruptcies and systemic failure avoided by state aid and guarantees
 - Some indications for credit shortages
- But no real estate bubble
 - Real estate prices have been constant from 1999 to 2009



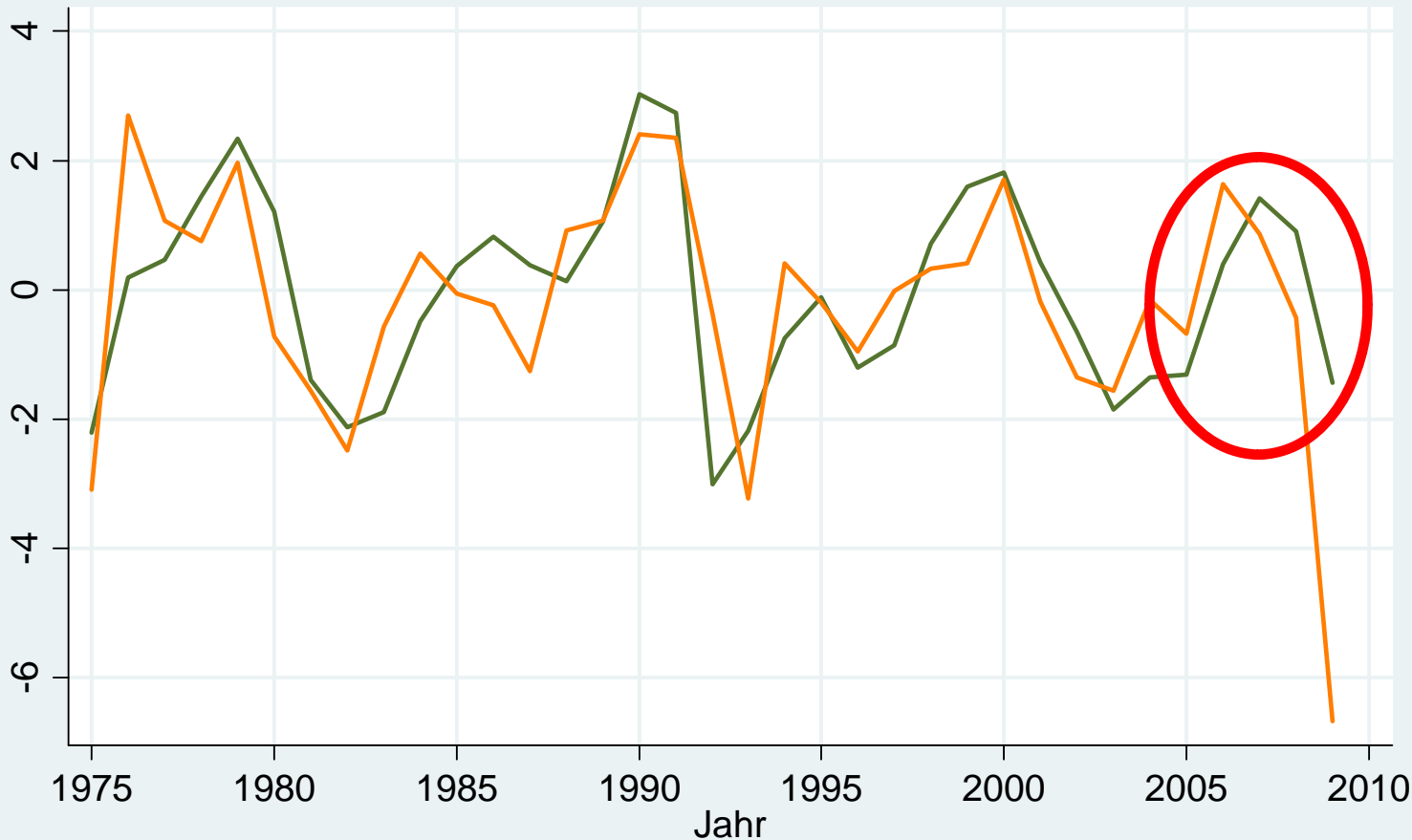
Change of unemployment rate in %-points vs. GDP growth in %, q2 2008 -- q2 2009

Source: IAB/Möller (2010), based on OECD data.



Germany:
Real GDP
growth rate and
trend growth
rate,
1950-2009

Source: IAB/Möller (2010), Statistisches Bundesamt.



Cyclical component of real GDP growth and employment growth, 1975-2010



Source: IAB/Möller (2010), Statistisches Bundesamt, Bundesagentur für Arbeit.

The unexpected employment stability

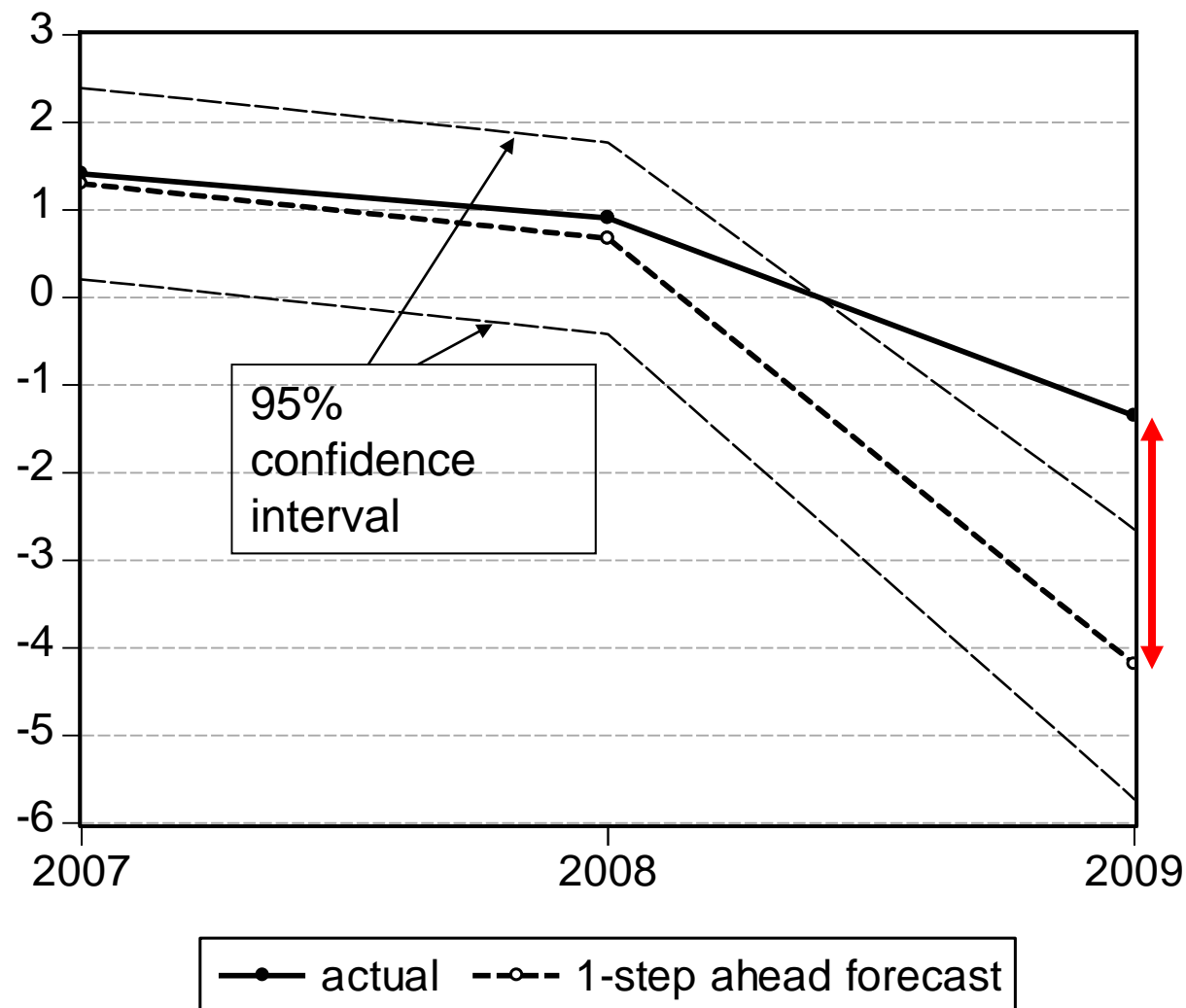
Forecasting the adjustment of employment

D1992	-4.595	-7.913
Test statistics		
Adj. R^2	0.882	
N	32	
s.e.	0.521	
LM (1) χ^2 [p-val.]	0.729	[0.392]
LM (2) χ^2 [p-val.]	2.637	[0.267]

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The unexpected employment stability (cont.)



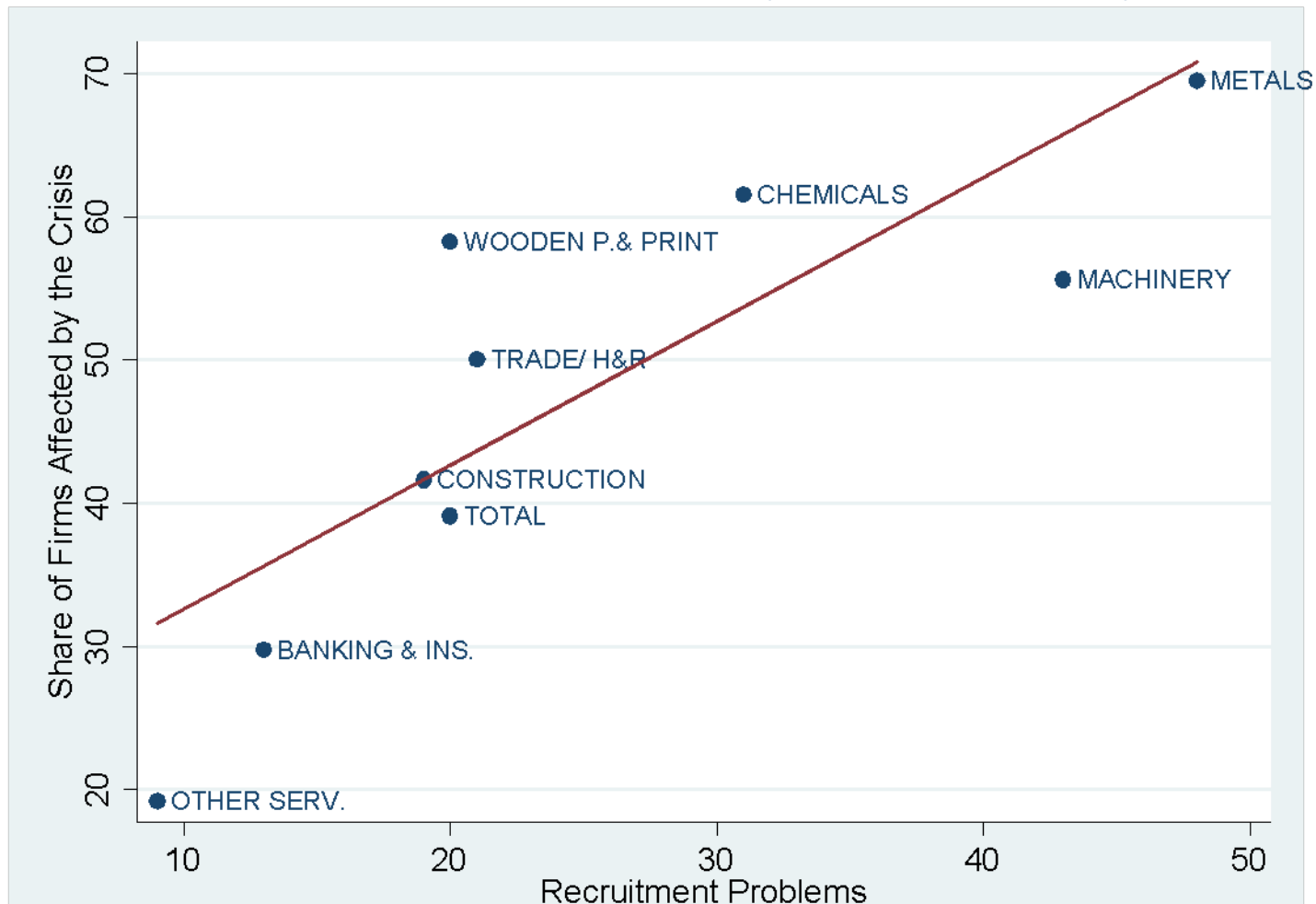
Forecasted and actual growth of employment (cyclical component), 2007-2009

Source: Möller (2010)

Which sectors are affected?

	growth rate of value added in %	
	manufacturing	total economy
upswing q1/2004-q1/2009	9.4	18.4
recession q2/2008-q2/2009	-5.9	-19.3

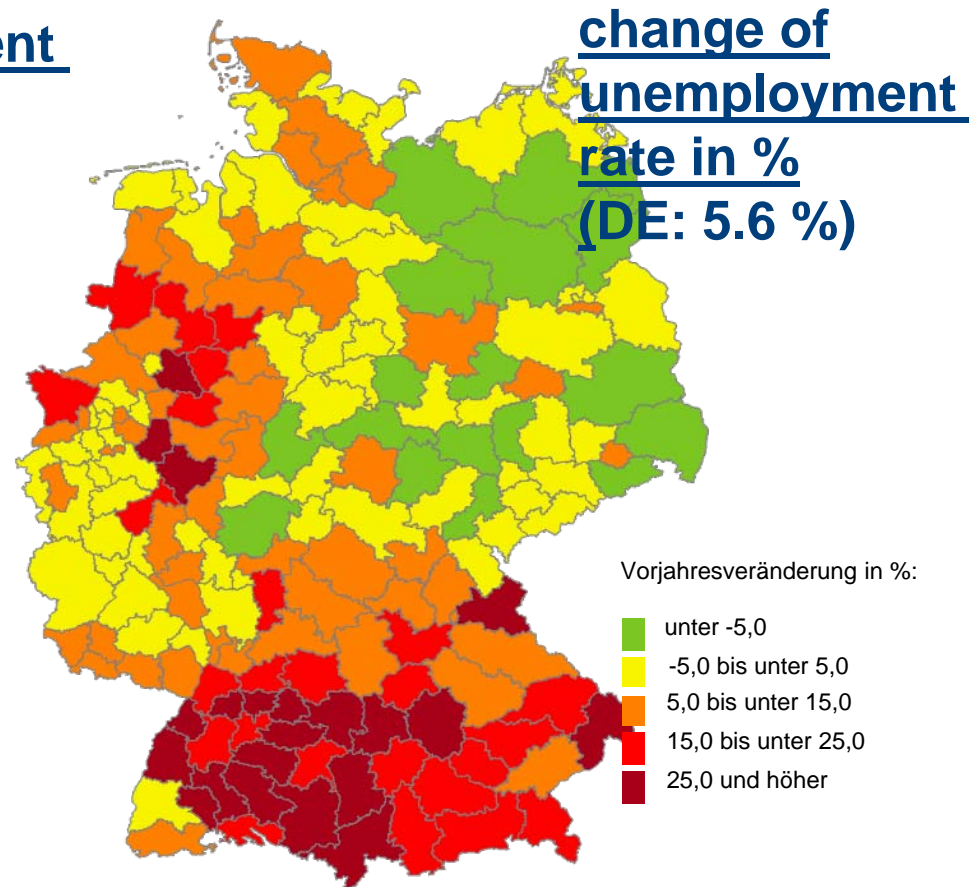
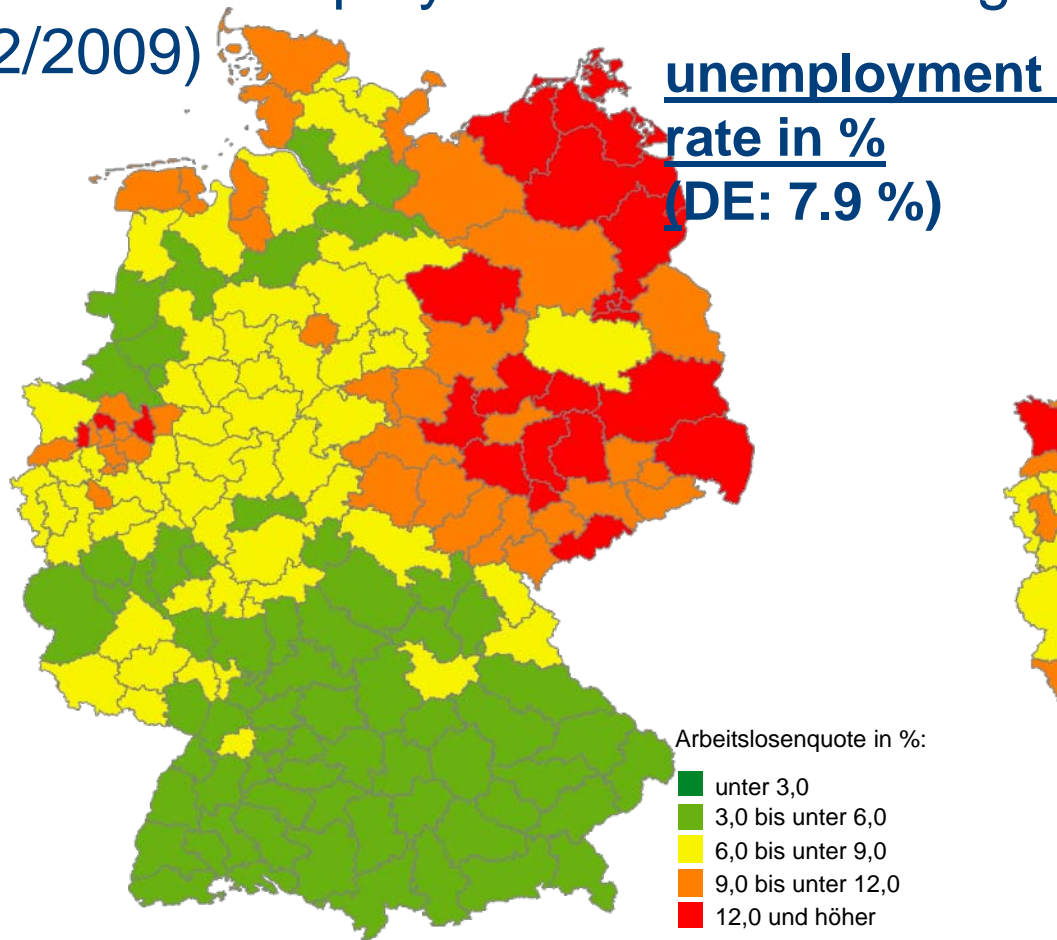
Share of firms affected by labour shortages (2008) and share of firms adversely affected by crisis (2009)



Source: IAB survey of firm vacancies and Möller (2010).

Which regions are affected?

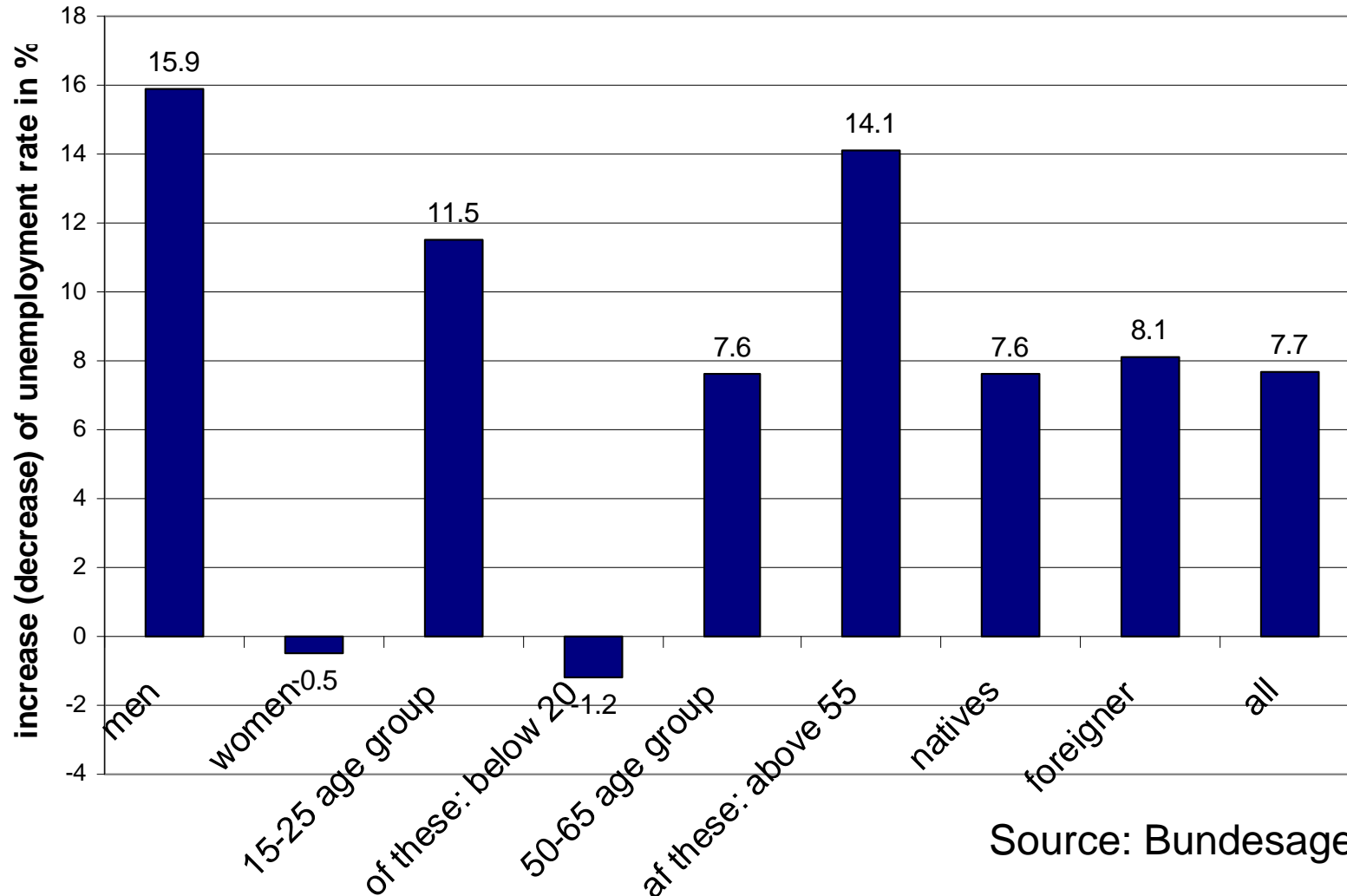
Level of unemployment rate vs. change of unemployment rate in %
(12/2009)



Source: Bundesagentur für Arbeit and Möller (2010).

Which groups are affected?

Annual change of unemployment rate in % (Dec. 2009)



Source: Bundesagentur für Arbeit.

Understanding the job miracle I: sectoral aspects

- The crisis hit basically German export industries which have specific characteristics
 - high share of Melitz (2003) type firms with high productivity and profitability (Fryges/Wagner, 2008)
 - operate under imperfect competition
 - benefited from moderate wage increases relative to Eurozone and other competitors in last upswing
 - faced labour shortages in last upswing
 - have accumulated substantial financial reserves
 - have capabilities to deal with high demand volatility

Understanding the job miracle I (cont.)

- Consequently, the crisis affected regions and workers which have not been affected by the stagnation in 2002-2005
- Service demand has been stable or increasing, while construction was only proportionally affected
- Employment growth in some regions with high unemployment levels
- While dual labour markets are a general feature of the German economy, the crisis has not (much) contributed to increase it

Internal flexibility and labour hoarding

- Decomposing the German output shock shows that firms hoard labour
- High level of internal flexibility through working time adjustment
 - reduction of stocks of overtime working hours
 - working time accounts
 - short term work
- But also substantial reduction in labour productivity

Decomposing real GDP

- In levels:

$$\begin{aligned} \text{GDP} &= \text{labour force} \\ &\quad \times \text{annual working time} \\ &\quad \times \text{hourly labour productivity} \end{aligned}$$

- In changes:

$$\begin{aligned} \text{GDP growth rate} &= \text{growth rate of labour force} \\ &\quad + \text{growth rate of working time} \\ &\quad + \text{growth rate of labour productivity} \end{aligned}$$

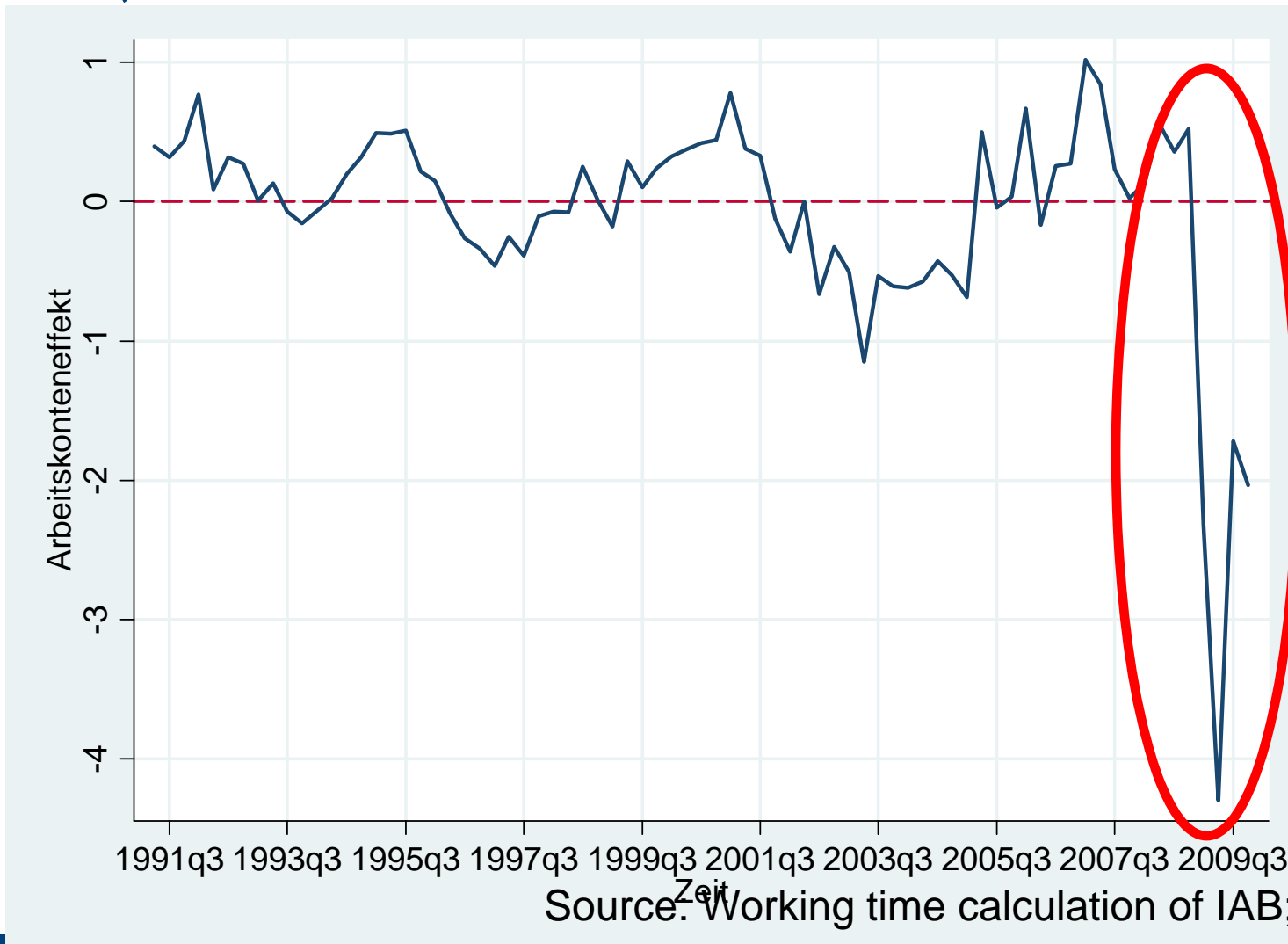
A decomposition of the 2008-09 GDP decline

	labour force	employees covered by social security system
real GDP	-2,693	-1,840
actual employment	-240	-164
labour hoarding	2,450	1,676
of this: unexpected	1,450	990
decomposing labour hoarding		
working time effect	1,391	
short time work	360	
overworking hours	285	
working time accounts	244	
hourly labour productivity	1,063	Source: IAB/Möller (2010)

Overtime work and working hours accounts

- Reducation of stocks of overtime working hours and working time accounts contributed substantially to internal flexibility
 - Reduction of overtime working hours:
285,000 full-time equivalents
 - Working time accounts:
244,000 full-time equivalents
- Share of German firms with working time accounts have increased from 29% (1999) to 41% (2009), particularly in manufacturing

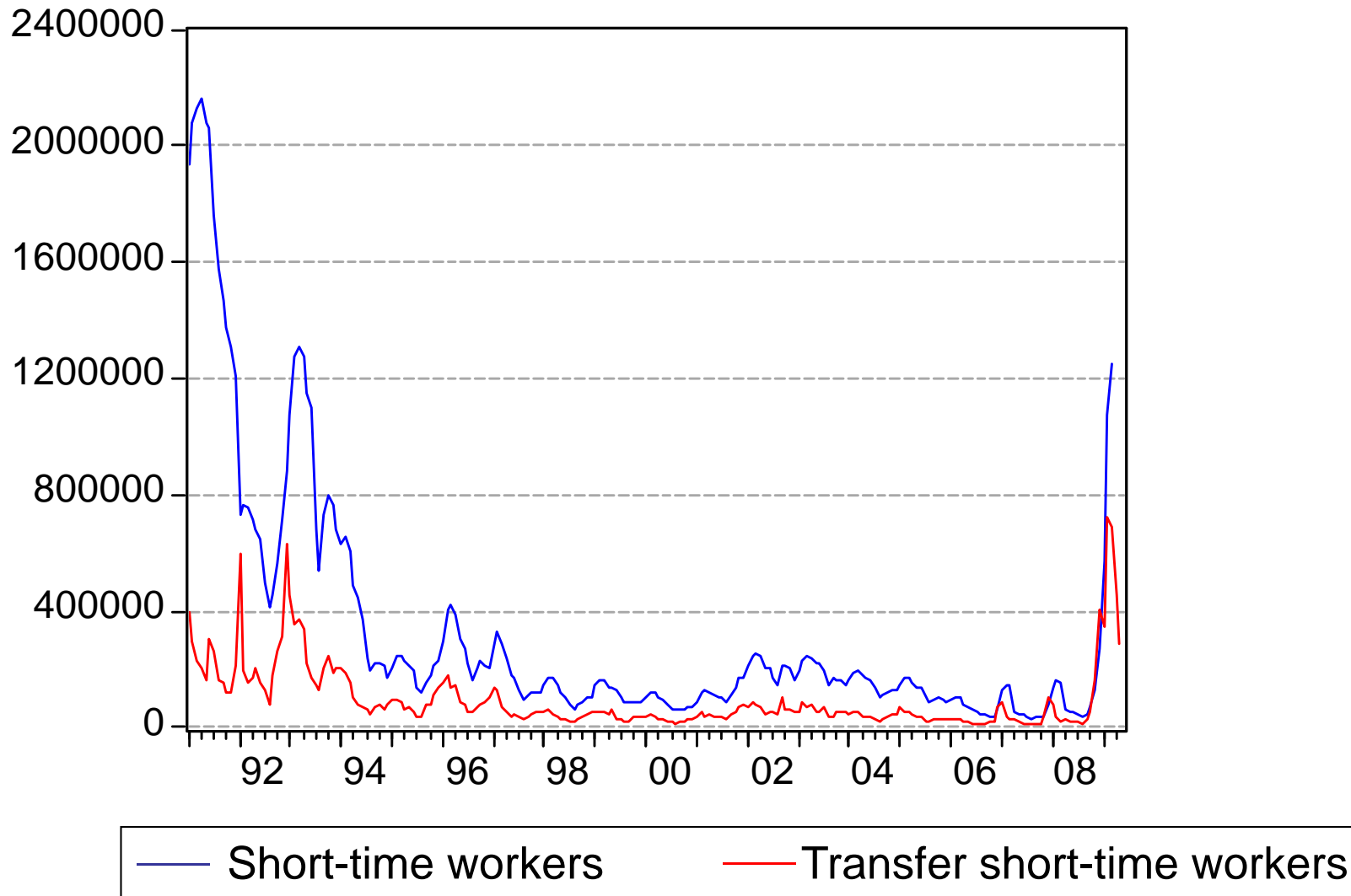
Impact of working time account saldo on labour volume, Q2 1991 – Q4 2009



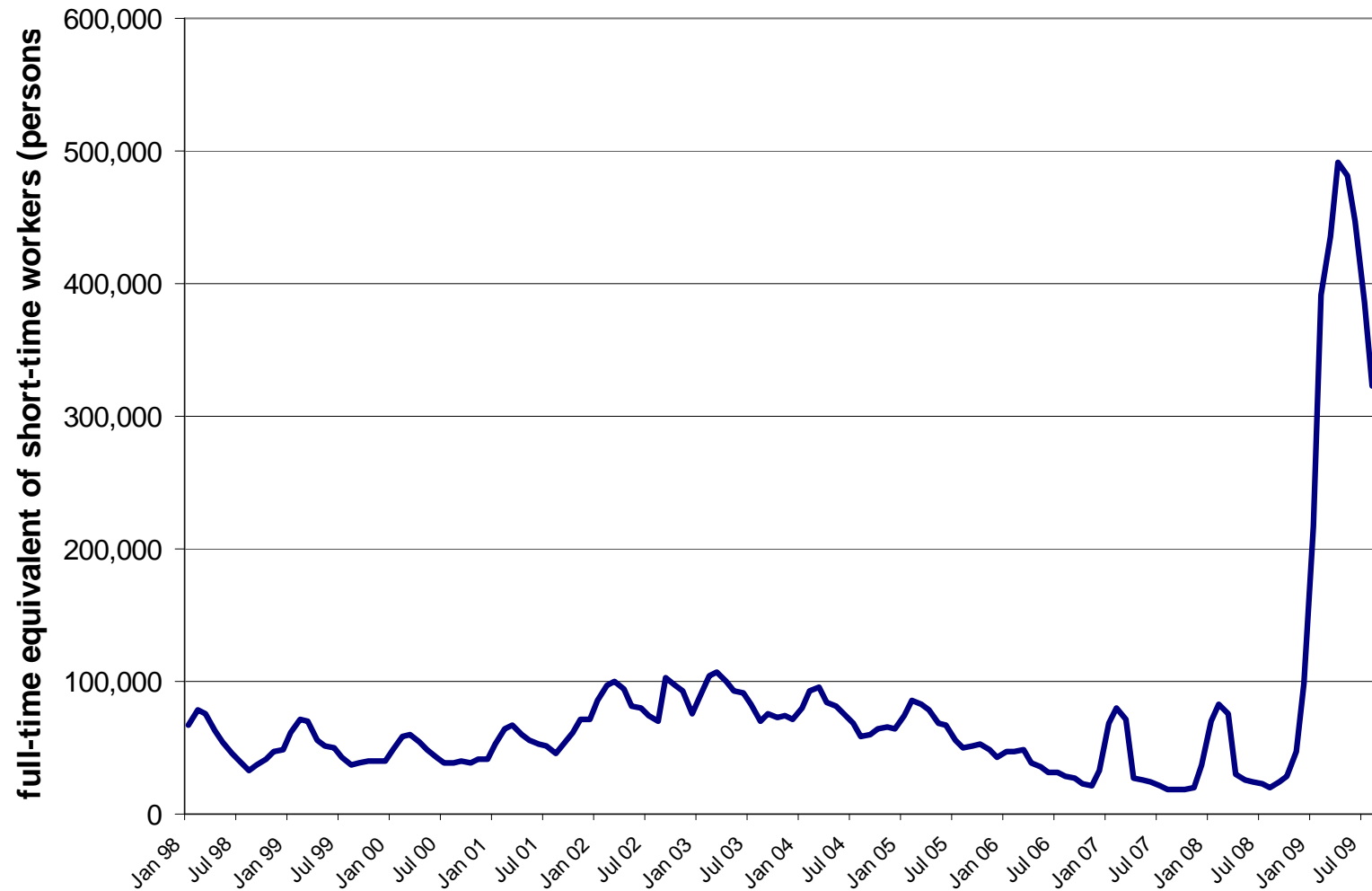
Short-time work benefits

- Explain quantitatively only a moderate part of labour hoarding
 - 360,000 full-time equivalents relative to 2.4 million jobs which are hoarded in 2009 (annual average)
- May however have a larger impact since they subsidise the salaries of much more workers
 - 1.5 millions noticed by Dec. 2009
 - average working-time reduction of 32-40 per cent
 - average duration of 6 month

Short-time workers, Q1-1991 to Q3-2009



Full-time equivalent of short-time workers, 1/2008 to 9/2009



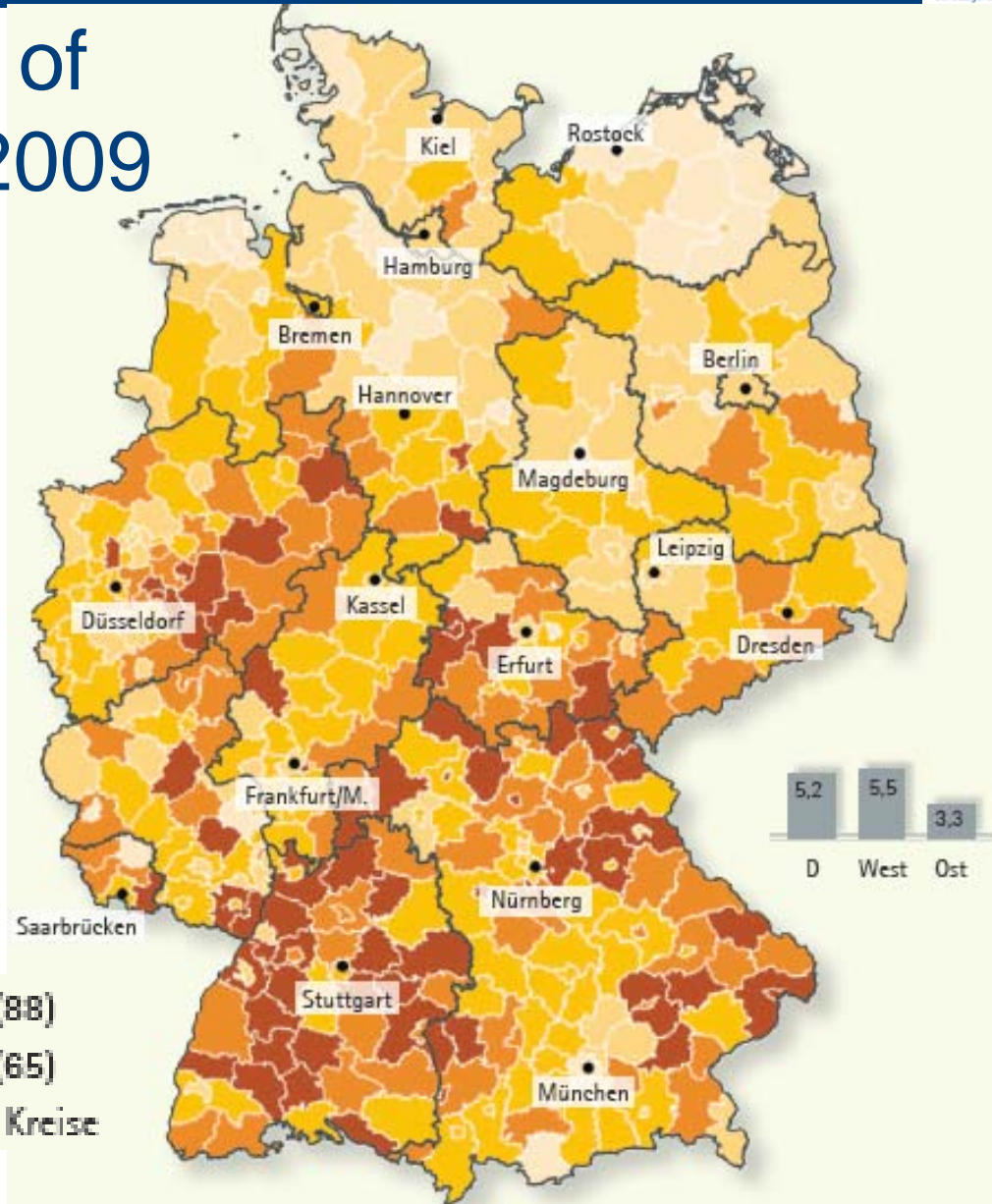
Full-time equivalent of short-time workers by sector, 9/2009

sector	in persons	in % of all
agriculture, mining, energy, water supply	2,750	0.8
manufacturing industries	241,632	71.9
machinery	86,743	25.8
metall	63,665	18.9
automobile	33,297	9.9
construction	12,546	3.7
transport, gross and retail trade	30,937	9.2
services	48,399	14.4
temporary agency work	9,589	2.9
all	336,255	100.0

Source: Federal Employment Services, 2010.

Regional breakdown of short-time workers, 2009 (Labour market districts)

Rate of short.-time workers in %



How do short-time work benefits work ? (I/IV)

- The legal framework
 - Three different types of short-time work benefits
 - Business-cycle short-time work benefits (§ 170 SGB III)
 - Seasonally short-time work benefits (§ 175 SGB III)
 - E.g. construction workers in winter times
 - Transfer short-time work benefits (§ 216b SGB III)
 - Restructuring of firms and enterprises (e.g. plant closures)
- Payment via social security contributions by Federal Employment Services (BA)

How do short-time work benefits work? (II/IV)

- Firms notice short-time work benefits at Federal Employment Services
- Must prove that economic conditions require a temporary reduction of working hours of more than 10% for 1/3rd of employees (since 2009: 1/10th of employees)
- Employee must have a standard contract and pays social security contributions
- Employee must participate in labour market and is subject to job placements
- Enforcement problems

How do short-time work benefits work? (III/IV)

- Replacement rate of 60% (singles) and 67% (1 child or more) analogously to unemployment benefits
- Maximal duration of short-time work benefits is regulated by governmental directive
 - rule: 6 month (never practised), maximum: 24 month
 - 18 month (1/2009), 24 month (6/2009), 18 month (1/2010)
- Firms can apply breaks to prolong duration period

How do short-time work benefits work? (IV/IV)

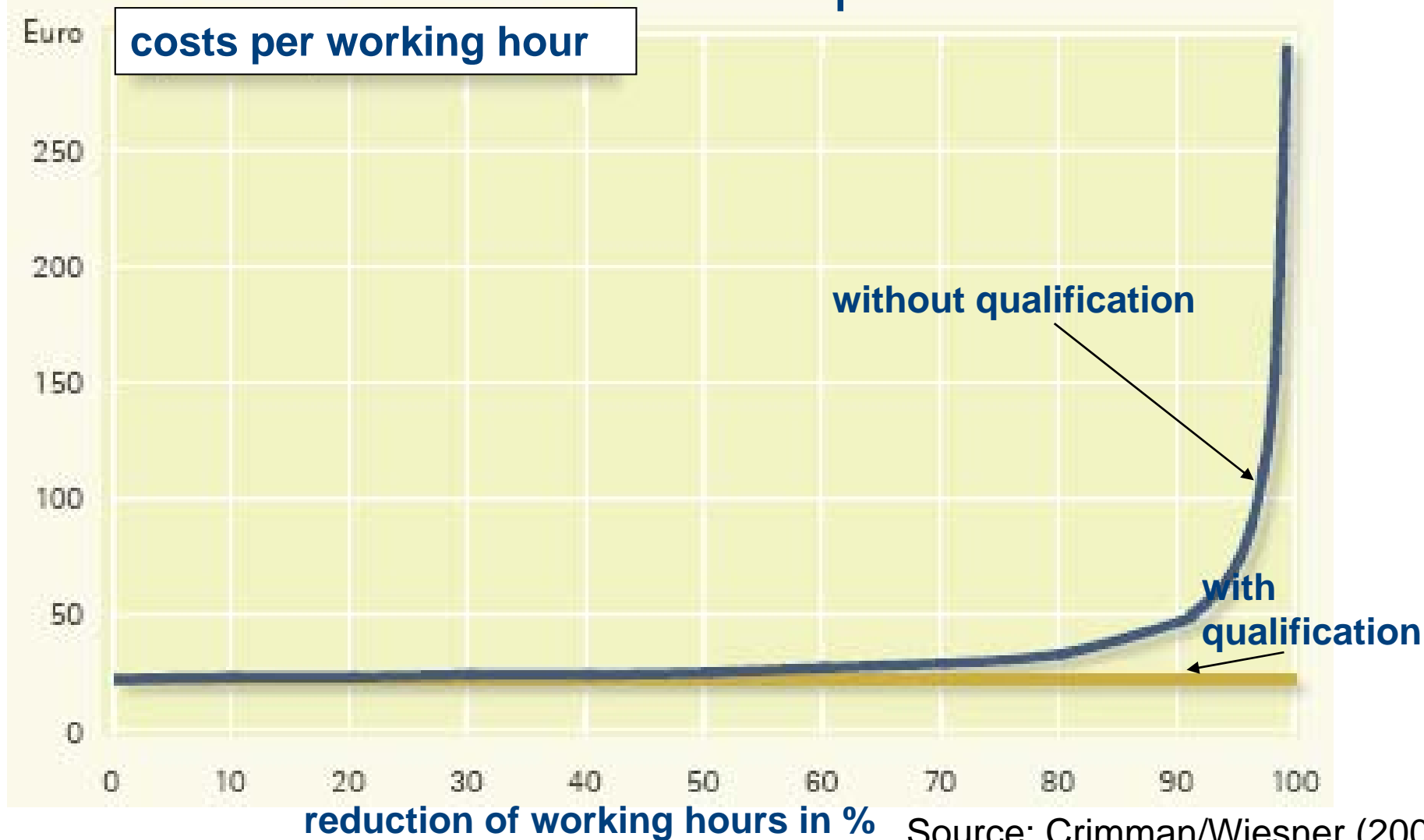
- Retention costs of firms
 - Social security contributions: calculation based on 80% of difference between full-employed gross earnings and actual gross earnings
 - Since 2009, 50% of these are also paid by Federal Employment Services during first six month, then completely
 - If short-time workers participate in approved qualification measures, the Federal Employment Services pays social security contributions
 - Many other fixed costs of employment

Labour costs with and without qualification measures



reduction of working hours in % Source: Crimman/Wiesner (2009)

Labour costs with and without qualification measures



Source: Crimman/Wiesner (2009)

What incentives creates this system?

- Sharing a (small) part of the costs of short-time work benefits and fixed employment costs create firm incentives to use the instrument only temporarily and when a recovery is expected
- Reducing the firm contribution in the course of the crisis has extended the utilisation of the instrument and may result in higher employment reductions later
- The instrument is expensive but affects structural adjustment less than many observers expect

Understanding the German job miracle II

- Thus, firms respond to demand shock by using internal flexibility mechanisms
- Adjust working time by
 - reducing the stock of overtime working hours
 - working time accounts
 - short-time work arrangements
- Still, reduction in hourly labour productivity indicates that firms hoard labour beyond that by a substantial amount

Why do firms hoard labour?

- Option value of waiting theories
 - e.g. Bentolila/Bertola (1990)
- Explains hiring and firing decisions by irreversible investment in human resources under uncertainty
 - Option value of waiting generates zone of inactivity
 - Threshold level of firing increases with size of irreversible investment, firing costs and uncertainty
- Links between firm and sector characteristics and institutions may explain why high option value of waiting is particularly high in Germany

Institutions and internal flexibility

- System of vocational training increases incentives to invest in firm-specific human capital
- Employment protection creates still high firing costs
 - Social plans forces firms to fire productive workers first
- Short-time work benefits compensate firms partially for labour hoarding
- Increasing firm-level wage setting and industry-level collective wage agreements which allow firms to opt out facilitate internal adjustment