# East Germany on the path from transition to European integration: results, shortcomings, future challenges

by Gerhard Heimpold (in collaboration with Mirko Titze)

at the Conference “Competitiveness in Europe: confronting Italy and Germany”, Rome, 11 and 12 July 2011

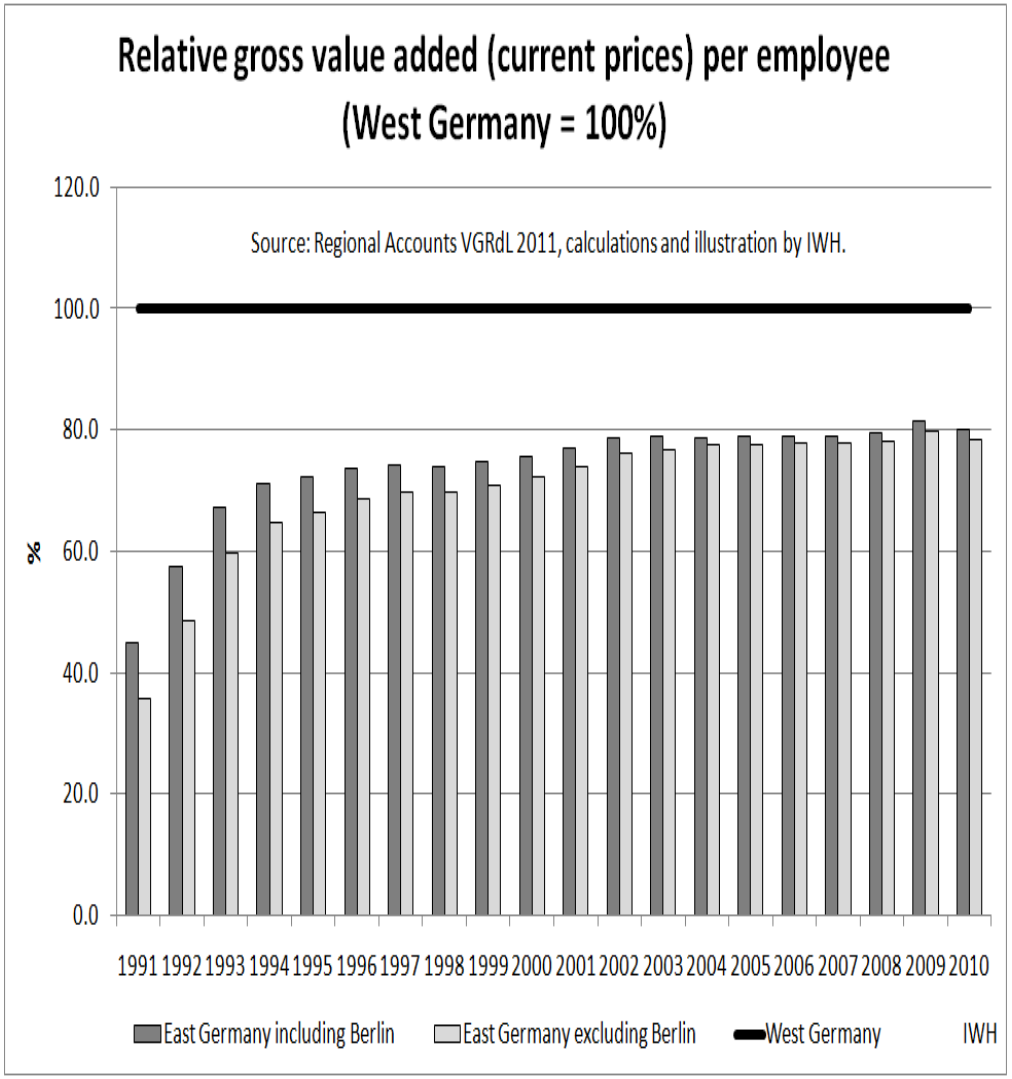
Version as of 08/07/2011

# Economic Results - Productivity

Twofold challenge for East Germany‘s economy after German Unification: First: overcoming the legacies of the centrally planned economy; implementing institutions of a social market economy; second: becoming part of an integrated Europe.

Productivity: considerable catching up in terms of productivity up to 80% of the West German level occurred; however, beginning in the mid 1990ies, catching up has decelerated, and later it has stagnated.

⇨ What economic theories predict regarding regional convergence / divergence?



# What economic theories predict regarding regional convergence / divergence?

German Unification as a case of economic integration:
Neoclassical theory in its simplest models suggest convergence in the sense of equalization of factor prices by factor mobility (cf. e. g. Richardson 1978, p. 130);

Contrary, recent theoretical strands, represented mainly by New Economic Geography, predict divergence or convergence; New Growth Theory is interpreted in a way that regions that possess a better initial position in terms of endowment with capital/human capital will grow faster due to externalities (cf., e.g., the summary in McCann/van Oort 2009, pp. 19-32, especially p. 24); New Economic Geography predicts that, depending on economies of scale in relation to costs of transportation, spatial concentration of economic activities may occur (cf. Krugman 2009, pp. 561-571, especially p. 567).

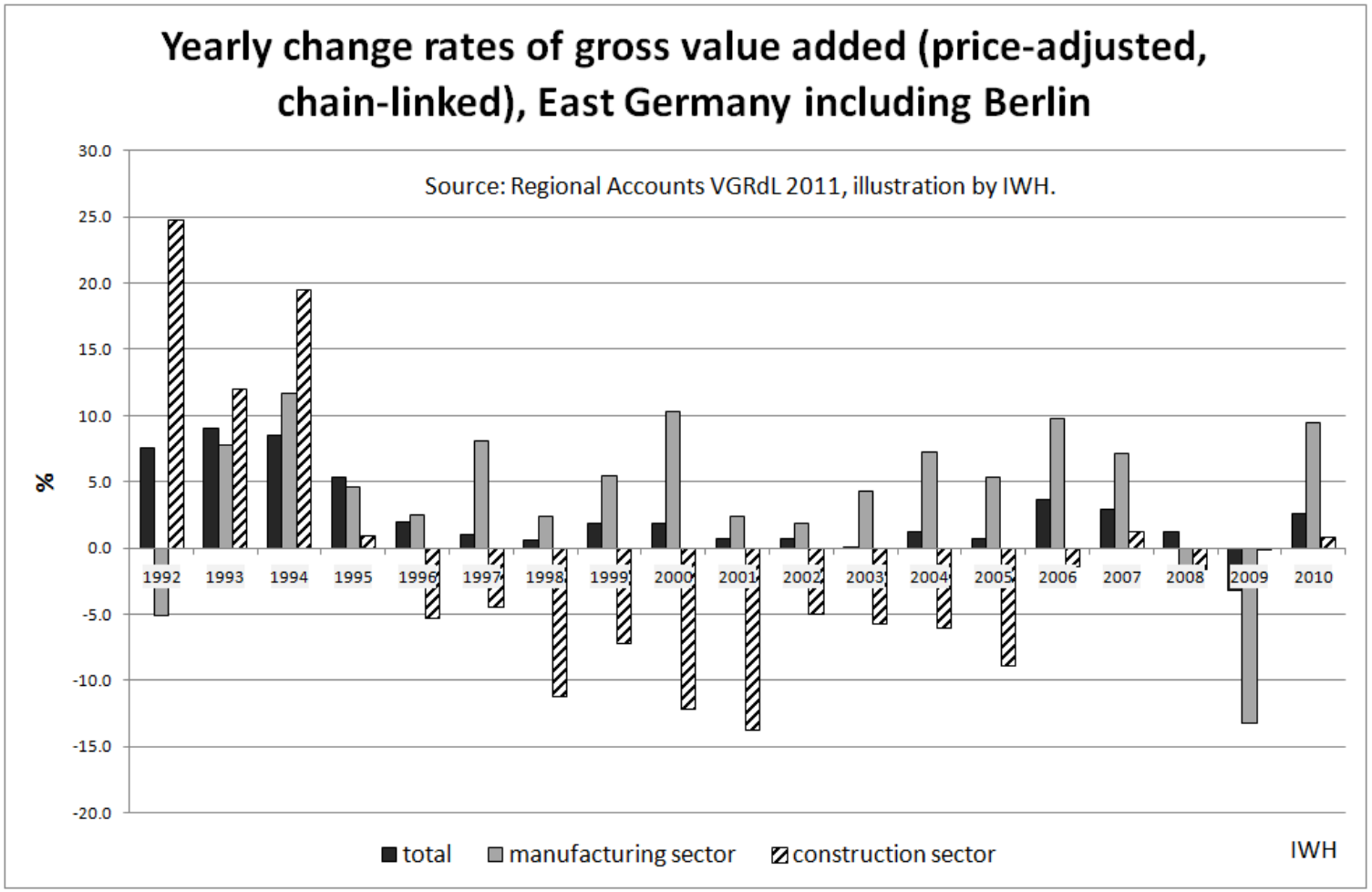
⇨ Researchers‘ view on East Germany‘s situation?

# Researchers‘ view on East Germany‘s situation

As hindrances for catching up were prominently highlighted (cf., e. g., Sinn/Westermann 2000):
- exorbitant wage increases exceeding the productivity, in combination with 1:1 currency exchange;
- infrastructural shortcomings;
- financial transfers inducing a kind of „Dutch Disease“ (ibid. p. 21).

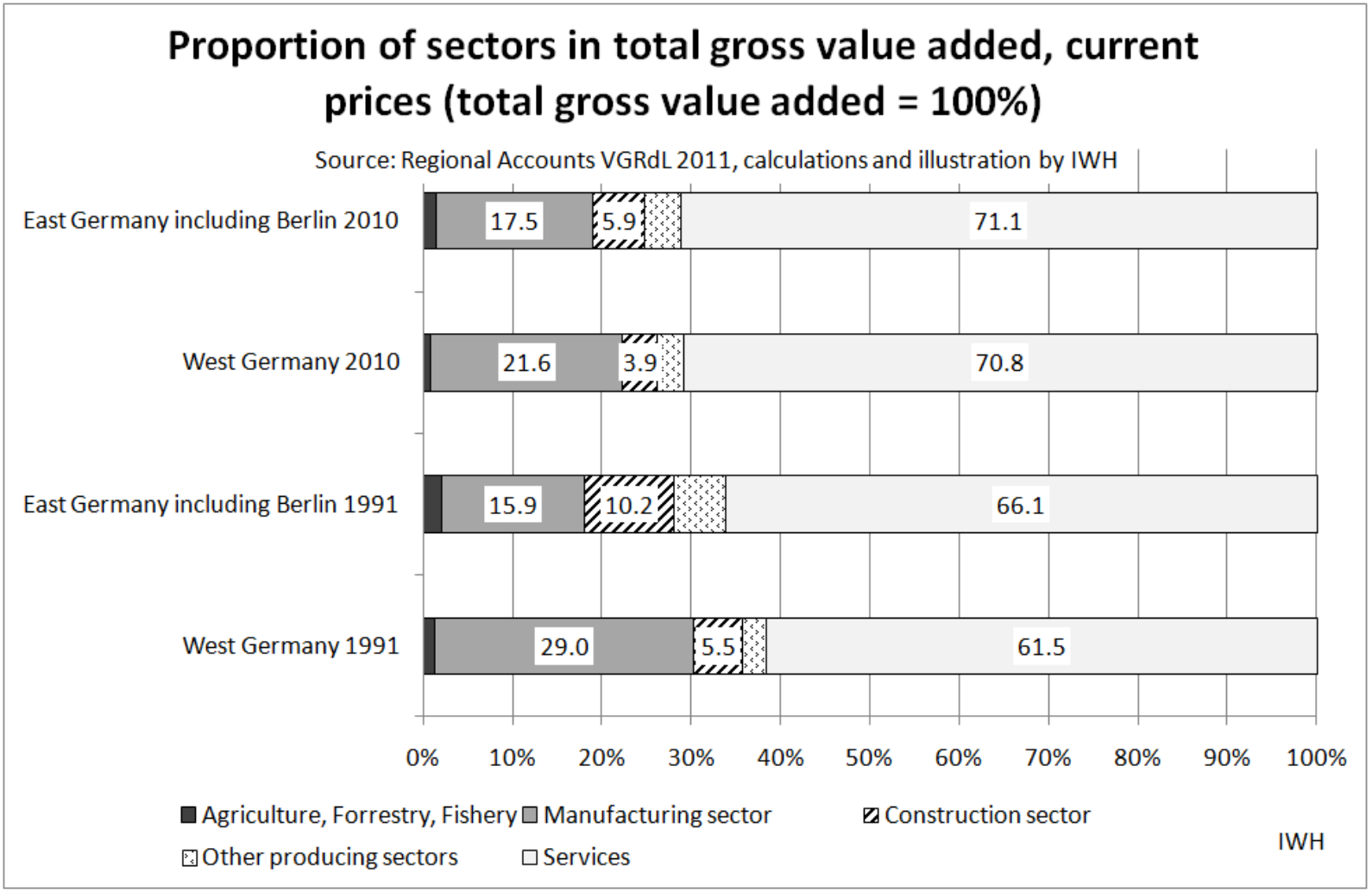
In the meantime, the hindrances mentioned lost of importance: Unit labor costs of East German manufacturing sector are lower than in West Germany (cf. Blum et al. 2010, pp.13, 77; infrastructure was modernized and large scale consumer-related transfers for job creating schemes, early retirement and retraining lost of importance.

Brakman/Garretsen (1994 , pp. 64-73) have New Growth Theory in mind, regard externalities as important for catching up; against this background the presentation will have a closer look on structural shortcomings which might provide further insights regarding East Germany‘s economic performance.




**Shift of driving forces: early 1990ies: de-industrialization, construction sector as an important driver of growth; beginning in the mid-199ies: construction sector shrank whereas manufacturing sector has evolved as a growth engine.**

# Shortcomings



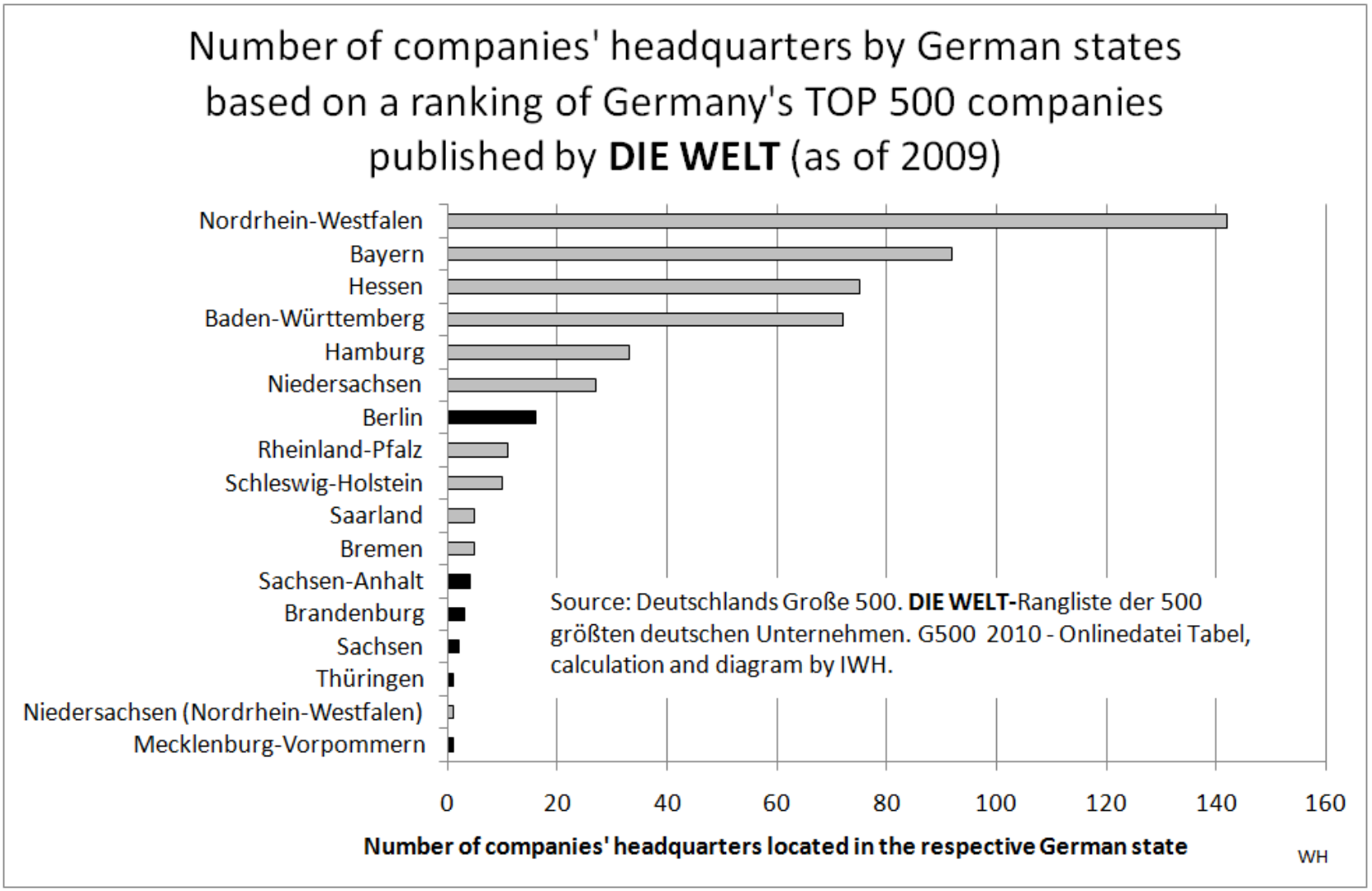

**Though the manufacturing sector has evolved as a growth engine, a lower proportion of the manufacturing sector in total gross value added is given in East Germany in comparison with West Germany.**

Size distribution of companies by turnover size (2008)

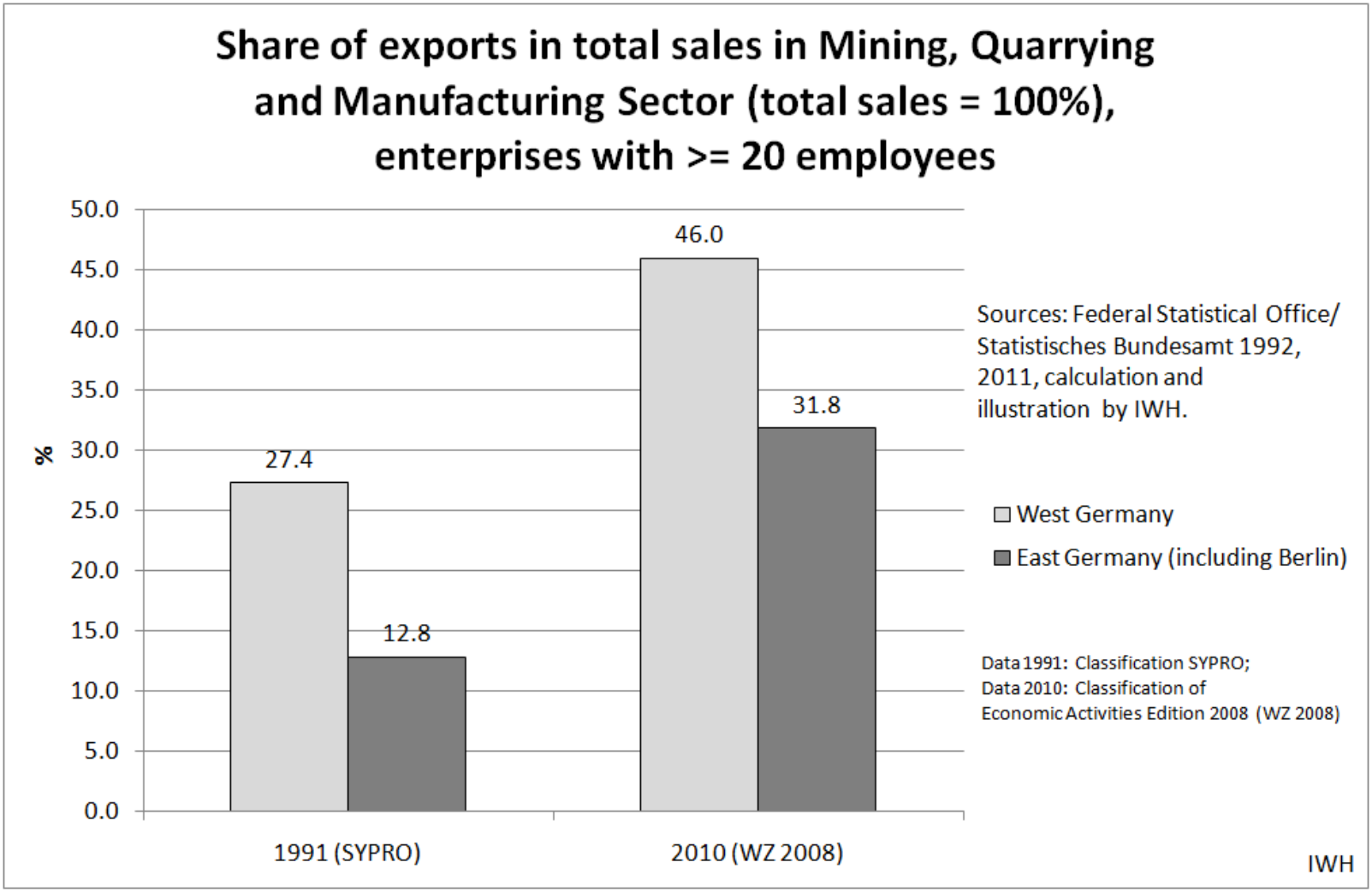
| | East Germany including | | West Germany excluding | |
|---|---|---|---|---|
| size groups in terms of turnover | Number of units liable to turnover tax | Turnover | Number of units liable to turnover tax | Turnover |
| <= 2 Mio | 95.3 | 22.5 | 93.8 | 11.6 |
| > 2 Mio <= 5 Mio | 3.8 | 17.6 | 4.6 | 10.3 |
| > 5 Mio <= 50 Mio | 0.7 | 16.7 | 1.2 | 13.1 |
| > 50 Mio | 0.1 | 43.2 | 0.4 | 65.1 |
| total | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Federal Statistical Office/Statistisches Bundesamt 1010a, calculations by IWH.

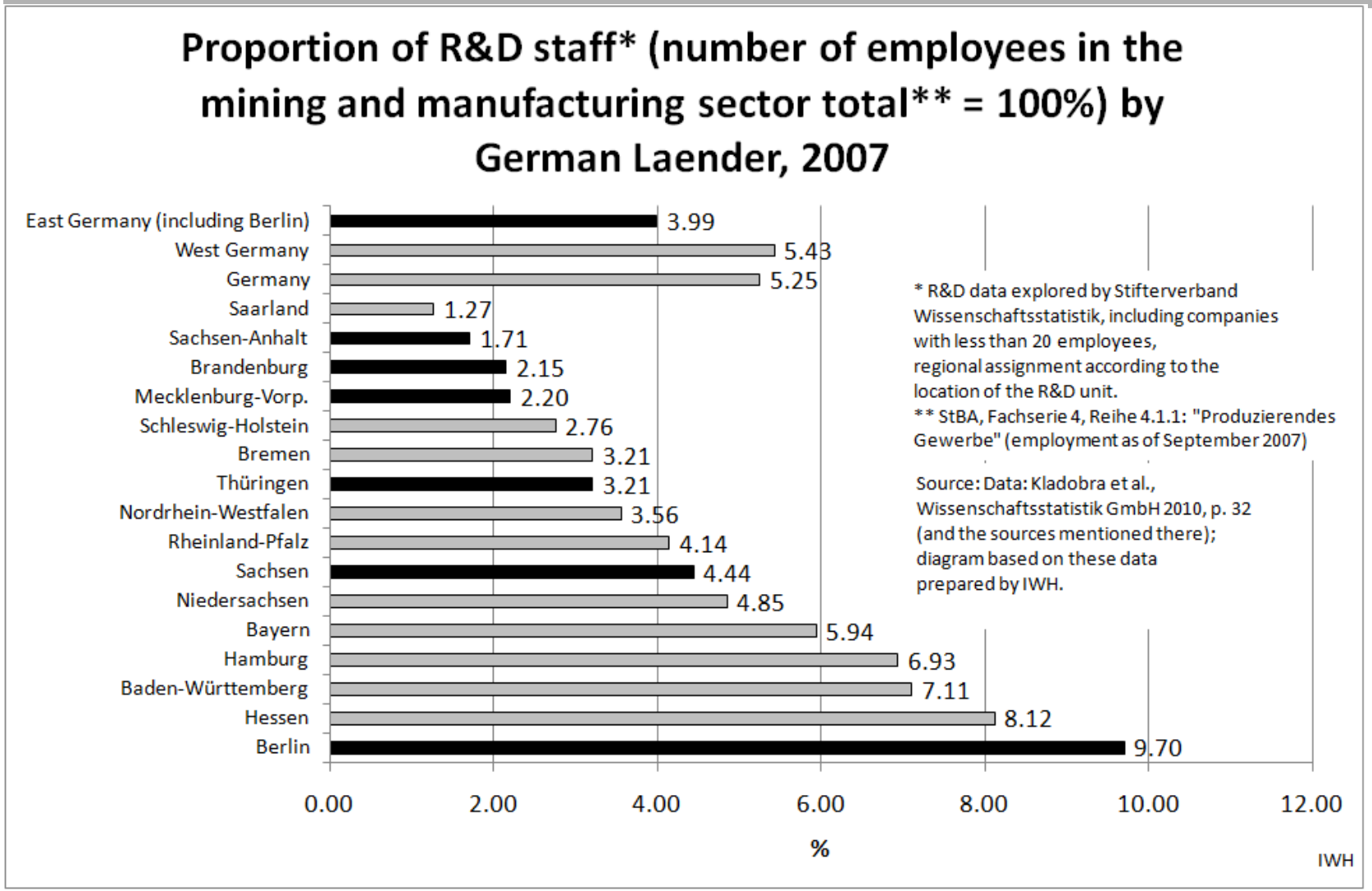
Lack of large companies and smaller proportion of large companies in total turnover in East Germany compared to West Germany.




**East Germany hosts only few headquarters.**




**Export intensity in the East German manufacturing sector is lower than in West Germany.**




**Personnel in research and development (R&D) in mining and manufacturing industries is lower than in West Germany.**

# Potentials for clustering

Clusters as drivers for regional prosperity, cluster concept has become popular with M. Porter's (1990, 1998) contributions; goes back especially to Marshall (1920/1962) who emphasized spatially concentrated industries and to J. Jacobs (1969) who focused on urban economies and its diversification.

Identifying clusters empirically requires identifying actors and interactions:

IWH method to identify cluster potentials (cf. Titze et al. 2011, Brachert et al. 2011) displays actors by using the Sternberg and Litzenberger's (2004) cluster index; based on employment and establishment statistics (Federal Employment Agency, Germany) and data on surface area and number of inhabitants (Federal Statistical Office, Germany); interactions are displayed by Qualitative Input Output analysis based on Schnabl 1994, 2000 (for details cf. Titze et al. 20011, Brachert et al. 2011); data source = Input Output statistics provided by Federal Statistical Office, Germany.

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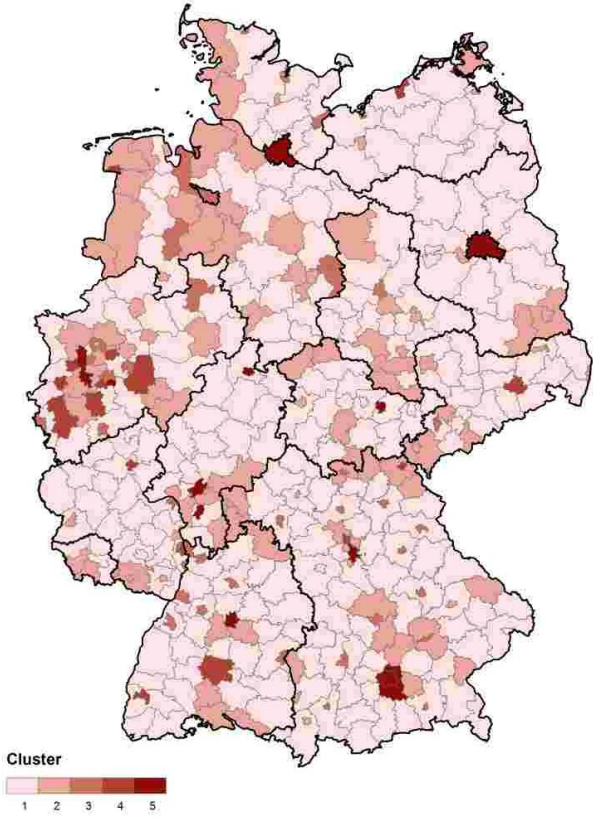
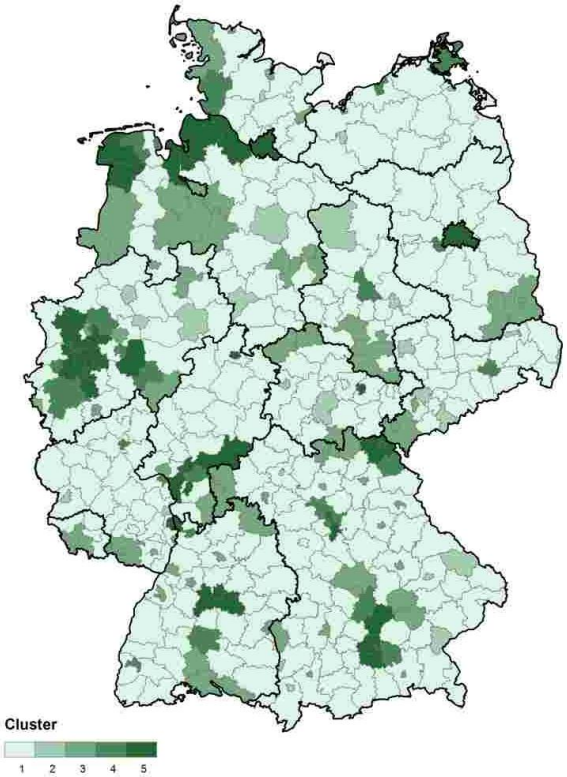
# Potentials for clustering (2003) in German districts (I): lower potentials for clustering in East Germany

Local cluster structures
(Regarding intra-regional linkages)




Regional cluster structures
(Including inter-regional linkages)




## Cluster classes

| Class | Description |
|---|---|
| 1 | Regions with no concentrated economic activity |
| 2 | Regions with one industrial cluster |
| 3 | Regions with more than one industrial cluster |
| 4 | Regions with one sectoral interdependency of industrial clusters |
| 5 | Regions with more than one sectoral interdependency of industrial clusters |

The maps were elaborated by Michael Barkholz, Dept. Formal Methods and Databases, IWH.

Sources: Statistics of the Federal Employment Agency and StBA 2008, own calculation and illustration by IWH according to Titze et al. 2011.

# Potentials for clustering in German districts (2003) (II)

Number of regions showing characteristics of industrial clusters
(values in parantheses = in percent):

| | | Class 1: Regions with no concentrated economic activity | Class 2: Regions with signs of horizontal clusters | Class 3: Regions with strong horizontal clusters | Class 4: Regions with first signs of vertical clusters | Class 5: Regions with strong vertical clusters | In total |
|---|---|---|---|---|---|---|---|
| Cluster class regarding intra-regional intermediate flows | East Germany | 79 (69,9) | 26 (23,0) | 3 (2,7) | 2 (1,8) | 3 (2,7) | 113 (100,0) |
| | West Germany | 183 (56,1) | 77 (23,6) | 40 (12,3) | 15 (4,6) | 11 (3,4) | 326 (100,0) |
| Cluster class regarding intra- and inter-regional intermediate flows | East Germany | 79 (69,9) | 11 (9,7) | 14 (12,4) | 6 (5,3) | 3 (2,7) | 113 (100,0) |
| | West Germany | 183 (56,1) | 14 (4,3) | 64 (19,6) | 23 (7,1) | 42 (12,9) | 326 (100,0) |

Sources: Statistics of the Federal Employment Agency and StBA 2008, own calculation and illustration by IWH according to Titze et al. 2011.

Cluster potentials in East Germany's districts look stronger by considering first-neighbor regions; with exception of districts with strong vertical clusters.

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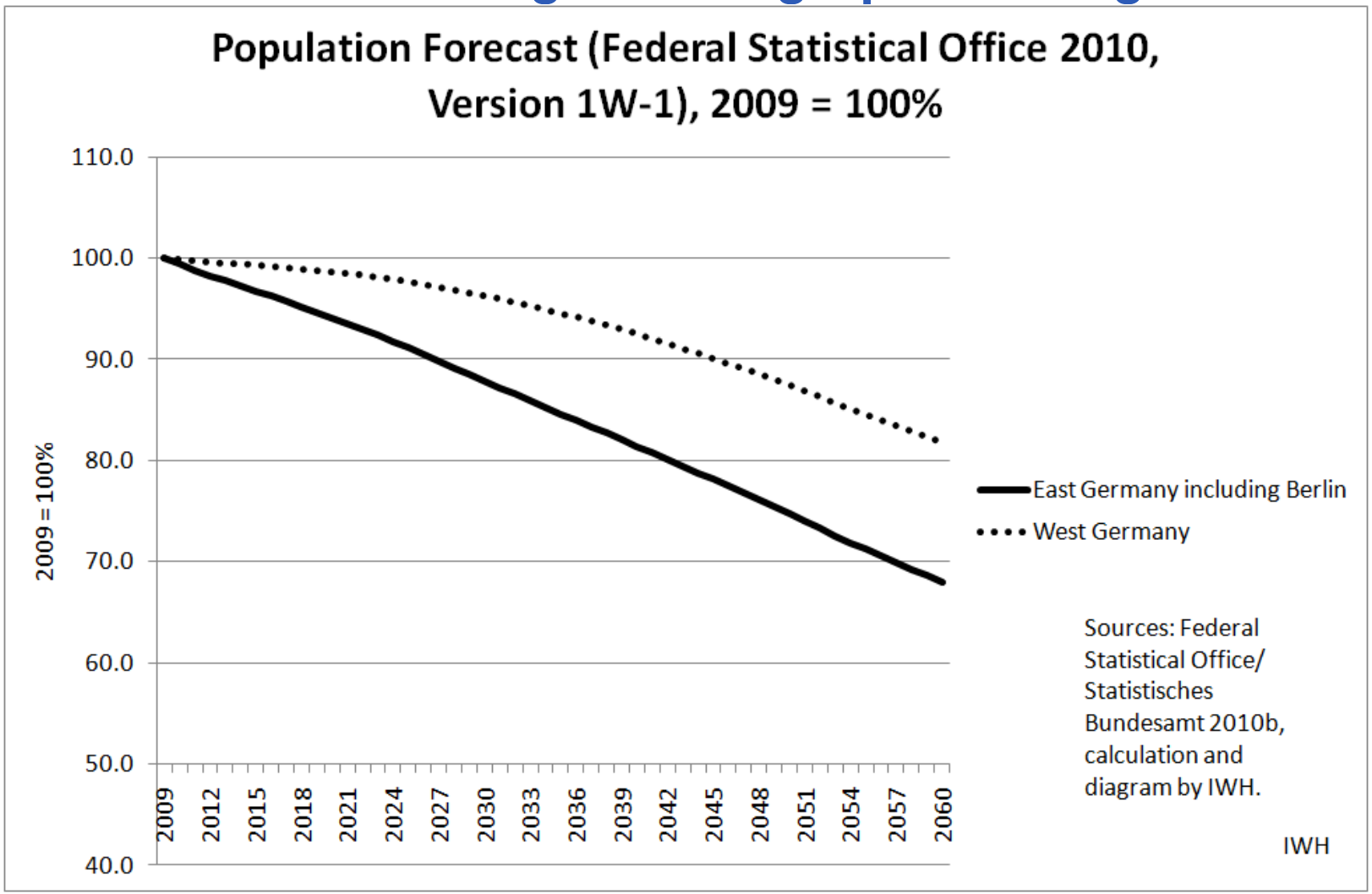
# Future challenge: Demographic change




Population decrease both in East and West Germany, but earlier and more intensively in East Germany.

# Conclusions

Remaining structural shortcomings can hardly be abolished directly and rapidly;

attracting large firms represents a relatively rare case;

headquarters can hardly be relocated;

changing the size structure will require “natural” firm growth: small firms have to become medium-sized, and medium-sized large;

firm growth takes time and patience;

economic policy may only have indirect impact on firm growth by providing business-friendly framework conditions;

to compensate for small firm size and to enhance knowledge transfer: support for clustering and networking may be appropriate; enhancing knowledge transfer between public research units and private firms;

demographic change in mind, firms and economic policy have to increase their efforts to maintain human capital.

# Thank you for the attention!

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