

Comparing European Metropolitan Regions in Germany

Wages diverge conspicuously

The aim of the concept „European Metropolitan Region“ is to strengthen the economic performance of a region and to set important impulses for the global economy. The wage level as an indicator of a region's economic strength shows strong distinctions between the eleven German Metropolitan Regions, along with a clear west-east gradient.



In Germany and Europe, the Metropolitan Regions constitute the motors of economic, social and cultural development. This is the central tenor of the Framework of Action for Spatial Planning („Raumordnungspolitischer Handlungsrahmen“) that the Conference of Ministers for Spatial Planning adopted in 1995. Metropolitan regions are to help shape the spatial development of the region through political, social and economic initiatives mutually undertaken in the largest German towns and the corresponding agglomeration areas. The aim is to intensify socio-cultural relations and to strengthen the economic power of the Metropolitan Region in respect to growth, competition and innovation (see Box: The „European Metropolitan Region“ concept).

In other words, the Metropolitan Regions are being seen as playing a leading role. By comparing the regional wage level in the eleven German Metropolitan Regions, one can evaluate to what extent they actually adopt this leading role, as the wage level of a region is an important indicator of wealth and economic performance.

Wages differ greatly among the western German Metropolitan Regions

The average wage level diverges greatly among the Metropolitan Regions. The nationwide monthly gross median wage of 2,615 euros in 2008 is taken as a reference value. According to this, 50 per cent of the full-time employed in Germany earn less and 50 per cent more than 2,615 euros per month (see Figure 2).

In western German Metropolitan Regions, the gross monthly wage fluctuates between close to 2,489 euros in Bremen/Oldenburg and roughly 2,991 euros in Stuttgart. Hence, employees in Stuttgart receive on average about a 20-per-cent-higher wage than employees in Bremen/Oldenburg. Compared with the nationwide median wage of approximately 2,615 euros, only the full-time employed subject to social security contributions in Nuremberg and Bremen/Oldenburg earn below average in relation to western Germany.

On the other hand, the regional wage level in the Metropolitan Regions of the Rhine-Ruhr, Rhine-Neckar, Frankfurt/Rhine-Main, Munich, Stuttgart, Hamburg and

The „European Metropolitan Region“ concept

Since the middle of the 1990s, the largest and most important German urban regions have been conferred the status of „European Metropolitan Regions“. This includes small regions such as the Rhine-Neckar with 2.36 million citizens as well as large regions like the Rhine-Ruhr with 11.69 million inhabitants (see Figure 1 and the corresponding Table). Along with core towns and their densely populated agglomeration areas, these also cover large rural areas which are intermeshed with the urban centres by way of their commuter flows. The metropolitan areas choose themselves to be classified as Metropolitan Regions. The Metropolitan Regions recognized in this way are organised into initiatives or associations whose members consist of municipal regional authorities. This pooling of efforts produces advantages for the individual members. They increase their visibility in the region and can profit economically from exchange and cooperation with other members of the Metropolitan Region.

At the present time, there are eleven European Metropolitan Regions in Germany. However their composition changes constantly because new regional authorities join the associations while others leave. Individual regional authorities can also join several associations on account of the loose organisational structure of the Metropolitan Regions.

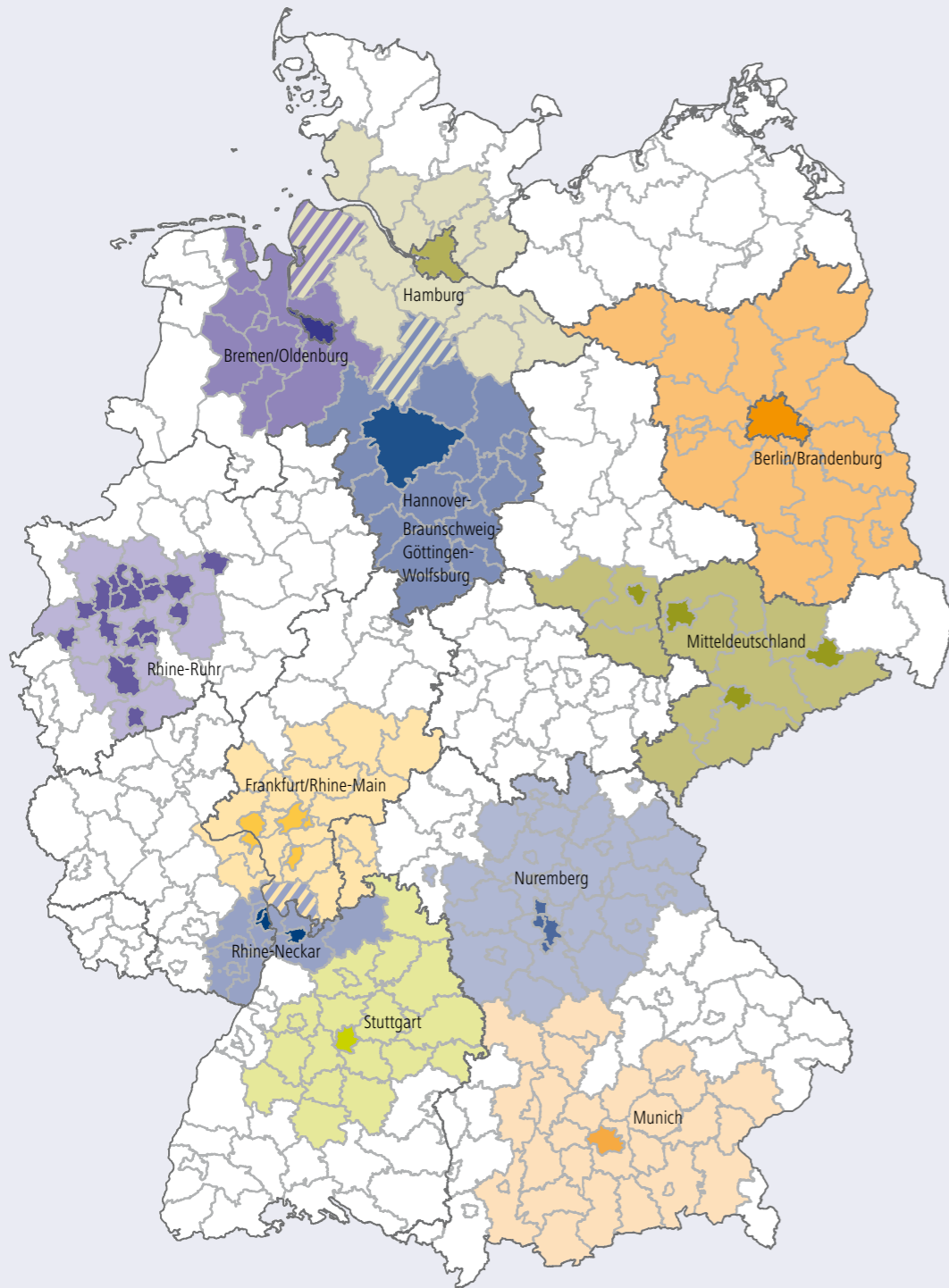
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Hannover-Braunschweig-Göttingen-Wolfsburg lies above the nationwide average. The average monthly wage is clearly higher than the median wage.

There is a steep wage gradient between the western and eastern part of Germany

In both eastern German Metropolitan Regions Berlin/Brandenburg and Central Germany, the wage level is be-

Figure 1
European Metropolitan Regions in Germany 2008



Notes: Metropolitan Regions and populations on 31.12.2008 from the Regional Monitoring of the Metropolitan Regions (BBR/IKM 2010).

Employees subject to social security contributions in full-time without trainees, extrapolated on the basis of the Integrated Employment Biographies Sample (Stichprobe der Integrierten Arbeitsmarktbiografien/SIAB) on 30.06.2008.

The core towns of the respective Metropolitan Regions have been coloured in a darker shade.

Source: Graphic representation based on Rusche/Oberst (2010), own calculations.

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low the level for Germany as a whole. The average gross monthly wage in Berlin/Brandenburg is just short of 2,241 euros. With 1,908 euros, the Metropolitan Region of Central Germany lags well behind in comparison to Berlin/Brandenburg, and also in comparison to the eastern German average of 1,977 euros.

In the countrywide comparison of the European Metropolitan Regions it is conspicuous that employees in Bremen/Oldenburg, the region with the lowest wages in the western part of Germany, still on average earn about 250 euros more per month than employees in Berlin/Brandenburg where the wage level lies clearly above the eastern German median wage. This mirrors the continuing strong wage gradient between the western and the eastern part of Germany.

Wage differentials are influenced by many factors

However the unadjusted wage differentials described above are only of a descriptive nature. It is not sufficient to only analyse these, as wage differentials between the Metropolitan Regions may be influenced by a multitude of factors, for instance, by differences in the employment or establishment structures. These different influencing factors can be identified or subtracted out by means of decomposition procedure (see Box „Data and Methods“). A part of the differences in wages is thus due to differences in the regional employment or establishment structures.

The remaining „unexplained“ part comprises, along with the non-observable characteristics, the extra wages or wage reductions that the employees of the particular Metropolitan Region receive in comparison to the nationwide average. For example, in Munich the calculations show that two-thirds of the on average 15-per cent-higher wage cannot be explained by observable differences (see Figure 3). The remaining third relates to observable factors such as employment, establishment and regional structure.

For instance, the differing sectoral structure plays an important role. The Metropolitan Regions with the highest level of wages – namely Stuttgart, Rhine-Neckar and Munich – also exhibit by far the highest proportion of em-

ployees in intensive, knowledge-based sectors. But even when subtracting these factors, employees in the Metropolitan Region of Munich still earn 10 per cent more, hence exhibiting the highest wage level of all the Metropolitan Regions. On the basis of the adjusted figures, 4 to 6 per cent higher wages are paid in the Metropolitan Regions of Frankfurt/Rhine-Main, Stuttgart and Hamburg. The adjusted monthly wage in the regions Rhine-Ruhr, Bremen/Oldenburg, Hannover-Braunschweig-Göttingen-Wolfsburg, Rhine-Neckar und Nuremberg lies very close to the nationwide average.

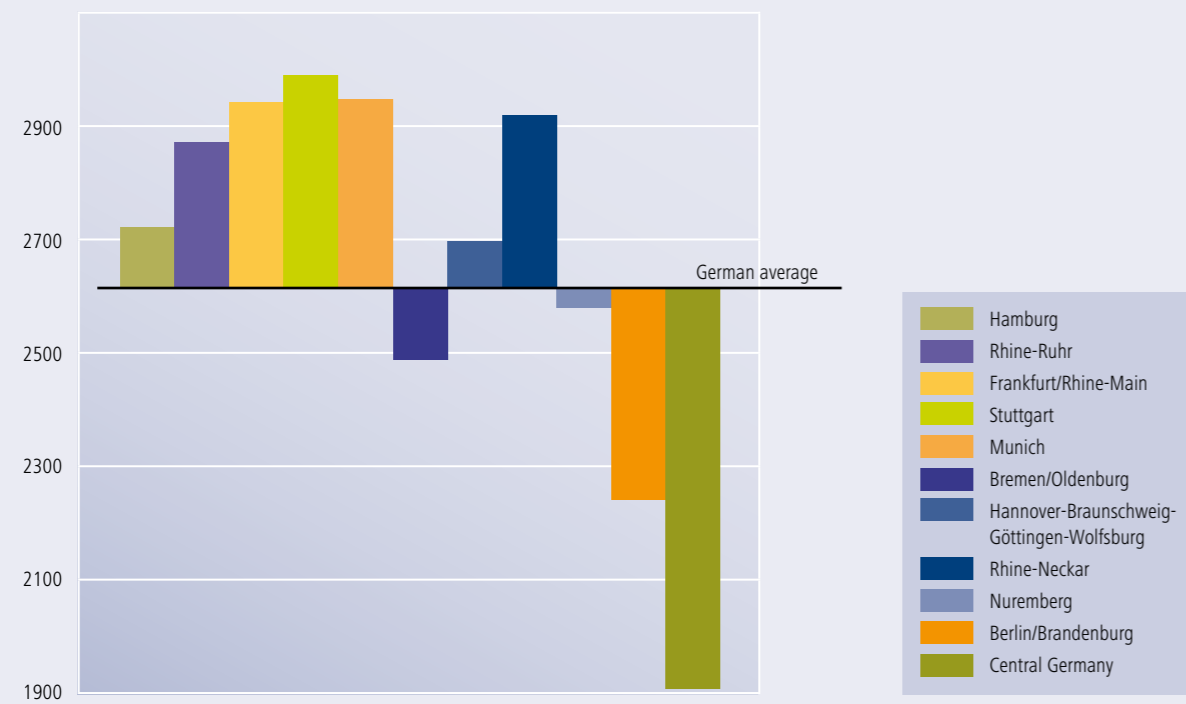
Table for Figure 1

European Metropolitan Regions in Germany 2008

Metropolitan Regions	Inhabitants in millions	Full-time employed in millions	Year of admission
Rhine-Ruhr	11.69	2.50	1995
Central Germany	6.90	1.04	1997
Berlin/Brandenburg	5.95	1.27	1995
Munich	5.60	1.44	1995
Frankfurt/Rhine-Main	5.52	1.45	1995
Stuttgart	5.29	1.42	1995
Hamburg	4.29	0.95	1995
Hannover-Braunschweig-Göttingen-Wolfsburg	3.88	0.90	2005
Nuremberg	3.60	0.88	2005
Bremen/Oldenburg	2.73	0.53	2005
Rhine-Neckar	2.36	0.52	2005
Metropolitan Regions in total	57.13	12.91	–
Germany in total	82.00	19.68	–

Note: The year of admission indicates the year of admission to the association of European Metropolitan Regions.

Figure 2
Gross median wage in the Metropolitan Regions in 2008
in euros



Note: The diagram represents the gross median wages of full-time employees subject to social security contributions, compiled on 30.06.2008.
Source: Sample of Integrated Labour Market Biographies (Stichprobe der Integrierten Arbeitsmarktbiografien/SIAB), monthly wages, own calculations.

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In comparison to the other Metropolitan Regions and to the country as a whole, the two eastern German Metropolitan Regions Berlin/Brandenburg and Central Germany trail far behind. However the deficit in wages of the Central German Region decreases considerably if the respective employment and establishment structures are taken into account. Nevertheless, in comparison to the country-wide level, the employees there still have to accept a wage reduction of 10 to 19 per cent.

Conclusions

Since the middle of the 1990s, eleven Metropolitan Regions have established themselves in Germany with the aim of strengthening the economic power of the respective region by means of more intensive cooperation. An indicator of the regional economic power is the wage level.

From a purely descriptive perspective, the wage level in the Metropolitan Region of Munich with the highest incomes surpasses the national average by close to 15 per cent, while the region with the lowest incomes, Central Germany, lies a good 30 per cent below the national average for Germany. When one subtracts the regional differences in the employment and establishment structure, this gap still amounts to plus 10 and minus 19 per cent respectively.

Some Metropolitan Regions – above all the regions in southern German with Munich as a leader but also Frankfurt/Rhine-Main, Stuttgart and Hamburg – can be regarded as being especially fit for the future and productive on account of their above-average high wages.

The other western German Metropolitan Regions trail far behind in comparison to the leading group and rank close to the national average in relation to regional earn-



Data and Methods

The evaluations of region-specific wage differentials are based on the SIAB 7508 (Stichprobe der Integrierten Arbeitsmarktbiografien/Integrated Employment Biographies Sample) which contains data on the employment biographies of two per cent of all employees subject to social security contributions on a daily basis. The evaluations are limited to all persons employed on a full-time basis on 30 June 2008 and between the ages of 15 and 65. Trainees, marginal employees and part-time employees are excluded from the analyses.

The data set used does not contain any quantitative information on the working time performed. A difference in wages in the case of part-time or marginal employees could be due to differences in the number of working hours. The actual wages of persons above the social security contribution assessment ceiling are not captured in this data set. Instead the social security contribution ceiling is declared here. In order to prevent the wages of these persons from being underestimated, the wages above the social security contribution assessment ceiling were imputed separately for each Metropolitan Region as well as for the remaining parts of Germany according to the eastern and western sections, that is, estimated and updated on the basis of a distribution assumption.

In order to calculate the unexplained region-specific wage differentials, a Blinder-Oaxaca-decomposition is carried out at the individual level. Here the average wage differential between the respective Metropolitan

Region and the remaining areas of the country are decomposed into two parts, one explained and one unexplained.

The explained part of the wage differential indicates differences in the configuration, that is, in the characteristics of employees and/or establishments. This can reflect differences in gender, nationality, education, in actual employment experience, in tenure, in one's position with regard to one's profession, or in the number of different employers one has had in the course of one's career. At the establishment level, there may be differences in relation to the industry the establishment belongs to, the size of the establishment, and its location. The effects of these differing characteristics on wages can be subtracted out. On account of the lack of available data, the regional price level is not explicitly channelled into the analysis. However it is partly taken into account indirectly by including regional types in the calculations.

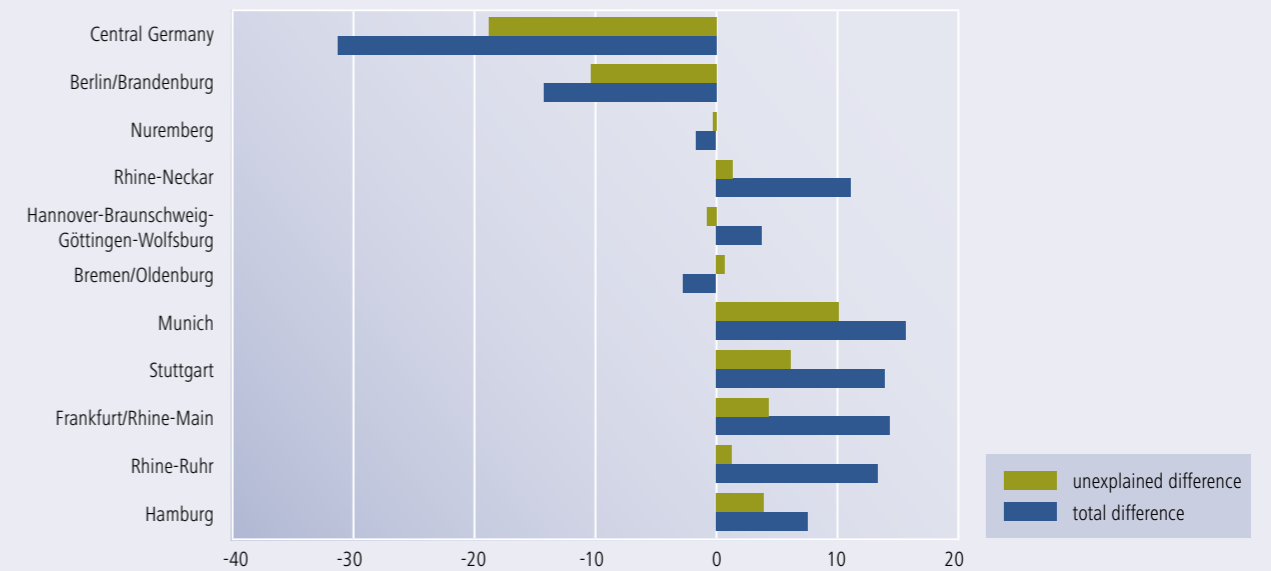
The remaining, unexplained part of the wage differential contains the non-observable and/or non-measurable differences in the characteristics of persons, establishments and regional types in comparison to Germany as whole. In addition the unexplained part measures the difference in the remuneration of persons with the same observable characteristics employed in different Metropolitan Regions (Metropolitan Region versus Germany as a whole).

ing opportunities. This applies particularly to the regions Bremen/Oldenburg, Hannover-Braunschweig-Göttingen-Wolfsburg, Rhine-Ruhr, Rhine-Neckar und Nuremberg. Employees in the Metropolitan Regions of Berlin/Brandenburg and Central Germany continue to earn considerably less than the nationwide average for employees. Thus the west-east gradient, which is still strongly pronounced, also manifests itself at the level of the Metropolitan Regions.

Figure 3

Adjusted wage gap of the Metropolitan Region versus the German average as a whole 2008

in per cent



Note: The diagram represents the adjusted wage gap of full-time employees subject to social security contributions, compiled on 30.06.2008. Source: Sample of Integrated Labour Market Biographies (Stichprobe der Integrierten Arbeitsmarktbiografien/SIAB), monthly wages, own calculations.

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