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How does the increase of low-wage work affect the German employment model?

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Abstract

Germany was long regarded as a country with relatively low income inequality. This was explained by the German product portfolio – the so called diversified quality production, the high skill levels of the workforce and the existence of patient capital, which was concerned with long-term returns. One important pillar of this system were internal labour markets with long employment tenure, strong unions and works councils as well as high rates of coverage by collective agreements, which guaranteed good rates of pay even in simple manual tasks.

Since the mid 1990s the system seems to be changing, which is indicated by a strong increase of low-wage employment. The paper addresses the question, if the growth of low paid employment leads to an erosion of internal and occupational labour markets or is limited to the margins of the labour market.

To answer this question, the development of low-wage work will be analysed in three segments of the labour market: internal markets, occupational labour markets and unstructured labour markets.

The main hypothesis is that low-wage work is mainly growing in unstructured labour markets, while internal and occupational labour markets are shrinking, but still offer good working conditions.

We suppose that the unstructured market is increasingly separated from the other segments, which leads to a decline of upward mobility from the low-wage sector.

According to this analysis we suppose, that the German employment model with a focus on internal and occupation labour markets is still strong, but a growing share of the employed population is excluded from this system.
1. Introduction

In international comparisons, Germany is often classified as a country with low wage dispersion and good chances to move up the income ladder. According to studies from the OECD (1996; 1997) income inequality in Germany has even decreased up to the mid 1990s, bucking the global trend. Only in the Scandinavian countries income inequality was even lower than in Germany. In the literature on the German employment system, the low income dispersion was often attributed to particular characteristics of the German institutional system: high levels of dismissal and unemployment protection as well as the skills profile of the workforce provide incentives for long term relationships of employers and employees. They also build the grounding for a coordinated market economy with strong networks among companies and between companies and housebanks. Cooperation was the mode of coordination with the orientation in long term success, contrary to a dominant role of market coordination in the Anglo-Saxon countries where the value of companies was first of all determined on the stock market and the orientation on short-term profits gave strong incentives for flexible labour markets (Hall/Soskice 2001). With its focus on the production of high quality goods the Germany employment system provided good rates of pay even in simple manual tasks (cf. Streeck 1991; Finegold/Soskice 1988). However, times have been changing over recent years. Figure 1 shows that the share of low pay among full-time employees has been increasing since the mid 1990s.

Figure 1: Share of low-wage workers among full-time employees covered by the social security system (separate low-wage thresholds for East and West)

Source: IAB regional sample (IABS-R01) up to 1998 and BA employee panel\(^1\) from 1999, own calculation

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\(^1\) The BA employee panel (BA-Beschäftigtenpanel) is drawn from anonymized quartile statistics from the employee statistic of the Federal Employment Services. This dataset is provided by the Zentralarchiv für Empirische Sozialforschung (in Cologne). The Federal Employment Agency has no responsibility for the use of this data in the following analysis.
We defined the low-wage threshold according to the OECD standard (cf. OECD 1996) as earnings below two thirds of the median income. The income information refers to gross monthly earnings. The share of employees with earnings below this threshold has grown strongly from 14.3% in 1995 to 19.3% in 2006 (Germany). For East Germany the share of low pay is higher than for West Germany (measured with separate low-wage thresholds). If we had used a uniform threshold for Germany the share of low pay in the East would be twice as high as measured with separate thresholds.

For the strong increase in low-wage employment there are several reasons (cf. Bosch/Weinkopf 2008):

- The German reunification that made huge transfers from West to East necessary, funded by increases in taxation and social security contributions
- EU-driven deregulation of many public institutions (like hospitals) with the establishment of governance structures similar to those in the private sector
- Growing importance of the service sector with high shares of female workers
- Low level of economic growth
- Rising unemployment
- Changes in corporate governance in the direction of maximising short term returns
- Competition between firms bound by collective agreements and those not bound by collective agreements
- Outsourcing of activities to firms not bound by collective agreements or substitution of regular employment by precarious employment forms
- Abolition of the income-related unemployment assistance for the long-term unemployed
- Tightening of the reasonableness criteria, forcing qualified unemployed to take up “low-skill” jobs

These factors lead to an increase of low-wage work in Germany, but do they also call into question the German employment system by an erosion of employment conditions in the core elements of this system? Or is the increase of low pay limited to the margins of the German labour market? These questions will be answered in the following paper, which is organised as follows: In section 2, the operationalisation of different labour market segments is outlined and the development of segments over time is analysed. Section 3 focuses on the development of low-wage employment in the different segments. Section 4 refers to mobility between segments and mobility out of the low wage sector. Section 5 will sum up the main findings.
2. Development of labour market segments over time

To answer the question, in which segments of the labour market low-wage employment has grown, different segments have to be defined on the basis of the data set used for the analysis, the BA employee panel.

The BA employee panel contains anonymized data on 1.92% of all workers covered by the social insurance system over the period from 1998 to 2006, which covers about 80% of all employees. Some company data taken from social security reports are also included, together with data on periods of benefit claiming (for details cf. Schmucker/Seth 2008).

Self-employed workers and civil servants are not included and besides this we excluded apprentices. The data on earnings contained relates to gross monthly income. As the data set does not contain data on the working time per week every analysis of low-pay has to be restricted to full-time employees only, as otherwise most part-time employees would be characterised as low-wage workers. An inclusion of part-time would only be possible if we could calculate hourly wages.

Contrary to studies of the US-labour market studies of the segmentation of the German labour market differentiate three different segments: internal markets on the one hand and occupational as well as unstructured labour markets as part of the external labour market segment on the other hand (cf. Sengenberger 1987). Internal and external markets are further differentiated into a primary and a secondary segment, resulting in a four-field matrix (cf. Table 1). The use of this matrix implies that working conditions in occupational labour markets are good and that unstructured markets are related to the secondary segment with bad employment conditions.

Table 1: Classical scheme for the analysis of the German labour market

<table>
<thead>
<tr>
<th>Internal</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>Occupational</td>
</tr>
<tr>
<td>Secondary</td>
<td>Secondary external</td>
</tr>
</tbody>
</table>

Source: Köhler et al. 2006, Sengenberger 1987, own presentation

For the purpose of our study this matrix is not useful, as one research question is, how employment conditions in the different segments are changing. So we cannot see employment conditions in the various segments as determined a-priori. In the study good and bad employment conditions will be measured via a low-wage threshold of two-thirds of the median gross monthly income, as was the case in the analysis of low-wage work in section 1. The differentiation into good and bad jobs in our study is identical with the differentiation into primary and secondary labour markets.

This differentiation leads to a six-field matrix (Table 2) with the typical three-fold structure of the Germany labour market on the horizontal axis and a differentiation of each segment into a primary and a secondary segment. This matrix is adequate for the research question, in which segments low-wage employment is growing.
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Table 2: Differentiation of labour market segments in the own study

<table>
<thead>
<tr>
<th>Labour market type</th>
<th>Internal labour markets</th>
<th>Occupational labour markets</th>
<th>Unstructured markets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Segment</strong></td>
<td>Primary internal</td>
<td>Primary occupational</td>
<td>Primary unstructured</td>
</tr>
<tr>
<td><strong>Low-wage threshold</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Secondary Segment</strong></td>
<td>Secondary internal</td>
<td>Secondary occupational</td>
<td>Secondary unstructured</td>
</tr>
</tbody>
</table>

*Source: own presentation*

Now the different segments must be operationalised on the basis of the available information from the data-set used for the study. First a distinction has to be made between internal and external markets, whereby occupational and unstructured markets build the external market segment. On a theoretical level the distinction is made by the mode of allocation, gratification and qualification of employees. In internal markets this functions are coordinated by rules of the organisation (e.g. company, enterprise) and in external market they are driven by market forces (Doeringer/Piore 1971: 1-2).

Variables frequently used to differentiate internal and external markets are employment tenure or establishment size (e.g. Blossfeld und Mayer 1988; Szydlik 1990; Köhler 2004, 2006). As the information from the BA employee panel is on the level of individual employees, employment tenure is only available for individuals, not as average tenure on company level. Because of that it would be impossible to study mobility between segments using tenure, as employees changing the employer would always start their new employment relationship at zero years. This would make it impossible to study transitions into internal markets, if they would be operationalised by long employment tenure (e.g. over 10 years). Therefore we decided to use establishment size (establishments with over 200 employees) as the main criterion in operationalising internal markets. Internal markets are further divided into entry positions (tenure of two years or less) and core positions (tenure more than two years).

Occupational markets are defined as employment in small and medium sized establishments (up to 200 employees). The employees have a certified vocational qualification or a higher skills level and they are not working in “low-skill” positions.²

The unstructured market is also defined as employment in small and medium sized establishments. The employees either have no vocational qualification or if the have one, they are working in “low-skill” positions.

² „Low-skill“ positions are defined as the occupational position „non-craftsman“ (Nicht-Facharbeiter), which is the lowest positions in collective agreements.
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Table 3: Definition of labour market segments

| Internal market | • Employee is working in a large-scale establishment (over 200 employees)  
|                 | • Division into core (tenure over two years) and entry positions (tenure up to two years) |
| Occupational market | • Employee is working in a small or medium sized establishment (up to 200 employees)  
|                    | • Employee has a certified degree of vocational training or a higher skills level  
|                    | • Employee is not working in a „low-skill“ position |
| Unstructured market | • Employee is working in a small or medium sized establishment (up to 200 employees)  
|                     | • Employee does not have a certified degree of vocational training or if he has one, he is working in a „low-skill“ position. |
| Differentiation primary/secondary market | By a low-wage threshold of two-thirds of the median hourly gross wage. |

Source: own presentation

The development of the shares of the different segments in total employment is depicted in Figure 2. Between 1999 and 2006 the unstructured segment has grown from 26.1 to 30.6%, while the occupational segment decreased from 41.8 to 38.8% and the internal segment decreased from 32.1 to 30.6% in 2006. A decrease or increase in the share in total employment does not necessarily mean a decrease or increase in absolute employment. Therefore we also analysed the development of employment in absolute terms. From 1999 until 2006 total employment declined by -2.5% and declined even stronger with -7% in internal and -9.6% in occupational markets. The only segment with employment growth was the unstructured segment with +14.3%.

So we can clearly conclude that from the end of the 1990s until 2006 there was a strong expansion of the unstructured segment. In the next section we will analyse, how the trends in labour market segmentation were related to the increase in low-wage employment.
3. Low-wage employment in the different labour market segments

The analysis in section 1 showed a strong increase in the share of low pay in Germany since the mid 1990s. In international comparison Germany has the highest share of low pay in Europe and is not far from the United States (Solow 2007). In this section the analysis of low pay will be linked to the analysis of labour market segments to answer the following questions:

- What is the share of low pay in the different labour market segments? How has it evolved over time?

- What is the share of the different labour market segments in the total of low pay?

- Does the expansion of the low-wage sector affect occupational and internal labour markets or is it limited to the margins of the labour market, the unstructured segment?

Our own analysis shows high shares of low pay especially in the unstructured segment (39.9% in 2006), whereas in occupational (19.2%) and internal labour markets (6.6%) the share is lower than for the total economy (19.3%) (Table 4). The division of the internal market into

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3 This figure includes part-time and marginal part-time. Apprentices have been excluded as they don’t have a certified degree of vocational training yet, but will probably have one in the near future. Contrary to this the following analysis of low pay is restricted to full-time employees because of the missing information of working time per hour in the data set.
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core positions and entry positions with short tenure shows huge differences in the share of low pay (3.7% in the core, 9.3% in entry positions with occupational background and 37.5% in entry position with a low-skill background.

The share of low pay increased between 1999 and 2006 in all labour market segments, especially in the unstructured segment by five percentage points, but also in the internal segment (+1.2 percentage points) and in the occupational segment (+1.4 percentage points).

The share of low pay in entry positions of the internal labour market with occupational background increased strongly in the last years. One possible explanation could be the tightening of reasonability criteria by the Hartz IV reforms in 2002, forcing skilled unemployed to take up low paid jobs.

Table 4: Share of low pay in different labour market segments over time (Germany, full-time employees covered by the social security system, in %)

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational</td>
<td>17.8%</td>
<td>17.9%</td>
<td>18.0%</td>
<td>18.2%</td>
<td>18.5%</td>
<td>18.9%</td>
<td>19.4%</td>
<td>19.2%</td>
</tr>
<tr>
<td>Internal (core)</td>
<td>2.7%</td>
<td>2.8%</td>
<td>3.0%</td>
<td>3.1%</td>
<td>3.2%</td>
<td>3.3%</td>
<td>3.7%</td>
<td></td>
</tr>
<tr>
<td>Internal (entry, unstructured)</td>
<td>25.0%</td>
<td>23.8%</td>
<td>24.9%</td>
<td>27.7%</td>
<td>29.8%</td>
<td>32.7%</td>
<td>37.5%</td>
<td></td>
</tr>
<tr>
<td>Internal (entry, occupational)</td>
<td>5.9%</td>
<td>5.6%</td>
<td>5.2%</td>
<td>5.7%</td>
<td>5.9%</td>
<td>7.7%</td>
<td>9.3%</td>
<td></td>
</tr>
<tr>
<td>Internal (Total)</td>
<td>5.4%</td>
<td>5.1%</td>
<td>5.0%</td>
<td>4.9%</td>
<td>5.0%</td>
<td>5.1%</td>
<td>5.6%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Unstructured</td>
<td>34.9%</td>
<td>35.3%</td>
<td>36.4%</td>
<td>36.9%</td>
<td>37.3%</td>
<td>38.3%</td>
<td>39.5%</td>
<td>39.9%</td>
</tr>
<tr>
<td>Total economy</td>
<td>16.6%</td>
<td>16.6%</td>
<td>16.9%</td>
<td>17.1%</td>
<td>17.4%</td>
<td>18.0%</td>
<td>18.8%</td>
<td>19.3%</td>
</tr>
</tbody>
</table>

Source: BA employee panel, own calculation

Regards the share of different segments in the total of low pay (Table 5), the development over time is strongly influenced by the share of the segments in the total employment (Figure 2). The long term trend is a decrease in the share of the occupational segment in the total of low pay from 47.9 to 41.1%, whereas the share of the unstructured segment increased from 40.4 to 46.5%. The share of internal markets remained at a relatively low level at about 12%.

Table 5: Share of labour market segments in the total of low pay over time (Germany, full-time employees covered by the social security system, in %)

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational</td>
<td>47.9%</td>
<td>47.1%</td>
<td>46.2%</td>
<td>45.8%</td>
<td>45.5%</td>
<td>44.6%</td>
<td>43.4%</td>
<td>41.1%</td>
</tr>
<tr>
<td>Internal (core)</td>
<td>4.4%</td>
<td>4.5%</td>
<td>5.0%</td>
<td>5.2%</td>
<td>5.2%</td>
<td>5.2%</td>
<td>5.2%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Internal (entry, unstructured)</td>
<td>4.7%</td>
<td>4.2%</td>
<td>3.8%</td>
<td>3.6%</td>
<td>3.5%</td>
<td>3.6%</td>
<td>4.0%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Internal (entry, occupational)</td>
<td>2.3%</td>
<td>2.2%</td>
<td>1.8%</td>
<td>1.7%</td>
<td>1.6%</td>
<td>2.0%</td>
<td>2.4%</td>
<td></td>
</tr>
<tr>
<td>Internal (Total)</td>
<td>11.7%</td>
<td>11.4%</td>
<td>10.9%</td>
<td>10.6%</td>
<td>10.6%</td>
<td>10.3%</td>
<td>10.8%</td>
<td>12.4%</td>
</tr>
<tr>
<td>Unstructured</td>
<td>40.4%</td>
<td>41.5%</td>
<td>42.9%</td>
<td>43.6%</td>
<td>43.9%</td>
<td>45.0%</td>
<td>45.8%</td>
<td>46.5%</td>
</tr>
<tr>
<td>Total economy</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: BA employee panel, own calculation

For the initial question, if the increasing low-wage sector is expanding into occupational and internal markets or keeps limited to the unstructured segment the analysis from Table 5 seems most relevant. This shows a strong increase of the unstructured segment in the total of low
pay, whereas the share of the occupational segment decreased and the share of the internal segment remained stable.

We come to the same conclusion, analyzing the change of absolute employment in the different segments (Table 6). Employment has been growing in the unstructured and internal secondary segment, whereas in the primary segment it declined as well as in the secondary occupational segment.

Table 6: Employment change between 1999 and 2006 by labour market segments (Germany, full-time employees covered by the social security system, in %)

<table>
<thead>
<tr>
<th>Labour market type</th>
<th>Internal</th>
<th>Occupational</th>
<th>Unstructured</th>
<th>Total Economy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>-13.5%</td>
<td>-18.4%</td>
<td>-3.2%</td>
<td>-15.5%</td>
</tr>
<tr>
<td>Secondary</td>
<td>9.3%</td>
<td>-10.3%</td>
<td>16.7%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Missing</td>
<td>-20.4%</td>
<td>30.3%</td>
<td>24.8%</td>
<td>15.0%</td>
</tr>
<tr>
<td>Total economy</td>
<td>-12.1%</td>
<td>-16.2%</td>
<td>5.7%</td>
<td>-11.0%</td>
</tr>
</tbody>
</table>

Source: BA employee panel, own calculation

The increase of the secondary internal segment led to an increase of the share of low pay in the respective segment (Table 4) as well as its share in the total of low pay (Table 5), but the share of low pay (6.6% in 2006) in internal markets is still lower than the average (19.3%) and much lower than in the unstructured segment (39.9%). The picture becomes clearer, when the share of the segments in the total employment is analyzed (Table 7). Especially the share of the secondary unstructured segment in the total employment has grown between 1999 and 2006 (+ 2.3 percentage points), compared to only +0.5 percentage points in the secondary internal segment.

Table 7: Share of labour market segments in the total employment4 (Germany, full-time employees covered by the social security system, in %)

<table>
<thead>
<tr>
<th>Labour market type</th>
<th>Internal</th>
<th>Occupational</th>
<th>Unstructured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>34.3%</td>
<td>36.7%</td>
<td>12.5%</td>
</tr>
<tr>
<td></td>
<td>33.7%</td>
<td>33.5%</td>
<td>13.5%</td>
</tr>
<tr>
<td>Secondary</td>
<td>1.9%</td>
<td>7.9%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Low-wage threshold</td>
<td>2.4%</td>
<td>7.9%</td>
<td>9.0%</td>
</tr>
</tbody>
</table>

Source: BA employee panel, own calculation

Between 1999 and 2006 total low-wage employment grew among full time employees by 156 thousand. From this about +43 thousand can be ascribed to internal markets, a minus of 176 thousand to occupational markets and +289 thousand to unstructured markets.

From this part of the analysis we conclude, that low-wage employment is especially growing in the unstructured segment, whereas the shrinking internal and occupational segment still offer good employment conditions in the form of a low share of low-wage employment.

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4 The figures are calculated for valid cases, excluding missing values. The share of missing values is about 2.5% in 2006.
4. Mobility between segments and out of low pay

From a social policy perspective, short periods in low-wage employment are less problematic than if low-wage employees have no prospect of moving up into more highly paid employment. One of the arguments frequently adduced in Germany in favor of encouraging low-wage jobs is that they offer a low-threshold entry point into better paid jobs.

Previous studies revealed that income mobility, i.e. movement upwards to a better paid occupation, was greater in Germany at the beginning of the 1990s than in the USA or the UK (OECD 1997: 31; Keese et al. 1998: 249). More recent studies have shown that this changed with the increase in low-wage work in Germany. According to a study by the European Commission (2004), upward mobility among low-wage earners between 1995 and 2001 in Germany was below the EU average. Several German studies (Kaltenborn/Klös 2002; Fertig et al. 2004; Rhein et al. 2005) have also concluded that income mobility in Germany has changed over time. However, the results of these studies are partially contradictory. Consequently, we carried out our own analysis of upward mobility on the basis of the BA data.

In order to estimate the change in the prospects for upward mobility over time we took a sample of full-time employees who had been low-wage earners on one reference day and then recorded their status on the same reference day the following year. For individuals who were in full-time employment with valid pay data on both reference days, a distinction was made between those who had moved up from the low-wage sector and those who had remained in the low-wage sector. Since the results fluctuate with changes in the economic situation, we calculated the trend.

Between 1975/76 and 2005/06, the trend in upward mobility in West Germany was downward, even though there were temporary fluctuations caused by the economic situation (Figure 3). This downward trend was strongly influenced by the declining growth rates following the reunification boom and could certainly be reversed again by a long period of growth.
From 2005 to 2006 only about 11% of all transition ended in higher pay. Most employees stayed in low pay or changes into unemployment or completely out of employment with social security contributions.

The question that should be answered in this section is, in how far the decline in upward mobility is linked to changes in labour market segmentation. In detail the following questions should be answered:

- Is the chance to escape from low pay different, depending on the segment an employee is working in?
- In how far is a “closing” of segments in the form of a decline of transitions between segments an explanation of declining upward mobility?
- To what extent are segment changes a means to escape from low pay?

### 4.1. Mobility out of low pay by segment

Figure 4 shows the chance to move up the income ladder for employees in different segments. With about 16% (2005/2006) this chance is above average for employees from the internal labour market compared to only about 9% for employees from the unstructured labour market segment. The chance to escape from low pay is about average in the occupational labour market segment. The rates of upward mobility follow the same trend over time and the distances to the average remain stable.
From this analysis we get a first clue, why the chances to move up the income ladder have deteriorated over time. From Table 5 we know that the share of the unstructured segment in the total of low pay has increased from 40.4% in 1999 to 46.5% in 2006. According to this, low pay is shifting to the labour market segments with the poorest chances to improve the income position.

4.2. Mobility out of low pay and segment changes

Besides the trend, that a growing share of employees can be found in the unstructured segment, a further explanation for a decline in upward mobility could be that upward mobility is related to segment changes and the transition rates between segments have changed over time. In this section the question will be answered, in how far segment changes are an entrance into better paid positions. The next section will analyse transition rates between segments over time.

From all employees of the occupational segment that moved up from the low-wage sector between 2005 and 2006 83.3% stayed in the occupational segment, 8.1% changed into the unstructured and 8.6% into the internal segment (Table 8). For employees starting their upward mobility from the other two segments the picture is similar in the way, that most upward mobile stayed in the same segment, they had been in 2005. Especially for the unstructured segment the share of upward mobile staying in the same (unstructured) segment is about five percentage points lower than for the other two segments. In turn the shares of segment changes in combination with upward mobility is higher for employees from the
unstructured segment, showing that segment changes might especially form employees from the unstructured segment be important for improving their income position.

Table 8: Share of segments in upward mobility (Germany, 2005/2006, full-time employees covered by the social security system.

<table>
<thead>
<tr>
<th>Segment in 2006</th>
<th>Segment 2005</th>
<th>Occupational</th>
<th>Unstructured</th>
<th>Internal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational</td>
<td>83.3%</td>
<td>8.1%</td>
<td>8.6%</td>
<td></td>
<td>100.0%</td>
</tr>
<tr>
<td>Unstructured</td>
<td>12.4%</td>
<td>77.4%</td>
<td>10.2%</td>
<td></td>
<td>100.0%</td>
</tr>
<tr>
<td>Internal</td>
<td>9.8%</td>
<td>8.0%</td>
<td>82.1%</td>
<td></td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: BA employee panel, own calculations

Over time the share of employees that changed their segment with upward mobility has declined, whereas the share of upward mobile, staying in the same segment has increased, from 81.1% to 83.3% in the occupational segment, from 70.3 to 77.4 in the unstructured segment and from 78.0 to 82.1% in the internal segment. From this we can conclude, that upward mobility is taking place to a higher percentage without segment chances in 2006 compared to 1999.

Table 9 shows the share of upward mobility in all segment changes, so we ask first, if employees have changed the segment and than, if this was combined with upward mobility. Contrary to Table 8 the denominator is now the number of segment changes and not the number of upward mobile. We can see that segment changes are to a high degree combined with upward mobility. For example employees changing from the occupational to the internal segment improved their income position in 41.8% of the transitions. Form employees from the unstructured segment, the change into the occupational or internal segment improved their income position to a high percentage between 26 and 27%, whereas employees staying in the unstructured segment moved up the income ladder only in about 9% of the transitions. For employees from the internal segment a change into the occupational segment improved the chance to move up into better paid jobs to 35.8% compared to only 17.5% for employees staying in the internal segment.

Table 9: Share of upward mobility in transitions between segments (Germany, 2005/2006, full-time employees covered by the social security system)

<table>
<thead>
<tr>
<th>Segment 2005</th>
<th>Segment 2006</th>
<th>Occupational</th>
<th>Unstructured</th>
<th>Internal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational</td>
<td>11.3%</td>
<td>19.9%</td>
<td>41.8%</td>
<td></td>
<td>12.6%</td>
</tr>
<tr>
<td>Unstructured</td>
<td>26.0%</td>
<td>9.1%</td>
<td>27.3%</td>
<td></td>
<td>10.7%</td>
</tr>
<tr>
<td>Internal</td>
<td>35.8%</td>
<td>17.8%</td>
<td>17.5%</td>
<td></td>
<td>18.5%</td>
</tr>
</tbody>
</table>

Source: BA employee panel, own calculations

From this we can clearly see that segment changes are related to an above average degree of upward mobility, possibly due to the fact, that employees only change the segment if this goes along with an improvement of the income situation. On the one hand segment changes are important for upward mobility, on the other hand we saw from Table 8 that most upward mobility is taking place without segment changes.

5 The values for the total are not comparable with the results from Figure 4, because missing values in the segment variable are not included.
mobility takes place without segment changes, which is due to the fact, that mobility between the segments is rather scarce in general, which will be shown in the next section.

4.3. Mobility between segments

From the analysis of one-year transitions between segments we can see that most employees stay in the same segment (Table 10). This share is highest in the internal labour market segment (88.2% in 2005/2006) and only slightly lower (86.1%) in occupational labour markets. In unstructured labour markets the share of employees that stay in the unstructured segment in a one-year period is at 74.5% much lower. The share of employees, staying in the same segment increased slightly in the occupational and the internal segment and decreased in the unstructured segment.

Table 10: Share of employees staying in the same segment in all transitions (Germany, all employees with social security contributions)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational</td>
<td>85.7%</td>
<td>84.2%</td>
<td>84.8%</td>
<td>85.0%</td>
<td>85.8%</td>
<td>86.2%</td>
<td>85.9%</td>
<td>86.1%</td>
</tr>
<tr>
<td>Internal</td>
<td>86.4%</td>
<td>86.3%</td>
<td>86.7%</td>
<td>87.1%</td>
<td>87.1%</td>
<td>88.3%</td>
<td>88.2%</td>
<td>88.2%</td>
</tr>
<tr>
<td>Unstructured</td>
<td>78.1%</td>
<td>75.9%</td>
<td>75.7%</td>
<td>76.5%</td>
<td>77.3%</td>
<td>78.1%</td>
<td>76.0%</td>
<td>74.5%</td>
</tr>
</tbody>
</table>

Source: BA employee panel, own calculations

A more detailed picture of transitions is depicted in Table 11 for the period 2005/2006. This shows what happened to the employees not staying in the same segment. From employees that were in the occupational segment in 2005 86.1% stayed in this segment, 2.3% changed to the internal segment, 2.8% to the unstructured segment and 8.8% had a missing segment status, which means they became unemployed, were no longer employed with contributions to the social security system or became apprentices. The share of mobility into other segments is between two and three percent, irrespective of the segment, the employees are from. A huge difference can be found in the transitions from the unstructured segment into a missing status, which shows a strong connection between this segment and the unemployment status.

Table 11: Mobility between segments (Germany 2006, full-time employees covered by the social security system)

<table>
<thead>
<tr>
<th>Segment in 2005</th>
<th>Occupational</th>
<th>Internal</th>
<th>Unstructured</th>
<th>Missing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational</td>
<td>86.1%</td>
<td>2.3%</td>
<td>2.8%</td>
<td>8.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Internal</td>
<td>2.6%</td>
<td>88.2%</td>
<td>1.8%</td>
<td>7.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Unstructured</td>
<td>3.4%</td>
<td>2.3%</td>
<td>74.5%</td>
<td>19.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Missing</td>
<td>7.3%</td>
<td>3.8%</td>
<td>9.1%</td>
<td>79.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>29.8%</td>
<td>23.6%</td>
<td>20.9%</td>
<td>25.7%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: BA employee panel, own calculations
The analysis shows that there is no change in the transition rates between the segments. This factor can be ruled out as an explanation for the decline in upward mobility from the low-wage sector.

5. Conclusions

It has become clear that wages in Germany have been exposed to increasing fragmentation and strong downward pressures because collectively agreed standards have been persistently eroded and the state has not yet laid down any general minimum wage standards. Instead, by extensively deregulating temporary agency work and changing the regulations governing mini-jobs in such a way as to encourage employers to make increasing use of them, the German government has removed more of the restraints on low pay, thereby encouraging its expansion and putting wage levels as a whole under pressure, making it especially attractive to source out activities into area with lower tariff standard or to replace regular work by precarious employment forms.

The developments and upheavals that have taken place since the 1990s have resulted in a considerable increase in low-wage work since the middle of that decade and a decline in upward mobility from the low-wage sector in better paid jobs. The aim of this paper was to analysis in how far the development of the low-wage sector affects different labour market segments. The main thesis was that the increase of low pay is mainly restricted to the unstructured segment, whereas in occupational and internal segments the pay conditions are still good.

From the analysis of section 3 this thesis can be proved. The share of the unstructured segment in the total of low pay has increased over time, whereas the share of the occupational segment decreased and the share of the internal segment only increased slightly. The share of low pay in the internal segment is at 6.6% in 2006 still relatively low. In the occupational segment it is at 19.2% about average and in the unstructured segment at about 40% much higher. From this we can on the one hand clearly say that the increase of low pay was concentrated on the unstructured segment. On the other hand the share of the internal and the occupational segment in total employment has decreased, so that a growing share of employees is excluded from the good employment conditions in these segments.

Since the end of the 1970s we found a decline in upward mobility from the low wage sector. Relating upward mobility to different labour market segments we found as a main explanation for the decline in upward mobility the shift of employment into the unstructured segment, in which the chances to move up the income ladder are much lower than in the other two segments. The analysis does not show a growing separation between segments, the transitions rates between segments remained stable over time, so this factor can be ruled out as an explanation for a decline in upward mobility.
Kalina: How does the increase of low-wage work affect the German employment model?

References


