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Liebig, Stefan; Hülle, Sebastian; Schupp, Jürgen

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Wages in Eastern Germany Still Considered More Unjust Than in the West

By Stefan Liebig, Sebastian Hülle, and Jürgen Schupp

Almost twenty-five years after the fall of the Berlin Wall, far more eastern Germans are unhappy with their income than western Germans. In 2013, around 44 percent of employed eastern Germans rated their earnings as unjust compared with approximately one-third in western Germany. Although the east-west gap has been diminishing since 2005—to around 12 percent in 2013—this is not because eastern Germans feel that they are now being paid more fairly, but rather because the perceived injustice in western Germany increases. One of the reasons why a relatively high level of perceived wage inequality persists in eastern Germany is the fact that there are still differences between East and West in incomes within occupations. Evidence of this is seen in analyses conducted by the Socio-Economic Panel (SOEP).

In the summer of 1989, when more and more citizens of the German Democratic Republic (GDR) were actively protesting against the existing political and economic system, one of their key demands was performance-related pay. The income structure in the GDR was known for having a much smaller spread, so that only minor differences in income existed, in particular, between "production workers on the one hand and master craftsmen, university graduates and technical or economic specialists on the other hand."[1] The Politburo of the Central Committee of the SED responded to the protesters' demands: as part of a declaration to the 12th party congress on October 12, 1989, it made "performance-related pay" to one of the GDR's main objectives to be realized in the GDR.[2] It is known that the east German public had little confidence that the SED could satisfactorily perform this task. Rather, they believed that the economic and political system of the Federal Republic of Germany was more likely to provide !just incomes and just remuneration" ". So today, twenty-five years after the fall of the Berlin Wall, the question comes up whether this hope has been fulfilled.

There are two methods of obtaining an answer to this question. The first is to consider the actual distribution of , calculate specific measures of distribution and then assess them on the basis of normative criteria that have been designated in the course of philosophical or political debate.[3] The second is to ask the members of the workforce themselves whether they perceive their own

1 See H. Stephan and E. Wiedemann, "Lohnstruktur und Lohndifferenzierung in der DDR," IAB Mitteilungen aus der Arbeitsmarkt-und Berufsforschung 4 (1990): 553; and "Ostmark zum Willkür-Kurs," Der Spiegel, no. 48 (1989): 112-113.

2 Declaration by the Politburo of the Central Committee of the SED, Neues Deutschland, October 12, 1989, www.chronik-der-mauer-online.de.

3 See, for example, W. Merkel, Soziale Gerechtigkeit im OECD-Vergleich. Soziale Gerechtigkeit – eine Bestandsaufnahme (Gütersloh: 2007): 233-257; and Bertelsmann Stiftung, Social Justice in the EU - A Cross-National Comparison (2014), www.bertelsmann-stiftung.de.

Box

On the Methodology of the Questions Used in Empirical Justice Research in the SOEP

Since 2005, the Socio-Economic Panel (SOEP)[1] population survey, which is carried out every two years by DIW Berlin in collaboration with the fieldwork organization TNS Infratest Sozialforschung, has included questions about respondents' assessment of justice concerning the own net income.[2] The question in the SOEP questionnaire is phrased as follows: "Is the income that you earn at your current job just, from your point of view?" The respondents can answer either "Yes" or "No." If a respondent answers "No," he or she is asked: "How high would your net income have to be in order to be just?" and the respondent's actual income is recorded. Beginning with the survey in 2009, a question about the assessment of fairness of gross income has also been included.

In addition to distinguishing between justly and unjustly paid individuals, the justice formula J[3] developed by American sociologist Guillermina Jasso can be used to calculate an even finer distinction of the feeling of injustice.[4] The logarithm of the relation between actual income and the income regarded as "just" generates the index J which can be used to quantify the intensity of perceived injustice.[5] The arithmetic mean (JI1) of these individual J values, or the arithmetic mean of the the absolute J values (JI2) can also be used to calculate two more indices which quantify the intensity of income injustice on the aggregate, i.e. on the level of groups or the society.[6]

1 See J. Schupp, "25 Jahre Sozio-oekonomisches Panel – Ein Infrastrukturprojekt der empirischen Sozial- und Wirtschaftsforschung in Deutschland," Zeitschrift für Soziologie 38 (2009): 350-357.

2 In the survey of 2009, questions were asked not only about the subjective justice of personal net income but also about that of gross income.

3 $$J = q \ln\left(\frac{\text{actual earnings}}{\text{as just perceived earnings}}\right).$$

4 G. Jasso, "On the Justice of Earnings: A New Specification of the Justice Evaluation Function," AJS , no. 83 (1978): 1398–1419.

5 J takes the value 0 when there is perfect justice. A positive value of J results if a respondent states that his current income is higher than is needed for it to be just; a negative value of J is given when the actual income is lower than the income deemed to be just. The bigger the difference between actual income and that regarded as just, the greater is the deviation of the J value from 0.

6 G. Jasso, "How Much Injustice is There in the World? Two New Justice Indexes," American Sociological Review, vol. 64, no. 1 (1999): 133–168.

income as just or unjust.[4] We chose the second route, partly because many empirical studies have shown that perceived injustice at the workplace can lead not only to reduced productivity or increased absenteeism, but above all to physical and mental health problems for the employees who feel unjustly paid.[5]

In order to assess whether, twenty-five years after the fall of the Wall, the working population of eastern Germany feels more justly paid, we used survey data collected at two-year intervals since 2005 by the Socio-Economic Panel. Respondents were asked whether they consider their income to be just and, if they perceive it as unjust, what specific net income from employment they would consider as just for themselves (see box). We have no way of making a direct comparison with the sense of justice in 1989. In order to find an answer to the question of perceived income injustice concerning the east Germans, we compared them in terms of extent and intensity with perceptions of income unjustice in western Germany. This allowed us to identify regional developments during the period of observation and to describe features peculiar to the Länder (federal states) that once constituted the GDR.

4 Whereas the first method provides information about the extent of income injustice existing in a society on the basis of the normative notions of a given selection of experts (philosophers, economists, etc.), the second assesses it in terms of the population's subjective perception.

5 R. Schunck, C. Sauer, and P. Valet, "Macht Ungerechtigkeit krank? Gesundheitliche Folgen von Einkommens(un)gerechtigkeit," WSI-Mitteilungen 66 (2013): 553-561.

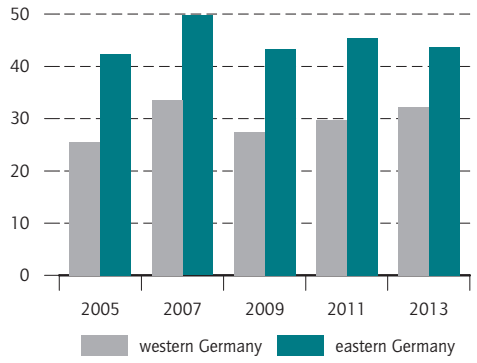
Share and Intensity of perceived income inequality in eastern Germany larger

If we look at the share of employees who felt unjustly paid during the observation period, the first thing that stands out is the large significant difference between eastern and western Germany (see Figure 1). In 2005, approximately 25 percent in the west were of the opinion that their income was unjust, whereas in the east the corresponding value was 42 percent. By 2013, this had increased slightly in the eastern Länder to 44 percent, while the west exhibited an increase of around seven percentage points to 32 percent. On average, the differ-

Figure 1

Share of Perceived Income Injustice

In percent



Source: SOEP v30; calculations by DIW Berlin.

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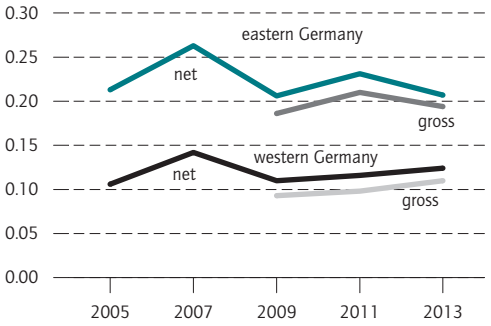
In eastern Germany, the share of perceived income injustice is much higher.

Figure 2

Intensity of Perceived Income Injustice (Net and Gross Income)

Justice index JI2



Source: SOEP v30; calculations by DIW Berlin.

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The intensity of perceived income injustice concerning the net and gross income is more pronounced in eastern Germany, too.

ence between eastern and western Germany is around 15 percentage points high. Hence, the question of just payment is evaluated very differently in the two parts of the country.

The majority perceived their income as just in 2013, both in the east and in the west. But the feeling of being unjustly paid is far more widespread in the east than in the west. In both parts of Germany this feeling of injustice peaked in the survey year 2007, when every second surveyed employee in the east evaluated the own income as unjust. In 2009, this proportion decreased in each part of the country, only to rise again by 2011. Between 2011 and 2013, the feeling of income injustice in eastern Germany declined, but in the west it continued to rise, almost reaching the level of 2007. Although the difference between eastern and western Germany shrank, this was not because people in the east felt more justly paid, but because more workers in the west evaluated their incomes as unjust.

The legitimacy gap in the assignment of earned income, which is expressed in the different shares employees that evaluate their own income as unjust, , may have many causes. Of these, we consider the following two mechanisms to be the two most plausible: first, that the assignment criteria on the labor market are perceived as unjust and second, that state intervention in the form of taxation and welfare transfers is considered illegitimate.

To establish whether the feeling of injustice connected with taxation is rising or falling, the assessment of net and gross income are considered separately. This has been possible with the SOEP since 2009. It also allows us to quantify the intensity of perceived income injustice concerning both kinds of income using the JI2-index (see box)..

Considering the intensity of perceived injustice with respect to the net income, the annual average in the west is 0.120, but it is a lot higher in the east: 0.224 (see Figure 2). According to this, those in the east who feel unjustly paid judge the intensity of injustice with regard to their net earnings to be on a level that is nearly twice that perceived in the west.

While the pattern in both parts of the country is very similar from 2005 to 2009, a difference has emerged since 2011: in the east, there was another increase in the intensity of perceived income injustice, followed by a renewed decline to the original level. In contrast, the west exhibited an uninterrupted increase in the intensity of perceived income injustice.

A greater feeling of injustice is also evident in the east with regard to the intensity of perceived injustice of gross income: the JI2-index annual average is 0.197 in the east, while in the west it is only half as much: 0.100. Chronologically, it runs broadly parallel to the assessment of net income. In other words, in both parts of the country, market wages are judged to be less unjust than the remaining net earningsafter taxes and mandatory deductions. State intervention is therefore apparently an independent source of the feeling of injustice in both

Table 1

East-West Difference in Median Income by Occupational Group of the Federal Institute for Vocational Education and Training (BiBB), 2005 to 2013
In euros

Position in the ranking	East-west difference[1]	N[2]	No. of BiBB category	Occupational activity
1	–1,575	81	33	Aviation and maritime professions
2	–1,040	164	26	Technical specialists
3	–1,027	597	44	Legal professions
4	–800	256	22	Chemists, physicists, and other scientists
5	–650	1,864	21	Engineers
6	–621	1,340	23	Technicians
7	–540	2,314	35	Managers, auditors, management consultants
8	–530	117	17	Food, beverage, and tobacco manufacturing, other nutritional industries
9	–515	351	31	Advertising agencies
10	–500	1,200	8	Machine fitters, toolmakers
...				
45	–141	1,114	36	Public sector administration
46	–73	152	13	Textile processing, leather production
47	–50	4,946	39	Clerical professions
48	–20	2,339	27	Sales personnel (retail)
49	9	609	16	Cooks
50	20	69	25	Surveying
51	69	656	51	Journalists, librarians, translators, and related academic staff
52	255	485	40	Clerical office staff, switchboard operators
53	300	1,836	54	Cleaning, waste disposal personnel
54	400	755	47	Licensed health professionals
Average	–257.88			
Standard deviation	268.74			

1 Median income of the occupational group in eastern Germany minus the median income of the occupational group in western Germany.
2 Total: 51,922 observations.
Source: SOEP v30; calculations by DIW Berlin.

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workforces. In many cases, progressive taxation is likely to play a part in this.[6]

Regional Differences among Occupations as Cause of Perceived Injustice

Why does the workforce in eastern Germany rate its gross or net income as significantly more unjust than its counterpart in western Germany does? The first studies after reunification showed that the point of reference for assessing one's own economic situation was the "west."[7] Consequently, it may be the continuing earnings gap between the two regions that is contributing to the higher level of perceived income inequality in the east. To answer this more accurately, it should be noted that the justice of one's own earned income is generally estimated on the basis of comparisons—people compare their personal income with that of workmates or those who perform the same kind of work elsewhere.[8] The crucial point is that on the level of occupations still differences in wages exist and that the convergence between east and west has progressed to a different extent from one occupational group to another. Within some occupational groups, there are now no regional differences in wages, while in others they are still considerable. Table 1 lists the median income levels within occupations and gives an overview over occupations with

6 See DIW glossary, www.diw.de/de/diw_01.c.412410.de/presse/diw_glossar/kalte_progression.html.

7 See S. Liebig and R. Verwiebe "Einstellungen zur sozialen Ungleichheit in Ostdeutschland. Plädoyer für eine doppelte Vergleichsperspektive," Zeitschrift für Soziologie, 29, (2000): 3-26.

8 A. E. Clark and C. Senik, "Who compares to whom? The anatomy of income comparisons in Europe," The Economic Journal 120 (544), (2010): 573-594; C. Sauer, P. Valet, and S. Liebig, "The impact of within and between occupational inequalities on people's justice perceptions towards their own earnings," SFB 882 Working Paper Series 21 (Bielefeld: SFB 882: From Heterogeneities to Inequalities, 2013).

Table 2

Evaluated Justice of Personal Net Income
Jasso index J

	Unbalanced models			Balanced models		
	M1	M2	M3	M4	M5	M6
Region: eastern Germany	−0.045***	−0.045***	−0.254***	−0.036***	−0.036***	−0.257***
Gender: male	−0.027***	−0.027***	−0.017***	−0.012	−0.012	−0.004
Age	−0.002***	−0.002***	−0.001***	−0.001**	−0.001**	−0.001
Hourly wage (log)	0.189***	0.188***	0.152***	0.137***	0.136***	0.104***
Actual weekly working hours	−0.002***	−0.002***	−0.002***	−0.002***	−0.002***	−0.002***
Employment (reference: full-time)						
Part-time	−0.024***	−0.022***	−0.020***	−0.017	−0.016	−0.016
Marginal	−0.043***	−0.041***	−0.010	−0.021	−0.019	−0.011
Public sector	0.002	0.007	0.005	0.010	0.014*	0.011
Education (CASMIN)	−0.012***	−0.012***	−0.011***	−0.008***	−0.008***	−0.007***
Professional status (ISEI)	−0.001***	−0.001***	−0.001***	0.000	0.000	0.000
Occupational group (acc. to BiBB)	0.000	0.000	0.000	0.000	0.000	0.000
East-west difference in median income within occupational group	**0,015****	**0,012****	**0,002**	**0,016***	**0,013**	**0,002**
0.015**	0.012**	0.002	0.016*	0.013	0.002	
Year (reference: 2013)						
2005		−0.004	−0.003		0.009	0.009
2007		−0.038***	−0.037***		−0.019***	−0.018**
2009		−0.013***	−0.013***		0.012*	0.012*
2011		−0.014***	−0.014***		0.002	0.003
Interaction effects:						
East x gender: male			−0.017*			−0.020
East x age			−0.002***			−0.001
East x hourly wage (log)			0.125***			0.112***
East x marginal employment			−0.144***			−0.153**
East x east-west difference in median income of the occupational group			0.030**			0.040**
Constant	−0.346***	−0.327***	−0.267***	−0.279***	−0.276***	−0.210***
N (observations)	45,188	45,188	45,188	11,650	11,650	11,650
N (people)	19,890	19,890	19,890	2,330	2,330	2,330
R^2 within	0.043	0.046	0.051	0.022	0.026	0.032
R^2 between	0.156	0.159	0.179	0.208	0.208	0.217
Chi^2	4,780.34	4,942.69	5,615.56	782.98	825.56	934.25
df	12	16	21	21	16	21
Rho	0.466	0.465	0.457	0.317	0.318	0.316

*Random effect models; Only employed respondents; Significance thresholds: * p <0.05, ** p < 0.01, *** p < 0.001.*
Source: SOEP v30; calculations by DIW Berlin.

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The regional wage differential within specific occupations leads to an increased feeling of injustice in eastern Germany.

high and low levels of regional wage differentials within occupations. Negative values indicate that the income level within the respective occupation is higher in western Germany than the eastern Germany.

Regression models can be used to determine the significance of earnings differences within a particular occupational group—given that the characteristics of the labor force are otherwise identical—and the extent to which this actually leads to an increase or decrease in perception of income injustice. The results of this are shown in Table 2. The key determinant of the subjective justice in both eastern and western Germany is, as could be expected, the hourly wage. This is not surprising, because a higher income for oneself tends to be perceived as just.

What is even more decisive is the result for occupational group differences (see Table 2). The coefficients listed show that in the east, an increase in the regional income gap between the members of a particular occupational group is associated with a rise in perceived income injustice. This effect is only to be found in the east. If we compare two people who possess the same characteristics relevant to the labor market (gender, education, etc.), have the same gross income, and are employed in a pro-

fession that is subject to income differences between east and west, we see that the person in the east judges their income to be much more unjust than the person in the west does. It is therefore not only the level of personal income that produces feelings of injustice, but also the fact of whether wage differentials between east and west within the considered occupational group exist. Consequently, within a person's occupational group the mere fact that the part of the country where one is employed makes a difference is enough to increase the perception of injustice. This ties in with results from empirical justice research which indicate that questions of equal treatment play a central role in the allocation of rewards or punishments. Where individual groups are already systematically favored or discriminated in the decision-making process, a greater degree of injustice is perceived.[9] It may be that the eastern Germans interpret the mere existence of regional wage differentials within their own occupation as unjustified unequal treatment. In fact, these wage differentials are influenced by the situation on the labor market in eastern Germany and are also caused by still existing productivity differences.[10] In this case, however, in the subjective experience and the value judgment of over 40 percent of the workforce in the new Länder, that is not a sufficient reason for receiving a lower income.

Summing up, differences continue to exist in the perceived justice of personal earned income across the former inner-German border, even if now the feelings of injustice in the east are no longer caused by the lack of income differences that was denounced in the summer of 1989, but by the existing income differences between east and west. Twenty-five years after the fall of the Berlin Wall, the frequently invoked "wall in the mind" is still very much present for many of the workforce in the former East German Länder, at least regarding their personal earned income.

Stefan Liebig is a Research Professor at DIW Berlin and Professor of Sociology at the University of Bielefeld | stefan.liebig@uni-bielefeld.de

Sebastian Hülle is a Research Assistant in the Faculty of Sociology at the University of Bielefeld | sebastian.huelle@uni-bielefeld.de

Jürgen Schupp is the Director of the Research Infrastructure Socio-Economic Panel (SOEP) | jschupp@diw.de

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9 See S. Liebig and C.Sauer, "Soziologische Gerechtigkeitsanalyse. Überlegungen zur theoretischen Fundierung eines Forschungsfeldes," Analyse und Kritik 35 (2013): 371–394.

10 See the first article in this issue of DIW Economic Bulletin.

DIW BERLIN

DIW Berlin—Deutsches Institut
für Wirtschaftsforschung e. V.
Mohrenstraße 58, 10117 Berlin
T +49 30 897 89 -0
F +49 30 897 89 -200

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