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**Article**

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# Everyone Happy—Living Standards in Germany 25 Years after Reunification

By Maximilian Priem and Jürgen Schupp

It is now a quarter of a century since the fall of the Berlin Wall and the gap in living standards between eastern and western Germany is still not fully closed. Admittedly, this could not realistically have been expected. Despite the increase in life satisfaction in eastern Germany, the east-west divide prevails. Evidence of this can be found in the latest data from the long-term Socio-Economic Panel (SOEP) study gathered by DIW Berlin in cooperation with the fieldwork organization TNS Infratest Sozialforschung. According to the SOEP data, in 2013, eastern Germans were far less happy than western Germans, although the level of life satisfaction in the east was higher than at any other point in the history of the survey, which was conducted for the first time in eastern Germany in 1990—shortly before economic, currency, and social union. Other subjective indicators reveal differences in satisfaction with household income, health, and childcare. In contrast, job satisfaction, as well as satisfaction with housing, housework, and leisure time have converged. Eastern Germans worry more about crime levels and their own financial circumstances, whereas concerns about xenophobia and employment have diminished throughout Germany. The SOEP surveys show that, according to population, living standards in Germany are now largely aligned. Despite a number of specific problems which, in the coming years, will include the development of new pensions in eastern Germany in particular, German reunification has proven to be an extraordinary success story.

“The process of divided Germany growing together will begin [...] with the people and their standards of living.” These were the words of Lothar de Maizière,<sup>1</sup> the last Prime Minister of the German Democratic Republic (GDR), that accompanied the signing of the State Treaty between the Federal Republic of Germany and the German Democratic Republic establishing a monetary, economic and social union of 18 May 1990. His statement clearly reflects the fact that the reunification of the two German states, initiated through the peaceful revolution in November 1989, was intended primarily to achieve the socio-political alignment of living standards, with aspects relating to market economy playing a secondary role.<sup>2</sup>

In order to fully assess the progress made in the unification process, both objective living conditions and subjective well-being in Germany have to be taken into account according to the concept of quality of life.<sup>3</sup> For this reason, this report presents selected areas of subjective well-being as well as their time sequence in eastern and western Germany: how has general life satisfaction developed in eastern and western Germany since 1990? In what areas of life are levels of satisfaction among eastern and western German citizens now converging and where do differences still exist? What concerns are

<sup>1</sup> 1989.dra.de/themendossiers/wirtschaft/waehrungs-wirtschafts-und-sozialunion.html.

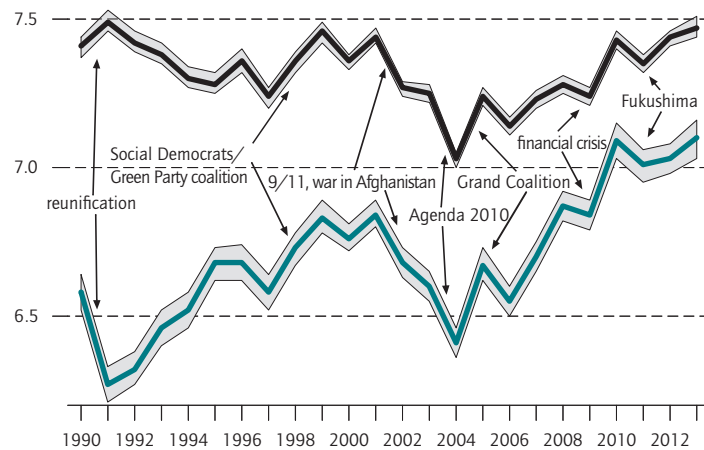
<sup>2</sup> See, for example, the first report in this issue of DIW Economic Bulletin and K. Brenke and K. F. Zimmermann, “Ostdeutschland 20 Jahre nach dem Mauerfall: Ist die Flasche nun zu einem Drittel leer – oder ist sie zu zwei Dritteln voll?,” *Vierteljahrshefte zur Wirtschaftsforschung*, 78(2) (2009): 57.

<sup>3</sup> See W. Zapf, “Individuelle Wohlfahrt: Lebensbedingungen und wahrgenommene Lebensqualität,” in: W. Glatzer and W. Zapf (eds.), *Lebensqualität in der Bundesrepublik* (Frankfurt/M., New York: 1984):13-26. This concept for measuring the quality of life developed in the '80s for West Germany was further developed in the '90s for the adjustment process of western and eastern Germany. For details, see W. Zapf and R. Habich, *Die Wohlfahrtentwicklung im vereinten Deutschland. Sozialstruktur, sozialer Wandel und Lebensqualität* (Berlin: 1999); for a similar analysis strategy to that used in the present report, see also J. Goebel, R. Habich, and P. Krause, “Zur Angleichung von Einkommen und Lebensqualität im vereinigten Deutschland,” *Vierteljahrshefte zur Wirtschaftsforschung* (78) 2 (2009): 122-145.

Figure 1

### Average Life Satisfaction<sup>1</sup> in Germany

Scale from 0 to 10 with 95-percent confidence interval



<sup>1</sup> Estimate corrected for repeat-survey effects. The basis of the estimated value for 2013 was a provisional weighting procedure (not including adults surveyed in the SOEP for the first time in 2013). Source: SOEP v30; calculations by DIW Berlin.

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Historical events have an impact on life satisfaction.

Germans most frequently preoccupied with? Are people in the former Federal Republic of Germany happier than those in the former German Democratic Republic (GDR)? In order to present evidence-based answers to these questions, the development of both life satisfaction and concerns is examined using the longitudinal study SOEP.<sup>4</sup> This is done descriptively and, in the case of general life satisfaction, by means of multivariate analyses. The SOEP is a particularly suitable data source for providing answers to these questions since it is one of the few studies that collected data in East Germany before reunification on October 3, 1990 and thus covers the entire period of transformation.

### Life Satisfaction in Eastern Germany Higher Than Ever

In the year of reunification, 1990, the level of life satisfaction in East Germany was considerably lower than

that of West Germany (see Figure 1).<sup>5</sup> Initially, the east-west difference increased slightly; while in western Germany a slight collective increase in average life satisfaction was seen in the first few years after reunification, a decrease in life satisfaction occurred in the east following the abrupt change in living conditions.<sup>6</sup> This gap narrowed again in the ensuing years, although it did not cease to exist, i.e., the average level of life satisfaction prevalent in western Germany was not achieved in the east. As of the late '90s, the average levels of life satisfaction in the west and in the east have followed a virtually parallel pattern, with peaks and troughs occurring simultaneously.<sup>7</sup> Since then, the average levels of life satisfaction in east and west have been converging gradually, causing the gap to virtually halve since the turn of the millennium. Over and above this, life satisfaction in Germany is at an all-time high; in western Germany the 1984 level has been attained again and in eastern Germany the level of general life satisfaction measured is unparalleled.<sup>8</sup> Nevertheless, the difference still remains significant, since the confidence intervals of the two mean values do not intersect.

### Equal Levels of Satisfaction with Work, Housing, and Leisure Time in East and West

A look at the satisfaction patterns in individual areas of life also shows that the process of harmonization of living standards does not follow a similar pattern in all spheres of life, and the convergence process between east and west is not yet complete (see Figure 2). Satisfaction with household income and standard of living<sup>9</sup> in eastern Germany has not yet been able to attain the western German level over the past 25 years, although, as with general life satisfaction, the gaps have been continuously closing in recent years.

<sup>5</sup> See box for further information on data collection on general life satisfaction and revised data in the SOEP.

<sup>6</sup> Here, it should be noted that at the time of the first survey in June 1990, there was virtually no unemployment in the GDR. Although job loss could be anticipated, it was only in the follow-up surveys that the real experience of unemployment was also reflected in the levels of life satisfaction included in the questionnaires.

<sup>7</sup> This becomes clear in 2004, for example. One possible explanation for this all-time low in the west and the second-lowest level of life satisfaction in the east since the "post-reunification shock" may lie in a combination of two things: first, the changed global security situation in the wake of September 11, 2001 and the ensuing wars and, second, the Agenda 2010 reforms announced by the then German Chancellor Gerhard Schröder as a reaction to the high unemployment in Germany.

<sup>8</sup> See J. Schupp, J. Goebel, M. Kroh, and G. G. Wagner, "Life Satisfaction in Germany at Highest Levels since Reunification," SOEP Wave Report 2013.

<sup>9</sup> The question about satisfaction with the standard of living was not included in the SOEP questionnaires from 2007 to 2012.

<sup>4</sup> The SOEP is a repeated representative survey of households which has been conducted annually in West Germany since 1984 and both western and eastern Germany since 1990; see G. G. Wagner, J. Göbel, P. Krause, R. Pischner, and I. Sieber, "Das Sozio-oekonomische Panel (SOEP): Multidisziplinäres Haushaltspanel und Kohortenstudie für Deutschland - Eine Einführung (für neue Datennutzer) mit einem Ausblick (für erfahrene Anwender)," *ASTA Wirtschafts- und Sozialstatistisches Archiv* 2, no. 4 (2008): 301-328.

## Box

**Measurement of Life Satisfaction in the SOEP**

As part of the Socio-Economic Panel (SOEP) study, the fieldwork organization TNS Infratest Sozialforschung, which collects survey data on behalf of DIW Berlin, asks respondents about a number of subjective indicators linked to the key question as to the cognitive dimension of well-being. From the beginning of the first survey wave in 1984, this was: "How satisfied are you currently with your life overall?" Responses to the question about general life satisfaction are collected on the basis of an 11-point scale from 0 ("completely dissatisfied") to 10 ("completely satisfied"). This scale is also used to measure satisfaction with various other areas of life, for example satisfaction with one's standard of living, household income, job, leisure time, health, and housing.

If we look at the time sequence of the average general life satisfaction in eastern and western Germany, it is important to consider the fact that the measurement of life satisfaction depends more on the context of the survey situation, known as survey artefacts, than the measurement of "objective information" such as level of education. The survey artefacts include, for example, the time of year the survey is conducted or how often an individual has already participated in a SOEP study. An interesting observation here is that people are more likely to indicate the maximum value ten when questioned for the first time than in the second or subse-

quent surveys.<sup>1</sup> If people participate in a repeat survey such as the SOEP for a very long time, they generally give lower satisfaction values on average. Although this "routine effect" only has a minimum impact from one year to the next, it has an accumulative effect when respondents participate for over 30 years as is sometimes the case with the SOEP. In order to take this into account in the descriptive analysis of life satisfaction courses in eastern and western Germany, the average levels of life satisfaction were revised in this report using a method developed by the SOEP group at DIW Berlin.<sup>2</sup> Here, all measurement artefacts are quantified in a regression analysis and subsequently assigned to each survey data point as if the respondents had answered the question for the first time in May of a given year in a paper and pen survey. The revised average general satisfaction and confidence interval are shown in Figure 1.<sup>3</sup>

**1** See H.-M. Mohr, "Analysen zur Vergleichbarkeit von Zufriedenheitsmessungen," *Zeitschrift für Sozialpsychologie*, vol. 18 (1987): 160–168.

**2** See Schupp et al., "Zufriedenheit in Deutschland"; and M. Kroh, M. Priem, U. Schimmack, J. Schupp, and G. G. Wagner, "Zur Korrektur der Lebenszufriedenheit um artifizielle Befragungseffekte," SOEPpaper (forthcoming, 2014).

**3** *The basis of the estimated value for 2013 was a provisional weighting procedure (not including adults surveyed in the SOEP for the first time in 2013).*

Trends can change, however, as can be seen in the example of job satisfaction. Up until six years ago, eastern Germans were less satisfied with their work. The mean values have since converged to such an extent that, since 2009, statistical differences between them no longer exist. Here, of course, it should be taken into account that only those in gainful employment are able to respond to the question about job satisfaction.

Satisfaction with the living situation, housework, and leisure time have now fully converged. Initially, their development was similar to that of general life satisfaction but from 2005 at the latest, the "east-west divide" disappeared completely owing to the alignment of housing standards and leisure opportunities in both parts of the country.

Satisfaction with childcare facilities for pre-school children was higher in East Germany than in West Germany and this has still remained the case since reunification. The opposite applies to satisfaction with health: this was uniform in east and west at the time of reuni-

fication but has since dropped slightly in eastern Germany. This finding is all the more remarkable given the increased life expectancy in eastern Germany.<sup>10</sup> Of course it also means that although elderly people with care needs now live longer than was the case in the former GDR, they are not satisfied with their health due to their advanced age.

### Concerns about Crime, Xenophobia, and the Environment Allayed despite East-West Divide

Since it began in 1984, the SOEP has collected data on almost a dozen specific concerns individuals may have about private and public spheres of life.<sup>11</sup> The SOEP data concerned attitudes toward general economic develop-

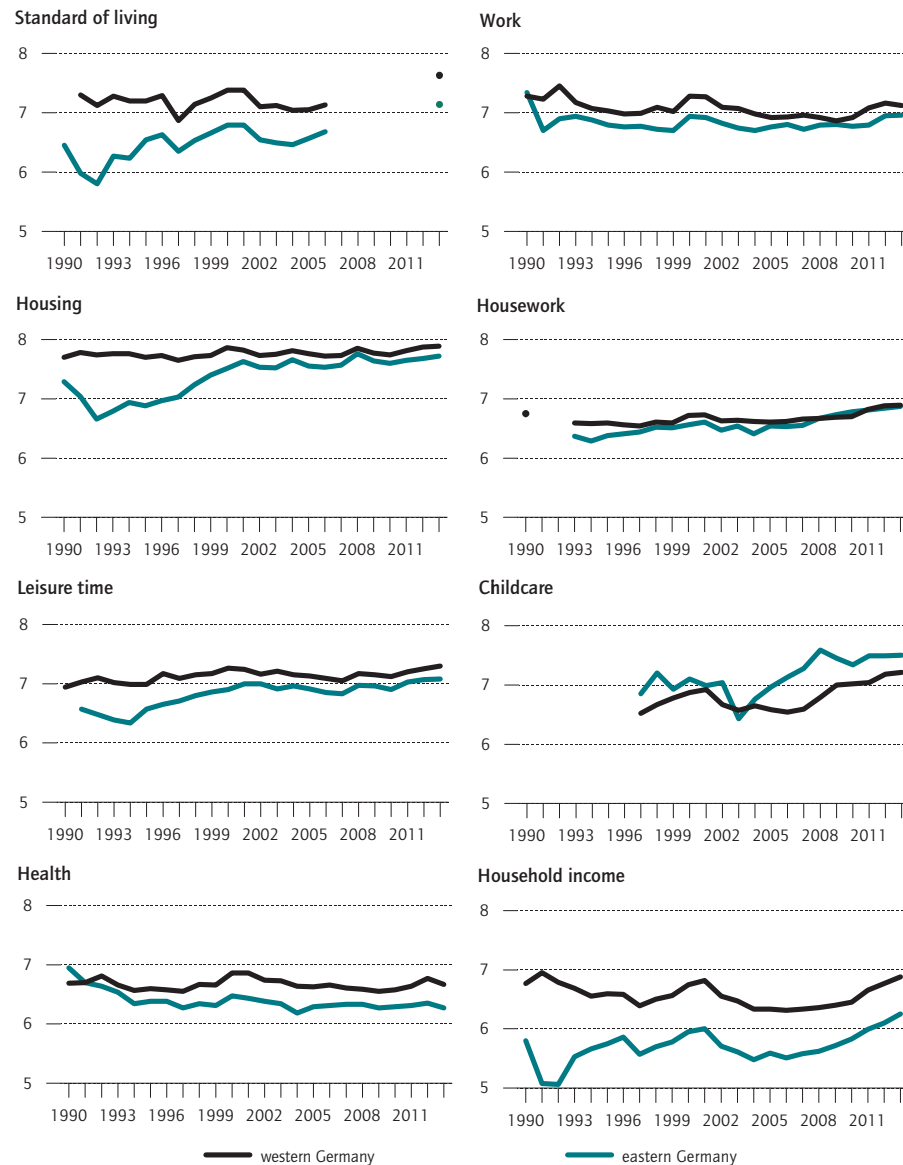
**10** See T. C. Vogt, "How many years of life did the fall of the Berlin Wall add? A projection of East German life expectancy," *Gerontology* 59 (3) (2013): 276.

**11** For the latest general overview of the development of concerns about public and private spheres, see J. Göbel, R. Habich, and P. Krause, "Subjektives

Figure 2

### Average Satisfaction with Various Areas of Life<sup>1</sup>

Scale from 0 to 10



<sup>1</sup> Estimate corrected for repeat-survey effects. The basis of the estimated value for 2013 was a provisional weighting procedure (not including adults surveyed in the SOEP for the first time in 2013).  
Source: SOEP v30; calculations by DIW Berlin.

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Patterns of satisfaction with various areas of life differ in east and west.

ment, an individual's own financial situation, keeping a job, crime, xenophobia, and world peace, given as a three-category variable (very concerned, somewhat concerned, or not concerned at all).

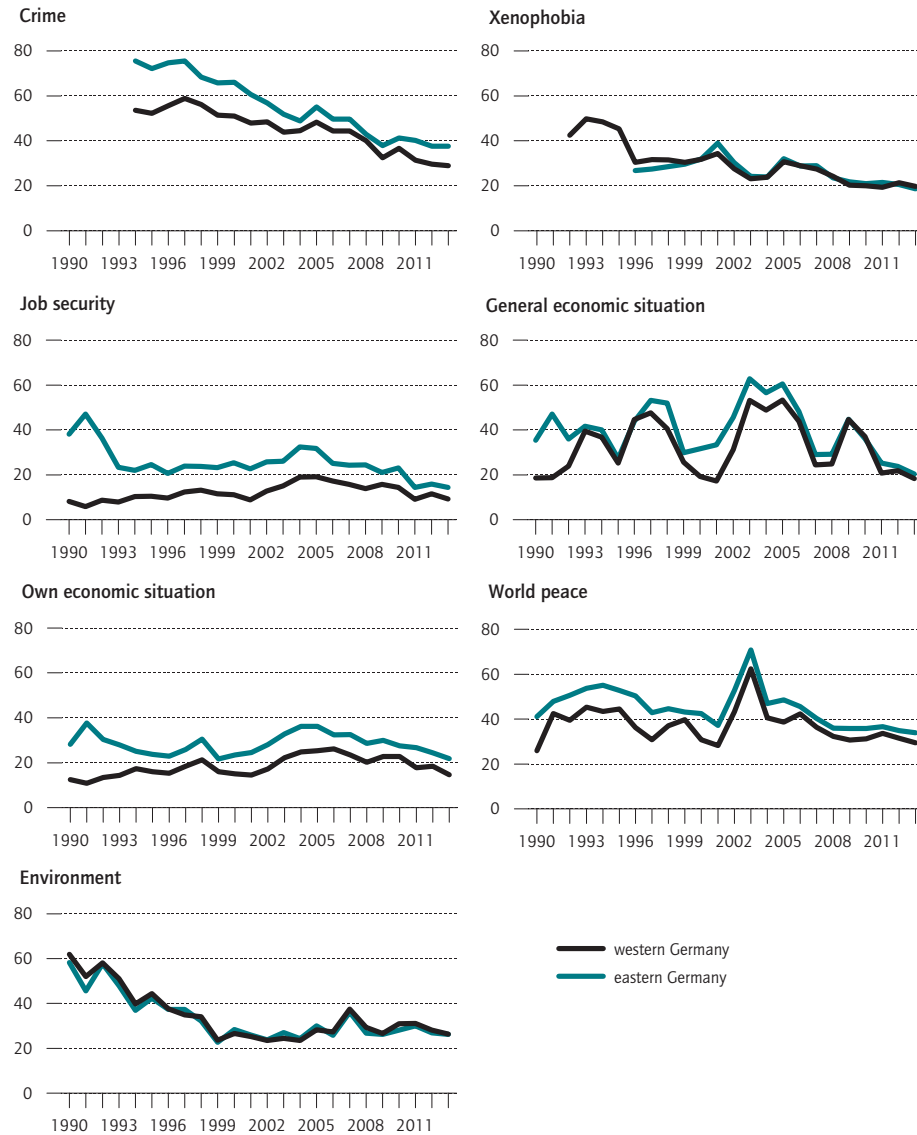
The pattern observed for concerns is similarly heterogeneous to that for satisfaction with the individual spheres of life (see Figure 3). In the mid-'90s, for instance concerns about crime were much more pronounced in eastern Germany than in western Germany; they then began to ease—more sharply in the east than in the west—and now show a similarly low level. There has also been

Wohlbeinden," in Federal Statistical Office (ed): Datenreport 2011 – Schriftenreihe der Bundeszentrale für politische Bildung, vol. 2, (Bonn, 2011): 377-384.

Figure 3

### Perceived Concerns in Public and Private Spheres<sup>1</sup>

Share of major concerns in percent



<sup>1</sup> The basis of the estimated value for 2013 was a provisional weighting procedure (not including adults surveyed in the SOEP for the first time in 2013). Source: SOEP v30; calculations by DIW Berlin.

Developments of concerns in east and west are largely convergent.

a decrease in concerns about xenophobia and the environment, both of which still caused great concern to over half the population in the '90s, but to only just under 20 percent in 2013. The long-term fluctuations in

these three areas of concern do not point to any clear east-west divide.<sup>12</sup>

<sup>12</sup> See Goebel et al. "Zur Angleichung."

Table

# East-West Divide in General Life Satisfaction<sup>1</sup>

OLS regression parameters

	1992	2002	2012
Region: east	−0.94***	−0.436***	−0.266***
Gender: female	0.0167	0.067**	0.0513
Age	−0.0336***	−0.0343***	−0.0439***
Age squared	0.00031***	0.00031***	0.00039***
Nationality: non-German	−0.163***	−0.0309	0.0915
Household income (ln)	0.647***	0.628***	0.588***
Employment status			
1. Full-time employment			
2. Part-time employment	−0.0118	0.0582	0.0428
3. Marginal employment	0.144	0.0195	0.0425
4. Unemployed	−0.783***	−0.862***	−0.809***
5. In education or training	0.0742	−0.0094	0.0177
6. Not in gainful employment	−0.0144	−0.0902**	−0.0451
Education (in years)	0.00059	0.0359***	0.0436***
Household size	−0.0036	0.0901***	0.113***
Household type			
1. Single-person household			
2. Household with a (married) couple	0.33***	0.161***	0.288***
3. Family household (children up to 16 years of age)	0.384***	0.101	0.233**
4. Single-parent household	−0.156	−0.344***	−0.182*
5. Family household (children over 16 years of age)	0.239**	0.0625	0.0761
6. Other	0.151	−0.183	−0.305*
District population size			
1. Fewer than 2,000 inhabitants			
2. 2,000 to 20,000 inhabitants	0.0271	−0.0044	−0.103*
3. 20,000 to 100,000 inhabitants	0.0415	−0.021	−0.112*
4. 100,000 to 500,000 inhabitants	−0.0898	−0.0141	−0.1
5. 500,000 inhabitants or more	−0.0692	−0.0216	−0.0343
Constants	3.42***	2.93***	3.42***
R <sup>2</sup>	0.1301	0.1056	0.0988
N	12,803	21,870	18,446

<sup>1</sup> Estimate corrected for repeat-survey effects (see box).

Sources: SOEP v30; calculations by DIW Berlin.

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Despite there still being a significant difference in life satisfaction, the effect of the east-west divide has halved in the past 20 years.

Over the past 25 years, eastern Germans have been increasingly more concerned about their own financial situation and job security than their western German counterparts. Concerns in eastern and western Germany follow a very similar pattern overall. This can be clearly seen from the pattern that emerges for concerns about world peace; a lower level of concern about this was recorded after the fall of the Wall. This trend was abruptly interrupted by the terrorist attacks in 2001; concerns about world peace across Germany rose in the two subsequent years. Levels of concern about world peace then began to fall once again.

Concerns about the general economic situation also followed a similar trend. Shortly after reunification, these were more pronounced in the east than in the west but with every economic downturn, there was a sharp increase in levels of concern in both parts of the country. An interesting observation here is that, although concerns among eastern Germans rose to approximately the same extent as for western Germans, eastern Germans still “carry over” these concerns to periods of economic upswings.

## Still Not Completely Unified

The descriptive analyses indicate that in the '90s life satisfaction in east and west converged rather quickly to begin with, slowing down over the last 15 years. Nevertheless, individual indicators now no longer reveal an east-west divide. A common level has still not been achieved, however, particularly from the viewpoint of the central indicator of general life satisfaction. Multivariate regression analyses are used to examine whether this is due to structural differences, which lead to higher levels of dissatisfaction in certain regions of western Germany also (particularly as a result of unemployment), or whether this difference can be attributed to socio-demographic characteristics such as age, marital status, or household type, or whether there is an “east effect” that cannot be identified more specifically. Here, the relevant level of general life satisfaction is calculated as a dependent variable for socio-demographic covariates as well as for several different periods. The place of residence in eastern or western Germany was also taken into account, meaning the corresponding “east-west indicator” can be interpreted as the resultant gauge for a less specifically identifiable east-west divergence.

Gender, age, nationality, income, employment status, education, household size, household type, and the district population size were all included in the calculation as control variables.

For the years 1992, 2002, and 2012, the OLS regressions<sup>13</sup> show significant less specifically identifiable life satisfaction values for eastern Germany which cannot be attributed to socio-demographic differences (see Table). However, a trend towards convergence can also be seen in the multivariate analysis. In 1992, shortly after reunification, this had an average negative effect of almost one point on the 11-point life satisfaction scale for respondents living in the former GDR. Ten years later,

<sup>13</sup> OLS regressions with robust standard errors.



in 2002, this effect had halved. In 2012, this negative effect was only 0.27 points.

Despite this convergence trend, the significant “east effect” would seem to indicate that the convergence process is still ongoing as far as general life satisfaction is concerned. If we look at the effect of other explanatory socio-demographic characteristics included in the model, these findings confirm the research into life satisfaction: life satisfaction follows a U-shaped trajectory over the course of people’s lives,<sup>14</sup> i.e., it is lowest in middle age. Unemployment has a strong negative<sup>15</sup> effect and income and education a positive effect on general life satisfaction.

Initially, up until the mid-’90s, general life satisfaction in eastern Germany quickly approached the western level. In the following ten years, virtually no progress was made with regard to convergence. It is only since 2008 that a further reduction in the east-west divide, albeit slight, has been evident (see Figure 4).<sup>16</sup>

## Conclusion

The descriptive analysis of the SOEP data shows that satisfaction with various areas of life has developed heterogeneously in Germany over the past 25 years; while satisfaction levels with regard to living situation, housework, leisure time, and job satisfaction have largely converged in eastern and western Germany, people in the former East are still less satisfied on average with their household income, their health, and their life as a whole than those in the former West Germany.

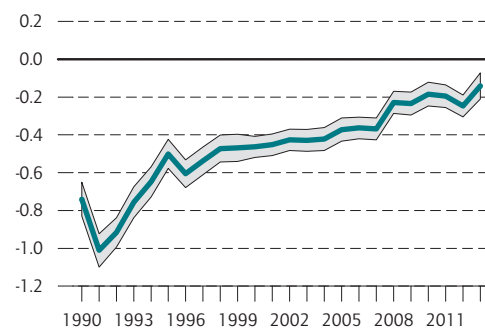
Eastern Germans are more concerned than their fellow citizens in the west of the country about their own financial situation, crime, and world peace. Moreover, even in periods of economic upturn, they are more concerned about the general economic situation than western Germans. People in both parts of the country are equally concerned about work and xenophobia.

The most important indicator for evaluating subjective living standards is general life satisfaction. Descriptive and multivariate analyses have shown that, as a result

Figure 4

### Convergence of General Life Satisfaction<sup>1</sup> between Eastern and Western Germany

OLS regression with 95-percent confidence interval



<sup>1</sup> Estimate corrected for repeat-survey effects. The basis of the estimated value for 2013 was a provisional weighting procedure (not including adults surveyed in the SOEP for the first time in 2013). Source: SOEP v30; calculations by DIW Berlin.

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The highest level of convergence of life satisfaction between east and west since 1990 was in 2013.

of the changed circumstances after the fall of the Wall, life satisfaction in the east fell sharply, picking up again significantly in the '90s. At the turn of the new millennium, the convergence process slowed down and stagnated. It is only since 2008 that a slight narrowing of the east-west gap can be observed again. Given the developments to date, however, it still remains to be seen whether this will even out over the next few years.

This east-west divide in subjective well-being, albeit less pronounced, continues to prevail, and— alongside material convergence—must continue to be taken into account in the future, for example when the German government and the Länder are consulting on a new strategy for structural policy once the Solidarity Pact II expires in 2019.

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Keywords: German unification, satisfaction, well-being, SOEP

<sup>14</sup> The linear age effect is significantly negative and the effect of age squared is significantly positive. See also D. G. Blanchflower and A. J. Oswald, “Is Well-Being U-Shaped Over the Life Cycle?,” *Social Science & Medicine* 66 (8) (2008): 1733-1749.

<sup>15</sup> L. Winkelmann and R. Winkelmann, “Why Are the Unemployed So Unhappy? Evidence from Panel Data,” *Economica* 65 (1998): 1-15.

<sup>16</sup> See also J. Geyer and V. Steiner, “Künftige Altersrenten in Deutschland: relative Stabilität im Westen, starker Rückgang im Osten,” *DIW Wochenbericht*, no. 11 (2010).



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