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CHANGES IN INDUSTRIAL ACTION: A COMPARISON BETWEEN GERMANY AND OTHER OECD COUNTRIES

HAGEN LESCH*

Introduction

Social peace is one of the most important locational advantages to invest and produce in Germany. However, starting from a very low level of industrial action in 2010, official statistics published by the German Federal Employment Agency (BA) show a remarkable increase in the number of working days lost due to strikes and lockouts. Against this background, we will first analyse the development of basic measures of strike activities since German unification. Afterwards, we will have a closer look at structural changes in industrial action. In the last part of this study, we will compare German figures with international ones.

In order to analyse trends of labour disputes in Germany, we can use two data sources:

- The German Federal Employment Agency, which is the main source, supplies data on disputes annually (German Federal Employment Agency 2015). The data are based on notifications by the employers, which are sent to the local employment agencies. Employers are obliged to report in accordance with Section 320 (5) of Volume III of the German Social Insurance Code (*Sozialgesetzbuch III*). The official statistics only record stoppages involving at least ten workers or lasting at least one day unless the total number of working days lost in the dispute is 100 or more. Since 2008, the statistics have reported smaller stoppages too. The basic data include the number of strike-affected firms, the number of workers involved and the number of work-

ing days lost due to strikes and lockouts. The figures are grouped by industry and by German state (also known as the German Bundesländer).

- In addition, since 2004, the Institute of Economic and Social Research within the Hans-Böckler-Foundation (WSI) has published strike statistics, which are based on reports of the trade unions (Bewernitz and Dribbusch 2014; WSI 2015). This alternative database informs about the number of disputes, the number of workers involved and the working days lost. There is no regional differentiation. Sector differentiation is restricted to the share of days lost in the service sector.

The main source for international comparisons of labour disputes is the International Labour Office (ILO), which collects data from the national labour agencies. They were published in the 'LABORSTA' database until 2008 and in the 'ILOSTAT' database thereafter (ILO 2008 and 2015). The ILO supplies data on disputes in different sectors and is therefore very useful to analyse inter-industry data (Lesch 2005). Unfortunately, for some countries, the two databases are fragmental. To get further information, we have to complete ILO-data with national sources. The European Trade Union Institute (EUTI 2015) supplies a lot of links to national sources for most of the European countries. In addition, data collected by Eurofound can also be used (Carley 2003, 2008 and 2013). The different sources report on the number of disputes, on the number of workers involved and on the working days lost. In contrast to the reporting made by the German Federal Employment Agency, the employment agencies in other OECD countries do not publish the number of strike-affected firms, but refer to the number of disputes.

The most reliable and most frequently used indicator of industrial action is the volume of labour disputes, which is often called the strike volume. It shows the number of working days lost due to strikes and lockouts (Gärtner 1989). For international comparisons, it is better to use a normalised strike volume. It is obtained by dividing the number of lost working days by the number of employees. This standardisation makes it possible to compare smaller economies, which usu-

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ally have fewer working days lost due to strikes, with bigger economies, which usually have more. To get a clearer picture of strike activity, further indicators can be used such as the number of disputes, striker determination and striker mobilisation. In order to construct striker determination, the number of days lost is divided by the number of workers involved. This indicates the average time spent on strike by each worker. Striker mobilisation is obtained by dividing the number of workers involved by the number of disputes. This indicates the average number of workers involved in each dispute (Aligisakis 1997).

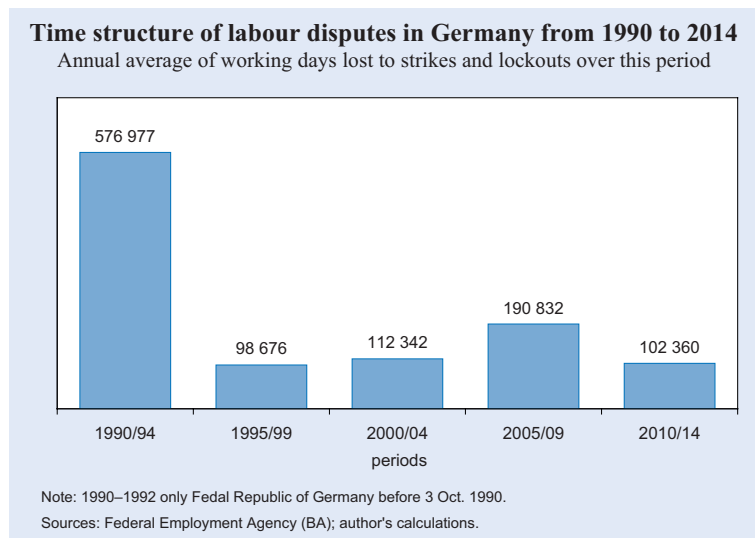
Development of strike volume in Germany

Figure 1 shows the volume of labour disputes (defined as the number of working days lost through industrial action) over the period 1990 to 2014. The big differences between the data supplied by the BA and the WSI are remarkable. On average, the WSI's estimations are 3.7 times higher than the official data published by the BA. A common result of both sources is the obvious fluctuation in strike volume. Some years were very conflictual, others very peaceful. In 1992, 2002 and 2006, more than 300,000 working days were lost per year. In 1998, 2000 and 2005, the data show less than 20,000 days. The years with the highest num-

Figure 1



Figure 2



ber of days lost are strongly influenced by major conflicts such as disputes in the public sector in 1992 and 2006 or in the metal industry in 2002. Over this period of time, major conflicts were responsible for two-thirds to three-quarters of the overall number of working days lost.

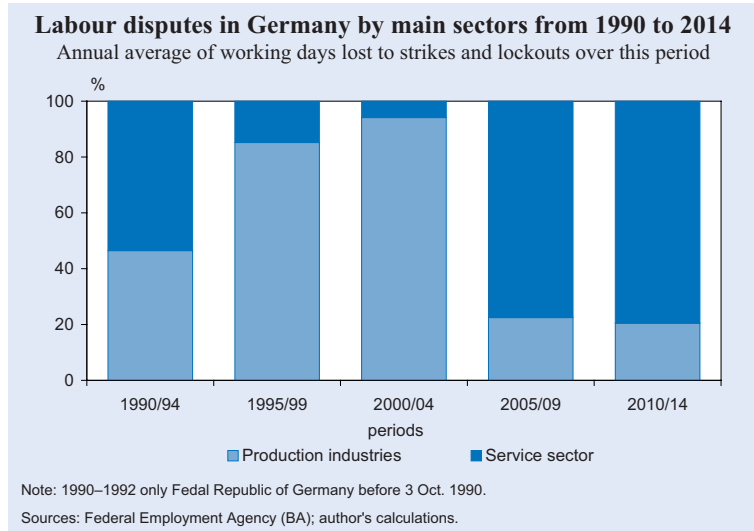
Since the data are significantly influenced by major conflicts, it is useful to aggregate single years into short periods of time. Figure 2 illustrates the development of five-year periods since 1990. Starting with 577,000 days lost in the first period, we can find a sharp decline to 99,000 days lost in the second period. The third period remained moderate but we can see an increase to 191,000 days on average for the years 2005 to 2009. This number nearly doubled compared to the late 1990s. Finally, the last period (2010 to 2014) was as peaceful as the late 1990s with 102,000 days lost.

However, the number of days lost increased in this short period of time. This trend will continue in 2015 as preliminary estimations have shown.

Structural changes in strike activity in Germany

Since the 1990s, strike activity in Germany has shifted from production industries to service industries. This trend towards the so-called tertiarisation of conflict (Bordogna and Cella 2002) is shown in Figure 3. In the early

Figure 3



1990s, the two main sectors caused a similar share of days lost in the whole economy. During the next two periods, the share of the production industries increased to 85 and 94 percent. This trend has sharply turned around since 2005. In the late 2000s and the early 2010s, the service industries accounted for about 80 percent of the number of days lost in the whole economy. It is remarkable that there were single years with a high share of days lost in the service sector before 2006. However, only single years (and not a longer period) have been observed since 2006.

Calculations concerning striker determination and striker mobilisation show further changes in industrial conflicts. Regarding striker determination first, a single striker was on strike for 1.8 days on average in the early 1990s. As presented in Table 1, this average was halved in the late 1990s but has increased since 2005. The last figure for the period 2010 to 2014 shows that a single striker was on strike for 2.8 days. Therefore, striker mobilisation has tripled within the last twenty years. A distinction between main sectors shows significant differences. In services, a single striker was on strike for 3.6 days on average. This was twice as much as a single striker in production industries. The highest level in determination was shown by strikes in services during the late 2000s with 5.4 days not worked per striker per year. This was nine times more than in production industries and five times more than in services during the early 2000s.

Whereas striker determination has increased in recent years, the degree of striker mobilisation has decreased. As presented in Table 1, we registered 583 strikers per dispute on average per year in the late 1990s compared to 64 strikers per dispute in the last period. Both main sectors follow this downward trend. However, despite a sharp reduction in recent years, striker mobilisation is bigger in production industries than in service industries. The sharp reduction in striker mobilisation in production industries is due to the great influence of the

German metal industry. Unlike in previous years, the trade union for the metal industry (IG Metall) has only called for a bigger warning strike once since 2010 (in 2013). Workers' involvement and therefore striker mobilisation in such warning strikes are very high.

In an attempt to summarise the main findings concerning changes in industrial conflict in Germany, the following conclusions can be drawn:

- There has been a steady decrease in strike activity since 1990.
- There has been a strong trend towards the tertiarisation of conflict since 2006.
- Striker mobilisation is decreasing while striker determination is increasing.

The last finding is part of the trend towards the tertiarisation of conflict. In some service industries such as retail, public services or sectors with strike-prone craft unions (such as aviation, flight control, railways and hospitals), strikes are scaled smaller than in pro-

Table 1

Striker determination and striker mobilisation in Germany from 1990 to 2014

Striker determination: average time spent on strike by each striker					
	1990/94	1995/99	2000/04	2005/09	2010/14
Production industries	1.1	0.8	0.9	0.6	1.8
Service sector	3.9	1.5	1.1	5.4	3.6
All industries	1.8	0.9	0.9	2.0	2.8
Striker mobilisation: average number of workers involved in each dispute					
	1990/94	1995/99	2000/04	2005/09	2010/14
Production industries	682	1,040	620	509	88
Service sector	128	103	97	68	57
All industries	327	583	496	176	64

Note: 1990–1992 only Fed. Rep. of Germany before 3/10/1990.

Sources: Federal Employment Agency (BA); author's calculations

duction industries (such as warning strikes in the metal sector).

Strike volume in international comparison

When interpreting international comparisons of labour disputes, it should be noted that an exact comparison between countries is not possible. There are important differences in the methods used to compile statistics in individual countries (ILO 1993; Sweeney and Davies 1996; Carley 2008 and 2013; Lesch 2010). The number of employees in the analysed 23 OECD countries differs. We can expect a positive relationship between the number of days lost due to industrial action and the number of employees. This bias is eliminated by relating the two numbers to each other (Aligisakis 1997). Table 2 summarises the volume of labour disputes defined as the number of working days lost through strikes and lockouts per 1,000 employees over the period 1990 to 2014. Furthermore, the table supplies data concerning the number of disputes. In order to smooth out bigger fluctuations (see discussion above), the international comparison is based on five-year averages instead of single years. As far as possible, the calculations include data for 2014.

When comparing the number of working days lost per 1,000 employees, sources reveal a wide span of results:

- The countries with more than 100 days lost per 1,000 employees in one or more periods are Australia (1990–1994), Denmark (1995–1999, 2005–2009, 2010–2013), Finland (1990–1994, 1995–1999), France (1995–1999, 2005–2009, 2010–2012), Ireland (1990–1994, 1995–1999), Italy (1990–1994, 2000–2004), Canada (all periods excluding 2010–2014) and Spain (1990–1994, 1995–1999, 2000–2004).
- The group of countries with consistently less than 20 days lost per 1,000 employees includes Germany (3 to 18 days), Japan (0 to 3 days) and Switzerland (1 to 5 days). Poland, Sweden and Slovakia show less than 20 days lost since 1995 (Poland: 1 to 8 days, Sweden: 7 to 16 days, Slovakia: 0 days for all periods). The Netherlands, Hungary and Austria had less than 20 days in four of five considered periods. Exemptions are the period 1995 to 1999 in the case of the Netherlands and Hungary and the period 2000 to 2004 in the case of Austria.

- New Zealand, Britain, the United States, Belgium, Norway and Portugal are countries which are in the middle of all compared OECD economies. Usually, the working days lost lie in a range between 20 and 99 days.

We find a constant decrease in strike volume especially in the Anglo-Saxon countries. Between the early 1990s and recent years (2010 to 2014), the number of working days lost per 1,000 employees declined from 220 to 83 in Canada, from 157 to 17 in Australia, from 99 to 12 in New Zealand, from 136 to 10 in Ireland, from 37 to 26 in Britain and from 43 to 4 in the United States. However, there are some other countries with a significant improvement in the strike balance. The number of working days lost shrunk from 471 to 61 in Spain, from 79 to 1 in Poland and from 55 to 4 in Sweden. Even though the degree of improvement is slightly less impressive, this group of countries also includes Portugal, where days lost declined from 39 to 24. As far as data are available (up to 2009), there is a similar trend in Italy (from 238 to 46 days). Because of missing data for the last period (2010 to 2014), we cannot calculate whether this trend is continuing. When analysing the development of the number of disputes by country, a similar picture emerged. This number decreased particularly in the Anglo-Saxon economies but also in Portugal and Sweden. There is no OECD country with an increasing number of disputes over a long period of time apart from France (from 1990 to 2004) and Spain (from 2000 to 2013). In Germany, we find an increase in the number of strike-affected firms between 1995 and 2009. However, despite this rise, the number was substantially lower than in the initial period from 1990 to 1994.

All in all, our findings confirm the results of earlier studies of strike activity. First, they show that there has been a general decline in aggregate strike activity. Second, although there was a weak tendency of convergence, the ‘strike league table’ (Vandaele 2011) showed remarkable stability over the last two decades. Inter-country differences also remained substantial (Lesch 2010; Vandaele 2011; Gall 2012). Third, the inter-year variation can be very significant. The general decline was often interrupted by sharp peaks, which were partly induced by political strikes (Gall 2012). Political strikes are defined as collective mobilisations in the political, rather than industrial arena (Gall 2012). Political strikes are often organised as general strikes across the whole economy or across the whole

Table 2

Labour disputes in international comparison from 1990 to 2014						
Strike volume (working days lost per 1.000 employees) and number of disputes; annual average rates						
		1990/94 ^{a)}	1995/99	2000/04	2005/09 ^{b)}	2010/14 ^{c)}
Australia	Strike volume	157	89	49	16	17
	Number of disputes	825	577	695	244	200
Belgium	Strike volume	35	31	69	71	71
	Number of disputes	40	134	n.a.	n.a.	n.a.
Denmark	Strike volume	36	300	41	163	100
	Number of disputes	209	943	951	483	258
Germany ^{d)}	Strike volume	18	3	4	6	3
	Number of disputes	978	190	257	538	535
Finland	Strike volume	207	129	49	91	50
	Number of disputes	236	92	90	151	130
France ^{e)}	Strike volume	42	104	93	115	139
	Number of disputes	1,616	1,794	2,101	n.a.	n.a.
Ireland	Strike volume	136	102	41	46	10
	Number of disputes	43	32	25	13	10
Italy	Strike volume	238	78	121	46	n.a.
	Number of disputes	941	846	757	632	n.a.
Japan	Strike volume	3	2	0	0	0
	Number of disputes	268	176	76	59	74
Canada	Strike volume	220	220	170	130	83
	Number of disputes	440	347	323	192	184
New Zealand	Strike volume	99	26	17	12	12
	Number of disputes	78	50	34	37	11
Netherlands	Strike volume	17	27	10	6	10
	Number of disputes	22	18	16	25	20
Norway	Strike volume	72	90	76	21	93
	Number of disputes	13	17	13	6	8
Austria	Strike volume	7	1	80	0	4
	Number of disputes	5	0	3	0	1
Poland	Strike volume	79	6	2	8	1
	Number of disputes	2,956	211	16	2,917	61
Portugal	Strike volume	39	22	17	10	24
	Number of disputes	294	250	200	133	114
Sweden	Strike volume	55	45	34	6	4
	Number of disputes	43	16	10	9	7
Switzerland	Strike volume	1	2	5	2	1
	Number of disputes	3	4	6	4	8
Slovakia	Strike volume	26	0	0	0	0
	Number of disputes	7	2	0	1	2
Spain	Strike volume	471	151	233	72	61
	Number of disputes	1,287	768	712	806	909
Hungary	Strike volume	4	33	11	5	3
	Number of disputes	4	6	6	11	3
United Kingdom	Strike volume	37	22	31	26	26
	Number of disputes	334	213	163	134	127
United States ^{f)}	Strike volume	43	38	43	11	4
	Number of disputes	40	30	24	18	15

n.a. = not available. – ^{a)} Strike volume: Slovakia; Hungary = 1991 to 1994; Germany = 1990 to 1992 only Fed. Rep. of Germany before 3/10/1990. Number of disputes: Hungary = 1991 to 1994; Germany = 1990 to 1992 only Fed. Rep. of Germany before 3/10/1990. – ^{b)} Strike volume: Italy = 2005 to 2008; Portugal = 2005 to 2007. Number of disputes: Italy = 2005 to 2008; Portugal = 2005 to 2007. – ^{c)} Strike volume: France and Japan = 2010 to 2012; Denmark; New Zealand; Norway; Poland; Portugal; Switzerland; Slovakia; Spain and Hungary = 2010 to 2013. Number of disputes: Japan = 2000 to 2012; Denmark; New Zealand; Norway; Poland; Portugal; Switzerland; Slovakia; Spain and Hungary = 2010 to 2013. – ^{d)} Number of strike-affected firms. – ^{e)} Strike volume includes general strikes as far as possible; number of disputes only in the private sector excluding transport and general strikes since 2002. – ^{f)} Excluding work stoppages involving fewer than 1.000 workers and lasting less than a full day or shift.

Sources: ETUI; ILO; OECD; national sources; author's calculations.

public sector. These collective mass protests are often short (one day) and targeted to develop political leverage over the government as executive or legislator. We

have to distinguish between such political and 'economic' strikes, of which the purpose is to reduce the employers' ability to make profit.

Given the stabilisation of industrial relations in many OECD countries, countries with traditionally stable industrial relations (such as Germany, Japan, the Netherlands, Switzerland and Austria), lose an important locational advantage. On the other hand, local production conditions in Belgium, France and some Scandinavian countries (Denmark, Finland and Norway) are deteriorating because the propensity to strike has been strengthened.

Based on the time period from 1990 to 2013, the analysis of the number of working days lost by main sectors shows a different picture. As Table 3 shows, there are still economies with more working days lost per 1,000 employees in production industries than in the service sectors. This picture emerges for all periods in Australia, Belgium, Italy (until 2008, no data thereafter), Canada, Portugal (until 2007, no data thereafter) and Spain and for four of five periods in Finland and the United States. In contrast, a smaller group of countries has more working days lost per 1,000 employees in services than in production industries. This group includes Austria, Sweden, Hungary and Britain. However, during the last period, the relation temporarily changed in Austria and Sweden. A third group of countries, comprising France, Ireland, Japan, Norway, Poland, Switzerland and Slovakia, shows no clear picture. We can see a trend reversal in Denmark, Germany and in the Netherlands. In these countries, the number of days lost per 1,000 employees was higher in production industries between 1990 and 2004 but higher in the service sector thereafter. In the Netherlands, both main sectors were confronted with a similar number of working days lost.

The trend towards the tertiarisation of conflict – in other words, the shifting of strike activity from production industries to services – as seen in Germany is visible for a majority of countries but it is no common trend (Bordogna and Cella 2002). If we look at the percentage of the (non-normalised) number of working days lost in production industries in relation to days lost in the whole economy in Table 4, we can see that there are still economies with a share of around 50 percent and sometimes even more in all periods. This is observable for Australia, Italy (until 2008), Spain and Portugal (until 2007). Furthermore, there are some economies with a share of working days lost in production industries of 50 percent and more in at least two of the five periods. This group of economies includes Finland (since 2000) as well as the Netherlands (from 1995 to 2004), Norway (from 1995 to 1999

and from 2010 to 2013), Poland (from 1995 to 1999 and from 2010 to 2013) and the United States (from 1995 to 1999 and from 2005 to 2009).

A particularly high proportion of days lost in the service sector is observable in France, Ireland, Sweden (apart from 2010 to 2013), Hungary (until 2009, no data thereafter) and in Britain. Since 1995, the share of working days lost in the service sector has fluctuated within a range of 76 and 89 percent in France and 82 and 97 percent in Britain. A similar range existed in Austria and Sweden until 2010. However, this changed significantly thereafter. To a lower level, Japan is characterized by a high share of days lost in the service sector too. Furthermore, there are some countries in which tertiarisation emerges during the last ten or twenty years. This development already started in the early 1990s in Denmark and has been observed in Australia, Germany and the Netherlands since 2005. The share of days lost in the service sector increased from 18 to 90 percent and more in Denmark, from 6 (2000 to 2004) to 73 (2010 to 2013) or 78 percent (2010 to 2014) in Germany and from 32 (2000 to 2004) to 88 (2010 to 2013) percent in the Netherlands.

Table 5 illustrates the evolution of striker mobilisation and striker determination. In most countries, striker mobilisation develops rather discontinuously. Indeed, mobilisation has declined in Germany, the United States and Hungary since the period 1995 to 1999 and in Switzerland and Spain since the period 2000 to 2004. At the same time, the level of mobilisation has declined remarkably in Hungary, Switzerland and Spain in recent years. On the other hand, Britain was the only country with a constantly rising striker mobilisation. A similar trend existed in Ireland, Poland and Canada, even though it was interrupted from 2005 to 2009. In this period, we can see a sharp increase in Ireland (more than 4,000 workers per strike compared to 612 before and 948 thereafter), a sharp decrease in Poland (only 22 workers per strike compared to 153 before and 333 thereafter) and a slight drop in Canada (431 workers per strike compared to 540 before and 623 thereafter).

Striker determination has decreased in Ireland, Slovakia and Britain over all periods and in Japan since the period 1995 to 1999 and Sweden after 2000 to 2004. The number of days lost per striker declined from 3.7 to 1.1 days in Britain, from 9.9 to 1.6 days in Ireland and from 9.1 to 0.0 days in Slovakia. On the other hand, striker determination continuously increased only in Spain. In Germany and Switzerland, it

Table 3

Labour disputes by main sectors in international comparison from 1990 to 2013

Working days lost per 1,000 employees; annual average rates		1990/94 ^{a)}	1995/99 ^{b)}	2000/04 ^{c)}	2005/09 ^{d)}	2010/13 ^{e)}
Australia	Production industries	425	273	161	36	48
	Service sector	73	39	20	11	12
Belgium	Production industries	93	73	98	156	148
	Service sector	9	15	59	42	48
Denmark	Production industries	107	741	93	35	18
	Service sector	9	117	21	205	121
Germany	Production industries	21	7	10	4	2
	Service sector	17	1	0	7	3
Finland	Production industries	271	31	103	282	137
	Service sector	197	174	24	19	33
France	Production industries	57	69	41	116	174
	Service sector	29	99	107	118	131
Ireland	Production industries	199	66	24	45	9
	Service sector	103	123	50	47	5
Italy	Production industries	370	148	80	68	n.a.
	Service sector	150	33	46	25	n.a.
Japan	Production industries	2	1	0	0	0
	Service sector	3	2	0	0	0
Canada	Production industries	536	334	216	188	189
	Service sector	119	180	157	116	50
New Zealand	Production industries	255	36	28	5	n.a.
	Service sector	54	23	15	7	n.a.
Netherlands	Production industries	42	94	34	6	11
	Service sector	8	6	5	6	11
Norway	Production industries	39	228	243	21	42
	Service sector	84	51	29	18	97
Austria	Production industries	1	0	22	0	12
	Service sector	11	2	139	0	1
Poland	Production industries	n.a.	11	1	3	3
	Service sector	n.a.	2	2	12	1
Portugal	Production industries	52	37	19	12	n.a.
	Service sector	37	13	15	9	n.a.
Sweden	Production industries	46	4	11	1	19
	Service sector	61	61	42	7	1
Switzerland	Production industries	4	1	9	4	0
	Service sector	0	3	5	1	1
Slovakia	Production industries	62	0	0	0	0
	Service sector	2	0	0	0	0
Spain	Production industries	471	269	238	112	130
	Service sector	199	78	69	50	39
Hungary	Production industries	4	3	1	2	n.a.
	Service sector	4	55	18	5	n.a.
United Kingdom	Production industries	51	15	12	13	5
	Service sector	31	26	37	30	29
United States ^{f)}	Production industries	76	116	17	42	16
	Service sector	33	13	51	4	2

n.a. = not available. – ^{a)} Germany = 1990 to 1992 only Fed. Rep. of Germany before 3/10/1990. Slovakia and Hungary = 1991 to 1994. – ^{b)} Slovakia = missing value for 1996. – ^{c)} Austria = missing value for 2004; Japan and New Zealand = missing values for 2003. – ^{d)} Italy = 2005 to 2008; Portugal = 2005 to 2007. – ^{e)} France and Japan = 2010 to 2012. – ^{f)} Excluding work stoppages involving fewer than 1.000 workers and lasting less than a full day or shift.

Sources: ETUI; ILO; OECD; national sources; author's calculations.

has risen since the period 2000 to 2004. On the one hand, a single strike in Germany and Switzerland were scaled smaller but lasted longer. On the other hand, a single strike in Britain and in Ireland was scaled bigger but also shorter. Striker mobilisation and striker determination evolved discontinuously in some coun-

tries, not only because general and political strikes took place in Southern Europe but also because strikes took place in Austria (2003), Ireland (2009), Belgium (2012) and Britain (2011). In organizing such mass protests, the unions mobilised many workers for a short time (Nowak and Gallas 2014).

Table 4

Tertiarisation of labour disputes in international comparison from 1990 to 2013

Share of working days lost by main sectors; annual averages in per cent		1990/94 ^{a)}	1995/99 ^{b)}	2000/04 ^{c)}	2005/09 ^{d)}	2010/13 ^{e)}
Australia	Production industries	65	67	67	44	51
	Service sector	34	33	32	51	49
Belgium	Production industries	87	70	38	56	48
	Service sector	13	30	62	44	52
Denmark	Production industries	82	68	56	5	4
	Service sector	18	29	40	95	96
Germany	Production industries	46	85	94	22	27
	Service sector	54	15	6	78	73
Finland	Production industries	35	7	60	84	57
	Service sector	65	91	34	16	43
France	Production industries	47	20	11	22	26
	Service sector	53	79	89	78	76
Ireland	Production industries	50	20	17	22	29
	Service sector	50	80	83	78	71
Italy	Production industries	58	71	47	62	n.a.
	Service sector	36	26	49	35	n.a.
Japan	Production industries	26	16	30	9	58
	Service sector	74	84	62	91	42
Canada	Production industries	60	36	29	32	49
	Service sector	40	59	68	68	51
New Zealand	Production industries	63	36	32	17	n.a.
	Service sector	37	64	53	83	n.a.
Netherlands	Production industries	67	83	67	20	12
	Service sector	32	17	32	79	88
Norway	Production industries	14	58	71	21	9
	Service sector	86	42	29	67	91
Austria	Production industries	8	1	7	0	76
	Service sector	92	99	93	0	24
Poland	Production industries	n.a.	79	20	13	72
	Service sector	n.a.	21	80	87	28
Portugal	Production industries	53	65	47	46	n.a.
	Service sector	46	30	50	54	n.a.
Sweden	Production industries	21	2	7	5	82
	Service sector	79	98	93	95	18
Switzerland	Production industries	99	8	35	54	8
	Service sector	1	92	65	22	92
Slovakia	Production industries	96	3	0	0	56
	Service sector	3	97	100	100	44
Spain	Production industries	58	61	45	45	47
	Service sector	38	34	25	48	51
Hungary	Production industries	39	3	2	19	n.a.
	Service sector	61	97	98	81	n.a.
United Kingdom	Production industries	44	18	9	10	3
	Service sector	56	82	91	90	97
United States ^{f)}	Production industries	44	74	9	63	45
	Service sector	56	26	91	37	55

n.a. = not available. – ^{a)} Germany = 1990 to 1992 only Fed. Rep. of Germany before 3/10/1990. Slovakia and Hungary = 1991 to 1994. – ^{b)} Slovakia = missing value for 1996. – ^{c)} Austria = missing value for 2004; Japan and New Zealand = missing values for 2003. – ^{d)} Italy = 2005 to 2008; Portugal = 2005 to 2007. – ^{e)} France and Japan = 2010 to 2012. – ^{f)} Excluding work stoppages involving fewer than 1.000 workers and lasting less than a full day or shift.

Sources: ETUI; ILO; OECD; national sources; author's calculations.

Structural change and mass strikes

There are many factors influencing strike activity. They include macroeconomic effects as well as political and institutional factors, country-specific characteristics and the historical context (Batstone 1985;

Lesch 2002; Goerke and Madsen 2004; Ludsteck and Jacobebbinghaus 2006; Vandaele 2011). In strike-prone Southern Europe and in France, strike activity is particularly influenced by the political sphere. Mass strikes are part of a social movement for democratic and social rights (Nowak and Gallas 2004). In these

Table 5

Striker mobilisation and striker determination in international comparison from 1990 to 2014

Striker mobilisation: number of strikers per dispute; striker determination: number of days lost per striker		1990/94 ^{a)}	1995/99	2000/04	2005/09 ^{b)}	2010/14 ^{c)}
Australia	Mobilisation	857	710	340	541	530
	Determination	1.4	1.6	1.6	1.1	1.6
Belgium	Mobilisation	284	109	n.a.	n.a.	n.a.
	Determination	8.6	5.3	8.7	7.2	n.a.
Denmark	Mobilisation	195	179	76	115	92
	Determination	2.1	4.3	1.4	7.6	10.3
Germany ^{d)}	Mobilisation	327	583	496	176	64
	Determination	1.8	0.9	0.9	2.0	2.8
Finland	Mobilisation	450	541	650	411	464
	Determination	3.8	4.6	1.8	3.1	1.8
France ^{e)}	Mobilisation	n.a.	n.a.	n.a.	n.a.	n.a.
	Determination	2.6	5.8	5.5	4.1	n.a.
Ireland	Mobilisation	275	593	612	4,311	948
	Determination	9.9	6.0	3.7	1.3	1.6
Italy	Mobilisation	3,145	1,003	2,782	1,293	n.a.
	Determination	1.2	1.3	0.9	1.0	n.a.
Japan	Mobilisation	268	178	121	202	191
	Determination	1.9	2.7	2.0	1.1	0.7
Canada	Mobilisation	389	496	540	431	623
	Determination	15.0	15.6	13.5	23.5	11.6
New Zealand	Mobilisation	429	432	320	215	310
	Determination	3.6	1.6	2.2	2.4	6.5
Netherlands	Mobilisation	1,485	1,778	2,374	932	1,576
	Determination	3.0	5.1	2.0	1.8	2.2
Norway	Mobilisation	1,811	1,178	1,750	1,442	3,557
	Determination	5.3	8.7	6.9	5.2	7.9
Austria	Mobilisation	5,120	1,616	114,994	0	16,543
	Determination	0.8	0.7	1.6	0.0	0.6
Poland	Mobilisation	114	114	153	22	333
	Determination	2.5	2.6	6.8	1.6	0.8
Portugal	Mobilisation	379	188	207	211	637
	Determination	1.1	1.5	1.4	1.2	1.1
Sweden	Mobilisation	674	1,909	1,802	409	738
	Determination	7.3	5.1	7.0	6.3	3.8
Switzerland	Mobilisation	554	1,299	2,452	784	130
	Determination	2.5	1.4	1.2	1.9	3.1
Slovakia	Mobilisation	781	178	9,163	284	7,763
	Determination	9.1	0.1	0.0	0.0	0.0
Spain	Mobilisation	2,280	1,075	2,564	644	367
	Determination	1.5	1.9	1.7	2.3	2.7
Hungary	Mobilisation	3,704	6,111	2,406	1,792	858
	Determination	0.8	2.6	2.6	0.8	3.3
United Kingdom	Mobilisation	668	846	2,146	3,399	4,792
	Determination	3.7	2.7	2.1	1.4	1.1
United States ^{f)}	Mobilisation	7,259	8,528	7,129	5,277	5,248
	Determination	16.3	17.6	32.5	15.9	7.5

n.a. = not available. – ^{a)} Mobilisation and determination: Slovakia; Hungary = 1991 to 1994; Germany = 1990 to 1992 only Rep. Fed. of Germany before 3/10/1990. – ^{b)} Mobilisation: Italy = 2005 to 2008; Belgium and Portugal = 2005 to 2007; determination: Italy = 2005 to 2008; Belgium; France and Portugal = 2005 to 2007 – ^{c)} Mobilisation: Japan = 2010 to 2012; Denmark; New Zealand; Norway; Poland; Portugal; Switzerland; Slovakia; Spain and Hungary = 2000 to 2013; determination: Japan = 2000 to 2012; Denmark; New Zealand; Norway; Poland; Portugal; Switzerland; Slovakia; Spain and Hungary = 2010 to 2013. – ^{d)} Number of strike-affected firms. – ^{e)} Strike volume includes general strikes as far as possible; number of disputes only in the private sector excluding transport and general strikes since 2002. – ^{f)} Excluding work stoppages involving fewer than 1,000 workers and lasting less than a full day or shift.

Sources: ETUI; ILO; OECD; national sources; author's calculations.

countries, we deal with competing communist, socialist and Christian trade unions with distinct political orientations and regularly state interventions in free

collective bargaining (for example, by declaring collective agreements which are generally binding). In Nordic countries and in Belgium, trade union density

is comparably high because the unions participate in the administration of unemployment insurance (the Ghent system). Free collective bargaining still works and politically-induced mass protests are not common. In Central and Eastern Europe, unions do not have a strong tradition of militancy compared to Southern Europe (Vandaele 2011).

At first, strike activity increased during the transformation of the former socialist planned economies to market economies. However, strike activity was dampened by rising unemployment and the development of tripartite social dialogue. It is obvious that there were no political mass protests during or after the financial and economic crisis in the three analysed Central and Eastern European economies. In Hungary and Poland, industrial disputes emerged only in some sectors. In Slovakia, there has been almost no industrial action since 2008 (Carley 2013).

Industrial action in the service sector hits the general public more than strikes in production industries. Therefore, we have more negative externalities induced by strikes in countries with a strong trend towards the tertiarisation of conflict. In addition, this implies that the strike volume loses importance in analysing strike activity, whereas strike frequency gains importance (Vandaele 2011). Tertiarisation of conflict is induced by de-industrialisation. Strike-prone sectors such as coal mining or iron and steel industries lost importance, the globalisation of production weakened the unions' position and there was an increase in employment in services (Bordogna and Cella 2002). In addition, decreasing employment in traditional industries has reduced the number of days lost due to strikes in countries with a relatively high share of labour conflicts in such industries. This structural effect was most significant during the 1980s but has declined thereafter (Lesch 2010). Hence, there must be other factors than structural change that can explain the tertiarisation of conflict in the last twenty years. One possible explanation is the growing relevance of political strikes. Increased worker militancy in services could be another one.

Indeed, in Western European countries, strike action has become increasingly dominated by political or general strikes. In addition, the frequency of political strikes has risen since the crisis of 2008 to 2009 (Gall 2012; Nowak and Gallas 2014). The number of general strikes in the EU15 plus Norway was 18 from

1980 to 1989, 26 between 1990 and 1999 and 27 between 2000 and 2009. In contrast, there were 38 general strikes from 2010 to May 2014. Half of these strikes were in Greece, six in Italy, five in Portugal, four in Spain and three in France (Nowak and Gallas 2014). Even though the statistical coverage of political mass strikes is not always complete, the figures can explain peak values in the development of strike volume. Political and general strikes have accelerated the tertiarisation of conflict because they were concentrated on the public and transport sectors. Furthermore, striker mobilisation is very high in political strikes while striker determination is short (one or two days). However, we can sometimes see rising worker militancy in services, especially in cases of liberalisation and privatisation (Carley 2013).

Conclusion

Tertiarisation of conflict in Germany goes hand in hand with an increasing number of days not worked per striker and a decreasing number of strikers per conflict. Labour disputes have become more fragmented. An opposite development has evolved in Britain and Ireland. In these countries, striker determination has declined and striker mobilisation has risen. In other OECD countries with a tertiarisation of conflict, both indicators did not follow a common trend. In many cases, this can be explained by a higher level of political strikes. In Germany, social partnership still worked during the crisis of 2008 to 2009. There were only a few labour disputes and the crisis was tackled with a tripartite agreement between the government, employers' federations and unions, which included an extension of short-time work and economic stimulus programmes. In many Southern European countries as well as Belgium, France and Ireland, political reforms and austerity programmes induced a lot of public protest including mass strikes. However, the overall decline in strike activity continued in most countries. We discovered an increasing convergence of strike activity but differences in inter-country levels still exist. Tertiarisation of conflict makes labour disputes more tangible for the public. Whereas tertiarisation was induced by 'economic' strikes (disputes between unions and employers) in Germany, it was a consequence of political mass strikes abroad. If the number of days lost due to strikes and the number of disputes still increase, Germany could lose an important locational advantage.

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