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Is Germany the North Star of Labor Market Policy?

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Germany's recovery from an unemployment disease and its resilience to the Great Recession is remarkable. Its success story makes it a showcase for labor policy and labor market reforms. This paper assesses the potential of the German experience as a model for effective, evidence-based policymaking. Flexible management of working time (through overtime and short-time work, time accounts, and labor hoarding), social cohesion and controlled unit labor costs, combined with a rigid, incentive-oriented labor policy supported by effective program evaluation, define the characteristics of a strong reference model. Austerity, sometimes seen as core to the German model, is not viewed as a key element. [JEL J68; J21; P52; O57]
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The so-called German model has recently been the subject of great interest, both inside and outside the policy community. The country has not only successfully managed to escape the unemployment trap it was caught in for a couple of decades, it also performed exceptionally well during and after the Great Recession. Hence, it is not surprising that the concepts underlying the German model are now viewed as a possible reference model for other countries with labor market turmoil. The question for policymakers in other countries is thus whether Germany's success is just a matter of "luck," or whether its specific combination of a flexible management of working time (through overtime and short-time work,

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time accounts, and labor hoarding), social cohesion and controlled unit labor costs, combined with a rigid, incentive-oriented labor policy supported by effective program evaluation, provide a set of guiding principles for labor market policies that can be successfully applied in other countries. In other words: Has Germany become the "North Star" for effective labor market policies and reforms?

This paper sheds light on this important question. Section I describes Germany's initial economic situation as Europe's "sick man" caught in the unemployment trap. Section II provides an overview about the country's subsequent labor market reforms and highlights the elements that helped reestablish the country's international competiveness. Section III analyzes the recent Great Recession that served as the litmus test for the robustness of the German economy and the vigor of its labor market. Section IV studies the extent to which the labor market reforms and policy responses during the crisis were combined with fiscal consolidation and austerity. The concluding Section V summarizes and derives lessons from the German experience.

I. Germany's Structural Unemployment Problem

For many years, the key challenge for Germany was to reduce structural and persistent unemployment. Overcoming this problem was crucial for the "sick man" in Europe. Although the phenomenon of successive, recession-related waves of unemployment that ended up accumulating was considered to be a European problem (Blanchard and Summers, 1986), among the countries in Europe, Germany served as *the* prime example for the pattern of high and rising unemployment ("hysteresis"). Figure 1 demonstrates that this alarming characteristic of Germany's labor market was present since the 1970s, and that German reunification, which began in 1990, further aggravated the problem.

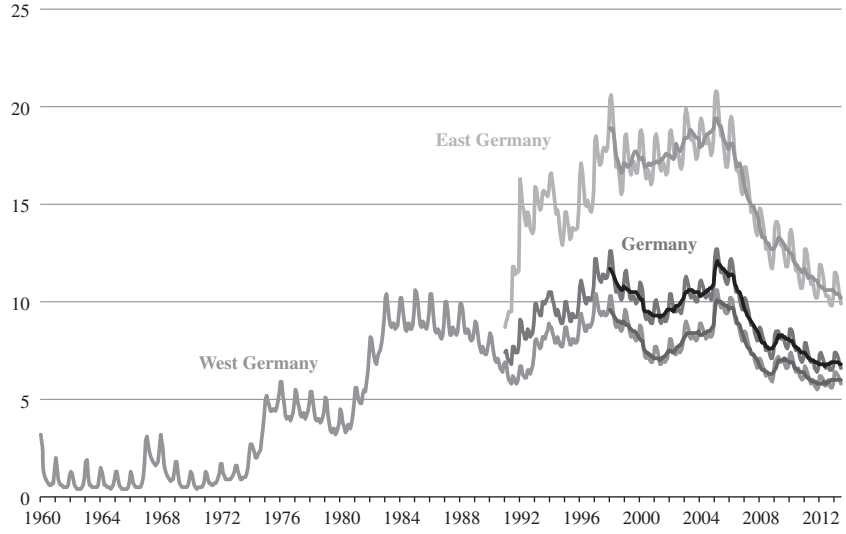
The continuous rise in unemployment throughout the 1990s and early 2000s—briefly interrupted only by a boom period around the turn of the century—can also be observed in Figure 2. Furthermore, it becomes apparent that unemployment in Germany has also been high in comparison with other European countries and with the United States. Whereas the unemployment rate was around 5–6 percent in the United States and the United Kingdom in the early 2000s, and averaged around 8 percent in the "old" 15 member states of the European Union, it reached values of more than 10 percent in Germany.

Unemployment continued to increase despite several policy measures and reforms that were introduced in the 1990s.[1] Apparently, these adjustments did not deal with the roots of the problems. Or, in the words of Siebert (1997, p. 42): "These reforms are undeniable, but mostly minor in their impact." Germany's high unemployment rate has often been linked to high levels of employment protection, high labor costs, and strict regulation of labor markets.[2] For example, and in

[1]For example, there were a number of changes in 1996 when, among other things, the maximum duration of fixed-term contracts was raised to 24 months and the size threshold relevant for the application of dismissal protection was raised from 5 to 10 employees. See Eichhorst and Marx (2011) for more details on labor market reforms during the 1990s.

[2]These factors are not too different from those that were identified as the underlying causes of high unemployment in Europe: "labor market rigidities" (Nickell, 1997; Siebert, 1997).

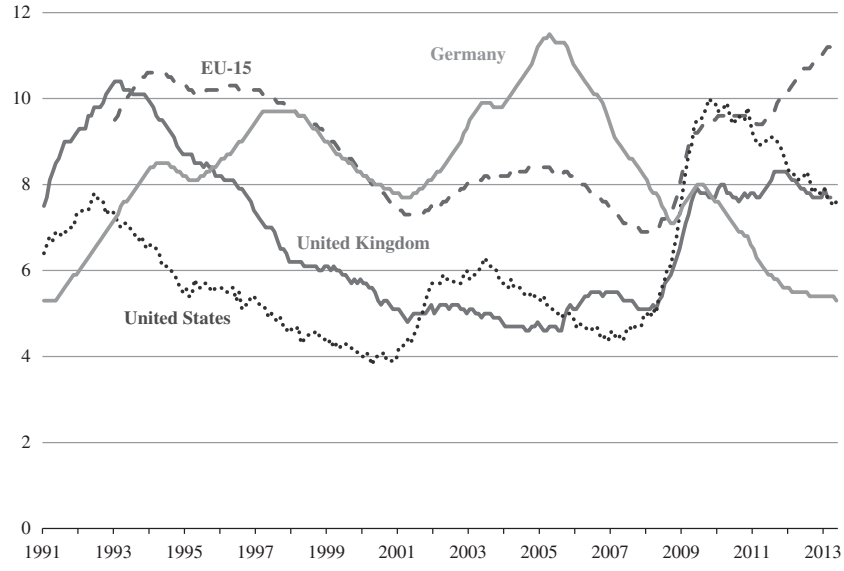
Figure 1. Unemployment Rate in Germany (1960–2012)



Source: Federal Employment Agency.

Notes: In percent. Germany: since 1991 West Germany (excl. Berlin) and East Germany (incl. Berlin). Seasonally adjusted unemployment rates as darker lines (available since 1998).

Figure 2. Selected Unemployment Rates (1991–2012)



Source: Eurostat.

Notes: In percent. Seasonally adjusted rates based on ILO guidelines. EU–15: "old" 15 EU member States.

contrast to the experience of many other countries, job mobility has been declining in (West) Germany between 1974 and 1994 (Winkelmann and Zimmermann, 1998). The structure of employment in East Germany has moreover been different from that of West Germany for many years, with a lack of part-time work, service jobs, and regular employment (Bonin and Zimmermann, 2001).

Furthermore, and although the availability of rather generous insurance-based social benefits—depending on previous wages—helped limit income inequality and wage dispersion, these results came at the cost of strong labor market segmentation and a large stock of long-term unemployed (Konle-Seidl, Eichhorst, and Grienberger-Zingerle, 2010). Overall, the German welfare state was at risk of becoming unsustainable. The increasing burden of non-wage labor costs to cover deficits in social insurance seriously jeopardized international competitiveness.[3] When considering this institutional setting, there was considerable scope and a strong need for structural reforms in terms of both passive labor market policies (PLMP) and active labor market policies (ALMP).

With respect to PLMP, the unlimited payment duration of unemployment benefits and unemployment assistance was an extraordinary feature of the German system (Caliendo and Hogenacker, 2012). The replacement rates for the long-term unemployed were higher than in any other OECD country, while replacement rates for the short-time unemployed were comparable with many other countries (Konle-Seidl, Eichhorst, and Grienberger-Zingerle, 2010). As a result, the incentives to take up a job were very low, especially for the low-skilled and long-term unemployed. Generous benefit levels and benefit durations, combined with high benefit reduction rates if taking up employment, resulted in a growing and enduring base level of unemployment.[4]

The approach toward ALMP was characterized by high expenditure levels and by programs with rather long durations. The most important programs were public job creation schemes, training programs, and wage subsidies (Caliendo, 2013), whereas activating measures such as job search assistance and monitoring were given low priority (Eichhorst and Zimmermann, 2007). Sanctions for low search efforts were rarely implemented (Jacobi and Kluve, 2007). Additionally, the assignment process into programs was based on the caseworkers' discretion and no systematic individual profiling took place (Fitzenberger, Osikominu, and Paul, 2010; Rinne, Zhao, and Uhlendorff, 2012). There was also no systematic approach with respect to assessing the programs' effectiveness and efficiency. Although evaluation studies had been available (Caliendo and Steiner, 2005), their—mainly indicative—results had essentially no impact on the design, configuration or targeting of ALMP.

[3]The situation was exploding since mainly workers financed the costs of German reunification through nonwage labor costs (see Riphahn, Snower, and Zimmermann, 2001). As a consequence, labor demand was falling.

[4]Siebert (1997, p. 40) highlights that a whole set of measures raised the reservation wage in the late 1960s and 1970s. Subsequent reforms did not change this situation markedly.

This was the initial situation around the beginning of the new century. Although there was scope and need for labor market reforms in Germany, this argument applied for many European countries. For example, Siebert (1997, p. 53) concluded that "the specter of unemployment that is hunting Europe will not be exorcised unless governments are prepared to undertake major reforms of the institutional setup of the labor markets."

II. An Overview of the German Labor Market Reforms

Against this background, major labor market reforms were introduced between 2003 and 2005.[5] Although the government took advantage of a broad public debate about the job placement practices at the Federal Employment Agency to initiate this process,[6] the reforms should also be viewed in light of New Labour's different "New Deals" in the United Kingdom and similar initiatives in other European countries in the late 1990s and early 2000s.[7] Table 1 gives an overview about the reforms' timing and contents. Implemented in four waves, the so-called Hartz reforms targeted three important areas that broadly affect the functioning of labor markets (Jacobi and Kluve, 2007).

First, the reforms reorganized existing employment services and related policy measures. Importantly, unemployment benefit and social assistance schemes were restructured, and a means-tested flat-rate benefit replaced earnings-related, long-term unemployment assistance. Second, a significant reduction of long-term unemployment benefits—in terms of both amount and duration—and stricter monitoring activities were implemented to stimulate labor supply by providing the unemployed with more incentives to take up a job. Third, massive deregulation of fixed-term contracts, agency work, and marginal part-time work was undertaken to stimulate labor demand. The implementation of the reforms in these three areas was tied to an evaluation mandate that systematically analyzed the effectiveness and efficiency of the various measures of ALMP.

Overall, the labor market reforms successfully addressed the German labor supply problem as, among other things, work incentives for older workers were improved (early retirement options were phased out),[8] ineffective policy instruments

[5]The reforms began with the historical speech of Gerhard Schröder ("*Mut zum Frieden und Mut zur Veränderung*") on March 14, 2003 which led to heated societal debates. They split the Social Democratic Party; and even nowadays, no major political party in Germany wants to openly identify itself with the labor market reforms—also not the currently ruling conservative party. To the contrary, there are repeated attempts to re-reform the measures which are unpopular and considered to be unsocial by large parts of the population. Note that during the time of the reform debate, IZA initiated a public declaration in support of the reforms by 300 economists (IZA, 2003). A comprehensive reform agenda is outlined in Zimmermann (2003).

[6]More precisely, the Federal Employment Agency was accused of massive fraud in their statistics about successful job placements in early 2002.

[7]See, for example, the introductory chapter of Layard and Nickell (2011, pp. 4–5) by the editors discussing how analytical work shaped similar welfare-to-work approaches in several European countries—among others, the influential work by Richard Layard and Stephen J. Nickell.

[8]About half of the early retirements before the reforms can be considered as "involuntary" (Dorn and Sousa-Poza, 2010). This is consistent with the observation that at least some firms used early

Table 1. Important Labor Market Reforms in Germany (2002–2005)

Date	Reform	Major Changes
January 1, 2002	*JobAQTIVE*	• Introduction of profiling and placement vouchers; liberalization of private placement agencies • Moderately stricter sanctioning criteria and stricter means-testing in unemployment assistance • Compulsory registration for those threatened with unemployment
January 1, 2003	*Hartz I/II*	• Introduction of personal service agencies (PSA) • Tightening of conditions for acceptability of jobs • Introduction of training vouchers • New regulations for marginal employment • Introduction of second start-up subsidy • Deregulation of temporary employment
January 1, 2004	*Hartz III*	• Reorganization and restructuring of the Federal Employment Agency • Duration of unemployment benefit for older workers reduced from 32 to 18 months (effective only in 2006) • Higher threshold for dismissal protection • Liberalization of temporary agency work
January 1, 2005	*Hartz IV*	• Combination of unemployment assistance and social assistance into new means-tested unemployment benefit system • New governance for activation of long-term unemployed; public employment opportunities ("one-euro-jobs")

Source: Authors' illustration based on Ebbinghaus and Eichhorst (2009), Caliendo (2013), and Rinne and Zimmermann (2012). Additional reform elements can be found in these references.

Notes: Although the labor market reforms are commonly referred to as the Hartz reforms, the first effort was actually made when the JobAQTIVE Law came into force on January 1, 2002. Hence, we include this law in this table.

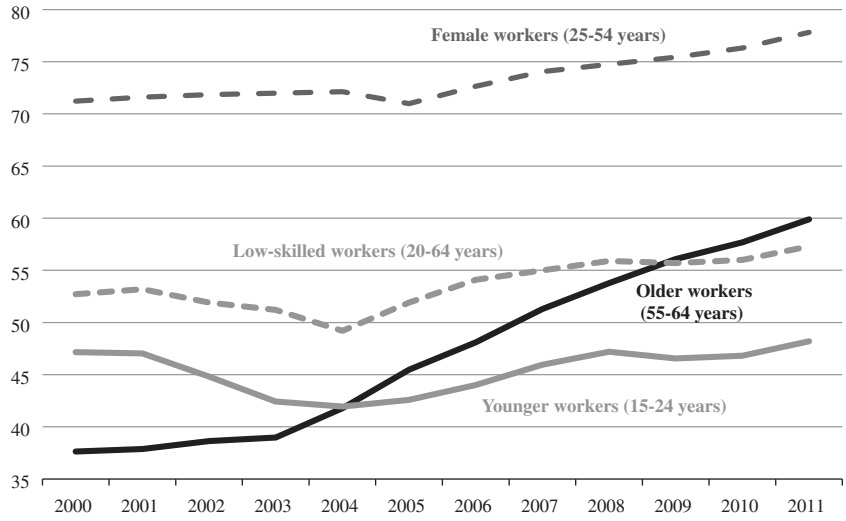
such as job creation schemes were abolished,[9] unemployment benefits were reorganized and generally reduced,[10] and the requirements for the unemployed to prove

retirement schemes as a means to circumvent strict employment protection legislation (Schmähl, 2003).

[9]Caliendo, Snower, and Zimmermann (2008) document the ineffectiveness of job creation schemes in Germany. Although a different type of public work program was introduced at the same time (the so-called one-euro-jobs workfare scheme), this new program has different goals and effects (Hohmeyer and Wolff, 2012). At least the intention was to create a program in the spirit of workfare programs that had been first introduced in the United States. See Schneider, Uhlendorff, and Zimmermann (2013) for more details on the background and history of workfare programs as well as the effects of a pilot workfare project in Berlin.

[10]See Caliendo and Hogenacker (2012, Table 1) for an overview about changes in the maximum duration of (insurance-based) unemployment benefits. For former recipients of unemployment

Figure 3. Employment/Population Ratio in Germany (2000–2011)



Source: OECD Statistical Database (older/younger/female workers); Eurostat (low-skilled workers).

Notes: Annual figures. In percent of the respective age group. Low-skilled workers include preprimary, primary, and lower secondary education (ISCED levels 0–2).

ongoing job search efforts were enforced.[11] These changes resulted in an improved functioning of the German labor market with an increased overall effectiveness of ALMP (Eichhorst and Zimmermann, 2007), lower reservation wages of the unemployed (Schneider, 2008), and an accelerated matching process between unemployed workers and job vacancies (Fahr and Sunde, 2009).

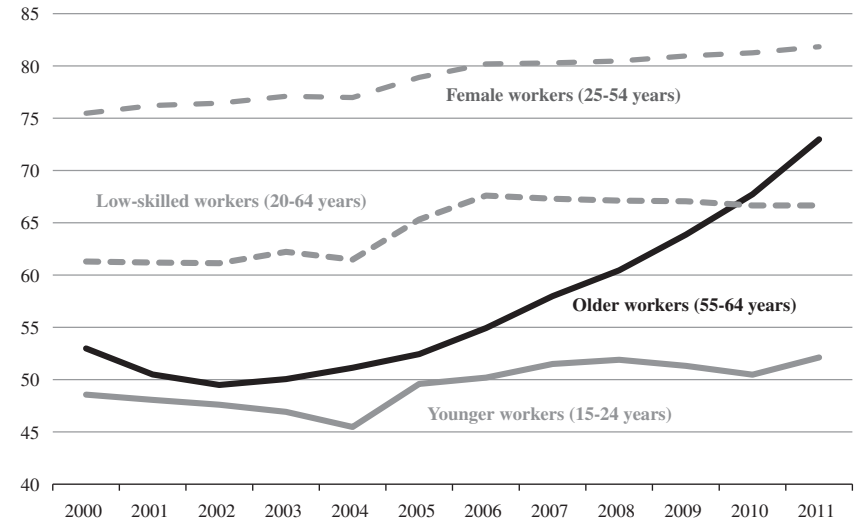
Population groups that had previously been characterized by comparatively low employment rates experienced substantial improvements in this regard. Figure 3 displays the development of the employment-to-population ratio for four important population groups: female workers between 25 and 54 years, older workers between 55 and 64 years, younger workers between 15 and 24 years, and low-skilled workers between 20 and 64 years. For all four groups, increasing employment rates can be observed after the reforms were introduced. The increase was strongest among older workers, where employment increased by more than 20 percentage points between 2003 and 2011.

These increasing employment rates were moreover not exclusively driven by decreasing unemployment rates among those groups. This is shown in Figure 4 displaying labor force participation rates. These rates also increased for the four population groups that are considered. Again, the strongest increase can be observed

assistance, the transfer payments decreased with the new means-tested long-term unemployment benefits, whereas for those having received social assistance before, they actually received marginally higher transfer payments (Konle-Seidl, Eichhorst, and Grienberger-Zingerle, 2010).

[11]For example, sanctions were more frequently applied resulting in a sanction rate of about 4–5 percent after the reforms (Boockmann, Thomsen, and Walter, 2009).

Figure 4. Labor Force Participation Rates in Germany (2000–2011)



Source: OECD Statistical Database (older/younger/female workers); Eurostat (low-skilled workers).

Notes: Annual figures. In percent of the respective age group. Low-skilled workers include preprimary, primary, and lower secondary education (ISCED levels 0–2).

for older workers whose participation in the labor market increased from around 50 percent the early 2000s to more than 70 percent in 2011. This increase is huge, but in line with several empirical studies documenting the substantial responsiveness of older workers to early retirement options (for example, Euwals, van Vuuren, and Wolthoff, 2010; Tatsiramos, 2010; Bloemen, Hochguertel, and Lammers, 2013). For the three other groups, the strongest increase took place around 2005 when the fourth wave of the Hartz reforms was introduced.

Demographic changes also did not play a major role in explaining the increasing employment rates, or decreasing unemployment rates, over the past decade as is often suggested in public debates anticipating the predicted population decline in Germany. Although these expected changes will substantially affect the size and the composition of the German labor force in the future, Table 2 shows that recent changes in this regard were comparatively small and resulted so far mainly in an aging of the working age population. The population size in the age group from 15 to 64 years changed from 55.2 million in 2005 to 54.1 million in 2012; in the core working age group from 25 to 64 years, the change was from 45.5 million in 2005 to 45.1 million in 2012.[12] The decline in the size of the cohort from 15 to 24 years over this period was more than compensated by an increase in the size of the age group from 55 to 64 years. Hence, and unlike what one should expect according to the demographic relief or burden hypothesis, the increasing size of older cohorts correlates positively with a

[12]As a comparison, Fuchs, Söhnlein, and Weber (2011) project the German labor force to shrink by almost 7 million workers by 2025.

Table 2. Population Size in Germany by Age Groups (2000–2012)

Age Group	2000	2005	2010	2012
Less than 15 years	12,897,014	11,924,658	11,022,634	10,832,088
From 15 to 24 years	9,159,497	9,678,080	9,251,529	9,040,382
From 25 to 34 years	12,167,216	10,034,073	9,709,677	9,933,516
From 35 to 44 years	13,357,666	14,054,648	12,108,652	11,148,325
From 45 to 54 years	10,276,038	11,745,733	13,076,517	13,560,587
From 55 to 64 years	10,954,792	9,696,206	9,731,506	10,448,295
From 65 to 74 years	7,565,953	8,803,290	9,620,433	9,040,798
From 75 to 84 years	4,150,162	5,152,845	5,412,511	5,806,212
85 years and above	1,635,137	1,411,316	1,868,798	2,033,540

Source: Eurostat.
Notes: Population size by age groups on January 1 of the respective year.

strong rise in their employment and labor force participation rates, and the declining size of younger cohorts is affiliated with only a weak rise of these two rates (see Figures 3 and 4).

When considering the development of unit labor costs in Figure 5, the reforms apparently also contributed to Germany regaining its international competitiveness. Unit labor costs in Germany were persistently high for many years, but decreased after implementation of the reforms began in 2003. In contrast, unit labor costs increased continuously during the 2000s in, for example, the United States and the United Kingdom.

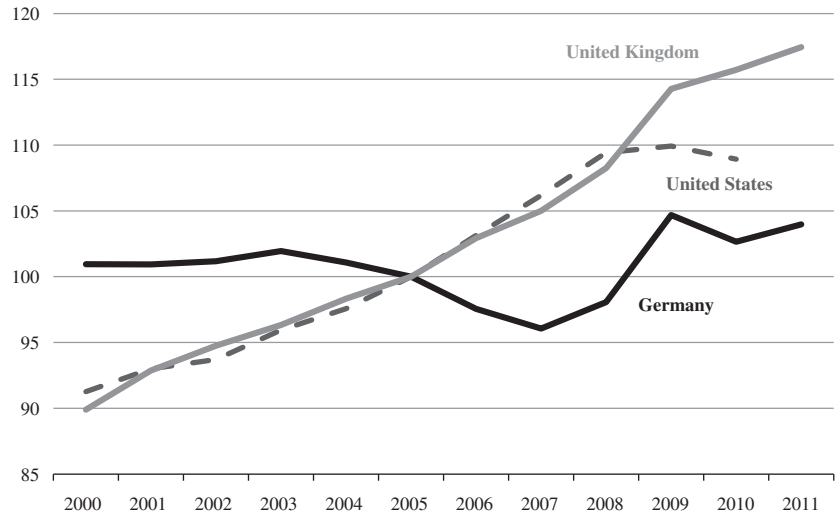
Against this background, it seems important to discuss a few potentially related developments. The decrease in unit labor costs could be related to the specific form of employment growth in Germany which resulted in an increasing share of nonstandard employment as well as in a growing low-wage sector.[13] More specifically, jobs that are subject to social security contributions represented only 68 percent of all jobs in 2010 (77 percent in 1992), while 21.5 percent of the employed worked in the low-wage sector in 2008 (16 percent in 1998; Alber and Heisig, 2011).

At the same time, however, poverty rates remained rather stable over time.[14] At least for three reasons, a job in the low-wage sector is not necessarily associated with (relative income) poverty. First, a considerable part of low-wage jobs is held by students, pensioners and other people who do not make their living from this wage alone (Brenke and Ziemendorff, 2008). Second, low-wage

[13]Alber and Heisig (2011) distinguish between six forms of nonstandard employment: part-time workers, workers with fixed terms contracts, temporary agency workers, marginal employment (that is, workers in so-called "mini jobs"), workers who are welfare recipients at the same time, and workers in ALMP jobs ("one-euro-jobs"). The low-wage sector includes jobs paying less than two-thirds of the median annual wage.

[14]When investigating the short-term impacts of the labor market reforms on poverty rates in Germany, Haisken-DeNew and Schmidt (2009) find no evidence of increases in this regard. On the other hand, the effect of employment in reducing the probability and intensity of poverty also remained unchanged by the reforms, at least in the short run.

Figure 5. Unit Labor Costs, Total Economy (2005 = 100)



Source: OECD Statistical Database.

Notes: Annual figures. OECD base year (2005 = 100). Data in 2011 not available for the United States. Unit labor costs are calculated as the ratio of total labor costs to real output.

earners often live in households with additional breadwinners. And third, low wages are often supplemented with welfare benefits. In addition, it should not be surprising that those individuals who additionally entered employment after the reforms did so primarily at the lower end of the wage distribution. Nonetheless, they enjoy higher life satisfaction than the unemployed (Alber and Heisig, 2011).

Second, union coverage fell over time—in particular during the last decade. And although in 2009 still more than 80 percent of employees in Germany were directly or indirectly covered by the results of collective bargaining (Ellguth and Kohaut, 2010), union power substantially declined. Hirsch and Schnabel (2013) find that while union power did not change much from 1992 to 2002, it fell markedly by about one third from 2002 to 2007, that is, in the aftermath of the labor market reforms.

This process has moreover been accompanied by rising wage inequality. As it has been the case in many countries (see, for example, Acemoglu and Autor, 2011, for a review), wage inequality has widened substantially in Germany over the past two decades (Dustmann, Ludsteck, and Schönberg, 2009). For example, from 1996 to 2009 the gap between the 20th and 80th percentile of the wage distribution expanded by approximately 20 log points, which is roughly comparable to the corresponding rise in the United States during the 1980s (Card, Heining, and Kline, 2013).

Card, Heining, and Kline (2013) investigate the sources of increasing wage inequality in West Germany and find that the increase is attributable to increases in the dispersion of both the person-specific and workplace-specific components of pay, coupled with an increasing tendency for higher-wage workers to sort to

establishments offering larger wage premiums that magnifies the joint effect of the former two effects. The latter effect suggests a fundamental change in the way workers are sorted to workplaces. Further investigations by Card, Heining, and Kline (2013) attribute the trend of rising heterogeneity in establishments to newer plants, which may moreover be linked to the relative fall in collective bargaining coverage among those firms. However, the authors are not able to establish causality between these coincident trends, and also not with the implementation of the labor market reforms.

It is moreover important to realize in this context that the underlying factor for the decline in unit labor costs did not stem primarily, as is widely believed, from wage restraint on the part of the trade unions. Union wages increased more moderately, but this explains only part of the decline in unit labor costs—and of the increase in wage inequality.[15] It appears more important, at least for firms covered by sectoral or plant-specific agreements, that unions and employers used the collective bargaining process to arrive at more flexible labor arrangements. This was, for example, possible via so-called opening clauses in the contracts between unions and employers associations that are valid at times of crises. Such clauses became increasingly popular and are associated with greater wage dispersion and higher employment growth (Brändle, Heinbach, and Meier, 2011). The more flexible labor arrangements allowed the adjustment, restructuring and reorganizing of existing work processes not only at the industry or sector level, but also at the firm level.

One may even argue that this newfound localized flexibility is the real source of the German model and, hence, of the country's resilience to the Great Recession. The recent increase of unit labor costs should be viewed in that light. It is—at least for the most part—a result of the various measures of internal flexibility used during the Great Recession. The next section discusses this issue in greater detail and in a broader context.

III. Stress Testing in the Great Recession

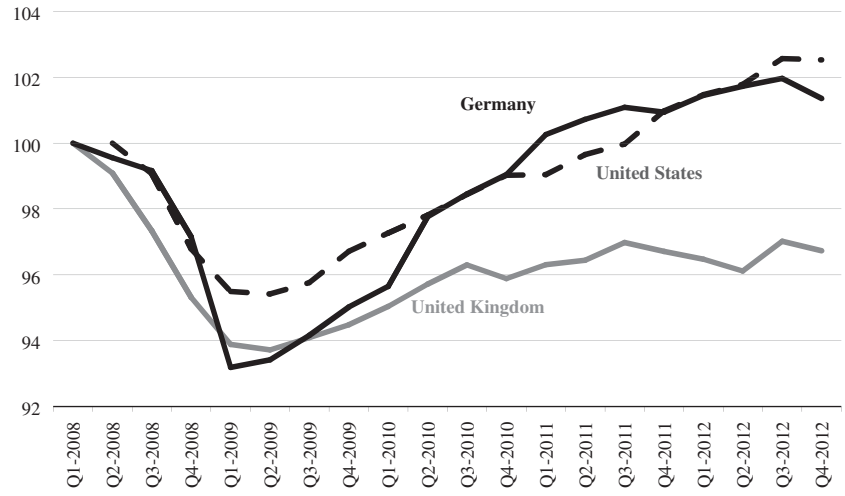
Germany's labor market reforms, introduced between 2003 and 2005, were apparently successful as employment and activity rates increased and unemployment decreased.[16] However, the worst global recession in postwar history constituted a strong test for the actual robustness of the economy and the labor market. During this critical period, the previous institutional changes and other adjustments had to prove that they indeed enhanced the functioning of the country's labor market—not only during a boom, but also when economic conditions become worse.

The Great Recession hit Germany mainly through declining exports. It arrived as a transitory external demand shock, which is different from what many other economies experienced. Figure 6 shows that output decline was at least as large as,

[15]As discussed above, rising establishment heterogeneity appears to be related to newer establishments that exhibit lower collective bargaining coverage (Card, Heining, and Kline, 2013).

[16]As discussed above, these developments were accompanied by increasing wage inequality and an increasing share of nonstandard and low-wage employment.

Figure 6. GDP Decline (GDP at Peak = 100)



Source: OECD Statistical Database.

Notes: The prerecession peak is 2008:Q1 for all countries except the United States, where it is 2008: Q2. In millions of US dollars, volume estimates, fixed PPPs, OECD reference year, annual levels, seasonally adjusted.

for example, in the United States or in the United Kingdom. GDP decreased by 4.7 percent in 2009 relative to the previous year.

This output decline was not homogeneous across Germany, and sectors and regions were affected to very different degrees (Rinne and Zimmermann, 2012). Output declines were most pronounced in export-oriented sectors such as manufacturing, where GDP dropped by about 18 percent in 2009. In contrast, sectors and industries related to private consumption were much less affected. For example, output in construction and in finance, renting and commercial services declined by less than 2 percent in 2009, while it even increased by about 2 percent in private and public services. Heterogeneous output declines can also be observed across German regions. Economically strong federal states, where many export-oriented firms are located, suffered the most (for example, Baden-Württemberg), whereas federal states with low international exposure were less affected (for example, Berlin, Brandenburg, Schleswig-Holstein).

In addition, economic recovery took place relatively early. Already in the course of 2009, the economy was expanding again—and recovery was strongest in those sectors that had previously experienced the sharpest declines. For example, manufacturing output increased by 11.5 percent in 2010. This quick recovery in Germany's export-oriented sectors appears related to the rather quick recovery of Asian economies that in turn boosted demand for German products (Bornhorst and Mody, 2012).[17] These

[17]Germany's industrial structure may play a role in this regard as manufacturing continues to be a key factor in the country's economic performance. It still accounted for about 23 percent of gross value added in Germany in 2008, while this share was considerable lower in the United States (13.3

heterogeneous impacts, both during the crisis and recovery, support the notion that the Great Recession hit Germany as a transitory external demand shock. This is different from what many other countries experienced during the Great Recession, which were also affected through the housing, financial, and consumer sectors.[18]

However, the real distinctive feature of the German case is the remarkably mild response of its labor market to the substantial output drop. Both unemployment and employment remained largely unaffected by the adverse economic shock. Figure 7 shows that employment continued to rise and remained at a record level of more than 40 million throughout 2009 and 2010. In stark contrast, other countries experienced substantial employment declines. For example, employment dropped by about 6 percent in the United States and by about 2 percent in the United Kingdom.

What factors explain the German success story during the Great Recession? A number of studies analyze this important question (Möller, 2010; Burda and Hunt, 2011; Bonin, 2012; Caliendo and Hogenacker, 2012; Eichhorst, 2012; Rinne and Zimmermann, 2012). Representative of this literature, Rinne and Zimmermann (2012) argue that a combination of factors created an environment that is a challenge to replicate. Although the weight attached to each factor may differ across studies, the following aspects are considered as being highly relevant: The specific nature of the economic shock that hit Germany plays a role, as discussed above. Beyond that, the concrete policy responses during the critical period as well as the significant reforms that had improved the functioning and resistance of the country's labor market are essential. Long-term demographic trends that are expected to result in shortages of skilled labor are another factor supporting a strategy of labor hoarding. And ultimately, it is the combination of these different factors that resulted in employment adjustments mainly at the intensive margin—that is, in Germany being a strong case of internal flexibility.

More specifically, Burda and Hunt (2011) argue that a substantial part of the missing employment decline during the Great Recession (41 percent) was because of the missing employment expansion in the previous boom. They furthermore argue that this had been caused by pessimistic expectations. An alternative or additional explanation is the presence of shortages of skilled workers and recruitment problems firms were facing.[19] As argued above, the extent of the output decline was heterogeneous across sectors; and at the sector level, there is a clear positive

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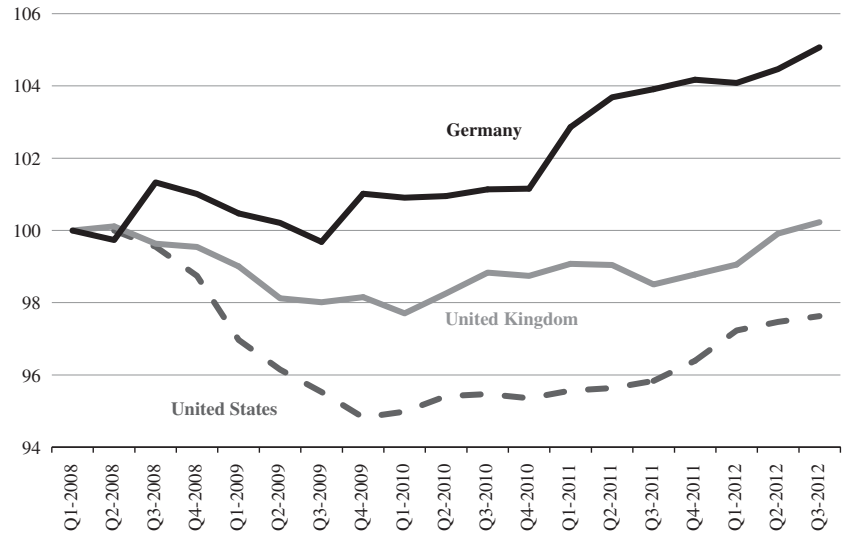
percent) or the United Kingdom (12.3 percent; FMET, 2010). In addition, the German model has long been characterized by "flexible specialization" and "diversified quality production" (that is, already during the 1980s; Vitols, 2004).

[18]Note that the German banking system suffered from high losses. As of July 2009, German write-downs accounted for 9 percent of global write-downs (Hardie and Howarth, 2009). Affected Germans banks have been repeatedly supported by interventions from the German government during the financial crisis to moderate consequences for the German economy (Zimmermann and Schäfer, 2010). In addition, the turmoil on international financial markets likely affected German firms to a smaller extent than firms in other countries. Although larger firms have increasingly moved away from Germany's bank-based financial system providing capital to firms, this system is still important for small- and medium-sized firms.

[19]Note that firms had in addition increasingly introduced more flexible labor arrangements during the previous boom, as discussed above.

Figure 7. Employment (Employment at Peak = 100)



Source: OECD Statistical Database.

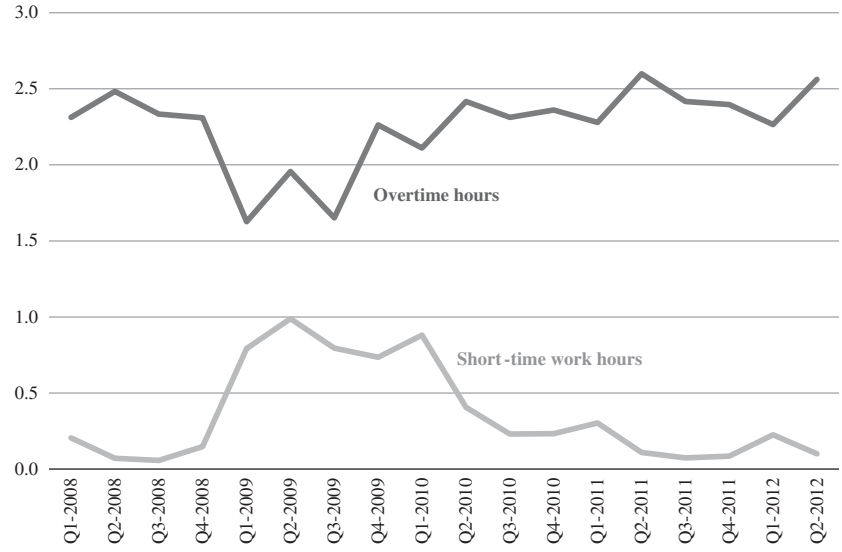
Notes: The prerecession peak is 2008:Q1 for all countries except the United States, where it is 2008: Q2. Civilian employment based on quarterly data. Quarterly averages of monthly data for the United States.

relationship between the share of firms that were strongly affected by the crisis and the share of firms reporting recruitment problems in 2008 (Möller, 2010). It is moreover expected that demographic changes will result in more severe shortages of skilled workers that will broadly affect the German labor market in the future. For example, the labor force is projected to shrink by almost 7 million workers by 2025 (Fuchs, Söhnlein, and Weber, 2011).

In any case, firms were more reluctant to lay off their workers—also because of the relative stability of private consumption. Moreover, and although faced with substantial uncertainty, they largely viewed the shock to be only temporary and anticipated a rather quick recovery (Bornhorst and Mody, 2012). Hence, they wanted to preserve employees in the established core of their companies to remove the necessity—and costs—of hiring new personnel when demand improved.

These factors—missing employment expansion in the previous boom and expected quick recovery—provided firms with the necessary incentives for internal flexibility. Besides these incentives, they also had the required financial resources to sustain a strategy of labor hoarding during the Great Recession. The successful labor market reforms have substantially improved the functioning of the labor markets and they helped firms regain international competiveness. When the crisis started, the economy as well as individual companies were thus in a relatively strong position. It is worth noting that the consumption sector with a large share of low-skilled workers and other workers at an above-average unemployment risk was unaffected by the crisis, and hence employment could

Figure 8. Overtime and Short-time Work in Germany (2008–2012)



Source: IAB (www.doku.iab.de/grauepap/2012/tab-az1202.pdf, last accessed February 1, 2013), own calculations.

Notes: In percent of total working hours in a given quarter.

even rise among the problem groups (unskilled, older workers, migrants) in the labor market.

In addition, firms had instruments available to reduce employees' working time at reasonable costs. They could achieve this on the one hand through a reduction of overtime hours and the use of other instruments of working time flexibility available at the firm level (for example, working time accounts). On the other hand, they made extensive use of short-time work (Brenke, Rinne, and Zimmermann, 2013). In fact, although German firms made ample use of all instruments to adjust at the intensive margin, short-time work appears to have been the quantitatively more important one. In 2009, the reduction in working hours because of working time accounts was about half of the size of the reduction due to short-time work (7.0 hours vs. 13.4 reduced annual hours per employee; Zapf and Brehmer, 2010). Employees also worked, on average, 9.8 hours less in paid overtime in 2009 than in 2008.[20]

However, it seems that many firms followed a sequential approach in using the different instruments. First, they reduced overtime and used working time accounts. When individual accounts were close to zero, firms switched their strategy and used short-time work. This pattern in the use of short-time work and reductions in overtime is displayed in more detail in Figure 8. Both instruments for

[20]Annual working hours decreased by 3.1 percent in 2009, corresponding to roughly 1.2 million jobs that could potentially be saved due to reduced working hours (Zapf and Bremer, 2010).

adjusting working time became relevant in the first quarter of 2009. However, it appears that reductions in overtime were essentially used only during three quarters, whereas short-time work had a longer-lasting impact. Adjustments in working hours using short-time work appear quantitatively important until the first quarter of 2011.

The importance of short-time work to stabilize the German labor market during the Great Recession is confirmed by Balleer and others (2013). According to their analysis, the rule-based component acts as a powerful automatic stabilizer while discretionary policy changes have virtually no impact. A counterfactual analysis reveals that short-time work has saved approximately 466,000 jobs in Germany during the Great Recession, which is similar to the number of short-time workers in full-time equivalents at its peak (Brenke, Rinne, and Zimmermann, 2013).

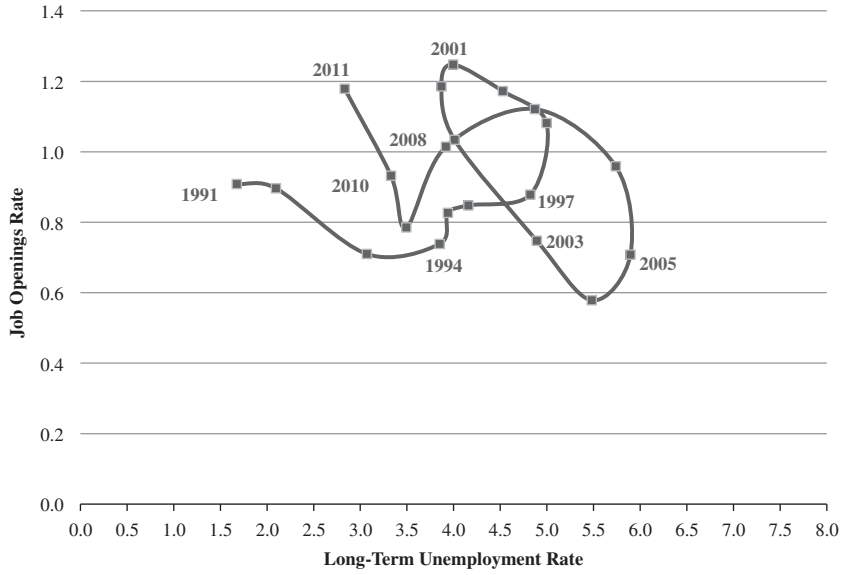
However, next to short-time work, additional factors are needed to fully explain the remarkable resilience of Germany's labor market to the Great Recession. It was in fact the result of various factors, among which one should try to distinguish between underlying long-term developments and policy responses during this critical period. The latter provided firms with the adequate instruments for adjusting employment almost entirely at the intensive margin in response to the crisis and the former factors were central for providing the required incentives and resources to do so in the first place. Next to long-term demographic changes, the successful labor market reforms should be regarded as an essential element.

This issue is illustrated in Figure 9, which displays the development of the job openings rate and the long-term unemployment rate between 1991 and 2011. Long-term unemployment here refers to individuals who had been unemployed for at least one year. This is an important point in the German unemployment insurance system, as 12 months is the maximum benefit entitlement duration for unemployed individuals younger than 50 years.[21] For longer durations of unemployment, workers have to rely on the means-tested flat-rate benefit scheme that was introduced with the labor market reforms.

When using this definition, long-term unemployment had been steadily increasing during the first years after German reunification. During the economic expansion of 1998-2002, the number of long-term unemployed could be reduced, but their number continued to increase until 2005—the year when the labor market reforms had been fully implemented. Since then, a remarkable decrease in long-term unemployment can be observed. In a period of just six years, the long-term unemployment rate in Germany fell by more than 50 percent—from 5.9 percent in 2005 to 2.8 percent in 2011. Importantly, this decline continued even during the Great Recession, whose impact becomes nevertheless apparent with a (temporary) drop in the job openings rate.

[21]See Caliendo and Hogenacker (2012, Table 1) for an overview about the maximum entitlement durations before and after the reforms. These durations depend on previous employment and age. Although they were generally reduced after the reforms, unemployed individuals older than 58 years can still be entitled to receive benefits for up to 24 months.

Figure 9. Job Openings and Long-Term Unemployment in Germany



Source: OECD Statistical Database, own calculations.

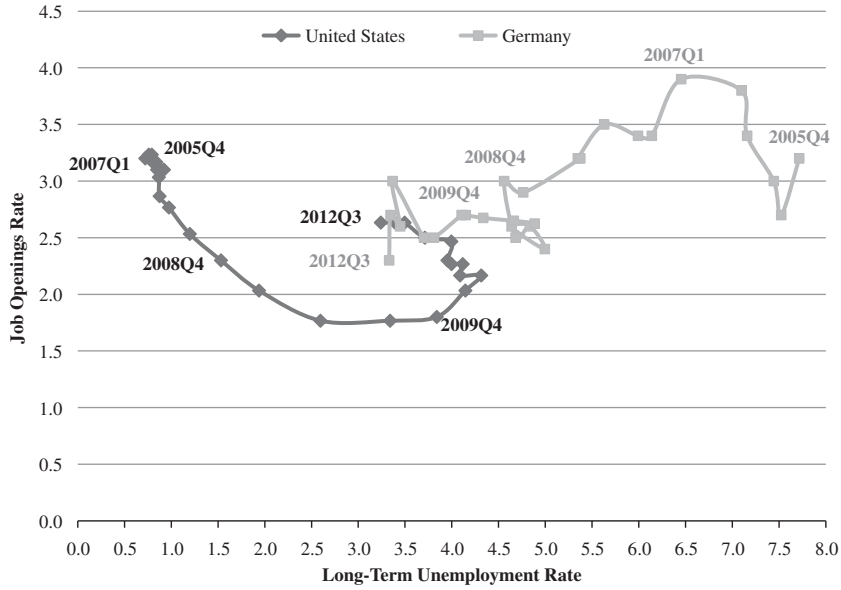
Notes: Annual data. Long-term unemployment rate calculated for individuals who are at least 12 months unemployed as percentage of civilian labor force. Job openings rate calculated as vacancies (stock) as percentage of civilian employment.

This finding is particularly remarkable in comparison with what was happening in other countries. Figure 10 compares the job openings rates and the long-term unemployment rates of Germany and the United States (using the American definition of long-term unemployment—individuals who are out of work for six months or longer—for both countries).[22] Remarkably, the current situation in Germany is very similar to the one the United States faces today. This is even more surprising when considering that the two countries were at strikingly different starting points before the Great Recession. Still, the consensus in the United States is that there is no reason to believe that the country's current long-term unemployment is structural; it is considered to be temporary.[23] If so, one may argue that long-term unemployment in Germany has reached an internationally acceptable level.

[22]Note that a certain degree of caution seems appropriate when directly comparing these Beveridge curves for Germany and the United States. As there is no vacancy survey in Germany, job openings rates and long-term unemployment rates are based on administrative data. This may lead to some bias, but the shape of the curve and its shifts should be a good indicator of underlying trends (Pissarides, 2013).

[23]Lazear and Spletzer (2012) and Yellen (2013) support this view. However, Pissarides (2013, p. 403) argues that the structural labor market reforms in the United Kingdom and Germany avoided the structural problems of previous recessions, whereas the United States experience a slower recovery in terms of employment "most likely because of temporary structural problems introduced

Figure 10. Job Openings Rate and Long-Term Unemployment Rate



Source: Bureau of Labor Statistics, Eurostat, own calculations.

Notes: Quarterly data for Germany, quarterly averages (based on monthly data) for the United States. Long-term unemployment rate calculated for individuals who are at least 6 months unemployed. Job openings rate in Germany not available from 2010:Q1 to 2010:Q3 (linear trend assumed).

Between 2005 and 2007, the United States was in a situation characterized by a low long-term unemployment rate of less than 1 percent and a rather high and stable job openings rate of more than 3 percent. During the Great Recession, however, the job opening rates fell to less than 2 percent and the long-term unemployment rate steadily increased, peaking at 4.3 percent in the second quarter of 2010. Although the long-term unemployment rate in the United States could subsequently be reduced to about 3 percent, it is still about three times higher than its precrisis level.

In contrast, Germany managed to reduce long-term unemployment despite the Great Recession. Standing at almost 8 percent in late 2005, the long-term unemployment rate steadily decreased to roughly 3 percent. On the other hand, the pattern of the job opening rates in Germany is less clear. In any case, Germany managed to successfully tackle its structural unemployment problem even during the worst global recession in postwar history. This is evidence that structural unemployment has been reduced in Germany during the crisis, which underlines the effectiveness of structural reforms, an assessment that is also supported by Pissarides (2013).

An important factor underlying this development is the increase in employment and activity rates among different population groups, as discussed

by the extension of unemployment insurance to nearly two years and the secular decline in labor mobility."

above. For instance, older workers lost the incentives to leave the labor market when early retirement schemes were abolished and unemployment benefits were made less attractive as a bridge into retirement. Although older workers still face substantial difficulties in finding employment once they have become unemployed (Bellmann and Brussig, 2007; Heywood, Jirjahn, and Tsertsvardze, 2010), they now become unemployed less often than they did before the reforms.

IV. Austerity and Fiscal Consolidation

Because of this success story, Germany is widely perceived as a role model for many countries—not only in Europe. In this context, however, there is a popular myth that needs to be put into perspective. Austerity and spending cuts for their own sake—the latter being synonymous with austerity in our understanding—were never the "German style," as it is now widely, but falsely believed.[24] We argue that during the reform process, fiscal consolidation and growth-oriented structural labor market reforms were regarded as two integral parts of a successful economic package to stimulate the economy.

Figure 11(a) and (b) puts the austerity myth into a broader perspective. Figure 11(a) displays the development of real government expenditure for the Southern European countries Greece, Italy, Portugal, and Spain since 2000, Figure 11(b) does the same for France, Germany, the Netherlands, and the United Kingdom. Accordingly, austerity in Southern European countries roughly means that those countries' public spending has returned to its precrisis level—only in Greece, spending cuts appear more severe. However, the continental European countries (and the United Kingdom) are expected to spend even more in 2013 than what they did in 2008. This also holds for Germany, although the country has admittedly been on a very moderate growth path in terms of public spending since 2000, that is, also during and after the labor market reforms.

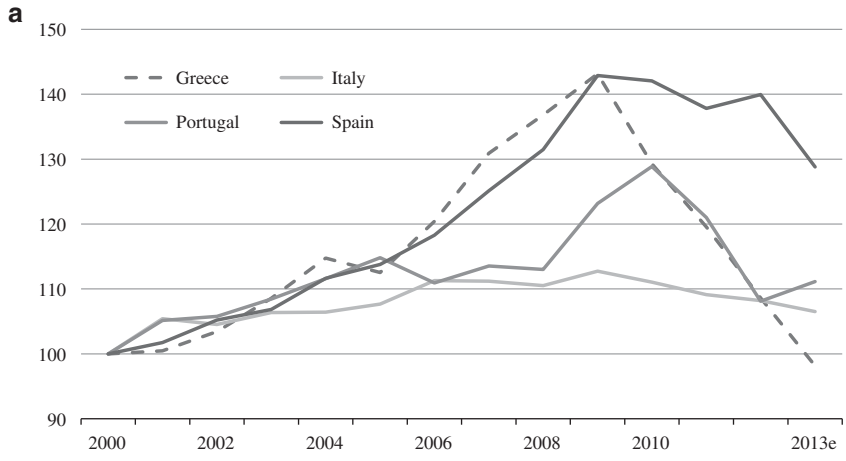
Nonetheless, the size of the German government is still large—not only compared with the United States, but also in comparison with other European countries. This is true both in terms of government expenditure and revenue. German government revenue averaged at 44.9 percent of GDP over the period from 2004 to 2009 and government expenditure at 48 percent during the same time (Gill and Raiser, 2012, Table A7). When considering only the years of the Great Recession, government expenditure increased from 43.5 percent in 2007 to 47.5 percent in 2009 (aus dem Moore and others, 2011).[25]

This had consequences. In fact, recent figures indicate that Germany's total government gross debt-to-GDP ratio was more than 80 percent in 2010 and around 78 percent in 2011 (BMF, 2013, Table 13b). This corresponds to a significant increase during the last decade. Furthermore, if this total debt were distributed across German

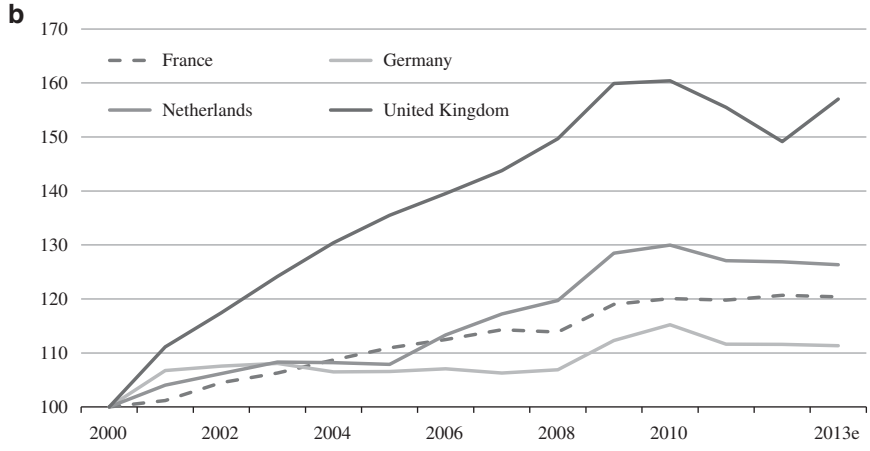
[24]Germany even broke the European Stability and Growth Pact in 2002 and 2003, together with France, by not observing the limits on government deficit (3 percent of GDP).

[25]Note that the German government introduced two fiscal stimulus packages in 2009 and 2010. The proportion of tax cuts in these discretionary fiscal policy packages was high in international comparison (68 percent vs. 33 percent on average in the G20 countries; Verick and Islam, 2010).

Figure 11. (a) Real Government Expenditure in Southern Europe (2000 = 100); (b) Real Government Expenditure in Continental Europe (2000 = 100)



Source: Own calculations based on data provided in the IMF *World Economic Outlook* (April 2013).
Notes: Real general government expenditure discounted by inflation 2000-2013. Expenditure 2000=100. e = estimated. For Portugal, estimations are also used for 2012 expenditures.



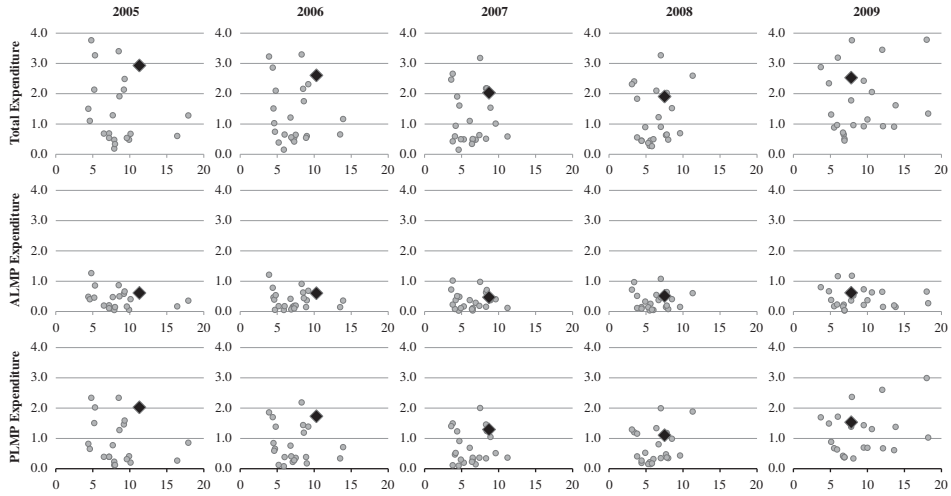
Source: Own calculations based on data provided in the IMF *World Economic Outlook* (April 2013).
Notes: Real general government expenditure discounted by inflation 2000-2013. Expenditure 2000=100. e = estimated. For France and the Netherlands, estimations are also used for 2012 expenditures.

regions, some federal states, such as Berlin and Bremen, would display debt-to-GDP ratios that are very similar to those of Ireland and Italy (DB Research, 2013).

Yet, the austerity myth is popular.[26] It could, of course, be the case that austerity was present in some kinds of government expenditures but not in others.

[26]See, for example, Streeck and Mertens (2010) who argue in favor of a common tendency toward regimes of austerity across a number of mature economies, including the United States and

Figure 12. Expenditures for Labor Market Policy vs. Unemployment Rate in European Countries (2005–2009)



Source: EUROSTAT.

Notes: Vertical axis: public expenditures for total/active/passive labor market policy as a percentage of GDP. Horizontal axis: unemployment rate. Germany highlighted as black diamond. Other European countries (gray circles) include Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, the Netherlands, Austria, Poland, Portugal, Romania, Slovenia, and Slovakia.

We thus take a closer look at the expenditures for social purposes and labor market policy. The structural labor market reforms could have been associated with adjustments in these areas. For example, the development of government expenditure for social purposes exhibits an interesting pattern over time (aus dem Moore and others, 2011, Figure 3). Although government expenditure for social purposes as a share of GDP increased during the early 1990s and early 2000s (from around 28 percent in 1991 to more than 32 percent in 2003), this share decreased in subsequent years (to roughly 29 percent in 2007). However, this relative decrease still corresponds to a continuous absolute (nominal) increase in government expenditure for social purposes. The main reason for the relative decrease appears to be the comparatively strong growth of GDP during that period.

Expenditure for labor market policy is related to the corresponding unemployment rate and should thus be put into this context. Moreover, it seems useful to compare the development in Germany to that in other European countries. This is portrayed in Figure 12, which shows that the development of expenditures for labor market policy in Germany is not all that exceptional compared with other

Germany. However, they use a rather peculiar definition of austerity that refers to a situation of a "continuous crisis of fiscal policy."

European countries. It was, however, relatively high in 2005; and that was related to comparatively large spending on PLMP. In subsequent years Germany managed to cut overall spending on labor market policy, and in particular in the area of PLMP. This decrease was yet accompanied by declining unemployment, however. Hence, before the Great Recession started in 2007, Germany's expenditures for labor market policy were not markedly different from those in other European countries facing similar unemployment rates. In fact, expenditures and unemployment were very similar to those in France in that year. During the Great Recession, however, the two countries displayed somewhat different patterns. Whereas expenditures were increasing in a similar path in both countries, they were accompanied by stable unemployment in Germany and rising unemployment in France.

One could thus argue that Germany increased expenditures on labor market policy during the Great Recession to successfully stabilize employment in this critical period, whereas other European countries (for example, France) apparently increased expenditures in response to rising unemployment—or, put differently, at least without being able to effectively stabilize unemployment.[27]

These considerations are in line with findings on the role of automatic stabilizers in the tax and transfer systems in different countries during the Great Recession (Dolls, Fuest, and Peichl, 2012). The degree to which income and unemployment shocks are absorbed by the tax and transfer system is generally higher in the European Union than in the United States. This difference is larger for unemployment shocks, which can be explained by the relative importance of unemployment benefits. Furthermore, Germany exhibits relatively high income stabilization coefficients, both for income shocks and unemployment shocks, which are for example larger than those in France and the United Kingdom.[28]

To summarize, Germany has been on a very moderate growth path in terms of real government expenditure in the years during and after the labor market reforms. However, the country failed to meet the European Stability and Growth Pact in terms of the government deficit ratio at the same time. In addition, government expenditure has substantially increased since the Great Recession. This was the case although the crisis' impact on the labor market has been very moderate. Government spending would have much more strongly increased if the Great Recession had resulted in a more severe unemployment shock in Germany because of the high importance of automatic stabilizers in the tax and transfer system. The lack of austerity would presumably be much more transparent in Germany if there had been a stronger need for anticyclical measures.

[27]It should be noted that labor market policies, especially PLMP, are usually nondiscretionary and thus act as automatic stabilizers. Hence, expenditures for PLMP are tied to the development of the unemployment rate and the active role of the government in cutting spending in this respect is limited.

[28]Note that the unemployment shock was modest in Germany. Therefore, the actual role of unemployment benefits is presumably exaggerated in these simulations which assume the same shock for all countries.

It is therefore important to realize the following additional lesson from the German success story: Optimizing the use of public resources to foster growth makes sense only if it is combined with structural labor market reforms. Austerity is not a growth strategy.

V. Lessons from the German Experience

The development of Germany's labor market during the past decade is remarkable from many perspectives. It is remarkable because the country managed to successfully tackle its structural unemployment problem—and not only during periods of economic booms, but also during the worst global recession in postwar history. This paper identifies a number of crucial characteristics that make Germany a strong reference model for other countries. These characteristics include a flexible management of working time (through overtime and short-time work, time accounts and labor hoarding), social cohesion and controlled unit labor costs combined with a rigid incentive-oriented labor policy supported by effective program evaluation.

Considering the initial question of this paper, Germany does indeed appear to be the North Star of labor policy. In terms of long-term unemployment, the current situation in Germany is very similar to that of the United States. This is very surprising when considering that the two countries were at strikingly different starting points before the Great Recession. The economic crisis acted as a very strong test for the actual robustness of the economy. During this critical period, institutional changes and other adjustments dating from the early 2000s had to prove that they indeed could enhance the functioning of the country's labor market. And apparently, they did. Although discretionary measures such as the extension of short-time work helped cushion the impact of the crisis on Germany's labor market, these measures could not have contributed to the observed continuous decline in long-term unemployment.

This paper furthermore supports the argument that the German success story is mainly due to a combination of structural labor market reforms and the *absence* of fiscal austerity. There were no spending cuts for their own sake, but rather adjustments and consolidation of previous spending levels. That means, for example, in the context of labor policy that the importance of specific measures changed over time. Ineffective policy instruments were abolished or their scope substantially reduced (for example, job creation schemes), whereas other measures and programs, mainly of short duration, gained importance (for example, job search assistance, monitoring). However, not all measures are generally accepted, among them the newly introduced public work program "one-euro-jobs."

Germany's remarkable resilience to the Great Recession raises the question whether this apparent success can be effectively replicated by other countries. This paper argues that although, in general, this is not possible, there are many features of the German model that other countries should closely investigate. For example, the apparent success of short-time work may be related to the fact that German firms already had experience with that measure. On the other hand, measures that increase the overall functioning of the labor market, for example, only implementing ALMP measures that prove effective and introducing measures that

improve the efficiency of public employment services, should be considered by any country. However, one should resist the temptation of believing in a one-size-fits-all solution. Instead, models for a given context have to be developed, which can yet be inspired by several aspects of the German model. In fact, to copy and steal what works in other countries is the bottom line of evidence-based policymaking—and also of the German experience.

Germany implemented its labor market reforms by seizing a historic opportunity. At first glance, an intense debate about the public employment service provided this opportunity, but there were important additional factors present. These include, for example, the general movement toward welfare-to-work approaches followed by many countries during that time. In addition, the political line-up facilitated the reforms. The ruling government of the Social Democratic Party and The Greens had to arrange with the oppositional parties as the latter had a majority in the second legislative chamber in Germany representing the federal states. Although this would usually result in a situation of political standstill, this time it was different. On the one hand, economic and fiscal pressure made reforms inevitable, and it was thus possible to negotiate a broad political support for these unpopular reforms that also included the support of employers and trade unions. On the other hand, because of the broad compromise that was needed and achieved, it was unlikely that any individual party could be blamed for the reforms—or could reap the benefits.

Finally, it should be pointed out that the German model will have to change in the future, at least to some extent. To be prepared for the enormous challenge that demographic change poses, the country has to urgently find effective answers to the questions of how to attract more skilled immigrants and how to mobilize internal human resources even better than in the past. The large industrial base and the rather slow development into a service economy had often been seen as a limitation of the German model, but the perceived need for change in this respect has become smaller since the Great Recession.

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