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From "Sick Man" to "Miracle": Explaining the Robustness of the German Labor Market During and After the Financial Crisis 2008-09

Alexander Reisenbichler[1] and Kimberly J. Morgan[1]

Abstract

What explains Germany's exceptional labor market performance during the Great Recession of 2008-09? Contrary to accounts that emphasize employment protection legislation or government policy (i.e., short-time work), this article argues that actions by firms—embedded in ever-changing coordinative institutional structures—were crucial. Firms chose to keep rather than shed labor, a strategy induced by (i) a "toolkit" of flexible labor market instruments that had evolved incrementally over the past thirty years; (ii) wage restraint and successful internal restructuring of firms during the past decade, which fueled an export boom before the crisis. Firms thus had some margin for maneuver, using internal flexibility to protect their investment in skilled workers. These and other institutional changes driven by firms reflect a process of successful adaptation to external economic challenges, but did not fundamentally undermine Germany's coordinated form of capitalism. The result is not a new German model that was purposefully designed; instead German firms slowly discovered new ways to cope with economic challenges.

Keywords

financial crisis, labor market, unemployment, institutional change, varieties of capitalism

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While many of the advanced industrialized economies are still reeling from the global economic crisis and struggle in particular with high rates of unemployment, Germany's labor market has been remarkably resilient. Despite experiencing the worst economic downturn since World War II, German unemployment rates dropped to 6.6 percent in December 2010—well below the 8.1 percent average for the Organisation for Economic Co-operation and Development (OECD) as a whole and 9.6 percent for the European Union. In October 2010, the number of unemployed dipped below 3 million for the first time since 1992.[1] No one forecasted this *decline* in unemployment in Germany; for instance, both the OECD and the International Monetary Fund (IMF) had projected stark increases in unemployment in 2008 and 2009.[2] The labor market turnabout is all the more startling given Germany's longstanding reputation as one of the "sick men" of Europe, plagued by sclerotic employment performance, stagnant growth, and an inability to adopt economic reforms.[3] Yet, commentators from across the political spectrum now laud the "German miracle," and seek to understand what policies or practices produced these positive employment outcomes.[4] Moreover, in debates about the future of European monetary union, German leaders and commentators have used their country's strong economic performance to make claims about the superiority of the "German model," arguing that decades of fiscal restraint and government policy to reduce labor costs have delivered economic competitiveness and employment growth that other European countries should try to emulate.

Conventional accounts would privilege either longstanding institutional arrangements— Germany's strict employment protection legislation, for instance—or short-term conjunctural ones, such as specificities in the nature of the crisis . . . aspects of the government's response to it. Yet, none of these approaches satisfactorily explains Germany's employment performance during this crisis. Certainly, employment protections can impede some of the labor shedding that might normally occur with less strict legislation; yet such protections hardly prevented firms from laying off workers in past economic downturns that were less severe than that of 2008-09. And although much journalistic attention has been paid to the government's efforts to encourage short-time work (*Kurzarbeit*), whereby employees work fewer hours and receive government subsidies for foregone wages but keep their jobs, *Kurzarbeit* has been around for many decades—indeed, for most of the twentieth century—and only partially explains the favorable labor market performance in the recent crisis.

Instead, firms were the central protagonists in securing this positive labor market outcome because, by and large, they chose to keep rather than shed workers. These choices were made possible by the availability of a "toolkit" of flexible labor market instruments that had developed incrementally over the past thirty years with the decentralization and disorganization of collective bargaining. As bargaining power shifted to firm-level negotiations between works councils and management, firms gained greater latitude to adjust working time and compensation to the economic situation of the firm. In 2008-09, this toolkit helped many firms cope with a severe decline in production without engaging in massive layoffs, enabling them to instead temporarily reduce the working time and pay of workers. Firms also benefited from a decade of wage restraint and internal restructuring that had helped restore competitiveness, fueling an export boom prior to the start of the crisis. Many firms thus had some margin for maneuver at the start of the crisis, and used the internal flexibility mechanisms to wait and see how the economic downturn would unfold.

This study has implications for how we should think about processes of economic adjustment and institutional change in advanced industrialized economies. First, we concur with a growing body of work on the way in which actions of firms—which are embedded in larger institutional frameworks and coordinated structures—drive incremental institutional changes in order to adjust to changing economic conditions while also maintaining the coordinative nature of German capitalism from which they benefit. The creation of a toolkit of internal flexibility instruments is an example *par excellence* of such processes, as it emerged out of *ad hoc* negotiations between the social partners and actors at the firm level, and was in no way foreseen as a way to manage severe economic crises. The result is not a new "German model" that was consciously designed by political or economic actors; instead German firms slowly *discovered* new ways to cope with economic challenges.[5] Finally, we differ with the more pessimistic conclusions about where these institutional changes have led. Certainly, the changes we describe have largely benefited the "core" workforce in the form of job security, whereas the "margin" of less well-protected workers—which has increased with the decentralization of collective bargaining and labor market reforms—has often functioned as a buffer to protect core workers during the crisis. However, rather than viewing a new dualized labor market equilibrium as the inevitable result of these processes, we believe that recent developments could help to counter some of these dualizing trends.

The German Employment Puzzle

One notable and surprising aspect of the recent economic crisis was the fact that unemployment not only did not rise in Germany, as was widely expected, but declined significantly. Figure 1 shows the quarterly evolution of unemployment rates since late 2007 and reveals that at the start of the crisis German unemployment was almost 9 percent.

Yet, as the financial crisis hit in 2008, unemployment rates in Germany steadily dropped, even as joblessness rose in many other OECD countries.[6] It is true that the sharp recession of 2008-09 did not generate commensurate employment declines in all OECD countries, as some countries were more affected than others.[7] Still, even when compared to a wide array of advanced industrialized states, Figure 2 shows that Germany stands out for its exceptional performance. The United States—long seen as an economy capable of tremendous job creation—was especially affected, with unemployment rates doubling between 2007 and 2009. Although the United Kingdom was not as severely impacted as the United States, unemployment rates have risen three percentage points since 2007.

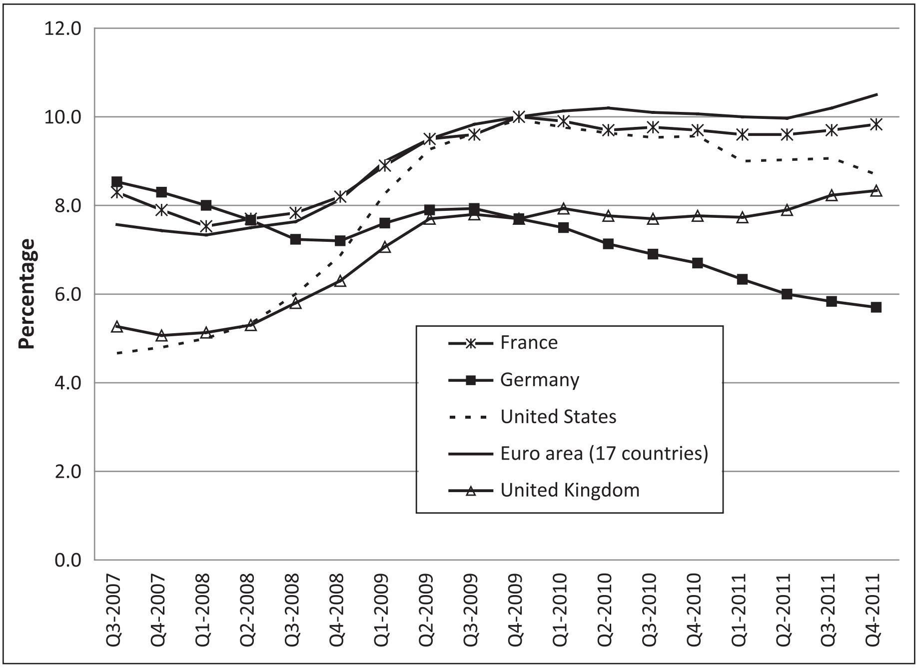

Figure 1. Standardized unemployment rates, 2007-2011
Source: OECD.Stat

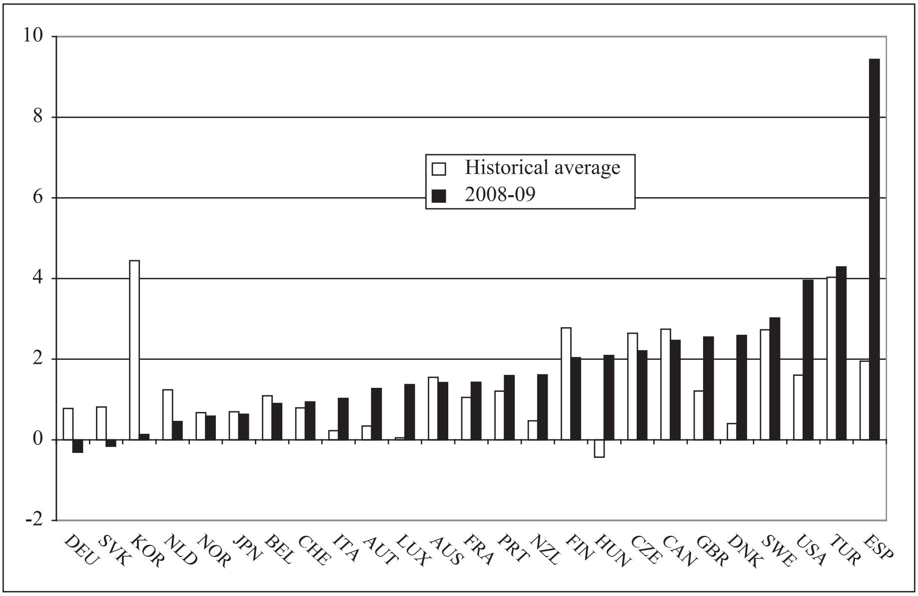

Figure 2. Percentage point change in unemployment rate, peak to trough, past and present recessions
Source: OECD, Employment Outlook 2010.

In pondering the German employment puzzle, one rival account could simply be that Germany suffered less during the financial crisis than did other OECD countries. For instance, Germany did not experience the asset bubble that had fueled economic growth in the United States and some of Europe, and thus was potentially better placed to weather the storm. In addition, the German financial sector eschewed many of the risky financial instruments that were widespread in the United States and the United Kingdom and was thus less affected by the crisis than its Anglo-American counterparts (although some battered German Landesbanken received a government bailout). However, Germany's export sector was hit very hard due to declining consumption abroad, and real GDP dropped by 6.7 percent during the recession—even more than the 4.8 percent average decline in the OECD as a whole (Figures 3 and 4). Compared with the United States and other European countries, as well as with past economic crises, it is clear that the German economy was severely affected by the 2008-09 recession.

Working in Germany's favor was the fact that the steep drop in output was relatively short term and followed by a rebound in export-led growth that also helped to create new jobs; but firms had no way of knowing this at the outset of the crisis and, indeed, the prognosis for the German economy was highly negative at the start of the recession.[8] We might therefore expect firms to behave as they did in many other countries and lay off workers in anticipation of worse times to come.

Reinforcing this expectation is the sharp decline in German productivity during the crisis (Figure 5). Labor productivity rates in Germany plummeted by more than 7 percent, which is not only significantly higher than its historical average of under 0.5 percent, but also the fifth largest decline in the OECD.

Moreover, voices among shareholders of big DAX firms,[9] particularly in the automobile industry, argued that only massive dismissals could prevent firms from going under.[10] Their claims were reinforced by the fact that German car industries had long suffered from overcapacity.[11] Despite these highly unfavorable circumstances, German firms, including those in the hard-hit export sector, did not massively lay off workers.

A second explanation could lie in the coordinated nature of German capitalism, which might have influenced the behavior of firms in two ways. First, a quintessential feature of coordinated market economies is that many firms rely on employees that have sector- or firm-specific skills.[12] Having invested in these workers, employers may expect that the transaction costs of finding, hiring, and training new workers well exceed the cost of hoarding labor for a certain amount of time.[13] Second, to ensure that individuals willingly invest in firm- or sector-specific skills, coordinated market economies tend to guarantee significant employment protection to safeguard these investments, whereas more liberal market economies, such as the United States and the United Kingdom, rely on more general skills, requiring less employment protection to preserve investment in these skills in a more fluid labor market.[14] The answer to the German riddle may therefore lie in the inability of firms to circumvent these protections and easily fire workers in times of economic slowdown.

Although Germany's employment protection legislation (EPL) is among the highest for core employees in OECD countries,[15] Möller (2010) finds no statistically significant

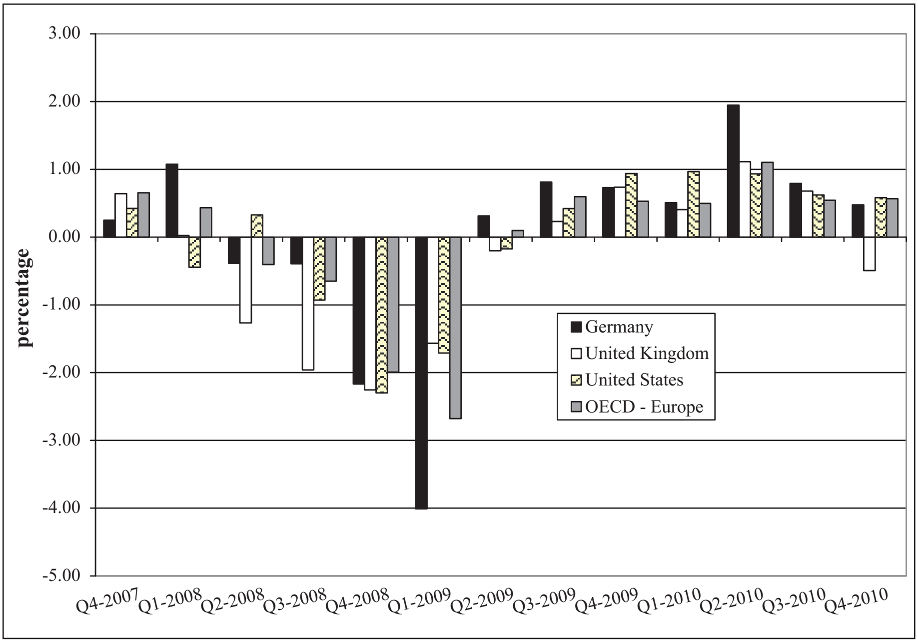

Figure 3. Quarterly growth rates of real GDP, change over previous quarter
Source: OECD.Stat

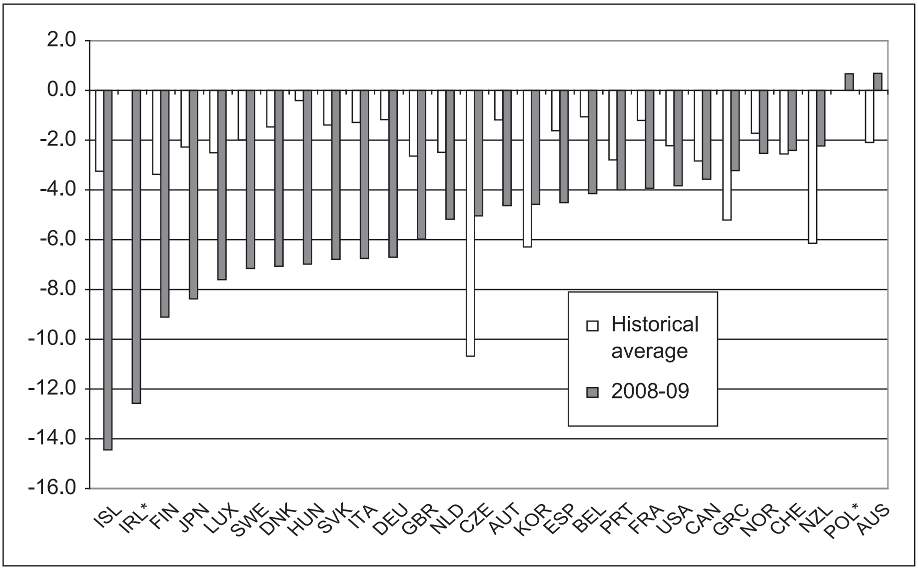

Figure 4. Percentage decline in GDP from peak to trough
Source: OECD, Employment Outlook 2010.

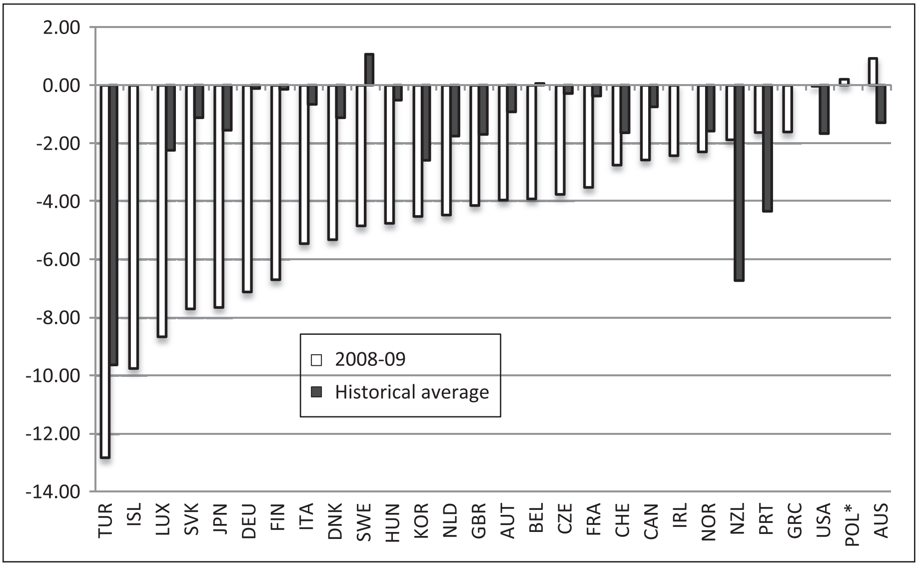

Figure 5. Change in labor productivity in the 2008-09 recession in historical comparison
Source: OECD, Employment Outlook 2010.

relationship between EPL and changes in unemployment rates during the recent crisis.[16] This is not to say that employment protection was altogether insignificant during the crisis in 2008-09 or past recessions. Employment protection certainly works as a stabilizer within the institutional context of the German employment system.[17] However, high EPL does not automatically guarantee a positive employment outcome. First, during the crisis, many countries with high overall EPL, such as France, experienced massive layoffs and increasing unemployment. Second, in earlier crises, German firms did dismiss workers, sometimes in large numbers, rather than reducing working time for current employees. For instance, during the economic slowdown between 2001 and 2003,[18] there was a massive dismissal wave, with unemployment rising from 7.9 percent in 2001 to a height of 10.5 percent in 2004.[19] Annual hours worked per employee decreased only slightly, by 0.7 percent from 2001 to 2002 (10 hours) and by 0.4 percent (5 hours) from 2002 to 2003, whereas hours worked decreased by 3.1 percent from 2008 to 2009 (42 hours).[20] Thus, rather than find ways to keep workers through reduced working hours, firms simply shed them despite the fact that EPL has not significantly changed between the two crises.[21]

These facts also challenge what we might expect from an equilibrium-oriented varieties of capitalism (VoC) perspective,[22] which might not allow for much variation in firm behavior during economic recessions. Certainly, liberal market economies such as the United States and the United Kingdom responded as the VoC literature would predict: that is, they shed labor in times of crisis, a move that is complementary to fluid labor markets, the prevalence of general skills, and "financial markets that render a firm's access to funds dependent on current profitability."[23] Yet, if firms in coordinated market economies behave rationally within stable sets of institutional complementarities based on their comparative advantage in the global economy, then German firms should always have seen merit in preserving rather than shedding (skilled) workers during times of economic slowdown, which is clearly not the case. Mass dismissals of workers might also be justified in the name of restoring competitiveness of firms in coordinated market economies—indeed, it appears that firms did precisely that in the 1990s and early 2000s. Still, a VoC perspective is valuable for thinking about why firms *might* want to hold onto skilled workers in whom much has been invested. It also rightly puts firms at the center of the analysis. However, as we argue below, we agree with Thelen (2009) and others that this perspective needs to be enhanced by a more dynamic analysis of firm behavior, one that highlights the way in which firms might contest, circumvent, and reinterpret existing institutions in order to adjust to their specific economic situations.[24]

A third possibility is that the German government's response to the crisis was swift and effective in truncating its consequences for the labor market. Certainly, the current and past governments (CDU-FDP and CDU-SPD) have trumpeted the averred successes of their economic policies during the financial crisis, highlighting in particular the use of short-time work (*Kurzarbeit)* whereby the government subsidizes the wages and social contributions of workers whose employers reduce their work time.[25] Yet, although *Kurzarbeit* has received considerable media attention, its roots extend back to the early twentieth century and it has been regularly refined and used since the 1970s. Although the CDU-SPD government further facilitated the use of *Kurzarbeit* as part of its stimulus packages,[26] which made it easier for firms to get immediate assistance as well as cut further costs for firms, this was perhaps less novel than the international press perceived. Also, other European countries that have used short-time work schemes were less successful in preventing moderate increases in the unemployment rate.

There are also limits to how much *Kurzarbeit* can help preserve jobs. *Kurzarbeit* has been shown to have cushioned the impact of past economic crises on unemployment.[27] Yet, despite its extensive use in past crises as well as the recent downturn, the unemployment rate still increased more significantly in past recessions (such as in 1973-74 and 1993) than during the 2008-09 recession.[28] Finally, *Kurzarbeit* cannot fully account for the pattern of reduced working hours during the crisis: on average, 42 working hours per worker were reduced in 2009, but only 13.4 hours came via *Kurzarbeit*, which highlights that other instruments were just as important, if not more so, in accounting for this positive labor market outcome.[29] In contrast, the United States reduced 25 hours per employee, whereas the United Kingdom only reduced 8 hours per employee between 2008-09.[30] This again highlights that firms in Germany, contrary to firms in the United States or the United Kingdom, reduced working hours more significantly to preserve employment.

From a management perspective, the use of *Kurzarbeit* (and thus of public subsidies) was initially not seen as an honorable thing to do, and no one wanted to be the first one to use *Kurzarbeit* among the big DAX firms. Its use was also seen as quite expensive before its refinement in the stimulus packages, and thus works councils of several firms complained that the timing of *Kurzarbeit* applications was too late.[31] Firms also saw potential risks in using *Kurzarbeit:* first, if overused, this practice could hamper structural economic change and thus decrease the long-term competitiveness of firms;[32] second, if the crisis had endured, Kurzarbeit in itself would not have had such a positive effect on employment and would just have prolonged inevitable dismissals.[33]

Finally, it may be that compensating developments in other parts of the German economy explain the positive employment figures, such as the recent expansion of the service sector. The service sector added more than 2.5 million jobs since the early 2000s and almost one million jobs between 2007-10, reflecting in part the "outsourcing" of service activities to specialized firms.[34] In particular, lower-skilled workers within the large manufacturing firms were outsourced to subsidiary spin-off companies, essentially performing the same job under a new service sector label (e.g., cafeteria workers, security personnel etc.).[35] This enabled firms to further reduce costs and flexibilize employment, as many of these outsourced workers were not part of collective agreements. Moreover, there has been a general trend of service sector expansion over the past decade due to rising demand for relatively income inelastic services.[36] Health care and social services have become especially important because of an aging and more service-oriented society, while rising demand for education, travel, and leisure activities are associated with higher wealth.[37] As Iversen and Wren (1998) point out, "the [long-term] decline in manufacturing has been accompanied by a shift in demand toward the services, and in this sense the service sector has assumed the role previously played by manufacturing as the main source of employment growth."[38]

Although we concur that the service industry has been the main *source* of employment growth, the manufacturing industry is still the main *driver* of this growth in Germany due to the export industry's feedback effect on the service economy. Thus, not only have profitable German export firms created jobs and produced economic growth, but they also fueled demand for services.[39] Wölfl (2005) rightly points out that:

> . . . the share of services activities that is necessary for, or complementary to, manufacturing goods production has increased. The production of a car, for instance, would not be able (sic) without services activities such as market research, technical research and development, human resource management, or business consulting. Moreover, a car is often sold in a package that includes financing, which may be provided directly by the car producer or indirectly via subcontracting.[40]

Profitable manufacturing export firms were thus able to utilize more sophisticated (external) services to meet their needs, such as product marketing and consulting, which had a positive feedback effect on employment numbers in the service industry. This is what Rattner (2011) labels a “virtuous circle” of a strong export sector strengthening the German economy, since “[m]ore exports have generated more profits and created more jobs, and these in turn have fueled domestic demand for consumer products.”[41] Thus, the strong performance of the German export industry during the past decade has significantly contributed to the rise in service sector jobs by not only providing the backbone of the German coordinated market economy, but also exerting positive feedback effects on the service sector. This also contributed to Germany’s positive labor market performance during the recent crisis. As German export firms preserved employment during the crisis, they continued to pay (relatively) high wages fostering demand for the above-mentioned services instead of massively laying off workers.

This discussion has shown that existing accounts cannot fully explain the robustness of the German labor market during the financial crisis. Although employment protection and *Kurzarbeit* surely affected the positive labor market outcomes during the recent crisis, earlier crises show that both EPL and *Kurzarbeit* did not prevent firms from also dismissing workers. The expansion of the service sector helped cushion the German economy from the impact of the crisis, yet many of these jobs are integrally tied to the export sector that was hard-hit by the downturn. Elements of the VoC offer more promise, emphasizing that firms might seek to hold on to skilled workers in which they have invested and on which they would rely once production picks up again. Yet, the VoC approach needs to be enhanced by a more dynamic view of firm behavior.

Explaining German Labor Market Resilience

We argue that Germany’s labor market performance during the recent crisis was made possible through a decades-long process of decentralization and disorganization of German industrial relations that resulted in unintended and surprising consequences: a toolkit of flexible labor market instruments as well as wage restraint that helped restore the competitiveness of German firms. This process has not culminated in a neoliberal labor market—whereby employment protections are significantly diminished—and it also has not substantially undermined the coordinated nature of German capitalism. Instead, firms have sought greater flexibility *within* the existing system of coordinated industrial relations, which has not changed in formal or legal terms but has devolved in organizational terms from the sectoral level to firm-level negotiations.[42] Such an approach places firms at the center of the analysis in explaining the evolving institutional arrangements and development of the flexibility toolkit they could use. It also allows for a more dynamic view of the workings of German capitalism. As Streeck and Thelen (2005) argue:

> [p]olitical institutions are not only periodically contested; they are the object of ongoing skirmishing as actors try to achieve advantage by interpreting or redirecting institutions in pursuit of their goals, or by subverting or circumventing rules that clash with their interests.[43]

In the face of global economic competition and high labor costs at home, firms sought ways to incrementally circumvent, reinterpret, and redirect existing arrangements in order to cut costs while maintaining the benefits of the coordinated market economy. One result was a set of internal flexibility instruments that could be used to preserve employment during the Great Recession. Firms then deployed this toolkit during the recent crisis because they had an interest in keeping the skilled workers in whom they had invested, avoiding the transaction costs of finding skilled workers during the next boom. In addition, firms sought and achieved wage restraint and internal restructuring, generating a boom in the export-oriented manufacturing sector on the eve of the crisis that left many firms in good financial shape.[44] Together, these factors enabled firms to wait and see how serious the crisis would be rather than immediately laying off workers.

This stands in stark contrast to firms operating in more liberal market economies, in which the transaction costs of finding new workers are presumably lower, due to a labor force with more general skills and a more fluid and flexible labor market. Not only do liberal market arrangements reduce the cost of firing through unilateral managerial control, weak labor representation, and low employment protection, but they also allow for radical restructuring in times of crisis.[45] These arrangements induce firms to adopt a short-term view emphasizing short-term profitability. Therefore, as firms have fewer incentives to employ internal flexibility mechanisms in liberal market arrangements, the dominant strategy during the Great Recession was to shed workers.

Wage Restraint and the Creation of a Toolkit of Labor Market Instruments

The collective bargaining system in Germany is comprised of organized business and labor, which negotiate sectoral or regional collective agreements (*Flächentarifverträge*) that complement German labor (and working-time) law. Firms that are subject to the collective agreement cannot undercut its provisions unless they do so in ways that benefit the employee (*Günstigkeitsprinzip*). Negotiations between the social partners take place autonomously from the state (*Tarifautonomie*) as an institutionalized system of conflict management, mutual recognition, and cooperation.[46] Yet workers are not only represented by unions on the sectoral level and by works councils at the plant level, but also on firms' supervisory boards (*Mitbestimmung*). These main pillars of collective bargaining comprised a great deal of the so-called "Model Germany" of the 1970s and early 1980s that produced very low wage dispersion and high wages, following an industrial path of "diversified quality production."[47] Moreover, collective bargaining coverage was quite high up to the 1990s.

Although these formal pillars are still intact, they have experienced major changes during the past twenty-five years, as bargaining power shifted from the sectoral or regional level to the firm or plant level through opening clauses and concession bargaining.[48] Behind these changes was the declining structural and organizational power of unions. Union membership rates have declined significantly during the past twenty years: for instance, the DGB peak organization membership rate plummeted from 11 million members in 1992 to 6.4 million in 2008.[49] Net union density also declined from 33.9 percent in 1992 to 18.6 percent in 2010.[50] This decline does not automatically represent a proportionate decrease in collective bargaining coverage, as entire firms are subject to collective agreements.[51] Still, whereas in 1998, 76 percent of the workforce was covered by collective agreements in the Western regions and 63 percent in the Eastern regions of Germany, in 2009, only 65 percent in the West and 51 percent in the East were covered by collective agreements.[52] Employer associations also have lost membership, especially among small- and medium-sized firms that benefit less from collective agreements.[53]

These developments potentially herald the declining coordinating capacity of firms and unions, and thus might pose a serious challenge to the coordinated market economy model of which Germany is the archetype.[54] Yet, a growing body of work on institutional change in capitalist economies has revealed the strong incentives that many firms—and workers—have in protecting the existing system of coordinated industrial relations and skill investments.[55] Particularly in the export-oriented large-scale manufacturing sector, firms have not aimed to jettison the system of coordinated bargaining and vocational training, but instead sought greater flexibility as well as wage restraint within the system in order to bolster their international competitiveness.[56] The search for ways to live within the existing, and highly beneficial, system of coordinated capitalism while adapting it to conditions of heightened international competition has produced a process of institutional reinterpretation as formal structures, rules, and instruments have been adapted to new circumstances.[57]

The development of a flexible working-time toolkit exemplifies these processes, most notably in how it was *not* driven by a grand strategy of reform by political or economic actors, but resulted from short-term negotiations and experimentation over time. Particularly important were the actions of the large export-oriented manufacturers, who struggled to adapt to growing international competition. The starting point for our historical discussion is the so-called "Leber compromise" of 1984 in the metal and electronics industries, which flexibilized working time in exchange for working hour reductions. After the oil crisis in the 1970s and rising unemployment in the 1980s, IG-Metall proposed a reduction of working hours from forty to thirty-five hours a week to counter unemployment, causing a rift between different unions that instead supported early retirement as a strategy of reducing labor supply.[58] In 1984, IG-Metall called for a national strike and achieved its goal of a thirty-five-hour-week (with gradual implementation until the 1990s), but this came at a price. To compensate for the working-time reduction, employers wanted more flexible working time at the plant level to increase their efficiency and competitiveness. The 1984 agreement thus also included institutionalized working-time flexibility.

More than 10,000 plant-level agreements were negotiated after the 1984 compromise, specifying variable working time, seasonal working time, and the further introduction of working-time accounts.[59] This meant that workers in the metal industry could work longer during times of production booms and work less during times of economic downturn, as long as the working hours balanced out over one year.[60] Although large firms in the manufacturing industry were particularly interested in such flexibility—they tend to have sophisticated working-time schedules tailored to complex plant workflows—other branches subsequently adopted the "working-time reduction for working-time flexibility" scheme of the Leber compromise, such as the financial services industry in 1989.[61] The larger implication was that unions and employer associations had essentially shifted working-time negotiations to the firm level, so that every company had to negotiate working-time reductions and flexibility independently.[62]

The second development that further enhanced the toolkit was the aforementioned spread of opening clauses in collective agreements. After reunification, the West German collective bargaining system was transferred to the *Neue Länder* in the East, yet many Eastern firms could not pay collectively agreed-upon wages. Therefore, to preserve employment in the East, unions made major concessions in granting those firms "hardship clauses" to negotiate new standards that deviated from collective agreements.[63] During the 1992-93 recession, several collective agreements in the Western parts of Germany also included opening clauses on temporary working-time reductions and wage reductions, again as employment protection measures for which the East German clauses served as models.[64]

Since the 1990s, opening clauses became increasingly normalized, even in ordinary economic times. The number of firms using opening clauses has increased continually: 22 percent of firms covered by collective agreements made use of opening clauses in 1999-2000, 35 percent in 2002, and 75 percent in 2004-05.[65] Unions were not necessarily in favor but also could not stop the normalization process because they once agreed to clauses "in particular justifiable cases" and were experiencing a decline in organizational power.[66] Moreover, former Chancellor Gerhard Schröder announced his support for statutory opening clauses and that his SPD-Green coalition government would even enact legislation to standardize such clauses if unions continued to oppose them.[67] The unions gave in to this pressure in agreeing to one of the most prominent opening clauses, the 2004 "Pforzheim Accord" in the metal industry, which sought to "secure competitiveness" by allowing firms to deviate from collectively agreed-upon working time, monthly pay, bonuses etc. One result was more than 300 deviating agreements within two years.[68] According to Institute of Economic and Social Research (WSI) surveys, most firms have used opening clauses to introduce variable working time, followed by extending working time, temporarily reducing working time, suspending or reducing bonuses, and finally reducing basic pay.[69]

In addition to these opening clauses, a third set of developments took place: company-level pacts between works councils and management. These pacts (*Betriebsbündnisse für Arbeit*) grant workers some employment security in return for concessions on working time or compensation, the goal of the firm being to reduce costs and maintain firm competitiveness by increasing productivity.[70] Furthermore, the pacts allowed firms to internally restructure and reorganize production processes. In one of the most important examples of these agreements, negotiations between Volkswagen's management, works council, and IG-Metall produced a company-level pact in 1994 that reduced weekly hours from 35.5 to 28.8, cut compensation (albeit not proportionately), yet also aimed to save 30,000 jobs. For Volkswagen's management, reducing working time was seen as a cheap, fast, and social alternative to either the government's *Kurzarbeit* scheme—which was expensive because employers had to pay full social contributions at that time[71]—or to firing workers, a move that could not "be integrated into the highly estimated VW model of social relations."[72] In short, Volkswagen did not want to break with long-established practices in German industrial relations and instead sought a way to both preserve competitiveness and protect employment.[73]

This strategy of adjustments in working hours and pay was subsequently adopted in various company-level pacts to enhance competitiveness across industries.[74] According to WSI surveys, the proportion of firms with works councils having concluded company-level pacts rose from 23 percent in 2003 to 58.5 percent in 2009.[75] The 2003 WSI survey shows that most measures negotiated in these pacts concern working time, such as working-time accounts, reductions in the use of overtime, time off in lieu of overtime pay, and working-time reductions.[76] Therefore, collective agreements function increasingly as a framework for firms to make use of opening clauses and/or conclude employment pacts as they see fit. Indeed, company-level pacts substantially contributed to increasing firms' competitiveness in the mid-2000s by allowing them to further reorganize and optimize production processes, especially in the export industry,[77] and thus put them in decent financial shape prior to the Great Recession.

In sum, through the three intertwining developments described above, firms sought ways to rework the collective bargaining system and its agreements in their favor. Where were the unions in all this? Unions were hardly passive actors; they also worked within these ever-shifting coordination structures to pursue *their* interest in protecting jobs.[78] This stance is notable: rather than adopt a hardline position opposing wage restraint, unions accepted considerable wage moderation relative to productivity increases as the price for maintaining firm competitiveness and, ultimately, preserving jobs. This shift from wage restraint in exchange for the redistributive policies of the postwar "Golden Age" to now accepting wage restraint as a means of increasing the economy's competitiveness signals that unions have adapted to new circumstances as well.[79] One reason may be the unwillingness of German governments to use expansionary fiscal policy to offset unemployment, creating incentives for unions to accept wage moderation in order to avert rising joblessness. Another reason for their moderation may lie in the very forces described above—the shifting of collective bargaining to the firm level and, concomitantly, the growing role of works councils in protecting employee interests. Works council heads have assumed a greater role within the industrial unions as well as on firms' supervisory boards,[80] and have likely influenced their orientation. More generally, "median (i.e. skilled) employee interest has become increasingly aligned with the firms'" making employees more likely to accept sacrifices to income and control over working time.[81]

In support of this, there was significant union wage restraint on the heels of rising unemployment and slow economic growth in the early 2000s, as high wage demands were seen as potentially threatening the competitiveness and profitability of export firms.[82] Wage restraint thereby functioned as an equivalent to currency devaluation within the European Union (EU), in essence "subsidizing" the export sector.[83] Furthermore, export firms benefited from the Eurozone's trade and capital flow arrangements in addition to a stable currency.[84] While wages in Germany have nearly stagnated since 2000, firms were able to lower unit labor costs compared to the rest of the EU, which proved effective at inducing an export as well as employment boom in the large export-oriented manufacturing industry since 2005. This resulted in a positive feedback effect on the German economy as a whole.[85] This development was largely driven by international demand, whereas wage moderation constrained domestic demand, inducing a strategy of saving among German consumers.[86] We highlight this trajectory, as it is important to show that the German export industry was highly competitive and booming on the eve of the crisis, which placed it in a financially healthy position.[87] Moreover, as the pre-crisis increase in labor demand resulted in higher employment (albeit not proportionately to that increasing labor demand) and might have continued if the crisis had not hit Germany, this might also be a mitigating factor compared to economies with stagnant labor demand.[88]

The coordinative and pragmatic actions of both employers *and* unions are also reflected in the 2008-2010 collective bargaining rounds. During the recession, wages only increased moderately, given fears that increased labor costs could produce a double-dip crisis.[89] Therefore, the trend of wage restraint continued to produce favorable conditions of industrial peace and contained wages as mechanisms to cope with the crisis.[90] Moreover, regional collective agreements were reached that included further provisions on *Kurzarbeit* and working-time flexibility, such as a collective agreement in the metal and electronic industry North-Rhine-Westphalia (*Tarifvertrag "Zukunft in Arbeit"*) that was subsequently adopted in several other regions within Germany.[91] In short, the trends of the pre-crisis period continued, as both unions and employers negotiated further internal flexibility and wage restraint as a form of "crisis corporatism" to preserve competitiveness.[92]

To sum up, although there have been significant changes in the nature of collective bargaining, neither employers nor employees have renounced their commitment to coordinated forms of industrial relations. The actions of firms were particularly important, as they circumvented and amended existing institutions through a process of incremental adaptation,[93] producing an array of instruments enabling large-scale flexibilization of working time and compensation. The evolution of this toolkit reveals the way in which institutional arrangements were constantly being reworked for new purposes. For example, when IG-Metall proposed working-time reduction in the 1980s, it was put forth as a labor market instrument at the industry level to prevent higher unemployment. In 1994, Volkswagen reinterpreted this as a "business strategy" of adjusting working time through a four-day-week at the firm level, which then spread widely to other firms.[94] Moreover, firms reinterpreted company-level pacts and opening clauses that were once hardship clauses in crisis situations as mechanisms to increase competitiveness and investment in ordinary times. Firms thus normalized the use of opening clauses and company-level agreements in order to adjust to economic conditions, which was certainly not the unions' intention; they originally saw them as crisis mechanisms. During the Great Recession, these instruments were again reinterpreted from enhancing competitiveness and investment (i.e., company-level pacts) to "survival" strategies of entire firms.[95] Firms furthermore reinterpreted certain principles, such as the *Günstigkeitsprinzip*, by concluding company-level pacts that could undercut working time and compensation of collective agreements, but nonetheless grant workers employment security. In so doing, firms converted this core principle of collective bargaining to work in their favor.[96]

Most scholars examining these developments have then drawn connections with labor market reform processes that began in the 1980s and created greater *external* flexibility for firms. The steady weakening of German unions, and their orientation toward safeguarding a shrinking core of "insiders," are said to have opened up space for the creation of less-regulated and less-protected forms of work at the margin of the labor market, including agency workers, mini-jobs, and fixed-term contracts that were further facilitated with the "Hartz" reforms in 2003-05.[97] As we shall see below, firms certainly made use of this enhanced external flexibility during the 2008-09 crisis, shedding atypical workers in lieu of laying off their core employees whose employment protection legislation remained strict over the years. Yet, although this growing flexibility at the margins of the labor market has been a significant trend, the focus on these developments has led scholars to neglect the *internal* flexibility mechanisms that were also emerging through the incremental process we describe above.

Overall, firms managed to change the existing institutional framework by reinterpreting, circumventing, and thereby flexibilizing some of its functions to adapt to hard times. This path, however, was not ordained. If unions had not adopted a pragmatic view that favored safeguarding employment through wage restraint and internal flexibility, and instead pursued a hardline position demanding major wage increases, firms might have not pursued this course. Similarly, if businesses had pushed for more neoliberal market arrangements and turned their back on the core institutions of the German market economy, coordinated capitalism itself would have been at risk. Instead, firms did not abandon the coordinative institutions from which they benefitted, but sought ways to turn them to their economic advantage. Thus, although both unions and firms pursued their pragmatic self-interest through incremental adjustments, the unintended effect was to reinforce the coordinated market arrangements and help firms cope with global economic conditions. Another unintended consequence was the forging of a toolkit that firms could deploy during the Great Recession. The changing institutional context and the financially healthy pre-crisis situation of export firms that were hit hardest, therefore, offered firms ever more internal flexibility to cope with the crisis.

The Response of Firms to the Great Recession of 2008-09

German firms were hit hard by the Great Recession: a survey of 8,000 firms conducted in the second quartile of 2009 by the IAB, the think tank of the Federal

Employment Agency, reckoned that almost 40 percent of all firms were impacted by the economic crisis. The manufacturing industry was especially affected, with more than 50 percent of firms—particularly in the chemical, car, machinery, and metal industries—stating that they were impacted by the downturn,[98] compared to 40 percent in the construction sector and only 30 percent in the financial services industry. According to the study, firms of all sizes were affected equally and export-oriented firms were particularly hard hit because of decreasing demand from abroad.[99] This is not surprising given a decline of 18.3 percent in exports in 2009.[100]

In response, firms utilized a broad array of instruments in order to avoid layoffs, taking advantage of both the internal and external flexibility that the aforementioned collective bargaining and labor market developments had enabled. A WSI study conducted in 2009 shows that firms extensively used *internal flexibility* mechanisms during the crisis: firms especially reduced employees' overtime hours on flexible time accounts or increased deficits on these accounts in order to cope with decreasing workload (30 percent of firms); made use of *Kurzarbeit* (20 percent); used intra-firm employee transfers (14 percent); new vacation allowances (13 percent); reduced wages (11 percent); and social benefits of their employees (5 percent). In terms of *external flexibility*: firms laid off core employees (28 percent); laid off agency workers (24 percent); deployed hiring freezes (13 percent); and did not renew temporary work contracts (17 percent).[101] During the recession, these instruments were deployed within the framework of collective agreements, opening clauses or company-level pacts.[102]

These instruments—with the notable exception of *Kurzarbeit*—are not the direct result of state or government action, but rather reflect institutional changes in the collective bargaining regime that led to the establishment of this toolkit as well as firm action. Certainly, on the heels of the financial crisis, the then CDU-SPD grand coalition was quick to react with two stimulus packages that included a number of labor market and training measures, such as the facilitation and extension of *Kurzarbeit* (see above). In so doing, the government sent "signals" to firms that it was willing to help overcome the crisis by fiscal stimulus and active labor market policies that would further facilitate internal flexibility. Moreover, these measures were largely developed in cooperation with employers and unions, which also took part in consultations with the grand coalition before and after enactment of the stimulus packages. Although these government actions indeed provided favorable conditions for firms to react, they cannot, in themselves, explain the positive labor market outcomes.[103] Instead, firms' decisions to make use of a variety of internal flexibility instruments were crucial in safeguarding employment.

The use of working-time accounts, for example, provides a particularly good case of how internal flexibility was used during the crisis to save employment. These accounts capture the *de facto* work time of the employee, allowing employees to accumulate hour surpluses or deficits that deviate from their regular working hours depending on the seasonal or cyclical workload situation of the firm. In times of economic downturn or growth, firms can reduce or increase the amount of hours worked by the employee while still paying the same wage, which provides flexibility for both the firm and to some extent for the employee. Working-time accounts spread rapidly—rising from 35 percent of all employees in 1999 to 51 percent in 2009—and employees had generally accumulated hour surpluses during the economic upswing before the financial crisis of 2008-09 hit.[104] Firms would be better off reducing these working-time accounts to zero first before laying off workers, as otherwise they would have to pay overtime; this also has a mitigating effect on employment and contributes to firm behavior.[105] Firms thus made use of these surpluses, reducing working time by an average of 14.9 hours per employee through overtime and time accounts surpluses (on average, 42 hours were reduced per employee, including all internal flexibility mechanisms).[106] Mathematically, these reductions saved 1.2 million jobs.[107]

Both the WSI and IAB studies concluded that the manufacturing sector was particularly active in deploying internal flexibility, as 59 to 78 percent (depending on the specific industry) of firms surveyed have used at least one instrument to save employment, such as *Kurzarbeit* or working-time accounts. By contrast, the financial services industry employed such mechanisms the least, with only 18 percent of firms using at least one internal flexibility instrument.[108] The export-oriented manufacturing industry that was hit hardest is not only the core industry of the German coordinated market model, but as was noted above, that sector had been booming since 2005. This factor helped German export firms build financial reserves to tide them over during the downturn.[109] Export-oriented manufacturing firms therefore could adopt a wait-and-see strategy *before* having to lay off workers, a move that could prove costly given the investments that had been made in these workers, and the skill shortage plaguing much of the manufacturing sector. The firms that reported being most affected by the crisis were generally also those that had faced problems recruiting workers in the years prior to the recession.[110] Thus, firms had both the financial resources and skill-related incentives to hoard their workers, with the flexibility instruments then enabling them to try to wait out the crisis.

Again, this differs from the crisis response of liberal market economies such as the United States or the United Kingdom. Without the ability to, or interest in, using mechanisms of internal flexibility, the dominant strategy among these firms was to dismiss workers in order to cut costs and quickly restore short-term profitability. Also, as Schmitt (2011) rightly points out in the case of the United States, "the structure of employer-provided benefits, particularly health insurance, makes hours cuts a less cost-effective tool for lowering total compensation."[111] Thus, the decision to release workers was induced and facilitated by the institutional context in which firms operate.

Overall, econometric studies confirm that the use of internal flexibility was indeed important in shaping the positive German labor market outcome across sectors.[112] It was unprecedented, compared to earlier crises, that the GDP and work volume drop were almost entirely absorbed by reductions in working time as well as decreasing productivity. Firms employed the toolkit in different combinations and to varying degrees to meet their specific needs. After the crisis, the usual "staircase development" of unemployment that is the accumulation of unemployed after each crisis did not occur, nor did jobless growth, which could be expected when firms simply readjust and increase working time.[113]

This is not to deny that external flexibility was also deployed, and that it especially hurt workers at the margin of the labor market: atypical agency employment decreased at an average rate of 38 percent, and even more so in the manufacturing sector (49 percent) between the first half of 2008 to 2009. Also, temporary employment decreased at a rate of 6 percent.[114] This margin of flexible and less well-protected workers thus functioned as a buffer to further protect core employees during the recession.[115] For example, in August 2009 there were 222,000 fewer workers in the manufacturing industry compared to August 2008.[116] Yet, in light of the extensive declines in production that firms faced, this decrease in employment is relatively moderate. It is also important to highlight that through internal flexibility, core employees also made some major concessions in terms of working time, income, and job insecurity.[117] For instance, workers often had to accept temporarily lower earnings, cuts in bonuses, compulsory vacation, changing working times, a relocation within the firm, etc.

Larger Implications

Does the above story signal a fundamental improvement in the workings of the German economy, or was the response to the crisis simply a fortuitous turn of events? Certainly, it is true that Germany benefited from a confluence of favorable circumstances, including continued demand for German exports from emerging economies, a relatively short (although dramatic) drop in aggregate demand, cooperative social partners, and quick action by the federal government to introduce active labor market policies and fiscal stimulus. More fundamentally, however, the economic stage had been set by a decade of wage restraint and internal restructuring that allowed firms to cut costs and boost exports since 2005, creating a financially healthy and competitive export sector that made it easier for firms to hoard workers while waiting to see how the crisis would unfold. In this environment, firms turned to a toolkit of internal flexibility instruments to help them weather the storm. If the export sector had been less competitive, firms most likely would not have been able or willing to use the toolkit to the same extent to hoard workers. In sum, microlevel and macrolevel developments intersected in very favorable ways during the crisis.

The microlevel changes were more than random good fortune, however, and reflected the ways in which German economic actors had, for decades, been adjusting to hard times. Faced with intensified economic competition and rising nonwage labor costs, firms did not abandon a system of coordinated industrial relations but sought ways to turn it to their economic advantage, particularly through the development of working time and, to a lesser degree, wage flexibility. Unions, similarly, stayed at the bargaining table, albeit with some reduced leverage, and they lost influence relative to works councils. The reworking of German corporatism led economic agents toward both wage restraint and the development of a toolkit of internal flexibility. Both then proved vital in shaping the response of German firms to the 2008-09 recession, which in turn enabled Germany to parry the crisis without much of the social suffering experienced in other advanced industrialized states.

We therefore conclude that Germany's labor market performance during the crisis is indicative of some larger economic strengths, revealing that Germany is not "adjusting badly"[118] any longer but has some positives that should carry forward. Not only is the German labor market innovative, but German firms are competitive and coping well with global economic conditions after years of readjustments. This is not to say that this positive trend will continue forever, as the global economy is constantly in motion and firms will surely have to cope with further, unforeseen changes in the economic environment—including with the repercussions of the current European debt crisis. And yet, over the past decades, firms have found ways to adapt and even innovate within the coordinative structures of their market economy. Finally, in the immediate term, the booming German economy is likely to have benefits for workers in the form of higher wages. The most recent collective bargaining rounds indeed concluded with much higher wage demands and increases than during 2008-10, which in turn is likely to stimulate greater domestic demand.[119]

Even the more pessimistic assessments of the dualization trend in the German labor market require some nuance. An important body of work argues that the efforts of economic actors in Germany to preserve coordinated forms of capitalism in the face of economic challenges have largely succeeded yet generated growing labor market segmentation.[120] Insiders have protected their jobs and social benefits, yet this core has shrunk as new, more flexible and less protected forms of employment—including agency work, part-time employment, and fixed-term contracts—have increased in importance. We concur, however, with Eichhorst and Marx (2011) that changes have taken place not only in the periphery of the labor market, but also in the "protected" core through the development of the internal flexibility schemes we described above.[121] Many insiders were fortunate to keep their jobs during the 2008-09 recession, yet they gave up income—both in lost wages during the downturn, and in the wage restraint of the past decade. This signals that the boundaries between the core and periphery are not as firm as suggested by previous work, nor that contemporary adjustment processes are taking place only through the degradation of working conditions of outsiders.

Moreover, these concessions seem now to be paying off and may advantage not only workers in the protected core but those on the margins of the labor force. Declining unemployment has *increased* the number of jobs covered by social contributions: in September 2010, the number of people working in such jobs exceeded 28.2 million—a fifteen-year high that is approaching the peak level of 29.3 million jobs in 1992.[122] This development is now benefiting older, younger, and female workers as well as the long-term unemployed. According to the Federal Statistics Office in Germany, the number of long-term unemployed (more than one year) declined significantly from 1.67 million in 2006 to 0.94 million in 2010.[123] The employment rate of women rose from 58.1 percent in 2000 to more than 66.1 percent in 2010, while that for older workers (55-64) increased from 37.6 percent in 2000 to 57.7 percent in 2010.[124] Furthermore, the most recent youth unemployment rates for Germany demonstrate that unemployment among young workers has declined from 10.6 percent in 2008 to 8.6 percent in 2011, giving Germany the third lowest youth unemployment rate in the EU behind the Netherlands and Austria.[125] This statistical snapshot indicates that Germany's labor market has indeed undergone dynamic changes. Finally, some of the unions have led "counter movements" to reregulate "atypical" (agency) work.[126]

Together, these developments and the improved economic climate may help counter some of the dualizing forces of recent years and contribute to further integration into the labor market. Of course, we do not intend to downplay the rise of precarious atypical jobs, specifically agency work, the increasing number of working poor, and rising inequality; these are indeed unwelcome developments that follow from increased labor market flexibilization.[127] But the German labor market appears not to have arrived at a new, dualized equilibrium, and instead is in the midst of continuing shifts and dialectic adjustments, as firms and workers adapt to changing economic circumstances.

This brings us to our larger, theoretical point about the nature of economic adjustment in a quintessential coordinated market economy. Our story is complementary to the efforts of some scholars to develop a more dynamic vision of institutional change in advanced industrialized economies.[128] Much as these scholars have done, we put firms at the center of our analysis and see them as the source of ongoing economic change. In this, we differ from those who would view Germany's robust employment performance as largely a product of successful state policy making, such as the Hartz reforms of the early 2000s.[129] Although the Hartz reforms provided some external flexibility for firms, internal flexibility and wage restraint proved most consequential during the Great Recession, generating positive economic feedback for the economy as a whole. This internal flexibility resulted from the actions of firms (and unions) feeling their way along in difficult external circumstances, while wage restraint followed from successful wage bargaining—revealing the continued vitality of Germany's coordinated industrial relations system as a means of coping with economic challenges. Thus, although the federal government certainly became more activist in the field of labor market policy since the late 1990s, many of the most consequential developments in recent years have taken place in the industrial relations arena and through the actions of individual firms.

Our analysis also supports a more dynamic and temporally sensitive approach to thinking about firm behavior. As Streeck (2009) points out, firms might not be guided by any grand strategic vision nor are they able to perfectly design a model that would fit *any* economic circumstance.[130] Yet, the actions of individual firms responding to similar economic constraints and incentives can cumulate in major structural shifts. Thus, the decade-long development of a toolkit of internal flexibility instruments helped produce a more "elastic" coordinated market economy in which, contrary to expectations, (internal) flexibilization strengthened coordination. It is therefore important to emphasize the agency of actors that might consciously or unconsciously alter and reproduce existing institutional arrangements. In our example, firms pushed for changes in the system of collective bargaining, gained wage restraint, and forged an array of internal flexibility instruments. The unforeseen but happy consequence of these developments was the preservation, and expansion, of employment during the Great Recession of 2008-09, contributing to the revitalization of the German economy as a whole.

Finally, the revitalization implies that while other countries might not be able to emulate the entire German labor market toolkit, evolving as it did from a very specific institutional setting, this is not to say that others cannot deploy or learn from *some* aspects thereof. For example, former French President Sarkozy recently asserted that the German labor market adjustments of the past decades might serve as a starting point for discussions on future French labor market innovations.[131] Moreover, several commentators and policy makers in the United States have been debating the merits of adopting and expanding German-style short-time work schemes.[132] Of course, one should not assume that these "tools" will automatically work elsewhere, as they may produce unintended consequences and simply not fit the broader institutional environment. However, with sensitivity to their own contexts, countries might find ways to successfully adjust some of these labor market tools to fit their own institutional settings and needs.

Conclusion

In this article, we show that despite the sharpest decline in economic output in Germany's postwar history, the country's labor market remained remarkably robust during and after the Great Recession. We argue that this robustness can only partly be explained by conventional accounts, such as the nature of the government's responses (i.e., *Kurzarbeit*) or the strength of employment protection legislation. Instead, we highlight the way in which firms deployed a toolkit of flexible labor market instruments that enabled them to preserve rather than shed their skilled workforce. This toolkit is the cumulative result of incremental changes in the German political economy that were driven by firms adapting to changing economic conditions. Although these changes did not undermine the coordinative nature of German capitalism, they substantially transformed and liberalized its organization *within* the framework of coordination, entailing a shift of collective bargaining power toward the firm with regard to working-time and compensation flexibility. The toolkit enabled German firms to adopt a "wait-and-see" strategy during the Great Recession, which was further facilitated by wage restraint and firm restructuring of the past decade, enhancing the competitiveness of German firms, fostering a pre-crisis export boom, and placing firms in a financially healthy position. Therefore, firms' responses to the Great Recession signaled their willingness, means, and ability to protect their comparative advantages and the skilled workforce in which they had invested. Although we could not explore this further in this article, it may be that this explains why German firms were quicker to dismiss their workforce in earlier crises, as they perceived a need to restructure and readjust their comparative advantages.

We also show that this has larger implications for how we should evaluate German capitalism today, which is regarded as the "crucial case" of a coordinated market economy. Instead of undermining the strength of German capitalism, these institutional changes reflect a process of successful adaptation to external economic challenges.

The German economy now appears quite competitive and able to cope with global economic conditions after years of readjustments. Growing employment and an improved economic climate might also help to combat dualizing forces. The result is not a new German model that was purposefully designed, but one that emerged through a process of *ad hoc* negotiations between firms and unions.

Future research might profitably explore the crisis responses of other OECD countries, contrasting firm behavior and institutional contexts to explain the different labor market developments during the Great Recession that conventional accounts might not explain. In addition, because firms often behave differently in different crises, a longitudinal study comparing firm responses to economic downturns could shed more light on why firms make the choices they do within their respective institutional frameworks.

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Notes

1. Based on harmonized unemployment rates from the Organisation for Economic Co-operation and Development (OECD), *OECD.Stat* (Paris: OECD); for the aggregate number of unemployed, see Bundesagentur für Arbeit (BA), *Statistik der Bundesagentur für Arbeit, Arbeitslosigkeit im Zeitverlauf* (Nürnberg: BA, 2011). This positive trend also continued in 2011, with an unemployment rate that has improved to 5.7 percent in October 2011; see OECD, *OECD.Stat*.
2. In 2008, the OECD projected 8.1 percent unemployment for 2009 and 8.6 percent for 2010. One year later, in its 2009 annual outlook, the OECD projected 9.2 percent unemployment

in 2010 and even 9.7 percent in 2011; see OECD, *OECD: December Economic Outlook No. 84* (Paris: OECD, 2008); and OECD, *OECD: December Economic Outlook No. 86* (Paris: OECD, 2009). In its 2009 World Economic Outlook, the International Monetary Fund (IMF) similarly projected 9.0 percent unemployment in 2009 and 10.8 percent in 2010; see IMF, *World Economic Outlook 2009–Crisis and Recovery* (Washington, D.C.: IMF, April 2009).

3. Philip Manow and Eric Seils, "Adjusting Badly: The German Welfare State, Structural Change, and the Open Economy," in F. W. Scharpf and V. A. Schmidt, eds., *Welfare and Work in the Open Economy. Volume II. Diverse Responses to Common Challenges* (Oxford: Oxford University Press, 2000), 264-307; and Fritz W. Scharpf, "Employment and the Welfare State: A Continental Dilemma," *MPIfG Working Paper* 7 (1997).
4. Michael Warren, "Why Germany's Unemployment Rate is Lower," *The Weekly Standard Blog* (August 31, 2010), http://www.weeklystandard.com/blogs/why-germanys-unemployment-rate-lower (accessed April 15, 2012); Paul Krugman, "Free to Lose," *New York Times* (November 12, 2009), http://www.nytimes.com/2009/11/13/opinion/13krugman.html?_r=1 (accessed April 15, 2012); and Katha Pollitt, "It's Better Over There," *The Nation* (September 2, 2010), http://www.thenation.com/article/154477/its-better-over-there (accessed April 15, 2012).
5. For similar arguments for the *Modell Deutschland* in the 1970s and 1980s, see Herbert Kitschelt and Wolfgang Streeck, "From Stability to Stagnation: Germany at the Beginning of the 21st Century," in H. Kitschelt and W. Streeck, eds., *Germany: Beyond the Stable State* (London: Routledge, 2004), 1-36.
6. The number of unemployed decreased from 3.76 million in 2007 to 3.26 million in 2008, slightly increased to 3.4 million in 2009, and then improved again to 3.2 million in 2010 (annual averages), while the total number of people in employment increased from 39.7 million in 2007 to 40.2 million in 2008, and to 40.4 million in 2010; calculated from Bundesagentur für Arbeit (BA), *Statistik der Bundesagentur für Arbeit*; and Statistisches Bundesamt (SBA), *Statistisches Jahrbuch 2011* (Wiesbaden: SBA, 2011). Germany's employment rate thus increased from 65 percent in 2004 to 69.4 percent in 2007, 70.7 percent in 2008, and to 70.9 percent in 2009, considerably higher than the EU average of 64.6 percent in 2009; calculated from European Commission, *Eurostat* (Brussels: European Commission).
7. OECD, *Employment Outlook 2010* (Paris: OECD, 2010).
8. The IMF World Economic Outlook predicted -5.6 percent in 2009 and -1 percent GDP growth rates in 2010; see IMF, *World Economic Outlook 2009*.
9. The DAX or German Stock Index includes the thirty largest and most profitable German companies.
10. This point was generated in an interview with a DAX-company representative.
11. Magdalena Bernaciak, "Cross-Border Competition and Trade Union Responses in the Enlarged EU: Evidence from the Automotive Industry in Germany and Poland," *European Journal of Industrial Relations* 16, no. 2 (2010): 119-135.
12. Peter Hall and David Soskice, eds., *Varieties of Capitalism* (New York: Oxford University Press, 2001).
13. Martin Dietz, Michael Stops, and Ulrich Walwei, "Safeguarding Jobs in Times of Crisis–Lessons from the German Experience," *ILO Discussion Paper* 207 (2011); and Peter Hall,

"The Political Origins of Our Economic Discontents: Contemporary Adjustment Problems in Historical Perspective," forthcoming in M. Kahler and D. Lake, eds., *Politics in the New Hard Times: The Great Recession in Comparative Perspective* (Ithaca: Cornell University Press).

14. Margarita Estevez-Abe, Torben Iversen, and David Soskice, "Social Protection and the Formation of Skills: A Reinterpretation of the Welfare State," in Hall and Soskice, eds., *Varieties of Capitalism*, 145-183.
15. According to the OECD, Germany's EPL indicator for regular employment has become slightly stricter since 2003, increasing from 2.68 to 3 on a scale of 0 (loose) to 4 (strict). Protection of temporary employment, however, has become substantially less strict since the mid-1990s, as the indicator has continuously fallen from 3.5 in 1996 to 1.25 in 2008; see OECD, *OECD.Stat*.
16. Joachim Möller, "The German Labor Market Response in the World Recession–Demystifying a Miracle," *Zeitschrift für Arbeitsmarkforschung* 42, no. 4 (2010), 327.
17. Dietz, Stops, and Walwei, "Safeguarding Jobs in Times of Crisis."
18. GDP growth was stagnant in 2002 and declined by -0.38 percent in 2003; see OECD, *OECD.Stat*.
19. Ibid.
20. Data retrieved from Institute for Employment Research (IAB), "Durchschnittliche Arbeitszeit und ihre Komponenten in Deutschland" (Nürnberg: IAB, 2011), http://doku.iab.de/grauepap/2011/tab-az10.pdf (accessed April 15, 2012).
21. For an interesting comparison of how different countries, including Germany, responded to earlier crises, see Jonas Pontusson and Damian Raess, "How (and Why) Is This Time Different? The Politics of Economic Crisis in Western Europe and the United States," *Annual Review of Political Science*, Advance Online Access (March 2012).
22. Hall and Soskice, *Varieties of Capitalism*; Bob Hancké, Martin Rhodes, and Martin Thatcher, "Introduction: Beyond Varieties of Capitalism," in B. Hancké, M. Rhodes, and M. Thatcher, eds., *Beyond Varieties of Capitalism: Conflict, Contradictions, and Complementarities in the European Economy* (Oxford: Oxford University Press, 2007), 3-38.
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