Crisis and Recovery in the German Economy: The Real Lessons

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Abstract

Owing to its strong dependence on exports, Germany was among the economies hit hardest by the financial crisis. But unlike almost all other countries, Germany emerged from the crisis quickly and stronger than before. What lies behind this success story, if at all it is one? The commonplace—neoliberal—answer is that Germany's success is the hard-won reward for strict economic management, combining fiscal conservatism and structural reforms of welfare and the labour market. The latter, by reducing labour costs, fostered competitiveness, boosted growth, and increased employment. "Progressive" economists arguing that Germany beggared its Eurozone neighbours by squeezing workers' wages, share a similar view. However, this particular explanation of Germany's resilience is wrong and unhelpful. Germany's export success cannot be explained in terms of its (labour) cost competitiveness, but is caused by strong *non-price* competitiveness. This, in turn, is due—much more than is normally recognized—by the remaining distinctly *non-neoliberal* dimensions of Germany's economic model (including a Keynesian crisis response). German and European policymakers preaching austerity and structural labor-market changes as the model for other Eurozone countries, misunderstand Germany's rebound from crisis, with serious costs to Eurozone populations.

JEL classification codes: E00; E02; E12; F02; and F15.

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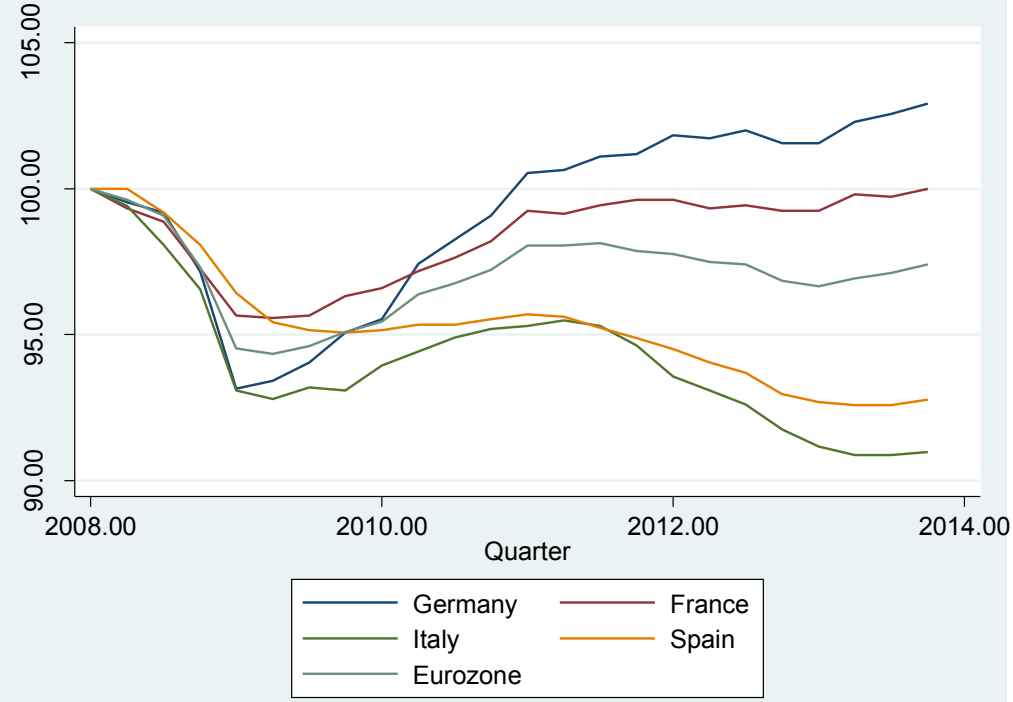
Präludium

The Eurozone entered a recession in the first quarter of 2008, and quarterly growth rates collapsed in the first quarter of 2009, when, as Figure 1 illustrates, the financial crisis hit Europe full-force. Export-dependent Germany was hit hard: its GDP fell by a cumulative 6.6 percentage points over five successive quarters (2008Q1 = 100), but then recovery set in—and Germany's GDP bounced back to its 2008Q1 level in the first quarter of 2011. France, which did better than Germany initially, recovered more languidly. While it took German GDP 12 quarters to recover, French real GDP rebounded to the 2008Q1 level after five full years, in 2013Q4. Italy and Spain are even doing worse—their real GDP has been on a downward trend since 2008Q1 with no strong turnaround as yet in sight. Italy suffered a cumulative decline in real GDP of 9 percentage points, while Spain's GDP fell by 7.4 percentage points over these five years. In 2013Q4, the GDP of the Eurozone as a whole is still 2.6 percentage points below its level in 2008Q1. Hence, whereas other European economies are still struggling if not failing, Germany bounced back quickly—with revitalized export industries, low borrowing costs, an inflow of investors' cash, a huge external surplus and a balanced budget. Whereas in 2008 Germany's rate of registered unemployment was roughly the same as the Eurozone, at 7.5 percent and 7.6 percent respectively, there has been a remarkable divergence since then, with the Eurozone rate rising to 12.1 percent in 2013, while Germany's unemployment rate has declined to 5.3 percent (according to Ameco-database figures). As head of the Eurozone's strongest economic power, Chancellor Merkel is in a position to dictate the terms under which struggling Eurozone nations can apply for further credit. It led German sociologist Ulrich Beck (2013) to argue that the Eurozone crisis has given birth to a political monster: a German Europe rather a European Germany, based on creditor-debtor relationships where Germany is the main creditor and the debtors have trouble meeting their obligations.

German performance is the more remarkable, because just two decades ago, its economy after reunification was stagnating with five million workers unemployed. For years, the German "sclerotic" economic model was ridiculed, *The Economist*[1] calling Germany "the sick man of Europe", when comparing it to the more rapidly growing and supposedly more innovative Anglo-Saxon capitalism, dominated by financial markets coordination and shareholder value maximization (see Siebert 1997). But the tables were turned by the financial crisis, which set the U.S. and most other economies on a path of "secular stagnation" while jumpstarting a German resurgence. The result has been an obsession, most prominently perhaps in France and Britain, with "the German model"—the benchmark against which to judge national economic performance.

Figure 1
Germany's Recovery (2008Q1-2011Q1)



Note: The index of real GDP for 2008Q1 = 100.

Source: Quarterly real GDP data are from the Eurostat Database.

The essence of this model, so the dominant narrative goes, goes back to Chancellor Gerhard Schröders' drastic labour market reforms (the Hartz reforms), which created strong price or cost competitiveness of Germany's export-oriented manufacturing sector (Dadush

[1] This happened in 1999. See: http://www.economist.com/node/209559 .

2010; OECD 2012; Ma and McCauley 2013). Mainstream commentators praise Germany as the only EMU country that got it all right and they set it up as the example to be followed by the crisis-ridden Eurozone members. This view has become codified in policy in the *Euro Plus Pact* (adopted by the European Council in March 2011), the core aim of which is to foster Eurozone (unit labour cost) competitiveness and net exports via labour market deregulation and welfare state reform, in conjunction with fiscal austerity (Gros 2011; Gabrisch and Staehr 2014). More progressive observers are buying into the same narrative centered around relative unit labour costs (RULC) by problematizing Germany's "mercantilistic" wage and trade policies (Priewe 2011). "Germany has pursued a policy of aggressive wage restraint resulting in large current account surpluses," writes Stockhammer (2011), and "German gains in competitiveness (since the introduction of the Euro) have not been founded on superior technological performance, but on more effective wage suppression." Bibow (2012) argues the same, claiming that "not German engineering ingenuity, but wage restraint gave German exporters an extra boost." Lapavitsas *et al.* (2010, p. 2) in a fairly typical statement, write: "Germany has gained [cost] competitiveness within the Eurozone for the sole reason that it has been able to squeeze its workers harder [than the rest of the Eurozone]." Germany's growing trade surpluses with Southern Europe are proof of Germany's success in "beggaring" its Mediterranean neighbours. "With German unit labour costs undercutting those in other countries by an increasing margin, its exports flourished and its imports slowed down", write Flassbeck and Lapavitsas (2013). These heterodox observers of course strongly reject the neoliberal reforms propagated by the *Euro Plus Pact*, but—following the same logic—argue instead for strong (relative) German wage increases to reduce Germany's external surplus and help rebalance the Eurozone (see also Darvas 2012; De Grauwe 2012; Sinn 2013).

To us, all this is flawed economics. Germany's resilience cannot be explained in terms of its (superior) international cost competitiveness, nor can one attribute the Eurozone imbalances to differences in relative unit labour costs. Germany's rebound is not due to the Hartz reforms and "effective wage suppression". Far from it. We argue that Germany's remarkable rebound must be explained in terms of the country's superior technological performance giving rise to strong *non-price* competitiveness. Germany's technological prowess, in turn, is founded on economic coordination and strongly market-guiding industrial policies—not cost competition. We begin by questioning the conventional wisdom and argue that changes in RULC do not explain Germany's superior export performance. We proceed to providing evidence on Germany's technological competitiveness—and its determinants. We

further consider how "wage suppression" has actually been damaging to Germany's aggregate performance. The *Euro Plus Pact* has wrongly reinforced the belief that crisis countries are crisis countries because of weak unit labour cost competitiveness and Germany is strong because of strong cost competitiveness. The wrong lessons have been learned from Germany's rapid rebound from crisis and this is leading to large avoidable economic costs.

Unit labour cost competitiveness: does it matter for Germany?

Competitiveness indicators are known to be weak predictors of future export performance (Gros 2011; Gaulier and Vicard 2012)—we need only to refer to the well-known "Kaldor paradox" (Kaldor 1978) which holds that the effects of growing relative (labour) costs or prices on exports or market shares are rather weak and often perverse (Fagerberg 1988; Carlin, Glyn and Van Reenen 2001; Storm and Naastepad 2007, 2012; Felipe and Kumar 2011). The main factors influencing differences in international competitiveness and growth across countries are technological (non-price) competitiveness and (high-tech) productive capabilities. Joseph Schumpeter (1943, p. 84) summarized the key point vividly as follows:

> "Economists are at long last emerging from the stage in which price competition was all they saw. (...) But in capitalist reality, as distinguished from its textbook picture, it is not that kind of competition which counts, but the competition from the new commodity, the new technology, the new source of supply, the new type of organization (...) —competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives."

If this holds true anywhere, it should be true for Germany, which is dominating world markets for medium- and high-technology manufacturing goods and services. Germany has a market share of 18% in the total world exports of the top-100 most complex products—against France 3.6%, Italy 3.1%, and Spain 0.9% (Felipe and Kumar 2011) —and "up-market products", which fetch the highest prices, account for more than half of German exports. Let us therefore tackle the issue head-on, and test the proposition that RULC are a key determinant of Germany's exports, imports and trade surplus. We estimated the following export and import demand functions (linear in growth rates) for 1996Q2-2008Q4 (growth denoted by a hat "^"):

(1) $$\hat{e} = \varepsilon_Y \hat{y}_W - \varepsilon_C \hat{c}$$

(2) $$\hat{\mu} = \eta_C \hat{c}$$

where e = real exports of Germany (at constant 2005 prices); y_W = real GDP of the OECD countries (at constant 2005 prices); c = RULC of Germany (performance is measured relative to the rest of 36 industrial countries: double export weights); ε_Y = the world income elasticity of export demand; and ε_C = the RULC elasticity of Germany's export; μ = the ratio of imports to GDP (both at constant 2005 prices)[2]; y = real GDP (at constant 2005 prices); and η_C = the RULC elasticity of import demand. The estimation results appear in Table 1. Our results show that the RULC elasticities of German export and import demand are not statistically significantly different from zero. Instead, Germany's exports are overwhelmingly determined by world income (see Schröder 2011), while its imports—most imported goods & services are "non-competing" imports used as intermediate inputs in manufacturing—depend almost completely on domestic income (see Bussière *et al.* 2011). We therefore reject the hypothesis that RULC matter for Germany's trade performance.

This can also be seen directly by looking at the impact of RULC on Germany's trade surplus. Since $\hat{\mu} = \hat{m} - \eta_Y \hat{y}$, assuming that the income elasticity of import demand $\eta_Y = 1$, we can express import growth as: $\hat{m} = \eta_Y \hat{y} + \eta_C \hat{c}$. Defining the trade balance, b, in growth rates as the difference between export and import growth and using (1) and (2), we get:

(3) $$\hat{b} = \hat{e} - \hat{m} = \varepsilon_Y \hat{y}_W - \eta_Y \hat{y} - (\varepsilon_C + \eta_C)\hat{c}$$

Equation (3) becomes Thirlwall's Law if we assume $\hat{b} = 0$ and impose real exchange rate stability $\hat{c} = 0$. The "warranted rate of growth" then equals:

(4) $$\hat{y}^* = [\varepsilon_Y / \eta_Y]\hat{y}_W .$$

Substituting (4) in (3) gives the following expression for $\hat{b}$:

(5) $$\hat{b} = \eta_Y[\hat{y}^* - \hat{y}] - (\varepsilon_C + \eta_C)\hat{c} = \text{constant} - (\varepsilon_C + \eta_C)\hat{c}$$

[2] We use the ratio of imports to GDP as the dependent variable in equation (2), constraining the income elasticity of import demand to unity.

If actual GDP growth is close to its long-run "warranted" rate of growth, *i.e.* $\hat{y}^* - \hat{y} \approx 0$, then the constant term on the right hand-side is zero, and $\hat{b}$ is a function of only RULC growth. If actual growth exceeds "warranted" growth, then the constant term will be negative (and *vice versa*). Column (3) in Table 1 shows that for Germany, the constant term is not statistically significant. We also find no statistically significant coefficient RULC growth, which confirms our (insignificant) results for ε_C and η_C in columns (1) and (2). The bottom-line is that RULC are basically irrelevant and Germany's superior net export performance is not founded upon effective wage suppression. These may appear freak findings, but they are not: we find ourselves in good company concluding that RULC do not matter much for competitiveness.[3]

Table 1
Estimated Equations: Germany (1996Q2-2008Q4)

dependent variable:	import share growth	export growth	trade balance growth
Constant	—	—	0.14 (0.49)
RULC growth	0.60 (1.44)	0.14 (0.26)	−0.69 (1.47)
World GDP growth		2.79 (7.72)***	
R^2	0.04	0.60	0.05
F	2.1	46.2***	2.16
DW	2.10	1.99	2.33
# observations	51	51	51

Notes: The Table reports OLS Prais-Winsten AR(1) regressions. Robust *t*-values are reported in parentheses. ***, **, * indicate statistical significance at the 1%, 5% and 10% level, respectively. The quarterly data are from Eurostat Database.

For instance, IMF economists Danninger and Joutz (2007, p. 15), in an econometric investigation of Germany's export growth (1993q1-2005q4), find that relative cost improvements accounted for less than 2% of German export growth. ECB economists Di Mauro and Forster (2008, p. 16) concur, concluding that "since the late 1990s there have been signs of this correlation [between RULC and export growth] weakening …" European Commission (2010) recognizes that Germany's massive export boom over 1999-2010 is

[3] When dismissing RULC as a factor determining competitiveness and current account imbalance, we are not implying that the same holds true for the (real) exchange rate. Unlike RULC, the exchange rate is a "macro price": any change in the exchange rate will change the total foreign-currency price (and not just the labour cost component).

almost completely due to the growth of its export markets, while the contribution of lower RULC to German export growth is barely noticeable. World Bank economists Diaz Sanchez and Varoudakis (2013, p. 17) find, based on the estimation of a panel-data analysis over 1975-2011 for 13 Eurozone countries, that for the Eurozone core, the contribution of RULC changes to external imbalances appears negligible (explaining only around 1 percent).[4] Econometric analyses for Germany by Schröder (2011) and for the EU by Gaulier and Vicard (2012) and Gabrisch and Staehr's (2014) show that changes in RULC do not affect changes in the current account balance in any statistically or economically significant manner. Why this is so, is not difficult to understand. What matters in international competition is the "gross output price" of a product or service—the full (national accounts) price which includes the costs of intermediate inputs and labour as well as a profit margin. Let p be the gross output price:

$$(4) \qquad p = (1+\tau)[W\lambda^{-1} + \alpha\, p_I]$$

where W is the nominal wage rate per hour worked, λ is labour productivity (per hour worked), α is intermediate-input use[5] (per unit of output), p_I is the price of intermediate inputs, and τ is the mark-up rate. (We assume that net indirect taxes are included in intermediate costs). Unit labour cost (ULC) are equal to $W\lambda^{-1}$. Using (4) and assuming that τ is constant (which means all cost increases are passed on into p), the elasticity of the gross output price p with respect to ULC is:

$$(5) \qquad \varepsilon^{p}_{ULC} = (dp/p)/(dULC/ULC) = (1+\tau)(ULC/p) = (1+\tau)\xi$$

ξ (= ULC/p) the share of wage cost in gross output price. Table 2 details the composition of the gross output price for Germany's tradables sectors. ULC make up only about 20-24% of the manufacturing gross output price, whereas intermediate input costs account for 67-68% of total costs and the profit mark-up is around 12%. Using these numbers, ε^{p}_{ULC} takes a value of 0.22 to 0.26. What this means is that if manufacturing ULC increase by one percentage point,

[4] These findings show how the kind of visual—infographic—argumentation as by Bibow (2012) and Ma and McCauley (2013) can go bad.

[5] Intermediate input costs have far more weight in price than wage costs. Some observers (Marin 2010; Hassel 2011) claim that German firms managed to reduce overall costs by relocating production to Eastern Europe, which allowed them to substantially reduce p_I. This is likely to have had a bigger impact on gross output prices than wage restraint.

the gross output price increases by just 0.22-0.26% when we assume the complete "pass-through" of higher labour costs onto prices. The implication is, to illustrate, that a relative-price elasticity of export demand of −1 is consistent with a RULC elasticity of export demand of around −0.25. However, if cost pass-through is not complete, but, say, only one-half (which is realistic), a relative-price elasticity of export demand of −1 is consistent with a RULC elasticity of export demand of just −0.13. What is not understood by most, is that RULC trade elasticities by definition take a value of only one-fourth to one-eighth of the respective price elasticities (in absolute terms).

Table 2
Unit Labour Costs and Gross Output Prices, Germany (mid-2000's)

	Agriculture & Mining	Low-Medium Technology Manufacturing	Medium-High Technology Manufacturing
1. intermediate costs per unit of output	0.61	0.68	0.67
2. unit labour costs: ULC	0.23	0.20	0.24
3. total unit variable cost: $vc = 1 + 2$	0.84	0.88	0.91
4. mark-up rate: π	0.20	0.14	0.10
5. gross output price: $(1+\pi) * vc$	1.00	1.00	1.00
6. implied "pass-through" elasticity of a one %- point *increase* in ULC	0.27	0.22	0.26

Source: Calculated using the OECD STAN Database input-output table for Germany.
Notes: Low-medium tech manufacturing includes sectors R3-R12. Medium-high tech manufacturing includes sectors R13-R20.

Table 3
RULC Elasticities: Germany

	period	imports	exports
Andersen (1990)[#]	1960-1990	0.01	−0.12
Bayoumi *et al.* (2011)[#]	1980-2009		−0.14
Breuer and Klose (2013)[#]	1995Q1-2012Q4	insignificant	−0.21
Bussière *et al.* (2011)[#]; for 18 OECD countries	1985Q1-2010Q2	0.04	
Chen *et al.* (2012)[#]; for 11 Eurozone countries	1990-2009	0.09	−0.09
Danninger & Joutz (2007)[#]	1993-2005		−0.10
ECB NMCM Model (Dieppe *et al.* 2011)[#]		0.18	−0.26
Hooper, Johnson and Marquez (2000)[#]	1970-1996	0.02	−0.08

NiGEM model (Hervé 2001)[#]		0.07	─0.14
OECD Global Model (Hervé *et al.* 2010)[#]		0.17	─0.40
Onaran & Galanis (2012)	1960-2007	insignificant	─0.10
Senhadji (1997)[#]	1960-1993	0.05	
Stahn (2006)[#]	1980Q3-2004Q3		─0.20
Storm and Naastepad (2012)	1960-2000		─0.12

Note: # relative price elasticities have been converted into RULC elasticities as explained in the text.

Table 3 presents an overview of the empirical estimates of RULC elasticities of Germany's imports and exports. However, most studies estimated relative price elasticities, which we converted to RULC elasticities by dividing them by four (which amounts to assuming complete cost "pass-through" as in equation (5)). The average RULC elasticity of demand for German exports (in Table 3) takes a value of ─0.16, which is close to the findings of Onaran and Galanis (2012) and Storm and Naastepad (2012)—the only two studies directly estimating the RULC elasticity of German exports. The average RULC elasticity of Germany's import demand (in Table 3) is just 0.06. Hence, while it is (always) possible to dispute our econometric findings in Table 1, the accumulated evidence of Table 3 points out the same stylized fact: trade is not very sensitive to RULC. Even if we assume such limited RULC sensitivity of exports and imports—in deviation from our own findings of Table 1—relative unit labour costs don't matter much. Consider German exports which during 1996Q1-2008Q4 increased by 143% in volume terms, while Germany's RULC declined by only 8.6% over the same period. Assuming $\varepsilon_C = -0.16$, the decline in RULC would account for less than *one percentage point* of the actual increase in Germany's real exports. Likewise, the decline in Germany's RULC would have raised import demand by a negligible 0.5% during 1996Q1-2008Q2 (if we assume that $\eta_C = 0.06$). These findings should be sobering. They should help economists to emerge, at long last, "from the stage in which price or labour cost competition was all they saw."

Technological competitiveness matters

To reinforce our point, we look at German wage and labour productivity growth in a comparative perspective in Table 4. The comparison is done in terms of nominal wage gaps, (real) labour productivity gaps and gaps in unit labour costs between Germany and the 16-countries' Eurozone (excluding Germany) averaged for the 1990s and 2000s. We consider wages, productivity levels and ULC in manufacturing, the non-traded sector and in the aggregate economy. An aggregate wage gap of ─25.4% between Italy and Germany during the 1990s means that the Italian wage rate per hour worked was about 25 percent lower than the hourly German wage rate. Table 4 paints a rich picture. We can only draw out a few main points. First, there is no sign of a nominal wage squeeze on German workers if we compare Germany to the Eurozone: German wages actually increased relative to the rest in manufacturing (the wage gap rose from ─24.3% in the 1990s to ─28.2% in the 2000s), in non-tradables (the gap increased from ─3.8% to ─9.8%) and also for the economy as a whole. German wage restraint thus was outdone by wage moderation elsewhere. Second, Germany managed to strongly increase the hourly productivity of its workers relative to productivity levels in the Eurozone. The total-economy gap between German and Eurozone productivity increased from ─0.4% in the 1990s to ─9.3% in the 2000s—a significant achievement that goes mostly unrecognized. German manufacturing contributed to this, but it was already operating at a productivity level that was 8% higher than that of the Eurozone (on average) in the 1990s; the gap increased to 11% in 2000s. But the bigger factor responsible for the widening of German-Eurozone productivity levels has been the *relative* leap in labour productivity in Germany's non-traded sector—while non-traded sector productivity levels were equal in Germany and the Eurozone in the 1990s, non-traded activities in the other Eurozone economies lost out to their German counterparts in the 2000s in a big way; the productivity gap rose to 9.6%. This happened notwithstanding the creation of 1.3 million additional "mini-jobs" in Germany in low-productivity services (since 2003). It must imply that other Eurozone countries did worse. Germany's (higher) ULC declined relative to those of the rest of the Eurozone—the gap was ─10.6% in the 1990s but just ─7.4% in the 2000s. This was not at all due, as explained, to relative wage restraint in Germany, as German hourly nominal wages did increase compared to the Eurozone. The fall in Germany's ULC must be completely attributed to Germany's outstanding productivity performance. Relative ULC in German manufacturing increased (because relative German hourly wages increased more than relative labour productivity), but they fell in the German non-traded sector (again: because of superior relative productivity performance). The conclusion must be that Germany excelled in building up strong technological capabilities, which in turn resulted in higher productivity

growth and non-price competitiveness. There has been no wage squeeze in manufacturing (compared to the Eurozone), while Germany's wage restraint in non-traded activities has been less tight than overall Eurozone wage moderation.

Table 4
Wage and Labour Productivity Gaps:
Eurozone versus Germany (%)

	1990-1999			2000-2007		
	wage gap %	productivity gap %	ULC gap %	wage gap %	productivity gap %	ULC gap %
Total Economy						
Eurozone#	−11.0	−0.4	−10.6	−16.0	−9.3	−7.4
France	0.1	0.7	−0.7	7.2	−3.9	11.6
Italy	−25.4	−6.3	−20.3	−22.6	−18.6	−4.9
Spain	−42.5	−36.4	−9.5	−36.2	−45.9	17.9
Manufacturing Sector						
Eurozone#	−24.3	−8.0	−17.7	−28.2	−11.0	−19.3
France	−12.5	−2.2	−10.5	−11.6	5.9	−16.5
Italy	−36.4	−16.2	−24.1	−36.1	−30.9	−7.6
Spain	−49.0	−35.6	−20.9	−48.1	−15.0	−4.6
Non-Traded Sector						
Eurozone#	−3.8	0.0	−3.8	−9.8	−9.6	−0.2
France	6.0	−2.1	8.3	15.3	−7.4	24.5
Italy	−18.7	−2.4	−16.8	−16.1	−15.0	−1.2
Spain	−38.4	−39.1	1.2	−30.4	−47.2	31.7

Notes: # Eurozone (16 member states) excluding Germany. The wage rate is the nominal wage (in euros) per hour worked. Labour productivity is real GDP (at 1995 prices) per hour worked. The non-traded sector includes (social, transport, distribution & financial) services, "electricity, gas & water supply", and construction.

Source: Authors' calculations from EU-KLEMS Database. See O'Mahony and Timmer (2009).

However, it is important to dig deeper and look more closely to what Germany is exporting and to which destinations it is exporting. This has been done in studies by the ECB (2005, 2010) and Cafiso (2009), which use "constant market share analysis" to decompose Eurozone export performance into a "structure effect" (SE) and a so-called "competitiveness effect". If a country is specialized in commodities and destination markets where demand growth is above average in comparison to other products and markets, its share in world exports must increase if it manages to maintain *constant market shares* in these dynamic commodities and geographical destinations. This influence on a country's overall export market share of the commodity composition of its exports as well as its destination markets is called the *structure effect*. Once the structure effect is determined, a country's export market share growth can be decomposed into the structure effect and a residual term, known as the *competitiveness effect* (CE), which—by definition—captures the influence of *price* as well as *non-price* factors (including R&D, regulation and institutions). Table 5 presents estimates of the "structure" and "competitiveness" effects for selected Eurozone economies in the period 1996-2007. As can be seen, Germany's export market share benefited from an advantageous export structure, geared towards rapidly growing regions, including non-euro EU countries, Russia and China (ECB 2005; Danninger and Joutz 2007; EC 2009); and to robustly growing medium-tech industries (chemicals, pharmaceuticals, motor vehicles & machinery), for which world markets are growing at an above-average rate. On account of this "structure effect", Germany's export market share would have increased by 1.46% per year. But, and remarkably so, Germany's actual export market share growth was just 0.45% per year. This implies that the CE for Germany was negative, reducing German export growth by about 1%-point below world export growth. "Made in Germany" therefore lost competitive edge, notwithstanding the decline in its RULC.

Table 5 includes a decomposition of export growth for France, Italy and Spain (relative to German performance). All three specialize in products for which export markets are growing less rapidly than markets for German products, and all three cater to relatively less dynamic destinations than German exporters. Italy and especially France are doing worse than Germany in terms of the competitiveness effect (while Spain gained export market as a result of a positive CE). German firms managed to hook into global demand and build up comparative advantage in large number of specialized products, unlike most other Eurozone countries. The point is that Deutschland AG did not get carried away by a focus on costs and prices, but continued to encourage *long-termism* in manufacturing activities—concentrating

on building up manufacturing non-price competitiveness (captured by its high SE), which shows up in "Made in Germany" standing for strong product design, quality, high-tech content and reliability. This long-termism was predicated on a system of cooperative capitalism, with "checks and balances" on firms', banks' and unions' behaviour and markets, which works because it creates *commitment*, both of employees (who think as they work) and of bank finance, which is fundamental to innovation, technical change and continuous improvement. As Wolfgang Streeck (2013) explains, the "constraints [imposed on Germany's firms] eventually proved beneficial. Firms accepted the challenge and got ahead by improving and innovating, particularly in the global market, focusing on quality not price."[6] It is to this model of cooperative capitalism that we now turn.

Table 5

Sources of Export Market Share Growth (1996-2007): Selected Eurozone Members
(average annual growth rates %)

	country's export market share growth	a country's export market share growth explained by:				
		price/ non-price competitiveness effect (CE)	structure effect (SE):			
			destination market effect	commodity composition effect	interaction effect	total structure effect (SE)
Germany	0.45	−1.01	0.89	0.29	0.28	1.46
difference with Germany:						
France	−3.44	−3.06	−0.76	0.16	0.22	−0.38
Italy	−1.64	−0.73	−0.21	−0.54	−0.15	−0.91
Spain	0.83	1.59	−0.78	−0.19	0.20	−0.76

Source: Cafiso (2009); see also ECB (2005).

Notes: Export market share growth of country *i* is defined as the difference between country *i*'s export growth and global export growth. (*a*) The "structure effect" is the growth rate differential which is due to a country's specialization; (*b*) the "destination market effect" measures whether specialization is tilted towards higher-growth destination markets; (*c*) the "commodity composition" effect measures whether specialization is directed towards higher-growth product markets; (*d*) the interaction effect embodies

[6] Source: http://www.guardian.co.uk/world/2013/jun/01/germany-champion-europe .

the impact of particular product-market combinations; and (*e*) the "competitiveness effect" is the residual.

Modell Deutschland 2.0

There is a lot written on Germany's corporatist economic model (e.g., Streeck 1997, 2009; Carlin and Soskice 2009; Hassel 2011; Bastasin 2013). German corporatism dates back to the post-war ordo-liberal *Sozialmarktwirtschaft*—a coordinated ("*konzertierte*") and regulated version of capitalism, based on close cooperation between capital, labour and the state. Its key features included concentrated ownership of firms through block-holding, cross shareholding of major industrial companies, bank-finance centred around a *Hausbank* (which by providing long-term committed financing offered firms the luxury of "long-termism", see Bannier and Grote 2008), plant-level cooperation between workers and managers (*Mittbestimmung*), collective bargaining, a Bismarckian welfare state, and active industrial and technology policies focused on and involving Germany's *Mittelstand*—the small- to medium-sized enterprises (often family-owned) with strong ties to local communities (banks and schools), that specialize and innovate in high-quality niche products. We call it Modell Deutschland 1.0, as it is generally believed that it no longer exists in this form. In this view, it has been radically transformed and superseded by something new, after a prolonged system's crisis in the 1980s and 1990s and under the combined influence of financial globalization, German reunification, and European integration. In Modell 2.0, it is argued, social coordination and regulation have been replaced by market mechanisms (OECD 2012; Bastasin 2013; Ma and McCauley 2013). Drastic reforms were implemented to deregulate labour market, limit unemployment insurance, limit and de-collectivize pensions, and to liberalize capital markets (e.g., the abolition of the capital gain tax in 2000) and corporate governance, which has shifted under the influence of Deutsche Bank and Daimler-Benz towards equity finance and the short-termism generally associated with shareholder value maximization. The Hartz I-IV labour market reforms (2002-2005) are widely seen as the capstone of this transformation—reducing the levels of unemployment benefits and their maximum duration (to 12 months), formalizing *Mini-jobs* with lower than normal-tax and-social-security contributions, and making receiving benefits conditional upon the willingness of transfer recipients to accept any job offered to them. In short, Modell Deutschland 2.0, in this view, constitutes an irreversible ("end-of-history") shift in Anglo-Saxon direction—from a coordinated to a liberal market

economy (Carlin and Soskice 2009). Germany's rebound from the crisis has to be read in the context of this shift. Many observers (Dadush 2011; Dadush and Stancil 2011; OECD2012) claim that Germany's recovery has been critically dependent on this transformation towards a more de-regulated and fundamentally lower-cost (that is *more competitive*) economy. While uncompetitive Modell 1.0 would have predictably tanked, a reinvigorated Deutschland Modell 2.0 "won the Euro Crisis" according to *Foreign Affairs* (Reisenbichler and Morgan 2013). This is economic mythology however. This section points out that Germany's rebound owes more to the surviving institutional foundations and mechanisms of social coordination of Germany's Modell 1.0 than to the liberalizing reforms of the 1990s and 2000s (for similar arguments, see also Streeck 2009; Hassel 2011; Beck and Scherrer 2010).

To do so, we have to go back to the German reunification of 1990, as a result of which Germany's population and workforce both increased by about 26% (Canova and Ravn 2000). Following a short-lived unification boom, the unemployment rate jumped up in a clear break with the historical (rising) trend of West-German unemployment. It reached an unprecedented 12.7% (or 4.5 million employees) in 1997 (Priewe 2011) and levelled off afterwards. Wage restraint comes naturally in such circumstances, and pressures for it increased further as European harmonization of rules and regulations brought down non-tariff barriers against the entry of European producers in the German market. But wage restraint did not help the German economy which is, as most studies find, wage-led.[7] Wage restraint did reduce the growth of domestic demand, forcing German firms to aggressively seek for export markets (while it at the same time reduced import growth). But there's more. With financial globalization, German firms and households became deeply involved in the IT bubble of 2000—through *Neuer Markt*, Germany's own version of NASDAQ (Koo 2010). But when the bubble burst, *Neuer Markt* fell 98% from its peak, leaving businesses and households with major balance sheet problems. The private sector responded by ramping up savings—and Koo (2010) estimates that this reduced private domestic demand in Germany by 13% of GDP over the period 2000-05. This may have been an even bigger factor (than wage restraint) explaining stagnating domestic demand.[8] All this coincided in time with a surge in

[7] Evidence on the wage-led nature of Germany's growth is provided by Naastepad and Storm (2007); Hein and Vogel (2008); Stockhammer, Onaran and Ederer (2009); Storm and Naastepad (2012); and Onaran and Galanis (2012).

[8] To sustain economic activity and prevent unemployment from rising even more, Germany's government, in response, went from a fiscal surplus of more than 1% of GDP during the bubble years to a fiscal deficit of 4% of GDP after the bubble burst. This "Keynesian" budgetary stance, while ostensibly violating the EU's Maastricht Treaty, did offset half of the decline in private demand (Koo 2010).

outsourcing of production activities by German firms to Eastern Europe, for reasons of market seeking, resource seeking and efficiency seeking (Marin 2010). In 1995 the degree of trade openness of the German economy—the sum of its export and imports relative to GDP—was lower than that of France and Italy. Between 1995 and 2008 it increased from 52% to over 90% (including intra-European trade), the highest level of the G7 countries and surpassing France and Italy by well over 50% (Batasin 2013). Table 6 illustrates what happened: German growth became heavily dependent on net exports, with higher export growth offsetting the loss of private demand growth. In fact, we can see that during 2000-07 Germany was underperforming compared to the Eurozone, as its growth was 0.56 %-points lower than average Eurozone growth. The main drag was domestic demand growth which was 1.4 %-points below Eurozone demand growth. German net export growth, however, was 0.83 %-points higher than the Eurozone average, and it is only in this respect that Germany has been outperforming France, Italy and Spain. (We note here that Spain's growth was overwhelmingly reliant on domestic demand, whereas Italy experienced stagnating domestic and foreign demand.)

Table 6
Decomposition of Eurozone GDP Growth (2000-2013)

	2000-07	2008	2009	2010-13
GDP growth relative to Eurozone growth				
Germany	−0.56	0.70	−0.73	1.48
France	−0.13	−0.47	1.27	0.39
Italy	−0.63	−1.54	−1.05	−1.16
Spain	1.42	0.51	0.58	−1.38
contribution of domestic demand to GDP growth (relative to average contribution of Eurozone)				
Germany	−1.40	0.80	1.54	1.60
France	0.41	−0.04	1.01	1.09
Italy	−0.41	−1.49	−0.70	−1.44
Spain	2.59	−0.87	−3.04	−2.10
contribution of net exports to GDP growth (relative to average contribution of Eurozone)				
Germany	0.83	−0.11	−2.27	−0.12
France	−0.55	−0.43	0.26	−0.70
Italy	−0.22	−0.04	−0.35	0.28

Spain	−1.17	1.38	3.62	0.72
Memo items: − real GDP growth of Eurozone-17	2.19	0.38	−4.43	0.61
− domestic demand growth of Eurozone-17	1.98	0.30	−3.70	−0.29
− net export growth of Eurozone-17	0.22	0.08	−0.73	0.90

Source: Authors' calculations based on data from AMECO Database.

Table 7
Elasticity of Employment with respect to real GDP

	1990-1999	2000-07
Total Economy		
Eurozone#	0.16	0.22
Germany	0.04	0.12
France	0.08	0.20
Italy	0.22	0.24
Spain	0.36	0.38
Manufacturing Sector		
Eurozone#	−0.50	−0.43
Germany	−0.32	−0.12
France	−1.78	−1.35
Italy	−0.51	−0.46
Spain	−0.12	−0.06
Non-Traded Sector		
Eurozone#	0.46	0.51
Germany	0.18	0.23
France	0.32	0.43
Italy	0.77	0.77
Spain	0.70	0.71

Notes: See Notes to Table 4.
Source: Authors' calculations from EU-KLEMS Database.

A strategy of wage restraint can be rationalized politically if it helps generate employment growth—even if the economy is wage-led (see Storm and Naastepad 2012); after all, with more than one-in-ten workers unemployed, the electorate's main concern is jobs. The point is that in a wage-led economy, the reduction in real wage growth may slow down labour productivity growth even more than output growth, in the process raising employment growth. This happened in Germany, as is illustrated in Table 7 by the increase in Germany's aggregate employment elasticity relative to GDP from 0.04% in the 1990s to 0.12% in the 2000s. What it means is that if real GDP growth increases by one percentage point, this is associated with 0.12 %-point of additional employment growth. The employment elasticity in manufacturing is negative—the sector is shedding work while growing—but it became less negative. But it is clear that a technologically advanced manufacturing sector is not creating

but destroying employment (this has been happening even more dramatically in French manufacturing). That only leaves the non-traded (services) sector as the place to create employment—mostly in the form of low-paid, low-productive temporary part-time (mini) jobs. Hence, the employment elasticity in non-traded activities increased from 0.18% in the 1990s to 0.23% in the 2000s. Wage restraint paid off in more hours of work, but not spectacularly so; quite a few jobs, we recall, have been outsourced to the East. The employment intensity of German growth is actually quite low in European comparison—especially when compared with the employment intensity of non-traded sector output in France, Italy and Spain. But although employment growth measured in hours was only modest, German job growth has been much higher, because of a drastic increase in part-time jobs in services (Hassel 2011).

This does bring us to the growing dualization of Germany's political economy into a technologically competitive core of "internationally exposed" manufacturing sectors, employing skilled high-productivity workers who are well protected by employment legislation and social security, and a "domestic periphery" consisting of a "sheltered" services & construction sector, employing lower-skilled lower-productivity workers who work part-time and fixed-term, often in *Mini-Jobs*, with little or no legal protection. Hourly pay in all services sectors declined relative to manufacturing wages. As EU-KLEMS data show, the hourly wage in the non-traded sector was about 88% of the manufacturing wage in the 1980s; this declined to 81% in the 1990s and further to 75% in the 2000s—the absence of a national minimum wage has contributed to this downward wage drift in the non-traded sector. But at the same time employment protection for core jobs has become stronger by collective agreements ("employment pacts") in the manufacturing sector, in which workers accepted internal flexibility (longer working hours, more flexible working patterns) in exchange for investment guarantees and promises of management not to resort to mass lay-offs (Hassel 2011). What must also be understood is that the core jobs are being protected by an "entrepreneurial state" (Mazzucato 2013)—a state actively supporting firms' R&D effort, technological learning, and workforce training (through apprenticeships), also by providing long-term committed finance through its national investment bank KfW (*Kreditanstalt für Wiederaufbau*) and the *Deutscher Sparkassen*. Germany's small & medium, young and R&D-intensive companies tend to choose *relationship lenders* to finance their activities (Memmel *et al.* 2008), relying to a much larger extent on bank debt than comparable firms in other Eurozone countries (Bannier and Grote 2008). German small & medium firms have by far the highest long-term debt ratio in the Eurozone. Long-term involved *Hausbanks* deliver lower-

cost loans when business conditions are tight and request higher compensation in more favourable times—while providing liquidity insurance to their borrowers (which is a service not offered by arm's length lenders). And the importance of relationship lending did not decrease since the mid-1990s (Memmel *et al*. 2008).[9] Germany's *Energiewende*, which reinforced an existing long-term approach to renewable energy (in place of nuclear and fossil-fuel based energy) based on massive R&D support and feed-in tariffs providing investors a 20-year investment horizon, is just a recent example of how the German state-finance nexus is helping to create the comparative and competitive advantage of its (often small- and medium-sized) manufacturing industries. Germany is among the leading green innovators and one of the largest producers of environmental goods and services with a share in the global trade of climate protection related products of more than 12% (OECD 2012). Many of these firms are part of the *Mittelstand*. Indeed, Modell Deutschland 1.0 has changed, but into somewhat of a hybrid, comprising, in mutual dependence, a coordinated core and a flexible deregulated shell. The manufacturing core is creating income but no employment growth, while the shell is acting as a sink for "excess" workers—not unlike the "informal" sector in the developing countries. With this structural understanding of institutional change we can turn to Germany's rebound.

Germany's extraordinary recovery

If Germany's strong rebound from crisis was due to its superior (technological) competitiveness, it follows that Germany owes its recovery more to its "old" coordinated core than to the deregulated sheltered segment of its economy. We indeed believe this is the case. First of all, it has to be recognized that recovery was helped by the contribution of the German welfare state's automatic stabilizers and two stimulus and bailout programmes (in November 2008 and January 2009), which included €480 billion for ailing banks[10], €115 billion for

[9] There is further evidence for Germany that more credit-worthy firms opt for a long-term relationship with a *Hausbank*, while less credit-worthy firms opt for shorter-term relations with arm's length banks (Memmel *et al*. 2008).

[10] Lured by the higher profitability of Wall Street's investment banks, Deutsche Bank abandoned its traditional semi-public role (offering long-term "subsidized" loans), pressing the German government to weaken stakeholder control in favour of shareholder control by the stock market. Searching for quick profits, large German banks became heavily invested in the U.S. shadow banking system, ultimately ending up with a big direct and indirect balance-sheet

financially weakened companies and €80 billion for two programs to stimulate the domestic economy. This was a stimulus of truly Keynesian proportions—amounting to about 5% of GDP (Beck and Scherrer 2010)—which reestablished basic confidence and kept the economy afloat. Germany's version of the U.S. "cash for clunkers" programme (amounting to 5 billion euro), which granted hundreds of thousands consumers buying new cars €2,500 for their old cars, protected core employment in export-oriented manufacturing (mainly the auto supplies industry) and kept intact domestic production networks of Germany's automotive industry.

The effects of these stabilizers were considerably augmented by the decision of the government to help firms bridge the economic slump by funding part-time support for workers. The legal framework for the programme has existed in German social legislation for decades. When companies experience sharp declines in sales, they are permitted to reduce their employees' working hours, and the government offsets a portion of the costs. The goal is to avoid layoffs and retain employees within the firm until the recession is over. In 2009, the duration of part-time support was extended up to 24 months and it was used by 30 percent of all firms, covering a maximum of 1.5 million (core) workers in May 2009 (compared to only 70.000 in 2007) (Beck and Scherrer 2010); lay-offs predominantly hit workers with temporary contracts. The extended scheme lasted until March 2012. As a result, labour markets adjusted primarily through changes in hours worked per employee, rather than layoffs. The increase in unemployment in Germany (by 0.5 %-points during 2008-10) was the lowest among the OECD countries (where unemployment increased by more than 3%-points), notwithstanding the fact that Germany's GDP fell more than the OECD average (OECD 2012). Labour hoarding of well-trained workers enabled firms to rebuild capacity quickly, as demand on world markets picked up steam once again—German firms were well positioned to jump on the bandwagon of China's and Asia's recovery, as reflected by the increase in Asia's share German exports from 6.6% in 2008 to 10.1% in 2013 (according to data from the *Statistisches Bundesamt*). Even more crucially, public short-time provisions helped stabilize German consumer spending, since short-time workers have more disposable and safer income than the unemployed. As Table 6 shows, steady domestic demand led Germany's receovery during 2009-2013, while overall export growth dropped off. It was "by far the most important adjustment mechanism" (Hassel 2011, p. 29). We concur with Beck and Scherrer (2010) who conclude that the crisis has actually strengthened Deutschland Modell 1.0: the close

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exposure to toxic securities and treasury bonds from highly-indebted Southern-European countries. These structural problems of Germany's highly leveraged financial sector are still far from resolved (Bastasin 2013).

cooperation of capital, finance, labour and Germany's entrepreneurial state in the pursuit of export surpluses.

Learning the wrong lessons from Germany's rebound

"Nearly all men die of their remedies, and not of their illnesses," wrote Molière (1673) in *The Imaginary Invalid*. In economics, as in medicine, it is critical to get the diagnosis right in order to get the remedy right. Unfortunately the *Euro Plus Pact* got it all wrong, justifying its essentialist emphasis on (labour) cost competitiveness by pointing to German experience. But Germany's rebound is founded upon the strong technological competitiveness of its corporatist core—manufacturing—not on the low wages in its sheltered non-traded sector. Germany's competitive core still has, as argued above, strong corporatist foundations. German manufacturing firms, as Hassel (2011, p. 31) explains, have not pressed for wholesale deregulation of labour markets, but rather sought stable alliances with core workers (represented by unions such as IG Metall) in its quest for productivity increases. Such "give-and-take" bargaining and social coordination is a far cry from the (what is euphemistically called) "modernizing" reforms propagated by the EU-ECB-IMF troika. The pinnacle of these reforms is the (further drastic) deregulation of labour markets, as "rigid" labour market rules and institutions supposedly make Mediterranean labour costly and hinder firms in their competitive struggles. The (mistaken) idea is to create more flexibility in the labor market for enterprises, curb union wage-bargaining power, reduce workers' sense of entitlement to job security and welfare, and improve labour mobility. What is not understood is that, as Robert Solow (1998) remarked, every one of these regulations was intended to promote a desirable social purpose—often as a "second-best" response to a "market failure" (see Lee and McCann 2011). Moreover, in flexible labour markets, firms will invest less in workers' firm-specific human capital and this hurts productivity as well (Auer *et al.* 2005). Labour market deregulation may affect productivity through its impact on worker motivation and effort, as it erodes social capital and trust in the labour relation (Storm and Naastepad 2009, 2012). Likewise, lower wages and more flexible labour slow down the process of Marx-biased technical change (Foley and Michl 1999), enabling inefficient firms to stay in the market and discouraging structural change. It also reduces the pace at which older vintages of capital stock are being scrapped and new equipment, embodying the latest more productive technologies, is being installed (Hein and Tarassow 2010). Taken together, lower wage

growth gets reflected in lower labour productivity growth and weaker export performance (Buchele and Christiansen 1999; Storm and Naastepad 2009, 2012; Kleinknecht *et al*. 2013). Hence, it is wrong to claim that the TINA road to recovery for Europe's peripheral countries is cutting wages (and deregulating labour markets) so as to improve their relative cost competitiveness. Eurozone debtor countries, forced to mold their economies to resemble Germany's relatively low-productive non-traded sector, will never be able to close their productivity gaps with Germany's core sector—but instead will get trapped in low-wage low-productivity activities with an export specialization that overlaps with even-more-low-wage China.[11] This is an uphill battle they cannot win (see Storm and Naastepad 2014). It will entrench a two-tier Europe with two classes of members, as both Ulrich Beck (2013) and George Soros (2014) fear, which will likely prove unstable. But not only mainstream economists have been learning the wrong lessons, heterodox observers have taken the mistaken view that all that is needed to save the Eurozone is: higher wages in Germany (Stockhammer 2011; Flassbeck and Lapavitsas 2013). Higher German wages are no substitute for a radically rethought industrial policy for the Eurozone periphery, which should replace of the broken *Euro Plus Pact*. Such a rethought industrial policy should be based on the understanding that it is not cost-based market competition which is driving innovation, but rather social coordination and regulation of economic decision-making and active guidance by an entrepreneurial state (Lucchese and Pianta 2012; Mazzucato 2013; Storm and Naastepad 2012).

So what are the right lessons?

Our anamnesis of Germany's recovery leads to a few important lessons for the Eurozone. The first one actually concerns a weakness of the German model—and it is related to Germany's over-reliance on exports as a source of demand (Table 6). German wage depression in the 2000s and the collapse of *Neuer Markt* in 2000 depressed not just household consumption demand, but more importantly domestic investment demand as well as inflation. With German inflation being low, the ECB responded to the problems in Germany's economy by lowering its interest rates sharply—and for the Eurozone as a whole. That, in turn, sparked housing booms in Ireland and Spain and a consumption boom in Greece (Storm and

[11] Indeed, ECB economists Benkovskis *et al*. (2013) find that competitive pressure from China is strongest and growing for the Southern periphery, Ireland and Central, Eastern and Southeastern European EU members. German firms, on the other hand, do not get pushed out of their export markets by Chinese newcomers.

Naastepad 2014). With little work to do for them in their domestic market, German banks overconfidently turned to the more dynamic periphery, creating the credit to co-finance the construction & real-estate booms and consumer binges—in the expectation that in the new ECB-governed single-currency area, peripheral institutions and incomes would converge to those of Europe's core countries and hence their credit risks would turn out to be small (Lane and Pels 2012; Lane 2013). It needs no elaboration how this unlikely gamble unraveled. We just point out that due to Germany's stunted investment demand, German banks were unable to step up lending domestically and were forced to turn to foreign borrowers—financing activities that were not necessarily always productive. And it is through helping financing unsustainable credit booms in the periphery (rather than through effective wage restraint) that Germany has been implicated in plotting the Eurozone crisis.

The second lesson concerns an inconvenient truth: Germany's overall success hides from view the dualization of its economy into "first-class" firms and workers (in manufacturing) and "second-class" firms and workers (in non-traded services). High productivity in Germany's dynamic manufacturing core comes at the cost of employment: between 1980 and 2007, manufacturing real GDP increased by 112.2 billion euros (in real terms), while the total number of hours worked in this sector declined by 6.1 million. As Table 8 illustrates, a similar dynamics applies to the Eurozone as a whole and to France, Italy and Spain. This points to a paradox. While in the new international division of labour, Eurozone countries have to specialize in medium- and high-tech (knowledge-intensive) manufacturing (and services), basically competing on technological competences, this strategy is going to generate additional unemployment. One way to solve this conundrum is having low-wage low-productive mini-jobs as in Germany's sheltered sector, or as in the U.S. But this will imply greater inequality and more working poor—in short, greater social and political instability and vulnerability. The other—royal—road to go would be to redistribute working time in the core itself, reducing full-time working jobs and/or earlier (not later) retirement. If at all possible, it would involve a grand social compromise—and commitment to a broad-based accessible educational system (as the German apprenticeship one).

Table 8
Change in real GDP and Hours worked between 1980 and 2007

	Manufacturing		Non-Traded Sector	
	GDP	Hours	GDP	Hours

	(billions euros)	(millions)	(billions euro)	(millions)
Eurozone (without Germany)	329.9	─8.8	1843.9	35.1
Germany	112.2	─6.1	664.1	3.3
France	65.3	─3.5	486.0	6.1
Italy	55.4	─2.2	303.6	8.3
Spain	105.2	─0.3	474.1	11.0

Notes: See Notes to Table 4.
Source: Authors' calculations from EU-KLEMS Database.

However, the main lesson to draw from Germany's remarkable rebound is a simple one: the stronger is a country's technological competitiveness and the more effective is its consensual macro-governance structure (based on coordinated burden sharing), the more likely this country will weather a crisis. Germany's rebound has nothing to do with unit labour costs, wage squeezing or beggaring its Eurozone neighbours. It is the success of Modell Deutschland 1.0—not of version 2.0. Rather than tilt at the windmills of RULC, under the delusion that labour cost competitiveness matters, the Eurozone periphery should instead be aided in the—much more complex—task of industrial restructuring and upgrading. This implies giving up austerity, relaxing financial and economic policies rather than curbing them, and transferring resources—long-term and for productive purposes—from Europe's core to its periphery (rather than the other way around, as is the case now). Although this remedy is clearly not a live option now, we regard it as an impossible truth—not recognizing it, does not mean it is wrong, contrary to what an ostrich would want to believe. Perhaps we can make our point more clearly by contextualizing our proposed remedy, using a historical analogy. Our plea that industrial restructuring in the periphery needs funding from the core is analogous to Keynes' plea for a more generous peace at the Versailles Conference. Keynes argued that German reparations should be limited so as not to cripple its post-war economic recovery, war debts should be forgiven and the U.S. government should launch a lending programme to restore European investment. Doing so, Keynes argued, was a matter of enlightened national interest, because the recovery of continental Europe would, in turn, be beneficial to Britain and the U.S. A similar agenda is needed today—the difference being that forgiveness should come this time from Germany. Eurozone recovery will be of vital interest to Germany's core sector (even if Germany's financial sector stands to lose), while a long-lasting Eurozone stagnation and the accompanying political disorder are not. However, in addition to this

Calvinist appeal to (debt) forgiveness, there is more reason to ask for German clemency and support—and that is the macro-economic gain which the country enjoys because of the Eurozone (crisis).

This gain arises from the fact that from the German point of view, the euro is considerably undervalued, as a result of the large trade deficits of Southern Europe. A break-up of the Eurozone, it is generally expected, will lead to a large exchange rate appreciation vis-à-vis dollar and yen for Germany—by at least as much as 20% (Mazier and Petit 2013). At the same time, of course, the euro is overvalued for the periphery—which is costing them dearly in terms of net export earning foregone. Mazier and Petit (2013) estimate that the current euro exchange rate represents a subsidy from the periphery to the core of about 5% of GDP. Germany, according to their numbers, has benefited from an implicit subsidy representing 8% of its GDP. And as Koo (2010) argues, the *extra* German export growth—caused by the favourable exchange rate—enabled the German government to turn its "excessive" deficits into a small fiscal surplus. Germans can be fiscally austere, courtesy of the periphery's trade deficit. This means that Europe's periphery can rightfully ask Germany for funding a new Marshall Plan to restructure their economies and upgrade their manufacturing sectors. This requires, at the EU level, coordination of economic decision-making, or what Beck (2013) calls a "new social contract for Europe"—not the beggar-thy-neighbour competition based on RULC. It is precisely when it comes to non-market modes of coordination, productivist regulation of markets, and entrepreneurial state actions that we should learn from Deutschland Modell 1.0 and not get distracted by hyped-up but fleeting claims of the superiority of Modell 2.0.

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