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The German Model – Seen by its Neighbours

Edited by Brigitte Unger
Eroding the Made-in-Germany Model: What Germans Could Learn from the Netherlands

Alfred Kleinknecht & Robert H. Kleinknecht

Introduction

The variety of capitalism literature distinguishes two stylized models of capitalism: the Liberal Market Economy (LME), with the USA as the main example, and the Coordinated Market Economy (CME), such as Germany (Hall & Soskice 2001). The Netherlands is classified as a CME, although it has adopted several LME elements since the 1980s (Sluyterman 2005). For instance, apart from a decrease in the concentration of firm ownership (De Jong et al. 2010) and an increased orientation towards shareholder value (Bezemer 2010), the number of freelancers and employees with flexible contracts has substantially increased over recent decades (Dekker et al. 2012).

Similarly, German labour markets have adopted LME
elements through the so-called Hartz Reforms (2002-2005). Such “structural reforms”, guided by a supply-side view of economics, usually include cuts on social benefits, easier firing, a lowering of minimum wages and (often implicitly) attempts to reduce trade union power. The German Hartz Reforms have been praised as an important move away from rigid, CME-type labour market institutions towards more flexible, LME-type labour markets. For example, the Konrad Adenauer Foundation (2014) concluded that Germany had moved from being the “sick man of Europe” to the “poster boy of crisis management” (2013: 7).

We argue that supply-side deregulation of labour markets is harmful to innovation. The Made-in-Germany model is largely based upon a “creative accumulation” innovation model. More flexible labour relations undermine the accumulation of (tacit) knowledge, which is crucial for the success of such an innovation model. Furthermore, German wage policies after the year 2000 have similarities with the Dutch policies of voluntary wage restraint (loonmatiging) over the past 35 years. The latter turned out to have a substantially negative impact on labour productivity growth.

We first present some key variables, comparing German economic performance to the average of the EU-15, but in particular to the performance of The Netherlands. We then discuss arguments that explain why deregulation of labour markets can be harmful to innovation. We conclude that the German Hartz Reforms may have started a gradual erosion of the (still) strong Made-in-Germany model. Germans should be aware that imitating Dutch policies is no “free lunch”.
Eroding the Made-in-Germany Model: What Germans Could Learn from the Netherlands

**Germany after “Hartz”: heading for weaker innovation performance?**

Over the last 35 years, Dutch trade unions were again and again ready to accept modest wage increases according to the principles of: “jobs are more important than wages” and “creating effective demand through exports”. At the same time, there was a substantial rise of poorly paid flexible jobs (Dekker et al. 2012), which supported the policy of voluntary wage restraint. Similarly, Germany showed a strong increase in flexible work after the Hartz Reforms (Schulze-Buschoff 2015), also accompanied by moderate wage claims. For these reasons, it is interesting to look at the long-term consequences of Dutch policy, since they can give an indication of the direction Germany may be heading.

In Figures 1 and 2 we compare Germany to the EU-15 (excluding Germany and The Netherlands). Figure 3 covers the same data for The Netherlands. Figures 1-2 show that, in the long run (1990-2013), Germany deviates little from the EU-15 in terms of GDP growth, labour productivity growth and employment. However, in one aspect Germany and the EU-15 deviate remarkably from The Netherlands: The Netherlands shows substantially lower rates of labour productivity growth, in spite of a higher GDP growth. The latter is remarkable, as the *Verdoorn-Kaldor Law* predicts that higher GDP growth enhances labour productivity growth (McCombie et al. 2002). In spite of this, Dutch labour productivity growth is seen to reach only the value of 125 (1990=100), while German labour productivity grew to about 142 (the EU-15: to 140) on the same index. This is consistent with findings by Vergeer & Kleinknecht (2011, 2014).
analyses of panel data from 19 OECD countries (1960-2004) they found that a one-percent lower wage growth results in ≈0.4 percent lower growth of labour productivity (i.e. GDP per working hour). The rationale behind the mechanism that wages influence labour productivity relates to neo-classical factor substitution, induced innovation, vintage effects and (lack of) Schumpeterian creative destruction (see Vergeer & Kleinknecht 2014 for a detailed discussion).

Figure 1: GDP, GDP per hour worked, employment and hours worked in Germany (1990-2013, index: 1990=100).

Data source: Groningen Growth and Development Centre (www.ggdc.net).
Figure 2: GDP, GDP per hour worked, employment and hours worked in EU-15 (excl. Germany and The Netherlands, 1990-2013, index: 1990=100).

Data source: Groningen Growth and Development Centre (www.ggdc.net).
The upside of low labour productivity growth was that The Netherlands achieved an impressive growth in employment, which can only in part be explained by its higher GDP growth. In the above figures, employment in both the EU-15 and Germany went from 100 in 1990 to a little more than 110 in 2013, while The Netherlands reached the value of almost 130 on the same index. Such a low-productive and labour-intensive growth path implies a lower income growth per working hour. For example, Salverda (2014) reports that real gross income for the group of median income earners in The Netherlands almost stagnated over the period 1977-2012.
Coming back to Figures 1-3, we see that, after the Hartz Reforms (2002-2005), Germany does slightly better than the EU-15 in terms of GDP growth. During the period 2006-13 we see an average GDP growth rate of +1.42% per year, which compares to 0.37% in the EU-15 (excl. Germany). German employment figures also look relatively favorable when compared to the EU-15 (+0.8 in 2006-2013 compared to +0.0% in the rest of the EU-15). The question is, however, whether this is to be (fully) ascribed to the Hartz Reforms. There are at least two alternative interpretations:

First, Germany seems to have done better after the Lehman Crash of 2008 thanks to its system of co-determination (Mitbestimmung). From an economic viewpoint, co-determination tends to be opposed, the argument being that employees are “conservative” and this is damaging interests of shareholders who themselves are less risk-averse as they can diversify their risks by spreading their money over many firms (while employees cannot diversify their job risk). Comparing the stock market valuation of firms from 17 European countries (using Tobin’s Q), it turned out that, before the Lehman Crash, investors indeed evaluated firms with co-determination significantly lower than comparable firms without co-determination. After the crash, however, this turned into the opposite: firms with co-determination lost relatively less value (Kleinknecht 2014). Obviously, thanks to “conservative” employee representatives on the board, co-determined firms had taken lower risks during the build-up to the financial bubble (resulting in lower ratios of Tobin’s Q); as a consequence, they tended to be less troubled after the crash, resulting in relatively more favorable Tobin’s Q values. German
co-determination seems to protect firms against excessive risk-taking in times of great optimism.

Second, in most countries, the downturn after Lehman resulted in large job losses. German employment figures, however, look quite favorable (Figure 1). This has been ascribed to two German labour market institutions: the system of short-time work (Kurzarbeit) and the labour-time accounts. Both were used as a buffer that prevented large-scale firings (Möller 2010; Zapf & Brehmer 2010; Seifert & Herzog-Stein 2010; Zapf & Herzog-Stein 2011). Keeping people employed had favorable effects on effective demand: people suffered lower income losses and had less need for precautionary savings. Moreover, knowledge leakage as a consequence of personnel fluctuation had been prevented which was favorable for innovative market leaders.

These arguments may explain why Germany performed so well after the Lehman Crash. At the same time, however, Germany’s moderate wage development (Figure 4) resulted in lower labour productivity growth. It is remarkable that during its “sick man of Europe” period (1991-2001) Germany still realized an average labour productivity growth (i.e. growth of GDP per working hour) of 2.16%. This figure went down to 1.08% in the period 2001-13 (or to 0,90% during the 2006-13 post-Hartz period). This is comparable to the experience in The Netherlands after the start of the long wage moderation period (Van Schaik 1994).

One could argue that German labour productivity growth deviates little from the EU-15 average. Indeed, in other EU countries, we also see a more moderate wage development and attempts to deregulate labour markets, followed by lower labour productivity growth. A dramatic example of
Eroding the Made-in-Germany Model:
What Germans Could Learn from the Netherlands

this is Italy. After a series of labour market reforms during the 1990s that allowed for a more “flexible” Italian labour market, Italian labour productivity growth dropped virtually to zero during the 2001-13 period (see www.ggdc.net). Such a drop is historically quite unique. Micro-econometric analyses show that those firms in Italy that made most use of the new flexible options had the worst labour productivity performance (Lucidi & Kleinknecht 2010).

Germans should be aware of an important fallacy of wage moderation: once you have brought down labour productivity growth through low wage cost pressure, only modest wage increases are possible, simply because the room for productivity-oriented wage increases is reduced. So even with moderate wage claims, wage unit costs may easily rise since labour productivity is growing slowly. This explains why The Netherlands in Figure 4 show a wage unit cost development that is not far from the EU average, in spite of quite modest wage increases over many years.

Going Dutch: effective demand through Beggar-thy-neighbour

Figure 4 shows that around the year 2000, there seems to be a break in the development of real wage unit costs in Germany. While some downward pressure can already be seen during the later 1990s, wage unit costs declined persistently between 2000 and 2007. This decline almost perfectly coincides with a change in Germany’s current account. From having an almost balanced current account during the 1990s, Germany jumped to an export surplus of around 5% of its
The German Model – Seen by its Neighbours

GDP after the year 2000 (Figure 5). The latter happened well before the Hartz Reforms, and we see no further acceleration of export surpluses after the Reforms.

Figure 4: Real unit labour costs in the EU-15 (1990-2013, index: 1990=100).

Data source: Annual macro-economic database, European Commission.

While there seems to be an almost perfect match between the decline of real wage unit costs and the rise of the German export surplus, one should be aware that such a one-to-one relationship often does not hold. We see, for example, in Figure 4 that both Spain and Greece had a moderate wage
unit cost development, not quite different from Germany. They nonetheless booked high import surpluses (Figure 5). Such counter-intuitive movements of wage costs and exports are known as the Kaldor paradox (Kaldor 1976) and underline the role of non-wage factors for competitiveness (see Carlin et al. 2001).

As to the latter, classical and coherent strengths of the Made-in-Germany model should be mentioned, such as the long-term oriented family companies in manufacturing, a very good educational and apprenticeship system, strong links of (applied) research to business and the ease of accumulating (tacit) knowledge due to the long-term commitment of skilled workers to their firms, facilitated by social partnership and co-determination. Of course, these classical competitive strengths of the Made-in-Germany model could only be fully exploited once the Euro prevented periodic revaluation of the German Mark, i.e. devaluations of other European currencies.

It should be noted that, until the European sovereign debt crisis, German export surpluses were mirrored by large import surpluses in countries like Spain, Greece and Portugal (Figure 5). Their current account deficits were growing after their accession to the Eurozone when they could no longer devaluate their currencies. As these import surpluses were generously financed by credit from Northern European financial institutions, it opened the way into the financial crisis that threatened the Euro currency. So far, the German (and Dutch) “beggar-thy-neighbour” policy was (and still is) a threat to the coherence of the Eurozone.
How can the Hartz Reforms undermine the Made-in-Germany model?

Above we saw that after the year 2000, German wage unit costs declined, and so did German labour productivity growth. This was well ahead of the Hartz Reforms. Nonetheless, there are reasons to believe that the Hartz Reforms still added to this process as they reduced insider protection, but also allowed for the growth of outsider jobs (Schulze-Buschoff 2015; Tangian...
Eroding the Made-in-Germany Model: What Germans Could Learn from the Netherlands

Several firm-level studies show the negative impact on innovation and on labour productivity growth of flexible work practices. The reasons why labour market flexibility negatively impacts on innovation and labour productivity growth can be summarized as follows:

First, as far as the Hartz Reforms lead to shorter average job durations, firm-sponsored training becomes less rewarding. In addition, workers will first of all be interested in acquiring general skills that increase their employability on the external job market, but may be reluctant to acquire firm-specific skills if there is no long-term commitment to their employers (Belot et al. 2002). Second, as far as the Hartz Reforms contribute to a more unequal income distribution, this will reduce the "compression" of the wage structure (both within and between firms); this is relevant as Acemoglu & Pischke (1999) and Agell (1999) argue that wage compression is a reason for the provision of training by firms.

A third group of arguments relates to the role of social capital. Long-lasting working relations and fair protection against dismissal can be interpreted as an investment in trust, loyalty and commitment to workers. Svensson (2011) showed convincingly that flexible work practices reduce trust. In so far as the Hartz Reforms lead to more short-term and flexible jobs and lower insider protection, they come down to a divestment in social capital. Lack of trust increases transaction costs. Naastepad & Storm (2006: 170-191) show that firms in “flexible” Anglo-Saxon countries have much denser management bureaucracies for monitoring and control, compared to “Rhineland” countries.

Lack of loyalty on the part of workers also increases positive externalities, i.e. the leaking of technological
knowledge and trade secrets to competitors, which reduces monopoly rents from innovation (thus reducing the incentive for risk-taking with innovative investments). From empirical research we know that personnel turnover is an important source of knowledge leakage. For example, drawing from *Community Innovation Survey* data, Brouwer & Kleinknecht (1999) report that innovative firms in The Netherlands judge “keeping qualified personnel in the firm” to be a crucial defense against imitators, being, on average, even more important than patent protection. This underlines the importance of ”tacit” knowledge from practical experience that tends to be poorly documented (Polanyi 1966). Tacit knowledge is owned by workers rather than by their firms. The Hartz Reforms made firing easier, which is likely to increase job turnover rates amongst those employees who are carriers of crucial knowledge. Lower job security also reduces critical feedback from the shop floor for management. Powerful managers like to surround themselves with people who do not contradict them. If this is enhanced by a change of power relations due to easier firing, it can favor autocratic management practices.

Furthermore, people who are easy to fire have motives for hiding information about how their work can be done more efficiently. This means that under a flexible *hire & fire* regime, management is likely to make poor use of knowledge from the shop floor about how to organize work processes more efficiently. In this context, Lorenz (1999) offered an interesting hypothesis: protection against dismissal may enhance productivity performance, as secure workers will be more willing to cooperate with management in developing labour-saving processes and in disclosing their (tacit) knowledge to
Eroding the Made-in-Germany Model: What Germans Could Learn from the Netherlands

the firm (see Lorenz 1999). Acharya et al. (2010) provide empirical support for a similar argument: stringent labour laws provide firms with a “commitment device” to not punish short-term failures and this will encourage employees to pursue more risky and value-enhancing innovative activities.\footnote{3}

Finally, protection against firing and long job durations favor the long-term historical accumulation of (tacit) knowledge in a “creative accumulation” (or Schumpeter II) innovation model. The argument about “creative accumulation” (versus “garage business” or “creative destruction”) innovation regimes is summarized in Table 1, which is inspired by the work of Breschi et al. (2000). Table 1 makes it clear that continuous accumulation of (tacit) knowledge in a “creative accumulation” innovation regime is favored by continuity in labour relations. In other words, a “creative accumulation” innovation regime gives incentives for the reallocation of work within internal labour markets through functional flexibility rather than via external labour markets through numerical flexibility. The historically cumulative nature of knowledge produces path dependencies, which give incentives to firms for employing protected insiders with long job tenures. Obviously, the strength of Made-in-Germany crucially depends on mastering the Schumpeter II model. The Hartz Reforms are not just labour market reforms; they also have an impact on an innovation model that has been crucial to the success of Made-in-German over many years.
The German Model – Seen by its Neighbours

Table 1: Stylized comparison of two Schumpeterian innovation models

<table>
<thead>
<tr>
<th>Schumpeter I model: “creative destruction” or “garage business innovation”</th>
<th>Schumpeter II model: “creative accumulation” or “routinized innovation”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starters in high tech; niche players</td>
<td>Established firms with professionalized R&amp;D labs</td>
</tr>
<tr>
<td>SMEs and young firms</td>
<td>Monopolistic competitors; oligopolists</td>
</tr>
<tr>
<td>High entry and exit rates</td>
<td>Stable hierarchy of (dominant) innovators</td>
</tr>
</tbody>
</table>

Properties of the knowledge base …

| Generally available knowledge → low entry barriers | Dependence on historically accumulated and often firm-specific (tacit) knowledge → high entry barriers |

… and complementary labour market institutions:

| Recruitment through external labour markets | Internal labour markets through dependence on accumulated (firm-specific, tacit) knowledge → well-protected ‘insiders’ |

It should be added that two recent firm-level studies show that the employment of large numbers of flexible workers significantly reduces both labour productivity growth (Vergeer et al. 2014) and the probability of realizing innovations (Kleinknecht et al. 2014) in sectors that tend towards a Schumpeter II innovation model. In sectors that tend more towards the garage business model, flexibility variables are insignificant in both studies. This can explain why the USA, in spite of a hire & fire labour market, were quite successful with IT in the garage business phase in Silicon Valley, while, in the post-Reagan era, they failed when competing in classical Schumpeter II industries. The fact that Detroit (rather than Wolfsburg) is today a dying city has a lot to do with the American inability to master the “creative accumulation” innovation model.
Eroding the Made-in-Germany Model: What Germans Could Learn from the Netherlands

Discussion and policy conclusions

High unemployment forced German trade unions to accept low wage increases, especially after the year 2000. It appears as if this had a similar effect to that which happened since the 1980s in The Netherlands: labour productivity growth went down. One of us launched in 1994 a criticism of the Dutch wage moderation strategy, hypothesizing that it had a negative impact on innovation and labour productivity growth (Kleinknecht 1994). At the time, there was a national consensus about the merits of wage moderation, as The Netherlands had achieved impressive employment growth and, naturally, trade unions were extremely happy with this. The Kleinknecht hypothesis unleashed fierce reactions in the media as well as in the national economic literature (see e.g. Jansen 2004). In the meantime Vergeer & Kleinknecht (2011, 2014) have demonstrated that the hypothesis holds: on average, in 19 OECD countries (1960-2004), a one percent change in wages causes \( \approx 0.4 \) percent change in labour productivity growth. This can explain why German labour productivity growth declined following the relative decline of German wage unit costs between 2000 and 2007 (Figure 4).

Given fierce reactions to “Kleinknecht’s Law” (Wouter Bos 2004) Vergeer & Kleinknecht (2011, 2014) have undertaken numerous efforts to check the robustness of their results. In the many versions of their model estimates, coefficients range between 0.32 and 0.49, with the most plausible versions being close to 0.40. For a good evaluation of the effects of downward wage flexibility, economists should include a coefficient of 0.4 into their models. Besides
Keynesian demand effects in favor of wage increases and neo-classical cost effects (against), wage growth also has a significant impact on labour productivity growth.

Advocates of structural reforms of labour markets have one strong point: from the perspective of the *Walrasian General Equilibrium Theory*, flexible *hire & fire* in the labour market enhances (static) allocative efficiency! In this view, every obstacle to the “free” working of markets causes welfare losses. A weak point of this argument is that Walrasians have no theory of “creative accumulation” innovation regimes. Moreover, they assume as an ideal the concept of perfect competition, considering market imperfections to be an undesirable exception. In the field of innovation, however, market imperfections are not the exception but the rule. One could even define innovation itself as an attempt at creating an imperfect market: if an entrepreneur introduces a unique product that others have difficulty imitating, the entrepreneur has a source of monopoly profit. Unique knowledge acts as a market entry barrier; and the higher the entry barrier, the higher the monopoly profits and hence the entrepreneur’s incentive to invest in R&D.

The most important source of market failure is knowledge as a public good. Intellectual property rights are hard to protect – and weak property rights result in market failure. In addition, various sorts of information asymmetries and lock-in (e.g., due to the sunk costs character of innovative investments) can increase uncertainty and can leave innovative efforts far below the social optimum. Strong technical and commercial uncertainties lead to high failure rates; in order to make firms nonetheless ready to invest in R&D, they need to make high monopoly profits on those projects.
that succeed. And this is incompatible with the idea that “more competition”, would enhance innovation. Giving simply more room to “free” markets is likely to result in stronger market failure with respect to bringing forth innovation. Summarizing, there is a significant trade-off between Walrasian static efficiency: ”how can we allocate scarce resources efficiently?“ and Schumpeterian dynamic efficiency: “how can we make resources less scarce through innovation?“.

Applying this to the logic of Schumpeter’s (1943) “creative accumulation” innovation model, we argue that labour market rigidities can be useful since longer job durations create trust and loyalty. This makes the long-term accumulation of (tacit) knowledge easier; it allows the knowledge from the shop floor to be used for the implementation of efficiency-enhancing investments; it helps against knowledge leakage and economizes on transaction costs for monitoring and control. Deregulation of labour markets such as the Hartz Reforms takes away labour market rigidities that are “bad” from a Walrasian viewpoint but useful for innovation.

The above may shed some light on the observation that, in spite of a highly flexible labour market, the USA were successful during the garage business phase of IT in the 1980s and 1990s. Our reasoning might, however, also explain why, after the Reagan era, many classical industries in the USA had hard times competing against Japanese and German suppliers. Obviously, as the new giants in Silicon Valley are gradually shifting towards the “creative accumulation” model, the liberal US hire & fire labour market is no longer a good institutional environment for them. The CME type labour market of Germany before ‘Hartz’ would now be a better place for them.
The German Model – Seen by its Neighbours

Notes

1. Officially, Dutch wage moderation is said to have started with the ‘Contract of Wassenaar’ in 1982. A look at the statistics (e.g. www.ggdc.net), however, suggests that already in the late 1970s, Dutch trade unions had negotiated increasingly modest wage agreements that remained well below labour productivity growth rates. The decline in Dutch labour productivity growth started around 1980.


3. Exploiting time-series variation in changes of dismissal laws, they find that “innovation and growth are fostered by stringent laws governing dismissal of employees, especially in the more innovation-intensive sectors. Firm-level tests within the United States that exploit a discontinuity generated by the passage of the federal Worker Adjustment and Retraining Notification Act confirm the cross-country evidence.” (2010: 1).

References


The German Model – Seen by its Neighbours


Eroding the Made-in-Germany Model: What Germans Could Learn from the Netherlands


The German Model – Seen by its Neighbours

