

## INSTITUTIONS IN THE ECONOMIC FITNESS LANDSCAPE

### WHAT IMPACT DO WELFARE STATE INSTITUTIONS HAVE ON ECONOMIC PERFORMANCE?<sup>1</sup>

RONALD SCHETTKAT\*

There are many potential reasons for unemployment, and the observation of unemployment is surely not sufficient in itself to justify the conclusion that labour markets are malfunctioning. But the most widely accepted explanation for high European unemployment is that European-type welfare state institutions are an impediment to economic development because they create frictions leading to sclerosis. If Europe wants to maintain its position in the world economy, it is argued, it needs to change its institutions. The typical line of reasoning proceeds as follows:

*Firstly*, it is argued on a theoretical basis that European welfare state institutions shift the economy away from Pareto efficiency.

*Secondly*, it is claimed that US institutions come closest to the “perfect market model” or “best practice” and that the economic success of the US shows the superiority of the Anglo-Saxon model.

*Thirdly*, it is argued that strong coalitions prevent the implementation of the “necessary” reforms. It is claimed that, although theoretical analysis shows what the necessary reforms are, political interests

(rent-seeking coalitions) prevent societies from adopting these recipes.

*Fourthly*, it is claimed that a delay in the “necessary” reforms will reduce international competitiveness. Globalised capitalism forces countries to bring their institutions into line with “best practice”. Just as it was once thought that competition between firms would only allow companies conforming to “best practice” to survive in the market, so globalisation will only allow the most efficient institutional arrangements to survive.

This reasoning depends on many assumptions, however. Basically, it holds for a perfect market world but not at all necessarily for the real world, with all its deviations from the perfect model. It has been shown that even small deviations from perfect market assumptions (Akerlof/Yellen 1985) can create outcomes very different from the perfect market equilibrium. Furthermore, market processes can create sub-optimal outcomes and macro results which do not fit the preferences of any (!) individual (Schelling 1978). In this situation, institutions are necessary in order to achieve the social and individual optimum. Regulations clearly limit *ceteris paribus* the scope for discretionary decisions, but only in the perfect market model are they simply restrictions and distortions; in a less perfect environment they may well create opportunities. For example, works councils may not only constrain managerial decisions but also give workers a “voice” and thus improve decision-making (Hirschman 1970, Freeman/Medoff 1984, Wolf/Zwick 2002).

Nevertheless, the perfect market model is still the point of reference in economic policy, and many “political economy” papers (see e.g. Saint-Paul 1996) likewise base their proposals on this model, albeit appending explanations of the non-implementation of the “perfect market solution”, usually based on the interest of “rent-seeking” coalitions (usually employed insiders or unions) in using their power to prevent the implementation of perfect market solutions and so to protect their rents.



\* Ronald Schettkat is Professor of Economics at the Utrecht University.

<sup>1</sup> This contribution is an extract from: Schettkat, R. (2002).

### One Best-Practice Institutional Arrangement?

Under the conditions of globalised capitalism the perfect market model predicts that only one “best practice” can survive. There is such a thing as THE optimum national institutional arrangement and ultimately all countries must adopt it. Although there are no markets for institutions, the selection process in the stylized economy will only allow “best practice” to survive. Just as firms with sub-optimal organizational structures will not survive in conditions of perfect market competition, so will international competition in conditions of globalised capitalism require countries with sub-optimal national institutional arrangements to conform to “best practice”. International competition in a globalised capitalist economy is thought to impose the optimum national institutional arrangement on countries, just as competition within markets imposes the optimum organizational structure on firms. In a diagram showing institutional arrangements, ranging from “deregulated” to “regulated” on the horizontal axis and economic fitness on the vertical axis, there would be only one peak representing the “best practice” institutional arrangement (left-hand diagram in Figure 1).<sup>2</sup>

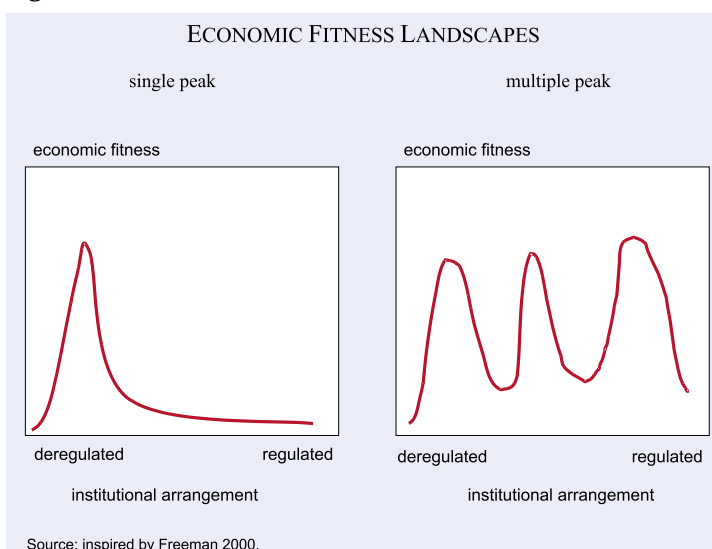
The single-peak world is intellectually attractive and deeply ingrained in economics, perhaps because it allows for clear and precise policy prescriptions. Changing institutions in the direction of the “best practice” institutional arrangement will always improve economic fitness. All that is necessary is to identify the leader in terms of economic fitness, investigate the institutional differences and eliminate them. Policy advice is a risk-free business in the

single-peak world. Once the institutional differences are identified, the policy prescription is simple: “follow the leader and you improve economic fitness”.

However, there may be more than one peak in the economic fitness landscape (right-hand panel of Figure 1). After all, different institutional arrangements may best serve economies specialising in different kinds of production. Countries may specialise according to their natural and historical (path-dependent) advantages. For example, one country may specialise in medium-tech industries using a roughly homogeneous labour force with medium skills, while another country may specialise in high-tech industries, probably in combination with a large part of the economy in low-tech industries. This is roughly the difference between the German and the US economy, with the former relying on a “medium-skilled” labour force and the latter depending on a combination of low-skilled and high-skilled workers in almost every industry (Freeman/Schettkat 1999). International trade may allow the two economies to achieve a similar level of economic fitness, so that the fitness landscape will have two peaks coinciding with different institutional arrangements. In this example, the difference in the institutional arrangements allows the economies to achieve similar fitness. Moving one country towards the institutional arrangement of the other country would reduce economic fitness, since each country already has the institutional arrangement best fitting its structure and resources.

Learning from other countries in a multi-peak economic fitness landscape is difficult and policy advice is hard to give. This world also requires a very different approach to international comparative research. It is no longer sufficient to identify the leader and then mimic the institutional arrangement of that country. Instead, the relationship between institutional arrangements and economic performance has to be carefully investigated to reach an understanding of why institutions differ and to decide

**Figure 1**



<sup>2</sup> The metaphor of a “fitness landscape” was first developed in biology to describe the ability to survive as a function of genetic code (Bak 1997: 118/119) and was to my knowledge first introduced into economics by Richard Freeman (2000).

whether they are ideally suited to the structure of the economy. To identify the impact of institutions on economic fitness, it is necessary at least to investigate whether changes in institutions lead to the assumed effect on economic fitness. Whereas it is sufficient in a single-peak world to conduct a cross-country study, the multi-peak world requires at least the investigation of initial differences and ideally a “difference in the difference” analysis.

Another complication is the multi-dimensionality of institutional arrangements, which make them difficult to identify, and the fact that indicators intended to summarise institutional arrangements are always debatable. Furthermore, economic fitness is likewise multi-dimensional and to some extent debatable. Even though the consensus may be greater in this respect than with regard to institutions, it will still be necessary to discuss which economic aspects are to be included in an economic fitness measure, whether they are compatible or competitive (for example, unemployment and inflation), and how different variables should be weighted when summarised in a single indicator. The single-peak vision requires that a single institutional arrangement be deemed to be “best practice” in relation to various dimensions of “economic fitness” and different periods of time.

Many economists may agree to describing economic fitness in terms of: (1) growth of per capita income (GDP per capita), (2) productivity growth, (3) low unemployment, (4) price stability, (5) external trade balance and (6) inequality. Leaving the more controversial inequality aside, Figure 2 shows “radar diagrams” for the ranking of six big OECD countries (Germany, France, Italy, UK, US and Japan) with respect to these economic dimensions for the averages of the 1960s, the 1970s, the 1980s and 1990s. The single-peak vision requires that the “best practice” country ranks number one in all dimensions and in all four periods, provided that there was no very great change in the institutions. In other words, the best practice country should be in the centre and country-lines should not cross each other in the radar diagrams. However, Figure 2 shows that the country-specific lines do cross, demonstrating that no country has been the top performer in all dimensions and over all periods. The single-peak vision certainly does not hold when all five dimensions of economic fitness are included in the analysis.

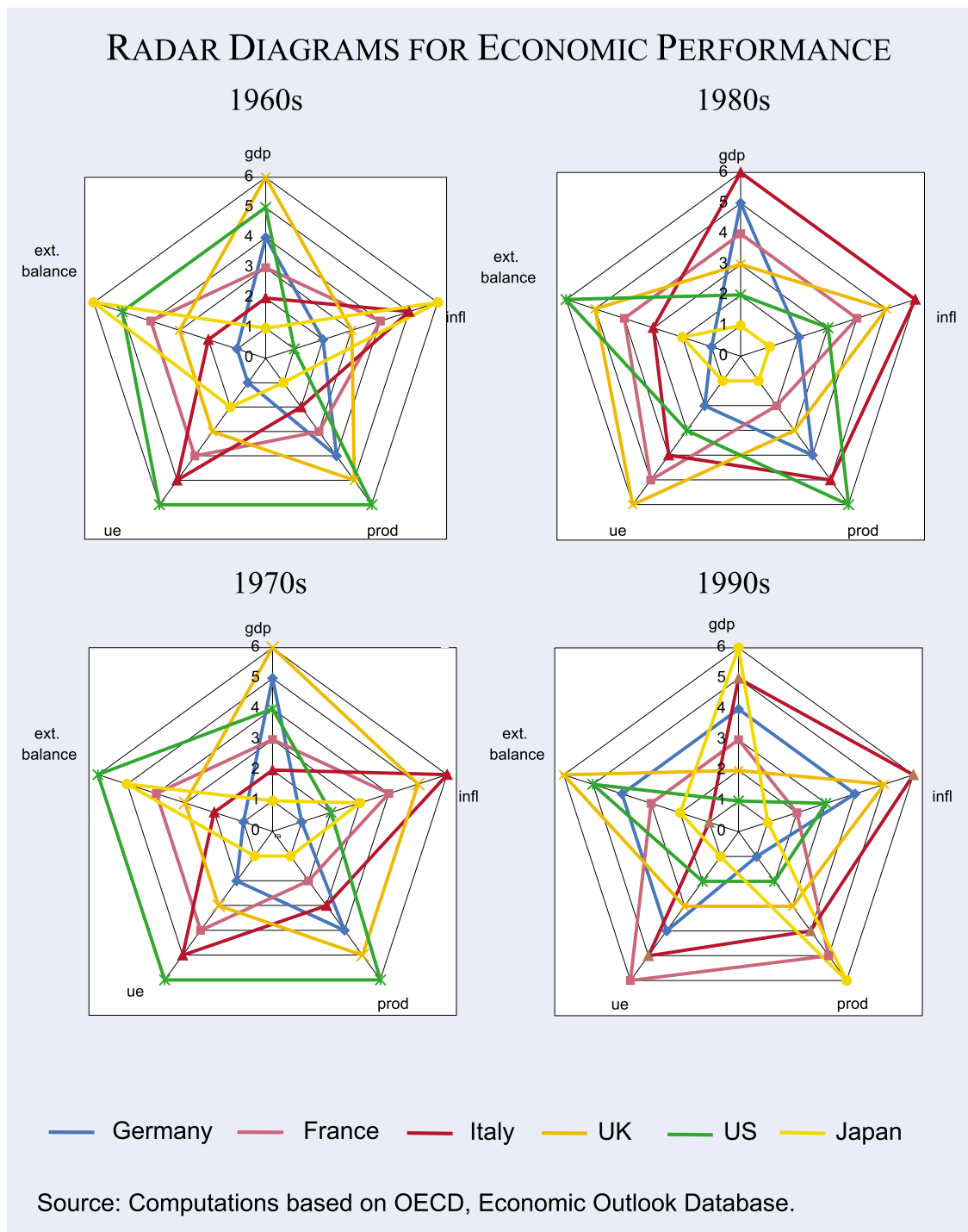
Japan came closest to being the “single-peak country” in the 1980s. In that period Japan ranked number one in 4 of the five dimensions (ranking after Germany only in export surplus), whereas US performance was average or worse in 4 dimensions of economic fitness. This explains the popularity of the Japanese model at that time. Weighting all five dimensions of economic fitness equally and taking the mean, Germany ranked number one in the 1960s and remained well ahead of the US up to the 1980s. Only in the 1990s did the US rank number one on average, and then only in one dimension: growth of per capita GDP. Apart from this, the US ranked number one only in terms of low inflation and that only in the 1960s.

### **Wage Bargaining: Institutionally Compressed Wage Distribution?**

“Equal pay for equal work” is the perfect-market outcome. That means that, controlled for individual productivity differences and working conditions, wages are equal across firms and industries. Allowing for some time to adjust to demand shocks, such differences may also cause some wage differences but these should be temporary. Traditionally, economists have favoured decentralised bargaining because it is closest to the “perfect market” model, in which neither the supply side nor the demand side have any market power and both are price-takers. Therefore, distortions in labour markets have usually been identified as the misuse of market power by unions, classified as monopolies, pushing up wages and compressing the wage structure (e.g., Monopolkommission 1994). In addition, high reservation wages (Sinn 1998) or minimum wages can compress the wage distribution at the low-skill end. Indeed, in a cross-country comparison, wage differentials decline in direct linear relation to increasing union density and other indicators characterizing the bargaining system such as the degree of centralisation of wage bargaining institutions. In Table 1 countries are ranked from left to right according to the degree of centralisation of wage bargaining confirming that pattern (panel 1, for a more comprehensive analysis Schettkat 2002).

However, these are raw wage differentials and wage distributions between countries vary for many reasons. A narrow wage distribution may indicate institutional wage compression but may

Figure 2



also be caused by a narrow skill distribution. Countries with a wide dispersion of skills are expected to have a wide dispersion of wages and if countries with decentralised wage bargaining systems also have wide distributions of skills, conclusions on the impact of institutions on wage disper-

sion drawn from the “raw” wage differentials will suffer from a spurious correlation.

Panels 2 to 5 display skill ratios derived from the OECD’s International Adult Literacy Survey (IALS), the first international comparative skill

Table 1

## Skills and wages

	US 1995	UK 1995	Germany 1993	Netherlands 1994	Sweden 1993
1. Wages					
D9 / D1	4.39	3.38	2.32	2.59	2.13
D9 / D5	2.10	1.87	1.61	1.66	1.59
D5 / D1	2.09	1.81	1.44	1.56	1.34
Skill (literacy scores)					
2. Population 15-64 years old (median)	285	276	285	292	310
3. Employed (median)	292	289	291	300	311
D5 / D1	1.41	1.36	1.22	1.24	1.22
4. Unemployed (median)	257	256	276	289	302
<i>unemployed in % of employed</i>	<i>88</i>	<i>89</i>	<i>95</i>	<i>96</i>	<i>97</i>
D5 / D1	2.14	1.52	1.32	1.44	1.30
5. $D5_{\text{employed}} / D1_{\text{unemployed}}$	2.48	1.72	1.39	1.49	1.34

Source: Computations are based on OECD Employment Outlook 1996, p. 62, for wage deciles and IALS for skill deciles.

survey among the adult population (see OECD 1997). The survey provides skill data based on standardised literacy scores ranging from 0 to a maximum of 500. The median skill scores in the IALS survey for the population in working age (panel 2 in Table 1) do not differ very much between the US, the UK, Germany and the Netherlands but are higher for Sweden. The upper end of the skill distribution also seems to be roughly similar (not displayed in Table 1), while the skill distributions at the lower end of the labour market are clearly different between the US and the continental European countries, but for the employed the difference is not so dramatic.

However, according to the hypothesis of institutional wage compression in Europe, the wage compression hypothesis, unions raised wages above the productivity of the low-skilled workers, which then caused unemployment among low-skilled workers. Continental European wage bargaining systems are alleged to “crowd out” the least skilled workers. Under the “wage compression hypothesis”, one would therefore expect that the skill score of the unemployed to be roughly equal to the skill score of the employed in the US, where the flexible wage system is claimed to allow low-skilled workers to price themselves into employment via wage concessions.<sup>3</sup> In continental European countries, on the other hand, the “wage compression hypothesis” would predict a huge gap between the skill scores of the employed and the unemployed, because unemployment should be more concen-

trated among the least skilled workers, who are allegedly pushed out of employment by excessive minimum wages. The empirical facts are exactly the reverse of what the wage compression hypothesis predicts: the median skills of the unemployed are substantially lower than that of the employed in the US (88 percent, see panel 4) whereas the median skills of unemployed in Continental Europe reaches 95 percent or more of the skills of the employed.

Because the employed are on average better skilled than the unemployed (Bell/Nickell 1996, Freeman/Schettkat 2001) the lower half of the labour market may be described by the median skill score of the employed ( $D5_{\text{employed}}$ ) at the upper bound and the first decile skill score of the unemployed ( $D1_{\text{unemployed}}$ ) at the lower bound. It emerges (in line 5 of Table 1) that the median score for the employed is 2.5 times that of the first decile of the unemployed in the US, but only about 1.3 to 1.5 times in Germany, Sweden and the Netherlands (and 1.7 in the UK). These values are much closer to the D5/D1 ratios for the employed in continental Europe than they are in the US.

Apparently the wage distribution in the US is also (but not only, see Schettkat 2002) wider because the US skill distribution is wider than those in the continental European countries. Furthermore, the integrative effect of flexible US wages cannot be found in the data. The skill differential between the employed and unemployed is high in the US but comparatively low in Europe. This is in total contrast with the “wage compression hypothesis”,

<sup>3</sup> For an analysis of why “pricing-in” does not occur even in the US, see Bewley 1995.



which alleges that European-type welfare state institutions exclude low-skilled workers from employment (see Freeman/Schettkat 2001).

### Conclusions

Many welfare state institutions are blamed for causing labour market inefficiencies and consequently high unemployment in Europe. Closer inspection reveals, however, that the impact of welfare state institutions on economic performance and employment is not as clear-cut as some analysts suggest. At both the theoretical and the empirical level, the picture is ambiguous, and this study must conclude that the empirical evidence in support of the idea that European unemployment is caused by European welfare state mechanisms is extremely weak.<sup>4</sup> Ranking 20 OECD countries in terms of the “usual suspects” (i.e. redistribution, the level of minimum wages, employment protection, disposable minimum-wage income relative to net transfers, and net unemployment replacement rates, for details see Schettkat 2002) and correlating them with the ranks of the unemployment rates suggests a very diverse picture (Table 2) more in line with multi-peak than with the one-peak economic fitness landscape.

There are only two significant (at the 10 percent level) rank correlations in the table. One is between inequality of market incomes and the unemployment rate in 1999. Here, however, the coefficient has a positive sign, meaning that higher unemployment goes together with higher inequality. The situation is similar for wage differentials (D9/D1): again higher wage differentials correlate

positively with unemployment rates in 1980 but not in other periods. In short, the rank correlations between institutional variables, which may be taken to represent the “usual suspects”, do not show the expected impact on unemployment rates. For itself, of course, these correlations would be at best a hint that the deregulationists’ claim of the negative labour market effects of welfare state institutions may not hold. However, given the theoretical ambiguity and the undetermined empirical evidence, the correlations in Table 2 may rather be taken as a summary of the argument: The relation between welfare state institutions and labour market performance is highly complex and deducing its impact from the perfect market model may be very misleading.

However, there may be many reasons why the alleged negative effects of welfare state institutions are not confirmed in the analysis. First of all, the indicators used for institutional arrangements are at best approximations, and it may well be that the concerted action of institutions creates effects undiscovered in the analysis of individual institutions (system effects). In general the information on institutions is weak and for inter-temporal analysis hardly available. Furthermore, little is known about the complex interaction of institutions and economic variables, which may in fact depend on the macroeconomic situation (see Blanchard/Wolfers 2000). In many analyses this problem is circumvented by referring to the perfect market model. Compared to the perfect market situation, any deviation from “perfect market” institutions is deemed to be a rigidity and the typical analysis following this approach creates a long list of such deviations. The message then is to shape the world according to the perfect market model, usually ignoring “natural imperfections”. The deregulationists’ view gains its strength from the

<sup>4</sup> This result is in line with previous studies, see Schettkat 2002 for references.

Table 2

Correlation coefficients for country rankings, unemployment rates and for major institutional variables, 20 OECD countries

Unemployment rate	Inequality market incomes	Redistribution	Employment protection	Wage differentials (D9 / D1)	Minimum wage/ average wage*	Disposable minimum wage-income/net transfers*	Net replacement rate*
1980	0	0	0	+	0	0	0
1990	0	0	0	0	0	0	0
1999	+	0	0	0	0	0	0

\* = for a single.

Source: Computations based on OECD countries listed in Schettkat 2002.

theoretical comparison of real world institutions with the perfect market model, supported by sketchy empirical examples. If the perfect model were correct, globalised capitalism would indeed select the most efficient institutions and countries would have nothing to choose from. The national institutions would converge to the one optimal arrangement. However, real markets suffer from natural imperfections and many institutions may have been introduced to compensate for these imperfections, which also provide freedom for different national institutional arrangements.

It can be concluded that knowledge of the impact of institutional arrangements on economic variables needs to be improved and presented in detailed bi-country studies (e.g. Freeman/Schettkat 2002). There is also a need for a better understanding of “how markets really work” (Gordon 1990) as it is expressed in the program of many microeconomic studies. However, institutions will always have many “side-effects” – both positive and negative – which will be hard to identify and even harder to quantify.

## References

- Akerlof, G. and J. Yellen (1985), “Can Small Deviations from Rationality Make Significant Differences to Economic Equilibria?”, *American Economic Review* 75(4), 708–20.
- Bak, P. (1997), *How Nature Works: The Science of Self-Organized Criticality*, Oxford: University Press.
- Bewley, T. (1995), “A Depressed Labor Market as Explained by Participants”, *American Economic Review* 85(2), 250–54.
- Blanchard, O. and J. Wolfers (2000), “The Role of Shocks and Institutions in the Rise of European Unemployment: The Aggregate Evidence”, *The Economic Journal* 110, c1–c33.
- Freeman, R.B. (2000), “Single Peaked vs. Diversified Capitalism: The Relation Between Economic Institutions and Outcomes”, *NBER Working Paper* 7556.
- Freeman, R.B. and J.M. Medoff (1984), *What Do Unions Do?*, New York: Basic Books.
- Freeman, R.B. and R. Schettkat (1999), *Differentials in Service Industry Employment Growth: Germany and the US in the Comparable German American Structural Database*, European Commission, Report.
- Freeman, R.B. and R. Schettkat (2001), “Skill Compression, Wage Differentials and Employment: Germany vs. the US”, *Oxford Economic Papers* 3, 582–603.
- Gordon, R. (1990), “What is New-Keynesian Economics?”, *Journal of Economic Literature* 28, 1115–71.
- Hirschman, A.O. (1970), *Exit, Voice, and Loyalty. Responses to Decline in Firms, Organizations, and States*, Cambridge Mass.: Harvard University Press.
- Monopolkommission (1994), *Mehr Wettbewerb auf allen Märkten*, Baden-Baden: Nomos Verlagsgesellschaft.
- Nickell, S. and B. Bell (1996), “Changes in the Distribution of Wages and Unemployment in the OECD Countries”, *American Economic Review* 86 (5), Papers and Proceedings, 302–8.
- OECD (1997), *Literacy Skills for the Knowledge Society, International Adult Literacy Survey*, Paris.
- OECD (1999), *Employment Outlook*, Paris.
- Saint-Paul, G. (1996), “Exploring the Political Economy of Labour Market Institutions”, *Economic Policy* 23, 265–300.
- Schelling, T. (1978), *Micromotives and Macrobehavior*, New York: W.W. Norton & Company.
- Schettkat, R. (2002), “Institutions in the Economic Fitness Landscape: What Impact do Welfare State Institutions have on Economic Performance?”, *IZA Discussion Paper* 696.
- Sinn, H.-W. (1998), “Der Sozialstaat in der Zwickmühle”, *Handelsblatt*, November 24, 53.
- Wolf, E. and T. Zwick (2002), “Partizipation erhöht Produktivität”, *ZEW News*, March 2002, Mannheim: Zentrum für Europäische Wirtschaftsforschung.