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# Structural Revolution: The Interaction of Product and Labor Markets

*Labor market rigidities are often claimed to be at the root of the European unemployment problem. The following article contends that this is not a very plausible explanation. The author presents a theoretical approach based on the interaction of both sides of the market, different from common business cycle explanations. He argues that employment growth is indeed compatible with social security and that market economies do not need to converge to a uniform institutional setting. Structural change needs to be supported by macroeconomic policies, however, which has been the case in the USA and in the Netherlands but not in Germany.*

Economic development since the mid-20th century can be divided into a period of unparalleled prosperity up to the early 1970s, a period of relative stagnation until the mid-1990s and a final period of renewed economic growth (especially in the United States). This last period is often labeled the "new economy". The adjective refers to a wide range of developments like the internet, e-commerce, economic growth without inflation, recovery of productivity gains and increasing share values. However, the brevity of this period of the "new economy" and the fact that it has been confined to the USA have suggested that these trends may simply be signs of a prolonged upswing rather than heralding the start of an economic era as such. Be that as it may, the attention of the world focuses on the news from Wall Street and the latest rumors from Silicon Valley. The hopes for the "new economy" are primarily based on an expected positive interaction between high productivity gains and high income growth, ending the comparatively low productivity and income gains seen in the United States in the 1970s and 1980s. Indeed, in the late 1990s productivity growth in the United States reached levels last experienced in the 1960s, a period still remembered for its historically high productivity growth rates (see Table 1).

The European experience has been different. Although productivity growth slowed in the 1970s and 1980s compared to the 1960s, European productivity remained much higher than that of the United States throughout the 1970s and 1980s. However, Europe suffered rising unemployment, often misleadingly related to technological progress. In the 1960s, annual productivity growth in Germany was about 4.3 per-

cent, employment was stable at a very high level and, as in most northern European economies, growth was labor-supply constrained, per capita income increased by 4.2 percent a year and the internationally comparable unemployment rate was below one percent (see Table 1). Despite these high productivity gains, Germany experienced labor scarcity and workers were actively recruited, mainly from southern Europe. From the early 1970s on, productivity gains were substantially lower and employment (as measured by employment-population ratios) suffered a slight decline. This was disguised in the official unemployment figures by early retirement measures.<sup>1</sup>

Why did the economic situation change so dramatically and what is the basis of current hopes for the new economy? In Europe the causes of high unemployment have been sought almost entirely in labor market mechanisms (labor market rigidities), which are claimed to be at the "root of the European unemployment problem".<sup>2</sup> This view is certainly shared by the European Central Bank (ECB), which has sole responsibility for monetary policy in almost the entire EU and claims that "structural unemployment" in Europe is high. The US developments may, however, be a strong warning against the ECB view. In the USA it was long believed that the "structural rate of unemployment" (or the NAIRU) was around 6 or 6.5% but this was obviously untrue since the country experienced an employment boom in the 1990s, with unemployment rates falling to around 4% even with declining rates of inflation.

<sup>1</sup> See R. Schettkat: The Labor Market Dynamics of Economic Restructuring. The United States and Germany in Transition, New York 1992, Praeger.

<sup>2</sup> E.g. H. Siebert: Labor Market Rigidities: At the Root of Unemployment in Europe, in: Journal of Economic Perspectives, Vol. 11, 1997, No. 3, pp. 37-54.

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**Table 1**  
**Growth Rates of Productivity, Per Capita Income**  
**and Employment-Population Ratios, and**  
**Unemployment Rates**

(Annual averages for the USA, the Netherlands  
 and Germany; from 1990: united Germany)  
 (in percent)

	USA	Netherlands	Germany
<b>Growth of productivity per person</b>			
1960s	2.32	3.87	4.26
1970s	0.75	2.70	2.57
1980s	1.26	1.60	2.10
1990s	1.87	1.15	1.95
1995-2000	2.15	0.86	1.76
<b>Growth of GDP per head of population (15-64 years)</b>			
1960s	2.48	3.50	4.22
1970s	1.39	1.52	2.16
1980s	2.25	0.97	1.23
1990s	2.19	2.21	1.33
1995-2000	2.66	2.67	1.49
<b>Growth of employment-population ratios</b>			
1960s	0.16	-	-0.04
1970s	0.63	-1.05	-0.40
1980s	0.93	-0.10	-0.19
1990s	0.31	1.51	-0.01
1995-2000	0.50	2.08	-0.26
<b>Unemployment rates (US concept)</b>			
1960s	4.7	-	0.6
1970s	6.4	4.5	2.3
1980s	7.1	8.9	6.1
1990s	5.8	5.4	8.2
1995-2000	4.2	9	3.5

Sources: computations based on OECD Economic Outlook database; BLS international comparative labor statistics.

In the Netherlands too, structural unemployment rates seem to be much lower than past estimates have suggested. Again, unemployment has declined substantially without strong signs of accelerating inflation. In the case of Germany, therefore, some caution concerning structural unemployment seems necessary. Of course, there are some particularities in the German labor law and in some labor court decisions, but the example of the Netherlands demonstrates that countries with much more rigid labor market structures than Germany can create employment gains higher than those of the United States (see Table 1).<sup>3</sup>

Many economists, especially in the United States, emphasize the role of macroeconomic policy – and especially monetary policy – in creating high and persistent European unemployment. Robert Solow, for example, argues that economic growth in Europe

has been retarded by overly tight monetary policies and that this has contributed to European unemployment.<sup>4</sup> I would like to suggest another theory, which does not compete with the macroeconomic explanation but rather complements it. This theory emphasizes the interaction of product and labor markets by combining the effects of supply and demand. Traditional macroeconomics usually abstracts from the structure of industry and thus from the impacts that the composition of industry may have on economic development. Actually, economic development is closely linked to changes in the industrial structure, and changes in the industrial structure of our economies have been dramatic and of increasing importance. We still speak of “industrialized economies” when referring to Western Europe and North America, but actually our economies have undergone a revolutionary change towards services. In the argument presented here, however, demand will not be reduced to aggregate demand; instead, the structure of demand and changes in it will be regarded as important. However, I would also like to distinguish this theory from purely supply-side theories, which regard productivity gains as sufficient to produce employment growth. Instead, I will emphasize the interaction of supply-side technological progress – process and product innovations – with demand for specific products. Economic growth and employment trends are regarded as complex dynamic processes, in which productivity growth can cause employment to rise but also to decline.

It is necessary to identify and highlight the conditions under which high productivity growth and stable employment interact positively to create periods of great prosperity like the 1960s. The most important of these conditions seems to be a combination of a specific supply-side development (high productivity growth) with highly price-elastic product demand. This model can explain not only periods of prosperity but also those of stagnation and dramatic changes in the structure of industry.

This paper will show first of all why the diagnosis of sclerotic European labor markets is not a very plausible explanation for European employment problems. This argument will then provide the grounds for a theory based on the interaction of both sides of the

<sup>3</sup> R. Schettkat: How bad are welfare state institutions for economic development? The amazing vitality of the European Tigers, in: Challenge, January/ February 2001, pp. 1-21.

<sup>4</sup> R. Solow: The European Unemployment Problem, in: CESifo Forum, Spring 2000, pp. 3-5.

market, consistent with institutional trends and very well able to explain periods of prosperity and stagnation, but different from common business cycle explanations. The theory will be illustrated by reference to economic trends in Germany, the Netherlands and the United States.

### Supply Instead of Demand?

Demand-side policies formed the credo of the Keynesian economic theories which quite successfully dominated thinking until the early 1970s but then came under pressure, partly because of changes in the institutional environment like the breakdown of the Bretton Woods system of fixed exchange rates in response to the Vietnam War deficit in the United States. Flexible exchange-rate regimes led to the dominance of monetary policies in government practice, paralleling the switch in economic doctrine away from "imperfect market" Keynesian theories in favor of the monetarist and new-classical macroeconomics which then dominated the scene until around the late 1980s.<sup>5</sup>

The Keynesian trade-off between inflation and unemployment was most clearly expressed by Helmut Schmidt, the former German Chancellor, himself an economist, who once argued that 5% inflation was preferable to 5% unemployment. This view of the Phillips trade-off between unemployment and inflation or the "menu of choice" was replaced by the NAIRU (Non-Accelerating Inflation Rate of Unemployment) as the major policy guideline. Nominal variables could affect the real economy only in the short run. When unemployment is below the NAIRU, inflation will accelerate and when it is above the NAIRU inflation will decline. The NAIRU is thought to represent equilibrium unemployment, in the sense of representing the optimal (utility-maximizing) choices of individuals given the institutional framework of the economy.

Accordingly, it is assumed that neither demand-side stimulation nor monetary expansion can reduce unemployment; only institutional reforms affecting individual labor supply decisions can do that. The theoretical basis for this analysis is the assumption that markets are in equilibrium, where equilibrium is interpreted as a situation where all agents have successfully modified their behavior to match institutional

incentives or resources and have achieved optimum utility given the institutional framework of the economy. If the NAIRU is regarded as too high, those aspects of the institutional setting which are regarded as producing "wrong" incentives need to be adjusted.<sup>6</sup> Clearly, the European debate on unemployment was based on the absolute conviction that the NAIRU was capturing the major causes of European unemployment. This meant that "deregulation" was at the top of the policy agenda but "institutional rigidities" may have been overemphasized.<sup>7</sup>

### Incentive Structures

The policy conclusions derived from the theoretical discussion emphasized the "right" structure of incentives, deregulation and private rather than public investment. However, these conclusions were derived from an idealistic model of perfect markets in which social welfare state institutions can only be sand in the gearbox. From the point of view of proponents of the "perfect-market" model, social welfare state institutions must either distort the incentive structure or, if in line with market forces, be unnecessary. In the real world, however, where perfect markets are a theoretical fiction rather than a description of actual situations, unions may actually – depending on the policies they pursue – improve the working of the market, for example by identifying work problems in no way transmitted through prices, or only transmitted at high cost.<sup>8</sup> In the real world, therefore, with all its imperfections, the value of institutions may be very different from that under an ideal Walrasian model. Of course, incentives influence economic activity, but the direction of that influence is unclear and it is even more unclear whether the right incentives will be sufficient to create high economic activity.

The less highly regulated US labor market is thought to correspond more closely to the perfect market model than the regulated, unionized labor markets found in European welfare states. This assumption has been combined with the perceived better performance of unemployment in the United States to produce the conclusion that the US NAIRU – the unemployment rate at which inflation is stable –

<sup>7</sup> R. Solow, *op. cit.*; O. Blanchard: European Unemployment: The Role of Shocks and Institutions, mimeo, MIT 1999; O. Blanchard, J. Wolfers: The Role of Shocks and Institutions in the Rise of European Unemployment: The Aggregate Evidence, in: *Economic Journal*, Vol. 110, 2000, C1-C33.

<sup>8</sup> See A. O. Hirschman: *Exit, voice, and loyalty; responses to decline in firms, organizations, and states*, Cambridge, Mass. 1970, Harvard University Press; R. B. Freeman, J. L. Medoff: *What do unions do?*, New York 1984, Basic Books.

<sup>5</sup> A. S. Blinder: *Central Banking in Theory and Practice*, Cambridge, Mass. 1998.

<sup>6</sup> For a more comprehensive discussion see R. Schettkat: *The Labor Market Dynamics of Economic Restructuring. The United States and Germany in Transition*, New York 1992, Praeger.

is lower than that in Europe. This in turn has led to the conclusion that European unemployment must be caused by institutions like employment protection, unemployment insurance, social assistance, high taxes, unions etc. The final argument, which seems to destroy any chance of country-specific alternative institutional arrangements, is globalization. This, it is argued, will force countries to adopt the same optimal institutional framework. Countries which fail to do so will lose out in a world of globalized capitalism and will experience economic decline.

**Role of Labor Market Rigidities**

At first glance, the employment differences between the United States and Germany appear to match the institutional differences, but both theoretical and empirical analysis reveal factors which cast serious doubt on the hypothesis of "institutional rigidities at the root of European unemployment". These may be summarized as follows:

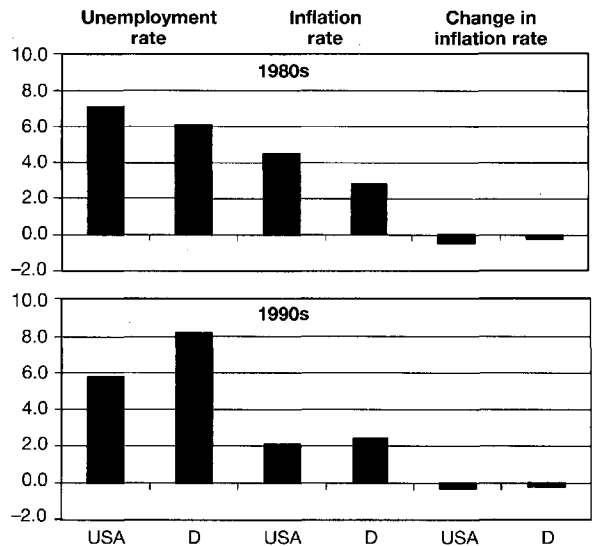
- The institutional differences already existed in the 1960s and 1970s, when Germany had lower unemployment than the United States.
- Institutional change in Germany and other European countries should have reduced rather than increased structural unemployment. Replacement rates have been lowered, conditions for work acceptance have been tightened up, fixed-term contracts have been made easier, unions have lost influence etc. The argument against explaining the rise in European unemployment by reference to institutional change is probably best summed up by Robert Solow: "the timing is wrong".<sup>9</sup>
- From the theoretical point of view, the effects of employment protection are not necessarily negative but rather ambivalent.<sup>10</sup> Empirical analyses of "natural experiments" show that easing fixed-term labor contracts has little or no effect on employment.<sup>11</sup>
- Actual employment trends in many European welfare states (such as the Netherlands and Denmark) demonstrate that social security is fully compatible with high levels of employment and high employment gains. The Netherlands, for example, has experienced

<sup>9</sup> R. Solow, *op. cit.*

<sup>10</sup> G. Bertola: Job security, employment and wages, in: *European Economic Review*, Vol. 41, 1990, pp. 1147-1161.

<sup>11</sup> Compare the analyses of the German "Beschäftigungsförderungsgesetz" summarized in S. Fuchs, R. Schettkat: *Regulated Flexibility: German Labor Market Institutions*, in: G. Esping-Andersen, M. Regini (eds.): *Why deregulate labour markets?*, Oxford 2000, Oxford University Press, pp. 211-244.

**Figure 1**  
**Unemployment Rates, Inflation Rates (GDP) and Changes in the Inflation rate, USA and Germany**  
 (10-year annual averages)



Sources: Computations based on BLS and OECD.

even higher employment growth than the United States but is a typical European welfare state with an institutional structure more rigid than that of Germany.

- The trend in unemployment in the United States has shown that the structural unemployment rate must be far below the widely assumed NAIRU of 6 to 6.5 percent. Without increasing inflation, the United States has achieved an unemployment rate of about 4 percent.
- It is surprising that the hypothesis has even been advanced that US institutions are preferable to those in Germany. In the 1980s, the NAIRU estimates for the United States were around 6 percent and the average actual unemployment rate was 7.2 percent, accompanied by a 4.5 percent average inflation rate. The German unemployment rate at that time was 8.2 percent according to the national definition, but only 6.1 percent according to the definition used in the USA. In other words, the comparable German unemployment rate was actually below that of the USA. In addition, the inflation rate in Germany averaged only 2.8 percent (cf. Figure 1). This hardly supports the view that US institutions were more successful and therefore preferable.
- It has been shown that the relative unemployment rate of low skilled workers in countries with a flexible wage structure is roughly similar to that in countries with "rigid" wage structures.<sup>12</sup>

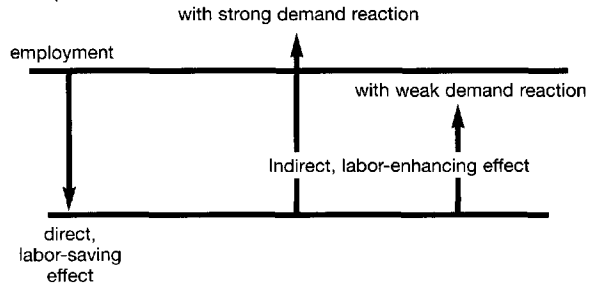
□ Qualifications in Europe and the United States are very different, meaning that the direct comparison of wage differentials uncontrolled for these skill differences may be very misleading.<sup>13</sup>

There are therefore many good reasons to look for factors other than labor market rigidities which may have produced employment problems in Germany and elsewhere in Europe. Are there situations which particularly favor economic prosperity? What were the specifics of the “Golden Age” of the capitalist market economies? When do high productivity gains lead to higher income and employment? Is the industrial structure of economies important?

**Effects of Productivity Gains**

First of all, productivity gains reduce the amount of labor necessary to produce a given output; in other words, the direct effect of productivity growth is labor-saving. Simultaneously, productivity gains reduce costs; if these cost reductions are not fully off-set by wage or profit increases, they enable price reductions to be made. In turn, lower prices can stimulate demand for products and, if demand responds strongly to price reductions (if demand has a price elasticity greater than 1), the market may expand (indirect effect). The market expansionary effect of productivity gains can - depending on the degree of price elasticity - offset or even outstrip the direct labor-saving effect (see Figure 2). Thus, it is the demand situation in the market that determines whether the net effect of productivity growth is positive or negative. In a very specific case where the price elasticity is equal to one and productivity gains are fully passed on in the form of price reductions, employment will be unchanged. In other words, in this specific situation the net effect is zero. If the price elasticity is low (if demand responds only weakly to price reductions), the labor-saving effect will dominate the market-expanding effect of productivity growth and employment will decline. On the other hand, if the demand response is strong, employment growth can keep pace with the increase in productivity. It is the interaction of the two sides of the market (supply and demand) that determines the net employment effect of productivity growth. The net employment effect of any given productivity rise will depend on the distribution of the productivity gain and, if it is passed on in the form of lower prices, the effect will depend on the demand response. If price

**Figure 2**  
**Net Employment Effects of Productivity Growth**



elasticity is high, employment will grow; if not, employment will shrink.

**Demand Elasticity**

Professor Jan Tinbergen described economic development as a race between productivity gains and demand expansion. The employment level is only “sustainable” if demand expands at the same rate as productivity. If demand lags behind productivity, employment will shrink. It is the interplay of supply and demand in product markets that determines employment; therefore, product markets influence labor markets.

Over time, sustainable growth may occur if supply improvements encounter appropriate demand responses. So productivity gains are not sufficient in themselves: they must meet with unsatisfied potential demand. The ever more efficient production of “old” products which are already enjoyed by every household will not be sufficient to stimulate demand from potential customers. New products and new markets must develop, as explained by Schumpeter in his innovation theory.<sup>14</sup>

The elasticity of demand is influenced by a multitude of variables:

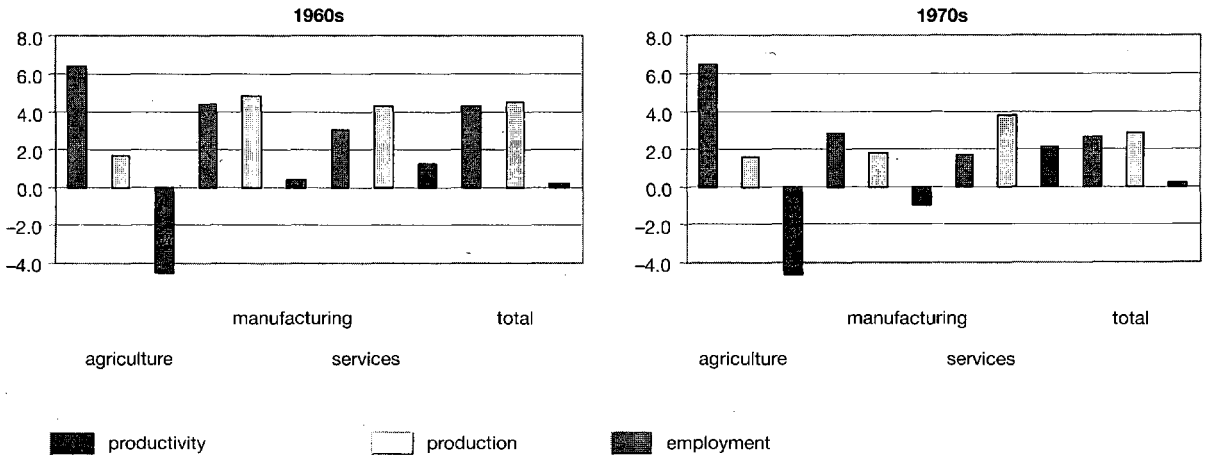
- the novelty of the products (product innovation)
- market diffusion
- price
- income
- expectations of future income.

<sup>13</sup> R. B. Freeman, R. Schettkat: Low Wage Services: Interpreting the US-German difference, NBER working paper No. 7611, Cambridge, Mass. 2000.

<sup>14</sup> Joseph A. Schumpeter: Theorie der wirtschaftlichen Entwicklung. Eine Untersuchung über Unternehmerrisiko, Kapital, Kredit, Zins und den Konjunkturzyklus, Munich 1911.

<sup>12</sup> S. J. Nickell, B. Bell: Changes in the Distribution of Wages and Unemployment in the OECD countries, in: American Economic Review, Vol. 86, 1996, No. 5, Papers and Proceedings, pp. 302-308.

**Figure 3**  
**Growth Rates of Productivity, Production and Employment by Industry**  
 (annual averages)



Individual countries or regions can improve demand for their products by exporting but this is not a viable strategy for all countries simultaneously.

Cellular phones are a case in point. Their wide diffusion is due to several factors: they are useful, for a while they were a status symbol and – most importantly of all – the huge drop in their price has brought them within reach of the masses. They are not as cheap as the advertisements suggest, but they have certainly experienced a substantial decline in price. Lower prices were made possible by productivity gains and are the necessary precondition for mass consumption. Only high productivity growth can provide a high standard of living for everybody. Productivity gains are the precondition for “democratic” wealth (Harrod), i.e. for income growth for a majority and not just a minority.

Changes on both the supply and the demand side are unevenly distributed across industries, and this leads to substantial changes in industrial structure.

**Structural Revolution**

Although they are still labeled industrialized countries, Western Europe, North America and Japan now have most of their workers employed in producing services rather than goods. Almost unnoticed by the public and in the academic debate, there has been a virtual revolution in the structures of production in these countries.<sup>15</sup> In 1970 – only 30 years ago! – about 47 percent of workers in Germany were employed in manufacturing industries and 9 percent in agriculture. By 1999 these shares had fallen to just 37 percent and 3 percent respectively, while employment in services had increased from 42 percent in 1970 to 60 percent

in 1999. Even in the late 1990s, however, the proportion of service sector employment in Germany was still substantially lower than in the USA (73 percent) and the Netherlands (74 percent). Service sector employment is often equated with badly paid, insecure jobs. This is obviously true of some services (McJobs) but the assumption is far too strong as a generalization. Some services (e.g. consultancy and accountancy) offer highly paid jobs and even in manufacturing industries the best paid jobs are non-production activities (management).

Until the 1970s manufacturing was the engine of economic growth. High productivity gains in manufacturing were transferred 100 percent into expanding production, so that employment in manufacturing remained stable or even increased (Figure 3). In almost all “industrialized countries”, manufacturing employment peaked in the early 1970s both in absolute terms and relative to overall employment.<sup>16</sup> Since then, it has declined in all industrialized countries as a share of overall employment and in Europe it is falling even in absolute numbers.

The decline of employment in manufacturing industries is not, as is often assumed, the result of a higher pace of technological progress; on the contrary, it has occurred at a time when productivity growth was lower, though still higher than demand expansion. In the early 1970s productivity gains were

<sup>15</sup> V. Fuchs: An agenda for research on the service sector, in: R. P. Inman (ed.): *Managing the service economy: prospects and problems*, Cambridge 1985, Cambridge University Press, pp. 319-325.

<sup>16</sup> A. Singh: *Manufacturing and de-industrialization*, The New Palgrave, London 1988, McMillan.

substantially higher than in the subsequent periods. Productivity has continued to grow but has done so at lower rates, contradicting technological unemployment or "end of work" scenarios. Changes negatively affecting employment and income growth have occurred mainly on the demand rather than the supply side. The price elasticity of demand for manufactured goods declined<sup>17</sup> and thus employment in manufacturing as is observable everywhere in the industrialized economies.<sup>18</sup>

The 1960s were the boom years of the "white goods" industries, which supplied European households with refrigerators, washing machines, toasters, cars and other household products. It was a period of "first buys" for most European households, unlike those in the United States, where this development had begun as far back as the 1930s. The increased income caused by high productivity gains was spent on goods from the industries experiencing them and thus stabilized employment in manufacturing. It was a positive cycle of productivity gains, income growth, demand expansion, increasing production, stable employment and additional productivity gains (induced by investment and economies of scale), as theoretically analyzed by Allyn Young.

Since the early 1970s, however, expansion in demand for the products of the manufacturing industries has lagged behind productivity growth and employment in manufacturing has declined. Product markets have changed. The products in highest demand among households are now services rather than goods. The share of services in private consumption is around 75 percent in the USA and about 66 percent in Germany.<sup>19</sup>

**Services Instead of Goods**

Services are an "amorphous concept"<sup>20</sup> because they can be sharply distinguished neither from the rest of the economy nor from each other: some services are mainly produced for the business world (intermediate services), while others are mainly produced for households. The services sector boasts highly qualified McKinsey-jobs at one end of the spectrum but is tainted by dead-end McDonald-jobs at the other. In other words, jobs in the service industries are at least as diverse as in the manufacturing sector.

The allegation is often made that the service sector growth in the United States (which some claim to constitute the major part of total employment growth) merely represents outsourcing of activities from private households and not "real new jobs". Certainly

<sup>17</sup> J. Möller: Income and Price Elasticities in Different Sectors of the Economy, in: T. ten Raa, R. Schettkat (eds.): The Growth of Service Industries, Cheltenham 2001, Edward Elgar, pp. 167-209 (forthcoming).

<sup>18</sup> E. Appelbaum, R. Schettkat: Are prices unimportant? The changing structure of the industrialized economies, in: T. ten Raa, R. Schettkat (eds.): The Growth of Service Industries, op. cit., pp. 121-131.

<sup>19</sup> G. Russo, R. Schettkat: Structural economic dynamics: myth or reality? Structural change and the final product concept, in: T. ten Raa, R. Schettkat (eds.): The Growth of Service Industries, op. cit., pp. 132-166.

<sup>20</sup> Z. Griliches: Introduction, in: Z. Griliches (ed.): Output Measurement in the Service Sectors, NBER Studies in Income and Wealth, Chicago 1992, University of Chicago Press, pp. 1-24.

Achim Güssgen/Reimund Seidelmann/Ting Wai (eds.)

**Hong Kong after reunification**

**Problems and perspectives**

Hong Kong's reintegration into China (PRC) has led to a major political debate about the future of the Special Administrative Region Hong Kong.

On the one side concerns about political and economic developments mainly critical of China and her take-over of Hong Kong have dominated the public debate; on the other side Hong Kong's reunification is regarded as an opportunity for modernization, democratisation, and self-rule of a former colony.

This book combines academic expertise and evaluation, major political statements and documents, with views from media representatives. Critical and supportive views on the political, economic, socio-cultural, and foreign policy perspectives are collected in order to reflect the political dispute about the past and the future in and about Hong Kong on the base of detailed and fact-oriented analysis.

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activities are outsourced from private households, but this process is characteristic of the whole of economic development, which started with autarchic households and proceeded via the increasing specialization of labor. Specialization is the key to productivity gains and wealth-expansion, a process analyzed by Adam Smith, whose writings are usually regarded as marking the birth of economics as a science.

The increasing demand for services is to some extent linked to the increasing complexity of our society, which requires increasing amounts of education, legal advice, accountancy services, etc. It is certainly linked to the rising demand for entertainment, travel and leisure activities. But it is also related to the advantages of specialization in working and domestic life (outsourcing of services from businesses and households).

Specialization is no problem if it leads to efficiency and productivity gains which are related to learning effects and the spread of high fixed costs. Some professional services, like those of lawyers or tax consultants, require high investments in human capital which lead to efficiency gains through scale economies internalized in persons. Even if it were possible for individuals to acquire such specialized knowledge, doing so would produce economically prohibitive costs for households and firms. Specialization thus leads to efficiency gains through the distribution of the high fixed cost of investments in specific human capital among several users and through learning.

Of course, there are also services which do not require any specific knowledge and which do not achieve productivity growth (technologically stagnant services).<sup>21</sup> Domestic cleaning, for example, can be done by virtually anybody with roughly the same level of productivity. Professional and do-it-yourself cleaning will take roughly the same amount of time but costs differ. If activities are not perceived as hobbies and enjoyable in themselves (like gardening), households will base their choice of market provision or do-it-yourself on a comparison of opportunity costs and market costs. Opportunity costs consist of the gross wage foregone minus taxes and social security contributions times the hours spent on the activity. But the costs of market provision consist of the time needed by the professional to provide these services times the gross labor costs, which include not just the gross wage but also non-wage labor costs, overheads, profits and value-added or sales taxes. Since

the wedge (the ratio of the net wage over gross labor costs) always shifts the odds in favor of do-it-yourself, the productivity of market provision (the time needed by the professional to perform a service or task) needs to off-set the wedge in order to make market provision of services an attractive option.<sup>22</sup>

Small productivity differences favor do-it-yourself and professional provision will only be economically attractive where there is a big productivity advantage. This is the case as regards the production of goods and is true of many services. As long as the provision of goods and services is accompanied by the high productivity gains made possible by specialization, factors like taxes, social security contributions and other costs of professional provision will not shift the odds irrevocably in favor of do-it-yourself. Big wage differentials between those who demand and those who supply services favor market provision over do-it-yourself. Such wage differentials were the reason why bourgeois households employed maids until well into the last century and they still explain the large numbers of servants employed in developing countries. It is not the productivity advantages of professional provision but simply huge wage differentials that favor the purchasing of technologically stagnant services by high-income groups. Unless productivity in these activities changes, they will never become part of mass consumption.

Based on the analysis of opportunity costs given above, it is not surprising that employment differences in services between the USA and Germany occur not so much in intermediate services but rather in household-oriented, consumer services. Although many economists believe – and some analysis seems to support the view – that American manufacturing firms incorporate more services in their in-house production processes than German firms, this view cannot be supported by the empirical evidence.<sup>23</sup> It is not true that US managers achieve specialization gains which German managers miss. Analyses based on different data sources (detailed employment data by industry and occupation from the German-American Structural Database as well as input-output

<sup>21</sup> W. Baumol: Paradox of the services: exploding costs, persistent demand, in: T. ten Raa, R. Schettkat (eds.): *The Growth of Service Industries*, op. cit., pp. 3-28.

<sup>22</sup> For details see R. Schettkat: *Differences in US-German time allocation*, Utrecht University, Faculty of Social Sciences, Department of Economics, working paper, 2001.

<sup>23</sup> R. B. Freeman, R. Schettkat: *The Role of Wage and Skill Differences in US-German Employment Differences*, in: *Jahrbücher für Nationalökonomie und Statistik*, special edition Wolfgang Franz (ed.), 1999, pp. 49-66.



data) do not support the outsourcing view regarding the US-German service employment gap.<sup>24</sup> The service employment gap is real and not just an illusion produced by measurement error. The major differences between the USA and Germany exist in personal services, as illustrated in Table 2 by the contributions of individual service industries to the overall employment gap in the service sector.

Many of the services shown in Table 2 are privately consumed but some are publicly provided or financed. The list includes “McDonald-jobs”, but also well-paid, highly skilled areas of employment, for example in the educational, research or health sectors,<sup>25</sup> and so illustrates the enormous heterogeneity of the service sector.

**Why Has the Netherlands Prospered?**

The Netherlands is a typical European welfare state with high taxes (including a top marginal rate of income tax of 60 percent), high contributions, minimum wage legislation, strong unions, a high degree of employment protection, legal extension of collective wage agreements etc. Even though these are all institutional features often classified as “employment killers”, they have not prevented the Netherlands from outstripping the USA with respect to employment growth (but not employment levels) at a time when it was suffering as much as the German economy from the tight monetary policies of the Bundesbank and the European Central Bank respectively.<sup>26</sup> In Germany, the Netherlands is often cited as an example of a country with successful deregulation policies and as a proof that “labor market rigidities are at the root of the unemployment problem”.<sup>27</sup> This is a mistaken view. It is true that the Netherlands has “deregulated” its labor market but the regulatory level is still higher than in Germany. Indeed, in the 1970s and early 1980s the Netherlands had a level of regulation which would be unthinkable in Germany. With

respect to labor market regulation, the Netherlands was more similar to Italy than to Germany. Wages were automatically adjusted to take account of inflation (“scala mobile”), notices of dismissal had (and still have) to be approved by employment offices etc.<sup>28</sup>

How could a country with such an “employment killer” institutional framework be so successful? How could a country experience a boom in employment greater than that in the “deregulated” US economy and unemployment rates below 3 percent, while at the same time having an institutional framework in many aspects comparable to that of Germany?

Although it is a well-known fact that about 40 percent of Dutch workers have part-time jobs, the employment gains in the Netherlands cannot be classified as purely working time effects. The main reason for the Dutch employment boom needs to be sought in the coordination of monetary, wage and fiscal policies within an extremely open economy. In 1983 the Dutch guilder was nominally pegged to the German mark, but the extreme wage discipline of the Dutch unions – supported by tax policy – produced lower rates of inflation in the Netherlands than in Germany and thus a real depreciation of the guilder against the mark. Dutch products became cheaper in the main trading countries of the EU and the effect of the real depreciation of the guilder can be clearly seen

**Table 2**  
**The Contribution of Individual Service Industries to the US-German Employment Gap in Overall Services<sup>1</sup>**

Industry	
Legal advice, accounting	3%
National security	3%
Government	-11%
Finance	7%
Education and research	21%
Health	19%
Real estate	5%
Wholesale trade	6%
Entertainment	6%
Bus, taxi, car rentals	6%
Business services	9%
Retail trade	12%
Eating, drinking places, care	16%

<sup>24</sup> Ibid.; G. Russo, R. Schettkat, op. cit.

<sup>25</sup> For details see R. B. Freeman, R. Schettkat: The Role of Wage and Skill Differences in US-German Employment Differences, op. cit.

<sup>26</sup> See R. Schettkat: Small Economy Macroeconomics. The Economic Success of Ireland, Denmark, Austria and the Netherlands Compared, in: INTERECONOMICS, Vol. 34, 1999, No. 4, pp. 159-170.

<sup>27</sup> H. Siebert, op. cit.

<sup>28</sup> R. Schettkat: Von anderen Ländern lernen? Institutionen und ökonomische Entwicklung in Deutschland, USA und den Niederlanden, in: W. Franz, H. Hesse, H.-J. Ramser, M. Stadler (eds.): Wirtschaftspolitische Herausforderungen an der Jahrtausendwende, Tübingen 2001, Mohr-Siebeck; R. Schettkat, L. Yocarrini: Some institutional arrangements in the Netherlands and Germany, Utrecht University, Faculty of Social Sciences, Department of Economics, working paper, 2001.

<sup>1</sup> The services employment gap is computed as the difference between the US and the German figures for employment in services divided by the population of working age (15 to 64 years).

Source: R. B. Freeman, R. Schettkat: The Role of Wage and Skill Differences in US-German Employment Differences, in: Jahrbücher für Nationalökonomie und Statistik, special edition Wolfgang Franz (ed.), 1999, pp. 49-66.

in the export surplus, amounting to as much as 8 percent of GDP in the 1990s.<sup>29</sup> The exogenous data that the Dutch economy needed to accept was the nominally fixed exchange rate but this in turn made a real depreciation possible as a result of wage restraint. Accordingly, the success of the Netherlands occurred not in spite of strong unions but because of them and because of their support for the “Polder Model” of wage restraint and extremely moderate wage policies. Between 1980 and 1999, real wages in manufacturing rose by only 7.5 percent. Given the low rate of unemployment at the time, such a moderate wage policy would have been unthinkable with fragmented unions.

Exports from the Netherlands, as from any other country, are concentrated in manufacturing, but the employment gains have occurred in the service sector, where part-time work is concentrated and fixed-term contracts are common, although permanent full-time jobs are still the rule.<sup>30</sup> Productivity growth in the Dutch service industries is substantially lower than in manufacturing and the Dutch employment boom relies – like the employment expansion in the United States in the 1970s, 1980s and early 1990s – largely on increased labor inputs (see Table 1). Aggregate demand in the Netherlands has been stabilized through exports, which have then translated into employment gains in services.

### **Structural Change Needs Macroeconomic Support**

The Netherlands, like the United States, has relied on the coordination of macroeconomic policy to achieve the current boom, although the two countries have achieved it via totally different instruments. Given the stability-oriented tight monetary policy of the Bundesbank, the Netherlands used the option of a moderate wage policy and in this way stabilized aggregate demand by expanding the export surplus. The USA has expanded mainly through high domestic demand and off-set its export deficit through capital imports made possible by the “Wall-Street-Dot-Com bubble”. The expectations of future profits in the IT industries have obviously outweighed the negative prospects signaled by an increasing export deficit, so that in the end the US dollar has even been able to appreciate substantially against the euro. German exports were stimulated in 2000 by the depreciating euro but domestic demand has traditionally lagged

behind, a trend which may in turn be related to the limited options for expansion in service industries. This may partly be resolved by the stimulus of the coming tax reform.

The experience of the Netherlands – and other European countries like Denmark – shows that a high level of social security is compatible with high employment growth. But it also shows that a high level of social security depends on a high degree of integration into employment, since social security contributions need to be accepted and financed. The Netherlands has not “deregulated” its institutional arrangements but has to some extent reduced its past very high level of regulation. This actually means that Dutch institutional arrangements are now more similar to those in Germany. Apparently it does not take a revolution in social policy to stimulate employment growth and small adjustments seem to have been sufficient in the Dutch case.

The example of the United States shows that there is no “end of work” in the industrialized economies but that, on the contrary, gainful employment can be further expanded. Western Europe certainly appears not to have reached its limits in this respect. Although employment in the traditional manufacturing industries will probably continue to shrink, many service industries seem to be far from exhibiting any signs of saturation. There is a huge potential demand, but this is not being activated automatically. Rather it is tending to suffer from Baumol’s cost disease.<sup>31</sup>

The new economy seems likely to bring a new “Golden Age” of high productivity and income gains combined with stable or rising employment, but the interpretation of the signs is ambivalent.<sup>32</sup> Even ordinary business upswings increase wealth permanently, but business upswings – however brief or prolonged – can only occur if the ECB is prepared to identify the structural unemployment rate in Europe. If the ECB adheres to an excessively stringent monetary policy, the real structural unemployment rate will never be known, and it seems that structural unemployment in Germany – as in other countries – has been overestimated. If monetary policy is effective in contracting an economy and if it is based on an overestimated NAIRU, unemployment in Germany and the rest of Europe will never disappear. It will become a self-fulfilling prophecy.

<sup>30</sup> Ibid.

<sup>31</sup> See W. Baumol, *op. cit.*

<sup>32</sup> A. Blinder: Can’t We Grow Faster?, in: *The American Prospect*, September-October 1997.