EMployment dynamics: a comparison of the United States, Germany and Japan

Summary of a study by the Austrian Institute of Economic Research ("Die Beschäftigungsdynamik in den USA im Vergleich zu Deutschland und Japan", Wien 1998)

by Stephan Schulmeister

While their economies were growing at approximately the same pace in the past 25 years, the United States and Germany have nevertheless experienced significant differences in the development of employment, labor productivity and real wages. In the United States, unemployment remained about constant over the last 25 years, while labor productivity and real wages were almost stagnant; in the European Union, on the other hand, unemployment exploded while productivity and real wages showed substantial increases

The study focuses on the following issues:

- Why did Germany and (Western) Europe in general enjoy full employment until the early 1970s and why has unemployment risen so conspicuously since?
- What were the factors that caused unemployment during post-war prosperity in Europe to be much lower than in the United States but much higher in the crisis period of the last 25 years?
- Why did labor productivity rise so much faster in Europe than in the United States in both periods?
- Is growing income inequality an (unavoidable) price for higher employment?
- What are the social costs of the American and European approaches, and what are the main differences in their performance for society as a whole?

The study examines the change from a regime of sustained full employment to a regime of rising unemployment by comparing two hypotheses:

- The neoliberal hypothesis expresses the currently dominant view that the magnitude of (un)employment is determined in the labor market, primarily by the level of real wages (including non-wage labor costs).
- The "systemic" hypothesis assumes that the input of labor relative to capital does not depend on the labor costs relative to the capital costs, but rather on irreversible technological progress. From this point of view,

1) The original study also considered employment trends in Japan, although these are ignored in this summary. As the study covers the period since 1960, only Western Germany (for reasons of simplicity referred to as "Germany" below) is included rather than all of Germany.
unemployment is the result of interacting economic, social and political variables, and reflects therefore the performance of the "system society" as a whole.

1. The neoliberal hypothesis

According to the neoliberal, or neoclassical, theory, supply and demand in the labor market determine the level of real wages and thus the level of employment. When unemployment rises as a consequence of "demand shocks" such as the two oil price shocks, job losses can be compensated only when moderation is exercised with regard to real wages; this calls for high wage flexibility, which is, however, hampered by unemployment benefits and other "rigidities" such as labor protection, minimum wages and the power of unions. Since the 1970s, flexibility must extend not just to the level of real wages, but also to their dispersion: mainstream economics contend that as a result of technological progress and of globalisation, demand for less qualified workers is declining, so that wage dispersion needs to rise in order to boost employment.

Differences in the development in the United States and Europe serve as empirical proof of neoclassical theory. Advocates contend that in the United States - in contrast to Europe - the level and dispersion of real wages could adjust to structural changes because of its lack of comprehensive labor market regulations, its low unemployment benefits and minimum wages, as well as its weak unions. And while real wages in the United States stagnated since the early 1970s, and their dispersion became increasingly uneven (about 80 percent of the workers suffered wage cuts), employment nevertheless rose by more than 50 percent. In the "rigid" European Union, on the other hand, real wages rose by more than 50 percent, while employment grew only marginally.

Various observations call into question the empirical relevance of these causal links, similarly assumed by the OECD in its "Job Study":

- The contribution of labor to the production costs is not simply determined by changes in real wages. It is rather a function of real wages relative to labor productivity. In the United States, real wages and labor productivity moved in the same direction over the past two decades (i.e. they stagnated); in Europe labor productivity grew even faster than wages (for a comparison between the United States and Germany see Fig. 2). Accordingly, the wage share in national income remained more or less constant in the United States, while it declined noticeably in Europe, and yet, unemployment continued to rise (Fig. 1).

- The much greater labor productivity growth in Europe, as compared to the United States, contradicts the neoliberal hypothesis: if the "rigidity" of European labor markets (stemming from job protection and minimum wages in particular) were truly important this would have to show up in a less efficient allocation of labor and thus weaker growth of productivity.

- In the "flexible" countries (U.S. and U.K.), the unemployment rate displays a much greater dispersion by regions, age, gender and qualification level than in "rigid" Germany, Italy or France – if wage moderation and flexibility


were the main causes of employment growth in the United States, we would observe the exact opposite.

- The contradiction is particularly highlighted when we look at the development of unemployment rates and wages by qualification levels: even though wage dispersion since 1980 has risen by much the greatest extent in the United States and United Kingdom, relative unemployment of the less skilled vis-à-vis the better qualified has since grown and in 1990 was higher than its counterpart in Germany and France.

- The demand shift against low-skilled workers assumed by the neoliberal theory has not been confirmed by the data: since the mid 1980s, unemployment among the better qualified has risen more strongly than among the low skilled in most countries.

- In general, the enormous discrepancy between unemployed job seekers and job vacancies points to the assumption that the rise of unemployment in Europe is not primarily a consequence of demand shifts against low-skilled labor or of a general "mismatch" between demand and supply (if this were the case, excess demand for high-skilled workers and excess supply of low-skilled workers would more or less cancel each other out).

- Even detailed analyses such as that of the OECD in its "Job Study" fail to prove a (positive) correlation between level of unemployment benefits and unemployment rate.

- The greater the influence of "rigidities", the lower should be the turnover in the labor market (i.e. the sum of newly created and terminated jobs relative to overall employment); actually turnover rates are higher in many European countries suffering from high unemployment, such as France, Italy, Denmark or Sweden, than in the United States.

- The more rigid the job protection, the greater should be the bargaining power available to insiders and thus the rise of the real wage gap. Yet, real wages in Europe have grown at a much slower rate than labor productivity over the past 20 years (Fig. 2).

2. The production function in empirical research: factor input and factor prices

The neoliberal explanation of labor demand rests on the (neoclassical) production function where capital input and labor input can be substituted for each other as a function of relative factor prices. In view of the above contradictions between the propositions of the neoliberal hypothesis and empirical evidence, the study examines at the most disaggregated level possible (manufacturing sector and various service industries) and for the economy as a whole the realizations of capital and labor inputs and of the corresponding outputs in the United States, Germany and Japan since 1960 (for an example see Fig. 3). It found the following stylized facts:

- Both in the manufacturing sector and in the economy as a whole labor productivity grows approximately at the same rate as capital intensity; the pace is slightly slower in traditional services like retail trade or personal
services, and quicker in the transport and communications industries (Fig. 4).

− The capital coefficient (the inverse of capital productivity) is accordingly more or less constant in the manufacturing sector and the economy as a whole.

− Even though capital intensity (the capital-labor-ratio) has multiplied while labor input has remained constant, the output-capital ratio has remained the same (which contradicts the law of diminishing returns and thus a basic assumption of neoclassical growth theory).

− Capital intensity grows year after year; the shift to ever more capital-intensive technologies appears to be irreversible and independent of shifts in the factor price ratio: not even the explosive increase in the cost of capital relative to labor towards the end of the 1970s effected a slowdown in the growth of capital intensity (Fig. 5).

− Increases in production are always tied to more capital input (the assumption in neoclassical and endogenous growth theories that output could be increased solely by technological progress was not realized).

− In each of the three countries, capital input and production grew by less than half after 1973.

− Since 1973, the production potential of labor and capital has been used to a much lesser degree than before. Unemployment rose and capacity utilization was markedly lower than between 1960 and 1973.

− The coincidence of slower growth, lower factor utilization and accelerated technological progress – especially due to microelectronics – raises doubts whether long-term economic development is determined solely by supply factors.

Figure 5, which illustrates the case of Germany, shows the strong fluctuations in relative factor prices are almost exclusively the result of the volatile cost of capital; hourly wages grow at a stable pace because they are based on labor productivity; instabilities of the cost of capital in turn are due mainly to the strong fluctuations in interest rates in the credit and bond markets. These stylized facts regarding the cost of capital and labor and the relative factor input are the same in each of the three countries and in all sectors of their economies.

The gap between expectations from the neoliberal hypothesis and the observed development of the relevant variables is the starting point for developing an alternative hypothesis.

3. The systemic hypothesis
This approach would allow for linear-limitational production functions to change over time:

− In the short term, the factor input ratio is fixed; if the output is to be increased, labor and capital inputs need to be raised proportionally, and
therefore, short term demand for labor will be mostly influenced by expectations concerning demand in the goods markets.

- In the long-term, capital intensity increases as a function of technical progress rather than of factor prices: more capital per labor is associated with a different quality of capital, meaning that labor productivity rises with capital intensity. Furthermore, since wages are following changes in labor productivity, the choice between maintaining the previous ray with a given capital labor ratio and shifting to a steeper ray (towards a more capital-intensive process) is independent of relative factor prices.

Based on these assumptions, consistent with the realizations observed in the K-L-Y space, this means that an increase in output can be realized by either of two methods (or a mixture of both):

- Movement along a ray with constant capital-labor ratios: capital intensity and labor productivity remain constant, the additional output is achieved by a greater input of capital and labor of the same quality.

- Movement to a steeper production ray: the additional output is achieved by the increase as well as the improvement of capital equipment per labor and by the related learning process on the part of workers using the new equipment, capital intensity and labor productivity will both increase.

The growth path of the aggregate economy is obtained as a sequence of realizations in the K-L-Y space of the different sectors and thus as the result of plans with regard to the amount of real capital in use on the one hand, and its quality on the other, i.e., the process technology as reflected by the (planned) capital-labor-ratio.

The speed of accumulation and thus of economic growth depends on the expectations held by entrepreneurs with regard to the following factors:

- the dynamics of demand, in particular of private consumption and thus of the growth and the distribution of household income, the public sector demand (in particular investment in infrastructure), and the dynamics of exports and thus also of the exchange rates;

- development of production costs, especially wages and interest rates, as well as the prices for raw materials, in particular crude oil;

- profitability and risk of real investment relative to short-term activities in financial markets, which is tied to the level and volatility of interest rates, exchange rates and raw materials prices.

- readiness on the part of entrepreneurs to incur debts, and readiness on the part of financial intermediaries to grant loans, both of which are determined to a high degree by the rate of interest relative to the rate of growth\(^2\).

\(^2\) It is only when the interest rate is lower than the growth rate that net debtors such as entrepreneurs or the government can raise more loans than they have to pay in interest for "old debts" (i.e. they can maintain a primary deficit), without having their debt position (necessarily) grow faster than the overall economy. When the interest rate is higher than the growth rate, they need to turn their primary balance into a surplus, reduce their borrowing and thus their investments.
It is the rate of realized (process-) technological progress and thus the growth in capital intensity that determines whether economic growth is induced predominantly by increases in labor productivity or by increases in employment (capital- or labor-intensive growth), which depends essentially on the following factors:

- The value assigned to the goal of full employment in economic policy on the one hand, and the value of "lean production" and "shareholder value" on the other hand; the former promotes employment-intensive growth, the latter fosters capital-intensive growth.

- The speed of process-technological progress and its diffusion, and the value assigned to technological competitiveness: An increase in either one will cause the rays with a constant capital-labor-ratio to become steeper, and thus capital intensity to rise.

- The pace of economic growth: the lower the growth rates, the more will the employed (the "insiders") try to achieve growth in real incomes by increasing capital intensity and labor productivity.

- The level of the real exchange rate: sustained currency undervaluation fosters the propensity to invest and thus production growth, especially in exposed sectors marked by an above-average capital equipment per job.

- A highly qualified supply of labor stimulates the implementation of technological innovations and thus of (human) capital-intensive production; a large supply of unqualified labor, on the other hand, will boost production in low-wage segments.

- The quality of labor relations and job protection: the greater the trust in mutual ties between employer and employees, the lower will be the risk of large scale investments, which fosters the expansion of (human) capital-intensive sectors; the hire-and-fire principle, on the other hand, will encourage the creation of low-wage jobs.

- "Generous" unemployment benefits, an active labor market policy and wage policy based on the principle of solidarity help overcome regional and sectoral mismatches by the way of better qualification and more efficient allocation of workers rather than by "downward" wage flexibility.

The interaction between the quantity of real investment and its quality, i.e. the capital equipment per job, makes for three types of growth paths in the K-L-Y space of an economy:

In a macroeconomic setting which encourages the pursuit of profits in the goods markets, real investment and economic growth will be sufficiently vigorous for both employment and labor productivity to grow rapidly; once full employment has been achieved, investment accumulation and economic growth can only be achieved by increasing the capital equipment per job, and with it labor productivity.

If conditions for real investment deteriorate over a sustained period of time, short-term speculative investments on financial markets become relatively more profitable. This will hamper economic growth and generate a conflict
between the goal of increasing employment on the one hand and increased efficiency on the other:

- The labor-intensive growth path does not exploit the efficiency potential of the economy; although employment grows, capital equipment per job and thus labor productivity remain more or less stagnant.
- The capital-intensive growth path, on the other hand, is associated with a rising productivity and increasing real wages; however, when economic growth is sluggish, the employment potential is not exploited, and unemployment rates increase.

Which of the three growth paths is realized depends on the factors determining the development of real investments and of capital intensity and thus of their characteristic combinations. In terms of the macroeconomic conditions, we can distinguish a "prosperity syndrome" and a "crisis syndrome"; in terms of the relationship between market and government as (alternative or complementary) "controlling systems", i.e. in terms of meso- and microeconomic conditions, we can distinguish between the "laissez-faire model" and the "welfare state model".

3.1 The macroeconomic framework: "prosperity syndrome" and "crisis syndrome"

In distinguishing between the "prosperity syndrome," which shaped post-war development until the early 1970s, and the "crisis syndrome", which has been operative since, the criterion generally used is the relative attractiveness of activities in the goods markets and of those in the financial markets.

- The "prosperity syndrome" constitutes a combination of macroeconomic conditions and thus an "incentive system" that guides the pursuit of profit towards long-term investments and innovations in the goods market, i.e. "real" speculation (through fixed exchange rates, low interest rates, stable prices for raw materials, moderately rising share prices, active economic policies aiming at dampening business cycles, stimulating growth and strengthening social coherence, cooperative handling of labor relations, declining inequality of incomes and thus demand stimulation).
- The "crisis syndrome," on the other hand, directs the pursuit of profit primarily towards short-term investments and innovations in the financial markets, i.e. financial speculation (through fluctuating interest rates, exchange rates, prices for raw materials, high interest rates in excess of the growth rate, new speculative tools, especially of futures and options, deregulation and the retreat of the state from an active economic policy).

3.2 The meso-economic framework: "laissez-faire model" and "welfare state model"

The two models describe two types of divisions of "responsibilities" between the state and the market:

- The "laissez-faire model" provides for the state essentially to restrict itself to specifying rules and monitoring their observance. It is the market processes which decide what is produced, how and for whom.
The "welfare state model" has the **state** interfere in these processes to compensating for inequalities, especially with regard to preparations for working life (education system), working life (labor protection) and the interruption (illness, accident or unemployment) or termination (retirement) of working life (social insurance schemes).

Education systems, employment relationships and social security are formed along the lines of long traditions which reflect different social "cultures", so that differences in meso-economic conditions are greater between countries than between time periods.

The economic system of the **United States** follows the laissez-faire model to a relatively large extent:

- educational facilities are in large part run by the private sector;
- labor relations are not regulated by the state; there is no legal barrier to hiring and firing practices;
- labor unions have not much influence, so that wages do not much reflect the solidarity principle;
- the state provides much less protection against income loss as a result of unemployment, illness, accident or retirement than is the case in Europe.

The welfare state model – which is typical for most countries in continental **Europe** – is characterized by a combination of traits as follows:

- an education system organized mostly by the state, aiming to achieve similar qualifications for graduates of each level;
- comprehensive labor protection;
- trade unions that have considerably more power than their counterparts in the United States;
- an inclusive system of social security.

### 3.3 Combinations of the "prosperity syndrome" and the "crisis syndrome" with the "laissez-faire model" and the "welfare state model"

Distinguishing between macro-economic conditions that differ by periods, and meso-economic conditions that differ by countries, we find four combinations:

The "prosperity syndrome & welfare state model" combination determined the growth path of **European** countries until the early 1970s: with stable monetary conditions, active economic policies, and labor relations of a corporatist type, entrepreneurs focused on investment, innovation and production in goods markets in their pursuit of profit.

These complementary conditions prepared the ground for a historically unprecedented growth rate in countries such as Germany. Full employment was achieved in the early 1960s and sustained until the early 1970s. With the supply of labor remaining almost constant, the high speed of growth could be achieved only by increasing and improving capital equipment and worker training: high employment on the one hand and an continuous rise in labor
productivity on the other hand complemented rather than contradicted each other.

The "prosperity syndrome & laissez-faire model" combination determined the growth path of the U.S. economy until the early 1970s: although macro-economic conditions fostered the growth of real capital and production, their expansion was limited by meso-economic conditions; high population growth and a large proportion of relatively low-qualified labor in particular exerted pressure to create jobs in sectors of below-average capital endowment: the growth of labor productivity lagged behind economic growth in general at a much higher rate than in Germany.

The "crisis syndrome & laissez-faire model" combination has determined the growth path of the U.S. economy since the early 1970s: with economic growth slowing down due to macro-economic factors, micro- and meso-economic conditions are found to be very "elastic" in their ability to absorb the growing supply of labor, especially by boosting the volume of low-wage jobs. When uncertainty in terms of interest rates, exchange rates, prices for raw materials and other conditions rises and entrepreneurs hesitate to be tied to real capital, employment can be boosted only when jobs are created which require little capital equipment, i.e., which require low labor costs as well as low capital costs.

For these reasons, labor productivity growth in the United States lagged behind that of Germany at an even greater rate than during the period of prosperity: in a conflict between efficient and employment-intensive growth, which was further aggravated by the "crisis syndrome", the United States realized the second variant by expanding low-wage jobs.

The "crisis syndrome & welfare state model" combination has determined the growth path of continental European countries since the early 1970s: it produced growing incoherence in economic, social and political terms:

- The success achieved by the "European path" during the period of prosperity contributed to the fact that capital endowment per job and labor efficiency continued to be boosted to a greater extent than in the United States; labor productivity rose further and produced higher real incomes.

- Since real capital and overall production growth rates had been halved under the conditions of the "crisis syndrome", the number of jobs grew at a slower rate than the supply of labor, and unemployment rose.

- This points to the fact that the economic system in continental Europe aims to achieve a permanent increase of overall economic efficiency (not least by uniform quality standards in education); in the conflict between efficient and employment-intensive growth, Europe thus realized the first variant.

- The contradiction between the neoliberal design of macro-economic conditions and the welfare-state structures of meso-economic conditions contributed to a great extent to the rise in government debt which in turn made it ever more difficult to finance the welfare state, because high social standards, as compared to the United States, can be maintained only when unemployment remains a cyclical phenomenon.
The incoherence of the "crisis syndrome & welfare state model" combination produced not only an explosive growth of unemployment and government debt, but also an inequality in the distribution of incomes and, generally, in opportunities for the employed and the unemployed, for men and women, for the young and the old. As a result, economic and social development in Europe runs increasingly counter to traditional values, habits and expectations of large parts of the population.

In conclusion, a comparison is given of the responses provided by the neoliberal and systemic approaches to the central issues discussed in the study.

4. **The way from full employment to the job crisis**

From the neoliberal point of view, the rate of unemployment does not depend on the rate of growth. In the short term, demand shocks such as the two oil price shocks will certainly cause job losses, but these can be compensated (only) by market forces and thus call for wage moderation. However, labor markets in Europe remained too "rigid", so that the rise in unemployment during recessions could not be curtailed afterwards and is thus structurally determined.

According to the systemic theory, employment develops as a function of the growth of real capital and (thus) of overall production on the one hand and of the growth of capital intensity (determining labor productivity) on the other hand. The speed of real capital accumulation in turn depends primarily on the profitability of activities in the goods markets as compared to those in the financial markets.

During the period of prosperity, macroeconomic conditions guided the pursuit of profit to long-term speculative activities in the goods markets, i.e. investments, innovations and (international) trade. During this period, European economies expanded much faster than their United States counterpart, mainly due to the coherence between macro- and mesoeconomic conditions were matched: a state active in economic policy and corporatist labor relations complemented macro-conditions that were conducive to real investments and thus to growth.

From the systemic point of view, the two recessions of 1974–75, 1980–82 and 1991–93 respectively were caused not so much by unavoidable "shocks" but by political measures such as the suspension of the dollar's convertibility to gold (the subsequent depreciation of the dollar depreciated export earnings of the OPEC countries and in this way contributed to the two oil price "shocks"), the high interest policy pursued by the United States in 1979–81 (which induced an enormous appreciation of the dollar and thus of the dollar debt of developing countries, thus contributing to the debt crisis of 1982), and by the German Bundesbank in 1989–92, which was one cause of the breakdown of fixed EMS exchange rates.

The main cause for the long-term slowdown of economic growth was the shift of profit-seeking from goods markets to financial markets: instable interest rates, exchange rates and prices for raw materials increased the uncertainty about whether real investments would be profitable and about the cost of their
financing; at the same time, it was these factors which generated new opportunities for profit from short-term speculative activities, fostered at the institutional level by an expansion of derivative instruments.

The rise of speculative transactions fueled the volatility of exchange rates, prices for raw materials, of interest rates and share prices, which in turn dampened real investments and thus overall growth. The situation was further aggravated by the fact that the rate of interest has persistently exceeded the rate of growth since 1980, thus financially restricting the real accumulation of companies. As a result, the latter were much less successful than until the early 1970s in meeting their main economic and social function, i.e., transforming private savings into real capital and thus into jobs. With social spending on the rise (primarily as a result of higher unemployment) and depressed tax revenues, the state "suffered" persistent budget deficits.

5. Differences in employment trends between the U.S. and Europe

In the neoliberal view, the higher (wage) flexibility of U.S. labor markets as compared to (continental) Europe is the chief reason why unemployment has grown at a much more modest rate in the United States since the early 1970s: job protection is negligible, minimum wages are low, unions are weak, and because of low unemployment benefits workers keep their wage aspirations comparatively low.

According to the systemic hypothesis, the high real interest level and greater opportunities for profits from speculative activities on the financial markets went hand in hand with profit aspirations of holders of real capital (as is manifested by the shareholder value philosophy); the demanded greater profitability of real investments called for redistribution in favor of profits, i.e. reducing real wage increases below the rate of labor productivity increase, which can be achieved in two ways:

− increase labor productivity by focusing investment on rationalization: this increases and improves capital equipment per job, and is concentrated on sectors of above-average capital intensity, especially manufacturing;

− reduce real wages and concentrate production on sectors that employ primarily low-skilled labor, combined with a low capital endowment, especially in the (traditional) service sector.

In the United States, a large pool of low-skilled labor, combined with "loose" employment relationships, low unemployment benefits and weak unions, meant that growth in production and employment concentrated on traditional services: labor productivity and real wages stagnated, the number of the working poor rose, as did inequality in the personal income distribution; at the same time employment as such continued to increase.

In Germany, the high level and the low dispersion of the qualification of the labor force, together with corporatist labor relations and a relatively tight network of social security meant that capital equipment per worker was boosted and labor productivity continued to increase; at the same time, personal income distribution remained stable.
In simplified terms: fueled by the "crisis syndrome", and especially the greater appeal of activities on the financial markets, the dynamism of real investment slowed down in both countries. In Germany, investment concentrated on the creation of a few, relatively expensive and highly productive jobs; in the United States, the additional real capital was distributed among many, relatively cheap and less productive jobs.

This development highlights the finding that destabilized conditions for real accumulation ("crisis syndrome") have a much more detrimental impact on the employment situation in a country that has a high share of capital-intensive manufacturing and (suitably) a high export share, such as Germany, than in a country with a high share of traditional services and a relatively low weight of its external sector, such as the United States.

As an additional factor, macroeconomic conditions have developed very differently in the United States and Germany since the early 1990s:

- In the United States, the low interest policy, the undervalued dollar exchange rate, the greater purchasing power enjoyed by the working poor due to an extension of the negative income tax and budget consolidation that was "soft" on aggregate demand thanks to a higher marginal tax rate in the top income brackets (once again) fostered activities in the goods markets, especially investment and exports.

- In Germany, the high interest policy pursued by the Bundesbank, the related appreciation of the DM, a budget policy that dampened demand, a steep decline in inflation and thus continuously high real interest rates led to exactly the opposite development: for the first time since the war, unemployment in Germany and the United States developed in markedly opposite directions: sinking in the United States, it continued to rise in Germany.

6. Unemployment and income distribution

From the neoliberal point of view, the increasingly unequal distribution of wages in the United States is the price for the high growth of employment: as they see it, real wages respond flexibly to the demand shift against low-skilled workers, so that employment has developed much better than, e.g., in Germany. Some observations, however, make this interpretation questionable:

- In the United States, unemployment among the low-skilled as compared to that among the high-skilled is markedly higher than in Germany.

- The relative unemployment rate among the low-skilled has declined in most industrialized countries since the mid-1980s.

- Accordingly, unemployment among all qualification and job groups has risen in the long term.

From the systemic point of view, the relationship between income distribution and unemployment depends to a great extent on overall economic conditions: when these deteriorate substantially, (continued) production efficiency makes for an increase in unemployment, which dampens real wages and increases
inequality in the income distribution. A comparison of developments in the United States and Germany since the early 1970s clarifies the connex:

− In the United States, the rise of labor productivity has come to a virtual halt; with moderate economic growth, a rising proportion of the labor force was employed in those service sectors where capital equipment, qualification profiles and remuneration are considerably below average.

− In Germany on the other hand, labor productivity and real wages continued to rise over the past 25 years, at the same time the greater production efficiency induced a rise in unemployment, given the slow-down of economic growth. Nevertheless, income inequality did not rise because the relatively low dispersion of workers' qualifications at a given education level and a wage policy based on solidarity effectively prevented the emergence of a low-wage labor market.

From the systemic perspective, the structure of the educational system has a significant impact on the development of labor productivity, (aspirations for) real wages, unemployment and income distribution:

− The U.S. system of education, which is primarily run by the private sector, "produces" graduates at all levels who are highly dispersed in terms of the quality of their education and thus their working skills; it is complemented by a large supply of jobs that require no specific qualifications.

− The German system of education emphasizes the desire to ensure uniform quality standards at all levels and for all types of training; as a consequence, the proportion of low-skill jobs is thus much smaller in Germany than in the United States.

The systemic view finds a general tendency that when unemployment rises, it will rise even more among those with lower qualifications: in a "crisis syndrome" situation, not enough jobs will be created; companies tend to employ the relatively best qualified, causing the proportion of the low-skilled to rise among the "residual" unemployed.

7. Unemployment, poverty and social coherence

In the systemic view, the growth of unemployment and inequality of income distribution cannot be solely explained by economic variables, but must be seen in the context of overall social developments.

The trend towards social disintegration linked to the "crisis syndrome," and thus the negative sides of the performance of society as a whole, became manifest in (continental) Europe primarily in unemployment; subsequent problems such as growing income inequality, poverty, social marginalization and rising crime rates, on the other hand, could be held in check by the social security systems.

In the United States, the low growth of "good" jobs in a weakly developed welfare state forced an increasing number of people to take low-paying jobs, especially in the traditional service sector. There, the inefficient performance of society as a whole linked to the "crisis syndrome" became manifest in side-effects such as greater income inequality, growing poverty and rising crime rates (Fig. 6):
The proportion of children in households where the per-capita income is below the poverty level, has risen from 14 percent in 1973 to 22 percent today.

In 1969, 10 percent of white high-school graduates and 20 percent of their black counterparts earned less than was required to keep a family of four above the poverty level; in 1991, their share had risen to 30 percent and 50 percent, respectively. The growing labor participation of women and the rising number of people holding several jobs thus appears to be in part also a consequence of the decline in real wages.

The "Index of Social Health" which assesses the social efficiency of a society as such, has been continuously deteriorating in the United States since 1970.

The prison population rose fivefold between 1973 and 1995, from 0.33 million to 1.66 million. In 1995, two percent of the male American labor force served a prison sentence, with the figure for blacks about eight times that of whites (6.9 percent vs. 0.9 percent).

8. Conclusions for economic policy

From the systemic point of view, the fight against unemployment needs to be "tailored" to the specific conditions prevailing in a society in order to be effective (as contrasted to the neoliberal approach which accepts solely the "laissez-faire" path). In the European Union, a strategy that has prospects of consensus should thus be aimed to renew the "European model" which, as "social market economy", ensured prosperity, full employment and social integration in the first decades after the war. This strategy at the E.U. level would have to be based on the following guidelines:

- Economic and social development is not solely determined by the market mechanism, but is a mix of two principles, competition of individual/private agents at the level of markets and cooperation of public/social institutions at the level of politics.

- At the company as well as at the political level, employers and employees pursue their respective interests not so much as opponents but by through cooperation.

- The interests of the financial capital are subordinated to an expansion of real capital and thus of the goods markets: the pursuit of profit by enterprises is directed towards investment, innovation, production and trade, and thus indirectly to the creation of jobs.

- All the leading decision makers in economic policy – at national and E.U. level – should aim at several goals simultaneously with regard to the use of their instruments: growth of employment, price stability, balanced budgets and social integration.

Their choice and design of policies should be based on the following finding: the main reason for unemployment in Europe is not that the jobless are insufficiently motivated to look for jobs, but that there are not enough jobs that correspond to the qualifications of those looking for a job.
A European employment strategy could have the following key elements to stabilize monetary conditions and focus the entrepreneurial pursuit of profit once again on the goods markets:

− As a precaution against oil price shocks and international debt crises (which are regularly triggered by fluctuations in the dollar price), the completion of EMU should be taken as an occasion to stabilize exchange rates between the two main currencies (dollar, euro, yen).

− The key euro lending rate should be kept stable at a level that ensures that the loan interest rate payable by companies does not much exceed, or preferably is lower than the growth rate in the European Union.

− Interest rate policies should thus focus on fostering real investments rather than be used to fight inflation; this is so because a rise in the interest rate increases production costs and dampens inflation only through an (avoidable) recession.

− A lower interest level in Europe this would also contribute to a modest appreciation of the still undervalued dollar against the euro (as exchange rates between dollar, euro and yen should be stabilized at a "fair" level that reflects purchasing power parity, the dollar would have to appreciate).

− In order to improve the European infrastructure, the concepts proposed in the E.U. White Paper should be gradually implemented, especially the investments in trans-European transportation networks (particularly with a view to the long-term integration of Western and Eastern Europe).

− In addition, an E.U.-wide "environmental offensive" should be launched, aimed particularly at the systematic reduction of toxic emissions of industries and households (improved exhaust gas treatment, promotion of combined heat and power schemes and other investments that help the environment, thermal rehabilitation of buildings, etc.).

− Environmental quality and infrastructure are public goods, and it is thus justified to finance them from taxes; tax revenues could be boosted if tax systems in the European Union, and especially taxes on financial capital gains and energy consumption, were to be harmonized and given an ecological orientation.

− In order to achieve technological progress and the related productivity growth as well as a growth of employment, the working time (over the whole life) should be reduced by flexible working time models, thereby distributing the volume of work more equally. The best way to convince companies to accept such a strategy would be to offer them better utilization of their real capital, i.e. by uncoupling operating hours from working hours.

The European path towards full employment will depend for its success on the number of people who can identify with it and who are willing to commit themselves to it: therefore it should be based on a social model that meets the values and habits of the Europeans, striving for a balance between competition and cooperation, and between the individual and the social interests of its citizens.