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**Research Report**

## Maastricht 2042 and the fate of Europe: Toward convergence and full employment

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The Levy Economics Institute of Bard College

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# ***Public Policy Brief***

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No. 87, 2006

## **MAASTRICHT 2042 AND THE FATE OF EUROPE**

Toward Convergence and Full  
Employment

JAMES K. GALBRAITH



**Public Policy Brief**

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## Preface

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Unemployment in the European Union (EU) is a serious problem that threatens to disrupt the integration of accession countries, the character of individual countries, and the continued existence of the EU. According to Senior Scholar James K. Galbraith, European integration poses a huge conundrum for European employment because the conventional theory explaining unemployment in Europe—labor market rigidities—is wrong. The application of this policy will not cure European unemployment, but it could destroy the economic promise of the EU for its poorer regions and the accession countries.

Expanding upon Public Policy Brief no. 72, Galbraith sets forth a concrete strategy of earnings convergence for the EU that is compatible with a high employment strategy and achievable productivity growth. He finds that countries and regions that are more egalitarian systematically enjoy more employment; this relationship is in accord with correct principles of economics. Furthermore, the relationship of inequality to unemployment in the United States is the opposite of the rigidities framework: in periods of full employment, pay inequality declines. Pay inequalities, therefore, are relevant to the theory of labor market adjustment. The European paradox is that European ideals require convergence, but European policy imposes divergence, which, if rigorously pursued, will result in declining relative pay rates in the poor regions of Europe.

A surprising finding is that intersectoral industrial pay inequalities are larger in Europe than in the United States and that average European incomes are dramatically more unequal than those in the United States when measured across continental distances. Measured across the EU–25, a European cross-regional Gini coefficient is more than twice the analogous value across the United States.

Galbraith calculates the relative growth rates of wage incomes that would be required to achieve income convergence and reduce the interregional inequalities in the EU to American levels by 2042, the 50th anniversary of the Maastricht Treaty. Convergence policy, he says, is the only way for Europe to approach full employment without serious inflation, and to preserve European ideals. Otherwise, the EU faces significant unemployment, unmanageable internal migration, and social dislocation.

Galbraith suggests that an egalitarian growth policy that raises relative growth rates in the poorer regions of Europe is the most powerful medium-term measure for reducing unemployment. He recommends an expansion of regional funds as well as new instruments that support the continental integration of social welfare policy. Continental integration, not flexible labor markets, accounts for America's relative success against entrenched structural unemployment (e.g., Social Security, Medicare, and minimum-wage laws). Galbraith's other suggestions for effective redistributive policy include the creation of a European Pension Union, interregional personal income convergence, directly raising the pay and purchasing power in the nontraded-goods sectors of peripheral Europe, and building European universities to rival higher education in the United States. Galbraith notes that monetary policy has a limited role in a convergence strategy, and he supports a major strategic objective that limits the ability of the European Central Bank to undermine the convergence process.

European policymakers should recognize the true roots of U.S. success in fiscal federalism and Keynesian economics.

As always, I welcome your comments.

Dimitri B. Papadimitriou, *President*

November 2006



## **Maastricht 2042 and the Fate of Europe**

### **The European Paradox**

Why does—why should—any country wish to join the European Union? The answer is plain: to become European. And what does that mean? If it means anything, surely the European dream is to be stable, democratic, and prosperous, with a touch of the “social model” that is supposed to distinguish Europe from the United States. This is obvious, and not only that: it is spelled out explicitly in the founding documents of the union.

For the presently less-prosperous and quite poor regions of the European Union (EU), especially to the east, becoming European requires that they catch up, toward the living standards prevailing in the west. It does not require equality. Living standards in Poland will never equal those in Germany, because the industrial and financial core of Europe will never move from Germany to Poland. But the EU, as a project, does require that the gap between Poland and Germany narrow over time. It also requires that the dramatic gaps that separate wage levels in Estonia and Bulgaria from those in Spain or the Czech Republic be narrowed, even as the Spaniards and Czechs reduce the gaps separating their countries from the truly rich.

This we may call the imperative of income convergence. This brief explores that imperative over a relatively long time, stretching out to the 50th anniversary of the Maastricht Treaty in 2042. Will that landmark be truly a golden jubilee, or will it prove nothing more than a sour footnote in the record of a failed endeavor? This question is facing Europe today. The answer will depend, in part, on whether the convergence imperative is recognized and realized between now and then.

Mathematically, the convergence imperative imposes a simple condition: growth of wages and incomes must be inversely proportional to present wage rates. This does not mean the rich must stagnate. It means that incomes and wages of the rich must grow more slowly than those of the less

rich, and those of the poor should grow the most rapidly of all. The achievement of equal growth rates across regions is not good enough. Equal growth rates preserve proportionate differences, and absolute differences grow over time.

For some time, the force of foreign direct investment has been bringing the start of convergence to some of the accession countries of the EU–25; for instance, the Czech Republic and Hungary. Thanks to appreciating currencies, wages in these countries have been rising quite rapidly—when measured in euros. But wage increases are unlikely to complete the job, for two reasons: investment booms tend to peter out, and once a country joins the euro zone, exchange rate–based convergence will stop. It has already stopped in some of the eurozone’s poorer regions, where the convergence project is also far from complete.

Over the long run, therefore, convergence will not just happen. It must be made to happen. And that means it must be part of an economic policy agenda for Europe.

But here we encounter a problem. Consider the economic policy prescription being advanced across Europe, under the unanimous advice of national governments, the EU, international institutions such as the International Monetary Fund (IMF) and the Organisation for Economic Co-operation and Development (OECD), the media, and, of course, a phalanx of economists, most of them safely protected by academic tenure. This is the project of labor market reform—aimed, it is said, at reducing the mass unemployment that afflicts so much of Europe today.

Labor market reform follows a logic familiar to every undergraduate who has ever taken an introductory economics course. Labor markets are supposed to operate under the guidance of supply and demand, with supply curves sloping upwards (mostly) and demand curves sloping downwards (always). If unemployment exists, the cause must lie in a failure of the real wage to adjust to its equilibrium value. Perhaps technological change and other factors have cut demand for workers equipped with relatively limited skills. To restore full employment, wages paid to such workers must fall. This can be accomplished by weakening unions, cutting job protections and unemployment benefits, and otherwise dismantling market power that rash democratic governments have allowed to accumulate in the hands of the unskilled.<sup>1</sup>

Given that real wages for unskilled work are too high, the remedy must be to reduce them. Labor market reform is the instrument for this reduction. Necessarily, the pay gaps separating skilled from unskilled labor must increase. The program of labor market flexibility envisages kicking the props out from under worker power in whatever forms it exists. That form varies from country to country, with some countries (such as Spain and Italy) favoring job-tenure protections (which do not impose accounting costs on the state budget), and others (such as Denmark and Sweden) placing more emphasis on unemployment benefits, training, and a compressed distribution of wages. To cure unemployment, the authorities and pundits say, all of this must change.

In the medium term, the project envisages that the EU should become flexible enough to reach levels of inequality characteristic of a “dynamic” capitalist economy. For this, many Europeans see a model—when they gaze across the Atlantic at the United States. Like it or not, the American model stands as the template for the degree of inequality that must be achieved in order to enjoy full employment.

A second truism of current economic discussion is globalization. Everyone knows that the boundaries of the economy are no longer at the national frontier. We live in a global economy and workers must therefore face the harsh reality that they compete not only with their compatriots, but with all workers of similar productivity, wherever they are. This reality must be doubly true within the confines of the EU, which lacks even the modest between-country protective barriers of other times and places.

This truism carries a clear implication. We observe, first, that unemployment and underemployment are typically higher in the peripheral regions of Europe, including in the accession countries, than in the relatively prosperous core countries. We observe also that in many of the accession countries, educational attainment is comparatively low. According to the logic of supply and demand, this must mean that the productivity of the accession countries does not justify, or at best barely justifies, the wages that workers make in those countries. It therefore cannot justify rapid wage increases.

Now consider what could happen when unskilled workers in France accept pay cuts, as the doctrine of labor market reform dictates that they must. If workers in Poland fail to follow suit, then in relative terms they must lose competitiveness vis-à-vis their low-skilled counterparts in France.

If Poland had been attracting jobs from France due to lower unit labor costs, some of that benefit may be lost. Faced with wage cuts in France and to maintain position, it follows that the Poles must also reduce their wages relative to what they would otherwise be.

So speaks the logic of globalization, combined with the logic of labor market reform. And since low-productivity workers represent a larger share of the Polish workforce than of the French, wage restraints must be more widely applied in Poland than in France. A similar logic applies further down the chain. Unfortunately, the consequence of this logic is divergence and, in the limiting case, even declining pay rates in the poor regions of Europe.

This is the European paradox. European ideals require convergence. But European policies impose divergence. Once the present phase of investment-driven convergence passes, pressure for divergence must fall heavily on the poorer countries. Of course, pay is the largest part of income, and income is the most important determinant of living standards. It follows that the application of labor market reform in Europe must mean slower growth of incomes and living standards in poorer regions, including the periphery of old Europe and the accession countries. One is entitled to fear, especially, that the accession countries will discover that European economic policies work to obstruct their rise toward a fully European living standard.

Actual European policy cannot operate indefinitely in this way. It is mathematically and humanly certain that unless income gaps between rich and poor countries continue to decline over the long run, the poor will increasingly migrate to the rich. Sooner or later, if too little convergence of incomes occurs between regions, this migration will develop into a full-scale convergence of populations. For practical economic purposes, the poorer countries will cease to exist, except as tourist destinations. The richer countries will become either melting pots—admitting all European citizens to full political rights—or ethnic oligarchies (modern versions of apartheid South Africa). In either case, both groups of countries will completely lose their present characters, for good.

Another possibility, if European economic policy were to follow the program of labor market reform qua globalization to its end, is that the EU would disappear. The EU is already politically stagnant. It has lost its grip on the idealism that it had as recently as 20 years ago, and the union is

engendering a nationalist and xenophobic backlash in many places. A lesson of the past two decades is that, when failed states collapse, the effects can be economically catastrophic, as they were in the Soviet Union, or violently catastrophic, as in Yugoslavia. Europe is not yet a state, but it is not immune to one catastrophic possibility or the other.

For these reasons, I take the position that the European project must be saved. It must be saved, most of all, from itself. And this means that the paradox of Europe must be overcome. The question is how to do it. An answer requires a reexamination of underlying economics. This will be a surprising exercise for many readers and, perhaps, a difficult one, because breaking free of the ingrained logic of supply-and-demand economics or the grip of factual preconceptions is not easy. I will show that this struggle to escape is not only necessary, but urgent. Contrary to theory, supply-and-demand economics do not rule the labor market. And in fact, the United States does not represent the ultimate example of high inequality in its pay structure, compared to modern Europe.

## **The Economics of Inequality and Unemployment**

In this section, I document the following propositions:

1. The theory of unemployment underlying the policy doctrine of labor market reform is fallacious, and its implication that jobs are purchased with inequality is incorrect.
2. Across Europe, the opposite relationship holds: countries and regions, which are *more* egalitarian, systematically enjoy *less* unemployment. This is not an anomaly, but entirely in accord with correct principles of economics.
3. The claim that the United States has a more unequal pay structure than that of Europe is false. All calculations that purport to verify this claim have been based on comparisons between the entire United States and individual countries of Europe. These calculations invalidly compare a large country with many small ones, and they exclude consideration of large inequalities that exist between European countries. When these inequalities are added in, the pay structure of the United States emerges as more egalitarian than that of Europe. And the American pay structure is dramatically more egalitarian when pay is measured geographically across states and regions.

As widely believed, moving Europe toward American levels of employment means moving Europe toward American levels of inequality. But to achieve this goal, inequalities within Europe must be *reduced*.

This is the resolution of the European paradox. No contradiction exists between the ideal of European equality and an efficient economic policy that results in full employment. Nor is there contradiction between the lessons of U.S. experience, correctly measured, and what is good for Europe. The contradiction is between the policies that are required and what, so far, the political, academic, media, and business elites of Europe have believed.

Moreover, from the 1930s through the late 1990s, the United States had always achieved higher employment by reducing inequalities in its pay structure, not by increasing them. Europe can do likewise. The task remains to adapt this principle and experience effectively in European institutions and overcome the true rigidities of Europe. The rigidities are not in the labor markets, but mainly in the credit and financial systems and the public sector, and in the failure, so far, to spread purchasing power effectively across the full extent of the EU. Most of all, the rigidities that must be overcome exist in the mind-set of European policymakers.

### **A. Why the Conventional Theory of Unemployment Is Wrong**

The problem of unemployment in Europe is vexed by a theory-driven predisposition to blame it on defects of labor market structure and then to go out in search of particular rigidities to blame. A great part of the economic literature follows this pattern, but the result has been a wild goose chase. Repeated attempts by the most committed advocates of the rigidities doctrine have failed. National differences of labor market institutions cannot effectively explain the existing pattern of variations in unemployment. Garcilazo (2005) provides an exhaustive survey of those differences, including examination of the underlying data sets used to measure differences in institutions across European countries. These data sets are of very low quality and they do not inspire confidence in empirical generalizations that might be drawn from them.

In a published review of the empirical literature, Baker et al. (2004) show that the entire power of institutional explanations for unemployment

differences across Europe rests on one fact. It is true that centralized collective bargaining and union density are associated with unemployment. But the effect is that stronger unions are associated with less—not more—unemployment. This effect does not support the rigidities doctrine.

The following section presents a simplified discussion of theoretical issues. It asks whether the conceptual framework within which the preoccupation with rigidities arises—though extremely well known and instinctively accepted by most people—is actually coherent.

To begin, I review the standard theoretical categories of unemployment, both neoclassical and Keynesian. I then take up an alternative perspective, emanating from development economics, with a contribution from the Swedish school. According to this perspective, unemployment, intersectoral inequalities, and migration flows are linked. In this alternative framework, unemployment arises when increasing inequalities induce an increased search for better jobs (including migration). With minor modification, these models are applicable to modern Europe and will become even more so as European integration progresses. The implications are consistent with what Baker et al. (2004) have already found: egalitarian policies can reduce unemployment. If further evidence supports the hypothesis, then conclusions must be drawn and the fetish of rigidities should be abandoned.

### ***Voluntary and Keynesian Unemployment: A Brief Review***

In the textbook theory of labor markets, unemployment is voluntary. Workers may leave their jobs to look for another. They may refuse to work at the prevailing wage, while looking for better work. Or they may find that some larger social power—the government or a union—has set the prevailing wage too high to justify their employment. In the first two instances, unemployment is a matter of personal choice. In the third, it is a matter of social choice.

The first instance is “frictional” unemployment. Frictional unemployment is generally supposed to remain at stable background levels for the society as a whole, but resolve itself for most individual workers after a short time. The background levels reflect the efficiency of job-search mechanisms and other institutions, which may be improved by structural reforms and new technologies. But the case for improvements is rarely considered urgent, and failure to implement them does not make frictional unemployment involuntary.

Most workers who decline to work at the prevailing wage (the second instance) are simply nonparticipants in the labor force. But if a worker actively searches for employment, holding out hope for a higher market wage than productivity would justify, or pretends to look for work in order to qualify for an unemployment benefit, the worker may be counted as unemployed. In certain national systems, an appropriately qualified worker who has left or lost a job (or seen a contract expire) may register for unemployment insurance or other labor market benefits and, in this way, also qualify to be counted as unemployed, even if they are not actively seeking work, but only waiting for work to come to them.

To call this type of unemployment “voluntary” presupposes that the worker could find work faster at a lower wage. The worker need only be willing to acknowledge the realities of his/her market value. That the worker does not do so is hardly anyone else’s fault. One may sympathize with employers under these conditions, as they cannot attract all the workers they might like at a low-enough wage to make the employment of those workers profitable to the firm. But it makes little sense to shed tears over the workers and still less sense to direct policy toward finding them jobs at the wages they happen to prefer but that their productivity does not justify. In a market system, one is not entitled to cause one’s employer a loss.

The institutions of the welfare state—in particular, a more generous system of unemployment insurance (UI) benefits—will logically increase the level of unemployment associated with the second instance. UI subsidizes leisure and encourages workers to hold out for a higher wage. If workers could work at a lower wage, then a reduction in the subsidy to leisure would be a sufficient condition for a reduction in unemployment. This model of unemployment thus presupposes that more jobs, in the aggregate, would be offered if wages were lower. It is the model underlying the recent proposals in France for cut-rate jobs for people under the age of 26. But if, on the other hand, more jobs in the aggregate are not actually available at lower wages, reducing UI merely reduces the disposable income of the unemployed, while cutting wages for certain categories of workers (such as the young or immigrants) merely substitutes those workers for others in existing jobs and reduces the aggregate wage bill. (This was the burden of student and worker objections to the French scheme.) In the real world, and certainly in Europe, there is essentially no evidence of a supply



response to lower-wage offers; even cut-rate jobs rarely go begging for workers and no one argues that firms have trouble finding employees when they want them. Therefore, the practical importance of this second instance of unemployment cannot be very large.

The third instance is more troublesome. It occurs when workers actually desire to work at the prevailing real wage, but employers do not believe them to be sufficiently productive to justify that wage, and the normal market response—namely, the bidding down of wages to an equilibrium level—is blocked by some barrier in the labor market. Minimum-wage laws and trade union contracts are standard examples of rigidities thought capable of producing this effect. Job protections might also have similar effects, if they permit incumbent workers to force up wages to the point where firms cannot earn profits by hiring new workers.

In this case, jobs are not on offer. Supply of labor flatly exceeds the demand. The individual worker cannot find work, even though he/she may be willing to work for less. The worker may feel frustrated and unhappy. Nevertheless, a “correct” theoretical statement still holds his/her unemployment to be voluntary. The worker could have chosen other social arrangements. The unemployed have no one to blame but their stubborn comrades, who will not accept lower wages in order to permit the creation of jobs.

This is the prevailing form of voluntary unemployment in the imagination of modern Europe and its media, economists, and policymakers. It justifies the campaign for “labor market reform.” The authorities and pundits forget, however, that *The General Theory of Employment, Interest, and Money* aimed at the third instance and destroyed it on logical grounds.

Writing at a time when unemployment insurance was minimal, John Maynard Keynes would not have considered my second type of unemployment worth bothering about. Nor was he much interested in frictions, which cannot account for joblessness on a mass scale. But the claim that workers could cure unemployment by accepting a reduction in their wage rates underpinned the classical response to the Great Depression, just as it does the neoclassical response to unemployment today.

Keynes pointed out that, since the theory posited a labor market that cleared in real terms, real wages could be reduced equivalently, either by reducing money wages or by increasing the money price of wage goods. The first path could be blocked by strikes against wage cuts (as the French

students and workers recently showed). But the second path could not be blocked, as workers rarely react to a little inflation. Therefore, so long as the authorities retained some influence over prices of wage goods, it would not be difficult to fool workers somewhat by reducing real wages with some inflation—and cure mass unemployment! Workers' acceptance of money wage cuts would not be essential and their resistance to them not decisive. And it would, of course, be utterly foolish to forego full employment simply for fear of a minor amount of wage-goods inflation.<sup>2</sup>

This argument has weaknesses, but Keynes also had a second one, which rested on the fact of markup pricing. If workers did accept money wage cuts, there would follow a fall in money prices. The effect of falling prices would be to obviate the effect on real wages. Thus, Keynes argued that workers not only *did not*, but also *could not*, make a wage bargain in real terms. Instead, workers merely accept the aggregate volume of employment offered by employers at a given, conventionally fixed structure of money wages. This, he argued, is how employment is determined in the real world. Under these conditions, therefore, the total volume of employment could be increased very simply: induce employers to offer more jobs at the same money wages by creating the conditions for greater profit associated with higher employment. And if that were so, Keynes argued, then previous unemployment would have to be considered involuntary.

Ever since Keynes, policymakers in the United States have responded to unemployment as if they believed it to be involuntary. They may, for instance, cut interest rates or income taxation in order to induce consumers to spend and businesses to invest. Or government may spend more. Even the most orthodox Republican leader is not above exhorting the American household to go out and spend in the hopes of reviving aggregate effective demand and overcoming a temporary shortfall in total employment.

This response is the common practice, but widely overlooked, especially in Europe. In journals and the media, not to mention the advice offered by institutes of “wise men” to governments, unemployment is almost always linked to the flexibility of labor markets, not to demand. This link is, of course, a euphemism for the ability to cut wages, benefits, and job protections. Indeed, policies to “reform” labor markets are routinely announced, and they always fail. The conditioned reflex pronounces the policies insufficient and more drastic remedies are then prescribed.

Meanwhile, the theoretical economists of the neoclassical school nowadays have not so much rejected Keynes as pretended that his arguments were never made in the first place. They are much concerned with airbrushing macroeconomic activism from the pages of history—as Trotsky was disappeared by Stalin. Robert Lucas’s 2003 presidential address to the American Economic Association was in this vein. For these theorists, only more flexibility can reduce unemployment. It is not clear how such thinkers reconcile their views with Keynes’s assault on a real wage-clearing labor market, since they rarely display awareness of the actual content of his critique.

Keynes’s disappearance has been abetted by the behavior of some economists who purport to be his successors. The rump that holds quasi-Keynesian policy views (for instance, the doctrine of “efficiency wages”) tends to favor both expansive demand policy and some measure of “labor market reform.” The former is to be pursued, especially when the latter is, for various reasons, impractical. These economists thus face both ways: left toward budget deficits and low interest rates when necessary, and right toward “reforms” aimed at rolling back the welfare state. With this group identified as New Keynesians, there is no influential school of economists who argue against more flexible labor markets.

Today, Keynes’s own critique of wage flexibility, which rests on the fact that wages are set in money but not in real terms, remains as valid as it was in 1936, and so the textbook labor market view of unemployment is plainly wrong. On the other hand, the quasi-Keynesian position described above is actually self-contradictory. If increasing labor market flexibility means lowering wages for low-productivity jobs, as it invariably does, the general effect will be to increase, rather than decrease, unemployment and to reduce the effectiveness of expanding aggregate demand.

This view suggests that the correct position is one almost nobody takes: that increasing wage flexibility has at best nothing to do with reducing unemployment. On the contrary, equality helps employment and inequality hurts it. Moreover, appropriate measures to expand the demand for labor by increasing spending also make labor markets more, rather than less, egalitarian. They reduce the wage flexibility so prized by commentators and wise men. Furthermore, measures that reduce inequalities per se also tend to reduce unemployment. They will have this effect, quite apart from any impact on aggregate effective demand.<sup>3</sup>

Therefore, all significant forms of unemployment are subject to policy control, and so they are involuntary in Keynes's meaning. Unemployment can generally be reduced, if not eliminated, by the quite simple expedient of creating jobs at the prevailing wage. The real objection to this policy does not concern labor market economics, but the politics of empowering and expanding government to accomplish this goal. It concerns the often dreary and misdirected character of the work undertaken by government projects and the interference that inevitably results when private enterprise attempts to maintain its own spheres of economic activity. These are legitimate objections. But they are objections best met by imaginative policy design, to help assure that the new employments actually accomplish something worth having. Keynesians have long argued that pointless employment was better than no employment at all, but absolutely nothing in their case precludes creating good and useful employment for those who are unemployed and underemployed. Keynes himself always argued that this would be better. Make-work was, for him, never more than a last resort.

### ***Why Flexibility Will Never Cure Unemployment***

Let's examine the flexibility hypothesis in more depth. Why do people become unemployed? Unemployment did not exist in preindustrial society. Unemployment, as we know it, emerged with the industrial revolution, took its definition from American statistical practices in the late 19th century, and became a mass phenomenon—worthy for the first time of concentrated attention from economists—in the Great Depression of the 1930s. Why?

It makes no sense to point to the creation of UI and similar institutions as a cause for the rise of unemployment. UI was not invented before unemployment.

Equally clearly, the standard supply-and-demand diagram, with wages set above the market-clearing levels, cannot account for the emergence of unemployment in the industrial age. Real factory wages in the 19th century were not protected by laws or by unions. Real wages were low, as any reader of Marx or Dickens knows. Moreover, many workers had other options. If they migrated from Europe to the slums of New York City, they could still move on, after a short time, to the west. Yet, in many cases, they did not. Instead, they formed, more or less willingly under the circumstances, the

“reserve army of the unemployed.” And that army remained, even though industrial production grew rapidly and the time was not one of depression or stagnation in output and demand. Why?

The textbook view holds that even though real wages were very low, they were nevertheless too high. Since the workers most likely to face unemployment in this model are those who are the least productive, it follows that wages for the least productive workers should have fallen, in order to give each worker a job commensurate with his/her skills. This can only lead to a greater inequality in wages than existed previously. The calls heard in Europe for “increased flexibility” today are of the same type. They are calls for increased pay inequalities, as a direct route toward full employment equilibrium.

And yet, it is almost always possible (in principle) for an unproductive worker to let his wages fall. Out-of-work academics know this very well: they become consultants. Ex-graduate students can wait tables. Secretaries become temps. Former farm boys can (in the most extreme cases) go back to the farm. Or they can work off the books, mowing lawns and weeding gardens.

If they do not do so (and many do not) and accept unemployment, it may be because such inferior jobs stand in the way of one’s chances of finding better work. At any rate, given the existence of an informal sector, dropping wages in the more formal sectors to the levels of the informal sector cannot be a solution, except insofar as it discourages people from leaving the informal sector. If productivity is determined by the capital stock (human and physical) available to workers, then cutting wages only amounts to a transfer of the surplus from inframarginal workers in the high-wage sectors to their employers.

In general, the rigidities doctrine supposes that unemployment is the only choice open to a worker who declines to cut his/her real wage to an equilibrium level. It supposes, in other words, that the “job” is something only offered by an “employer.” But this is hardly the normal case. If workers have the option of self-employment, whether in agriculture or services, or in the formal or cash economy, then the rigidities framework runs into trouble. Workers may be “choosing” unemployment over work options that are open to them, but are unsatisfactory because those options reflect low productivity when unassisted by capital and large-scale organization. So we have today a theory of unemployment that cannot account either for the

emergence of unemployment alongside industrialization or the standard employment practices in a service economy. And we have a neo-Keynesian alternative that equally overlooks, for the most part, the flow of workers into and out of the industrial workforce.

The neo-Keynesian theory is concerned, mainly, with the unemployment of workers who, at the outset, are already committed to industrial life. A satisfactory theory of unemployment, on the other hand, must deal with a world in which the options of organized and informal employment both exist. It must be valid for the developing (which is to say, preindustrial and industrializing) countries and also for the postindustrial world. Indeed, it is only when both types of employment are recognized explicitly that one can make sense of the phenomenon of unemployment and the empirical relationship between unemployment and pay.

### *A More General Theory of Unemployment and Inequality*

Suppose we find ourselves in a preindustrial society. A highly egalitarian peasant agriculture prevails (presupposing an abundance of free land), and there is no welfare state. (Imagine the United States, outside the South, in the late 18th century.) Each worker lives according to his/her abilities and the fortunes of the soil. No one leaves employment except to search, very purposefully, for better land. In this egalitarian state, unemployment does not exist.

Now, suppose we find ourselves in a workers' paradise of industrial socialism. Once again conditions are egalitarian, not because of an abundance of land, but because of the philosophy of those with state power. Education, health care, child care, and housing are likewise provided for free. Workers all have jobs if they want them. Part of the reason for this—lax management, lack of a profit motive, and overstaffing on the factory floor—is well known. But the other part is that workers have no incentive to leave their present employment and look for better work (except by emigrating). They cannot improve their economic circumstances materially by trying to change their jobs. So why do it? As in the first case, unemployment does not exist. Therefore, the intermediate cases are those that cause the trouble.

A half century ago, Simon Kuznets argued that inequality would rise in the early stages of economic development and transition to industrial growth. The reasons were concrete. New urban centers were places of concentrated income and wealth. The differential between incomes in these

centers and those in the countryside became significant as cities grew; and that disparity would only decline later as the proportion of the population remaining in the countryside shrank. This dynamic was not the entirety of the theory behind Kuznets' famous inverted-U relationship between income and inequality, but it was surely the most significant single factor.

John Harris and Michael Todaro offered a model that captured these characteristics in a neoclassical paper aimed mainly at development economists (Harris and Todaro 1970). In the model, workers migrate from a low marginal-product rural sector to cities, where minimum wages are imposed, and accept a high probability of sustained unemployment, in exchange for a low probability of getting better-paying jobs. The equilibrium condition is that the expected value of the gain is equal to the cost incurred in leaving rural employment; this condition entails substantial equilibrium unemployment.

From this, a positive monotonic relationship between inequality and unemployment emerges. As development starts, the riches of the city become magnets for the rural poor. No one on the farm can find an urban industrial job without pulling up stakes and heading to the city. Everyone with initiative does this, particularly if a shock to farm incomes suddenly makes the inequality worse.

But the number of jobs cannot keep up. And so, no matter how rapidly cities grow, mass unemployment is inevitable for a time. It will only end when the rural population is absorbed or emigrates. It can only be contained (as in modern China) by a pass system regulating who may live in the cities. And it can only be regulated effectively by measures that provide strong incentives to stay in the countryside or in the smaller cities and towns. (Social security systems, which provide common money incomes to retirees and therefore higher real incomes to those living where staples are cheap, are an example of such an incentive, one that works effectively to this purpose in the United States.)

While Harris and Todaro focused on East Africa, their argument is also adaptable for postagricultural societies, which have elites in technology and finance, a core of manufacturing workers, and a large reservoir of workers in services. The elites live off the fat of the land; access to their jobs is restricted by cartels and credentialing. The same is not true for manufacturing workers who, nevertheless, enjoy wage premiums due, in part, to their ability to

mine the profit positions of firms they work for. (This is known as industry-specific labor rent.) Service workers enjoy no such advantages, and their pay is largely set by the social minimums of the welfare state. They are like the earlier generation of farm workers in most relevant economic respects, and they may be considered a “reserve army of the underemployed.” So long as the differentials between service and manufacturing wages are fairly small, or it is possible to search for better jobs for minimal cost while working, service workers may not abandon current employment to seek better employment. Still, if the situation becomes sufficiently desperate, they will do so. In this case, measured unemployment will rise because underemployment will come out in the open.

The choice facing younger workers is especially stark, since a worker entering the low-wage service sector may be “typed” as unambitious and low in productivity. Such a worker cannot make the transition later as easily as a worker who has never been employed at all. For this reason, young people have an incentive to resist taking bad employment for as long as possible; therefore, youth unemployment in unequal societies is expected to be an especially serious problem. And unemployment overall will be worse, other things equal, in societies with younger populations.

From the standpoint of the individual worker, the decision to risk unemployment depends on two parameters: the difference between current income and the hoped-for improvement, and the probability of attaining that improvement. The former can be measured by the inequality of wages. The greater the existing inequality, the greater the potential rewards. The latter depends in part on the rate at which new, higher-wage employments are offered. Thus the worst case for unemployment would be in an unequal society experiencing the early phases of a boom or otherwise hopeful moment (Spain in the 1970s comes to mind). Growth over time absorbs the unemployed, but if growth first accelerates and then fails, a higher long-term rate of unemployment can result. The “best” case for unemployment may be in a slow-growth society as a long period of equalizing expansion comes to an end. Here, the United States in early 2000 offers a compelling example.

To reiterate, as outlined above, *pay inequality causes unemployment*. Unequal societies should have more unemployment than egalitarian societies. Mobility barriers across regions will help determine how far workers are willing to go to look for jobs, and where unemployment is actually



found. Thus, in the relatively unified United States, with a single federal UI system, one would expect the highest unemployment in or around the richest places. In Europe, where welfare states remain national and the loss from moving across national frontiers is relatively high, one might expect the unemployed of Poland, for example, to congregate in Poland.

Is their unemployment voluntary or involuntary? In this theory, the distinction has lost its meaning, for it is purely a matter of perspective. From the standpoint of the individual worker, there is always a choice—to risk unemployment or not to risk it. In this sense, unemployment is voluntary. But, at the same time, from the larger standpoint of society, the aggregate volume of unemployment is endogenous. And at least one critical variable—the inequality of the wage structure—is subject to policy control. Since unemployment can be reduced by policy without changing the underlying preferences of the workforce, then, by Keynes's definition, it is involuntary, in spite of having been individually chosen.

In this model, unemployment is a positive function of (a) inequality in the structure of pay, (b) the immediate growth rate of higher-wage employments (not necessarily that of the economy overall), and (c) the proportion of the population below a certain age. One may add a variable (d) for that part of the youth population held off the labor market altogether because of college, military service, or even prison. Any of these “holding pens” may ease the problem of long-term unemployment. The first two allow young people to remain off the labor market, without stigma, until they can find suitable employment. The third, for most people, removes hope for any but menial employments following release from detention.

Finally, a dynamic element may be added to the discussion. I draw on Meidner and Rehn (1951), whose work underpinned the conceptualization of the Swedish model. They pointed out another consequence of inegalitarianism in the structure of pay: it permits technologically backward firms to maintain competitiveness, despite higher unit costs, by paying their workers less than more progressive firms. Thus a high degree of inequality in the wage structure would be associated with a weak degree of technological dynamism and, over time, a lower average productivity and standard of living than would otherwise be the case.

Deliberate compression of wage differentials puts the technological laggards out of business. It therefore releases labor. But with active labor-market

policies (providing retraining for displaced workers) and a policy of strong aggregate demand, the end result can be an expansion of capacity by the technologically progressive firms. Some of the unemployed can then be absorbed in the expanding, advanced industries. And many more can be maintained in subsidized, low-productivity employment—either public or nominally private sector—essentially paid for by the surplus created in the high-productivity firms. In this way, egalitarian societies enjoy efficient use of all their labor resources, high absolute living standards, and competitive advantages over societies that allow markets to adjust wages to an existing structure of relative productivities.

To contrast this model of employment and unemployment with the rigidity-flexibility framework, one need only be reminded that the alternative to good employment is not only unemployment, which is what the framework supposes, but it can also be bad employment (perhaps in some other place or occupation). Bad employment in the informal sector is never precluded, anywhere, by labor market institutions. The differences between the available alternatives are what matter. Some people—not all—will choose unemployment if it provides at least some chance of jumping the gap to a better-paid job. The greater the gap, the more tempting it is to take the risk, and the higher the unemployment.

In short summary, it is not just that full employment tends to reduce inequality. It is also that inequality produces unemployment. The more unequal the structure of pay facing an individual worker, the greater the likelihood that the worker will choose the lottery of unemployment over the certainty of an impoverished and miserable life.

Inequality, however, is a feature of society. It is not a characteristic of the individual, but of the environment within which the individual lives. And this raises a question of crucial importance that is entirely overlooked in the literature. What are the boundaries of the environment? Are they purely local? Are they national? Or are they continental in scope?

This is a subjective matter, but it is clear that, as economic barriers fall between regions and countries, and as communications improve and discrimination decreases, individual prospects must necessarily expand. This process has been going on in Europe for 50 years—it is in many ways the essence of European integration. And given the theoretical proposition just stated (relating the perception of inequality to unemployment), it is imme-

diately obvious that European integration poses a huge conundrum for European employment.

For the further one looks in any direction across Europe, the greater the inequality one observes. It follows that the more Europe integrates, the greater the problem of unemployment, unless drastic measures are taken to reduce inter-regional inequalities. This is the basic economic logic of a convergence strategy.

## **B. Inequality and Unemployment in Europe**

So far, we have argued that inequality of wage rates helps to govern the rate of unemployment. This brings up a point of method, often overlooked, which is of central importance to the problem of unemployment in Europe today: Inequality over what range? The town? The province? The country? Or Europe as a whole? And if the latter, what is Europe, exactly? What is the effect of expanding the sphere of European economic integration on the inequalities experienced and perceived by Europeans?

The importance of this question stems from the fact that Europe experiences different levels of inequality at different levels of geographic aggregation. In many parts of the continent, local or national inequality is low. Scandinavians and Germans take pride in the economic equality within their borders, and with reason. However, wage differentials between European countries are high. Average income (in nominal terms and common currency units) in Spain is only about 60 percent of that in Germany—comparable to the average differential between American blacks and whites. It follows that making a correct prediction of the unemployment rate expected from any given level of inequality depends critically on drawing analytical boundaries in an economically and socially relevant way. In principle, we must gauge inequality across the geographic and political range of individuals. And this problem is complicated by the fact that, at a given moment in time, different groups may experience different geographic (as well as occupational) horizons.

Conceição, Ferreira, and Galbraith (CFG) (1999) showed that there was an uncanny negative correlation, on the order of  $-0.8$ , between European GDP per capita and rates of unemployment from the late 1970s to the early 1990s (when the collapse of Eastern markets upset it). If every country were clearing an internal labor market independently of the others, this relationship

could not exist. National labor markets would have cleared separately, and there would be no association between national productivity and national unemployment. But the relationship did exist. Indeed, the relationship was highly systematic, excepting only those nations (notably Portugal) that solved unemployment in large part by exporting their unemployed.

In this sense, Poland today is no longer an independent labor market but a province of greater Europe. The unemployed are not the unemployed merely of Poland, but the unemployed of all Europe. They are not only the low-wage workers seeking to escape the countryside for Warsaw or Krakow, but also the low-wage workers who cannot find jobs across the vast differentials separating Poland from Germany. Today, they may live in Poland because barriers to international mobility still exist, or they have not yet located jobs, or they don't qualify for German welfare. If one has to be unemployed, then it is better to be jobless near home. But if international inequalities are not steadily reduced, a new wave of emigration from the peripheries into the center of Europe is inevitable. At that point, both Poland and Germany would cease to be national units in their present sense. They would become merely geographic boundaries with wholly floating populations—as is the case today for U.S. states—except that they would lack the easy political integration enjoyed by mobile Americans.

CFG also found that, in general, European countries with less inequality enjoy more employment. This suggests that national frontiers remain the relevant ones for some substantial part of the employable population. An interesting test of this view came with German reunification. Both East and West Germany were highly egalitarian internally before 1989, and neither suffered especially high unemployment by European standards. They were, however, rigidly separated from each other. The difference in average income levels between east and west was so large that unification created, almost instantaneously, a much more unequal country. The model predicts that the equilibrium unemployment rate would rise on this account alone. And, sadly, so it did.

Galbraith and Garcilazo (GG) (2004) extended this work by introducing new measures of inequality across 159 European provinces annually for 15 years, and showing the degree of inequality within provinces and the degree to which each province contributed to inequality in Europe as a whole. Their findings are consistent with CFG and with the theory that

regions with lower inequality and higher average incomes enjoy systematically less unemployment across Europe. GG also show that, on balance, institutional differences between the major countries of continental Europe (except Spain before the recent decline in unemployment there and, to a very modest extent, the United Kingdom and Netherlands) are not major predictors of differences in average unemployment rates. These findings are all inconsistent with the national labor market–rigidities framework that has, up until now, dominated the debate over unemployment in Europe.

In sum, both national and provincial measures of inequality support an augmented version of the Harris-Todaro view that unemployment depends on the expected value of gain from accepting a ticket to search for higher wages. It is equally consistent with the CFG view of social democratic anti-unemployment policy—the wealthy countries avoid unemployment most effectively, not by liberalizing their labor markets, but by subsidizing low-productivity workers to stay in their jobs. As CFG argued, the efficiency gains from this strategy can be astonishingly large and propel an egalitarian country with mediocre productivity, such as Denmark, into the forefront of the world competition for a high standard of living.

### **C. The Case of the United States**

In the opening section of this brief, I wrote of a widespread European belief: the American model stands as the template for the degree of inequality that must be achieved in order to enjoy the American level of full employment. I endorse this belief. It furnishes a precise and agreed-on point of departure for the following empirical inquiry.

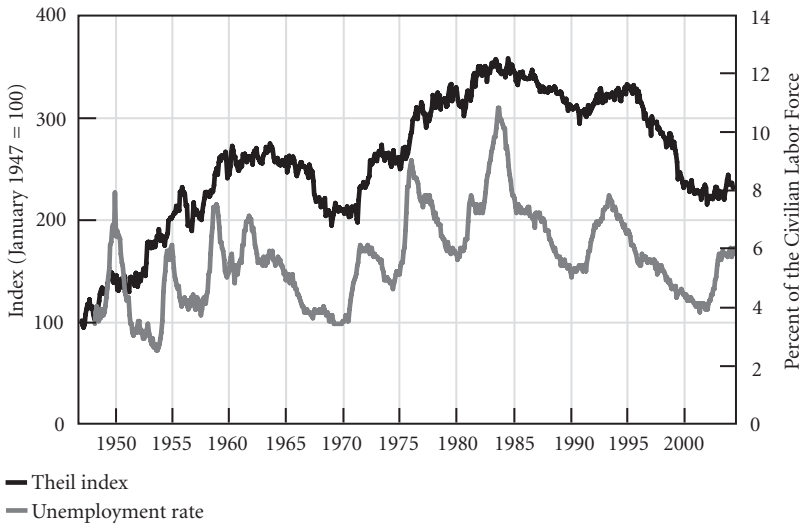
In my judgment, the forces that determine employment must operate on similar principles everywhere. For example, in a given state of technology, there must be a particular relationship between pay inequality and unemployment. I see no compelling reason why this relationship should differ between the United States and Europe. It follows that there likely does exist an “optimal” structure of pay inequality associated with maximum employment. Since the American employment experience is plainly better—a point no one disputes—it follows that good employment policy for Europe would seek levels of pay inequality characteristic of those found

in the United States. I shall turn in due course to the surprising implications of this statement.

But first, what is the relationship of inequality to unemployment in the United States? Ample evidence suggests that it is the opposite of the rigidities-framework prediction. In periods of high unemployment, American inequality in pay structures *increased*. In periods of full employment, pay inequality *declined*. A consistent measure of manufacturing-pay inequalities on a monthly basis since 1947 tracks the monthly unemployment record so closely that the two series would appear to be drawn from the same statistical distribution. Whatever else one may say about this, it is not consistent with a wage-adjusting view of vicissitudes of unemployment.

Figure 1 illustrates this finding. The measure of pay inequality is the between-groups component of Theil's T-statistic computed across 17 industrial categories in the United States for which consistent monthly data are available starting from January 1947.<sup>4</sup> The variable observed is average weekly earnings in the category. The association with the monthly unemployment rate for the country is far too close to be coincidental. The evidence of a positive relationship between pay inequalities and unemployment

**Figure 1** Inequality in U.S. Manufacturing Wages 1947–2004



Source: U.S. Bureau of Labor Statistics

is bad news for the neo-Keynesian effort to claim a role for labor market flexibility as an auxiliary to increasing demand. A hallmark of the neo-Keynesian effort is a strict separation between questions of distribution, which are reserved to microeconomics, and questions of total effective demand. Only the latter remains within the macroeconomist's province. An increase in labor flexibility and wage inequality (in the face of "skill-biased technological change") is, to this point of view, a micro measure that should improve employment prospects. Accordingly, evidence should exist that increasing inequalities lead to higher employment—but it doesn't. The finding that full employment is systematically egalitarian in distributive effect controverts the thesis.

By now, readers will be objecting on the common sense ground that "everyone knows" that overall American society is grotesquely unequal, while Europeans retain values of solidarity, which impart rigidities to their wages. So how can this argument possibly reconcile low unemployment in the United States with high unemployment in Europe?

Part of the answer is that the relevant inequalities are of wages, the reward for work. They do not include inequalities of other forms of income, including income from property and capital. In the American case, measurement is contaminated by a very wide range of highly unequal, nonwage incomes. Moreover, those inequalities grew dramatically in the late 1990s, in particular, and they were a function of the speculative bubble at that time. Capital gains were intensely concentrated by industry and location. As Galbraith and Hale (2003) show, the between-counties component of the surge in income inequality in the late 1990s was accounted for entirely by increasing income in just five of 3,150 counties overall: New York, New York; King County, Washington (Seattle); and three counties in northern California (Santa Clara, San Francisco, and San Mateo).

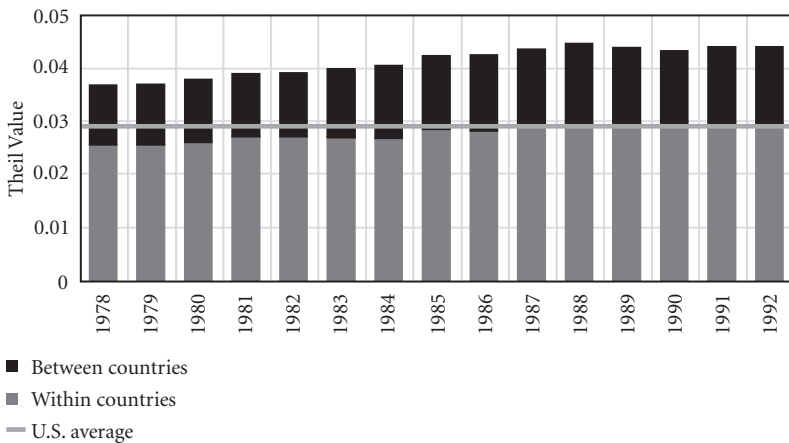
Schmitt and Zipperer (2006) report that, according to the Luxembourg Income Studies, pretax, pretransfer income inequality in the United States in 2000 was not higher than in typical European countries. The U.S. value was around 0.45, while the range for Europe was 0.39 to 0.50. Only after one takes account of taxes and transfers in measures of post-tax, post-transfer income does the United States rise to the top of the inequality tables. But it is the pretax, pretransfer measure that reflects pay.

Pay inequalities, finally, can be measured directly and are relevant to a theory of labor-market adjustment. Comparable measures of industrial pay inequality for Europe and the United States can be drawn from the OECD's Structural Analysis (STAN) data set; the relevant calculations were made by CFG. They show that inequalities in industrial pay, measured across sectors in the United States, are comparable to the upper end of the national European range. They are not materially higher than in, say, Spain or Italy. And when one takes account of the large differentials between European country averages, intersectoral industrial pay inequalities are actually larger in Europe than in the United States.<sup>5</sup>

Figure 2, taken from CFG, shows inequality in manufacturing pay measured across sectors within and between European countries and compared to the United States. Looking only at manufacturing pay within countries from 1986 to 1992, the United States was as egalitarian as Europe. However, adding in the between-countries component radically worsens the European position in the comparison.

In this brief, I present an even more direct and updated comparison of between-regions pay inequalities using measures of total payroll and total employment for 215 European regions and all 50 U.S. states, plus the District of Columbia. The measures are made comparable by presenting them in

**Figure 2 Inequality in Europe: Manufacturing Earnings**



Source: OECD STAN Database



the form of Gini coefficients, which are calculated on the artificial assumption that every person within a state or region enjoys the same average income. This comparison is not, nor is it intended to be, a full comparison of inequalities within the United States or across Europe. However, for a theory of unemployment, interregional inequalities are particularly important. They measure, quite directly, the incentive for long-distance economic migration and, therefore, the incentive to expose oneself to the risk of unemployment in order to gain the possibility of a high-income job. By comparison, inequalities within close geographic quarters may represent nothing more than the incentive to commute (e.g., by train between the suburbs and downtown Paris, or by subway from the Bronx to Manhattan).

Viewing this comparison, the results are quite striking. A European cross-regional Gini coefficient is about 0.235, or more than twice the value across the American states (0.101). To check the comparison, I reduced the number of regions in the European calculation to American values by computing a separate Gini across every fourth region, and averaging the coefficients for the four such cohorts. The coefficient is essentially identical to the previous one. There are other ways of aggregating European regions to achieve comparable values for Europe and the United States, but I believe that they would not alter the basic conclusion. Across continental distances, average European incomes are dramatically more unequal than are those in the United States.<sup>6</sup>

It does not necessarily follow from this that living standards in Europe are more unequal than those in the United States. Cost-of-living indexes tend to be geographically specific. The United States has large income differentials among populations living close to each other (e.g., blacks and whites in major cities) but exposed to roughly comparable living costs. In Europe, the differentials are much greater between regions and countries—the east and south experience much lower incomes, but also lower living costs, than the north and west. For this reason, the lived experience of a given nominal inequality may be harsher in the United States than in Europe and this probably accounts for the common perception that life is less fair in America.

For the purposes of a theory of unemployment, however, differences in nominal earnings matter, not real living standards. For a person contemplating long-distance migration, a key consideration is whether the nominal income available in a rich country can provide a decent living standard, not

in the rich country but in the poorer region whence the migrant comes and where his/her family likely remains. Typically, migrants are willing to endure cramped and deprived conditions in their place of work, precisely in order to maximize the incomes sent back to their homes, where purchasing power is magnified by low living costs. Hence, nominal inequalities—for example, between Andalusia and Madrid, the Algarve and Paris, or Poland and Frankfurt—drive both the competition for low-skilled jobs in the rich regions and, to a very substantial extent, the unemployment rates. Furthermore, one can reasonably expect that cost-of-living differentials across Europe will decline over time. As markets continue to integrate, the traded-goods components of living costs will tend to equalize, leaving only the nontraded-goods components—whose price levels depend on local wage levels (including rents) and the intangible elements of the living standard—as separating the costs of living in richer and poorer regions of Europe. Absent convergence of nominal wages, convergence of living costs will produce further divergence of real living standards. Convergence policy must, therefore, deal with nominal differentials, as expressed in the common currency unit. It is, above all, a matter of money, and particularly of the money wage.

### **The Mechanics of Convergence**

In this section, I present the results of a calculation of relative growth rates of wage incomes that are required to achieve a degree of convergence across the European regions. My chosen objective is to reduce the degree of interregional inequality across Europe to American levels by 2042, the 50th anniversary of the Maastricht Treaty.

The point of the exercise is to illustrate, under certain assumptions, what the relative annual growth rates of wages in each European region would have to be in order to meet my objective. For the exercise, I use Eurostat's REGIO data set for 215 European regions. Average wages are computed for 16 economic sectors in each region. The sectors are listed in Table A1. The year 2000 is the latest year that data for all 16 industrial sectors are available at the NUTS 2 regional level (except in Germany, where regional data are only available at the NUTS 1 regional level for eight industrial sectors).<sup>7</sup>

I make the following assumptions and impose the following restrictions. First, I assume that the present hierarchy of relative incomes between sectors of each European region will remain strictly unchanged (there are 3,062 “region-sector cells”). I also assume that the richest cells will remain the richest, the poorest will remain the poorest, and that all cells will retain their present exact position in the ranking of average incomes. My purpose is not to overthrow any hierarchy, but merely to reduce the differentials between them.

Second, I assume that present gaps between region-sector cells will remain exactly proportionate. My method is to reduce the proportionate gap between each cell and the one below it by exactly the same (very small) differential each year. I then calculate the compound growth rate required to advance each cell by exactly that amount.

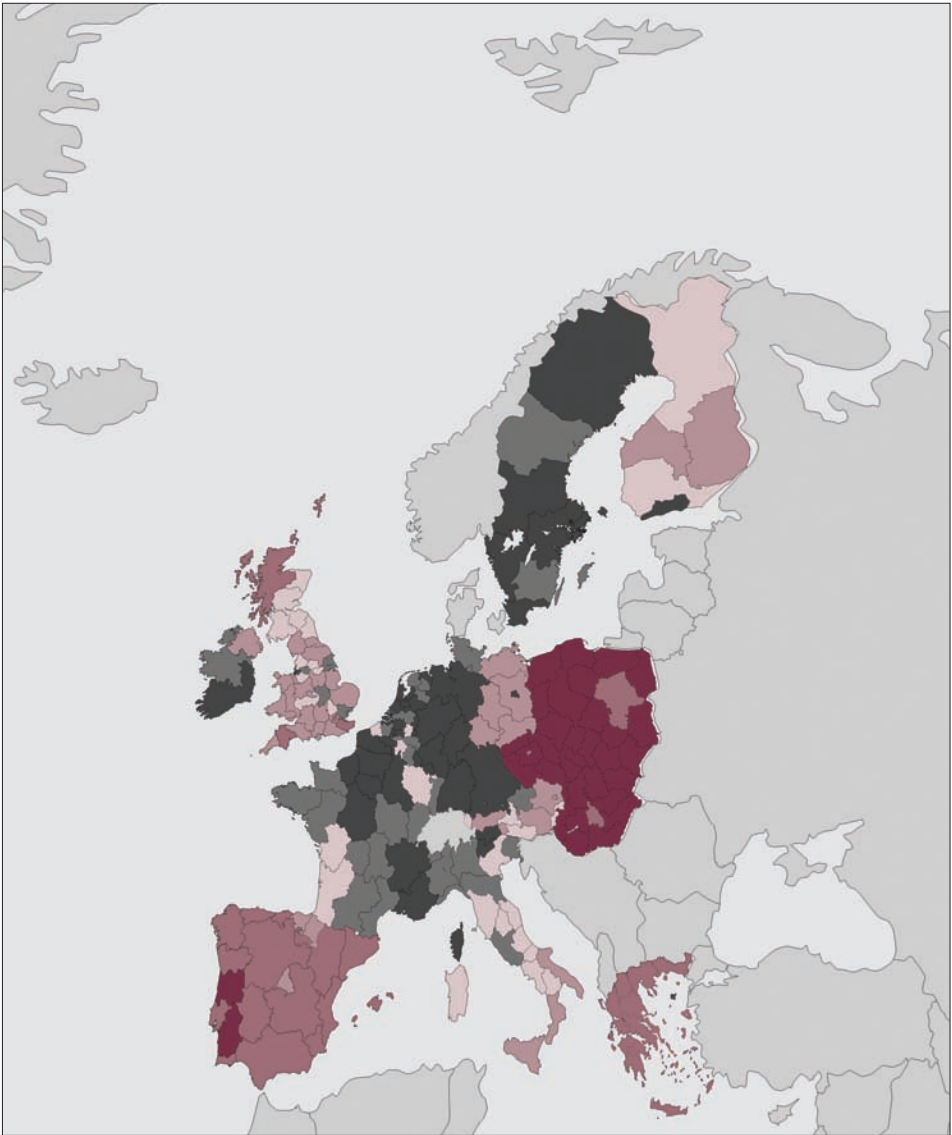
Third, I assume that the richest region-sector cells (consisting largely of mining and utility workers in Germany) experience zero real-wage growth between now and 2042. This is an artificial assumption that can be relaxed by allowing workers in these cells to enjoy any given base rate of wage increase that the productivity of the whole economy can afford. Setting a zero base for the best-paid sectors merely enables one to see most clearly what the relative growth rates in the poorer regions must be in order to achieve a given degree of convergence.

Fourth, I assume no structural change in the balance of employment in any region between now and 2042. This is, again, purely artificial. In the next section, I suggest policies that violate the assumption and foster an increasing share of better-paid employments. But the assumption is necessary at this stage to keep calculations tractable and their meanings clear.

Having calculated a path for wages in each region-sector cell for each year from 2007 to 2042, I then add up the sectors within regions to obtain new values for average pay in each region. Average pay is obtained by taking the ratio of total compensation of employees (including wages and salaries, plus employers’ social contributions) and total employment for the region, assuming a fixed sectoral composition of employment. Thus I compute a pretax, pretransfer measure of average pay measured in thousands of euros per year.

From this value, I can compute the Gini coefficient of pay inequality across regions in 2042. I set this value to the desired level (corresponding

**Figure 3** Distribution of Growth Rates of Real Average Annual Pay Required to Meet Convergence Criteria between 2007 and 2042, by Region\*



Growth rate to meet convergence criteria

\* excluding Denmark

- 5.7 to 7.4 percent (36 regions)
- 3.8 to 5.7 percent (37 regions)
- 3.3 to 3.8 percent (36 regions)
- 3.1 to 3.3 percent (31 regions)
- 2.9 to 3.1 percent (35 regions)
- 0.0 to 2.9 percent (40 regions)

to the American value in 2000) and adjust the convergence parameter, which governs the pace at which the earning structure is compressed, until I achieve the desired degree of inequality on the target date.

The results are given in detail in Table A2 in the appendix and shown in Figure 3. The table gives the annual compound growth rate of average wages for each region that is required to achieve an American degree of regional earnings convergence by 2042. The map in Figure 3 shows the broad outlines of the strategy in geographic terms (excluding Denmark). If we desired to give additional gains to the sectors presently at the top of the European pay ladder, then meeting the convergence targets would require comparable acceleration of wage gains further down the ladder.

Would the wage gains in the poorer regions of a converging Europe be inflationary? They would clearly have the effect of raising the prices of non-traded goods in the low-cost regions and the associated land rents. However, following the Meidner-Rehn formula, they would also raise productivity in the regions, and there is no reason to expect that costs would rise more than productivity. In the U.S. experience in the late 1990s, productivity rose *pari passu* with employment, as firms facing labor shortages sought and discovered new ways to improve their use of labor. There was no employment-driven inflation. For Europe, I calculate that the average rate of wage gain between 2006 and 2042 implied by my convergence parameters is about 3.5 percent. This is only slightly above historically achieved rates of productivity growth at high employment, and perfectly achievable when the increases are concentrated in low-income regions with productivity catch-up potential.

Since convergence *per se* has no effect on the prices of traded goods produced in the high-wage, high-productivity regions, there is no reason to expect that it would affect traded-goods prices and, therefore, the conventional measures of price inflation in traded goods. Nor should convergence induce any wage spirals among workers in richer countries, so long as the purposes of policy were well understood, agreed upon, and respected in practice. Convergence is not designed to catapult Spain, say, ahead of France: its purpose is only to reduce the gap between them.

Convergence would raise effective demand emanating from the low-wage regions. It would raise the demand for traded goods produced elsewhere in Europe, and therefore help to absorb unemployed labor in the traded-goods producing centers. And it would raise the demand for (white-market)

service employment in the converging countries, absorbing labor in situ at increasingly tolerable and ultimately attractive wages. Convergence would reduce incentives to economic migration and reduce pressures on labor supply in the richer countries, even as unemployment fell in the poorer regions.

At the end of the day, Europe would approach full employment in harmony and solidarity, without serious inflation. With confidence that this policy can, in fact, succeed at that objective, opposition to broadening the scope of European integration and governance should melt away. A convergence policy, I suggest, is the only way to achieve this goal and preserve the European ideal in the face of debilitating challenges of unemployment, immigration, and social dislocation that are attendant on the manifest failure of European economic policy so far.

### **The Policies of Convergence**

Hurricane Katrina and the destruction of New Orleans have exposed the folly of the American model, as commonly understood, for Europeans. Having abandoned planned public-capital investment—not merely under George Bush but over 30 years—the United States finds itself unprotected from a well-predicted natural disaster, unable to stage an effective urban evacuation, and with impaired capacity to plan and execute reconstruction. Meanwhile, fiscal federalism in the stricken region led to public sector bankruptcy and a collapse of services, to the point where for a time local authorities could not even detain, let alone prosecute, thieves, murderers, and rapists. Even a year later, some evacuees found themselves stranded in hotels and shelters across the country with their homes ruined, finances in tatters, and futures in doubt.

To the extent that the drive for labor market reform in Europe is predicated on shallow comparison with the United States, these developments should signal a profound reexamination of assumptions. Do free and flexible labor markets imply, in part, the abandonment of cherished national and regional construction projects? Given the obvious linkage between wage rates and tax revenues, clearly they do: impoverished workers cannot easily support expensive public works. But public works are integral to the identity and even to the survival of Europe. Should the game of labor market reform require privatizing the French National Railway Company or

defunding the Dutch levees? Few Europeans would consider that worth the candle.

Nevertheless, Europeans would be mistaken to swing to the view that America's experience has nothing to offer in the way of useful ideas against mass unemployment. It was only five years ago that the United States achieved full employment, including a high labor force participation rate, measured unemployment rates below 4 percent for three years in a row, and recorded low unemployment and poverty among ethnic minorities. America achieved this with negligible price inflation. The question is: how?

The answer cannot be found in the hypothesis of labor market flexibility. This hypothesis holds that wages are adjusted to equate marginal productivity to pay. It implies that, in the run-up to full employment, the United States should have experienced increasing inequality in the structure of earnings or pay. Yet this was not the case. Although income inequality rose, the inequality was due almost entirely to the rise in capital incomes—to the cash flow immanent in the technology boom. As we have seen, pay inequalities relevant to the labor market declined.

The same principle holds across Europe in cross-section. To summarize GG (2004), regions with lower inequality in pay structures exhibit systematically lower rates of unemployment. More broadly, much of the variation of European unemployment can be accounted for by inequalities within and between regions, by differential growth rates, and by the share of youth in total population. Much of the remainder is due to variations common to all European regions, *prima facie* evidence of the importance of continental macroeconomic control. In more recent work, GG (2005) show that, as unemployment declined across Europe in the late 1990s, inequality also declined.

The implications for the general design of unemployment policy are straightforward. Anything that will reduce the inequality of European wages will help reduce chronic unemployment. So will targeted measures that provide prelabor market opportunities for young people, enabling them to time their entry into paid employment so as to escape being tarred as long-term unemployed. So would anything that increases rates of growth in a targeted way.

But what specific policies will do the work that must be done? One must be careful. Would raising the minimum wage in Germany to a higher

fraction of the average, for example, be an effective way to reduce inequalities (and therefore unemployment) in Europe? It would not. For the intersectoral differences within the labor markets of the German *Lande* are not among the most significant in Europe. In fact, these regions are already among Europe's lowest inequalities.

Pay inequality in Europe is of a different kind. Within individual regions, it is highest where middle-class jobs (usually associated with manufacturing industry and robust service employment at good wage rates) are scarce or absent. Structural unemployment festers in Europe's dualistic regional economies, where a few good jobs are in the mix with many undesirable ones. These economies exist mainly on the European periphery and very extensively among the accession countries. An even larger source of overall inequality is between these regions and the rich regions of the European center. Raising minimum wages in Germany does nothing to create middle-class jobs in the periphery or relieve the difference separating average wage levels in Germany from those of Poland or Spain.

It follows that an egalitarian growth policy—with directed measures to raise relative growth rates in the poorer regions of Europe—would be the single most powerful medium-term measure for the reduction of European unemployment. Some instruments for this policy already exist. Regional funds are a proven, powerful tool, especially for smaller countries. They could and should be expanded. But they are limited by the capacity of direct state action. They are also strongly biased toward infrastructure improvements (which pay high wages) and therefore limited in their effect on employment. They are not by themselves sufficient; new instruments are required.

The practical steps that would generate convergence within Europe involve personal income. The EU has left social welfare policies to member states—and the inequalities in their economic positions are perpetuated by this decision. This is the problem that policy innovation must now begin to address. Interregional personal income convergence is one key to less inequality and fuller employment in Europe. The direct route is the most efficient way to achieve convergence—by contriving to raise the incomes of Europe's poor (measured on the continental scale and consisting largely of the residents of low-income regions) more rapidly than the incomes of the rich.

This is an old story in the United States. The Deep South (the old Confederacy) was much poorer than any other region except Appalachia



until recent times, and marked by much deeper unemployment. Periodic crises, such as the Dust Bowl of the 1930s, sparked mass migration—the Okies and Arkies to California, and the blacks from Mississippi and Alabama to Chicago and Detroit. These migrations eventually spurred projects directed toward national economic convergence.

In the New Deal, the United States began the process of federalizing the welfare state. Social Security and a continental minimum wage came into being in the 1930s. A national industrial development policy grew out of deliberate federal investment decisions during wartime mobilization in the 1940s. A national transportation network was built in the 1950s. Federally funded health care for the elderly and the poor (Medicare and Medicaid) was achieved in the 1960s. Even Richard Nixon’s administration contributed General Revenue Sharing (although this program alone did not survive the Reagan counterrevolution of the 1980s and no further progress has been made since that time). Nevertheless, the continental integration of social welfare policy in the United States today is much farther along than in Europe (e.g., the Deep South and Appalachia are no longer especially poor). Continental integration, not flexible labor markets, accounts for America’s relative success against entrenched structural unemployment.

As economic integration now encompasses all of Europe, the EU needs to follow the earlier American example. More social democracy and a more unified social democracy is the answer to European unemployment. The EU must identify specific measures and prove the model with bold experiments.

One useful, practical step that is fully consonant with economic justice would be the creation of a European Pension Union, which would move the base incomes of the elderly toward convergence. There is no just reason why the retired elderly in the poor countries of a unified Europe should be paid on the income standard of their own nation and suffer the indignity of poverty in old age, compared to fellow Europeans who worked no harder or longer than they did. Minimum pensions should be set on a standard governed by the average productivity of Europe as a whole, and any differentials should be paid to individuals by direct transfers through the EU.

There is also no just reason why unskilled pay differentials across Europe should be allowed to remain as large as they are. The street sweepers

and news vendors of Portugal are no less productive than those of Germany (except possibly by virtue of inferior equipment). The EU could inaugurate a “topping up” scheme for low-wage employees in the poor regions, along the lines of the American Earned Income Tax Credit. This too would slow economic dislocation and reduce the incentive to migrate, by directly raising pay and purchasing power in the nontraded-goods sectors of peripheral Europe.

No one would wish Europe to emulate American rates of military enlistment or incarceration. But our rates of enrollment in higher education—now up to about half of high school graduates (and higher in some places, such as California)—are another matter. The investment required to improve European performance in education would mobilize resources in the lower-income areas, while sharply reducing the incidence of youth joblessness by converting the unemployed into students, as does the United States. Let Europe, therefore, fund and build European universities on a scale and of a quality to rival higher education in the United States. Here, Europe lags badly, not because of a lack of talent, but because of a lack of will and imagination. Let Prague, Warsaw, Budapest, Lisbon, and Thessaloniki become true magnets of world learning.

The economic burden of these and similar measures needs to be understood carefully. It need not be, as many suppose, a matter of taxing Germans to support the Portuguese. Rather, as there exist unemployed human capital assets in Portugal, the appropriate step is to create a liability that will permit employment in Portugal. A pension-supplement scheme—placing purchasing power in the hands of the elderly in Portugal—will mobilize latent resources in Portugal. It has no other important economic effects. In fact, there is no need to tax Germans to do it. A deficit run at the European level is perfectly justifiable, so long as overall unemployment exists at intolerable levels. The interest on the deficit can be paid, in effect, from the eventual increase in national income in Portugal. The burden will be light if the benefit is realized.

Beyond these examples of effective redistributive policy (which could be multiplied, particularly by emulating the role of the nonprofit sector in U.S. job creation), the larger problem of relative growth rates needs to be addressed. This is substantially a macroeconomic problem and, accordingly, a new and plainly Keynesian understanding is necessary of how aggregate income convergence might be achieved.

The readily available macroeconomic policy instruments in Europe are now reduced to a single measure: a lower interest rate. But there is no way to impose low interest rate policy on the European Central Bank (ECB), no very practical way to target the policy to the European periphery, and no guarantee that lower interest rates (if they worked at all) would, in fact, foment income convergence. If monetary stimulus were to help the rich countries of Europe more than the poor, inequalities could rise.

The active role of monetary policy in a convergence strategy is therefore somewhat limited. Indeed, convergence would be all too easy to reverse at any time by raising interest rates and transferring income from debtors (the relatively poor) to creditors (the relatively rich). This must be prevented. Rather than relying on central bank policy to lead the process, a major strategic objective must be, simply, to limit the degree to which the ECB can undermine it.

And yet, the monetary front is not entirely barren. The euro has worked (so far) for much of the periphery of Europe. The remarkable decline in unemployment in Spain (from over 20 to approximately 8 percent) clearly owes much to the disappearance of exchange-rate risk and interest-rate convergence. In principle, these monetary policies reduce distortion in favor of manufacturing activity in peripheral countries and absorb the unemployed into better-paid service jobs, which now become creditworthy in ways that they were not before. This approach took root in Spain as a phenomenon similar, in some ways, to the American experience of the late 1990s. At that time, millions of new jobs were created in the United States—not by lowering wages nor by deficit spending, but simply by making credit available for next to nothing.

As already noted, some of the accession countries have recently enjoyed a surge of foreign direct investment, whose benefits are transferred to the whole population through a rise in the exchange rate. How far this process will go remains to be seen, although obviously once countries join the euro, it will stop. At that point, more direct policies will be needed to keep the convergence process underway, and while the monetary mechanism that brought such benefits to Spain might be repeated, it is not certain that it will be, as the necessary financial institutions and credit market conditions may not arise on their own.

And so I turn to fiscal policy proper. An effective, targeted, growth-producing, fiscal policy is required. This means running deficits, but in

such a way as to help reach the larger goals. This might be achieved by revising the Stability and Growth Pact. Permit the EU to run fiscal deficits and issue euro bonds, which would support the incomes of lower-income persons and regions, and the strategy of convergence. This is what the United States usually does, or tries to do, in a slump. Such a radical change, however, presupposes a development of European federalism and Keynesianism on a scale that is not presently in the cards.

If the best policy—the most efficient route to fiscal expansion—is barred, the same effect could be sought in other ways. An alternative would be to rewrite the Stability and Growth Pact to permit *any* country of the EU to run deficits greater than 3 percent—the current limit, excepted only in deep recessions—so long as unemployment *on average* in Europe is higher than a threshold value. The point here is that it does not matter which country runs deficits and provides stimulus. Since the European economies are integrated, the resource-using effects will be felt everywhere. And what if, say, the Germans do not want to create full employment in Europe by absorbing their own unemployed first and then attracting immigrants from Spain or Poland? Well then, let the Spaniards or the Poles do it, and let the Germans (directly, or indirectly through the ECB) hold the resulting bonds. Could German money build a great European university in Portugal or Greece, or in Budapest or Sofia? Of course it could.

The threshold average value for unemployment in this scheme need not be close to full employment. Any figure well below the present European averages (for instance, 6 percent) would do. For it is a near certainty that, once unemployment in Europe started decisively on a downward path, the private sector's demand for credit (and its perceived creditworthiness by financial institutions) would rise. Before long, the resulting growth of private deficits and debt would reduce the deficits of the public sector. The problem for the authorities then would be merely to manage the flow of funds, guarding against the emergence of bubbles and Ponzi schemes that would make the expansion difficult or impossible to sustain.

Such was the experience of the United States in the late 1990s, when a credit expansion, underpinned by fiscal federalism and a long-term, structural policy of interregional convergence, brought us to full employment without inflation. It was a happy time, while it lasted. And it contains a plethora of useful, unexpected, and unexploited lessons for Europe.

Europe, which has not plunged itself into needless wars or grossly neglected its public capital formation, is very well positioned to exploit these lessons. They are just not the lessons that most Europeans expect to find when casting a glance in the American direction. And Europeans will not find them until they come to understand our actual circumstances far better than conventional economics has taught them.

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## Appendix

1. Gini coefficients for earnings, measured across regions in Europe, are computed by the following formula:

$$GINI = \frac{2}{N-1} * \sum_{i=1}^{N-1} (F_i - Q_i)$$

where:

- N is the number of regions
- $F_i = \frac{i}{N}$
- $Q_i = \frac{\sum_{j=1}^i \bar{y}_j}{\sum_{j=1}^N \bar{y}_j}$
- $\bar{y}_j$  is the average earnings of region j

## 2. Economic sectors in the REGIO data set are given in Table A1.

**Table A1 Economic Sectors**

Agriculture, hunting, and forestry	Transport, storage, and communication
Fishing	Financial intermediation
Mining and quarrying	Real estate, renting, and business activities
Manufacturing	Public administration and defense; compulsory Social Security
Electricity, gas and water supply	Education
Construction	Health and social work
Wholesale and retail trade; repair of motor vehicles, motorcycles, and personal and household goods	Other community, social, personal service activities
Hotels and restaurants	Private households with employed persons

## 3. Convergence paths are calculated for each European region.

The convergence path for wages among 215 European regions over a 34-year period (2007–2042) is set so that the dispersion of average wages between European regions in 2042 becomes equal to the dispersion of average wages between the 50 U.S. states and the District of Columbia in 2001.

Four key assumptions underpin these calculations:

1. The present hierarchy of relation incomes between every sector of every region in Europe remains strictly unchanged. The richest remain the richest and the poorest the poorest.
2. Every gap between region-sector cells in 2042 remains exactly proportional to its 2000 value.
3. The richest region-sector cell enjoys zero real wage growth between now and 2042.
4. No structural change occurs in the balance of employment in any region.

The calculations follow this procedure:

1. Compute the Gini coefficient for inequality of average pay across the United States in 2001 (0.101).
2. Compute average annual wages, in thousands of euros, among 16 industries for 215 European regions in 2000 and the associated Gini coefficient across the regions (0.235).
3. Compute average wages for each region-sector cell in 2000 (a total of 3,062) and rank them from high to low.
4. Take the ratio of the second highest to the highest region-sector cell, the third highest to the second highest, and so forth, down to the ratio of the lowest to the second lowest, for a total of 3,061 ratios.
5. Assume zero real wage growth in the richest region-sector cell between now and 2042.
6. Choose the required ratio (convergence parameter) so that the European interregional Gini coefficient in 2042 corresponds to the U.S. value in 2000. The convergence parameter meeting this requirement is 0.999822, meaning that the gap between each region-sector cell and the one immediately below it is reduced by this ratio, each year.
7. Add sectors within regions to obtain new values for the average wages in each region in 2042.
8. Compute the compound growth rate of average wages in each region required to meet the convergence criterion in 2042.

Table A2 displays the results. For each European region, the table displays average wages in 2000 (step 2), the required level of average wages in 2042 (step 7) necessary to meet the convergence criteria (step 6), and the associated compound rate of wage growth necessary to meet the convergence criteria under the stipulated conditions (step 8). Note that the present ranking of regional average incomes is not preserved by this procedure; rather, the present ranking of all sectors within regions is preserved. But regions with a large fraction of sectors that are near, but not quite at the top of, the current rankings may see their average incomes overtake those of the highest-income regions; this is true for parts of the Netherlands and especially for inner London.



**Table A2 Convergence Paths for Each European Region\***

Code	Region/Province	Av Wage 2000 <sup>+</sup>	Av Wage 2042 <sup>+</sup>	Rate of Growth
De1	Baden-Württemberg	35.64	93.24	2.7%
De2	Bayern	33.89	92.30	2.8%
De3	Berlin	32.80	93.71	3.0%
De4	Brandenburg	25.97	86.54	3.4%
De5	Bremen	36.12	94.06	2.7%
De6	Hamburg	37.65	110.96	3.0%
De7	Hessen	35.61	94.21	2.7%
De8	Mecklenburg- Vorpommern	25.66	85.85	3.4%
De9	Niedersachsen	33.54	93.21	2.9%
Dea	Nordrhein-Westfalen	35.27	94.29	2.8%
Deb	Rheinland-Pfalz	33.36	91.33	2.8%
Dec	Saarland	33.55	92.50	2.9%
Ded	Sachsen	24.75	85.62	3.5%
Dee	Sachsen-Anhalt	25.41	86.05	3.4%
Def	Schleswig-Holstein	31.73	91.18	3.0%
Deg	Thüringen	24.51	84.35	3.5%
Gr11	Anatoliki Makedonia, Thraki	17.62	74.66	4.1%
Gr12	Kentriki Makedonia	17.53	74.64	4.1%
Gr13	Dytiki Makedonia	19.32	74.79	3.8%
Gr14	Thessalia	17.86	74.55	4.0%
Gr21	Ipeiros	18.49	74.92	4.0%
Gr22	Ionia Nisia	17.79	74.45	4.1%
Gr23	Dytiki Ellada	17.54	74.22	4.1%
Gr24	Stereia Ellada	17.55	74.51	4.1%
Gr25	Peloponnisos	17.85	74.52	4.0%
Gr3	Attiki	18.36	74.57	4.0%
Gr41	Voreio Aigaio	18.54	75.70	4.0%
Gr42	Notio Aigaio	17.85	74.73	4.1%
Gr43	Kriti	17.32	74.39	4.1%
Es11	Galicia	14.03	75.98	4.8%
Es12	Principado de Asturias	17.91	77.82	4.2%
Es13	Cantabria	18.52	77.51	4.1%
Es21	Pais Vasco	22.64	81.55	3.6%
Es22	Comunidad Foral de Navarra	21.87	79.63	3.7%
Es23	La Rioja	19.29	78.10	4.0%
Es24	Aragón	20.12	78.98	3.9%
Es3	Comunidad de Madrid	23.17	80.70	3.5%
Es41	Castilla y León	18.96	77.99	4.0%
Es42	Castilla-la Mancha	16.79	77.25	4.3%

Code	Region/Province	Av Wage 2000 <sup>+</sup>	Av Wage 2042 <sup>+</sup>	Rate of Growth
Es43	Extremadura	15.66	76.31	4.5%
Es51	Cataluña	19.71	78.53	3.9%
Es52	Comunidad Valenciana	16.77	76.06	4.3%
Es53	Illes Balears	18.80	77.61	4.0%
Es61	Andalucía	16.18	76.93	4.4%
Es62	Murcia	14.91	75.33	4.6%
Es63	Ceuta y Melilla	22.44	78.43	3.5%
Es7	Canarias (ES)	17.56	78.96	4.3%
Fr1	Île de France	43.69	117.61	2.8%
Fr21	Champagne-Ardenne	30.76	87.31	2.9%
Fr22	Picardie	30.01	85.10	2.9%
Fr23	Haute-Normandie	31.00	84.58	2.8%
Fr24	Centre	30.40	85.91	2.9%
Fr25	Basse-Normandie	27.73	83.11	3.1%
Fr26	Bourgogne	29.32	86.49	3.1%
Fr3	Nord - Pas-de-Calais	30.50	84.65	2.9%
Fr41	Lorraine	30.40	94.36	3.2%
Fr42	Alsace	33.54	96.61	3.0%
Fr43	Franche-Comté	29.30	85.70	3.0%
Fr51	Pays de la Loire	28.63	85.07	3.1%
Fr52	Bretagne	28.53	86.14	3.1%
Fr53	Poitou-Charentes	28.08	85.53	3.1%
Fr61	Aquitaine	28.95	92.25	3.3%
Fr62	Midi-Pyrénées	29.70	86.89	3.0%
Fr63	Limousin	28.28	84.32	3.1%
Fr71	Rhône-Alpes	32.27	86.52	2.8%
Fr72	Auvergne	29.13	85.91	3.0%
Fr81	Languedoc- Roussillon	27.97	84.36	3.1%
Fr82	Provence-Alpes Côte d'Azur	31.60	87.64	2.9%
Fr83	Corse	31.36	87.94	2.9%
Ie01	Border, Midlands and Western	28.30	84.13	3.1%
Ie02	Southern and Eastern	30.79	87.88	3.0%
Itc1	Piemonte	28.82	84.51	3.0%
Itc2	Valle d'Aosta/ Vallée d'Aoste	29.62	85.85	3.0%
Itc3	Liguria	28.90	84.53	3.0%
Itc4	Lombardia	30.12	86.95	3.0%
Itd1	Prov. Autonoma Bolzano-Bozen		No data available	
Itd2	Prov. Autonoma Trento		No data available	

<b>Code</b>	<b>Region/Province</b>	<b>Av Wage 2000<sup>+</sup></b>	<b>Av Wage 2042<sup>+</sup></b>	<b>Rate of Growth</b>
It43	Veneto	27.52	84.86	3.2%
It44	Friuli-Venezia Giulia	28.28	84.57	3.1%
It45	Emilia-Romagna	28.53	85.41	3.1%
It1	Toscana	27.15	84.54	3.2%
It2	Umbria	25.86	83.39	3.3%
It3	Marche	26.25	83.82	3.3%
It4	Lazio	29.48	86.15	3.0%
Itf1	Abruzzo	25.75	83.00	3.3%
Itf2	Molise	27.17	83.95	3.2%
Itf3	Campania	25.44	81.99	3.3%
Itf4	Puglia	23.56	81.39	3.5%
Itf5	Basilicata	25.78	83.17	3.3%
Itf6	Calabria	23.16	81.02	3.5%
Itg1	Sicilia	25.50	82.65	3.3%
Itg2	Sardegna	25.64	82.82	3.3%
Nl11	Groningen	36.17	100.81	2.9%
Nl12	Friesland	33.48	99.60	3.1%
Nl13	Drenthe	33.76	99.48	3.0%
Nl21	Overijssel	34.09	99.70	3.0%
Nl22	Gelderland	35.15	93.39	2.8%
Nl23	Flevoland	33.70	92.06	2.8%
Nl31	Utrecht	38.27	94.50	2.5%
Nl32	Noord-Holland	38.11	102.97	2.8%
Nl33	Zuid-Holland	37.41	102.40	2.8%
Nl34	Zeeland	35.37	100.46	2.9%
Nl41	Noord-Brabant	35.16	100.72	3.0%
Nl42	Limburg (NL)	35.13	93.54	2.8%
At11	Burgenland	27.32	86.59	3.3%
At12	Niederösterreich	30.71	103.10	3.4%
At13	Vienna	39.70	131.94	3.4%
At21	Kärnten	29.60	95.54	3.3%
At22	Steiermark	28.77	94.08	3.3%
At31	Oberösterreich	32.36	97.10	3.1%
At32	Salzburg	30.97	96.46	3.2%
At33	Tirol	28.70	93.94	3.3%
At34	Vorarlberg	31.41	96.35	3.2%
Pt11	Norte	9.43	69.29	5.7%
Pt16	Centro (PT)	9.18	69.00	5.8%
Pt17	Lisboa	13.27	70.73	4.8%
Pt18	Alentejo	9.40	69.53	5.7%
Pt15	Algarve	9.43	69.18	5.7%
Pt20	Região Autónoma dos Açores (PT)	9.09	69.23	5.8%

Code	Region/Province	Av Wage 2000 <sup>+</sup>	Av Wage 2042 <sup>+</sup>	Rate of Growth
Pt30	Região Autónoma da Madeira (PT)	9.39	69.45	5.7%
Fi13	Itä-Suomi	23.17	79.51	3.5%
Fi14	Väli-Suomi	23.67	79.01	3.4%
Fi15	Pohjois-Suomi	25.38	80.85	3.3%
Fi16	Uusimaa (suuralue)	31.05	86.57	2.9%
Fi17	Etelä-Suomi	26.12	80.62	3.2%
Fi2	Åland	29.94	84.16	2.9%
Se01	Stockholm	42.12	102.78	2.5%
Se02	Östra Mellansverige	34.31	91.11	2.8%
Se04	Sydsverige	34.94	90.64	2.7%
Se06	Norra Mellansverige	33.05	90.64	2.8%
Se07	Mellersta Norrland	32.61	97.77	3.1%
Se08	Övre Norrland	32.77	90.43	2.9%
Se09	Småland med öarna	32.60	97.70	3.1%
Se0a	Västsverige	34.57	96.93	2.9%
Be10	Région de Bruxelles	44.25	110.93	2.6%
Be21	Prov. Antwerpen	39.04	106.12	2.8%
Be22	Prov. Limburg (B)	33.50	101.81	3.1%
Be23	Prov. Oost-Vlaanderen	35.11	103.90	3.1%
Be24	Prov. Vlaams Brabant	40.58	107.68	2.7%
Be25	Prov. West-Vlaanderen	32.74	103.17	3.2%
Be31	Prov. Brabant Wallon	40.07	117.22	3.0%
Be32	Prov. Hainaut	33.87	94.59	2.9%
Be33	Prov. Liège	34.07	102.82	3.1%
Be34	Prov. Luxembourg (B)	31.26	93.17	3.1%
Be35	Prov. Namur	33.03	102.74	3.2%
Ukc1	Tees Valley and Durham	30.94	105.14	3.5%
Ukc2	Northumberland, Tyne and Wear	30.11	96.63	3.3%
Ukd1	Cumbria	28.36	100.08	3.6%
Ukd2	Cheshire	32.85	106.14	3.3%
Ukd3	Greater Manchester	31.81	95.90	3.1%
Ukd4	Lancashire	30.90	95.17	3.2%
Ukd5	Merseyside	30.63	87.40	3.0%
Uke1	East Riding and North Lincolnshire	31.46	94.96	3.1%
Uke2	North Yorkshire	29.31	95.76	3.3%
Uke3	South Yorkshire	30.18	94.91	3.2%
Uke4	West Yorkshire	31.41	96.13	3.2%
Ukf1	Derbyshire and Nottinghamshire	32.97	108.11	3.4%
Ukf2	Leicestershire, Rutland, and Northants	33.47	97.12	3.0%

<b>Code</b>	<b>Region/Province</b>	<b>Av Wage 2000<sup>+</sup></b>	<b>Av Wage 2042<sup>+</sup></b>	<b>Rate of Growth</b>
Ukf3	Lincolnshire	28.17	102.59	3.7%
Ukg1	Herefordshire, Worcestershire, and Warks	29.40	94.27	3.3%
Ukg2	Shropshire and Staffordshire	28.31	93.06	3.4%
Ukg3	West Midlands	32.40	105.13	3.3%
Ukh1	East Anglia	29.66	103.37	3.5%
Ukh2	Bedfordshire, Hertfordshire	34.72	110.06	3.3%
Ukh3	Essex	30.13	90.41	3.1%
Uki1	Inner London	48.10	195.81	4.0%
Uki2	Outer London	37.34	129.69	3.5%
Ukj1	Berkshire, Bucks, and Oxfordshire	36.94	123.14	3.4%
Ukj2	Surrey, East and West Sussex	31.56	108.09	3.5%
Ukj3	Hampshire and Isle of Wight	30.71	103.61	3.4%
Ukj4	Kent	31.52	131.51	4.0%
Ukk1	Gloucestershire, Wiltshire, and North Somerset	31.56	105.50	3.4%
Ukk2	Dorset and Somerset	28.57	103.64	3.6%
Ukk3	Cornwall and Isles of Scilly	23.56	81.72	3.5%
Ukk4	Devon	28.45	111.27	3.9%
Ukl1	West Wales and The Valleys	29.92	104.37	3.5%
Ukl2	East Wales	32.03	116.48	3.7%
Ukm1	North Eastern Scotland	34.61	106.07	3.2%
Ukm2	Eastern Scotland	31.92	97.67	3.2%
Ukm3	South Western Scotland	31.20	96.42	3.2%
Ukm4	Highlands and Islands	25.59	100.08	3.9%
Ukn0	Northern Ireland	28.42	104.05	3.7%
Cz01	Praha	10.42	67.42	5.3%
Cz02	Střední Čechy	6.47	64.66	6.6%
Cz03	Jihozápad	6.09	65.32	6.8%
Cz04	Severozápad	5.85	64.50	6.9%
Cz05	Severovýchod	5.89	64.65	6.9%
Cz06	Jihovýchod	5.93	64.55	6.9%
Cz07	Střední Morava	5.70	64.22	7.0%
Cz08	Moravskoslezsko	6.18	64.55	6.7%
Hu1	Közép-Magyarország	9.29	66.88	5.6%

Code	Region/Province	Av Wage 2000 <sup>+</sup>	Av Wage 2042 <sup>+</sup>	Rate of Growth
Hu21	Közép-Dunántúl	6.38	64.55	6.6%
Hu22	Nyugat-Dunántúl	6.09	64.23	6.8%
Hu23	Dél-Dunántúl	5.53	64.25	7.0%
Hu31	Észak-Magyarország	5.71	64.11	6.9%
Hu32	Észak-Alföld	5.30	64.28	7.2%
Hu33	Dél-Alföld	5.26	63.83	7.2%
Pl11	Lódzkie	7.24	67.48	6.4%
Pl12	Mazowieckie	10.18	68.84	5.5%
Pl21	Malopolskie	7.51	67.24	6.3%
Pl22	Slaskie	8.25	66.70	6.0%
Pl31	Lubelskie	7.35	67.06	6.3%
Pl32	Podkarpackie	7.27	66.38	6.3%
Pl33	Swietokrzyskie	7.37	66.40	6.3%
Pl34	Podlaskie	7.40	66.34	6.3%
Pl41	Wielkopolskie	7.54	66.79	6.2%
Pl42	Zachodniopomorskie	7.05	65.86	6.4%
Pl43	Lubuskie	7.14	67.08	6.4%
Pl51	Dolnoslaskie	7.84	66.76	6.1%
Pl52	Opolskie	7.66	66.76	6.2%
Pl61	Kujawsko-Pomorskie	7.22	65.92	6.3%
Pl62	Warminsko-Mazurskie	7.21	66.38	6.4%
Pl63	Pomorskie	7.74	66.63	6.2%
Sk01	Bratislavský	7.74	66.18	6.1%
Sk02	Západné Slovensko	5.10	64.04	7.3%
Sk03	Stredné Slovensko	5.14	64.77	7.3%
Sk04	Východné Slovensko	4.98	64.12	7.4%

\* excluding Denmark

<sup>+</sup> in thousands of euros

## Notes

1. To the untutored, a claim that serious monopoly power is held by the mass of low-paid, unskilled workers may seem strange. One might think that market power would accumulate in the hands of, well, monopolies; that the benefits of monopoly are more likely to be found in the stock options of executives than in the pay packets of the assembly line. But to think this way is to misunderstand the logic of supply and demand. Given that there is unemployment, it must be the case that real wages are too high. And this proves (without further recourse

to evidence) that the problem of monopoly is a problem of worker power. Conversely, no chief executive is ever fired for demanding too much money, proof that the market for CEOs clears at the competitive price. In some matters, it may be better to remain untutored.

2. This possibility led later to great debates over adaptive and rational expectations, and to the counterargument that any effort to generate a little inflation would necessarily spin out of control. It is hard to take that view too seriously anymore; a more cogent objection to Keynes's remedy is that today's economy has a hard time generating inflation at all. But then, of course, no barrier exists to the direct provision of the needed jobs through fiscal policy or an employer-of-last-resort scheme.
3. A familiar argument holds that redistribution from higher to lower incomes raises the propensity to consume, but this is arguably a weak effect and is not part of the case being made here.
4. Similar patterns can be found in broader measures of pay encompassing the service sector, but computational difficulties are greater.
5. Hourly pay inequalities within industries in the United States may be larger than indicated by the data, thus blunting the intersectoral comparison. (Obvious examples of pay inequalities are the well-known abuses of CEO pay.) My experience with these comparisons is that the same order of difference prevails within and between industries. Another reason why U.S. unemployment fell so far below European levels may lie in superior search mechanisms in the language-unified and computerized United States. It may be easier for low-wage service workers in America than in Europe to search for better jobs without actually leaving their current ones. To the extent that this is true, the U.S. service sector may be sheltering many underemployed people who would be openly unemployed in Europe. However, I do not have estimates, or know whether underemployment is worse than unemployment.
6. For the EU-15 alone, the interregional Gini coefficient comes to 0.142, which is still 40 percent higher than in the United States.
7. To test the impact of the missing data for Germany, I estimated the missing observations by assuming that the wages and employment in German regions by sector bear the same relationship as those in France. The simulations did not change significantly, so my calculations here do not include this adjustment.

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James K. Galbraith holds the Lloyd M. Bentsen Jr. Chair in Government/Business Relations at the Lyndon B. Johnson School of Public Affairs, the University of Texas at Austin, and is a senior scholar with the Levy Institute. He also chairs the board of Economists for Peace and Security (EPS), an international association of professional economists, and is director of the University of Texas Inequality Project.

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Galbraith served on the staff of the U.S. Congress in 1981–82, as an economist for the House Banking Committee and as executive director of the Joint Economic Committee. He was an architect of the modern procedures of congressional monetary policy oversight. Galbraith was a guest scholar at the Brookings Institution in 1985 and served as chief technical adviser to the State Planning Commission of China for a United Nations Development Program project on macroeconomic reform from 1993 to 1997. He held a Fulbright Distinguished Visiting Lectureship in China in the summer of 2001, and was named a Carnegie Scholar in 2003.

Galbraith studied economics as a Marshall Scholar at King's College, Cambridge, in 1974–75. He holds economics degrees from Harvard (B.A., 1974) and Yale (Ph.D., 1981).

For current research and an archive of published writings, visit the website of the University of Texas Inequality Project at <http://utip.gov.utexas.edu>. Papers on macroeconomic topics can be found on the Levy Institute website at [www.levy.org](http://www.levy.org). The work of EPS is at [www.epsusa.org](http://www.epsusa.org).



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