Commentary: Past and Prospective Causes of High Unemployment

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I am delighted to see that Paul Krugman and I agree on the two most basic points to be made. First, there is a natural rate of unemployment. Second, the natural rate moves. The importance of natural rate doctrine, of course, lies in the property of its standard models that after a monetary disturbance has driven the unemployment rate away from the natural rate—or a real disturbance operating through the monetary mechanism discovered by Keynes—the *equilibrium* (that is, the surprise-free, correct-expectations) trajectory of the unemployment rate returns to the natural rate (Phelps, 1968). A soft landing is theoretically possible in the simplest models, while in realistic models exhibiting stickiness of wages or prices or of the interest rates set by the central bank, overshooting is to be expected. In any case, the average unemployment rate in a long period—a dozen years or more, say—is rarely far from the average value of the natural unemployment rate in that period.

On our approaches to unemployment, however, we are far apart. I feel compelled therefore to inject into the discussion my own perspective on the natural unemployment rate, since it differs from that of Krugman and several other economists here. Then I will come to his thoughts on the subject and try to give them their due.

Confidence in the essential rightness of natural rate doctrine has not always been as firm as it is now. As the 1980s unfolded it began to be felt that I and the other natural rate theorists, such as Stiglitz (1973), Calvo (1979), and Salop (1979) had left the natural rate concept too feeble to live. In Western Europe, unemployment rates reached double-digit levels at mid-decade and seemed to hang there, motionless. Moreover, the inflation rate seemed to be barely falling. Several economists began to express doubts about the natural rate. Since the natural rate couldn't have jumped to double digits, they said, there must be something wrong with the natural rate concept.[1] (Some economists developed the concept of strong persistence, or strong hysteresis: A country's equilibrium unemployment rate is not some natural rate; it is whatever rate was experienced yesterday.)

Now I am coming off a six-year effort to fortify the natural rate concept against such doubts through a further development of the theory of the determination of the natural rate (Phelps, 1994a). The objective has been to find the mechanism governing how the natural rate moves in response to a nonmonetary macroeconomic shock or policy shift. The empirical conclusion is stronger than I anticipated: *Most of the long-term changes in the unemployment rate are the result of the movement in the natural rate rather than of deviations from an unchanging natural rate.* It is the persistence of the underlying forces driving the natural rate that accounts for the seeming "persistence" of the unemployment rate, not any tendency for unemployment to lock onto its current rate regardless of fundamentals.

The gist of the theory, as in my original 1968 formulation, is still the idea that costliness of employee behavior at low unemployment rates impels firms to drive the equilibrium wage level above the market-clearing level. (If across the economy the going wage starts out low enough to clear the market—a wage level so low that firms could afford to hire everyone wanting a job, leaving no pool of workers involuntarily unemployed—firms are beset by employee quitting, shirking, absenteeism, strikes, and the rest. Each firm then responds by raising its wage in the expectation that a favorable wage differential would provide its employees with an incentive to perform better—sufficiently better to repay the higher hourly wage.) The escalation of wage standards in turn forces each firm to economize more on labor.[2] Employment—the number of jobs available—is decreased; but the labor force is not or not by as much, if decreased at all. Thus a pool of involuntarily unemployed workers is created—the natural army of the unemployed.[3] We can imagine them drawing lots in the local employment office or taking a number at one or more firms as consumers do at a bakery to determine who gets a job and when.)

My more recent models have the further property that there is an equilibrium wage required by cost considerations at every given level of the unemployment rate. This required wage curve gives a higher wage the lower is the unemployment rate. A shock increasing the propensity to quit or shirk or whatnot drives up the required wage in the sense of shifting up this curve—for example, a fatter financial cushion—more cash flow or imputed income from private assets or more welfare entitlements. My recent models capture this by making these propensities of an employee a function of wage rates (his employer's and other firms') relative to what is called his "nonwage income."

Overall equilibrium also entails that firms can afford to employ the numbers they are employing. This brings in the demand wage—the wage that the firms can afford to pay at a given level of employment or at the corresponding level of the unemployment rate. Anything that reduces the demand for labor can be interpreted as shifting down this demand-wage curve. This steady-state demand wage is downward sloping in the wage-employment rate plan, like ordinary labor demand curves.

Unemployment has to rise or fall as necessary to reconcile the demand wage and the required wage. If something happens to push up the required wage above the demand wage, employment shrinks until the required wage is no longer above the demand wage. This rate of unemployment where the required wage equals the demand wage—where the two curves cross—gives the natural rate. If the economy is found initially at that point, firms will be willing to hire at a rate that maintains the unemployment rate steady for the moment. This notion of the unemployment rate that, if reached, would hold steady at least momentarily, absent monetary influences, is what we mean by the natural rate.

It follows that forces shifting up the required wage but not the demand wage (or shifting up the former more than the latter) operate to increase the natural rate; thus forces shifting down the demand wage but not the required wage (or shifting down the former more than the latter) also increase the natural rate.

It is instructive to consider a shock consisting of a one-time "Harrod-neutral" technological advance at firms—one that "augments" the labor input of all grades of labor equiproportionately—accompanied by an increase of the capital stock in equal proportion. In a neoclassical growth model, the effect would be simply to increase output, wages, and nonwage income in that same proportion, with no change in the rate of interest. Those results occur in my models with the added implication that there is no change in the natural unemployment rate. The reason for this neutrality is that wage rates as a ratio to nonwage incomes are left unchanged, so that the required wage increases in the same proportion as the demand wage rises. This neutrality could theoretically apply to an open economy too. The value-added tax is another neutral factor, and so too in the long run is the size of the labor force. All other shocks appear to be non-neutral for the natural rate.

A wave of empirical results from this framework (or more rudimentary ones) have come in. My own statistical study of seventeen OECD countries (Phelps, 1994a) confirms the importance of several factors in the secular rise of unemployment—though one, the real price of energy, has abated.

> "The two external oil price shocks hurled by OPEC in the middle and late 1970s were seriously contractionary. Such shocks push up the natural rate by reducing the wage business can afford while doing little or nothing to bring an accommodating reduction in the required wage."

This factor is widely thought quiescent now, since real oil prices, after soaring to twice its 1960s level in the 1980s, have been low again since 1987. Yet energy taxes in many countries have risen to fill the void, possibly shoring up the natural rate. Furthermore, the shift of energy-saving production techniques for more than twenty years may continue to dampen the demand for labor.

> "External shocks to real interest rates (money rates after sub-

> tracting off the ongoing inflation rate) have been a big contractionary force, as the theory predicted. Being purely on the receiving end, Europe suffered most from such shocks in the '80s, the non-German countries most in the early '90s. An environment of high real interest rates has a chilling effect on investment activities that create jobs: training new employees, labor-intensive construction, and recruiting new customers by keeping prices low." (Phelps, 1994a)

The good news is that the factors that pushed up world real interest rates in the early 1980s and the early 1990s, notably the American and next the German investment stimuli, have subsided. Moreover, reverse forces are operating in the 1990s with the renewed attacks on government spending and the defense budget. (Lower inflation may also have lowered the real cost of capital.) The bad news is that some new and as-yet-unmeasured factor has been keeping real interest rates higher than predicted for the past few years—presumably the emerging market economies.

A country can insulate itself from these international forces only at great cost. But an appreciable part of the secular rise of unemployment in France and elsewhere can be laid to a domestic factor.

> "The big hikes in payroll and personal-income taxes in most countries have been mass job-killers. In France the ten-point rise has cost the unemployment rate about a point and a half. The contrasting neutrality of value-added taxes is also confirmed." (Phelps, 1994a)

Some observers already guessed these results from simple correlations: In the G-7 contest for the largest total rise in these two damaging tax rates from 1965 to 1990, Canada and France finished 1 and 3. In the standings for the rise in unemployment, Canada and France finished 3 and 1. Japan aside, the United States was last in the latter race, and next to last in the former. Either way, the results conform to the theory. When business or workers are taxed on wages, business must pay more to provide the same employee incentives as before, and cannot then afford the same workforce as before.

The econometric estimates and the time series of the explanatory variables imply a path of the natural unemployment rate over the estimation period—and on to 1993, the last year for which we have all the data on the causal variables. The United States path is shown in the attached chart. As the reader can see, the forces I have discussed have collectively produced a major rise of the U.S. natural rate between the mid-1960s and the present. As estimated, the natural rate has climbed from around 5 percent in 1964 to around 6.45 percent in 1993. If this is so, there has been substantial overshooting of the unemployment rate in 1994. Furthermore, international factors point toward a resumption of the natural rate to a level more nearly like what existed in 1988, 1990 and 1991—years when the world real interest rate was much higher and the dollar's real strength much less than in 1993. What we might call the ***basic*** natural rate might be estimated at around 6.65 percent. It seems to me, therefore, that Paul Krugman is out of touch with the development of the natural rate in this country when he suggests that the natural rate in the United States has exhibited no important elevation in the past few decades. A climb of one-third since the mid-1960s is, to me, a major increase, and this increase comes on top of a level that was already unsatisfactory and far higher than what was enjoyed in Western Europe at that time.

Two other influences are not estimated in my study, though I am working to estimate these factors now. One of these is domestic:

> "The enlargement of welfare benefits in recent decades operates to undermine employee performance and thus to shrink jobs—and possibly wages too. When people see that failing to remain continuously in their job will not cost them a range of benefits, from medical care to retirement income, and that losing their jobs may gain them additional means-tested benefits, their propensities to quit, shirk, be an absentee, and to strike are increased. Employer costs are increased, and jobs have to be curtailed." (Phelps, 1994a; see also Phelps, 1994b)

The other is largely international:

> "The demand for low-skill labor appears to have declined in relation to labor demand as a whole. The effect on the unemploy-

> ment rate of low-wage workers is sizable in recent estimates by others, though the effect on the general unemployment rate is still quite small." (Phelps, 1994a)

Two of the underlying causes are also international. Trade liberalization in previous decades and the productivity gains realized in East Asia, in sending cheap-labor imports into Western markets, have reduced sharply the wage that some employers can afford. Technological advances such as computerization may make the training of low-skill labor too expensive to be worthwhile for employers.

Let me now take up briefly Paul Krugman's thoughts on the behavior of the natural rate over this same period. I am continually astounded that insightful economic observers do not see the importance of the huge rise in the world real interest rate in recent years (first pointed to by Lal and van Wijnbergen and by Fitoussi and Phelps in the mid-1980s). One would think that an international economics theorist, as Krugman is, could hardly miss the point that the newly arrived opportunities for profitable investment in East Asia and Latin America at real rates far higher than the marginal investments needed for high employment in the rich countries of the West spell a slowdown of wages in the West to accommodate the elevation of the world real rate. The trade theorists miss it, I would guess, because they have not thought through how such a downward pressure on wages could push up the natural rate. However, let us focus on what he does say, not on what he doesn't.

It was very pleasant to see him take seriously the idea, which has been noisily trumpeted in the financial press, that the welfare state and its financing through taxes on labor might have been responsible for some of the rise of the natural rate on the European continent. I did feel let down, therefore, when he lets the welfare state off the hook, saying that it does not "explain why unemployment rates in Europe have risen so much." To say that the welfare states were "already notably generous in the low-employment (sic) era of the early 1970s"—he must mean the low-unemployment era—is of little value here (it proves nothing) since so many other factors can explain the low unemployment in those years (and earlier ones): the world real interest rate had been steadily falling and was then much lower than it is today, and tax rates falling wholly or disproportionately on labor were far lower than today. Ultimately, good sense is regained when he concedes that pruning the welfare state would contribute to reducing the natural rate, alluding to the widely conceded decline in the British natural rate over the past dozen years.

The author's discussion of "inequality" and unemployment was a great deal fresher, thus more of a contribution, it seemed to me. I will confess that at first I thought this was just a glitzy way of saying that a drop or a slowdown in the demand for *low-wage* workers will raise *their* natural unemployment rate. "Economist Says Inequality Swells Joblessness," is the possible headline, and in fact I saw a headline like that in Italy this summer (though I think none of the conference speakers had said any such thing). But then I realized that there is a deep truth in it—more maybe than the author realized.

Suppose that there is an increase or a speedup in the demand for *high-wage* labor. Since their unemployment rate is already quite low we can virtually forget about the effect on *their* natural unemployment rate. But the natural unemployment rate of the *low-wage* workers might be sensitive to such a shock, and be driven up by it. If there were a sociologist here, he or she would insist to us that some or all of the low-wage workers would resent the increased wage rates of the high-wage workers and this resentment would aggravate their propensities to quit and shirk, with the consequence that their employability was reduced and their natural unemployment rate was increased. Whatever the truth in that thesis, I would argue that the technological or other improvement generating the increased demand for high-wage labor would-trickle down in the form of increased nonwage income for low-wage workers—they would find that while their wages were at a standstill, the returns from the private assets and the welfare entitlements were enlarged by the economic progress focused at the top of the pyramid. As a thought experiment, take a random sample of workers from a poor economy and transplant them into, a rich economy where their wages will be as low as previously but everyone else's wages will be vastly higher. I say that their employability will collapse from the destruction of their incentives to perform as diligently as they did in their home country, with the result that their unemployment rates will soar.

There is also a great deal in Krugman's paper on how little the effect of foreign trade on the natural rate has been so far. The international economics fraternity is, nearly to a man, all very determined to defend free trade against the criticism that it has worsened unemployment. So the diligent review of recent studies on this topic is hardly iconoclastic. I would only say that I also like free trade. But I do think that the ritualistic free traders should shore up their case by arguing that it may be necessary to engage in some redistribution of the gains from a country's free trade if there is to be assurance that low-wage workers will not be heavy losers from free trade. If the plight of low-wage workers gets much worse in the future, it will be interesting to see how the international economists divide themselves among the die-hard free-trade camp--come what may—and a new camp that takes seriously the need for subsidies for low-wage workers. This brings me to the matter of policies to reduce the natural rate.

What to do? The solution for which I have pleaded the past five years: a low-wage employment'subsidy. It would best take the form of a tax credit that employers could use to offset the payroll taxes they owe from their employment of low-wage workers (Phelps, 1990). Low unemployment and better pay would result at the low end of the labor market—the less of the one, the more of the other. I hope that, with time, I will be able to persuade Paul Krugman; who seems a little diffident about subsidies at this moment, and indeed all right-thinking economists to join in the effort to see such a scheme put into action.

To some extent, this subsidy scheme would be self-financing. Reduced joblessness and better pay would reduce claims on the welfare system. As crime rates fell there would be savings in law enforcement. The added employment would add some payroll and income tax revenue net of the subsidy.

To a considerable extent, the remaining financing would best come from shrinking those welfare benefits that most undermine employees' interest in staying and performing in their job. Unemployment benefits are a common example.

Some increase of taxes could well be necessary, though. An extra value-added tax would be relatively convenient in countries having the machinery for collecting such a tax already in place. An extra payroll tax at the high-wage end is likely to be more attractive. In that latter case, no ***net*** increase in the overall tax burden on labor results, only a reshuffling of the net tax revenue to be paid.

Once the results of this measure for unemployment and wages can be gauged, the government should give consideration to outright cash subsidies that would go beyond relief of payroll taxes. In recent calculations, I figure that wage incomes as low as $7,000 or so could be boosted to around $11,000 or so, with lesser increases at higher income levels, at a cost of a little more than $100 billion per year (Phelps, 1994c). The transformative social effects would transcend what might be suggested by the impact on the aggregate unemployment rate.

It would be fitting that the employment subsidy program be introduced first in this county, where the economic difficulty of low-wage workers may be the worst among Western countries. The United States, which, as Myrdal was fond of observing, has always been the laboratory for devising answers to the world's new social problems, has the opportunity to be the first country to translate widespread notions of economic justice for disadvantaged workers into reality—and to reduce unemployment and boost industry and enterprise in the process.

Chart 1
Decomposition of the Rate of Steady-State Unemployment and the Rate of Actual Unemployment in the United States

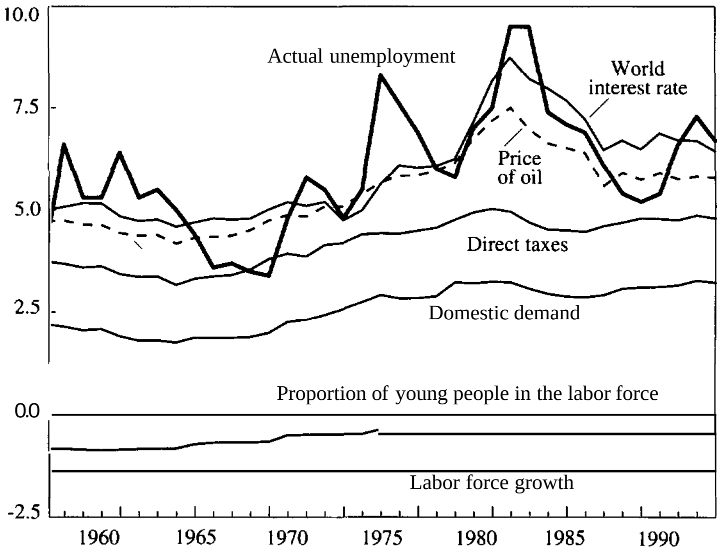
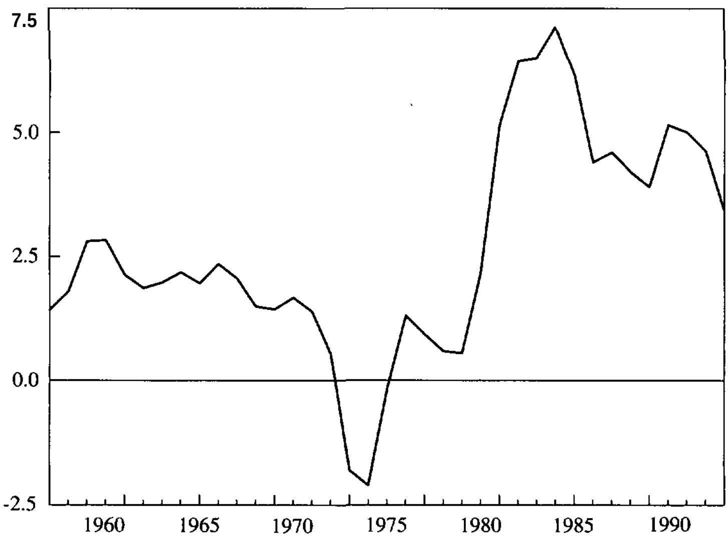


Chart 2
The World Real Long-Term Interest Rate



Endnotes

[1]A similar episode occurred just a year ago. On both occasions, just when radical pessimism began to take hold, recovery began in one country after another, with few exceptions.

[2]Although my decision to raise my wage scale is no reason then to fire some of my workers, the discovery that the firms generally have raised their wages is a reason for me to fire some of my employees and to pay more to the remaining ones.

[3]For these workers, and for workers generally, the wage is above the "reservation wage," which a worker needs to participate in the labor force. It is curious that Paul Krugman somehow appears to believe that people's unemployment is explained by an excess of their reservation wage over their available wage; that could only explain their nonparticipation in the labor force, not their unemployment. since they would not be in the labor force.

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