

## The 'Natural' Rate of Unemployment

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This chapter aims to help us understand the 'natural' rate of unemployment (NRU) and its limitations. This concept is a central part of the neo-liberal or *laissez-faire* view of macroeconomics. This chapter looks at the issue in reference to United States, both theoretically and empirically. The U.S. is probably the best place to understand the issues, since it is the closest to being a closed capitalist economy. There, the NRU theory should apply in the purest form, with a smaller role for exchange-rate fluctuations and the like to confuse inflationary dynamics.

We will start with the history and implications of the NRU. Then, this concept will be described in greater detail, leading up to criticism. Finally, this chapter sketches some conclusions.

### FROM FULL EMPLOYMENT TO THE NATURAL RATE

Due to the extreme unemployment encountered during the 1930s, *full employment* (low unemployment) became a major policy goal. But concerns with creeping inflation colored such commitments during the 1950s. This crystallized in the famous Phillips curve, named after economist A.W. Phillips: this was a trade-off between unemployment and inflation. No single 'full employment' unemployment rate exists. Rather, we can 'buy' higher employment only by suffering greater inflation. Or we could obtain lower inflation by enduring higher unemployment.

During the 1970s, the dread disease of 'stagflation' struck Phillips-Curve thinking: for example, unemployment rose from 3.5 to 5 per cent from 1969 to

1970, but inflation stayed high. This combination of high unemployment and inflation rates contradicted the idea of a simple trade-off, making many economists willing to accept the NRU theory, previously developed by *laissez-faire* economists Milton Friedman and Edmund Phelps.

In the NRU view, inflation *accelerates* (gets worse) when the actual unemployment rate persists below the NRU. Something like this happened during the period 1966 to 1969, with unemployment rates below 4 per cent: consumer-price inflation tripled from 1.9 per cent in 1965 to 6.2 per cent in 1969. Going the other way, inflation slows when unemployment stays above the NRU. This *disinflation* was encouraged by unemployment of almost 10 per cent during 1982 and 1983, resulting from the Federal Reserve's high interest rate policy. Inflation rates fell from over 12 per cent in 1980 to about 4 per cent in 1983.

Further, the NRU (somewhere between 5 and 7 per cent of the civilian labor force) is seen as an *economic equilibrium*: if the economy attains it, the inflation rate stays constant, unless there is a shock to the system. This vision returns us to the idea of a unique full-employment unemployment rate. Unlike for earlier thinkers, however, it is not something that's desired. It's something we're stuck with. Thus, economists rarely use the phrase 'full employment' these days.

The NRU corresponds to problems in labor markets that prevent instant adjustment to changes in the economy. These involve classical unemployment (where real wages are too high compared to an assumed equilibrium wage), frictional unemployment (where workers are temporarily between jobs), and structural unemployment (where the economy's dynamic changes leave pockets of workers with skills or in locations that do not correspond to available job openings).

In this view, the economy 'naturally' persists where productive inputs are scarce. So the Central Bank's monetary policy has no permanent effect except on the rate of inflation. Thus, the *only* goal of the Central Bank is to control inflation. As for the other form of demand-management policy (fiscal policy), government deficits simply compete with the private sector for scarce resources and so should be avoided. In theory, such deficits could be used to finance government investment, raising the economy's potential rather than merely crowding out the private sector. But NRU theory is usually part of the broader neo-liberal package, which sees the government as essentially useless beyond its military and police roles. NRU theory also rules out wage and price controls (incomes policies), since they lead to shortages of products, illegal markets, and the like. The bureaucratic costs of such programs correspond to few if any benefits.

Despite its name, the NRU is not fixed. For example, it rises or falls as populations that are more prone to unemployment (such as untrained youth)

become more or less represented in the labor force. More crucially, it can (in theory) be reduced by policies that 'reform' labor markets. There is nothing in NRU theory that says that this cannot involve (for example) training of workers for available jobs or even efforts to stop disruptions arising from capital mobility that cause structural unemployment. But these are discouraged by other parts of the neo-liberal package. So the emphasis is on attacking unemployment seen as arising from welfare-state programs, minimum wages, and labor unions. For example, the NRU can be lowered if unemployment insurance benefits are more miserly, undermining the assumed incentive to be unemployed.

#### UNDERSTANDING THE NRU

The word 'natural' is a rhetorical trick, since there's nothing natural about the NRU. Even its advocates see it as a result of non-natural institutions in labor markets. Other names have been adopted, for example, the inflation-threshold unemployment rate or the long-run equilibrium unemployment rate. For many, it's called the NAIRU, the Non-Accelerating Inflation Rate of Unemployment.

As noted in the references to the late 1960s and early 1980s above, there is some real-world basis for some of the ideas behind the NRU. The key variable is expectations of future inflation, which rise (or fall) based on experience with inflation. They also tend to persist, to have inertia.

Inflation accelerates as the economy persists below the NRU because high inflation becomes a self-fulfilling prophecy. Demand pressure encourages faster inflation than is currently expected. That encourages inflationary expectations to rise as people adapt to perceived reality. Worse, this feeds back to raise the actual inflation rate as people act on their expectations. With persistently high rates of unemployment, on the other hand, inflation moderates. Low demand encourages prices to grow more slowly than expected. So inflationary expectations fall, feeding back to reduce actual inflation. Finally, at some medium rate of unemployment, actual inflation equals the expected inflation rate, so that both stay constant; no acceleration or deceleration of inflation rates occurs.

The subjective nature of inflationary expectations suggests that disinflation is relatively painless. People simply have to change their minds. This perspective opens the way to the *rational expectations* theory, in which high unemployment is seen as an extremely short-lived phenomenon because inflationary expectations have no inertia. People adjust expectations following their understanding of the workings of the economic system (rather than extrapolating past inflation into the future). For example, people might think that money-supply growth is the only source of inflation. So if the Central

Bank slows that growth, this theory says that people will instantly cut their inflationary expectations, reducing actual inflation.

#### CRITIQUE OF THE NRU THEORY

As the NRU became a fixture in textbooks and policy, critiques arose. Instead of a full survey of this literature, consider only several major points.

*Inflationary Persistence:* many have emphasized the objective side of inertial inflation. For inflationary expectations to persist, people and institutions must have the *power* to act on their expectations. Thus, inflation is more likely to persist to the extent that corporations are shielded from product-market competition and workers belong to labor unions. Further, the objective inflationary process can take on a life of its own, as in the famous price/wage spiral, which works with, and is reinforced by, inflationary expectations. First, rising prices encourage workers to push for higher money (nominal) wages to avoid or reverse falling real living standards (this may be written into contracts as cost-of-living escalators.) Then employers protect their profit margins by passing on wage increases as higher prices. That, in turn, encourages higher money wages, so the process might continue indefinitely. This process has been described as 'conflict inflation,' since the fight between employers and employees over the creation and distribution of the product can cause inertial inflation. It may be reinforced by 'wage-wage' inflation, in which workers push for nominal wage increases in step with those received by others.

This inertia is not immune to high or low unemployment. But it does tend to persist longer than inflation based solely on subjective expectations. Further, it works asymmetrically. Whereas workers are relatively happy with nominal raises even if they fall behind price inflation, they resent money wage cuts. They thus resist those cuts, discouraging disinflation. This does not rule out disinflation. Rather, it means that efforts to fight severe inflation using only demand restraint can be extremely painful. In the U.S., the 1980s disinflation meant persistent high unemployment, union-busting, and destruction of much of the Northeastern industrial belt. Further, monetary tightness triggered a Latin American debt crisis. In this perspective, incomes policies can reinforce demand-based anti-inflation campaigns, making them more efficient.

Inertial inflation also suggests a larger role for supply shocks (such as the oil-price hikes of the 1970s) than that which is usually allowed in the NRU literature. A rapid increase in oil prices depresses both real wages and profit margins in oil-dependent sectors, intensifying the price/wage spiral. Since the distributional conflict cannot be easily solved with demand-side policies, persistent stagflation results.

*The Wide NRU:* to Friedman, the NRU corresponds to the level of employment 'which would be ground out by the Walrasian system of general

equilibrium...including market imperfections ...the cost of gathering information about job vacancies and labor availabilities, the costs of mobility, and so on' (1968, p. 8). This refers to one of economists' tall tales, that of Léon Walras about an imaginary world where perfect markets are guided by an all-knowing Auctioneer. But then it tries to bring a large number of snakes into this Garden of Eden. Unfortunately, no one has ever combined multiple 'imperfections' with a Walrasian model. Crucially, there is no reason why the NRU should be unique.

Long before Friedman and Phelps, Abba Lerner (1951) developed a version of the NRU theory. Unlike the current orthodoxy, he saw a *range* of full-employment unemployment rates. 'High full employment' (low unemployment) could be attained using incomes policies, but only 'low full employment' (high unemployment) without. If we accept the neo-liberal taboo against incomes policies, we miss much of the economy's potential, while condemning many workers to unneeded misery.

The idea that the NRU is not a unique number has been seen in recent empirical research. Staiger, Stock, and Watson (1997) found that the range of possible values of the NRU (from 4.3 to 7.3 per cent unemployment) was too large to be useful to macroeconomic policy-makers. Robert Eisner (1997) suggested that for 1956–95 there was a zone from about 5 per cent to about 10 per cent unemployment between the low-unemployment realm of accelerating inflation and the high-unemployment realm of disinflation. In between, he found that inflation falls with falling unemployment.

*The changing NRU*: as noted, there is nothing in NRU theory that says that this threshold is constant. But few if any NRU-oriented economists were ready for the late 1990s, when unemployment persisted at about 5 per cent but inflation rates fell. In response, some pointed to beneficial supply shocks (such as low oil prices or the inflation-suppressing effects of a high dollar exchange rate). Robert J. Gordon (1997) and others tried to save NRU theory by making it vary over time. But this simply repeats one of the major flaws of empirical studies of inflation: because NRU estimates are not based on independent study of labor markets but instead on studies of unemployment/inflation dynamics alone, such estimates tend to follow the actual unemployment rate. If the estimated NRU is based on the path of actual unemployment, that undermines the policy usefulness of the NRU theory.

Further, it makes the hysteresis hypothesis more plausible: contrary to Friedman, for whom causation goes only one way, the actual unemployment rate can affect the NRU. As Shaun Hargreaves-Heap (1980) pointed out, persistently high unemployment does not simply undermine inertial inflation. It also encourages a rise in structural unemployment (as, perhaps, in Thatcher-era England), by destroying the value of workers' skills, demoralizing them, and by creating pockets of poverty. The pain created by anti-inflation campaigns

can be permanent! Similarly, persistently high demand can erode structural unemployment, lowering the NRU or its range (as perhaps in the U.S. during the 1990s). As he suggests, this re-establishes an inflation/unemployment trade-off.

Recent mainstream research has suggested another reason why the estimated NRU can change. Workers may have 'aspirations' of attaining a specific level of real wages that is above that which is possible currently (given labor productivity). They will thus keep on pushing up nominal wages to attain that desired level, encouraging inertial inflation. Higher unemployment is needed to keep these aspirations from causing accelerating inflation. Ironically, this turn toward the conflict theory of inflation fits well with the Marxian theory, i.e., that some unemployment is needed to undermine the bargaining power of workers and to preserve profitability. This 'reserve army of the unemployed' is an addition to the usual trio of frictional, structural, and classical unemployment. Unlike the last two, this type of unemployment is beneficial to those with the most political and economic power in the system (the capitalists). This theory suggests that, all else constant, estimates of the NRU would be higher when profit rates are low (as in the 1970s), since a larger reserve army would be needed to restore profitability.

#### CONCLUSION

The history of the 1970s to the 1990s contradicts the NRU theory, suggesting that a new theory will arise. But there is currently no new consensus, so that the NRU theory continues to dominate textbooks. The current theory of the inflation/unemployment connection can be summarized as involving three main elements that can be added up to give the total inflation rate:

1. demand inflation, due to currently low unemployment.
2. supply inflation, due to sudden, large, and persistent increases in the cost of raw materials and/or imported goods.
3. inertial inflation, which can rise due to persistent and extreme low unemployment or due to supply shocks.

All three of these can work in the other direction. Note that the Phillips Curve survives as element #1. Unlike the early version, this curve can shift due to the other two factors.

As for the NRU, the criticisms discussed above suggest that anti-inflation campaigns are far from painless, that this crucial unemployment rate is unknown and could be a range of unemployment rates, changes over time in an uncertain way, and reflects 'sociological factors' such as the balance of class power. This opens the way for the use of incomes policies and the use of government deficits

to steer the economy, while making the Central Bank's monetary policy more unfixd and intuitive.

Thus, the avoidance of low unemployment rates by the Central Bank might reflect Michal Kalecki's political theory: low unemployment threatens to undermine worker discipline in the workplace and to offend financiers by causing inflation (Kalecki 1971). If so, that might explain why the NRU theory has been so popular, i.e., that it takes a political issue and tries to end the debate by invoking a 'natural' explanation.

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