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Is Full Employment an Appropriate Monetary Policy Target?[1]

Full employment is an important public policy objective. The unprecedented level of unemployment observed in the aftermath of the global crisis represents a major policy failure. This paper re-examines whether this policy failure is one we should associate with monetary policy and whether full employment is an appropriate target for monetary policy. It is recalled that a few decades ago, full employment was considered by many to be a proper monetary policy target. This changed with the advent of inflation targeting that recognized the value of the primacy of price stability. Following a brief historical review, it is argued that full employment is not an appropriate target for the central bank and should be avoided for the same reasons that led central banks to put price stability above other objectives as an operational target in the latter part of the 20th century. Lack of knowledge about what constitutes full employment in real time and the risk of politicization of the central bank in the face of possibly politically motivated disagreements about its measurement make full employment an unsuitable target.

Keywords: Natural rate of unemployment, full employment, potential output, monetary policy, real-time output gap
JEL Classification: E50, E52, E58

Full employment is an important public policy objective. The unprecedented level of unemployment in the aftermath of the global crisis has become a cause of grave concern in a number of developed economies. Aggregate production remains far below what would have been expected before the crisis. "Underutilized" resources impose a welfare loss on any economy and a strong desire is seen for public policy to intervene and correct the situation.

In the euro area, the situation is particularly dramatic in countries under an IMF/EU program, where in some cases unemployment has reached depression era proportions (chart 1). The contrast with Germany, where unemployment has been declining during the crisis is striking. Focusing on youth unemployment rates (chart 2) highlights the risk of creating a lost generation as a result of the potentially permanent scarring effects of unemployment.

Without question, the dismal performance of unemployment reflects a major policy failure. But is the failure we observe in the elevated unemployment rates one we should associate with monetary policy? Alternatively, is full employment an appropriate monetary policy target? Should full employment be part of the legal mandate of central banks or should the mandate of a central bank be interpreted in this manner?

To address this question it is useful to consider the role of monetary policy in the broader context of serving the public interest. In theory, all government policies and institutions, including the central bank, could coordinate to achieve maximum social welfare. Monetary, fiscal, regulatory, labor, structural and other policies could contribute, in small or large part, to the attainment of multiple objectives: Price stability, financial stability, full employment, high productivity, fairness, equality, social justice and so on. But at times there may be conflicts among the various objectives and the roles of different institutions. Different policies and different institutions may vary widely in the effectiveness with which they can

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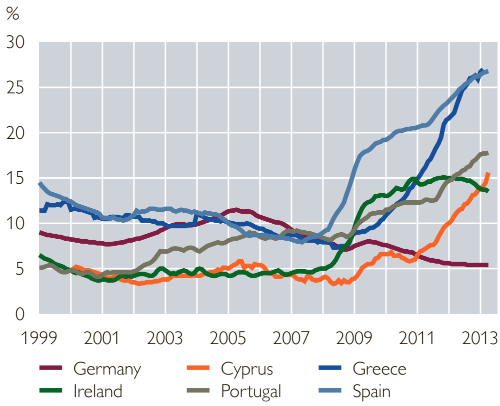
Chart 1

Unemployment Rates

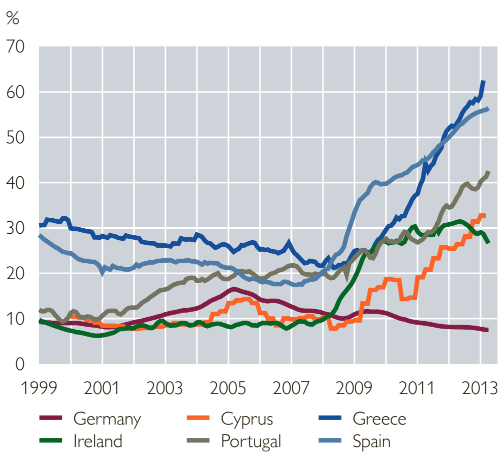


Source: Eurostat.

Note: Germany versus program countries.

Chart 2

Youth Unemployment Rates



Source: Eurostat.

Note: Germany versus program countries.

contribute to their attainment. And in the context of modern democracies, intertemporal conflicts may arise due to electoral considerations. Elected governments and politicians more generally, may have different objectives and shorter horizons than would be ideal for society as a whole.

In practice, these considerations suggest that better results may be attainable for social welfare as a whole if institutions and policies are assigned more specific targets and, further, that the targets assigned should be achievable. With regard to monetary policy, these considerations have led to the view that it is best performed by independent central banks and that a primary task can be identified in the preservation of price stability, an objective which is squarely under its control over time. Because of the short-term influence of monetary policy on aggregate demand and employment, monetary policy is also recognized as a countercyclical stabilization tool and, in this light, full employment might be considered as another objective. A practical difficulty arises, however, once it is recognized that full employment cannot be accurately determined, especially in real time, when monetary policy decisions are taken. As a result, the pursuit of full employment as a monetary policy target may compromise the pursuit of price stability. In this context, the question to address is whether full employment is an appropriate monetary policy target despite the risks this could pose to the achievement of price stability over time.

In fact, full employment had become part of the legal mandate of some central banks during the 20th century, and, in some cases, monetary policy was de facto operating with full employment as a target. In the United States, the Employment Act of 1946 proclaimed that it was the continuing policy and responsibility of the government and the Federal Reserve to "promote maximum employment, production and purchasing power." The Act was enacted in the shadow of the Great Depression, a period when the social pain associated with persistent unemployment was as dramatic as ever. As DeLong (1997) notes, however, precisely this motivation to achieve full employment following the experience of the Great Depression, led to a neglect of price stability as the predominant objective of monetary policy, leading to the Great Inflation. Nelson (2005) documents that neglect of price stability as a responsibility of monetary policy was observed in a number of countries.

The infeasibility of pursuing full employment policies in the manner pursued following the Employment Act, and the inflationary consequences that would eventually materialize by such policies was a recurring theme in Milton Friedman's work (1947, 1953, 1968). Friedman stressed that our lack of knowledge of the precise dynamics of the economy and of the measurement of the business cycle made it infeasible for monetary policy to pursue a full employment target. Friedman argued that doing so would likely increase instability in the economy as it would compromise what monetary policy could achieve, that is to deliver price stability over time. Unfortunately, the consensus policy advice provided by our profession failed to heed these warnings at that time. It was only following the Great Inflation, a disastrous experience with high and volatile inflation accompanied by slow growth and high unemployment, that the error was recognized.

Misperceptions in real-time estimates of full employment and potential output unavoidably become a significant problem when policy is guided by a full employment target. A monetary policy strategy based on a full employment target would produce periods of high and sustained inflation and periods of sustained and low inflation (or deflation) depending on whether estimates of the economy's potential used to guide policy subsequently prove to have been overoptimistic or over pessimistic. Recent macro econometric exercises have confirmed that, as Friedman had argued, such errors add to economic instability (Orphanides and Williams, 2013). But revisions in real-time estimates of the economy's potential need not be symmetric. Then, in addition to greater instability, such policies may induce a bias.

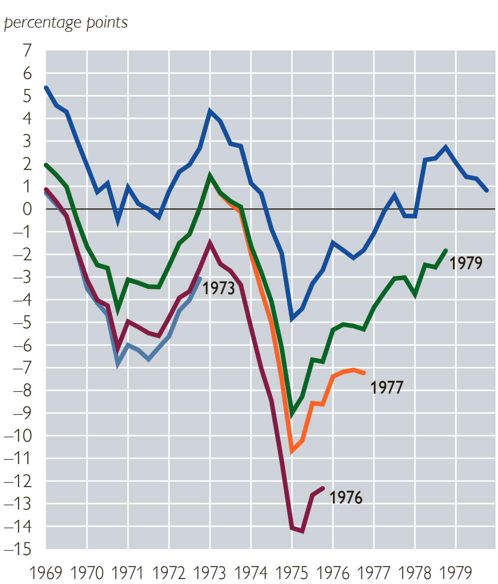
Politics and human optimism could result in an asymmetry in the revisions of full employment estimates in a manner that would imply an inflation bias if

full employment is used as a policy target. Political pressure to attain higher and higher employment when the precise definition of full employment remained unknown could induce faster revisions from estimates that appear pessimistic than from estimates that appear optimistic. Such a pattern in the process of revisions would result in an inflationary bias, overall, when monetary policy is guided by a full employment target. Meltzer (2005) argues that such a political dimension is essential to fully understand the origins of the Great Inflation. When policy is guided by two targets – full employment and price stability – conflicts arise as "[p]oliticians elected for four-or five-year terms put much more weight on employment – jobs, jobs, jobs – than on future inflation."

The pattern of revision of official estimates of potential output and the associated output gap in the United States during the 1970s offers a clear case of the resulting inflationary dynamic. Chart 3, reproduced from Orphanides (2003), shows the evolution of historical estimates of the output gap during the 1970s. The chart shows official estimates of the output gap produced by the Council of Economic Advisers in 1973, 1976, 1977 and 1979. At that time, other institutions, including the Federal Reserve, employed the Council's estimates for potential output in their analysis. For comparison, the unlabeled line at the top shows the Federal Reserve staff's estimate of the output gap based on estimates of potential output produced in 1994. During the 1970s the US economy had experienced a productivity slowdown and an increase in the natural rate of unemployment. But these adverse supply developments were recognized only gradually and with a significant lag. This delay in recognition, while policies targeted full employment, led to a series of policy errors.

Chart 3

US Output Gap Revisions: 1973, 1976, 1977, 1979



Source: Orphanides.

Note: Reproduced from Orphanides (2003).

The experience at the Federal Reserve at the beginning of the 1970s is characteristic of the errors. When Arthur Burns became Chairman of the Federal Reserve in 1970, the economy was entering into a recession. Even though inflation was on the rise, the estimates of the output gap available at the time argued that aggregate demand was below the economy's potential and policy was eased. Similarly, in 1973, the economy appeared to underperform, and estimates suggested that only part of the output gap resulting from the recession of 1970s had been recovered. At the time, both fiscal and monetary policy actively targeted full employment and the estimates of the output gap influenced policy decisions towards excessive accommodation. As the decade progressed, growth generally frustrated expectations and inflation exceeded forecasts.

Subsequently, it was realized that earlier estimates of full employment were overoptimistic. This led to upward revisions in the natural rate of unemployment and corresponding downward revisions in the estimates of potential, as seen in the chart. By 1979, several percentage points of the output gap previously estimated for the early 1970s were revised away. Still, the 1979 vintage of the output gap only corrected part of the problem. Subsequently, potential output estimates were revised to show that the output gap was generally positive during the decade, consistent with the inflationary experience. On the basis of these revised estimates, the economy was overheated both in 1970 and in 1973. Had monetary policy not targeted the flawed estimates of full employment, and instead focused on price stability, the inflation experience would have been averted and the economy would have experienced less instability.

The traumatic experience associated with the Great Inflation around the world, shifted attitudes and led to the rebirth of modern central banking (Bordo and Orphanides, 2013). The limits of monetary policy were better recognized and central bank mandates adjusted to avoid the risk of compromising price stability. For example, in the case of the European Central Bank, the 1992 Treaty explicitly recognizes that: "The primary objective ... shall be to maintain price stability." The Treaty goes on to recognize that the central bank can possibly help attain other objectives but that these should follow: "Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Union ..." This mandate suggests a lexicographic nature, with goals such as full employment seen as subordinated to that of price stability. The primacy of price stability is also a prominent feature of the Inflation Targeting (IT) framework for monetary policy.

In the quarter century or so before the recent crisis, the policy strategy of putting price stability first, and avoiding a parallel target of full employment was practiced successfully by a large number of central banks. The framework is associated with inflation targeting but has been practiced explicitly or implicitly both by central banks that self-describe themselves as inflation-targeters and others. The success of the framework can be summarized as ensuring a credible nominal anchor, helping central banks achieve an environment of well-anchored inflation expectations around the central banks' price stability objectives which in turn enhances stability in the real economy and indirectly attains full employment.

Unlike the ECB, the Federal Reserve's mandate has not been as explicit on the primacy of price stability. The Federal Reserve Act was revised in the 1970s to recognize explicitly price stability as one of its objectives. According to the revised Act, the Federal Reserve should "promote effectively the goals of maximum employment and stable prices." However, literal interpretation of this language continued to suggest full employment as a target for policy, and thus would not have freed the Federal Reserve from the failed policies of the 1970s.

One might ask how policy was actually practiced in the United States

following 1979, when starting with Paul Volcker the central bank dealt decisively with its inflation problem. The answer is that both Chairman Volcker from 1979 on and Chairman Greenspan who succeeded him in 1987 effectively interpreted the legal mandate of the Federal Reserve as if it recognized the primacy of price stability. That is, the Fed was implicitly acting as an inflation targeting central bank (Orphanides, 2006).

Consider for example how Chairman Greenspan explained the success of policy in the post-1979 period. In an address in 2004 he explained this was achieved by: "... maximizing the probabilities of achieving our goals of price stability and the maximum sustainable growth that we associate with it." The key, in this interpretation, is that by focusing on price stability, the Federal Reserve could ensure that the real economy could grow along its maximum sustainable growth path which is associated with "it" – that is with price

stability – that need not be explicitly identified nor targeted by the central bank.

One may ask why this roundabout way to help the economy achieves maximum employment over time? As mentioned earlier, the answer is our lack of knowledge regarding the appropriate real targets, concepts such as the natural rate of employment and unemployment and potential or natural output. For example, as Chairman Greenspan noted back in 1994, "while the idea of a national 'threshold' at which short-term inflation rises or falls is statistically appealing, it is very difficult in practice to arrive at useful estimates that would identify such a natural rate." He went on to conclude: "In light of these uncertainties, I do not think that any one estimate of the natural rate is useful in the formulation of monetary policy." In the Volcker-Greenspan era, the Federal Reserve respected the primacy of price stability in the formulation of monetary policy.

More recently, the role of full employment as part of the mandate of the central bank has again been brought into question. Frustration with the slow improvement in output and employment growth following the 2008 global collapse permeates most developed economies. Decisive policies averted a repetition of the Great Depression experience, but in the aftermath of a prolonged period of subpar growth and high unemployment, expectations are high that monetary policy can do more to facilitate faster growth and employment. Should full employment once again become a monetary policy target?

At the Federal Reserve, the communication of the committee in the recent past has shifted following the crisis to place more symmetric emphasis on employment and price stability than had been the case during the Volcker-Greenspan era. In its announcement following the November 2010 meeting, the Federal Open Market Committee (FOMC) added the following description of its objectives: "Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability." According to the minutes of the meeting, "members agreed that it was appropriate to adjust the statement to make it clear that the unemployment rate was elevated, and that measures of underlying inflation were somewhat low, relative to levels that the Committee judged to be consistent, over the longer run, with its dual mandate." The change in communication in part reflected the frustration with the pace of economic recovery. During the discussion "[p]rogress toward the Committee's dual objectives of maximum employment and price stability was described as disappointingly slow." In December 2012, the FOMC has introduced explicit mention of the rate of unemployment as a guide to its unconventional measures during the crisis. Specifically, the associated statement stated that the FOMC "currently anticipates that this exceptionally low range for the federal funds rate will be appropriate at least as long as the unemployment rate remains above 6.5%." These changes have created a tension that could be interpreted as a shift away from the recognition of price stability as primary to the achievement of other objectives. In a recent speech, Chairman Volcker reiterated the concern that if policy is explicitly directed towards a dual mandate that puts employment on par with price stability, the outcome could well be counterproductive. "Asked to do too much ... [the Federal Reserve] will inevitably fall short. If in the process of trying it loses sight of its basic responsibility for price stability, a matter which is within its range of influence, then those other goals will be beyond reach." (Volcker, 2013.) It seems that much like in the aftermath of the Great Depression, frustration with the slow pace of economic recovery in the United States and elsewhere has elevated demands to place greater attention on the achievement of full employment.

Should full employment once again become a monetary policy target? One way to examine the issue is by asking a number of related questions reflecting the rationale for recognizing the primacy of price stability as a policy strategy: Has the measurement problem associated with what constitutes full employment been solved? Can we reliably detect shifts in the natural rate of unemployment in real time? Can we tell when a shift in output is temporary and when it may be more permanent in nature?

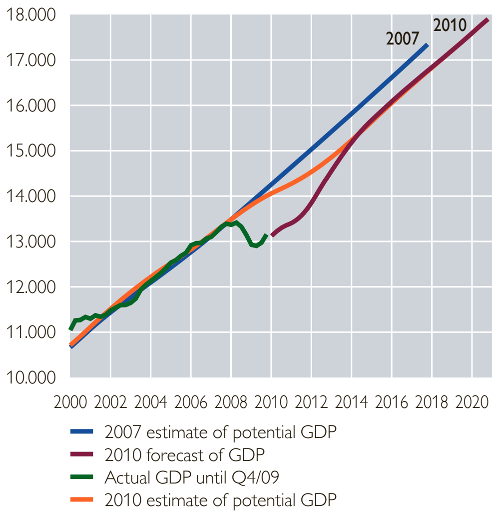
Unfortunately, the answer to all these questions is "No!" Confidence in the reliability of real-time estimates of either the natural rate of unemployment or the corresponding level of potential output, if anything, can only be lower today than it had been before the crisis. The extent of the decline in economy activity during the crisis had been so large and the damage to the financial sector so extensive that it is harder to assess how much of the fall is structural and likely persistent, and how much could be corrected with further policy-induced increases in aggregate demand.

The difficulty of assessing the path of full employment in the past few years can be highlighted by examining the recent pattern of revision in the estimate of potential output published by the Congressional Budget Office (CBO). The CBO is an independent, non-partisan organization tasked to evaluate the government budget for which estimates and forecasts of both actual and potential output are a critical input. Chart 4 presents the data as available in early 2010. The blue line shows the estimate of potential GDP available in early 2007, before the crisis. The green line shows actual GDP, ending with the fourth quarter of 2009, the last available data point at that time. As can be seen, for several years prior to the crisis, output growth exhibited remarkable stability and deviations of actual GDP from what was thought to have been potential output were very small. The recession opened a considerable gap that was forecast to close slowly over many years. The CBO revised downward its estimate of potential output (the orange line) going forward and adjusted its forecast of actual GDP so the gap closed by 2014. Unfortunately, the subsequent growth in the economy did not meet the forecasted path for GDP. Chart 5 presents the data as available in early 2013, replacing the 2010 vintages of actual and potential GDP forecasts with their 2013 counterparts.

Chart 4

US GDP and Revisions of Potential GDP: 2010

Trillions of 2005 USD



Source: Congressional Budget Office.

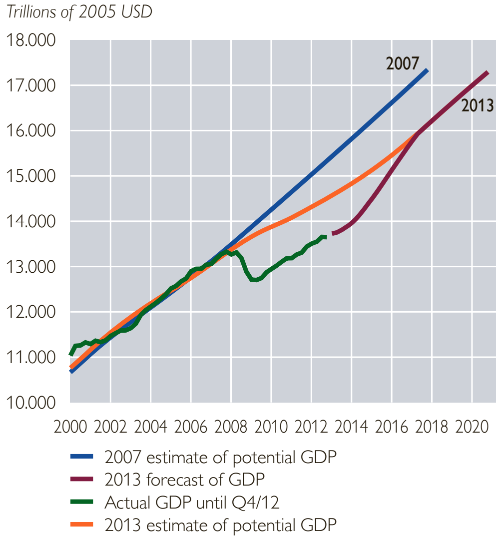
The green line with actual GDP data now extends to the fourth quarter of 2012. As can be seen, the disappointing growth led to a further significant downward revision of potential GDP and a corresponding less optimistic path for the level of GDP of the economy. But whether this revision will prove adequate cannot be judged yet. Chart 6 plots together the evolution of actual GDP and the three vintages of potential output 2007, 2010 and 2013. Despite the evident downward revision, the output gap implied by the current estimate over the past five years remains implausibly persistently large. At the same time, inflation has not declined over the past several years, as would have been expected if the economy was persistently operating substantially below its potential. This suggests that the output gap may have been significantly smaller than what is implied by even the recent downwards-adjusted estimates of potential output.

Using past experience as a guide, it is more likely than not that the CBO

Chart 5

US GDP and Revisions of Potential GDP: 2013

Trillions of 2005 USD

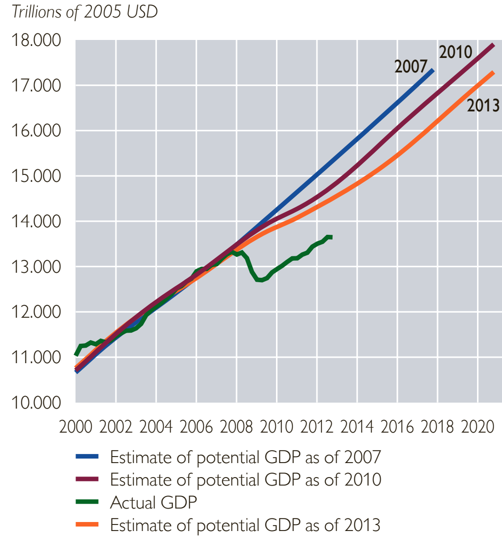


Source: Congressional Budget Office.

Chart 6

US GDP and Revisions of Potential GDP

Trillions of 2005 USD



Source: Congressional Budget Office.

will further revise downwards its estimate of potential output for the first half of this decade. If the disruption in the growth path of the economy proves as dramatic as the slowdown experienced in the 1970s, another decade may need to go by before we can accurately assess whether and to what extent the economy today is underperforming its potential. The main difficulty with full employment as a target for monetary policy remains that we cannot know how to measure it precisely enough in real time, when it is needed as an input to policy decisions. If monetary policy decisions are guided by full employment, instead of assigning a primary role to price stability, then, sooner or later, price stability will be compromised and the economy will likely experience greater instability overall.

Assigning full employment as a target to monetary policy under such circumstances would raise expectations that the central bank can do what it takes to deliver on higher employment. The threat of politicization of the central bank and eventual neglect of price stability could soon follow. In an environment with asymmetric political pressures for "more jobs," uncertainty regarding the measurement of full employment would once again introduce an inflationary bias to policy.

Assigning full employment as a target to monetary policy also obscures the role of other policies and institutions and can be counterproductive for the very attainment of higher employment. After all, monetary policy does not determine the level of employment consistent with full employment and maximum sustainable production over time. Other policies, together with household preferences determine the level of employment that is consistent with full employment over time and these factors together with technology determine potential output. Over the medium term, fiscal policy can provide better incentives for job creation and investment. Over the longer term, structural and labor policies determine the degree of flexibility and efficiency

of labor markets in an economy, and thus the level of employment and production corresponding to full employment over time. The cases of Spain and Greece where, as can be seen in charts 1 and 2, the unemployment rate has risen particularly dramatically during the crisis are instructive. The greatest tragedy of the current record high unemployment rates in these countries primarily reflects a failure of the euro area construction and flawed policies that predate the crisis. Instead of hastening reforms that could have enhanced productivity and flexibility, the euro perpetuated dysfunctional elements in labor markets. Needed adjustments that ideally should have taken place before the crisis were avoided. The failure to correct these sources of vulnerability before the crisis added rigidity to labor markets and magnified the impact of the crisis on the rate of unemployment.

Understandably, the slower than desired progress of the recovery following the crisis is frustrating to politicians and monetary policymakers. But the temptation to seek an improvement by declaring full employment a monetary policy target is likely to do more harm than good. The primacy of price stability as the bedrock of monetary policy should not be compromised.

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