Firing restrictions, government growth, immigration, and the NAIRU: Evidence from fifteen OECD countries

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Abstract

Using annual aggregate data from 15 OECD countries, we estimate the effects of the following policies on the "non-accelerating inflation rate of unemployment" (NAIRU): restrictions on firing, growth in government "productive" expenditure, growth in social security benefits, and lax immigration policy. We consider Greece separately, but treat the other 14 countries as a group. Two effects seem to be robust to changes in the sample: restrictions on firing and growth in social security benefits raise the NAIRU. In particular, in the case of Greece, we estimate that the presence of firing restrictions (since 1983) has raised the NAIRU, and hence the average unemployment rate, by about 4 percentage points.

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1. Introduction

The "non-accelerating inflation rate of unemployment" (NAIRU) is the economy's overall rate of unemployment, which emerges from all the labor markets, some of which may be in excess demand and others in excess supply. If the NAIRU is high, then the observed rate of unemployment will also be high on average, and can be reduced only temporarily and at the cost of higher inflation. Knowledge of the NAIRU may serve as a useful guide for monetary policy. For example, when the observed unemployment rate is below the NAIRU, the inflation rate tends to rise, so monetary policy should be tightened.

The problem is that the NAIRU is not observable, so it must be estimated. Based on a closely related idea, namely, M. Friedman's "natural unemployment rate," one can assume that the NAIRU depends on the structural and the institutional characteristics of the labor and the commodity markets. Anything that affects the wage-setting process, the matching process of vacancies and the unemployed, the bargaining power of firms and workers, the ease of relocation of workers, and the demands and supplies of goods and services also affects the NAIRU. Examples include unemployment benefits, restrictions on firing and other government regulations, immigration of unskilled labor, etc.

Using annual aggregate data from 14 OECD countries (1970-2008), which we consider as a group (henceforth described as "the panel"), and from Greece (1960–2008), which we consider separately, this paper attempts to estimate the effects of the policies described below on the NAIRU. The panel consists of the following countries: Australia, Austria, Belgium, Denmark, Finland, France, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, and the UK. We included those countries where the variable that measures firing restrictions, which takes on any value between 0 (least restrictions) and 6 (most restrictions), exhibits substantial variability. For Greece, data on this variable are available only from 1985 onward, so we consider the case of Greece separately, and use instead a qualitative variable, which takes on the value of 0 for 1960-1982 (absence of firing restrictions) and the value of 1 for 1983-2008 (presence of firing restrictions).

First, we consider the effect of firing restrictions on the NAIRU. In the 14 countries of the panel, the intensity of this policy, as measured by the variable mentioned above, followed various patterns throughout the sample period. In Greece, the policy was instituted in 1983 and became more stringent in 2000.[1] Restrictions on firing may

discourage firms, however, to hire new workers in good times in the fear that they may be unable to fire them in bad times. They may also discourage foreign investment in fixed capital. If present, both of these effects raise the NAIRU. Note that the observed rate of unemployment in Greece has increased noticeably since the institution of this policy.

Second, we consider the effects of growth in government spending on the NAIRU. To this end, we decompose total government spending into two parts, both in percent of GDP: (i) "productive spending," which is general government total expenditure *less* property income paid (e.g., interest payments on the public debt, rents, etc.) *less* social security benefits; and (ii) "non productive spending," mainly social security benefits. "Productive" expenditure may influence the NAIRU negatively by creating jobs, whereas "non productive" expenditure may influence it positively by causing workers to develop a "rentier mentality," as they become accustomed to welfare assistance. Such a mentality reduces a worker's motivation to search for a job or take a marginal job, thus increasing the average duration of unemployment and the NAIRU. Note that government "productive" expenditure exhibits an upward trend in most of the countries in the sample (exceptions are the UK, Ireland, the Netherlands, and Norway), whereas social security benefits exhibit an upward trend in all countries except the Netherlands.

Third, we consider the effect of mass immigration that many Western countries experienced in the early 1990s, following the collapse of Central and Eastern European regimes in 1990. This led to an increase in the unskilled labor force of the hosting countries. For a given number of vacancies, the increase in the labor force may raise the NAIRU; it is also possible, however, that it might reduce it by reducing the lowest wage at which an unskilled worker would be willing to accept a particular type of job. In the case of the panel, we use data on legal immigration only, whereas in the case of Greece we use an additional qualitative variable to capture the effect of the massive *illegal* immigration, which began in 1990.

Finally, in the case of Greece, we also consider the effects of the following two policies on inflation: (1) the automatic wage indexation scheme, which was in place from 1982 to 1990; and (2) the hard-drachma policy, introduced in 1988, which allowed the drachma to depreciate only partially, and not according to inflation differentials.

2. Results

A summary of our main empirical results is as follows. Begin with the case of Greece. First, the restrictions on firing (since 1983) have exerted a strong positive effect on the NAIRU, raising it by about 4 percentage points. Second, massive immigration, both legal and illegal (since 1990), has also raised the NAIRU by about 3 percentage points. The effects of firing restrictions and of lax immigration policy just reported can partly explain why the observed unemployment rate in Greece rose from 5.8% in 1982 to more than 10% in the late 1990's.

Third, there is weak evidence that an increase in the rate of growth of government "productive" expenditure (in percent of GDP) by 1 percentage point, other things equal, reduces the NAIRU by 0.02 of a percentage point. Fourth, an increase in the growth rate of social security benefits (in percent of GDP) by 1 percentage point, other things equal, raises the NAIRU by about 0.16 of a percentage point. Taken together, the last two results imply that, as far as government growth is concerned, the real culprit for raising the NAIRU is the growth of social security benefits. Fifth, in addition to raising the NAIRU, the restrictions on firing, the lax immigration policy, and the growing social security benefits also raise the inflation rate.

Sixth, the inflation rate, which averaged at about 18% during 1982-1990, when the policy of automatic wage indexation was in effect, would have been lower by about 3 percentage points each year had this policy not been instituted. Seventh, the inflation rate would have been higher by about 2 percentage points each year after 1988 had the anti-inflationary "hard-drachma" policy not been in place.

Now consider the results for the panel. First, an increase in the variable that measures the intensity of firing restrictions by 1 unit (more firing restrictions), other things equal, is expected to raise the NAIRU by 1.18 percentage points. Second, an increase in the rate of growth of government "productive" expenditure in percent of GDP by 1 percentage point, other things equal, is expected to reduce the NAIRU by 0.64 of a percentage point. Third, an increase in the rate of growth of social security benefits (in percent of GDP) by 1 percentage point, other things equal, is expected to raise the NAIRU by 0.26 of a percentage point. Fourth, in this case (panel), net immigration influences the NAIRU negatively. This is an important difference between the results for Greece and those for

the panel. It could be attributed to differences in the labor market functioning (e.g., wage rigidities) between Greece and the countries in the panel. Fifth, another important difference is that, on average, in the 14 countries of the panel the short-run gains (in terms of reducing unemployment) from expansionary fiscal or monetary policies may be less costly (in terms of raising the inflation rate) than in the case of Greece.

3. Conclusions

The purpose of this paper was to estimate the effects on the NAIRU of the following policies: (1) restrictions on firing; (2) growth in government "productive" expenditure; (3) growth in social security benefits; and (4) lax immigration policy.

In the case of Greece, we find that policies (1), (3), and (4) have raised the NAIRU considerably, whereas policy (2) might have had a small negative effect on it. In particular, we estimate that (i) the institution of firing restrictions in 1983 has raised the NAIRU, and hence the average unemployment rate, by about 4 percentage points; (ii) each percentage point of growth in social security benefits (in percent of GDP) raises the NAIRU by about 0.16 of a percentage point; and (iii) massive immigration, both legal and illegal (since 1990), has raised the NAIRU by about 3 percentage points. These estimates can partly explain why the observed unemployment rate in Greece rose from 5.8% in 1982 to more than 10% in the late 1990's. We believe that, in order to reduce unemployment, the Greek government should consider removing firing restrictions and rationalizing its immigration policy.

In the case of the panel, we can confirm the signs of the effects of policies (1), (2), and (3), but find an opposite effect of policy (4).

Two of our findings that mostly interest us seem to be quite robust to changes in the sample: the effects on the NAIRU of (i) firing restrictions and (ii) growth in social security benefits (in percent of GDP). Both of these effects are positive and statistically (and economically) significant. Thus, the governments of the OECD countries considered in this paper could reduce their rates of unemployment by reducing employment-protection rigidities and by reallocating public spending from social security towards productive activities.

Footnote

[1] See Laws 1387/1983 and 2874/2000 (Article 9), *Newspaper of the Government of the Hellenic Democracy*, No. 110 A' (19 August 1983) and No. 286 A' (29 December 2000). Note that these laws are in accordance with the European Community Council Directive 75/129/EEC of 17 February 1975.