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The employment effect of reforming a public employment agency

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ABSTRACT

By how much does an increase in operating effectiveness of a public employment agency (PEA) and a reduction of unemployment benefits reduce unemployment? Using a recent labour market reform in Germany as background, we find that an enhanced effectiveness of the PEA explains about 20% of the observed post-reform unemployment decline. The role of unemployment benefit reduction explains just about 5% of the observed decline. Due to disincentive effects resulting from the reform, the reform of the PEA could have had an even higher impact on unemployment reduction if there had been less focus on long-term unemployed workers.

1. Introduction

Understanding the determinants of unemployment has always been at the center of economic research and public interest alike. This is true in " old times" when oil price shocks hit OECD countries, just as much as today in the aftermath of the financial crisis.

It is widely accepted by now that labour market institutions such as the unemployment benefit system, trade unions, minimum wages, employment protection legislation and labour taxes stand among key determinants of unemployment in OECD countries (see e.g. Blau and Kahn, 1999; Nickell and Layard, 1999). Despite their apparent heterogeneity, all these institutions have one salient trait in common: whatever the degree of coordination frictions, they shape the incentives of the market participants. Just in contrast to that stands another important labour market institution: the public employment agency. Whatever the incentives of the market participants, public employment agencies reduce the degree of coordination frictions (Petrongolo and Pissarides, 2001).

While employment effects of unemployment benefits, unions, employment protection and taxation have been quite extensively studied to this date, there is surprisingly little evidence on the role of a public employment agency (PEA) in reducing equilibrium unemployment. The present paper fills this gap.

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We use the unique setup of a comprehensive labour market reform introduced between 2003 and 2005 in Germany. This reform induced an increase in operating effectiveness of the Federal Employment Agency (a PEA) and reduced the generosity of payments to the unemployed.[2] We structurally estimate the effect of the increase of operating effectiveness on the equilibrium unemployment rate. We then compare this impact with the impact of the reduction of unemployment assistance benefits. We find that organizing the work of a PEA in a more efficient way has scored a much better result than creating pecuniary incentives through unemployment assistance benefits. Quantitatively, the re-organization of the agency is responsible for a 0.69–0.88 percentage point drop of the equilibrium unemployment rate, explaining 17.7–22.5% of the observed post-reform decline in unemployment. Benefit reduction, in contrast, adds only 0.18–0.20 percentage points to the fall of the equilibrium unemployment rate. This explains merely 4.6–5.1% of the observed post-reform unemployment decline.

Furthermore, and somewhat surprisingly, we find an "unemployment paradox": An increase in effectiveness of a PEA can lead to an *increase* of the unemployment rate. An ambiguous response of the unemployment rate to the reform can arise, for instance, if the reform design favours long-term unemployed workers more than short-term ones. When a PEA becomes more effective in matching the long-term unemployed, search effort and hence exit rates of long-term unemployed workers go up. Short-term unemployed workers anticipate this increase in the exit rate and therefore have less incentives to search intensively while still being short-term unemployed. Consequently, search effort and exit rates of the short-term unemployed go down. As long as the disincentive effect on the short-term unemployed workers is stronger than the positive influence on the long-term unemployed workers, the unemployment rate *rises* when the PEA becomes more productive.

Quantitatively, we indeed find that the reform's focus on long-term unemployed workers weakened the overall intended goal. If the increase in matching effectiveness of the agency for the long-term unemployed workers had been just as high as the (smaller) increase in effectiveness for the short-term unemployed, the reform would have reduced the equilibrium unemployment rate by further 0.21 percentage points. Apparently, the extra increase of matching efficiency for the long-term unemployed workers was too much of a good thing.

Our model shares a number of elements with the existing search and matching literature. Workers are ex-ante heterogeneous in skills, as in Mortensen and Pissarides (1999) and Postel-Vinay and Robin (2002), and ex-post heterogeneous in duration of their unemployment spells. The model allows for time-dependent unemployment benefits, as in Albrecht and Vroman (2005) and Coles and Masters (2006), to capture the differences between unemployment insurance (UI) and unemployment assistance (UA) payments. Benefits are proportional to past wages, as in Chéron and Langot (2010), and there is a fixed time limit on UI. Workers optimally choose search effort, as in Cahuc and Lehmann (2000) and Lehmann and van der Linden (2007), and experience negative duration dependence of their exit rates out of unemployment due to Bayesian learning. The simultaneous presence of a duration-contingent effectiveness of the PEA and time-dependent unemployment benefits in our model allows for an easy comparison of the equilibrium effects of the reforms of these two institutions.

The setup closest to this paper is our earlier equilibrium analysis of nonstationary search and matching (Launov and Wälde, 2013). From a theoretical perspective, we extend this model to allow for a matching effectiveness of the public employment agency that changes due to a reform and that varies with duration of unemployment. This theoretically tiny extension has dramatic implications for policy evaluation. First, we are able to talk about the effects of the Hartz III reform (which is not possible in our earlier work). Second, we are able to identify and analyse the unemployment paradox. Third, we quantify this effect here (and slightly amend our earlier estimates of the Hartz IV reform) using a novel estimation procedure.

To quantify the employment effect of the reform of the PEA in Germany we estimate our theoretical model using the following two-stage procedure. At the first stage we estimate all parameters of the pre-reform steady state from the pre-reform data, keeping matching effectiveness parameters of the agency for short- and long-term unemployed workers normalized to unity. Estimation at the first stage is fully structural, by maximum likelihood, as e.g. in van den Berg and Ridder (1998). The data are the survey data on individual employment histories taken from the German Socio-Economic Panel. At the second stage we use both pre-reform and post-reform data to estimate the reform-induced increase of the matching effectiveness of PEA for short- and long-term unemployed, taking the estimates from the first stage as given. Estimation at the second stage is again fully structural, using indirect inference as e.g. in Lise (2013) and Bagger et al. (2014). The data are the regional time series data on matches, vacancies and unemployment collected by the Institute for Employment Research (IAB, Nürnberg). Auxiliary regressions at the second step match the impact coefficient of the reform of the PEA on log-matches for short- and long-term unemployed workers.[3] The entire two-step approach is similar to the one of Postel-Vinay and Turon (2010). Estimated increases of the effectiveness of the agency due to the reform of the PEA immediately lead to the change in equilibrium unemployment caused by this reform.

To the best of our knowledge, our paper is the first to estimate the equilibrium employment effect of a reform of a PEA. The closest papers to ours in the structural literature on employment agencies are Pissarides (1979) and Fougère et al. (2009). Pissarides (1979) considers a theoretical equilibrium search model in which unemployed workers can obtain job

[2] We use the term effectiveness to denote total factor productivity of the matching function. This differs from individual search productivity. See our model specification below for details.

[3] Fahr and Sunde (2009) and Klinger and Rothe (2012) use similar regressions to assess the reform.