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Flexibility of new hires' earnings in Ireland☆

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ABSTRACT

The rigidity of the net present value of wages for newly hired workers from unemployment is one of the key ingredients to generate realistic volatility of (un)employment in standard search and matching models. With Nash bargaining or if wage contracts are long-term, this net present value is affected by wages of new hires. Yet data on wages of new hires are rare and, in the few papers that distinguish between new hires from unemployment and job changers, the findings vary. For the U.S., two influential papers reach the opposite conclusions, and the findings for the few European countries are mixed. We combine administrative tax data on earnings with the Household Finance and Consumption Survey for Ireland and find that earnings of new hires from non-employment are substantially more flexible compared to earnings of incumbent workers or job changers. The findings are robust. Earnings of new hires from non-employment are more procyclical for workers with less valuable outside options.

1. Introduction

Since Shimer (2005) pointed out that the standard Diamond–Mortensen–Pissarides search and matching model (the model that Pissarides, 2009 refers to as the 'canonical model') cannot replicate the volatility of labour market variables observed in the data, several solutions have been proposed. One of the remedies, suggested already by Shimer (2005) and by Hall (2005), is to introduce wage rigidity. However, while aggregate wages seem to be sticky (Bewley, 2002), when it comes to a firm's hiring decision, the wage flexibility that matters is that of the new or marginal worker (Pissarides, 2009), and not of the aggregate or average wages.

What matters for the unemployment fluctuations in models with search and matching frictions, where the firm-worker relationship is longer-term, is the net present value of profits a firm expects to make over the duration of the employment contract (Haefke et al., 2013). Pissarides (2009) shows that, as long as Nash bargaining is used to split the surplus of the new match at the time of job creation, the job creation condition is not affected by the way this surplus is split in ongoing jobs. The empirical wage that should be compared to the wage that is relevant for job creation in such model is the wage of new hires and not the wage of existing workers. If wage contracting is more long-term (as shown by Rudanko, 2009, a constant wage contract is optimal under commitment when workers are risk-averse and firms are risk-neutral), then the wage negotiated at the start of the match determines the present value of expected firm profits over the duration of the contract.[1]

For the 'canonical model' without on-the-job search, the relevant wage rigidity statistic is that of wages of new hires from unemployment and not of wages of job changers. The reason is that in the data already employed workers tend to move to higher-paying jobs during economic expansions (these are new hires who are job changers). The same can happen during recessions (Gertler and Trigari, 2009). If this is the case, pooling new hires from unemployment and job changers biases the estimates of the cyclical variation of wages of new hires from unemployment. It is therefore necessary to separate these two groups in order to establish how flexible are wages of new hires from unemployment in the data (Gertler et al., 2016).

Unfortunately, older empirical literature that attempts to identify the cyclical sensitivity of wages of new hires separate from wages of existing workers (e.g., Bils, 1985) does not distinguish between wages of new hires who were previously unemployed and wages of new hires who were previously employed. The main reason is the lack of data that allows researchers to clearly identify the two

[1] See also Kudlyak (2014), who argues that the wage component of the user cost of labour can be thought as a more general measure of marginal cost of labour than wage. User cost of labour is however not directly observed and has to be constructed from the present value of wages a worker earns over the course of the new job.

☆ The views expressed here do not represent the views of the Central Bank of Ireland or of the Eurosystem.

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types of new hires. For the U.S., there are two recent exceptions, Haefke et al. (2013) and Gertler et al. (2016). Interestingly, these papers reach different conclusions. Haefke et al. (2013) find that wages of new hires from non-employment are more sensitive to the business cycle than aggregate wages, while Gertler et al. (2016) find no evidence of greater wage flexibility for new hires from non-employment. It should be noted that these two papers are quite different regarding their methodology. Haefke et al. (2013) use repeated cross-sections and Gertler et al. (2016) use panel data. Moreover, Haefke et al. (2013) only look at the elasticity of wages of new hires from non-employment and job changers with respect to labour productivity (rather than unemployment).[2] The paper by Hagedorn and Manovskii (2013) can distinguish between new hires from non-employment and job changers, but they consider them together and only mention in the footnote that the cyclicality of their wages is very similar if they consider them separately.[3]

The evidence for European countries is also rare due to data availability issues. Three large studies using administrative data – Carneiro et al. (2012) and Martins et al. (2012) for Portugal, and Stüber (2017) for Germany – do not distinguish between wages of new hires from employment or unemployment. They find that all wages are quite flexible, but in Portugal wages of new hires are more flexible than wages of incumbent workers, while in Germany there is no statistically significant difference between their cyclicality. Drawing on similar data as Stüber (2017), and Bauer and Lochner (2016) do distinguish between wages of new hires from employment and from unemployment. Their paper also accounts for the 'implicit contract' model of Beaudry and DiNardo (1991) and the 'cyclical selection' hypothesis in Hagedorn and Manovskii (2013). They find that wages of new hires from unemployment tend to be less pro-cyclical.

We investigate the sensitivity of the weekly earnings of new hires in Ireland to changes in local unemployment rates. Importantly, we use administrative tax data on earnings, where we can distinguish whether new hires come from unemployment and inactivity or from other jobs (job changers). To the best of our knowledge, the only other papers that do this for a country from Europe are Bauer and Lochner (2016) and Snell et al. (2017), both for Germany.

Our paper differs from the above papers along three important dimensions. First, we investigate the period with a large negative shock that is mostly absent from the samples considered in most other studies for Europe. For instance, Carneiro et al. (2012) end their sample just before the recent crisis, while Stüber (2017) has only one data point that includes the crisis. This is important because of the evidence that wages tend to be downward-rigid and that a strong shock is required for wages to lose some of the downward rigidity, see for example Fagan and Messina (2009), and Abbritti and Fahr (2013), and Fabiani et al. (2015).[4] In addition Hall (2005), Galıand van Rens (2010), and Shimer (2010) show that there is an interval in the bargaining set where wages can be rigid unless there is a large enough shock to trigger renegotiations. Evidence based on the Irish data is therefore interesting because our dataset spans such a large shock. The first two years of the sample catch the end of a prolonged period of very low unemployment (averaging 4.5%). With the onset of the recession in 2007, and a full-blown financial crisis by 2010, unemployment rose rapidly, peaking at just under 15% in 2012. Our earnings data also covers the remarkable recovery phase from 2013 onward, driven by exports.[5]

Second, even though Bauer and Lochner (2016) have the recent crisis in their sample, Germany may be a somewhat particular case due to the widespread use of short-term work schemes and working-time accounts during the recession.[6] As argued by Boeri and Bruecker (2011), short-time work schemes that were used extensively in Germany during the recent crisis can be viewed as a substitute for wage reductions.[7]

Third, Ireland is at the opposite end of the spectrum than either Portugal or Germany in terms of labour market flexibility in Europe and is in this respect more similar to the UK or the US. For instance, according to the OECD employment protection indicators, Portugal in particular is at an upper end of the distribution as regards the strength of employment protection for regular contracts, and Germany is above the OECD average, while Ireland is at the lower end of the distribution together with the UK.

Therefore, apart from providing evidence on the flexibility of new hires from yet another country, the depth and the persistence of the recession, the absence of other measures that could stand-in for wage reductions, and a different end of the spectrum than other European countries in terms of employment protection, make Ireland an interesting case to examine the issue of cyclical wage or earnings flexibility.

We exploit a new administrative panel dataset on the pre-tax earnings of employees in Ireland over the period from 2005 to 2014, linked to the 2013 Household Finance and Consumption Survey (HFCS). Our main finding is that weekly earnings of new hires from non-employment are substantially more procyclical than the earnings of incumbent workers or job changers. Across all workers, our estimated elasticity of earnings of new hires is higher than the elasticity of earnings of incumbent workers. Moreover, this finding is largely driven by the higher elasticity of earnings of new hires from non-employment, as earnings of job changers are much less elastic than those of job changers (but more elastic than for incumbent workers, although this result is not robust). These results are qualitatively consistent with the findings of Haefke et al. (2013) for the US and with Carneiro et al. (2012) for Portugal, but are in contrast with the results in Gertler et al. (2016) for the US and Bauer and Lochner (2016), which are the closest to our paper in terms of methodology, or Stüber (2017) for Germany. We also find that earnings of new hires from non-employment tend to be more flexible when workers have outside options that are less valuable, for instance when they are less educated or older, but not old enough to be able to wait out the unemployment spell until retirement.

Our results hold if we control for unemployment at the beginning of the employment spell or minimum unemployment during the employment spell, as in Beaudry and DiNardo (1991). While the elasticity of earnings of new hires from non-employment is somewhat smaller in this case, it remains highly statistically significant. The elasticity of earnings of job changers often becomes insignificant when controls are included. Interestingly, current-period unemployment still matters, which indicates that there is a role for spot labour markets in determining earnings for all groups, but job changers do not exhibit significantly higher wage elasticity than incumbents with these controls. All results survive if we

[2] Their estimates of excess cyclicality of wages of new hires from non-employment (compared to the workers who do not change their jobs) have relatively large standard errors.

[3] Kudlyak (2014) examines the cyclicality of the wage component of the user cost of labour, but does not explicitly distinguish between new hires from unemployment and job changers. For all new hires, she reaches similar conclusions as Haefke et al. (2013).

[4] Snell et al. (2017) examine the asymmetric effects for wages of new hires, incumbents, and job changers for West Germany from 1978 to 2014 and find no significant differences between the responsiveness of their wages, neither during upswings nor during downswings.

[5] The variation in the data should help us to better identify the cyclicality of wages. However, it may also be the case that wages of *existing* workers become more flexible in a strong cycle, so the difference between rigidity of wages of existing and newly hired workers might be more difficult to identify.

[6] Herzog-Stein et al. (2013) show that short-time work arrangements were used extensively by firms in the export-oriented manufacturing sector – that is, the sector mainly affected by the recession.

[7] They write explicitly (Boeri and Bruecker (2011), p. 722): "A case for short-term work can also be made in the presence of rigid wages, preventing wages from being renegotiated in case of negative productivity shocks. [...] Short-term work in the presence of rigid wages is therefore mainly a device to prevent or reduce the scope of downward wage adjustment or to compensate for its absence in the case of negative productivity shocks."