**CAED Special session**

**"Labour input adjustment, firm heterogeneity and the Great Recession"**

Session organiser:

Alexander Hijzen (OECD and GEP, University of Nottingham)

**Back ground and motivation**

All OECD countries have been severely hit by the global crisis. But the extent to which the decline in aggregate demand translated into lower employment has differed dramatically across countries and, in many cases, also deviated importantly from labour-input adjustment that were observed during previous downturns. These differences across countries and over time reflect important differences in the extent to which firms have responded to shocks by making adjustments on the intensive and extensive margins. For example, in countries such as Spain and the United States in which labour input adjustment has overwhelmingly taken the form of labour shedding. In other countries, where firms have tended to hoard labour (*e.g.* Germany, Japan), much of the decline in employment has been avoided, despite large output shocks. The experience during the crisis of 2008-2009 raises important questions about the role of policies and institutions in shaping the labour market impact of aggregate demand shocks.

So far, most work that has looked at the role of policies and institutions for labour market adjustment patterns during the crisis has made use of macro-economic data. While macro-economic analyses represent an important first step in understanding the role of policies and institutions for labour market adjustment, they also have important limitations since they do not differentiate between "shock" and "response" heterogeneity beyond controlling for the aggregate decline in GDP. It is implicitly assumed either that firms within a country adjust to output shocks in the same way (*i.e.* within-country responses are homogeneous) or that the distribution of shocks across different types of firms is the same across countries (*i.e.* shocks are homogeneous in terms of their within-country distribution). However, within-country shock- and response distributions may be important factors for explaining differences in aggregate employment growth rates. For instance, aggregate employment can be relatively volatile in a given country because a disproportional share of employment is accounted for by firms in activities that are characterised by an above–average output volatility or employment sensitivity to output. Similarly, if the adjustment behaviour of firms depends on initial conditions or their size, differences in the distribution along these dimensions can also affect aggregate employment growth. To properly account for such effects, firm-level data are required.

This special session consists of four country studies that make use of detailed firm-level data to provide an in-depth analysis of the way firms respond to shocks and analyse the role of specific policies and institutions in this regard. More specifically, the objective of this special session is to shed additional light on three related questions. First, the papers in this special session aim at throwing new light on the **labour-input adjustment behaviour of firms** in response to shocks, with particular emphasis on the role of policies and institutions. Second, the papers in this session seek to contribute to our understanding of the role of heterogeneity in labour-input adjustment behaviour for understanding **aggregate labour market dynamics.** Third, the two previous questions are analysed with reference to the **2008-2009 crisis** and, thus, are of particular relevance for researchers and policy-makers with an interest in improving their understanding of this experience. In order to address these questions, each of the papers in this session makes use of detailed firm/establishment level data with data at least up to 2009 and in most cases a fairly long time-series dimension. Moreover, a salient feature of the data used for the country studies is that they provide information not just on job flows (job creation and destruction) but also workers flows (hires and separations). The case studies refer to the following four countries: Germany, Japan, New Zealand and Portugal.

All the papers in this session are written in the context of a broader OECD project on the role of policies on labour market resilience. First drafts of the papers have already been discussed at OECD workshop "Analysing the role of policies for labour market resilience using micro data", 12 October 2011, Paris. The full versions of the papers that were presented during this event are enclosed for your information. This event was organized relatively soon since the inception of the project in order to promote discussion among the authors of the country studies. This also means that papers enclosed are still rather preliminary. Following this event, all the country studies have been substantially revised in the light of the discussions during the workshop and detailed written comments from the OECD. Revised drafts will be available late January/the first half of February.[1]

**Contributed papers (speaker in bold)**

- **"The response of German firms to the 08-09 economic crisis"**

  Lutz Bellmann (IAB, Nürnberg), Hans-Dieter Gerner (IAB, Nürnberg), **Richard Upward (University of Nottingham)**

  **Abstract**

  The German labour market has, so far, shown remarkable resilience in the face of the severe economic downturn of 2008-09. What can explain this success story? A number of explanations have been suggested for the resilience of the German labour market. These explanations tend to focus either on the idea that German firms practiced some form of "labour hoarding", allowing labour productivity to fall in the expectation that demand would pick up again, or the idea that German firms adjusted their labour input at the *intensive margin* (hours of work) rather than at the *extensive margin* (number of

[1] In addition, the OECD has developed a data protocol that would allow a better comparison of the way firms adjust to shocks across countries. While the comparative analysis is not part of the special session proposed for the CAED, having this special session at the CAED would represent a great opportunity to continue our work on comparative analysis.

workers). A number of factors have been cited as the reason for this behaviour, including the availability of government-compensated short-time work; the use of working-time accounts which had large surpluses going into the crisis; the role of bargaining arrangements and wage moderation in the period before 2008; the existence of labour shortages, particularly for skilled workers in the period before 2008; the fact that the crisis largely affected high-tech manufacturing firms which exported their output; and expectations that the crisis would be short-lived.

While there are many potential explanations, there is little hard evidence from micro-data on the behaviour of German firms. In this paper we use the IAB establishment panel to examine the relationship between output shocks, employment, worker hires and separations before and during the crisis and assess the role of various policies. The following findings emerge. First, we show that for a given change in employment, German establishments rely on both hires and separations in a very similar way to establishments in the U.S, but that firms rely on a much greater extent on labour hoarding, reflected by the limited responsiveness of employment to output shocks. Interestingly, both these features appear to have changed markedly during the crisis in comparison with pre-crisis patterns. Second, establishments that were affected by the crisis were more than twice as likely to reduce hours of work or to delay hiring rather than to increase layoffs. Moreover, firms affected by the crisis were much likely to make use of short-time work, whereas the use of working-time accounts was the result of earlier bargaining arrangements and firm characteristics. While establishments which used short-time work did experience much larger falls in labour productivity, consistent with the "labour hoarding" story, there is little evidence that this contributed to preserving jobs.

- **"The response of firms to the 08-09 crisis and its implications for workers"**

**Richard Fabling** (MOTU and Statistics New Zealand) & Dave Mare (MOTU and Statistics New Zealand)

**Abstract**

Prior to the global financial crisis, New Zealand had experienced a prolonged period of growth. In comparison with other OECD economies, the recession in NZ was relatively mild, although the initial contraction was sharp and its effects were widespread, reflecting not only the onset of the global financial crisis, but also the effects of an overdue cooling of the housing market. Compared with previous recessions in New Zealand, the 2008 recession was initially less severe, but was more prolonged. The impact on the labour market was roughly commensurate with the output changes, a pattern seen in recent recessions but in contrast to the major changes that occurred in New Zealand in the 1980s and 1990s.

This study has three objectives. The first objective is to describe how individual establishments responded to the crisis in terms of employment, hiring and layoffs and wages. The analysis will be conducted for different types of firms based on firm characteristics such as size, industry affiliation, profitability and export intensity. The second objective is to analyse the consequences of the firm-level adjustment patterns for the earnings of individual workers as well as the distribution of earnings. This involves first describing the pattern of earnings changes across different groups of workers and decomposing this across different margins of adjustment. It also involves analysing the implications of adjustment on different margins for the distribution of earnings. The third objective is to provide a qualitative discussion of the effectiveness of the existing safety net to absorb temporary fluctuations in earnings. This may also involve some discussion of the desirability in the specific case of New Zealand of making benefits dependent on the business cycle.

- **"Non-standard work and labour input adjustment in Japan"**

  Yuji Genda (University of Tokyo), Alexander Hijzen (OECD), **Ryo Kambayashi** (Hitotsubashi University and OECD), Hiroski Teruyama (University of Kyoto)

  During the financial crisis of 2008 and 2009, the Japanese labour market exhibited a remarkable resilience to shocks as witnessed by the relative stability of the unemployment rate. In principle, this is consistent with the way firms traditionally dealt with aggregate demand shocks in the context of the widespread of the life-time employment system.[2] An important feature of this system is the strong commitment of employers to preserve jobs during periods of slack aggregate demand. Nevertheless, the high degree of labour market resilience during the 2008-2009 came as somewhat of a surprise as important structural changes had taken place since the collapse of the bubble in 1992. Driven by the gradual liberalisation of the market for temporary work during the late 1990s, there has been important increase in the rise of non-standard work. This has been associated with increasing labour market turnover and a gradual increase in the rate of structural unemployment. It was widely expected that the increase in incidence of non-standard work would have important implications for the way Japanese firms adjusted in response to negative demand shocks. In particular, firms were expected to rely less on labour hoarding and more on labour shedding.

  This paper examines the implications of the rise in non-standard work for labour market resilience using a large nationally representative panel dataset of establishments for the period 1991-2009. The analysis proceeds in two steps. In the first step, the way firms adjust their labour inputs in response to output shocks has evolved over time by comparing adjustment patterns between regular and non-regular workers relative to start of the sample in 1994. In doing so, it attempts to verify the validity of two

[2] This refers to the practice where firms hire workers directly out of school and where a significant portion of employees only leaves their employer at the mandatory retirement age.

conjectures with the respect to the incidence of non-standard work for the adjustment behaviour of firms: i) the rise in non-standard work shifts the burden of adjustment from hours to employment; ii) the rise in non-standard work shifts the burden of adjustment from permanent to temporary workers by increasing the hiring probability of temporary workers and reducing the separation probability of permanent workers. In order to identify the role of non-regular work the methodological framework controls for differences in the size of shocks between periods, for differences in the distribution of shocks across firms with different adjustment technologies; and for any differences in the initial growth distribution of firms. Second, we assess the aggregate implications of the rise in non-standard work for hiring, separations, employment and hours.

- **"Catastrophic Job Destruction"**

  Anabela Carneiro (Faculdade de Economia do Porto), **Pedro Portugal** (Banco de Portugal, NOVA School of Business and Economics) and José Varejão (Faculdade de Economia do Porto)

  **Abstract**
  When the great recession hit Portugal, the economy was already facing severe macroeconomic imbalances and dysfunctional labour market. Extreme employment protection, a very generous unemployment insurance system, and a poorly conceived wage setting process all contribute to the deplorable performance of the Portuguese labour market. This paper shows how the existing institutional settings favour adjustment on the extensive margin and thus contributed to the sharp increase in unemployment. It also provides a detailed analysis of the worker, job and firm-specific determinants of voluntary and involuntary separations.