

Green, Francis; Handel, Michael

## Article

### Editorial for special issue on Job Tasks and Labour Studies

Journal for Labour Market Research

#### Provided in Cooperation with:

Institute for Employment Research (IAB)

*Suggested Citation:* Green, Francis; Handel, Michael (2016) : Editorial for special issue on Job Tasks and Labour Studies, Journal for Labour Market Research, ISSN 2510-5027, Springer, Heidelberg, Vol. 49, Iss. 2, pp. 97-98,  
<https://doi.org/10.1007/s12651-016-0212-2>

This Version is available at:

<https://hdl.handle.net/10419/158811>

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EDITORIAL

## Editorial for special issue on *Job Tasks and Labour Studies*

Francis Green<sup>1</sup> · Michael Handel<sup>2</sup>

Published online: 5 September 2016

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Recent years have witnessed increasing interest in the value of job requirements data for understanding a range of economic outcomes, including the changing composition of employment (characterised in some countries by an asymmetric polarisation), rising earnings inequalities, occupational mobility, and the relationships between technological change, organisational change and workforce skills (e. g. Autor et al. 2003; Spitz-Oener 2006; Acemoglu and Autor 2011; Green 2012). This research agenda has been stimulated by the collection of task-related data in a number of countries, often for purposes quite unrelated to labour market research. In the US, the Dictionary of Occupational Titles data, which had been collected for several decades, reached its final form in 1991, and was replaced eventually in 2008 by the O\*NET Database. In the UK, task-based data was collected with the Skills and Employment Surveys since 1997, and educational job requirements data since 1986. In Germany, employment surveys incorporating task data have been collected since 1979. More recently, national or regional data on tasks have been collected in other countries, including Spain and Singapore. Moreover, harmonised data was collected as part of the background survey for the OECD's Survey of Adult Skills: including the wave 2 countries which were surveyed in 2014/2015, the OECD database now includes data for 32 countries.

With new databases still coming on-stream, and ongoing theoretical and econometric research, the prospects for ongoing task-based research around the world seem good. In

this issue we include five papers that utilise job requirements data from Germany, the UK, Spain and the US, demonstrating the versatility of a task-based approach to studying the deployment of labour.

In Germany, Rohrbach-Schmidt and Tiemann utilise the BIBB/BauA Employment Survey from 2006 to analyse educational and skills mismatches. The former are measured using the comparison between achieved education level and workers' reports of the required education level. The latter is measured by a subjective indicator of over- or under-utilisation of skill, and the authors provide estimates of both the incidence of mismatches, and the wage penalties associated with them in Germany. In this paper, tasks are found to be significant determinants of the incidence of skills mismatches.

In the UK, data from the British Skills and Employment survey series, from 1986 to the present, are used by Green et al. to show trends in skills utilisation, in key aspects of the organisation of work – such as forms of teamworking and the extent of worker autonomy, the growing extent of educational mismatch, and the changing valuation of skills. Changes in both technology and work organisation are implicated in the skills use trends. The paper thereby provides for both researchers and policy makers an overview of the changing British workplace over a quarter century. Overall, skills use has been rising in a number of dimensions, but rather less fast in recent years. A notable feature of the 1990s was the declining extent to which task discretion is afforded to British workers. That discretion has not recovered since.

In Spain, Mane and Miravet make use of an unusual regional data set collected in Catalonia, in which task-based data obtained from workers is matched with establishment-level data gleaned from interviews with managers. They study both wages and the determinants of the skill content

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✉ Francis Green  
francis.green@ucl.ac.uk

<sup>1</sup> LLAKES Centre, UCL Institute of Education, University College London, Bedford Way, London, WC1H 0AL, UK

<sup>2</sup> Northeastern University, Boston, USA

of jobs, and find differing returns to generic skills depending on the worker's level in the firm's hierarchy. Matched employer-employee data is relatively rare in many countries, not least because of its cost, yet this paper demonstrates the potential for this approach to data gathering.

In the US, much use has been made of the O\*NET database. Designed for the purposes of human resource analysts and advisers, the database has nevertheless become a fruitful source for researchers trying to understand labour markets, and research users now have a stake in its ongoing development (National Research Council 2010). Handel's paper below is a systematic appraisal of its representativeness, and of its constructs and of how they relate to important criterion variables such as wages. While appreciative of the substantial scope of O\*NET, his critique focuses on the vagueness and complexity of both O\*NET's constructs and its response scales.

Finally, in a second paper by Handel a profile of US jobs is presented, obtained from an alternative source – the survey of Skills, Technology and Management Practices (STAMP). A leading characteristic of this survey is that it focuses on behaviourally-specific questions. Thus, for example, it reports the proportions of jobs that require the use of calculus, advanced algebra or inferential statistics. The range of questions on maths skills enables Handel to devise a satisfactory scale of maths complexity, with rather better properties than, for example, those of the maths usage scales used within the OECD's Survey of Adult skills.

One striking finding is the low level of skills being used in many jobs across the US, relative to the skills that could be expected to have been acquired by those finishing a college education.

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**Francis Green** Professor of Work and Education Economics