

CeLMR Insights

Autumn 2025

Welcome note

This year marks the Centre's 25th Anniversary, a fitting moment to reflect on our longstanding commitment to understanding the links between work, health, and wellbeing. Our anniversary conference embodied this mission, bringing together diverse perspectives and inspiring discussions.

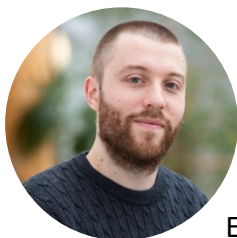
The Autumn 2025 issue of CeLMR Insights highlights two recent studies that showcase the breadth of CeLMR's research. Keith Bender and colleagues examine how performance-related pay affects workplace stress, while research by Alexandros Zangelidis and John Sessions explores how gender differences shape volunteering in response to persistent inequality.

We also feature Dr Marco Mello, whose work bridges labour and health economics, focusing on how clinical labour supply and hospital working conditions shape patient outcomes. Alongside this, we share recent publications and celebrate this year's CeLMR Prize. We look forward to another year of impactful research.

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Prof. Alexandros Zangelidis
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Featured researcher

Dr Marco Mello
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Dr. Marco Mello is an applied microeconomist with primary research interests in Health Economics and Labour Economics. His main research agenda investigates how the

labour supply of different groups of clinical workers, such as nurses and doctors, affect the quantity and quality of hospital care provided to patients. Dr. Mello is also interested in how hospital working conditions and policy interventions affect the turnover rate of clinical staff, which hospitals wish to minimize in order to avert staff shortages and ensure continuity of care.

By focusing on the interplay between hospital workers' labour supply and patients' health outcomes, his studies have been published both in leading medical journals such as the British Medical Journal, and internationally recognized Economics outlets like *Economica*. Dr. Mello has also examined the role of political institutions and electoral outcomes in shaping public health outcomes like COVID-19 spread, by publishing a study in the renowned *Journal of Economic Behavior and Organization*.

Dr. Mello began studying Economics at the University of Florence, Italy, where he obtained both a bachelor (BA) and a master (MSc) degree in Economics. Later, he joined the University of Surrey for a PhD in Economics, which he obtained in 2021. Prior to joining the University of Aberdeen in summer 2023, Dr Mello continued working at the University of Surrey as a postdoctoral research fellow, where he started to study the labour and health topics that still represent the core of his research.



Research highlights

tressed in your job? It may be because of how you are paid.

Prof. Keith Bender (kabender@abdn.ac.uk)



In the book *The Wealth of Nations*, the father of modern economics, Adam Smith, observed that,

‘Workmen....when liberally paid by the piece, are very apt to overwork themselves, and to ruin their health and constitution in a few years’.

Smith was making a connection that work influences health – not just because of the nature of the work but by the very way that workers are paid. He suggests that paying workers by their performance might cause some harm to health and wellbeing. While most jobs in a modern economy are much safer than those in 18th Century Scotland, there are still significant numbers of jobs where pay is dependent upon performance and so this may explain some of the high rates of workplace ill health.

There is a growing literature on looking at the link between performance-related pay (PRP) and health and it identifies a number of potential pathways – through increases in injuries or in hours spent at work meaning less hours available for healthy behaviours or through increased stress. It is this last pathway that CeLMR members have been focusing over the last several years to investigate how PRP affects health by using survey data to investigate the linkage between PRP and health (Andelic *et al.*, 2024) and using experimental data that looks at how PRP affects stress as measured by salivary cortisol (Andelic *et al.*, 2023; Allan *et al.*, 2021).

While Allan *et al.* (2021) establishes a clear causal pathway between PRP and physiological stress in an experimental

setting, there is a potential complication that workers in the real world typically select into PRP jobs. It may be that this very selection affects the PRP-stress relationship since it is possible that those who have an ability to handle stress better might be more suited for the stress inherent in PRP jobs. Allan *et al.* (2021) did not allow for this possibility since participants in the experiment were randomly allocated into PRP ‘jobs’ in order to assure the causal relationship. Therefore, to more closely imitate job markets, a second set of experiments were developed to allow participants to choose their ‘job’ – either PRP or not.

The basic setup of the experiment was the same as Allan *et al.* (2021), except participants were able to perform the task of solving maths problems and how much they would be paid under a PRP and nonPRP ‘contract’. Then they were given the choice of which contract they preferred, performed the task and were paid accordingly. During the experiment they were given questionnaires to ask about their subjective stress and had saliva taken to measure changes in salivary cortisol, the so-called stress hormone. The results were clear – allowing participants to select their contract only caused a minimal mitigation of the negative effect of PRP on self-reported and physiological stress as those who chose the PRP contract had higher levels of both compared to those who took the minimum performance contract.

In these experiments, then, we find that it does not matter if PRP is imposed or chosen – across this study and our earlier one, we find consistent results that PRP is associated with higher subjective stress and increased cortisol. While clearly this is a low stakes experiment where students are earning small amounts of money, if we can find consistent results that PRP generates increased stress, how much

more impactful will PRP be if a significant amount of your pay check is determined explicitly by your performance? For workers, employers and public health officials it is important that this unintended consequence of PRP negatively impacting health is understood so that the true costs of PRP are understood.

Reference:

Nicole Andelic, Julia Allan, Keith A. Bender, Daniel Powell and Ioannis Theodossiou, "Performance-related Pay and Sorting into Stress," *Oxford Economic Papers*, Vol. 77, 2025: 938-953.

<https://doi.org/10.1093/oep/gpaf008>

For further information on the broader project on PRP and Health, please go to the following website:

<https://www.abdn.ac.uk/business/research/projects/performance-related-pay-and-health/>

Bibliography:

Julia Allan, Nicole Andelic, Keith A. Bender, Daniel Powell, Sandro Stoffel and Ioannis Theodossiou, "Employment Contracts and Stress: Experimental Evidence," *Journal of Economic Behavior and Organization*, 187, July 2021: 360-73.

<https://doi.org/10.1016/j.jebo.2021.04.015>

Nicole Andelic, Julia Allan, Keith A. Bender, Dan Powell and Ioannis Theodossiou, "Performance-related Pay, Mental and Physiological Health." *Industrial Relations*, 63(1), 2024: 3-25.

<https://doi.org/10.1111/irel.12334>

Nicole Andelic, Julia Allan, Keith A. Bender, Dan Powell and Ioannis Theodossiou, "Stress in Performance-related Pay: The Effect of Motivated Performance and Social-Evaluative Threat," *Stress*, 26:1, 2283435, 2023.

<https://doi.org/10.1080/10253890.2023.2283435>

Why Women Volunteer More Where Inequality Hits Hardest

Prof. Alexandros Zangelidis

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Volunteering is a major global activity. Around 800 million people, about one in ten worldwide, give their time without pay, contributing the

equivalent of 109 million full-time workers. But not everyone volunteers at the same rate. Women consistently volunteer more than men, both formally and informally. Understanding why this gap exists, and what motivates people to volunteer, has long been unclear.

New research by John Sessions (Newcastle University) and Alexandros Zangelidis (University of Aberdeen, CeLMR) offers fresh insight. Their study asks whether people treat volunteering as a way to respond to income inequality in their communities, essentially, whether they give more time when economic disparities are greater. The findings point to a clear gender difference.

Using data from the British Household Panel Survey, which followed thousands of adults across the UK from 1996 to 2008, the researchers examined whether volunteering levels rise in areas with higher income inequality. They found that women, but not men, increase their volunteering when inequality is persistently high. Women not only become more likely to volunteer but also volunteer more frequently. A one-standard-deviation increase in long-term regional inequality is linked to roughly a 4% rise in women's participation, an important change given typical volunteering rates.

Crucially, women respond only to long-lasting inequality, not short-term fluctuations. This suggests that it takes

time for people to recognise stable differences in living standards and adjust their behaviour accordingly. The pattern holds across a range of inequality measures.

Men, however, show no similar response. One explanation may be time constraints: on average, men spend more hours in paid work, limiting their flexibility to volunteer. Income also plays a role. Women in upper-middle-income households show the strongest response, consistent with the idea that some view volunteering as a way to contribute to fairness or community support. In contrast, high-income men volunteer less when inequality is high.

These results align with broader evidence showing that women tend to be more inequality-averse, more responsive to community needs, and more likely to volunteer in roles addressing social or humanitarian issues, such as supporting the elderly or disadvantaged groups. Men, by comparison, often volunteer in organisations linked to recreation or networking.

The study highlights important implications for policymakers and community organisations. If women are more likely to increase their voluntary support where inequality is greater, this may help sustain community cohesion but also raises questions about the limits of such informal responses. As inequality continues to shape social outcomes, understanding gendered patterns in volunteering becomes increasingly essential for designing effective support and engagement strategies.

Reference:

Sessions, J. G., & Zangelidis, A. (2025). Volunteerism, redistribution and gender. *Scottish Journal of Political Economy*, 72(3), e12410.

<https://doi.org/10.1111/sjpe.12410>

Publications

Selected recent publications

Abubakar, A. B., **McCausland, W. D.**, & **Theodossiou, I.** (2025). Do debt relief and fiscal rules improve public debt sustainability? The experience of sub-Saharan African countries. *Journal of Policy Modeling*, 47(1), 166-186.

Andelic, N., Allan, J., **Bender, K. A.**, **Powell, D.**, & **Theodossiou, I.** (2025). Performance-related pay and sorting into stress. *Oxford Economic Papers*, gpa008.

Asare, B. Y. A., **Powell, D.**, Robinson, S., & Kwasnicka, D. (2025). Rotation work in the resources sector: a systematic review of the impact on workers' families. *Psychology & health*, 40(1), 17-46.

Asiamah-Asare, B. K. Y., Robinson, S., Kwasnicka, D., & **Powell, D.** (2024). Health behaviours and affective states of partners of fly-in fly-out workers: A daily diary study. *Australian Journal of Social Issues*.

Champagne, S. N., Macdiarmid, J. I., Olusola, O., **Phimister, E.**, & Guntupalli, A. M. (2024). Heating or eating? The framing of food and fuel poverty in UK news media. *Social Science & Medicine*, 360, 117297.

Haque, S., de Aguiar, T. R. S., & **Bender, K. A.** (2025). Managing the unwanted: an application of dispositional analysis on the Athena SWAN initiative in UK Business Schools. *Gender, Work & Organization*, 32(4), 1540-1555.

Iddrisu, A. G., **Phimister, E.**, & **Zangelidis, A.** (2025). The Role of Energy Poverty on the Gender-Health Gap in Ghana. *Review of Development Economics*.

Kane, L., Ball, D., Martin, K. R., & **Powell, D.** (2025). Continuous heart rate variability monitoring—understanding patterns of stress and recovery and their relationship with self-reported burnout, resilience and well-being in doctors: a protocol for a

- sequential explanatory mixed-methods study. *BMJ open*, 15(6), e097849.
- Maier, M., Lawrie, L., **Powell, D.**, Murchie, P., & Allan, J. L. (2025). Lengthy Shifts and Decision Fatigue in Out-of-Hours Primary Care: A Qualitative Study. *Journal of Evaluation in Clinical Practice*, 31(2), e70050.
- Maier, M., **Powell, D.**, Murchie, P., & Allan, J. L. (2025). Systematic review of the effects of decision fatigue in healthcare professionals on medical decision-making. *Health Psychology Review*, 1-46.
- Mekuria, W., **Phimister, E.**, Yakob, G., Tegegne, D., Moges, A., Tesfaye, Y., ... & Smith, J. U. (2024). Gully rehabilitation in southern Ethiopia—value and impacts for farmers. *Soil*, 10(2), 637-654.
- Mello, M.** (2024). A kick for the GDP: the effect of winning the FIFA World Cup. *Oxford Bulletin of Economics and Statistics*, 86(6), 1313-1341.
- Montagna, C.**, & **Zangelidis, A.** (2025). Workplace Thyroid Toolkit: An interactive toolkit for managing thyroid conditions in the workplace.
- Moscelli, G., **Mello, M.**, Sayli, M., & Boyle, A. (2024). Nurse and doctor turnover and patient outcomes in NHS acute trusts in England: retrospective longitudinal study. *bmj*, 387.
- Moscelli, G., Sayli, M., **Mello, M.**, & Vesperoni, A. (2025). Staff engagement, co-workers' complementarity and employee retention: evidence from English NHS hospitals. *Economica*, 92(365), 42-83.
- Peters, G. J., Kwasnicka, D., Ten Hoor, G. A., Crutzen, R., Varol, T., Warner, L. M., ..., **Powell, D.**, ...& Roozen, S. (2025). Collecting behavioural data across countries during pandemics: Development of the COVID-19 Risk Assessment Tool. *Behavior research methods*, 57(8), 223.
- Sessions, J. G., & **Zangelidis, A.** (2025). Volunteerism, redistribution and gender. *Scottish Journal of Political Economy*, 72(3), e12410.
- Shapovalova, D., **Bender, K. A.**, Bone, J., & Potts, T. (2025). A place-based approach to measuring a just transition: Evidence from the north-east of Scotland. *Energy Research & Social Science*, 127, 104236.
- Shapovalova, D., **Bender, K.**, Bond, C., Bone, J., & Potts, T. (2024). Just Transition Policy in the Context of Nuclear Decommissioning in Dounreay.
- Shapovalova, D., **Bender, K.**, Bond, C., Bone, J., & Potts, T. (2024). Just Transition Policy in the Context of Nuclear Decommissioning in Dounreay.
- Shapovalova, D., **Bender, K.**, Bone, J., Bond, C. E., & Potts, T. (2024). Initial report to Just Transition Commission: Just transition activities, planning, and policy landscape in Aberdeen and the North East.
- Shapovalova, D., Bond, C., Bone, J., **Bender, K.**, & Potts, T. (2025). Regional Planning for a Just Transition-A case study for the North East of Scotland.

CeLMR activities

The Centre for Labour Market Research marked its 25th Anniversary with a vibrant interdisciplinary conference on “**Workplace, Health and Wellbeing.**”



The event was well attended and generated highly engaging discussions throughout the day.

Invited speakers Cristina Tealdi (Heriot-Watt University) and Agnese Romiti (University of Strathclyde) offered stimulating insights with their talks *Winners and Losers of Immigration* and *Beliefs on Children's Human Capital Formation and Mothers at Work*, respectively, sparking thoughtful debate and exchange among participants.



This was a fitting celebration of the Centre's longstanding contribution to labour market research.

Here's to the next 25 years!

News coverage

Selected media reporting

[Rural business establishment and interconnections with natural resources in Halaba, Central Ethiopia](#) (*Consultative Group on International Agricultural Research - CGIAR*, 26 March 2025) **Phimister**.

[‘Father of Honey’ empowers his community in rural Ethiopia](#) (*International Water Management Institute – IWMI*, 1 May 2025), **Phimister**.

[Income divide shows Aberdeen storing up energy jobs problem](#) (*Press & Journal* and *Sunday Post*, 4 May 2025) **Bender**.

[North-east must secure renewables manufacturing jobs, economist warns](#) (*Aberdeen Grampian Chamber of Commerce - AGCC*, 5 May 2025), **Bender**.

[A young Ethiopian woman inspires others in her community to make it at home](#) (*International Water Management Institute – IWMI*, 15 May 2025), **Phimister**.

[University of Aberdeen launches toolkit to help thyroid sufferers stay in work](#) (*Workplace Journal*, 23 May 2025), **Montagna & Zangelidis**.

[Aberdeen University study finds thyroid disease isn't the end of career prospects](#) (*AberdeenLive*, 25 May 2025), **Montagna & Zangelidis**.

Education corner

PhD supervision

CeLMR supervised PhDs recently completed

Title: Three Analytical Essays on the Saudi Labour Market: Trends, Challenges, and Opportunities

Student: Saad Alobaid

Supervisors: **K. Bender & I. Theodossiou**

CeLMR Prize

Each year, we celebrate excellence in Labour Economics undergraduate research through the CeLMR Prize, made possible by the generous support of an external donor. In 2024–25, the prize was awarded to Yifei Fu for her outstanding dissertation, “*The Impact of the Gig Economy on Worker Health: Gender and Job-Type Heterogeneity*.” Drawing on UK Household Longitudinal Study (UKHLS) panel data from 2021–2023, the dissertation examines how participation in the gig economy affects workers’ mental and physical health. Using fixed-effects regression models, Yifei finds that gig work is associated with notable declines in both mental and physical health, with women disproportionately affected. The analysis also highlights important differences across job types: digital and professional gig work appears to harm mental health, while manual gig work may have positive effects, particularly for men. Impacts on physical health are generally weaker and more variable across groups.

Contact

More information can be found at the [CeLMR website](#)

