

CeLMR Insights

Autumn 2024

Welcome note

Welcome to the Autumn 2024 edition of *CeLMR Insights*! This issue highlights the Centre for Labour Market Research's dedication to understanding and addressing complex challenges across labour markets, health, and societal integration. We are excited to feature Dr. Likun Mao, whose research explores the impact of technology on cognitive and wellbeing outcomes across age groups, from young children to older adults. Her work advances our understanding of technology's role in shaping lives, health, and retirement decisions.

From Dr. Yu Aoki's novel study on the impact of language proficiency on migrant residential choices in the UK to Dr. Marco Mello's in-depth analysis of NHS staff engagement and retention, our researchers continue to tackle pressing questions with cutting-edge approaches. This edition also celebrates recent PhD successes, conference highlights, and recognitions, reflecting CeLMR's thriving community and its contributions to impactful, policy-relevant research. Enjoy the read!

Director of CeLMR
Prof. Alexandros Zangelidis
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Featured researcher

Dr Likun Mao (likun.mao@abdn.ac.uk)



Dr. Likun Mao's research focuses on understanding the impact of technology on people's lives through applied methods. Her main strand of research, arising from the PhD,

explores how technology use affects cognitive and non-cognitive outcomes across various age groups, including young children, adolescents, and older adults. Another strand examines wellbeing and retirement among older population.

Currently, she pursues to investigate the impact of digital behaviours on educational and wellbeing outcomes.

Her research has been published in internationally recognized journals, such as *Journal of Economic Behaviour and Organization*, the *Journal of the Economics of Ageing, Economics and Human Biology*, and *Journal of the American Medical Informatics Association*. Her work also crosses disciplinary boundaries, for example, her study on telemedicine usage of older people during COVID-19 in Ireland based on large nationally representative dataset, offers insights into the factors influencing telemedicine adoption, as well as the role of Irish healthcare system and healthcare accessibility.

She began the journey with a double degree in Economics (BA) from Sun Yat-sen University in China and in Business Studies (BSc) from Lancaster university. She holds an MSc in Economics from the University of Warwick and a PhD in Economics in Lancaster University. Prior to joining the University of Aberdeen, she worked as Research Fellow in The Irish Longitudinal Study on Aging (TILDA) in Trinity College Dublin, contributing to data collection, survey design, and economics research on health and retirement issues of older people.



Research highlights

Where to live? English proficiency and residential location of UK migrants

Dr Yu Aoki (y.aoki@abdn.ac.uk)



The integration of immigrant population is an increasingly important policy objective in many developed countries, and it is widely believed that proficiency in the host-country language is an important factor for promoting integration. In fact, there is vast literature establishing the relation between host-country language skills and immigrant labour market integration. However, there is still limited knowledge on the causal impact of language skills on one of the key aspects of integration; namely, residential integration. We are the first UK study, investigating the causal effects of English proficiency on location choices of residence of immigrants in the United Kingdom (UK).

There is a significant extent of residential segregation in the UK, as is indicated by the fact that over half of Britain's ethnic minority population lives in only three cities, London, Manchester and Birmingham. Given the findings of the existing research that residential environments have a significant impact on social, behavioural and labour market outcomes, it is informative to know the role host-country language skills play in explaining immigrant residential location choices.

We analyse two sets of residential outcomes. First, we construct measures of the extent of residential clustering of migrants, aimed at capturing the concept of enclave along four dimensions: main language spoken by residents (language

enclave), ethnicity (ethnic enclave), country of birth (country-of-birth enclave), and world region of birth (region-of-birth enclave). We then analyse whether language skills of migrants affect location choices of their residence in these different types of enclaves. Migrants fluent in English may not choose to live in a language enclave, if the reason for living in an enclave is simply for linguistic convenience. However, migrants proficient in English may decide to live in an ethnic enclave if they value other aspects of living in an enclave, such as offering employment networks, cultural amenities, or protection from possible discrimination they might face outside of the enclave.

Second, we study the quality of the neighbourhood migrants live in, where the quality is measured by the extent of income deprivation, employment deprivation, and health deprivation of residents in the neighbourhood. We can conduct this analysis by linking a unique dataset from the Office for National Statistics Longitudinal Study, containing individual-level data from the England and Wales 2011 Census, to the indices measuring neighbourhood quality in England.

For our analysis, we rely on an estimation technique called the Instrumental Variable (IV) estimation, which allows us to estimate the causal effects of language skills, as opposed to mere correlations. This estimation requires a so-called IV for English proficiency, which is a variable correlated with English skills, but is uncorrelated with any other determinants of immigrant residential location choices. In our study, linguistic distance between English and the origin-country language, interacted with age at arrival, is used as an IV for English skills. The idea behind the use of this IV is that, the later the immigrant arrives in the UK, the poorer their English proficiency is on average; and this effect

would be larger for immigrants coming from a country with a larger linguistic distance from English (e.g., Somalia).

Our results indicate that poorer English skills lead migrants to live in areas with a higher concentration of individuals who speak their native language (i.e., language enclave). In contrast, better English skills lead migrants to live in an ethnic enclave and a world-region-of-birth enclave. Our findings imply that, for example, a Spanish-speaking white immigrant born in Spain who speaks English very well tend to live in an area with a low concentration of Spanish speakers, but in an area with a high concentration of individuals from Europe (their world region of birth) and of other white people (their ethnicity).

Our results suggest that, helping migrants improve their English skills could be effective in reducing residential clustering, by promoting migrants to live in linguistically less segregated areas. However, better language proficiency leads migrants to cluster in areas with a higher concentration of individuals from the same ethnicity, suggesting that other aspects than linguistic convenience, such as good job opportunities, and protection from possible discrimination they might face outside of the enclave, are likely to play an important role in determining migrant residential locations.

Turning to the quality of the neighbourhood where migrants live, we find strong evidence that poorer English skills lead migrants to live in a neighbourhood of lower quality. Our supplementary analysis finds that better educational attainment as a result of better English skills is likely to be a key channel through which language impacts neighbourhood quality outcomes. In this regard, helping migrants improve their English skills, which have been shown to improve their educational outcomes, could

be an effective policy to improve their residential environments.

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Staff engagement, coworkers' complementarity and employee retention: Evidence from English NHS hospitals

Dr Marco Mello

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The retention of clinical workers is a crucial issue in the policy agenda, as an excessive turnover of nurses and doctors can compromise the quantity and quality of care provided to hospital patients. Healthcare policymakers are therefore looking for new and possibly cost-effective strategies which may improve clinical workers' retention, especially in response to the growing demand for healthcare services that follows from the progressive population ageing and the legacy of the COVID-19 pandemic. As a result, identifying what are the key factors which affect healthcare workers' retention has become an increasingly central subject in the healthcare literature.

This research provides novel insights on this topic and focuses on two non-pecuniary job aspects that have the potential to affect clinical workers' retention: staff engagement and complementary workers' retention. The engagement of staff at the workplace can be considered as the result of a top-down managerial effort in keeping workers motivated in their role. This non-monetary job amenity assumes specific importance in mission-driven sectors like public healthcare, where pay is generally regulated at the central level and therefore there is limited room for workers to negotiate salaries with local employers. Even complementarities in workers' retention are particularly relevant in settings like hospital care, where nurses and doctors present skills and competencies that complement each other when considering the final delivery of services to patients. For instance, nurses assist doctors in the treatment of patients by administering medication, thus their labour is a natural complement input to doctors' labour. First, our study proposes a conceptual framework that formalizes these patterns that are typical of the healthcare sector, then it tests some theoretical predictions using administrative-level data on English NHS hospitals.

Specifically, the paper uses payroll records on around 320,000 nurses and 50,000 tenured doctors in order to measure annual retention rates at the hospital level of these two alternative groups of workers. These retention metrics are complemented with data from the NHS Staff Survey (NSS), one of the largest workforce surveys in the world, from which the study gathers information on the hospital-specific and self-reported engagement levels of these two separate groups of clinical workers. Overall, the analysis sample consists of a 10-year

hospital-level panel at annual frequency that goes from the 2009/10 to the 2019/20 financial year and that includes 190 different hospital organisations. Over this decade, the analysis investigates how nurses' and doctors' retention related to their group-specific engagement levels and also to the retention of complementary workers (with nurses being the complement workers' group of doctors and vice versa). To deal with reverse causality and other potential sources of endogeneity, the analysis implements both dynamic panel estimation methods and unconditional quantile regressions that account for hospital-level heterogeneity through the inclusion of hospital fixed effects.

The findings of the study suggest that a higher engagement level among nurses translates into higher nurses' retention. Indeed, a one standard deviation increase in nurses' engagement is associated with a 16% standard deviation increase in nurses' retention. However, the same relationship does not hold for tenured doctors. Furthermore, higher nurses' retention implies higher tenured doctors' retention: a 10% increase in nurses' retention is associated with a 1.6% increase in doctors' retention. No comparable effect arises in the opposite direction. Hence, the results indicate that tenured doctors are responsive to nurses' retention, but not the other way around. Finally, the study shows that this complementarity between nurses' and doctors' retention is stronger in some medical specialties (e.g. acute medicine) and primarily driven by the retention of more experienced nurses.

The paper also investigates the main determinants of clinical staff engagement, with a specific focus devoted to work environment and managerial inputs. Using additional data from the NSS survey, the analysis demonstrates that both nurses' and doctors' engagement positively

correlates with hospital managers having an effective communication, involving staff in the decision-making process and acting on the feedback provided by staff. Most importantly, older nurses' engagement appears particularly sensitive to managers caring for staff health and wellbeing. Nurses' engagement also results negatively correlated with the occurrence of bullying, discrimination or work-related stress episodes.

Generally, the results provide new relevant tools that policymakers can leverage in order to enhance the engagement of clinical staff and especially that of experienced nurses. The latter group is in fact critical to further engage and retain within the hospital, as its turnover rate is the ultimate metric which appears to affect tenured doctors' retention. Effectively, the results of this research highlight how policies that are designated to improve nurses' retention in public hospitals might have higher returns than what previously thought, as they can trigger a positive spillover effect on the retention of the medical workforce as well. Although arising from the English public healthcare sector, these findings are potentially applicable even to other sectors characterized by strong input complementarities and hierarchical division in the labour structure, where synergies among coworkers are key for the final output production.

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Moscelli, G., Sayli, M., Mello, M., & Vesperoni, A. (2024). Staff engagement, co-

workers' complementarity and employee retention: evidence from English NHS hospitals. *Economica*.

<https://doi.org/10.1111/ecca.12554>

Publications

Selected recent publications

Abubakar, A. B., **McCausland, W. D.**, & **Theodossiou, I.** (2024). Do debt relief and fiscal rules improve public debt sustainability? The experience of sub-Saharan African countries. *Journal of Policy Modeling*.

Andelic, N., Allan, J., Bender, K. A., Powell, D., & **Theodossiou, I.** (2023). Stress in performance-related pay: the effect of payment contracts and social-evaluative threat. *Stress*, 26(1), 2283435.

Aoki, Y., & Santiago, L. (2024). Where to live? English proficiency and residential location of UK migrants. *Journal of Economic Behavior & Organization*, 221, 73-93.

Asare, B. Y. A., Kwasnicka, D., Robinson, S., & **Powell, D.** (2024). Health and related behaviours of partners of fly-in fly-out workers in Australia: a cross-sectional study. *Community, Work & Family*, 27(1), 78-97.

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

Bender, K. A., & **Skåtun, J. D.** (2024). Performance-Related Pay: The Expected and the Unexpected. *Handbook of Labor, Human Resources and Population Economics*, 1-28.

Bransch, F., Malik, S., & **Mihm, B.** (2024). The cyclicalities of on-the-job search. *Labour Economics*, 87, 102517.

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.

Mao, L., Mohan, G., & Normand, C. (2023). Use of information communication technologies by older people and telemedicine adoption during COVID-19: a longitudinal study. *Journal of the American Medical Informatics Association*, 30(12), 2012-2020.

Mello, M. (2024). A kick for the GDP: the effect of winning the FIFA World Cup. *Oxford Bulletin of Economics and Statistics*.

Moscelli, G., Nicodemo, C., Sayli, M., & **Mello, M.** (2024). Trends and determinants of clinical staff retention in the English NHS: a double retrospective cohort study. *BMJ open*, 14(4), e078072.

Moscelli, G., Sayli, M., **Mello, M.**, & Vesperoni, A. (2024). Staff engagement, co-workers' complementarity and employee retention: evidence from English NHS hospitals. *Economica*.

Sessions, J. G., & **Zangelidis, A.** (2024). Volunteerism, redistribution and gender. *Scottish Journal of Political Economy*. (In press).

CeLMR activities

CeLMR hosted its annual conference on May 31, 2024, this year centered on “**Workplace, Health, and Wellbeing**”. The event showcased a wide array of research presentations by CeLMR members, highlighting the diverse work conducted within our centre.



We were honoured to welcome Prof. Melanie Jones from Cardiff University as our keynote speaker, who delivered an insightful talk on

“**Disability and the UK Labour Market**”. The conference attracted a substantial

audience, with active engagement from both faculty members and PhD students.

Professor Catia Montagna recently delivered two invited talks on pressing labour market issues. On November 16, 2023, she spoke as an invited expert at MacKay Hannah’s conference, “*Addressing the Labour Market Crisis in Scotland’s Public, Private, and Third Sectors: Innovating Our Way Forward*”, exploring the future trajectory of the labour market amid persistent challenges. Later, on May 12, 2024, she presented at the *Confederazione Generale Italiana del Lavoro* (CGIL), analysing sectoral and regional labour market implications. Her insights have contributed significantly to ongoing discussions on labour market adaptation in both Scotland and Italy.

On October 23, 2024, Professor Keith Bender delivered a presentation titled “Nuclear Decommissioning and the Just Transition” to the UK Nuclear Decommissioning Authority (NDA). Professor Bender's talk highlighted the challenges of managing the decommissioning process in a way that ensures fairness, mitigates economic disruptions, and fosters long-term resilience for impacted communities.

News coverage

Selected media reporting

[BrewDog scrap Living Wage for new hires after decade of championing initiative.](#) (*Press & Journal*, 10 January 2024; *Evening Express*, 11 January 2024), **Bender**.

[Women with underactive thyroids are being told they are menopausal or depressed](#) (*Women’s Health*, 04 April 2024), **Montagna & Zangelidis**.

[Language skills are one of the key factors which explains residential segregation.](#) (*That’s TV Scotland*, 2 May 2024), Aoki.

[NHS symptoms of silent killer that affects 1 in 200 - but takes over 4 years to diagnose](#)

(*Mirror*, 13 May 2024), **Montagna & Zangelidis**.

[My thyroid nightmare: heart palpitations, weight gain, stomach issues — why did no-one listen?](#) (*Evening Standard*, 21 May 2024), **Montagna & Zangelidis**.

Education corner

PhD supervision

CeLMR supervised PhDs recently completed

Title: Crime response to labour market dynamics and law enforcement incentives

Student: Ibzan Darius

Supervisors: **K. Bender & J. Skåtun**

Title: Examining subject choice, job satisfaction, and student loan decisions: unravelling the determinants and consequences for early labour market outcomes of UK graduates

Student: Bei Chen

Supervisors: **K. Bender, Y. Aoki & A. Zangelidis**

Title: Structural transformation, productivity growth and manufacturing output

Student: Chigozie Nelson Nkaku

Supervisors: **D. McCausland & I. Theodossiou**

Title: Public health insurance and agricultural labour supply in China

Student: Liangzhi Dai

Supervisors: **E. Phimister & H. Battu**

Title: Health, energy poverty and children's education in Ghana: exploring the role of gender

Student: Abdul Ganiyu Iddrisu

Supervisors: **E. Phimister & A. Zangelidis**

Title: The socioeconomic causes of schooling non-attendance: the case of Bangladesh

Student: Nazmun Bakth

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

CeLMR Prize

Each year, we award the CeLMR Prize to the top undergraduate dissertation in Labour Economics, made possible by the generous support of an external donor. In 2023-24, the prize went to Yuqing Kang for her dissertation, "The impact of hybrid working from home on job satisfaction, life satisfaction, and employee performance in the UK." Using UK social survey data spanning pre- and post-COVID-19, Yuqing found a positive link between hybrid WFH and satisfaction and performance, though some effects weakened during COVID-19. Her research offers valuable insights for employers on enhancing satisfaction and productivity through flexible work.

Contact

More information can be found at the

[CeLMR website](#)

