

# Matching skills needs with skills reserves: Protecting workers & communities for a Just Transition

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**Summary:** The Republic of Ireland remains a laggard regarding necessary policy to reduce carbon emissions associated with climate change. Just Transition principles state that the significant changes required should not be disproportionately borne by at-risk workers and communities. With this in mind, we identify workers and regions at high-risk of disruption from transition and examine their skills profiles. We identify a high-risk population in several emissions intensive sectors. This has a strong regional dimension. We also find evidence of significant skills mismatch within the Irish economy. We conclude with proposals to manage transition from international experience.

## **What jobs are at risk from a transition to a green economy?**

The transition to a more ecologically sustainable economy presents an opportunity to create more jobs than it displaces. However, certain economic sectors and jobs will be affected more than others. While the extent of change is difficult to quantify directly, changes will likely be concentrated in those sectors which contribute disproportionately to emissions.

Table 1 examines the six sectors with shares of two per cent or more of total emissions in 2017. These sectors contribute the vast bulk (88 per cent) of total non-household carbon emissions in Ireland but less than 9 per cent of total employment in 2017. Over three quarters of sectoral emissions came from *Crop and animal production, hunting and related service activities, Air transport* and *Electricity, gas, steam and air conditioning supply* activity but make up only 5.8 per cent of employment.

**Table 1: Proportions of emissions and employment by sector 2017**

| Sector/Subsector                                                   | Broader NACE Sector                                    | Percentage of total non-household emissions (CO <sub>2</sub> equivalent) | Percentage of total employment |
|--------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------|
| Crop and animal production, hunting and related service activities | A: Agriculture, forestry and fishing                   | 35.1                                                                     | 4.9                            |
| Air transport                                                      | H: Transportation and storage                          | 21.4                                                                     | 0.5                            |
| Electricity, gas, steam and air conditioning supply                | D: Electricity, gas, steam and air conditioning supply | 19.0                                                                     | 0.4                            |
| Manufacture of other non-metallic mineral products                 | C: Manufacturing                                       | 5.5                                                                      | 0.4                            |
| Land transport and transport via pipelines                         | H: Transportation and storage                          | 4.5                                                                      | 2.1                            |
| Manufacture of basic metals                                        | C: Manufacturing                                       | 2.0                                                                      | 0.3                            |
| Cumulative share                                                   |                                                        | 87.5                                                                     | 8.6                            |

CSO data indicate that emissions intensive sectors are concentrated outside of the Dublin area for the most part, apart from *Transportation and storage*.<sup>1</sup> These data point to a disproportionate concentration of employment in the Border and Midlands in *Agriculture, forestry and fishing* at about twice the national average. Similarly, most regions outside of Dublin have higher shares of employment in *Industry*. This is most apparent in the West, South West and Midlands, where employment shares were between 29 and 43 per cent higher than the aggregate regional employment share would imply.

Disparities also emerge with respect to job creation outside these sectors. While “non-intensive” sectors made up most of national employment growth between 2012 and 2019 (85 per cent), this was not the case for several regions. Less than 70 per cent of new jobs generated between the second quarter of 2012 and 2019 were in low emitting sectors in the South-west and Midlands regions. While employment in the Border and West have higher shares in high carbon emitting sectors, the trend has been towards sectors with lower emission intensity.

### Skill needs and job quality in the Just Transition

A key prerequisite to a realised Just Transition is policy to ensure that the existing workforce and future workers are suitably equipped for new roles and tasks. While there is no international consensus as to how green jobs/skills are defined, there appears to be agreement that skills demand to realise the transition to a low carbon economy will skew towards *STEM*

<sup>1</sup> “Emissions intensive sectors” refers to broader sector aggregates containing the subsectors identified in the previous section. These broader sector aggregates are used in the absence of more detailed regional data.

(Science, Technology, Engineering and Mathematics) and *Administration, Management and Business* qualifications.

The data show that 30.6 per cent of Irish workers with tertiary education between 25 and 34 are working in fields unrelated to their skills competencies (horizontally mismatched). For those with tertiary qualifications in *Science, Mathematics and Computing* the rate is even higher at 39.2 per cent. In vertical mismatch terms, 29.5 per cent of all workers with tertiary education were working in occupations that do not require that level of education or training in 2018. For those working in *Wholesale and Retail trade*, one of the largest sectoral employers, 53.9 per cent of workers with a tertiary qualification are overqualified for their positions. For *Manufacturing* and *Transport*, which contain many of the at-risk subsectors, the over-qualification rates are 36.1 and 55 per cent, respectively. In the context of declining higher education spending by the state and comparatively low rates of in-job training, these mismatches could impede transition efforts and limit the potential employment and productivity gains arising from it.

While limited, the available data also point to specific risk factors among the at-risk employed population. For *Crop and Animal Production* only 12.1 per cent of workers have bachelor's degrees or higher and 45.6 per cent are 56 and over. This signals potentially high demand for upskilling in the sector. On the other hand, the education profile of workers in the *electricity, gas, steam and hot water* sector suggests that fundamental changes to their jobs or tasks will be relatively easy to address, with 52.7 per cent earning bachelor's degrees or higher and an average cohort of over 55's (17.6 per cent). In *Manufacturing of other non-metallic mineral products*, approximately 18.1 per cent of workers have a degree or more and 23.9 per cent are 55 or over suggesting a possible future need of widespread upskilling of this workforce.

The Irish economy exhibits a large supply of underutilised skills which policy could mobilise to address the climate emergency and promote high quality, regionally distributed employment. The CSO PLS4 indicator includes discouraged workers, others who want a job and the part-time underemployed alongside the unemployed.

PLS4 rates in the West, Mid-west and Midlands were considerably higher than the national average of 17 per cent in 2018. At the same time, these workers display high levels of skill. Nearly a quarter of the PLS4 group have bachelor's degrees or higher (approximately 110,000 individuals), while 53.5 per cent have post-secondary qualification (approximately 256,000). The *Labour Force Survey* also provides data on the broad area of study of individuals with tertiary qualifications. Of the PLS4 group with tertiary education, almost half have a qualification in broad areas of relevance to the Just Transition. An estimated 22.4 per cent have a third level qualification in *Business, Administration and Law*, 4.3 per cent in *Natural Sciences, Mathematics and Statistics*, 9.4 per cent in *Information and Communication Technologies* and 10.9 per cent in *Engineering, Manufacturing and Construction*. For the portion of the PLS4

group who have been in employment in the previous eight years (about 40 per cent), 28.1 per cent worked in the top three occupational categories *Managers, Professionals and Technicians and Associate professionals*, 9.7 per cent were *Craft and related trades workers* and 6.3 per cent were *Plant and Machine operators*.

### **Implementing a Just Transition**

International experience suggests that participation in planning should be established between workers and their representatives, employers, farming and community groups and government at various levels. This should enable national coherence in green transition while remaining flexible in the face of changing circumstances. Consistent, integrated planning across government levels in partnership with local actors should enable pro-active rather than reactive policy responses, with clear timelines in agreements and policy. It also provides long term stability in policy terms, which affects the incentives faced by all market participants.

Developed co-ordinating institutions and active labour market policy also appear to be associated with better transitions for workers and their communities. Institutions like the Swedish Job Security Councils appear to offer effective support to ensure displaced workers find decent work. A social safety net is also a key element of a Just Transition, supporting regional activity and facilitating transitions to decent work. Ireland collects a relatively small amount of social insurance relative to other developed EU states. Approaching western European norms in this respect should offer automatic stabilisers in the face of possible job losses, minimise dislocation and facilitate moves to decent work. These funds could also support a more developed skills system offering support throughout the work life.

### **Conclusion**

The concentration of emissions in certain sectors, the broader skills profile in those sectors and across the economy and international experience point to a significant role for the state in ensuring a Just Transition. Policy to address these risks in line with international best practice and a broader “mission-oriented” approach to investment and innovative systems could enable a transition to a green and socially just economy.

### **References**

This *NERI Research inBrief* accompanies NERI Working paper No 65 (November 2019), [Matching Skills needs with skills reserves: Protecting workers & communities for a Just Transition](#)

Working paper No 65 contains a list the references and findings used in this *inBrief*.