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**Working Paper**

## A study of cross-border working on the Island of Ireland

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# ESRI Working Paper No. 781

*June 2024*

## **A Study of Cross-Border Working on the Island of Ireland**

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## **Abstract**

To our knowledge, this study represents the first comprehensive study of cross-border workers on the Island of Ireland. We estimate that the total number of cross-border workers increased from 12,740 to between 17,827 and 19,282 which represents a growth rate of between 40 and 51 per cent. Cross-border worker flows increased in both directions over the period 2011 to 2021, but the bulk of the growth was due to the expansion in the numbers travelling from Northern Ireland to the Republic of Ireland for work. After controlling for other factors, Republic of Ireland to Northern Ireland cross-border workers incur a wage disadvantage of just under 30% relative to their Northern Ireland to Republic of Ireland counterparts. Female cross-border workers earn approximately 30% less than their male counterparts. Common perceived barriers to cross border working included exchange rate risk, tax return requirements, accessing social welfare benefits, the cost of commuting and difficulties accessing financial products such as mortgages.

**Keywords:** Cross-border, barriers, opportunities, motives

**JEL Codes:** J10, J20, J31, J61

# 1. Introduction

This study represents the first comprehensive analysis of cross-border worker flows in Ireland. The issue of cross-border employment has received increased attention in recent times with the higher incidence of flexible working arrangements following the COVID-19 pandemic, with previous concerns raised relating to the potential impacts of Brexit. The objectives of the study are two-fold. Our first objective is to assess the magnitude of cross-border worker flows and the extent to which these are changing over time, using Census and Revenue Commissioners data. The second objective is to develop an understanding of the profile and characteristics of cross-border workers and to develop a deeper understanding of the opportunities and barriers associated with cross-border employment. The remainder of this section describes the rationale for cross-border employment, recent relevant taxation developments and the methodology employed in the study.

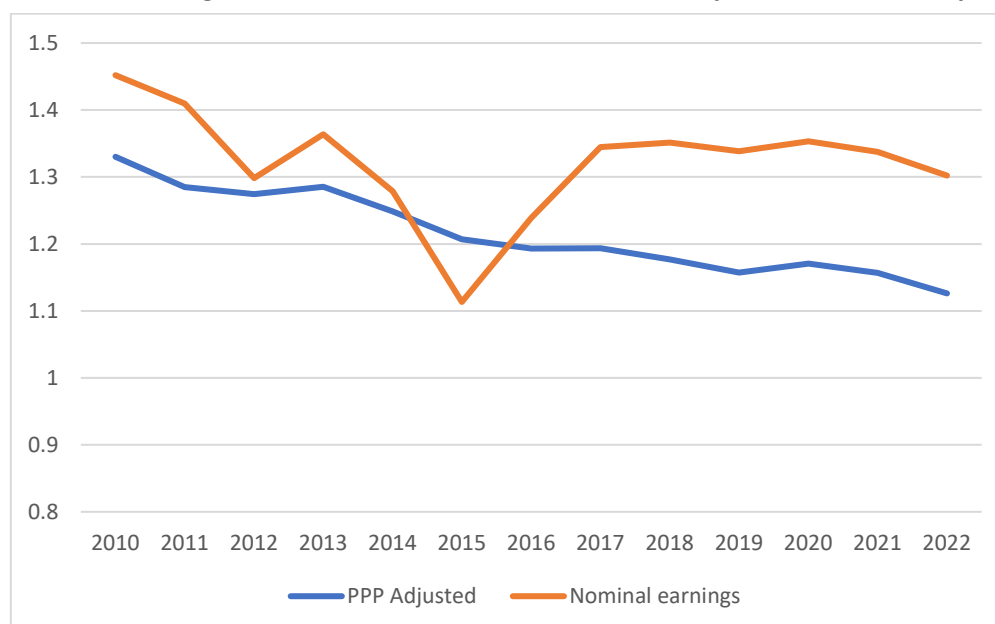
## 1.1 Rationale for Cross-Border Employment Flows

From a policy perspective, cross-border worker flows are important as they can help alleviate the negative impacts of the business cycle, particularly when labour market conditions vary across jurisdictions. During periods of high growth, cross-border flows can reduce the incidence and impacts of skill shortages (Hienz et. al., 2006) while they can also reduce unemployment during periods of low growth and / or recession, particularly when contiguous labour markets are at different stages of the business cycle, as is often the case on the island of Ireland. McVicar et al (2017) plot unemployment rates in the Republic of Ireland (RoI) and Northern Ireland (NI) over the period 1998 to 2016 and demonstrate much higher levels of volatility within the Irish labour market due to its greater exposure to macroeconomic shocks which stems from the highly open nature of the Irish economy. In contrast, unemployment levels in NI tend to be much more stable over time, as NI's heavier reliance on the public sector tends to insulate the labour market from the impacts of international shocks (McVicar, et al. 2017). More generally, as migration typically acts as a release valve during periods of high unemployment in RoI (McVicar et al, 2017) it is likely that cross-border flows are important for alleviating skill shortages in RoI and act as a mechanism for lessening the impacts during rises in unemployment in NI. Optimal cross border labour flows are also likely to be important factors in determining the growth of the all-island economy.

Differences in wages between jurisdictions are likely to be a significant determinant of cross-border employment flows. Recent years have seen the publication of several studies that have pointed towards the emergence of significant wage differences between RoI and NI (McGuinness & Bergin, 2019; Bergin & McGuinness, 2020; Smyth et al, 2022). Figure 1 plots the ratios of weekly earnings for full-time employees in nominal (although in a common currency) and PPP adjusted terms. The PPP adjusted series declined from a ratio of 1.33 in 2010 to 1.13 in 2022, which points towards substantial wage convergence over the period. Nevertheless, after adjusting for regional price differences included in the measure, weekly earnings were approximately 13% higher in RoI which equates to an

annual difference of €4,628. However, cross-border workers travelling from NI to RoI will face NI prices (as that is the area they are living) and, as such, the nominal ratio is perhaps more relevant for this group of employees. The nominal ratio was 1.45 in 2010 and has declined to a lesser extent than the PPP adjusted ratio, to 1.30 in 2022. Irish nominal wages fell below those of NI in 2015 due to a rapid fall in the Euro /Sterling exchange rate that year, however, comparing the two ratios it appears that much of the convergence in the PPP adjusted series is driven by higher prices in RoI relative to NI. Nevertheless, based on the nominal data average weekly earnings were €242 higher in RoI which equates to an annual difference of €12,584. It is important to note these measures do not take any account of differences in taxation between the regions and so there will be differences in net pay; however, they do provide an indication of a strong earnings incentive for North to South cross-border working.

**Figure 1: Ratio of Earnings in RoI Relative to NI, 2010-2022, PPP adjusted and nominal prices.**



**Notes:** Ratio of mean income in Ireland relative to NI. Nominal (as cross-border workers won't be exposed to prices in the other jurisdiction) and PPP adjusted. PPP adjustment not available for 2019 on so assumed constant. Price Indices: Eurostat series for final household consumption expenditure (EU28=100). Further adjustment for UK price differential between NI and UK average based on

<https://www.ons.gov.uk/economy/inflationandpriceindices/articles/relative-regional-consumer-price-levels-uk/2016>

**Sources:** NI Earnings - Annual Survey of Hours and Earnings published by NISRA. Ireland - CSO Series of average annual earnings.

## 1.2 Recent Developments in Taxation Arrangements impacting Cross-Border Workers

The taxation arrangements of cross-border workers are governed by a double taxation agreement between the governments of the UK and Ireland and are like those arrangements which apply for cross-border workers living and working in other European countries. Under the double taxation arrangement, cross-border workers will pay income tax in the country where the income is earned but have an ultimate tax responsibility to the country in which they are living. Existing legislation requires

cross-border workers to submit an annual self-assessment tax return to the revenue authority where they live and may be subject to additional charges if the tax paid on their foreign income is lower than the tax accrued had that income been earned in the jurisdiction where they are living. In effect, when submitting a self-assessment form, cross-border workers receive a credit/relief for any tax paid on their foreign income. For example, an NI to RoI cross-border worker is required to submit a self-assessment tax return to HMRC and will be liable for the difference if the tax paid on their foreign income (paid to Revenue) is lower than the tax payable on the same income amount had it been earned in NI. The same principal holds for RoI to NI cross-border workers.

On this basis, as cross-border workers tend to have higher than average salaries and income tax is more progressive in RoI those cross-border workers who live in RoI and work in NI may owe a sum of money each year to Revenue. Since 1998, RoI to NI cross-border workers can apply for Trans-border Worker Relief (TBWR) provided that 100 per cent of their income is earned outside of RoI. RoI to NI cross-border workers must file a tax return to Revenue at year end to claim TBWR which ensures that they will not be required to pay any additional RoI tax. TBWR is generally advantageous to those that can avail of it as UK tax rates are typically lower than those in RoI, implying that many RoI to NI cross-border workers would be required to pay a balancing amount to Revenue in the absence of TBWR.

During the COVID-19 pandemic, as the Irish government response included restrictions to limit movement resulting in many employees having to work from home, a COVID-19 concession was put in place whereby cross-border workers could still avail of TBWR relief while working predominantly (or exclusively) in their home jurisdiction. This TBWR COVID-19 concession was in place for 2020, 2021 and Q1 2022. The COVID-19 concession ended on the 31st March 2022, meaning that TBWR relief could still be claimed but only by those residents in RoI who were employed in NI and did 100 per cent of their work outside the State. Therefore, those RoI residents employed by NI firms who in the wake of COVID-19 now worked from home either all or part of the time could not claim TBWR and at year end could have a top-up amount of tax to pay to Revenue. The end of the concession resulted in groups representing RoI to NI cross-border workers pointing out that they cannot take advantage of the post-COVID transition to remote working without incurring a financial cost they didn't previously have. The government position is that an RoI to NI cross-border worker will only be eligible for TBWR if 100 per cent of their income is earned outside of Ireland<sup>1</sup>. TBWR itself does not prevent working from home. RoI to NI cross-border workers can still avail of remote working (subject to employer's terms and conditions), however, such individuals would not be eligible for TBWR. However, RoI to NI cross-border workers have expressed the view that the end of the concession has created an inequality with regard to accessing remote working; conversely, the government view is that the continuation of the of the concession would create an inequality with respect to the tax treatment of employees employed and working in RoI.

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<sup>1</sup> [Tax Code – Tuesday, 3 Oct 2023 – Parliamentary Questions \(33rd Dáil\) – Houses of the Oireachtas](#)

### 1.3 Methodology

The lack of appropriate data or a developed academic literature on cross border working necessitates a mixed methods research approach to develop a clear picture of the underlying structure of cross border employment and the key issues associated with it. Mixed methods approaches are common within the literature and have been conducted in several recent ESRI studies aimed at uncovering evidence on key policy issues (Smyth et. al, 2022; Whelan et. al., 2020; McGuinness et. al., 2018). In this report we aim to address two main research questions (1) how have the flows of cross-border workers been evolving over time (2) what are characteristic profiles of cross-border workers and do these differ according to the direction of travel and what are the perceived benefits and opportunities of cross border working and, again, do perceptions around these differ according to the direction of travel?

With respect to the estimation of cross-border worker flows, we achieve this through the combined use of Census data estimates and information provided to us from Revenue. We address the question regarding the characteristics and profiles of cross-border workers using data from the closed-ended questions asked within a specially designed survey that was open for a two-month period in 2023. With regard to identifying the perceived barriers and opportunities associated with cross border employment, this was achieved by using specialist software to extract key patterns and information from the open-ended questions included within our specially designed survey. Our research approach offers a greater depth of understanding of the issues and will assist in the identification of important directions for future policy.

## 2. Estimating Cross Border Employment Flows

In terms of estimating the flows of cross-border workers, we use data from both the NI and RoI Censuses and Irish Revenue data to estimate the numbers employed in the other jurisdiction. Both Censuses ask respondents for details of their main job so it is possible that this is an underestimate as people may undertake cross-border work outside of their main job, people whose place of work varies (e.g. on-site construction workers, quantity surveyors, delivery drivers etc.) may respond as “no fixed place” and at the time of census collection in both there is likely to be an increased prevalence of working from home which will also hide cross-border workers.

With respect to the NI to RoI flows, we begin with the 2011 NI Census and then use Revenue data on the number of PAYE registered workers with a NI address in both 2016 and 2020 with the figures for the intervening years generated using linear interpolation. As the Revenue data only includes PAYE persons, we gross this figure up by 7 per cent to account for the flows of self-employed workers<sup>2</sup>. The estimated share of self-employment is based on the results from the survey data (see Table 6). The

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<sup>2</sup> Based on our survey which found that 7% of respondents were self-employed.

2021 data point is derived directly from the 2021 NI census. The data indicates the flow of NI to RoI cross-border workers has expanded substantially over recent years from just over 6,000 in 2011 to over 11,000 in 2021. It is noticeable that the Census figure for 2021 of 10,541 is below that of the PAYE data for 2020 and a potential explanation for this anomaly may relate to the timing of the survey and that the question asked was where individuals worked, as opposed to the location of their employer as discussed above.<sup>3</sup> If we extend the previous linear trend between 2021 and 2022 as an estimate that takes account of any potential under-reporting (blue dotted line) then the 2021 figure for North to South employment flows rises to 11,949. Therefore, we estimate that the number of NI to RoI cross-border workers increased over the 2011 and 2021 period by between 67 and 90 per cent. Regarding the flows of RoI to NI cross-border workers, we rely on Irish census data for 2011, 2016 and 2022, with linear interpolation for the intervening years. The data indicates that the flow of RoI to NI cross-border workers trended upwards between 2011 and 2022, but to a much lesser extent than for those travelling NI to RoI. Over the period, the number of workers crossing RoI to NI increased from 6,416 to 7,333 which represents a growth rate of 14 per cent. Overall, over the period 2011 to 2021 we estimate that the total number of cross-border workers increased from 12,740 to between 17,827 and 19,282 which represents total growth of between 40 and 51 per cent, with the bulk of the growth due to the expansion in the numbers travelling NI to RoI for work purposes.

However, it is also important to note that cross-border employment, while growing, represents a small share of employment in each respective labour market; for instance, RoI to NI flows account for approximately 0.8 per cent of total NI employment.<sup>4</sup> Similarly, NI to RoI workers account for just 0.5 per cent of total RoI employment<sup>5</sup>. However, cross-border workers will represent a much more significant share of employment in border counties in either jurisdiction, with RoI to NI cross-border workers account for just under 4 per cent<sup>6</sup> of employment in the Border region of RoI based on 2021 estimates. NI to RoI cross-border workers also account for 4 per cent of employment in the border areas in NI<sup>7</sup>. There are likely to be spatial differences in this however as certain areas have higher flows than others e.g. there are larger flows from Donegal to Derry and Newry to Dublin. Furthermore, given that cross-border workers are predominantly high skilled, then their contribution to total economy value added will exceed their respective shares of employment.

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<sup>3</sup> The NI census question in 2021 was “what is the name and address of your main place of work or course of study”, the information that accompanies the question also states, “Answer for the place that you spend the most time”.

<sup>4</sup> There were approximately 833,000 persons employed in Northern Ireland in September 2023 (Department for Economy).

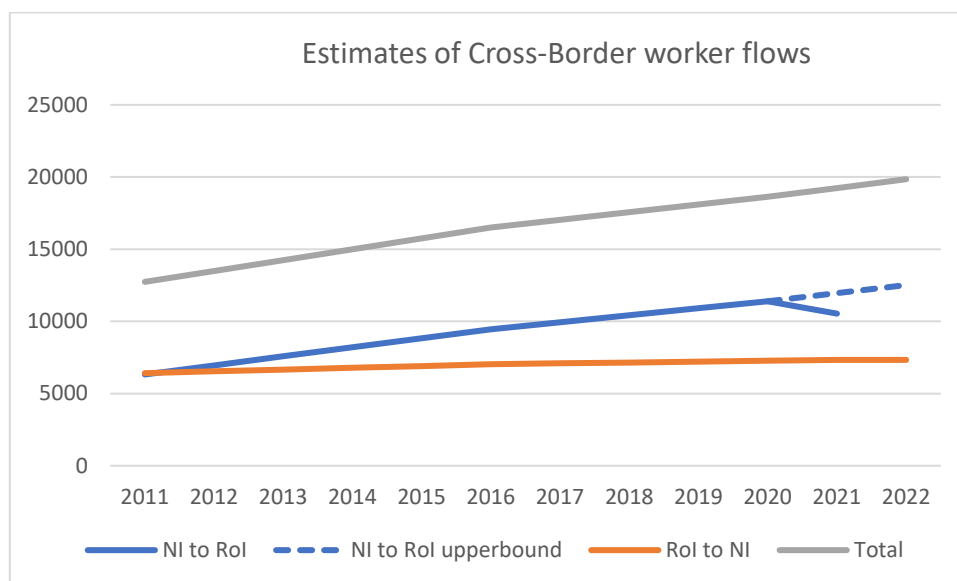
<sup>5</sup> Based on an Irish employment level of approximately 2.5 million (CSO Labour Force Survey, Q2 2002).

<sup>6</sup> [https://www.solas.ie/f/70398/x/47b4590517/solas-slmru-regional-infographic\\_border.pdf](https://www.solas.ie/f/70398/x/47b4590517/solas-slmru-regional-infographic_border.pdf)

<sup>7</sup> Based on there being approximately 272,987 persons employed in District Electoral Areas (DEAs) near the border



**Figure 2: Estimates of Cross-Border Worker Flows, 2011-2022**



*Note: Using Census 2011, 2016 and 2022 for RoI and Census 2011 and 2021 for NI.*

### 3. Survey Results

The ESRI conducted an online survey for cross-border workers during the period March 7 and April 14, 2023. The survey was widely promoted online including by the ESRI and key bodies with a remit for cross-border employment including Border People<sup>8</sup> and the Irish Tax Institute. It was highly successful in terms of responses, with just over 600 completed surveys. The survey response rate was equivalent to approximately 3 per cent of the total population of cross border workers and represented an extremely workable sample for statistical analysis. It provides a rich source of data across a range of areas including worker characteristics, the motivations for undertaking cross-border employment, the perceived advantages and disadvantages of cross-border employment, job satisfaction, the impacts of Brexit and COVID-19 as well as job characteristics including occupation and sector.

As the survey was not stratified to ensure its representativeness, a check was conducted to ensure the responses were broadly representative of cross-border workers. Table 1 compares the sectoral distribution of RoI to NI cross-border workers from the survey with the results for the same group from the 2022 Irish Census. Table 1 confirms that the survey data collected is highly representative; however as expected, there is some under-representation of certain sectors, i.e. Construction and Transport, sectors that tend to have higher shares of self-employed workers and who are less likely to engage with online surveys. Given this underrepresentation of certain sectors there is also overrepresentation of certain sectors e.g. Professional, scientific and technical activities and ICT activities. These roles are more likely to be engaged with the groups used to promote the survey and

<sup>8</sup> Based at the Centre for Cross Border Studies.

thus this was to be expected. The Census reports the top 10 sectors of employment and covers 85% of RoI to NI cross-border workers<sup>9</sup>. These sectors cover 91 per cent of RoI to NI cross-border workers from the survey data. Consequently, this robustness check confirms that the survey results will be highly representative of the composition of cross-border workers.<sup>10</sup>

**Table 1: Sectoral Employment distribution**

Sector	Census	Survey
Human health and social work activities	16%	16%
Wholesale and retail trade; repair of motor vehicles and motorcycles	13%	10%
Manufacturing	11%	10%
Education	11%	13%
Construction	8%	2%
Public administration and defence; compulsory social security	7%	8%
Professional, scientific and technical activities	6%	13%
Information and communication activities	5%	17%
Transportation and storage	4%	0%
Accommodation and food service activities	3%	1%
% of total S-to-N workers	85%	91%

### 3.1 Descriptive Statistics

Turning to the survey results, in terms of the direction of flows among survey respondents, these generally reflect the patterns evident in the Census and Revenue data with a larger percentage of respondents crossing the border from NI to the Republic of RoI (NI to RoI) relative to those travelling from the Republic of RoI to NI (RoI to NI). Table 2 shows that approximately 63% of the sample travelled NI to RoI for work compared to 37% who travelled RoI to NI. 53% of workers travelling NI to RoI are female compared to 45% travelling RoI to NI (Table 3).

<sup>9</sup> See <https://www.cso.ie/en/releasesandpublications/ep/p-cpp7/census2022profile7-employmentoccupationsandcommuting/commutingtowork/>

<sup>10</sup> Unfortunately, since we cannot yet access the NI Census micro data, it was not possible to run the same robustness check for NI to RoI cross-border workers. However, as statistical representativeness increases with sample size, we have no reason to believe that the NI to RoI data, which has a larger sample, is not also representative.

**Table 2: Direction of Travel, % of Survey Respondents**

	NI to RoI	RoI to NI
<b>%</b>	62.9	37.1
<b>N</b>	372	219

**Table 3: Gender, % of Survey Respondents**

	NI to RoI	RoI to NI
<b>Male</b>	52.7	45.2
<b>Female</b>	47.3	54.8
<b>Total</b>	100	100

Table 4 shows the level of educational attainment among cross-border workers, and it is evident that they are, on average, much more likely to be third-level graduates compared to the population in either RoI or NI. Just under 80% of cross-border workers, travelling in either direction, hold third-level qualifications with the rate slightly higher among RoI to NI workers. Another approximately 10% hold post-secondary qualifications. Together these equate to a high level of educational attainment relative to the populations as found by other research; in the NI population in 2019 36% had a high level of education compared to 41% in RoI (Smyth et al., 2023). This increases somewhat if we look at younger working age individuals, 46% and 55% respectively (Smyth et al., 2023), but remains significantly below the education profile of cross-border workers. This points to cross-border work being associated with high-skilled labour flows that are likely to substantially benefit the economies of both regions.

**Table 4: Educational Attainment, % of Survey Respondents**

	NI to RoI	RoI to NI
<b>Lower secondary</b>	6.8	3.2
<b>Upper secondary</b>	6.2	7.8
<b>Post secondary</b>	9.7	9.2
<b>Third level</b>	77.3	79.7
<b>Total</b>	100	100

The high value added nature of cross border employment is confirmed by Table 5, which indicates that cross-border workers are heavily concentrated within professional and managerial occupations; these occupations account for approximately 70% of NI to RoI workers and 67% of those travelling RoI to NI. A further 12% of RoI to NI workers are in Associate Professional occupations with the respective figure for the NI to RoI grouping 5%. Workers in non-professional/managerial occupations account for less than a quarter of cross-border workers travelling in either direction.

**Table 5: Occupation Distribution, % of Survey Respondents**

	NI to RoI	RoI to NI
<b>Professional occupation</b>	38.0	38.9
<b>Manager, director and senior official</b>	32.1	27.8
<b>Associate professional and technical occupations</b>	5.4	12.0
<b>Administrative and secretarial occupations</b>	8.4	6.5
<b>Sales and customer service</b>	5.7	3.2
<b>Skilled trades</b>	4.1	1.9
<b>Caring, leisure and other services</b>	1.4	4.2
<b>Process, plant and machine operatives</b>	1.1	1.4
<b>Other</b>	3.8	4.2
<b>Total</b>	100	100

In terms of contractual status, over 90% of respondents were employees (Table 6) with the remaining proportion self-employed. The self-employed group were disproportionately smaller in our sample than in the workforce at large. Latest figures for NI and RoI put self-employment at 13% of the workforce (NISRA, 2023 for NI and CSO, 2023 for RoI). This could be that cross-border work is not as common amongst the self-employed or that the survey has not fully captured the cross-border self-employment likely to be in areas such as construction and trade occupations.

A large proportion (over 90%) of respondents were on permanent contracts with the figures highly similar for both groups of workers (Table 6). Approximately 40 per cent of cross-border workers were employed in the public sector (Table 7) which is over representative relative to the labour force in both jurisdictions. 27% of all employees in NI are employed in the public sector (NISRA, 2023) compared to 14% in RoI (IPA, 2022). However, the relationship holds in that for those travelling RoI to NI employment is slightly larger in the public sector, which is in keeping with the greater public sector employment share in NI relative to the Republic of RoI (McGuinness & Bergin, 2019). It also reflects the types of jobs which cross-border workers do.

**Table 6: Contractual Status, % of Survey Respondents**

	NI to Rol	Rol to NI
<b>Employee</b>	92.7	92.24
<b>Self-employed</b>	7.3	7.8
<b>Total</b>	100	100
	NI to Rol	Rol to NI
<b>Permanent</b>	92.6	91.2
<b>Fixed Term</b>	2.9	4.4
<b>Temporary</b>	4.6	4.4
<b>Total</b>	100	100

**Table 7: Public/Private Sector, % of Survey Respondents**

	NI to Rol	Rol to NI
<b>Public</b>	38.77	42.0
<b>Private</b>	61.3	58.0
<b>Total</b>	100	100

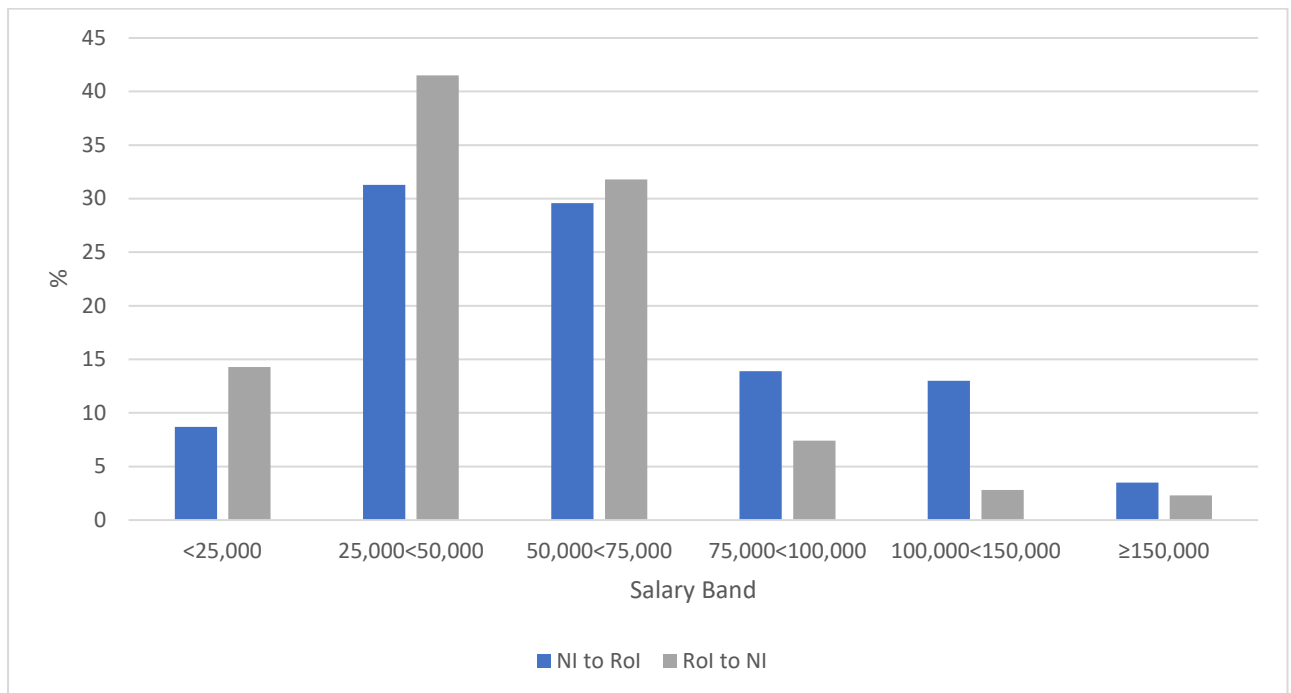
In terms of employment tenure, most workers have been with their current employer for more than five years (Table 8). However, some differences are apparent with cross-border workers travelling Rol to NI having somewhat longer tenures than their NI to Rol counterparts. Over 50% of Rol to NI workers have been with their current employer for more than ten years, compared to a figure of 38% for NI to Rol workers. This is reflective of the growing flow of workers from NI to Rol (Figure 2).

**Table 8: Tenure, % of Survey Respondents**

	NI to Rol	Rol to NI
<b>Less than 1 year</b>	12.4	7.3
<b>1 to 5 years</b>	30.1	23.3
<b>5 to 10 years</b>	18.8	16.4
<b>Over ten years</b>	38.2	53.0
<b>Total</b>	100	100

While the profile of cross-border workers has been found to be very similar in most respects regardless of direction, the main exception is in terms of salaries. In keeping with previous work, we find that the NI to Rol workers generally earn higher salaries than their Rol to NI counterparts. Over 30% of NI to Rol workers earn a salary more than €75,000 in contrast to 12% for those travelling Rol to NI. At the other end of the spectrum, just under 40% of NI to Rol workers earned below €50,000 euros compared to 55% percent for those travelling Rol to NI (Figure 3).

**Figure 3: Salary (Euros), % of Survey Respondents**



Notes: Figures were given in the survey in euros and sterling for these figures using the exchange rate on the day the survey went live.

Most respondents have been undertaking cross border work for more than five years, with 52% travelling RoI to NI doing so for over ten years whilst the comparable figure for NI to RoI stands at 41%. The numbers undertaking cross border work for less than five years is approximately 10 percentage points higher among NI to RoI workers, which is consistent with our earlier estimates showing a substantial increase in the flow of workers travelling NI to RoI in recent years (Table 9).<sup>11</sup> We report the distance that cross-border workers live from the border in Table 10 and find that almost 50% (over 40%) of workers travelling North to South (South to North) live within ten miles from the border. Approximately two-thirds of cross-border workers, irrespective of the direction of travel, live within 20 miles from the border.

**Table 9: Time spent as a cross-border worker, % of Survey Respondents**

	NI to RoI	RoI to NI
Less than 1 year	8.6	6.4
1 to 5 years	31.7	24.2
5 to 10 years	18.3	17.4
Over ten years	40.9	52.1
Total	100	100

<sup>11</sup> The distributions in Tables 8 (tenure) and 9 (time spent as a cross-border worker) broadly align; however, they do not match exactly as there will be some who were cross-border workers in their previous employment and others who may not have always been cross-border workers with their current employer.

**Table 10: Distance lived from Border, % of Survey Respondents**

Distance to border	NI to RoI	RoI to NI
less than 10 miles	49.2	40.2
10 to 19 miles	18.8	24.7
20 to 29 miles	11.3	19.6
30 plus miles	20.4	15.5
<b>Total</b>	100	100

We next explore workers motives for undertaking cross border employment. We provided several potential options, and it should be noted that respondents could tick more than one box, so the options are not mutually exclusive, and the columns do not sum to 100. While the survey results for both sets of cross-border workers have been closely aligned to this point, significant differences exist with respect to the motives underlying cross border employment. Respondents were asked “Why do you work in the other jurisdiction?” and it is clear from Table 11 that the availability of a better salary and career prospects are primary factors motivating NI to RoI workers, with two-thirds of workers pointing to higher earnings as a factor and over 40% indicating that they believed that better career opportunities were open to them as a result of working in RoI. Just over a third of NI to RoI workers cited proximity to the border as an important factor. The situation for RoI to NI workers is very different with no factor dominating. As was the case with NI to RoI workers, just over a third of those travelling North for employment pointed to proximity to the border as a relevant factor.

**Table 11: Motives for being a cross-border worker, % of Survey Respondents**

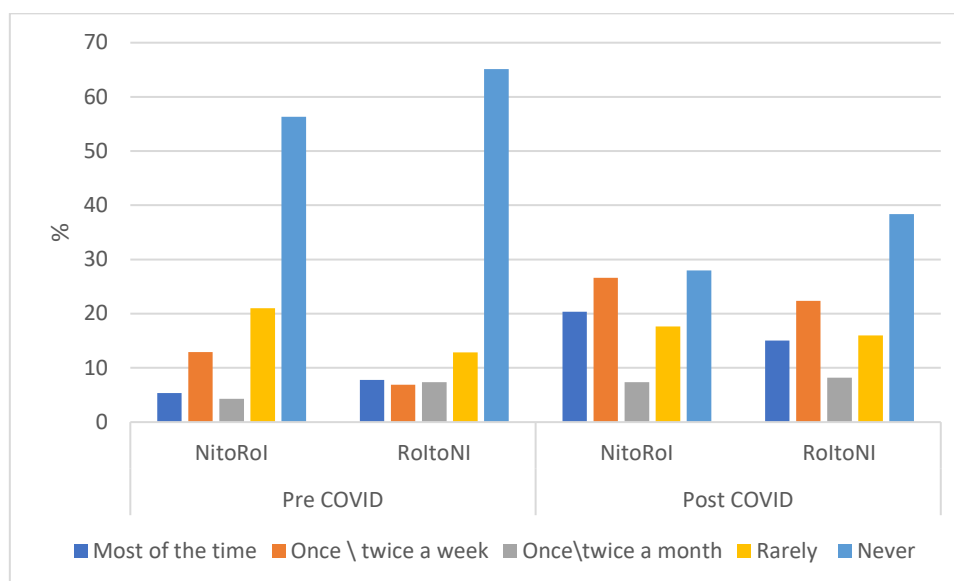
	NI to RoI	RoI to NI
<b>Work life balance</b>	23.9	23.3
<b>Better salary</b>	66.7	14.2
<b>Better pension</b>	20.2	5.9
<b>Career progression</b>	41.1	26.5
<b>Type of work available</b>	21.8	24.2
<b>Home \ family reasons</b>	23.9	23.3
<b>Company's reputation</b>	13.2	23.3
<b>Leave \ holiday</b>	9.4	11.4
<b>Live close to border</b>	34.7	35.6

*Notes: Choices were not mutually exclusive, so columns total to more than 100%.*

Since the pandemic, there has been a rapid increase in the incidence of remote working in RoI and elsewhere and Figure 4 examines the extent of this phenomenon among cross-border workers. Prior to the pandemic, over 75% of all cross-border workers either never or rarely engaged in remote working. Following the end of the pandemic this figure fell to well below 50% for both groups of workers. Post pandemic, 47% of NI to RoI cross-border workers do their jobs remotely either most of the time or once / twice a week, with the corresponding figure for RoI to NI cross-border workers standing at 37%, indicating that a substantially lower take-up of remote working among those travelling RoI to NI. Among those cross-border workers travelling for work purposes there is a

remarkably low usage of public transport with 78% of those travelling NI to RoI using cars to do so (Table 12); for those travelling RoI to NI, car usage stood at over 90%.

**Figure 4: Frequency of Remote Working Pre- and Post-Pandemic**



**Table 12: Mode of Transport, % of Survey Respondents**

	NI to RoI	RoI to NI
Car	77.9	90.8
Train	7.6	1.8
Car and train	4.0	0.5
Bus	0.8	1.4
Car and bus	0.3	2.3
Other	9.4	3.2
Total	100	100

Finally, in this descriptive section we discuss the perceptions of the impact of both the pandemic and Brexit on the welfare of cross-border workers. With respect to the pandemic, approximately 12% of workers travelling NI to RoI believe that this impacted them negatively, with the corresponding figure for those travelling RoI to NI standing at 24%; nevertheless, most respondents felt that the pandemic had either no impact or positive impacts (Table 13). The situation with respect to Brexit is markedly different with virtually no respondents perceiving any positive impacts. While the largest proportions of both groups felt that Brexit had no impacts, a substantial minority felt that Brexit had a negative impact, and this was particularly the case for RoI to NI workers. The proportion of RoI to NI workers who believed that Brexit had impacted them in a substantially negative way stood at 24% compared to under 11% for those travelling NI to RoI for employment purposes (Table 14).



**Table 13: Impact of the COVID-19 Pandemic on Cross-Border Workers, % of Survey Respondents**

	NI to RoI	RoI to NI
<b>A lot negative</b>	3.5	13.4
<b>A little negative</b>	8.5	11.1
<b>None</b>	66.5	51.2
<b>A little positive</b>	9.8	10.1
<b>A lot positive</b>	11.7	14.3
<b>Total</b>	100	100

**Table 14: Impact of Brexit on Cross-Border Workers, % of Survey Respondents**

	NI to RoI	RoI to NI
<b>A lot negative</b>	10.6	23.5
<b>A little negative</b>	16.1	21.2
<b>None</b>	71.0	53.5
<b>A little positive</b>	1.4	0
<b>A lot positive</b>	0	0
<b>Total</b>	100	100

### 3.2 Multivariate Analysis

We next estimate multivariate models to assess the extent to which statistically significant differences exist between both groups of cross-border workers with respect to earnings, job satisfaction and the adverse impacts of Brexit/COVID-19. More formally, we estimate a set of models like Equation 1 (using probit and interval regression estimation methods) to initially explore how the relationship between the direction of cross border work relates to a series of outcome variables such as wages, job satisfaction and the impacts of Brexit and COVID-19. We then use Propensity Score Matching (PSM) to estimate these same relationships in a framework that accounts for sample selection bias. The propensity score is defined as the conditional probability of receiving a treatment given certain determining characteristics (Equation 2):  $D$  indicates exposure to the treatment (job satisfaction, COVID-19 and Brexit dissatisfaction) and  $X$  is a vector of determining characteristics. For the probit and PSM models, the treatment group will be NI to RoI cross-border workers, and the control group will be RoI to NI cross-border workers. In the second stage of the PSM estimation procedure, individuals in the treatment group (NI to RoI) are “matched” with counterparts in the control group (RoI to NI) that have similar propensity scores of being subject to the treatment effect and their actual outcomes are compared.

$$y_{it} = \beta_0 + \beta_1 X_{1j} + \beta_2 X_{2j} + \varepsilon_{it} \quad (1)$$

$$p(X) = Pr\{D = 1/X\} = E\{D/X\} \quad (2)$$

Regarding wages, respondents were asked to pick the relevant wage range for their salary, consequently we estimate an interval regression model using the logged values of the relevant wage band categories. In the models we have a dummy variable measuring NI to RoI cross-border workers

against the reference category of RoI to NI workers. Our models also contain additional controls for gender, occupation<sup>12</sup>, tenure, public sector employment and hours worked. The wage equation model indicates that, after controlling for other factors, RoI to NI cross-border workers incur a wage disadvantage of just under 30% relative to their NI to RoI counterparts. Another key observation of the model results is that female cross-border workers earn approximately 30% less than their male counterparts, after controlling for other factors. To assess the extent to which the gender wage disadvantage was been driven by one group of cross-border workers, we estimate the wage equation separately for both the NI to RoI and RoI to NI sub-samples (columns 3 and 4 of Table 15). A gender pay disadvantage was observed among both groups, however, at 34% was substantially greater among cross-border workers travelling RoI to NI. For workers travelling NI to RoI the gender wage disadvantage was 23%.

**Table 15: Wage model, Survey Respondents**

VARIABLES	All	NI to RoI	RoI to NI
<b>Male</b>	0.30*** (0.116)	0.23* (0.141)	0.34* (0.178)
<b>Tenure 1-5 years</b>	0.33 (0.207)	0.21 (0.235)	0.03 (0.378)
<b>Tenure 5-10 years</b>	0.49** (0.221)	0.35 (0.253)	0.17 (0.392)
<b>Tenure 10 plus years</b>	0.42** (0.199)	0.29 (0.228)	-0.01 (0.352)
<b>Professional occupations</b>	0.41*** (0.150)	0.25 (0.180)	0.82*** (0.236)
<b>Manager, director and senior official</b>	0.74*** (0.158)	0.62*** (0.189)	0.96*** (0.251)
<b>Associate professional and technical occupations</b>	0.46* (0.236)	0.39 (0.327)	0.60* (0.312)
<b>Part-time</b>	-0.93*** (0.224)	-1.16*** (0.301)	-0.67** (0.304)
<b>Public Sector</b>	0.03 (0.118)	0.02 (0.145)	-0.09 (0.181)
<b>NI to RoI</b>	0.28** (0.118)		
<b>Constant</b>	9.59*** (0.230)	10.14*** (0.246)	9.77*** (0.369)
<b>N</b>	601	372	219

Notes: Standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

We next estimate models for job satisfaction using a binary variable derived from the questionnaire. Although the descriptive data indicates that 55% of cross-border workers travelling NI to RoI reported

<sup>12</sup> This was highly co-linear with measures of educational attainment, so those variables were not included in the models.

themselves to be “very satisfied” in their work, compared to 47% of those travelling RoI to NI, after controlling for other factors those travelling NI to RoI were found to be 9 percentage points less likely to be job satisfied relative to those travelling RoI to NI (Table 16). The results suggest that workers travelling RoI to NI may, at least to some extent, be compensated for lower earnings by higher levels of job satisfaction.

**Table 16: High levels of Job Satisfaction, Marginal effects**

<b>VARIABLES</b>	<b>Satisfaction</b>
<b>Male</b>	0.00
<b>Tenure</b>	
<b>1-5 years</b>	-0.01 (0.075)
<b>5-10 years</b>	-0.12 (0.078)
<b>10 + years</b>	-0.07 (0.071)
<b>Professional occupations</b>	0.13** (0.055)
<b>Manager, director and senior official</b>	0.16*** (0.058)
<b>Associate professional and technical occupations</b>	0.16* (0.084)
<b>Part-time</b>	0.04 (0.071)
<b>Public Sector</b>	-0.05 (0.043)
<b>NI to RoI</b>	-0.09** (0.044)
<b>Distance to the Border</b>	
<b>10 - 19 Miles</b>	-0.05 (0.054)
<b>20 - 29 Miles</b>	0.07 (0.063)
<b>/30 + Miles</b>	-0.06 (0.057)
<b>Observations</b>	601

Table 17 assesses the extent to which there existed differences in the negative experiences arising from both the COVID-19 pandemic and Brexit across both groups of cross-border workers. The results show that workers travelling NI to RoI are much less likely to state that either COVID-19 or Brexit had impacted them negatively<sup>13</sup>. Relative to those traveling RoI to NI, NI to RoI workers are 16 percentage points less likely to report a negative impact arising from Brexit and 11 percentage points less likely to

<sup>13</sup> The variables take the value 1 if respondents reported that they were impacted negatively a lot or a little and zero otherwise.

report an adverse experience because of COVID-19.

**Table 17: Dissatisfaction with Brexit \ COVID-19 Pandemic, Marginal effects**

<b>VARIABLES</b>	<b>Brexit</b>	<b>COVID-19</b>
Male	0.03	0.03
	(0.041)	(0.031)
<b>Tenure</b>		
<b>1-5 years</b>	-0.12*	0.01
	(0.064)	(0.057)
<b>5-10 years</b>	-0.10	0.05
	(0.067)	(0.066)
<b>10 + years</b>	-0.05	-0.01
	(0.066)	(0.053)
<b>Professional occupations</b>	0.12**	0.04
	(0.055)	(0.043)
<b>Manager, director and senior official</b>	0.18***	0.05
	(0.059)	(0.046)
<b>Associate professional and technical occupations</b>	0.23***	0.12
	(0.089)	(0.079)
<b>Part-time</b>	-0.12*	0.04
	(0.061)	(0.057)
<b>Public Sector</b>	-0.01	-0.08***
	(0.041)	(0.030)
<b>NI to RoI</b>	-0.16***	-0.11***
	(0.042)	(0.034)
<b>Distance to the Border</b>		
<b>10 - 19 Miles</b>	0.01	0.01
	(0.052)	(0.040)
<b>20 - 29 Miles</b>	0.03	0.04
	(0.060)	(0.048)
<b>30 + Miles</b>	0.04	0.01
	(0.055)	(0.042)
<b>Observations</b>	601	601

Finally, Table 18 reports the results from our robustness checks using a Propensity Score Matching (PSM) approach. Unfortunately, PSM cannot be applied to interval data, so we cannot estimate wage impacts using our data. We do find that NI to RoI cross-border workers were less likely to experience negative impacts of Brexit or have high levels of job satisfaction relative to the RoI to NI control group. These results are consistent with the Probit models (Table 16 and Table 17). However, the PSM analysis does not support the earlier result that the negative impacts of COVID-19 were lower among NI to RoI cross-border workers and, therefore, some caution is required with respect to the earlier finding (Table 17). The post estimation pseudo R2 are statistically zero, indicating that the matching has successfully controlled for any observable differences between the treatment and control groups and that, therefore, the post-matching data was appropriately balanced.

**Table 18: PSM Robustness checks**

	NI to RoI	Pre R2	Post R2
<b>Brexit</b>	-0.205***	0.045***	0.004
<b>COVID-19</b>	-0.072	0.045***	0.004
<b>Job Satisfaction</b>	-0.175***	0.045***	0.004

### 3.3 Analysis of Qualitative Data

The survey contained several open-ended questions designed to explore both the opportunities and challenges of cross border work, along with the perceived impacts of both Brexit and the COVID-19 pandemic. We use wordclouds to visually represent keywords that came up frequently in our open-ended questions. These wordclouds were generated using NVivo 12 software. The more frequent a word the larger it appears in the visualisation. Given the questions were open-ended individuals often used different words with similar meanings which were then grouped together in two ways. First, we grouped all stemmed words e.g. commute and commuting were grouped together. Secondly, we grouped synonyms together e.g. commute and travel were grouped together. The most frequent word was then displayed in the word cloud and the frequency reflected the size of the grouping. We also restricted the wordclouds to contain only words which had 4 or more letters this meant that NI and RoI as well as words like 'the' and 'and' were not included, with the exception of the question on barriers to cross-border work which we restrict to words of 3 or more letters as 'tax' was a key issue raised.

Below we discuss some of the findings to these open-ended questions. We attempt to balance the quotes by using examples from respondents from both jurisdictions, however this was not always possible or feasible. For example, with regards the 'benefits to being a cross-border worker' open ended question this was answered by a larger proportion of NI to RoI workers while for the 'barriers and costs question' RoI to NI workers were more likely to answer. Therefore, where the quotes do not appear balanced between the jurisdictions this is reflective of the responses.

#### 3.3.1 Benefits of being a cross-border worker

Respondents were asked about the opportunities or benefits from being a cross-border worker. Some responses were similar to those seen in Table 11, for example salary and career opportunities were found to be frequently cited as benefits. Figure 5 displays a word cloud generated from the open-ended answer to this question. Other prominent words which emerged are medical (referring to medical access and medical cover for some cross-border workers), pensions, and living (referring to the cost of living).

However, as suggested previously the opportunities and benefits for cross-border workers differed significantly between those travelling NI to RoI and those RoI to NI. Figure 6 show the responses to this question by direction of travel. In Figure 6 for those travelling NI to RoI salary was very clearly the

most prominent keyword to emerge, followed by opportunities. For those going from RoI to NI a greater spread of keywords emerged. While opportunities did emerge, salary was not in the wordcloud in any capacity, which is reflective of the wage differential between the jurisdictions discussed above. Other keywords that did emerge for those going from RoI to NI were medical, healthcare, card (relating to a medical or GP card), and benefits.

Figure 5: Wordcloud generated from 'What are the benefits/opportunities of being a cross-border worker?'



Figure 6: Benefits cited by those travelling North to South (L) and South to North (R)



As discussed above and reflected in Figure 6, responses differed considerably to this question based on direction of travel. For those travelling NI to RoI for work, the most common responses related to better salaries and opportunities. One respondent reported that they could earn “4 times the salary” (travelling NI to RoI). Many respondents also mentioned a higher salary and better career opportunities as coinciding benefits of working in RoI.

*“Salary/opportunities are better in Ireland” (NI to RoI)*

Some individuals travelling to RoI for work also reported better working conditions as a benefit of being a cross-border worker. One cross-border worker employed in RoI stated:

*“Industry in Republic of Ireland is more professional, less nepotistic, better paid, (and has) better prospects.” (NI to RoI)*

While other keywords emerged in the wordclouds, salary and better career opportunities were very clearly the main reasons for travelling from NI for work in RoI.

For those travelling in the opposite direction from RoI to NI, the word cloud indicates that respondents mentioned other benefits to being a cross-border worker which tended not to be salary related e.g. child benefit top-up, medical/healthcare access, pensions etc. Holidays and leave entitlement were also benefits as well as flexible working.

Quite clearly a major perceived benefit for those travelling to NI for work related to eligibility for access to NHS care in NI. About half of those who mentioned benefits of working in NI mentioned healthcare or medical cover as a positive from being a cross-border worker.

*“I am eligible for free NHS healthcare which entitles me to a medical card in IRELAND.” (RoI to NI)*

*“Medical card, better health benefits, better retirement fund” (RoI to NI)*

*“Access to the other health system because of paying national insurance in NI.” (RoI to NI)*

However, it wasn’t always positive and some also mentioned the current state of the NHS in NI:

*“Because I work in the North I can access a doctor there. Although their system is not much better than the Southern system only that you don’t have to pay.” (RoI to NI)*

*“Free health care, albeit deteriorating NHS services.” (RoI to NI)*

Other benefits for those going from RoI to NI for work were varied and included proximity to the border or availability of jobs in the other jurisdiction.

Some RoI to NI workers did also mention career progression and opportunities, but this seemed to be restricted to the health and social care sector in which many RoI to NI cross-border workers are employed in.



*“Career progression.” (RoI to NI – employed in healthcare)*

Some workers also cited benefits which their particular firm provided which made cross-border working more attractive.

*“Much better work life balance policies. I am able to work part time, take additional leave, work compressed hours.” (RoI to NI)*

*“Company provides exceptional benefits + as a cross-border worker we get medical care in both jurisdictions” (RoI to NI)*

However, unlike NI to RoI workers where salary and opportunity were very clearly key themes amongst workers, those going from RoI to NI were much more spread out in their views and some of these keywords or emerging themes were only cited by a minority of the sample.

### *3.3.2 Costs of being a cross-border worker*

There were also barriers to being a cross-border worker. Respondents were asked to report the additional barriers that they experienced as a direct result of being a cross-border worker. Not surprisingly, the financial cost of commuting to work was a dominant theme, as were tax issues, exchange rates and the implications of working from home. Unlike the results for the perceived benefits to cross border work, there was little change in the results when the word clouds were broken out separately by jurisdiction.

Furthermore, while the perceived benefits/opportunities of being a cross-border worker were relatively straight forward, the perceived barriers were more varied and emotive.

The issues around tax were seen for cross-border workers in both jurisdictions but there does seem to be more perceived complication for those workers going South to North or it may be that there is greater awareness of the complexities. Individuals felt the tax regime was more complex than it needed to be, and employers were responding to the tax system in a variety of ways:

*“Tax matters are much more complicated.” (RoI to NI)*

*“Lack of harmony in tax regime between Revenue Commissioners and HMRC – nightmare!” (RoI to NI)*

*“Complex tax issues. The employer paid me by cheque for 2 years as they said they could not pay into an Irish bank account.” (RoI to NI)*

For those going from NI to RoI the biggest grievance around tax was needing an accountant to help complete an annual tax return:

*“Have to pay an accountant every year to provide a tax return to HMRC.” (NI to RoI)*

For those going in both directions, but particularly those going from RoI to NI, there were particular concerns expressed around working from home with some respondents expressing the view that they felt disadvantaged with regard to remote working. The implications of this were varied with some

individuals unhappy at a perception that they were being treated differently while others were more aggrieved by the commuting costs, the impact on their work/life balance, and on family arrangements. It is important to reiterate when assessing these quotes that the removal to the COVID-19 concession on the TBWR does not, in itself, restrict RoI to NI cross border employees from working remotely. Specifically, if RoI to NI cross borders workers were to do their job remotely, they will no longer be entitled to TBWR, putting them in the same tax position as other Ireland based workers.

*“As a cross-border worker living in the republic of Ireland, I can't work from home/work remotely therefore I have more travel expenses than other employees who live in Northern Ireland and I can't avail of the flexibility that the company offers their employees e.g. leaving/picking up children from school etc” (RoI to NI)*

*“Unfair working from home limitations due to tax requirement makes my situation unequal to my colleagues” (RoI to NI)*

*“As I am a cross-border worker I am not allowed to work from home. I feel that I am being discriminated against by the Irish Government. Not having the freedom of choice is very unfair on cross-border workers. It is an unusual situation that people find themselves in and the Government owe it to their people to see this.” (RoI to NI)*

One worker stressed that the systems, HMRC and Revenue Commissioners, were not designed for cross-border working:

*“I also find the tax systems in both jurisdictions are not aware of cross border working and not designed with the situation in mind, which causes paperwork and confusion.” (NI to RoI)*

Knock-on effects of working in a different jurisdiction were also brought up. Respondents reported issues in accessing mortgages for example. Some banks won't lend to cross-border workers while others will reduce the mortgage amount relative to earnings due to currency fluctuations:

*“I am finding that getting a mortgage in Ireland (through an Irish bank) is becoming an issue due to a stress test that that banks impose and can reduce mortgage amount by 20%, which is adding to the stress of trying to buy a house in Ireland which is already challenging.” (RoI to NI)*

*“Another major barrier is the reluctance of the banking sectors in regards mortgages some make it extremely difficult and adds another dimension to an already disadvantaged border region.” (NI to RoI)*

There were issues raised around social security eligibility and payments as well. Child benefit was one which was mentioned by several respondents and seemed to be particularly the case for those cross-border workers resident in Ireland:

*“Extra layer of bureaucracy / complications with various aspects of life e.g. finances/exchange rates, tax, banking, family benefits. For example, child benefit*

*is paid in home jurisdiction (South where we live with our children), but they write to me every six months seeking assurances that me/partner are still employed / self-employed there (ie payment is predicated on his employment status in South). Obviously not a requirement for residents /families without a cross-border worker.” (RoI to NI)*

The survey was live in March – April 2023 so not surprisingly fuel costs and general commuting costs were also mentioned as a barrier. Some mentioned the environmental impact which they felt was particularly bothersome when many people, including colleagues, could work from home and were travelling in their opinion unnecessarily due to tax laws which were able to be relaxed during the pandemic.

*“Travel - time and diesel are added costs right now - during a cost-of-living crisis. And the Government say they are worried about the environment???... while we have to travel in our cars unnecessarily because of a crazy tax law! Bus is not a good option in rural Ireland!!” (RoI to NI)*

There was a general consensus that the situation is complex with tax returns necessary, working from home tax implications, access to social security etc. This was made even more complicated for some individuals who work on both sides of the border, and perhaps on a combination of contract types e.g. one individual was employed in a part-time permanent role in one jurisdiction and self-employed in a part-time role in the other. Another respondent was in a similar position:

*“It is a bit difficult to navigate the systems. I am part employed (in Ireland) and self-employed (in NI). PSWT Withholding tax from Ireland can take a long time to sort out.” (NI to RoI)*

Figure 7: Wordcloud generated from ‘What are the barriers/costs, over and above those which you would experience working in the jurisdiction in which you live, as a cross-border worker?’

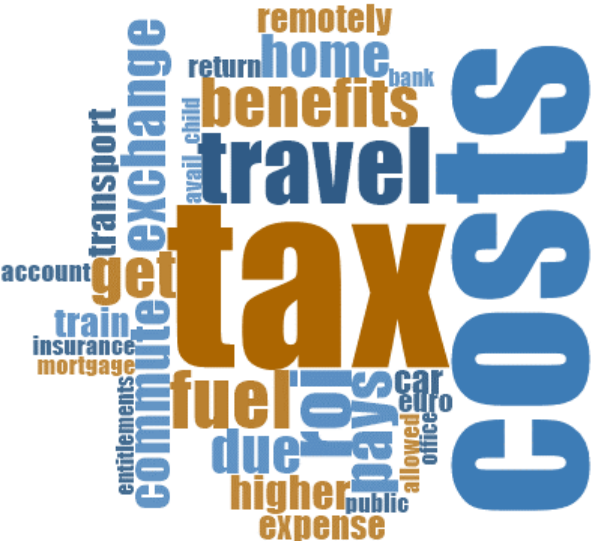


Figure 8: Barriers/costs cited by those travelling North to South (L) and South to North (R)



Barriers to being a cross-border worker were similar in both jurisdictions, as opposed to our findings for the benefits of being a cross-border worker, which differed considerably based on direction of travel. However, perceived barriers were stronger for those who lived in RoI and worked in NI. 67% of those who live in RoI and work in NI reported facing barriers compared to 47% of those going in the other direction<sup>14</sup>. Many of those working in NI do so because of proximity to the border rather than any strong pull factor. Furthermore, the different types of transport used for commuting purposes were evident, with many travelling NI to RoI mentioning the cost of public transport and the train, while those traveling to NI for work mentioned fuel. This is reflective of the places people are working, with many going NI to RoI likely to be working in and around Dublin and thus travelling significant distances whereas those travelling from RoI to NI are doing so because they live close to the border and work in a range of areas across NI.

### *3.3.3 Impact of the Pandemic*

Respondents were then asked how they have been impacted by the COVID-19 pandemic. Figure 9 displays a wordcloud generated from the responses and Figure 10 splits this out by direction of travel. The biggest impact for all respondents related to remote/home working arrangements. Many cross-border workers perceived themselves as unable to work from home like their colleagues due to tax implications of working from home in a different jurisdiction which they believe would shift their tax residency to their home jurisdiction where the work is carried out rather than the jurisdiction in which they are employed. This was the most frequently cited impact and the other words shown in the word clouds fell out from this e.g. travel costs which colleagues no longer faced but respondents did due to having to be in the office. The word clouds in Figure 10 which split out the responses by direction of travel do not differ considerably in the same way as they have for other questions. This is not surprising as the tax implications of remote working impact workers going in both directions and are not unique to the Island of Ireland.

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<sup>14</sup> This question was answered by the whole sample.

Figure 9: Wordcloud generated from 'In what way has the pandemic affected your ability to be a cross-border worker?'"



Figure 10: Impact of the pandemic cited by those travelling North to South (L) and South to North (R)



Not surprisingly a lot of the responses here reiterated those in the previous section on barriers and were common to workers travelling in both directions. However, it appears to be felt more heavily by those cross-border workers who live in RoI and work in NI, but again this could be due to perceived differences in taxation.

*“Employer insisting all staff living in Ireland come into the office every day” (RoI to NI)*

*“The issues around the tax system not supporting the ability to work remotely due to personal taxation requirements and other business taxation requirements.” (NI to RoI)*

This is made particularly pronounced for cross-border workers from RoI as many of these workers feel less able to work at home following the pandemic given the lifting of a pandemic concession by the Revenue Commissioners.

*“During Covid when the Revenue exception was in place work life balance and not feeling discriminated against just because where I live was not an issue, felt that everyone was treated the same. Now that has all gone, once the Revenue exception was removed, I am forced to go back to the office which is not a company policy but an Irish Revenue requirement.” (RoI to NI)*

On the other hand, some cross-border workers reported as being positively impacted by the pandemic, as working from home is now more common:

*“Better work life balance due to 80% of working week working from home.” (NI to RoI)*

To deal with the tax implications of working from home, rather than make some members of staff attend the office daily some firms have moved staff on to employment contracts in the other jurisdiction. While this resolved the working from home tax issue it has led to other implications particularly around pensions:

*“The fact that I have had to change tax residency. This has negatively affected how my pension contributions are treated.” (NI to RoI)*

The more immediate implications of the COVID-19 pandemic were also mentioned with diverging government restrictions on the island a problem for cross-border workers and checkpoints adding considerably to commutes:

Several respondents who lived in NI and worked in RoI mentioned issues with the pandemic unemployment payment and other supports which were designed to support people in RoI whose employment had been lost or interrupted due to government restrictions:

*“During the pandemic I was not entitled to the Covid ‘PUP’ payment because I was a resident in NI even though I paid taxes in Ireland.” (NI to RoI)*

There were also cross-border workers reported no impact from the pandemic (51% in RoI and 66% in

NI) and those who reported that the pandemic had a positive impact on them 22% (24%) of cross-border workers living in NI (RoI) reported positive impacts. These are reported in Table 13. Most of these positive impacts were based around working from home and the positive impact this had on their mental health and work/life balance.

#### 3.3.4 Impact of Brexit

Respondents were asked to what extent their ability to be a cross-border had been impacted by Brexit. Figure 11 displays a word cloud of the most found words and Figure 12 splits this out by direction of travel. As shown in Figure 11 the main implications of Brexit for cross-border workers related to additional costs, mainly due to the fluctuating exchange rate, increasing costs of insurance, uncertainty (this related to a range of issues including uncertainty around exchange rates, employment legislation and migrants' ability to cross the border), and increasing travel costs. While the wordclouds by direction contain similar words, the prominence differs. For those travelling North to South for work additional costs, uncertainty and insurance (this covered car insurance, health insurance, travel insurance and work-related insurance) were the biggest Brexit impacts. For those travelling South to North there is a greater spread in terms of the impacts Brexit had on cross-border workers which includes exchange rates, additional costs, pension issues and exchange rates.





The negative impacts cited by cross-border workers were varied but there were concerns around uncertainty and a lack of clarity even within government around issues related to banking, healthcare and GDPR. Those living in NI and working in RoI also reported concerns around uncertainty when seeking advice from government departments around issues such as Insurance and travel post brexit. This uncertainty was compounded by the lack of a NI executive. Some survey respondents mentioned the lack of a Stormont Executive as impacting on their work. This is in relation to the recent period, 2022-2024, in which there was no recent NI government due to a dispute between the DUP and the UK Government over the Windsor Framework. The Windsor Framework having been designed to mitigate the risk to the NI economy from Brexit due to it being the only part of the UK with a land border with the EU.

A key theme which emerged for many cross-border workers travelling to the North for work was the fall in sterling and how this impacted their take-home pay:

*“Between the value of the GBP tanking and having to drive to the office every day, it is making me question if it's worthwhile staying as a cross-border worker. Any pay rise I got by changing job has disappeared.” (RoI to NI)*

*“I am constantly working on an exchange rate and can face salary increases/decreases based on currency exchange. Overnight I received nearly a 20% Salary decrease.” (RoI to NI)*

While others reported facing additional costs since Brexit and in particular there were issues around changes in the banking industry which were impacting cross-border workers:

*“Additional insurance costs. Additional banking costs - additional accounting costs.” (RoI to NI)*

*“Seems to be blamed by banks for further restrictions /more limited options re cross border banking services. Very limited options now for any cross-border worker trying to open an account for their salary. Could present issues for future cross-border workers.” (RoI to NI)*

Issues were also raised around various types of insurance for cross-border workers post-Brexit. Again, there was a lot of uncertainty and people were concerned about legality now and what might change in the future.

## 4. Summary and Conclusions

Cross border employment flows represent potentially important mechanisms for reducing the adverse impacts of asymmetries in levels of labour market demand between NI and RoI, helping to reduce labour and skill shortages in instances where regional labour markets are tight and reducing unemployment during regional specific recessions. Optimal movement of labour between both regions is also likely to be an important factor in contributing to the growth of the all-island economy. This study represents the first comprehensive study of cross-border workers on the Island of Ireland. The objectives of the study are two-fold. Firstly, to assess the magnitude of cross-border worker flows and the extent to which these are changing over time. Secondly, using survey data, to develop an understanding of the profile and characteristics of cross-border workers, as well as the opportunities and barriers associated with cross-border employment.

In terms of labour market flows, for the period 2011 to 2021 we estimate that the total number of cross-border workers increased from 12,740 to between 17,827 and 19,282 which represents a total growth rate of between 40 and 51 per cent, with the bulk of the growth due to the expansion in the numbers travelling from NI to RoI for work purposes. However, cross-border worker flows increased in both directions over the period 2011 to 2021. The gap in wages that has persisted between RoI and NI for some time is likely to be a significant factor in the increased numbers travelling NI to RoI for work purposes; based on the nominal data average weekly earnings were €242 higher in Ireland which equates to an annual difference of €12,584, representing a substantial gain for NI to RoI cross-border workers who receive high RoI earnings and face lower NI prices. It is clear that the movement in flows is beyond what we would normally expect to observe between contingent counties not separated by a land border.

In order to gain a greater insight into the issue of cross-border employment, we conducted an online survey for cross-border workers during the period March 7 and April 14 2023, which achieved over 600 valid responses. This survey was broadly representative of cross-border workers in terms of the sectors worked in. Public sector workers were overrepresented relative to the labour force in both jurisdictions, but this is reflective of the types of workers who are employed cross-border. The education profile of cross-border workers was similar regardless of direction and was much higher than either of the respective populations, with over 75 per cent holding third-level qualifications. Unsurprisingly, given their education profile, cross-border workers are heavily concentrated within professional and managerial occupations; these occupations account for approximately 70% of NI to RoI workers and 67% of those travelling RoI to NI. Most cross-border workers were employees on permanent contracts with the figures highly similar for both groups. Self-employed persons accounted for just 7 per cent of survey respondents. Approximately 40 per cent of cross-border workers were employed in the public sector, with the figure highest for those travelling RoI to NI. This is in line with the historically high proportion of public sector employment in NI.

Most cross-border workers cross the border for work purposes daily, with the figure standing at over

70% (60%) among those travelling South to North (North to South). While less than 10% of workers, going in either direction, crossed the border for work reasons monthly. The research found that proximity to the border was a key determinant of cross border working, with almost 50% (over 40%) of workers travelling NI to RoI (RoI to NI) living within ten miles from the border; approximately two-thirds of cross-border workers, irrespective of the direction of travel, live within 20 miles from the border.

Motives for cross-border working are varied and tend to vary according to the direction of travel. The availability of a better salary and career prospects are primary factors motivating NI to RoI workers, with two-thirds of this group pointing to higher earnings as a key factor and over 40% indicating that they believed that better career opportunities were open to them because of working in Ireland. Just over a third of NI to RoI workers cited proximity to the border as an important factor. The situation for RoI to NI workers is very different, with no factor dominating, proximity to the border and personal reasons were mentioned amongst other factors.

The COVID-19 pandemic has, not surprisingly, led to a significant shift in home working patterns. Prior to the COVID-19 pandemic, over 75% of all cross-border workers either never or rarely engaged in remote working, following the pandemic this figure fell to well below 50% for both groups of workers. Post pandemic, 47% of NI to RoI cross-border workers do their jobs remotely either most of the time or once / twice a week, with the corresponding figure for RoI to NI cross-border workers 37%. The lower rates of home working for RoI to NI workers may be related to more substantial tax related factors that cross-border workers believe make remote working relatively more difficult. However, sectoral differences may also explain part of this difference, as higher proportions of RoI to NI cross-border workers are employed in public sector roles, many of which will be in essential occupations that are less suitable to remote working.

With respect to wage differences, our models indicate that, after controlling for other factors, RoI to NI cross-border workers incur a wage disadvantage of just under 30% relative to their NI to RoI counterparts. This is directly in line with the results from our analysis of official wage data (Table 1). The wage premium is consistent with the other evidence that North to South cross-border workers are primarily motivated by better salary and career opportunities. Another key, and worrying, observation from the models is that female cross-border workers earn approximately 30% less than their male counterparts, after controlling for other factors. This gender pay gap was found to be present when the analysis was conducted separated for each group of cross-border workers.

Although the descriptive data indicates that 55% of cross-border workers travelling NI to RoI reported themselves to be “very satisfied” in their work, compared to 47% of those travelling RoI to NI. After controlling for other factors those travelling NI to RoI were found to be 9 percentage points less likely to be job satisfied relative to those travelling RoI to NI. The results suggest that workers travelling RoI to NI may, at least to some extent, be compensated for lower earnings by higher levels of job satisfaction.

The results also show that workers travelling NI to RoI are much less likely to state that either COVID-19 or Brexit had impacted them negatively, relative to those traveling RoI to NI, NI to RoI workers are 16 percentage points less likely to report a negative impact arising from Brexit and 11 percentage points less likely to report an adverse experience because of the pandemic. The factors explaining these differences were explored within our qualitative analysis and some important insights were uncovered.

In terms of the motives for cross border working our qualitative analysis confirmed the importance of salary and career prospects and working conditions for those travelling North to South. The advantages accruing to those travelling South to North were more diverse in nature, nevertheless, a consistent advantage was having access to free GP and other care (by virtue of paying National Insurance), however, there was also a trend indicating that this advantage has been declining due to the rise in NHS waiting lists. Some workers travelling South to North employed in the health sector indicated better working conditions and career prospects relative to those available in the HSE.

However, there were also substantial difficulties experienced because of being a cross-border worker with many barriers common to all cross-border workers, such as exchange rate risk, tax return requirements, accessing social welfare benefits, the cost of commuting and difficulties access financial products such as mortgages. However, our research provided strong evidence that these were much more substantial for those travelling South to North, with the fallout from both Brexit and the COVID-19 pandemic resulting in a worsening situation for many. From our survey data 67% of those who live in Ireland and work in NI reported facing barriers compared to 47% of those going in the other direction. In particular, tax related issues appear to be a much bigger concern for RoI to NI cross-border workers and concerns were expressed around the inability to simultaneously claim Trans Worker Border Relief and work from home, which has become much more common since the COVID-19 pandemic. Many respondents travelling RoI to NI reported a perception that their ability to work from home has been severely restricted following the lifting of TBWR exemptions by Revenue that were in place during the pandemic. Variations in lockdown conditions and timings were found to create many difficulties for cross-border workers travelling in both directions. Finally, Brexit has resulted in mainly negative implications for cross-border workers associated with greater bureaucracy, political instability, exchange rate volatility and insurance costs.

## References

- CSO (2023) LFS Quarterly Series: Persons aged 15-89 years in Employment by Employment Status. Available online from: <https://data.cso.ie/table/QLF17>
- Heinz, F.F. & Ward-Warmedinger, M. (2006) Cross-Border Labour Mobility within an Enlarged EU. ECB Occasional Paper No. 52, Available at SRN: <https://ssrn.com/abstract=923371> or <http://dx.doi.org/10.2139/ssrn.923371>
- McGuinness, S., Bergin, A., Kelly, E., McCoy, S., Smyth, E., Watson, D. & Whelan, A. (2018) Evaluation of PLC programme provision, ESRI Research Series 61, Dublin: ESRI, <https://doi.org/10.26504/RS61>
- McVicar, D., Park, A. & McGuinness, S. (2017). "Employment and Hours Impacts of the National Minimum Wage and National Living Wage in Northern Ireland", UK Low Pay Commission Report. Available online from: [Low Pay Commission research 2017 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/644441/low-pay-commission-research-2017.pdf)
- NISRA (2023) Labour Market Report – December 2023. Available online from: <https://www.nisra.gov.uk/publications/labour-market-report-december-2023>
- Smyth, E., Devlin, A., Bergin, A. & McGuinness, S. (2022) A North-South comparison of education and training systems: lessons for policy, ESRI Research Series 138. Available online from: <https://www.esri.ie/publications/a-north-south-comparison-of-education-and-training-systems-lessons-for-policy>
- IPA (2022) Public Sector Trends. State of the Public Service Series 28. Available online from: [https://www.ipa.ie/ fileUpload/Documents/IPA%20Public%20Sector%20Trends%202022.pdf](https://www.ipa.ie/fileUpload/Documents/IPA%20Public%20Sector%20Trends%202022.pdf)
- NISRA (2023) Northern Ireland Quarterly Employment Survey. Available online from: <https://www.nisra.gov.uk/system/files/statistics/publication-document-december-2023.pdf>