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THE IMPACT OF CHANGES TO UK MIGRATION POLICY ON THE NORTHERN IRELAND ECONOMY

AN INDEPENDENT REPORT FOR THE DEPARTMENT FOR THE ECONOMY

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Oxford Economics

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EXECUTIVE SUMMARY

A NEW APPROACH TO MIGRATION POLICY

Following recommendations from the Migration Advisory Committee (MAC)[1], the UK Government published its Immigration White Paper *"The UK's Future Skills-based Immigration System"*[2] on 19th December 2018. The paper recommended changes to immigration policy from January 2021, which will result in a single UK immigration system for both EU and non-EU citizens—prioritising high-skilled immigrants.

This original White Paper proposed to expand Tier 2 of the immigration system (skilled migrants) through a series of measures, most important of which is retaining a salary threshold which migrants must earn before they can reside in the UK. The original proposals were for a £30,000 threshold.[3]

Given the importance of migrants to the NI economy, and evidence of current skills gaps in a range of sectors, the Department for the Economy (DfE) commissioned Oxford Economics in July 2019 to assess the potential impacts of the UK Government's Immigration White Paper's proposals on the NI economy. Following the original 2018 White Paper, we considered the £30,000 threshold and two alternative scenarios of £25,000 and £20,000.

However, at the end of January 2020, the MAC published a report "A points-based system and salary thresholds for immigration".[4] In it they recommended a lower salary threshold of £25,600 and a lower threshold of £17,920 for new entrants. The MAC also recommended extending the new entrant rate, making it applicable for five years instead of three, however, to date the UK Government has not committed to this change. On 19th February 2020, the UK Government published "The UK's points-based immigration system: policy statement"[5] where they accepted the MAC's recommendations for lower salary thresholds. Given this subsequent policy statement, our £25,000 scenario provides a good proxy for the UK Government's current stance on future migration policy. We therefore focus on the £25,000 scenario in this report.

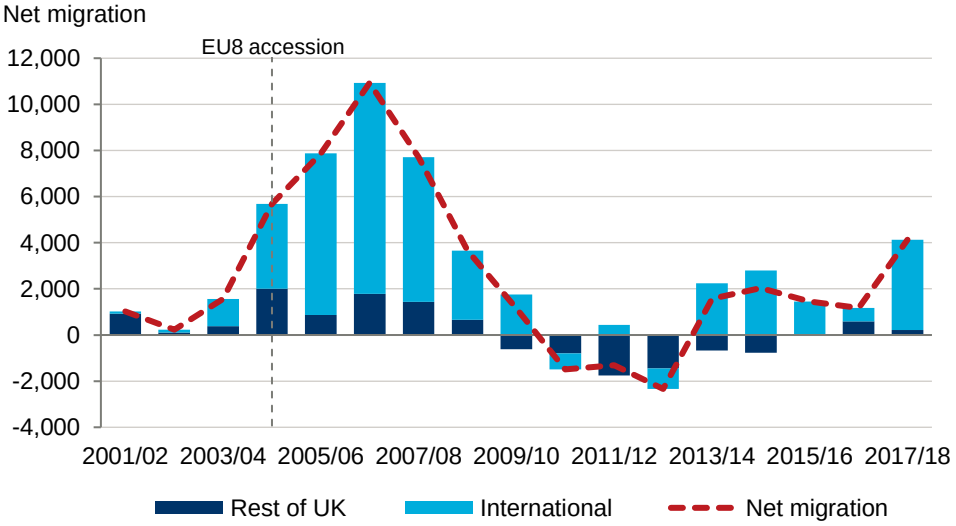
While economic and social conditions in the EU and UK will not remain static, the purpose of this report is to look specifically at the new approach to immigration policy. It does not consider the societal impact of migrants in NI. The fact that social dimension is not considered in detail should not be interpreted as a dismissal of its importance.

[1] https://www.gov.uk/government/publications/migration-advisory-committee-mac-report-eea-migration
[2] https://www.gov.uk/government/publications/the-uks-future-skills-based-immigration-system
[3] https://www.gov.uk/government/consultations/salary-threshold-and-points-based-system-pbs-commission-call-for-evidence
[4] https://www.gov.uk/government/publications/migration-advisory-committee-mac-report-points-based-system-and-salary-thresholds
[5] https://www.gov.uk/government/publications/the-uks-points-based-immigration-system-policy-statement/the-uks-points-based-immigration-system-policy-statement

THE IMPORTANCE OF MIGRANTS

Net migration to NI has been positive in all but three years since 2001 (Fig. 1). A significant proportion (45%) of migrants coming to NI are doing so for work. Consequently, net inflows over the period have been largely driven by those aged 25 to 44.

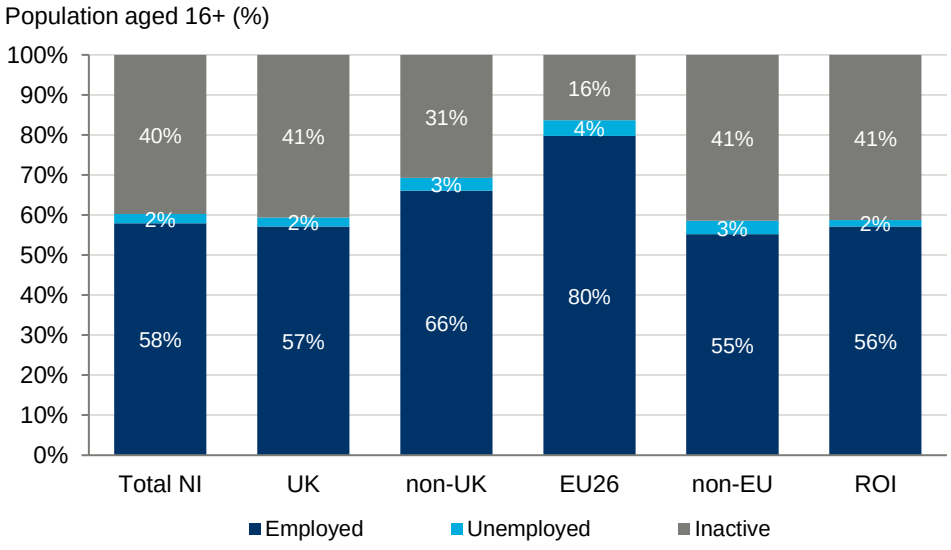
Fig. 1. Net migration to Northern Ireland, 2001/02 to 2017/18



Source: Mid-Year Population Estimates

Migrants from the EU26 (defined as the EU28 except for the UK and Republic of Ireland) tend to be more active in the labour market. More than four-in-five EU26 nationals living in NI and over the age of 16 are in employment, and just 16% are economically inactive. By comparison, less than three in every five UK born population aged 16+ are in employment and over 40% are inactive.

Fig. 2. Labour market activity by country of birth, Northern Ireland, 2018



Source: Labour Force Survey

Although they are employed across the economy, EU26 migrants are particularly important to specific sectors. Data from Department of Agriculture, Environment and Rural Affairs (DAERA)[6] and the Labour Force Survey (LFS) shows that they account for 40% of employees in food manufacturing, 16% in manufacturing overall and 8% in distribution, hotels and restaurants. Importantly, these sectors are major employers in NI and pay average wages that are below the economy average.

Linked to this, an analysis of LFS data on occupations show that the two groups with the lowest skill requirement—elementary, and process, plant & machine operatives—are the most reliant on non-UK born workers, drawing largely from the EU26.

Consequently, we find that median pay for EU26 workers stands at just £18,000[7], over 25% below the median pay for UK born workers. In addition, according to LFS data only 16% of EU26 migrants that worked over 30 hours per week in NI (from 2016 to 2018) earned over £25,000 per year.

THE IMPACT OF CHANGES TO MIGRATION POLICY

The new approach to migration policy will primarily impact the flow of new EU26 migrants given this group has enjoyed free movement of labour. In addition, their tendency to take up roles in lower-value added and lower-paid sectors leaves attracting future EU26 migrants particularly vulnerable to a £25,600 threshold. Furthermore, the impacts will likely be concentrated in specific sectors and locations such as food manufacturing and hospitality.

The **salary threshold** will have a significant negative impact on the NI economy. Of course, there are other elements to be considered with a salary threshold:

- A **Shortage Occupation List (SOL)** with additional occupations included for NI would allow a lower salary threshold. However, without further information on the potential composition of an NI specific SOL, we cannot model the impacts.
- A **temporary work visa** could in theory provide NI companies with a route to secure EU26 migrant labour. However, UK Government have ruled this option out in their recent policy statement and therefore we have excluded it from our modelling.
- We have however modelled the impact of **public service occupations** that must meet a lower salary threshold (however we have modelled the original £20,800 threshold rather than the revised lower figure) or the appropriate rate for the job, whichever is higher (pre-registration nurses can be paid even below this amount). This will limit much of the negative impact of the salary threshold in these occupations as most of these jobs start close to or above the threshold level.
- **Those under 26 and converting from study to work** will also be treated differently by changes to the migration policy. They too need to secure employment at or above the minimum salary. Again it is worth

[6] https://www.daera-ni.gov.uk/publications/migrant-labour-and-trade-enquiry

[7] Sourced from LFS data and is the average from 2016 to 2018.

nothing that the MAC has recently recommended a lower figure of £17,920, however the modelling in this paper focuses on the original £20,800 figure. This minimum salary is temporary and after five years migrants must receive at least £25,600 if they want to stay in the UK on a Tier 2 visa (the White Paper had originally proposed a three-year period which we have adopted in the modelling). We have assumed this will therefore impact on higher education graduates. Given the low volume of foreign students in NI, the impact of this exemption is also likely to be limited. Nevertheless, we have included this in our modelling.

- Finally, the **removal of the cap on Tier 2 visas and lowering the skills threshold** in the original White Paper were also likely to have marginal impacts. Firstly, the removal of the cap would only impact migrants earning over the salary threshold and occupations such as Doctors and nurses are already exempt from the cap. In addition, the impact of lowering the skill level requirement is offset by the need to earn over the salary threshold. We therefore would conclude that both the reduction in the cap and lower skills threshold will have marginal impacts on the NI economy[8]. However, **the points-based system** as set out in the Government's recent policy statement[9] allows migrants to trade off lower salary with other characteristics of their employment. Without the detail of how this will work, it is difficult to assess the impact of the points-based system, but it could in theory provide a more flexible route for migrants to gain employment in the UK and NI.

To quantify the likely scale of the impact, we adopted a *static* modelling approach (a detailed explanation is set out in the Technical Annex), which is consistent with the frameworks adopted in recent policy papers published for Wales[10] and Scotland[11]. In doing so, we do not account for the *dynamic* effects of the policy. We do not for example model the possible change in behaviour by businesses (who may adjust their average salaries) or by individuals (who may react to higher wages or a larger pool of unfilled vacancies).

Our modelling exercise shows that the new migration system will have an adverse impact on the NI economy. The impact is equivalent to 17,100 fewer jobs by 2030, implying a 1.9% loss in employee jobs relative to our baseline forecast. Slower employment growth will be concentrated in sectors that typically support higher shares of EU26 workers, such as wholesale & retail, manufacturing and accommodation & food services. The impact on these sectors is partly due to the impact of weaker migration and a smaller overall population. Indeed, the main impact from the policy changes is the result of employers being unable to replace migrant workers leaving NI to work

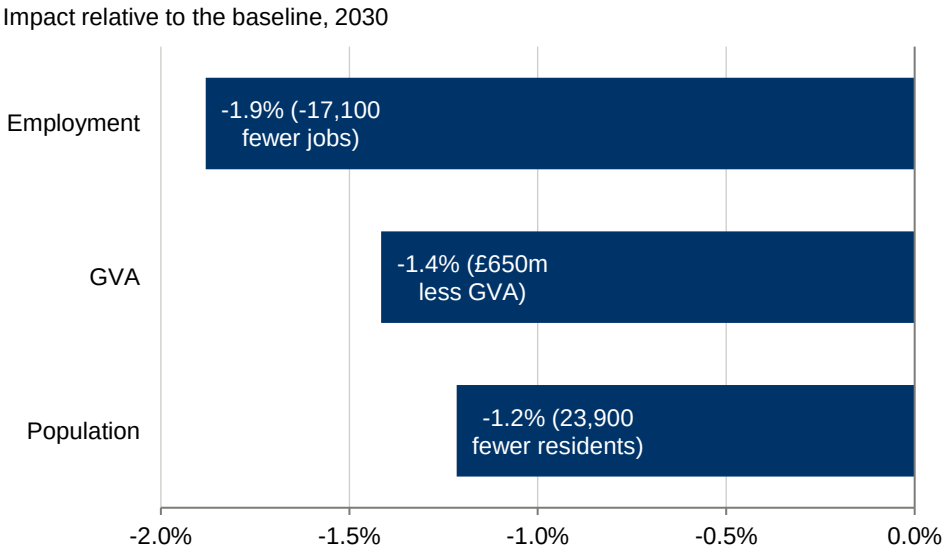
[8] HM Government arrived at a similar conclusions in their assessment (see page 140 of "The UK's future skills-based Immigration system", December 2018).
[9] https://www.gov.uk/government/publications/the-uks-points-based-immigration-system-policy-statement/the-uks-points-based-immigration-system-policy-statement
[10] https://www.wcpp.org.uk/wp-content/uploads/2019/03/FINAL-WCPP-report_Immigration-in-Wales-post-Brexit.pdf
[11] https://www.gov.scot/publications/uk-immigration-policy-leaving-eu-impacts-scotlands-economy-population-society/

elsewhere. We estimate this would result in 23,900 fewer residents, 1.2% lower than in the baseline forecast, by 2030.

The £25,000 threshold used in our modelling results in a 1.4% fall in GVA by 2030, equivalent to a loss of £650 million in that year (in 2016 prices) — proportionately lower than the employment impact, reflecting the loss of lower-paid roles that are typically less productive. To put this in context, the loss of GVA is larger than estimated 2019 GVA levels for sectors such as agriculture; the manufacturing of transport equipment; the manufacturing machinery and equipment; or the manufacturing of pharmaceuticals, among others.

Reducing migrant numbers who are typically of working age and who are more likely to be employed (relative to the current population) will have a negative impact on UK Government finances. The policy changes will increase the dependency ratio (i.e. push up the share of the population aged under 16 and over 64) in NI and reduce tax revenue by a greater extent than Government expenditure will fall due to the lower population level. We estimate the income tax, employees National Insurance Contributions (NICs) and employer NICs will fall by £125.6 million by 2030, or £706.2 million cumulatively. This equates to a loss of nearly £65 per capita by 2030.

Fig. 3. Impacts relative to the baseline scenario, 2030



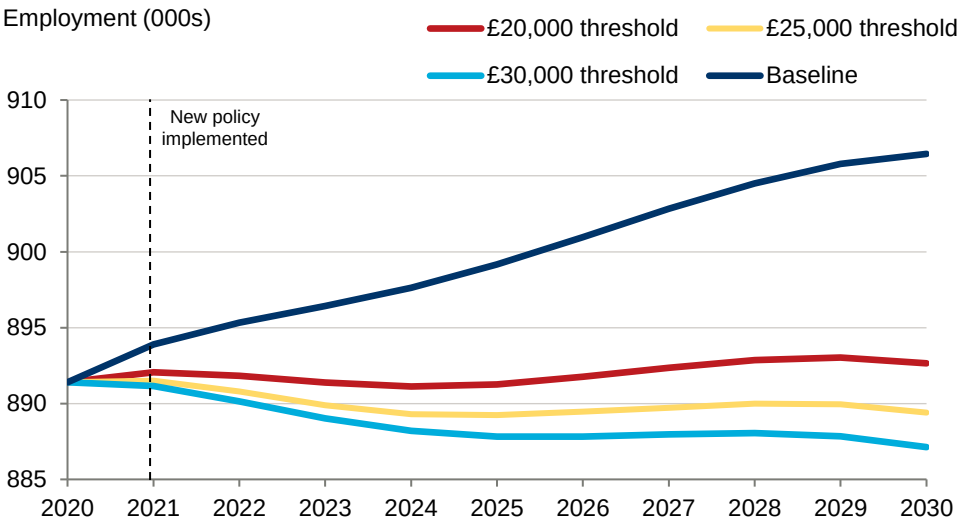
Source: Oxford Economics

We also estimated the implications of the original proposed salary threshold of £30,000 and reducing it to £20,000. Our scenario analysis shows that reducing the salary threshold would help reduce the negative impacts of the new migration policy, and vice versa. However, given the large share of EU26 workers earning salaries below £20,000, the salary threshold would need to be reduced substantially to effectively mitigate the adverse impacts of this policy approach.

With a £30,000 threshold, the employment impacts increase from 17,100 to 19,300 by 2030, 2.1% lower than the baseline value in 2030. By contrast, the £20,000 threshold results in a loss of just 13,800 jobs (or 1.5% on the baseline value). The lower alternative scenario therefore has a larger magnitude of

impact relative to the £25,000 scenario (3,300 fewer jobs lost) than the higher alternative threshold (an additional 2,300 jobs lost). This reflects the earnings distribution of EU26 workers.

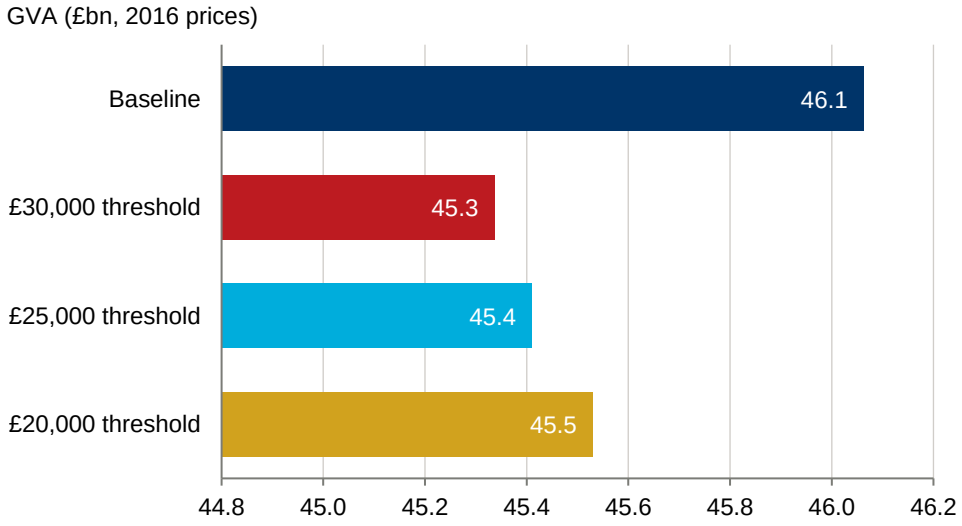
Fig. 4. Employment impacts from alternative scenarios



Source: Oxford Economics

Fewer jobs will result in a proportionately similar impact on Gross Value Added (GVA)[12]. In the £30,000 threshold scenario, GVA in NI is £730 billion (in 2016 prices) or 1.6% lower by 2030 compared to our baseline forecast.

Fig. 5. NI GVA levels under alternative outlooks, 2030



Source: ONS, NISRA, Oxford Economics

Under the scenarios, lower salary thresholds reduce the adverse impacts of the new migration policy, but again only marginally. We estimate a salary threshold

[12] GVA is the same as GDP plus subsidies, and minus taxes. It is a measure of the value added in an economy, sector or business.

of £25,000, an approximate for the salary threshold set by UK immigration policy, would result in a slightly lower fall in GVA of 1.4% (compared to the baseline) by 2030, while a salary threshold of £20,000 would result in a 1.2% reduction in GVA by 2030.

Fig. 6. Summary of scenario results

	Employment		GVA		Population		GVA per capita	
	000s	%	£bn (2016)	%	000s	%	£ (2016)	%
£30,000 threshold	-19.3	-2.1	-0.73	-1.6	-25.7	-1.3	-63.1	-0.3
£25,000 threshold	**-17.1**	**-1.9**	**-0.65**	**-1.4**	**-23.9**	**-1.2**	**-47.5**	**-0.2**
£20,000 threshold	-13.8	-1.5	-0.53	-1.2	-19.6	-1.0	-38.0	-0.2

Source: Oxford Economics

HOW MIGHT BUSINESSES AND INDIVIDUALS REACT?

There are various ways in which the NI economy may adapt to, offset or mitigate against the adverse impacts of this policy. However, our assessment of these suggests they are likely to have a limited mitigating effect based on other published evidence.

Businesses may increase wages to compete for workers in the local market, but this may not increase the overall supply of available labour without other interventions (e.g. the provision of training to workers to get back into employment). This benefits of this may be realised if government also consider interventions to assist in growing the skills necessary to the economy.

It is unlikely that the unemployed or economically inactive resident population would be able to immediately fill the void, however it will be important for government to continue to work and develop policy interventions in this area. For example, many of those long-term unemployed and inactive will require training to get them ready to enter the labour market. They may then require further formal training to gain the skills demanded by businesses impacted by the loss of EU26 workers. This will take time and therefore the inactive and long-term unemployed are unlikely to provide an immediate solution to hard to fill vacancies.

In addition, there is also a proportion of inactive labour that could be productive but are at present unable to join the economically active population, given family commitments. More child care places or social care could free up these individuals and enable them to work. Of course, these new jobs in childcare or social care may need to offer over £25,600 to avoid further hard to fill vacancies.

In addition, any increase of wages as a result of the new migration policy will likely occur across all regions of the UK, limiting the scope to attract a greater share of internal migration.

Finally, our analysis indicates that firms' ability to increase capital investment to offset the impact of reduced access to labour could be constrained. The ability to increase investment will depend on firms' access to finance. Those sectors

with a greater reliance on EU26 migration tend to have a relatively high proportion of smaller firms with typically lower profit margins—where cost is an important factor in competitiveness. There may therefore be little scope to increase the capital-intensity of a vast majority of firms. Certainly, these types of firms are unlikely to be able to respond quickly to the reduction in available labour. Again, government interventions and support in innovation may assist companies in ensuring they are embracing the most current technologies to enhance their business performance.

SPECIFIC ISSUES FOR NI

While reducing the salary threshold is increasingly effective at mitigating against the adverse impacts, consideration of an effective route for the inflow of lower skills from outside the UK – even on a transitional basis – may be required to safeguard key industries such as Agri-food and the growing tourism sector. In addition, the development of a NI specific Shortage Occupations List (SOL) will aid in mitigation of impacts in those roles which are at a medium to higher skill level.

Reducing migrant labour that would fill jobs offering less than £25,600 will inevitably have implications for sectors and businesses where costs are an important part of staying competitive. Our analysis shows that NI is particularly vulnerable given its sectoral structure (i.e. higher concentration of manufacturing and agricultural jobs) and its lower than average wages.

Furthermore, the characteristics (sectoral structure, demographics etc.) of NI's Local Government Districts that border the Republic of Ireland indicate they may be particularly adversely impacted by the changes to migration policy (e.g. 40% of employees in food manufacturing—a sector with high representation in border areas—are from EU26 countries). In addition, NI firms are to a large extent operating in the same markets as rival operators in the Republic of Ireland. As a result, a shortfall of labour could have a range of distorting effects on cross-border labour markets.

Therefore, we could see greater commuting inflows to NI to fill jobs that were previously taken by EU26 residents in NI, or at a more extreme level, there may be 'capital flight', whereby firms or production that would otherwise have operated in NI are instead displaced to Ireland.

Now that the UK has left the EU there will be a range of factors influencing private sector investments. These will include the extent to which NI benefits from or is impacted by new free trade agreements and the attractiveness of the region for investment. However, this report shows how important the particular factor of access to labour is to the future performance of the NI economy.

TABLE OF CONTENTS

1. INTRODUCTION

1.1 THE UK'S NEW APPROACH TO IMMIGRATION POLICY

Now that the UK has left the EU, following the end of the transition period, the UK will be able to end free movement of people between the UK and the EU, leaving the UK free to set its own immigration policy.

1.1.1 The UK's Future Skills-based Immigration System

Following recommendations from the Migration Advisory Committee (MAC), the UK Government published its Immigration White Paper *"The UK's Future Skills-based Immigration System"* on 19th December 2018. The paper recommended changes to immigration policy following the end of free movement of people, which would result in a single UK immigration system for both EU and non-EU citizens—prioritising high-skilled immigrants.

In particular, Tier 2 of the immigration system (**skilled migrants**) would be expanded by:

- removing the current cap on the number of Tier 2 visas;
- lowering the minimum skill level requirement from NQF6 to NQF3 (roughly equivalent to A-level) to include workers with intermediate level skills;
- retaining a salary threshold of £30,000 which migrants must earn before they can reside in the UK; and
- potentially agreeing the principle of a "Shortage Occupation List" for NI, which would allow a salary threshold for occupations facing acute shortages. Currently, there are SOLs for the UK and Scotland, but not for NI. The MAC[13] recommended implementing additional lists for each of the countries in the UK.

1.1.2 A Points-Based System and Salary Thresholds for Immigration

Although outside the scope of our study, at the end of January 2020, the MAC published their report "A points-based system and salary thresholds for immigration" [14]. In it they recommended a lower salary threshold of £25,600 and a lower threshold of £17,920 for new entrants. It was also recommended that the new entrant period be extended to five years, however to date the UK Government have not committed to this.

The MAC did not recommend a route specifically for **low-skilled migrants**, and the UK Government policy statement has now advised there will **not** be a low-skilled route.

[13] https://www.gov.uk/government/publications/full-review-of-the-shortage-occupation-list-may-2019

[14] https://www.gov.uk/government/publications/migration-advisory-committee-mac-report-points-based-system-and-salary-thresholds

On 19th February 2020, the UK Government published "The UK's points-based immigration system: policy statement"[15] where they accepted the MAC's recommendations for lower salary thresholds [16]. The key points in the policy statement are:

- Free movement will end from 1 January 2021 with the introduction of a new points-based system;
- The salary threshold will be set at £25,600, with tradable characteristics to enable a lower salary;
- A total of 70 points is required to be eligible to apply;
- There will not be a low-skilled route;
- The cap on the number of people who can come on the skilled worker route and the resident labour market test will be removed;
- There will be a reduction in definition of skilled workers from RQF6 to RQF3;
- There will be a commission to review the SOL;
- Highly skilled global talent route will be expanded to include EU migrants;
- Student visas appear to be covered by the new points-based system, however criteria remain as per the current system; and
- Six months visa free for EU Visitors to the UK.

1.2 SCOPE AND PURPOSE OF THIS STUDY

There are a variety of factors beyond migration policy which could influence the flow of EU migrants into the UK and NI over the next decade. These include:

- changing economic and social conditions in the countries of origin of EU migrants; and
- changing economic and social conditions in the UK.

While economic and social conditions in the EU and UK will not remain static, **the purpose of this report is to look specifically at changes to immigration policy.** Given the importance of migrants to the NI economy, and evidence of current skills gaps in a range of sectors, the Department for the Economy (DfE) commissioned Oxford Economics in July 2019 to assess the potential impacts of the UK Government's Immigration White Paper's proposals on the NI economy. In doing so we considered the £30,000 threshold and two alternative scenarios of £25,000 and £20,000. However, given the latest policy statements on immigration, our £25,000 scenario would appear to be a good proxy for the UK Government's current stance on future policy. Therefore, we focus on the £25,000 scenario in this report, but still provide the results of our modelling on the original £30,000 salary threshold as well as the results for a lower salary threshold of £20,000.

[15] https://www.gov.uk/government/publications/the-uks-points-based-immigration-system-policy-statement/the-uks-points-based-immigration-system-policy-statement

[16] The proposed 'points-based' system takes into account a variety of other requirements, such as the skill level of jobs, occupational shortages, speaking English and qualifications.

2. THE CURRENT STATE OF IMMIGRATION IN NORTHERN IRELAND

This chapter examines the available data published by the Office for National Statistics (ONS) and the Northern Ireland Statistics and Research Agency (NISRA) to provide a clear understanding of the role of migrants in the NI economy. To aid this understanding, we compare its recent migration and labour market trends with the other UK regions.

Migrants from EU26[17] countries will be the most affected by the Government's new approach to migration policy and hence we focus on this group more than others. International migrants in this report are considered as any non-UK migrants (EU26, ROI, and non-EU).

BOX 1: HOW WE DEFINE MIGRANTS

In this report, a migrant refers to an individual who was born overseas but currently lives in the UK, while a "native" refers to someone born in the UK.

EU26 migrants are those originating from the 28 European Union member states (excluding the UK and Republic of Ireland).

Non-EU migrants are those originating from outside the EU.

2.1 THE MIGRANT POPULATION IN NORTHERN IRELAND

2.1.1 Population and origin of migrants

In 2018, the Labour Force Survey (LFS) showed there were an estimated 146,000 non-UK nationals in NI, which equates to 7.8% of the population (Fig. 7). This is among the lowest share of any UK region, and 5.5 percentage points below the national rate (14.3%)—although this is somewhat skewed by London, an outlier at 36.4% non-UK nationals.

Of the 146,000 non-UK nationals in NI in 2018, 62,000 were EU26[18] citizens (3.3% of the total population), 34,000 were Irish citizens (1.8%), and 50,000 were non-EU citizens (2.7%).

[17] Despite being in the EU, Irish citizens' have the right to travel freely without the need for immigration controls or residence/work permits under the Common Travel Area (CTA).
[18] EU26 includes all EU countries but excludes both the United Kingdom, and the Republic of Ireland.

Fig. 7. Population by country of birth, by UK region, 2018

	UK	non-UK	EU26	non-EU	ROI
London	63.6%	36.4%	10.2%	25.0%	1.2%
UK	**85.8%**	**14.3%**	**4.9%**	**8.8%**	**0.6%**
West Midlands	86.2%	13.8%	4.6%	8.6%	0.6%
South East	86.6%	13.4%	4.5%	8.4%	0.5%
East Midlands	87.3%	12.7%	5.3%	7.0%	0.4%
East of England	87.3%	12.6%	5.3%	6.8%	0.5%
North West	90.0%	10.0%	3.1%	6.4%	0.5%
Yorkshire & Humberside	90.2%	9.7%	3.8%	5.6%	0.3%
South West	90.6%	9.4%	4.0%	5.1%	0.3%
Scotland	91.2%	8.8%	3.9%	4.5%	0.4%
Northern Ireland	**92.1%**	**7.8%**	**3.3%**	**2.7%**	**1.8%**
Wales	93.9%	6.1%	2.5%	3.3%	0.3%
North East	94.2%	5.8%	2.0%	3.7%	0.1%

Source: Labour Force Survey

Note: May not add due to rounding.

In May 2004, eight Central and Eastern European countries (the "A8") joined the EU[19]. While 12 of the EU15[20] Member States imposed labour market restrictions on A8 nationals, the UK, Ireland and Sweden did not. With relatively free access to the labour market, citizens from the A8 countries began to arrive in the UK and Ireland in large numbers[21].

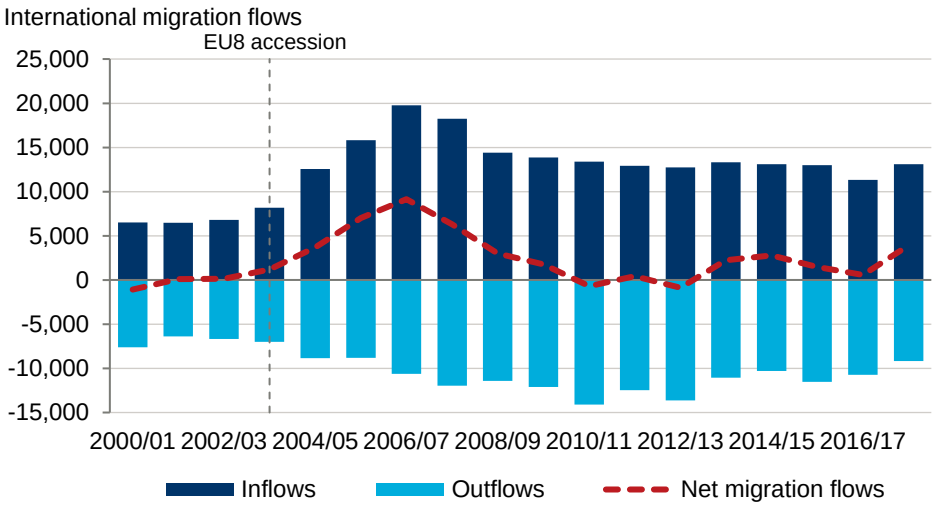
In NI, international migration inflows peaked in 2006/07, when a total of 19,800 people came to live in the region, and 10,700 left to live abroad, leaving a net inflow of 9,100 people who were born outside the UK (Fig. 8).

[19] Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.

[20] The **EU15** comprised the following 15 countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and the UK.

[21] R. Russel, "International Migration in Northern Ireland: an Update" (Research report, Northern Ireland Assembly, 2016).

Fig. 8. International migrant flows to and from NI, 2000 to 2018



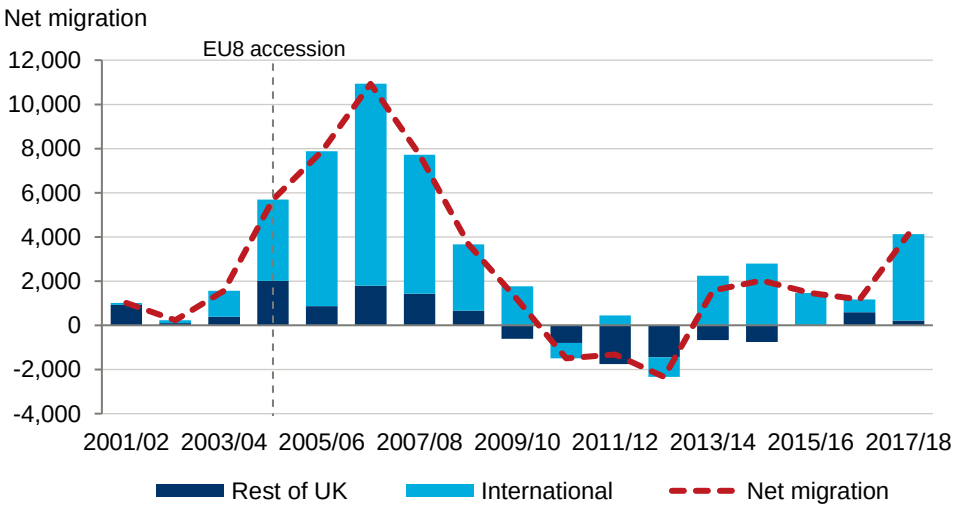
Source: Labour Force Survey

Although gross inflows to NI from the rest of the UK have been similar in level to international inflows, net migration with the rest of the UK has made a somewhat smaller contribution to overall population growth as outflows from NI to the rest of the UK have often been larger than inflows. Consequently, net migration to the rest of the UK has been negative in seven of the past 10 years.

With the onset of the global financial crisis in 2008, migration inflows (both the UK and international) began to decline, and at the same time increasing numbers of people left NI. Between 2011 and 2013, NI experienced a period of negative net migration. However, migration returned to net inflows again in 2013/14, with a net increase of just under 1,600 people.

In 2017/18, there were net inflows of 3,900 international and 200 UK migrants respectively—resulting in overall net migration of approximately 4,100 people. This is the fifth successive year that there has been a net inward migration of people to NI (see Fig. 9).

Fig. 9. Net migration flows to NI, 2000 to 2018

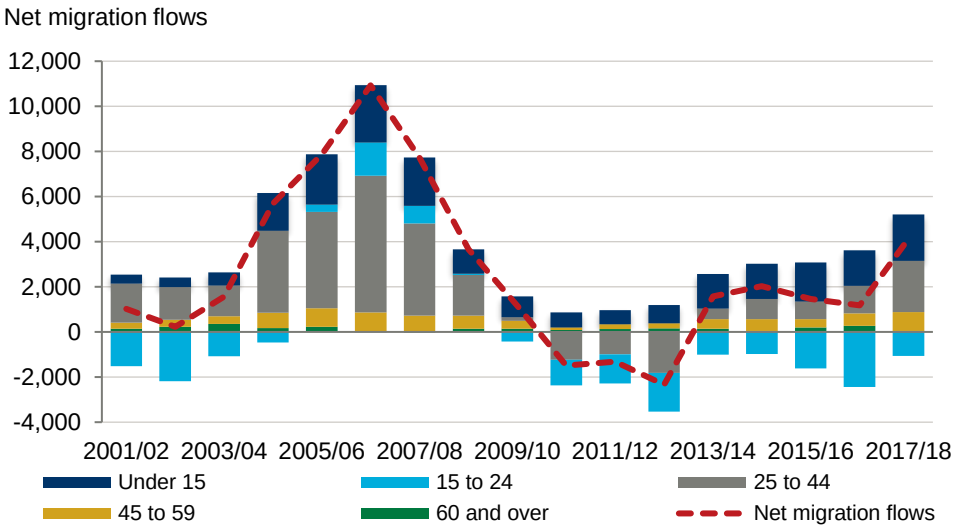


Source: ONS Mid-Year Poulation Estimates

The composition of net migration (both UK and international) by age group has also varied over time (see Fig. 10). Throughout the mid-2000s, when net migration was at its highest, flows were largely driven by those aged 25 to 44. Following the financial crisis, both this age group and those aged 15 to 24—who also tend to move for educational purposes—contributed to a net outflow of migrants. Although NI has continued to see a net outflow from this group over recent years, overall positive net migration from 2013/14 onwards has been largely driven by a net positive contribution from those aged 25 to 44.

The under 15 age group has consistently contributed to positive net inward migration. This likely reflects the dependants of the 25 to 44 age group and underlines how new migrants can drive population growth.

Fig. 10. Net migration by age group, NI, 2001/02 to 2017/18[22]

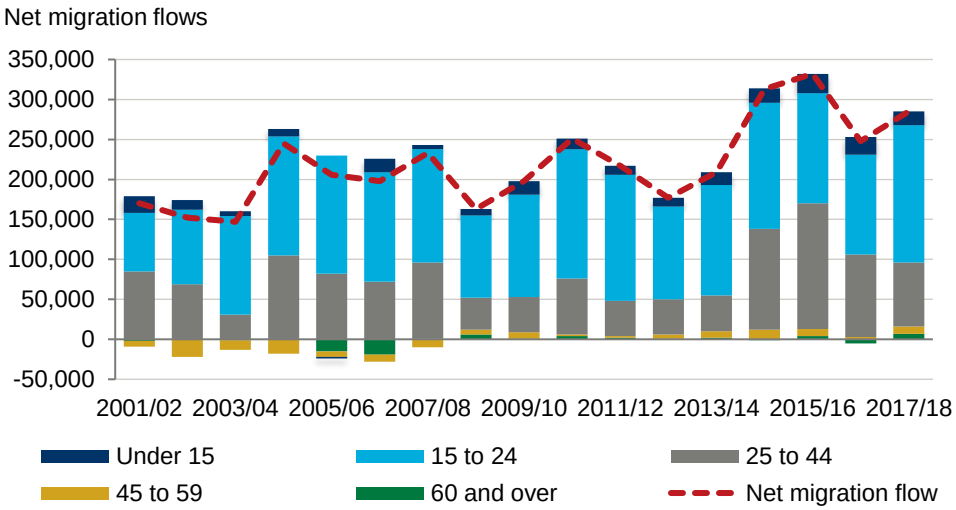


Source: ONS

In the UK, net migration has been positive since 2001/02 (see Fig. 11). Despite the downward trend in NI, the global financial crisis had a limited impact on net migration in the UK. Indeed, net migration peaked at 332,000 in 2015/16 and stood at 285,000 in 2017/18. The age composition of net migration flows also differs somewhat to NI, as those aged 15 to 24 form a dominant share.

[22] https://www.nisra.gov.uk/publications/2018-mid-year-population-estimates-northern-ireland

Fig. 11. Net migration by age group, UK, 2001/02-2017/18



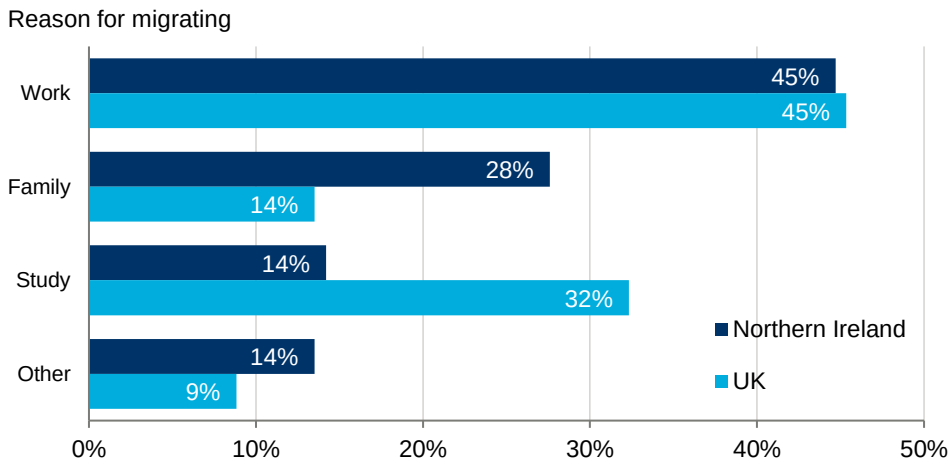
Source: ONS

Data are also gathered to understand the reasons people migrate into both NI and the UK as a whole. In both, almost half of migration inflows by international migrants (all non-UK) are for work purposes, a factor reflected in the large net inflows of those aged 15 to 24 into the UK and those aged 25 to 44 into both NI and nationally. The 15 to 24 age group in the UK also reflects the large inflow of students.

However, there is some disparity in the other reasons for inward migration. The share migrating to NI for family reasons (28%) is twice as high as the national average (14%), while conversely, almost a third of migrants to the UK came to study, compared to just 14% of NI migrants (see Fig. 12).

It is worth noting that over time, these categories are not necessarily mutually exclusive: some of those who came to study may go on to take jobs in NI, while those who came to join family may also become economically active.

Fig. 12. Reason for migration (inflows) by international migrants, NI and UK, 2017



Source: ONS, NISRA.

Note: International inflows relate to new registrations to the Medical Card register from outside the UK
Figures may not add due to rounding in published data.

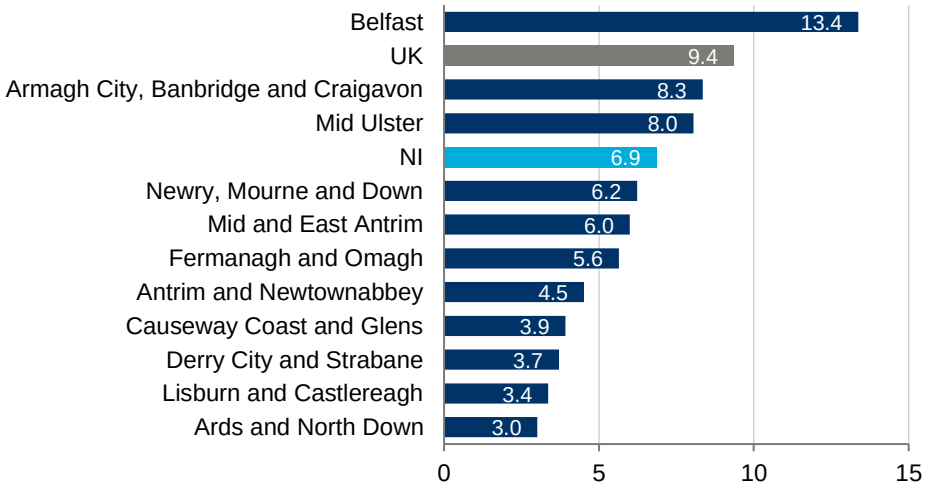
2.2 CONCENTRATIONS OF MIGRANTS

Over the past five years, long-term immigration inflows[23] to NI have averaged 6.9 per 1,000 residents. However, the destination of migrants is not evenly distributed within NI. Generally speaking, international migrants tend to be attracted to larger cities and urban areas where job opportunities are often most plentiful. In NI they are also attracted in large numbers to Mid Ulster and Armagh, Banbridge and Craigavon given employment opportunities in sectors such as agri-food and manufacturing.

Belfast attracts a disproportionately high share of inflows: despite supporting just 18% of the NI population, over the past five years it has attracted 36% of international migration flows. In contrast, and despite sharing an international border, the five Border districts collectively account for 41% of international inflows to NI over the past five years—almost in-line with their share of the overall population (39%).

Fig. 13. International migration inflows per 1,000 of the population, NI, UK, NI districts, annual average over the period 2014 to 2018

Migrant inflow per 1,000 residents (five year average)



Source: ONS

For context, NI recorded the fifth lowest number of international migrant inflows per 1,000 residents in 2018. Only Wales (5.6), North East (6), Scotland (6) and South West (6.8) had lower levels. However, rates across the UK are not too dissimilar. The UK rate of 9.4 is skewed notably by London (which experienced 22.7 migrants per 1,000 residents). Indeed, the highest rate of international migrants per 1,000 residents outside of London was 8.6 in West Midlands.

[23] A long-term international migrant is a person who moves to a country other than that of his or her usual residence for a period of at least 12 months.

2.3 LABOUR MARKET ACTIVITY OF MIGRANTS

This section looks at the labour market characteristics of international migrants in NI—focussing on indicators such as economic activity, distribution across sectors/occupations, skill levels, and earnings.

2.3.1 Employment and economic activity

Data for 2018 from the LFS show there are 1.46 million people in the NI labour market[24], of which 131,000 (9% of the total) were Irish or non-UK citizens (see Fig. 14).

Fig. 14. Labour market activity by country of birth, NI, 2018

	Employed	Unemployed	Inactive	Total
UK	762,000	29,000	542,000	1,332,000
Non-UK	86,000	4,100	40,000	131,000
EU26	44,000	2,100*	9,000	55,000
Non-EU	24,000	1,500*	18,000	44,000
ROI	18,000	500*	13,000	32,000
Total	**848,000**	**33,100**	**582,000**	**1,463,000**

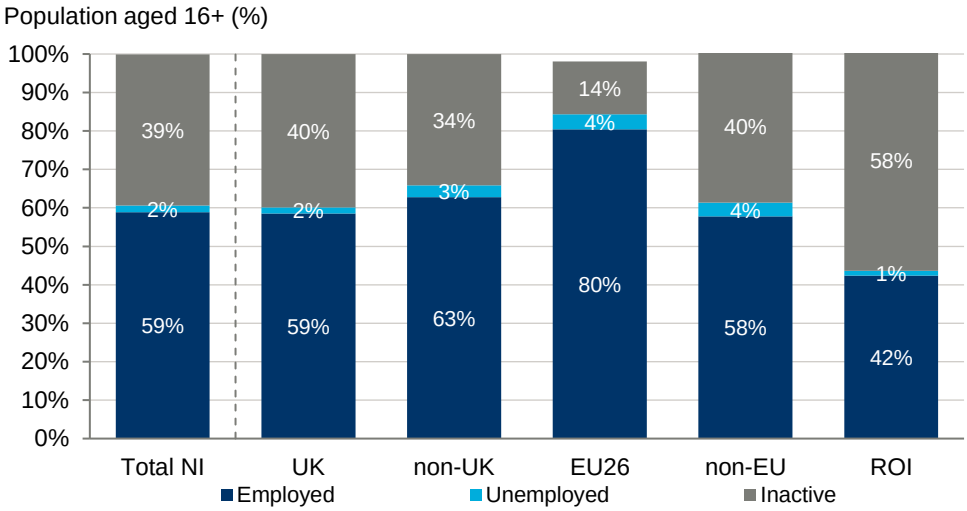
Source: Labour Force Survey[25] and Oxford Economics estimates
Notes: may not add due to rounding

There are currently 848,000 people in employment in NI (58% of all residents aged 16 and over in the labour market) and a further 582,000 (39.8%) classified as being economically inactive[26]. The 131,000 non-UK born adults in NI are more likely to be in employment (66%) and less likely to be economically inactive (31%) than the UK-born population.

There is also a greater variation in the labour market activities by origin of the migrant population. Four out of every five EU26 nationals living in NI are in employment, and just 16% are economically inactive. By contrast, the employment rate of Irish nationals living in NI is significantly lower than it is for EU26 residents, at 56%.

[24] Including people who are employed, unemployed (economically active) and people who are economically inactive, aged 16 and over.
[25] The Labour Force Survey is a sample survey therefore estimates are subject to sampling error – further info here (see sampling variability).
[26] Economic activity is defined as people who are neither in employment, nor unemployed. This measure includes those who are looking after a home, are long-term sick or disabled, are students, or are retired.

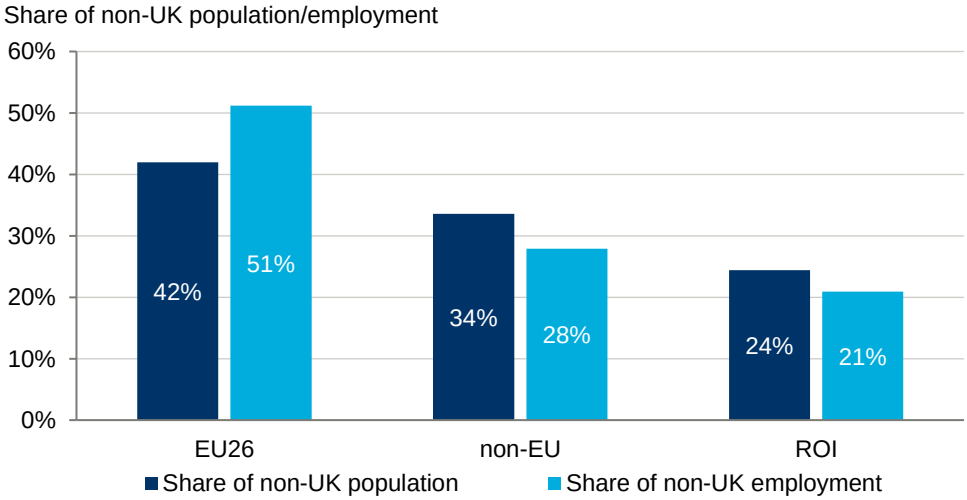
Fig. 15. Labour market activity by country of birth, NI, 2018



Source: NISRA, Labour Force Survey
Note: may not add due to rounding.

People born in EU26 countries make up 42% of the migrant population in NI, but more than half of the migrant employment (see Fig. 16). Conversely, Irish nationals account for 24% of the migrant population, but just 21% of migrant employment. Overall, non-UK nationals have a higher employment rate, and a lower inactivity rate, than the UK-born population in NI.

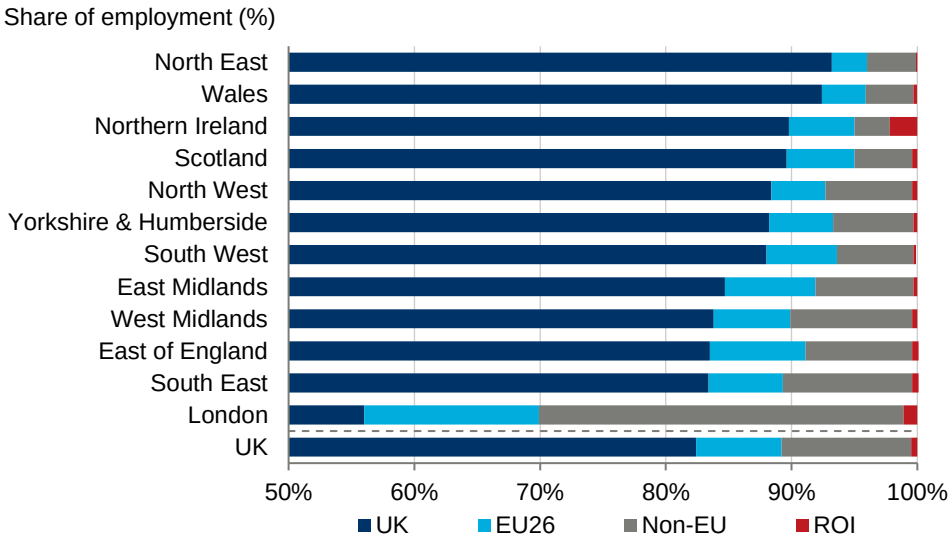
Fig. 16. Migrant population and employment shares, non-UK nationals, 2018



Source: Oxford Economics
Note: may not add due to rounding.

Data from the Annual Population Survey[27] show that NI has the third-lowest proportion (10.1%) of non-UK nationals in employment of all UK regions, 7.4 percentage points lower than the UK average (17.5%). London has by far the highest, at 44.9%—more than twice the UK average (see Fig. 17). NI's share of employment taken by EU26 migrants is however relatively more important. At 5.2% of total employment, NI is more reliant on EU26 labour than Yorkshire and Humberside, North West, Wales and North East.

Fig. 17. Share of total employment, by country of birth, UK regions, 2018



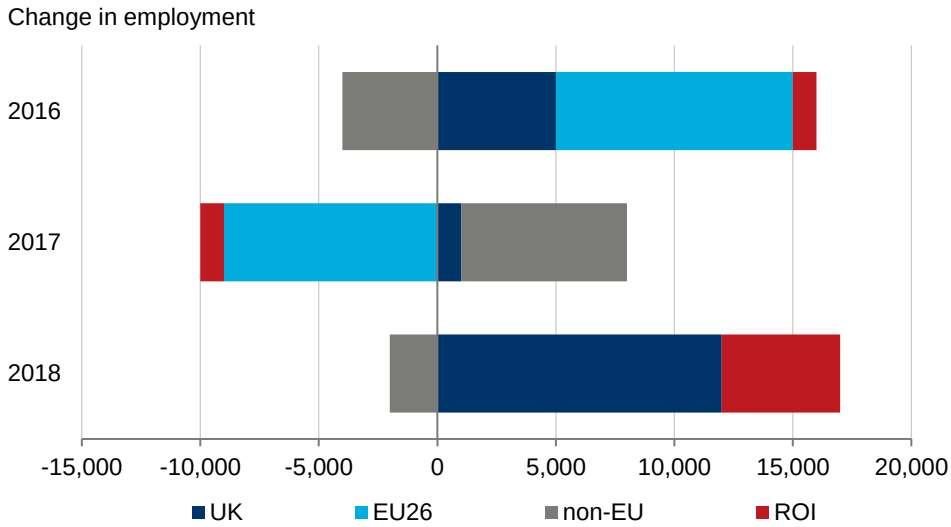
Source: Annual Population Survey

An analysis of employment growth shows that EU26 workers provided the largest contribution to employment growth in 2016. However, NI experienced a net fall in EU26 born individuals in employment in 2017. Data for 2018, show there was generally no change in EU26 workers in NI. The data align with anecdotal evidence that NI businesses are experiencing an outflow of EU26 labour.

The experience of 2017 and 2018 is likely to reflect uncertainty over future immigration rules and the Sterling / Euro exchange rate being less attractive to migrant workers. It is also likely to reflect improving fortunes in some EU labour markets (relative to the UK and NI). Including Irish workers, employment of EU nationals has fallen by 17,000. Since the Referendum, the EU27 share of non-UK employment has fallen by 9.5 percentage points to 68%.

[27] The APS allows regional comparisons to be made, though given the small sample size, we have taken an average of three years' data from 2016-2018 to estimate the share of employment that different migrant groups have in each region. For this reason, there is a slight difference in the proportions for Northern Ireland when compared with the Labour Force Survey.

Fig. 18. Contributions to employment change, NI, 2016 to 2018



Source: NISRA, Oxford Economics

2.3.2 Sector, occupation and wage detail

Manufacturing is particularly reliant on migrant labour, with over a fifth of the sector's workforce having been born outside the UK. According to LFS data, approximately 16% of manufacturing employment is filled by EU26 workers[28]. Within manufacturing, migrant labour is particularly important for the manufacturing of food sector. A DAERA "Migrant Labour and Trade Enquiry" (published in May 2018) into the Food and drink processing sector found that 40% of the labour force were from the EU26[29].

The concentration of employment in manufacturing is important as the sector accounts for almost 14% of the region's GVA, and 72%[30] of goods exports, therefore, any policy that limits its access to migrant labour could have significant implications to local businesses both directly in manufacturing and indirectly through supply chain spending.

The distribution, hotels and restaurants sector is also relatively dependent on migrants, with 14% of the workforce born outside the UK. The sub-sectors that make up this industry (such as accommodation and food and beverage service activities), represent the backbone of NI's increasingly important hospitality and tourism industry—which has seen overall visitor expenditure in NI increase by 35% over the previous five years[31].

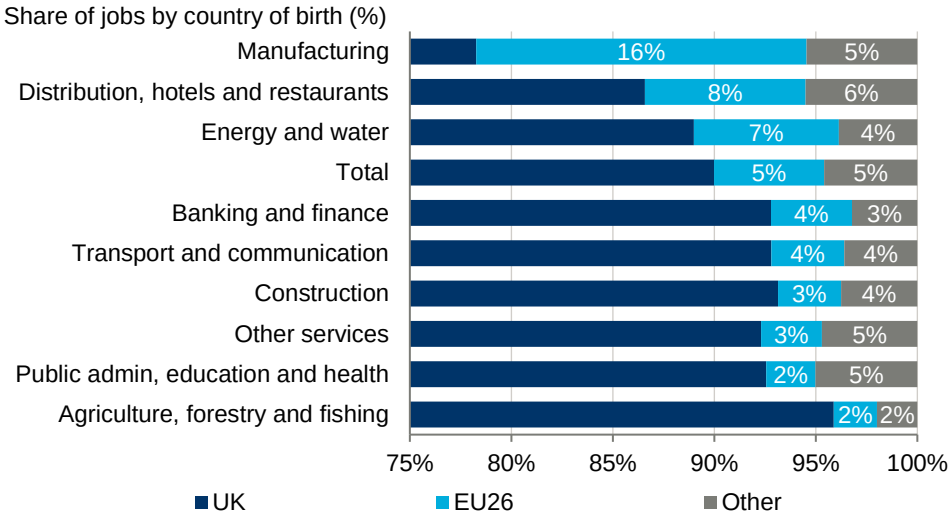
[28] This detailed industrial data was sourced through bespoke cuts of LFS data at an ONS Microlab. We have compared some of this Microlab data with available published data to ensure the estimates are reliable. This verification of Microlab data is set out at the end of the document.

[29] https://www.daera-ni.gov.uk/publications/migrant-labour-and-trade-enquiry

[30] Northern Ireland Broad Economy Sales & Exports Data, 2017

[31] NISRA (2019), "Northern Ireland Annual Tourism Statistics 2018"

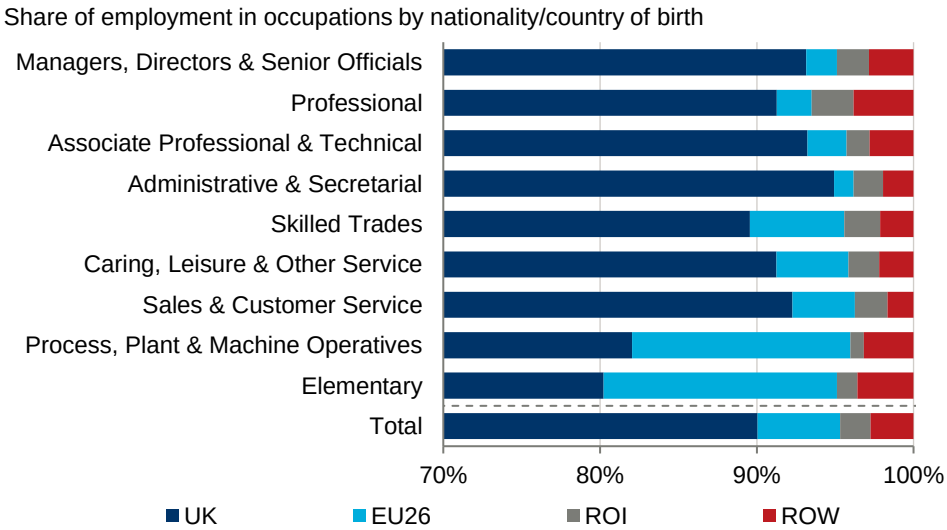
Fig. 19. Share of employment by sector, country of origin, NI, three year average from 2016 to 2018



Source: ONS Microlab, Labour Force Survey, Oxford Economics

Given the sectoral distribution above, and the restrictions on the rest of world migrants taking up low paid roles, it is unsurprising that EU26 workers make up a significant amount of those employed in lower skilled occupations in NI. Indeed, 15% of elementary occupations and 14% of process, plant and machine operatives are made up by EU26 workers.

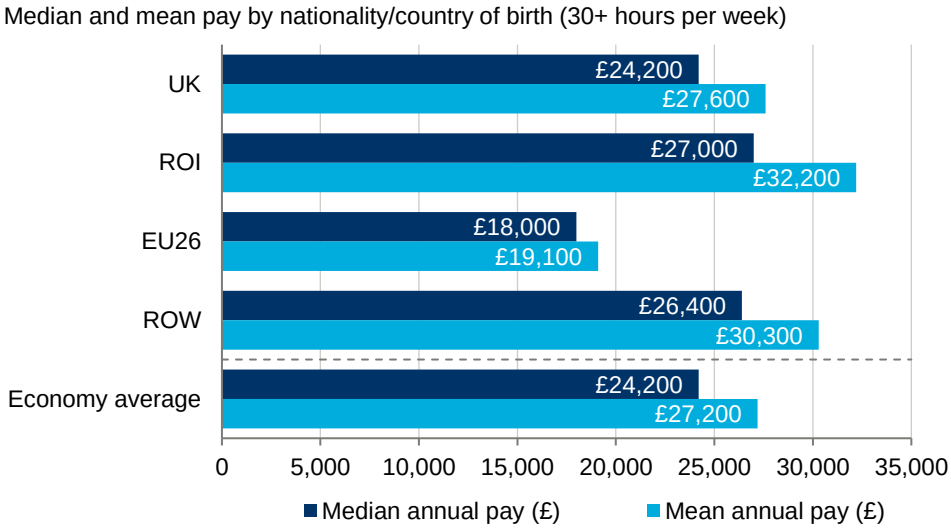
Fig. 20. Share of employment in occupations by nationality/country of birth, three-year average from 2016 to 2018



Source: ONS Microlab (Labour Force Survey), Oxford Economics

Consequently, the median and mean pay for EU26 workers (working 30 or more hours per week) is notably below the average (see Fig. 20). At £18,000, the median pay for EU26 workers employed in NI, is over 25% lower than the median pay for UK born workers (this compares to Rest of World migrants who enjoy a median salary 9% above UK born workers).

Fig. 21. Median and mean pay by nationality/country of birth (30+ hours per week), three year average from 2016 to 2018[32]



Source: ONS Microlab (Labour Force Survey), Oxford Economics

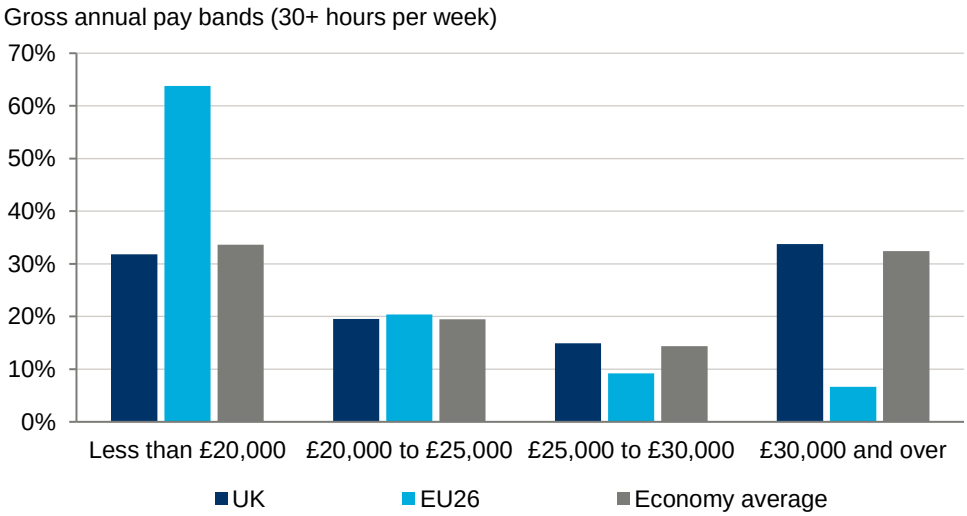
Indeed, an analysis of LFS data from 2016 to 2018 at an ONS Microlab shows that **only 16% of EU26 workers in employment in NI and working over 30 hours a week, earned over £25,000 per year**.[33] [34] Fig. 21 shows the distribution of pay for UK and EU26 born workers in NI, we have not included Republic of Ireland or rest of world figures due to data gaps. That compared to 49% of the UK born in employment. Therefore, 84% of EU26 workers earned under £25,000 over the period and 64% of EU26 workers earned less than £20,000.

[32] It is worth noting that the salary estimates produced from the Microlab data were 8-11% lower than the figures reported by the ASHE.

[33] For reference, only 7% of EU26 migrants working over 30 hours a week earned over £30,000 per year, compared to 34% of UK born workers, 44% of those born in the Republic of Ireland and 44% of those from the rest of the world.

[34] The Microlab data was accessed at an early stage of the project, and hence we do not currently have the data cut by the £25,600 salary threshold currently being recommended by the MAC and accepted by Government.

Fig. 22. Distribution of pay by country of birth, three-year average from 2016 to 2018



Source: ONS Microlab (Labour Force Survey), Oxford Economics

2.4 SUMMARY

The key findings from the analysis are:

- A significant proportion (45%) of migrants coming to NI are doing so for work.
- Consequently, net inflows have been largely driven by those aged 25 to 44.
- EU26 migrants tend to be more active in the labour market with a higher share in employment.
- NI tends to have lower wages than the UK and we find that 84% of EU26 workers are currently earning under £25,000 and work in key NI sectors such as food manufacturing, accommodation and food, and beverage services.
- These workers are also predominantly in occupations with the lowest skill requirements—elementary, and process, plant & machine operatives.

3. ESTIMATING THE IMPACT OF THE UK'S IMMIGRATION POLICY

In this section we discuss and estimate the impact of the new approach to migration policy. We present the impacts on employment, GVA, population, and GVA per capita. We also estimate the impact across sectors and the implications for income related tax.

3.1 IMPLICATIONS OF THE NEW APPROACH

It is worth considering at a high level the implications of the changes before presenting the results of our impact modelling.

The **salary threshold** will have a significant negative impact on the NI economy. We have already shown that the median salary for EU26 workers is £18,000 in NI and that only 16% (working over 30 hours a week), earned over £25,000 per year. Given EU26 workers tend to be concentrated in certain sectors of the economy, the direct impacts of the policy will also be concentrated in specific sectors and areas of NI.

Of course, there are other considerations alongside this salary threshold. A **Shortage Occupation List** for NI could allow a lower salary threshold. However, without additional information on the potential composition of an NI specific SOL, we cannot model the impacts.

The **temporary work visa** could have, in theory, provided NI companies with a route to secure EU26 migrant labour. This could have helped address hard to fill vacancies in the future. However, the UK Government has ruled this option out in their policy statement.

Public service occupations such as nurses, medical radiographers, paramedics and secondary school teachers will be treated differently. Migrants in these occupations must secure employment at the standard rate of pay so long as it is at least £20,480 (it is worth noting that pre-registration nurses can be paid below this threshold). This will limit much of the negative impact of the salary threshold in these occupations as most of these jobs start close to or above the £20,480 level. In our modelling we have considered the slightly higher salary threshold of £20,800 which was originally set out in the Migration White Paper. The results are presented later in this chapter.

In the 2018 White Paper, those under 26 and **converting from study to work** were also treated differently, allowing them to stay on a Tier 2 visa for up to three years below the threshold salary if they earn at a minimum £20,800. However, the 2020 policy statement does not give full details on arrangements for student visas. Given the low volume of foreign students in NI, the presence of this exemption would have been limited. The most recent data for 2017 shows that fewer than 200 EU26 students graduated in NI in 2017, of whom only around a third went to work in the UK. As those working in NI represent a subset of this total, that it applies only to students under 26, and that only some of these workers will earn between the temporary and Tier 2 visa thresholds, the impact of these students will not have a material impact on the NI economy.

The White Paper contained proposals to remove the cap on Tier 2 visas and lower the skills threshold. These measures were also likely to have marginal impacts. Firstly, the removal of the cap will only impact migrants earning over the salary threshold and occupations such as Doctors and nurses are already exempt from the cap. In addition, the impact of lowering the skill level requirement is offset by the need to earn over the salary threshold. We therefore conclude that both the reduction in the cap and lower skills threshold will have marginal impacts on the NI economy[35].

The UK Government has now committed to a points-based system. This might offer some flexibility for migrants to the UK and NI as it allows a trade-off between different employment "characteristics". However, full analysis of the points-based system is out of the scope of this paper.

Given the above, Box 2 below describes our modelling approach which estimates the number of EU26 workers earning under £25,000 from 2018 to 2030 by sector and therefore the number of jobs that may not be filled over the forecast period. It then estimates the likely outflow of EU26 migrants over the forecast period, before accounting for the volume of public service jobs that are exempt and the number of under 26 year old migrants that will switch from studying to work.

[35] HM Government arrived at a similar conclusions in their assessment (see page 140 of "The UK's future skills-based Immigration system", December 2018).

BOX 2: OUR MODELLING APPROACH

We adopted a *static* modelling approach to this work (a detailed explanation is set out in the Technical Annex). This is consistent with the frameworks adopted in recent policy papers published for Wales and Scotland[36] [37].

In summary, our modelling approach has the following stages:

1. estimate the number of EU26 workers earning under £25,000 by sector;
2. apply the share of EU26 workers earning under the £25,000 threshold by sector to our sectoral employment forecasts for NI to estimate the number of jobs that would have been taken by individuals who would no longer be able to be resident in the UK and apply our lost workers to our baseline forecasts;
3. adjust the forecasts to take account of exempt public service occupations and EU26 graduates entering the labour market;
4. assume that the jobs that would have been taken by EU26 migrants are not taken up by existing residents in NI—because either the skill profile of EU26 residents specifically matched those jobs, or because they may have been willing to accept a wage that NI residents would not;
5. use our forecasts for sectoral productivity (adjusted to reflect the loss of lower skilled / lower paid roles) to estimate the associated level of GVA that would no longer be produced;
6. adjust our population forecasts to account for the lower number of EU26 migrants; and
7. calculate the implied impact on GVA per capita.

This approach does not account for the *dynamic* effects of the policy. We do not for example model the possible change in behaviour by businesses (who may adjust their average salaries) or by individuals (who may react to higher wages or a larger pool of unfilled vacancies). We do however discuss how businesses and individuals might react later in the document.

The model uses Oxford Economics baseline forecasts for NI that incorporate the official population projections produced by the ONS. It also uses a range of datasets published by ONS and NISRA. We document these in the Technical Annex. In addition, we use bespoke cuts of LFS and APS data sourced from an ONS Microlab. Given sample sizes we have had to combine 2016, 2017 and 2018 survey results to access the detailed industrial, occupation and salary information we required for the modelling. We have tested the accuracy of this data by comparing some of the information with the limited published data available (see annex “Verifying Microlab data” at the end of this document).

[36] J and Forte, G Portes, "Migration in Wales: the impact of post-Brexit policy changes" (research report, Wales Centre for Public Policy, February 2019).

[37] C, Bell, D, Copus, A, Kay, R and Kulu, H Boswell, "UK Immigration Policy After Leaving the EU: impacts on Scotland's economy, population and society" (Research report, Expert Advisory Group on Migration and Population, 2019).

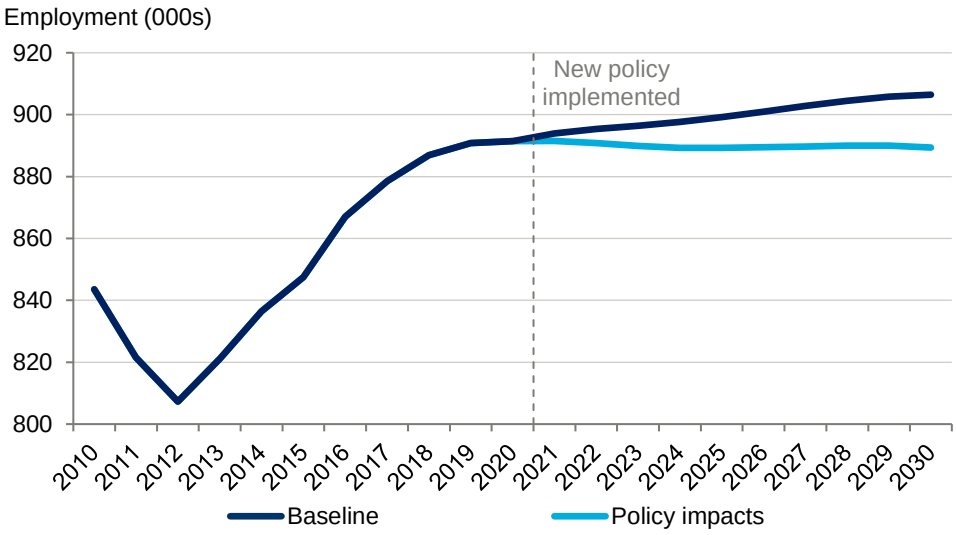
3.2 ESTIMATED IMPACTS

3.2.1 Labour market and economic impacts

We estimate that the new approach to migration policy will lead to a **lower level of employment in NI**. While the baseline forecasts (which assume no change in migration policy) estimate that workforce jobs will increase from 893,900 in 2021 to 906,500 by 2030, the policy impact will result in an overall reduction in employment, to 889,400 by 2030.

Assuming, therefore a continuation of the current sectoral shares of EU26 workers, we estimate the lower level of employment would equate to a 1.9% reduction in total employment by 2030 compared to our baseline forecasts, **equivalent to nearly 17,100 jobs that would otherwise have been filled by EU26 migrants by 2030**.

Fig. 23. Baseline employment forecasts and policy impacts, 2010 to 2030



Source: ONS, NISRA, Oxford Economics

We have made a number of assumptions and accounted for several trends to estimate the employment impact. One of the key assumptions driving this is that **jobs that would have previously been occupied by EU26 migrants would not be taken up by NI residents** given a mix of a mismatch in skills demanded and those in supply, and an unwillingness to accept relatively low wages.

We also **assume the current EU26 population in NI is free to switch between jobs / occupations over the forecast period**. This is important for estimating the impacts of sectoral growth. Overall, our baseline forecast suggest demand for EU26 migrants will increase slightly, from 48,200 in 2020 to 49,000 by 2030 (though this masks expected falls in demand in manufacturing for example). With restrictions on future EU26 migrants to NI, there will therefore be unfilled vacancies in parts of the economy. Migrant workers already in NI and earning under £25,000 will be allowed to move between jobs. Hence EU26 workers could move into growth sectors.

In practice, a mismatch of skills is likely to restrict EU26 movements across sectors and occupations pushing up the number of unfilled job vacancies. It is outside the scope of this project to consider in detail the demand and supply of skills of EU26 workers, and hence the model assumes the free movement of EU26 workers (currently employed in NI) between sectors and occupations.

Consequently, we forecast just over 1,730 jobs currently filled by EU26 migrants will be lost due to general contraction in employment in the economy (in sectors such as manufacturing). However, with growth in other parts of the economy we forecast additional demand for nearly 890 EU26 workers earning under £25,000 (in sectors such as administrative and support services and accommodation and food services). The net impact (assuming EU26 labour lost in one sector can meet demand in another) is therefore nearly 840 less jobs taken by EU26 labour.

However, this estimated reduction in EU26 filled jobs (assuming the share of jobs taken by EU26 labour remains fixed across sectors) is minor compared to the impacts of annual outflows of migrant labour. The main reason we expect such a large loss of EU26 jobs overall is due to **replacement demand**—in other words, the need to replace EU26 migrants that flow out of the economy each year. Total international out-migration (all non-UK migrants) was nearly 19,400 in 2018, and we estimate that the number attributable to EU26-born individuals was close to 4,500 in that year.[38] Our baseline forecasts show that over the period 2021 to 2030, the annual average outflow of EU26 born people would be approximately 4,200 per year.

Consequently, EU26 population and employment levels will fall over time—because if there are restrictions on inflows, it will be difficult to replace the stock of EU26 working in jobs earning less than £25,000 from 2021 onwards.

Overall, we estimate the cumulative impact of not being able to replace the outflow of EU26 individuals is a loss of approximately 25,600 people, and a loss of 17,800 people that would have been employed in roles paying less than £25,000. Though as we discuss later, these impacts are mitigated slightly through the safeguarded public sector occupations and the treatment of “new entrants”— currently those under the age of 26, as well as people switching from a study visa to a work visa.

The overall job losses set out above are marginally offset by the safeguarding of public service occupations that fall within the standard salary bands as per visa guidelines or above the £20,800 threshold. However, given that only 2.9% of public service sector employment is taken by migrants, the mitigating impacts are limited. Likewise, the impact of new EU26 entrants to the labour market that earn over £20,800 and who can stay after three years[39] if they earn over £25,000 is estimated to have a limited impact on safeguarding jobs and

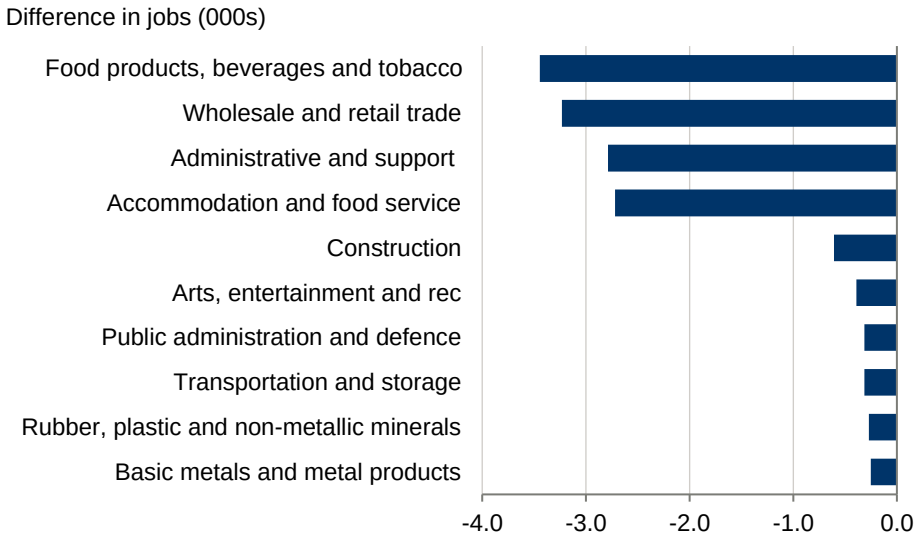
[38] Using UK statistics on the share of EU out-migration to total out-migration. These data have been sourced from the experimental series, “Long-Term International Migration: Rolling annual data for the United Kingdom, year ending March 2019” published by ONS.

[39] The MAC has recommended extending this period to five years, but the UK Government has not responded to this issue.

migrants given the low number of EU26 students leaving NI Higher Education and securing employment in Northern Ireland.

At a sectoral level, we estimate that the largest direct employment impacts are most acutely felt in the food manufacturing and wholesale & retail sectors, equivalent to 3,450 and over 3,200 fewer jobs respectively, or a 15.6% and 2.3% reduction relative to the 2030 baseline value. In addition, the administrative and support sector is expected to support 2,800 fewer jobs than the baseline (4.0% lower), while accommodation & food services is expected to experience 2,700 fewer jobs (a 4.7% contraction). This estimate reflects the high concentration of EU26-born individuals working in these sectors. More sectoral detail is provided in the Additional Tables Annex.

Fig. 24. Employment difference with baseline forecasts (top 10), 2030



Source: Oxford Economics

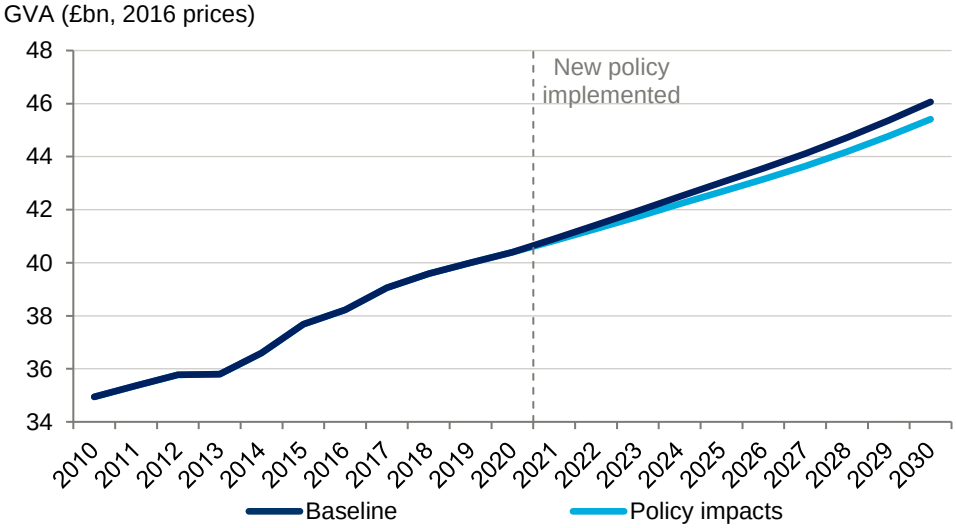
As noted by the MAC and by Portes and Forte's (2019) study on the impact of migration policy changes on Wales[40], the literature on the productivity impact of migrants is subject to significant uncertainty. While studies such as Hornung (2014)[41] estimate that high-skilled immigration has a positive impact on productivity, there is no clear correlation with lower-skilled immigration throughout the literature. Consequently, we assume the reduction in EU26 workers has no impact on average sectoral productivity. This assumption is consistent with both the MAC conclusions[42] and the approach taken by Portes & Forte (2019).

[40] https://www.wcpp.org.uk/wp-content/uploads/2019/03/FINAL-WCPP-report_Immigration-in-Wales-post-Brexit.pdf
[41] Hornung (2014). "Immigration and the diffusion of technology: The Huguenot diaspora in Prussia" The American Economic Review (January 2014).
[42] Ibid, Para. 2.36, p.59.

However, to reflect the fact that the migration policy will impact lower-paid roles in NI, we have adjusted down sectoral productivity[43] using the ratio of EU26 wages to average wages, when estimating the GVA impacts.

We conclude that the policy changes will lead to a 1.4% fall in GVA by 2030, equivalent to a loss of £650 million in that year (in 2016 prices).

Fig. 25. Baseline GVA forecasts and policy impacts, 2010 to 2030



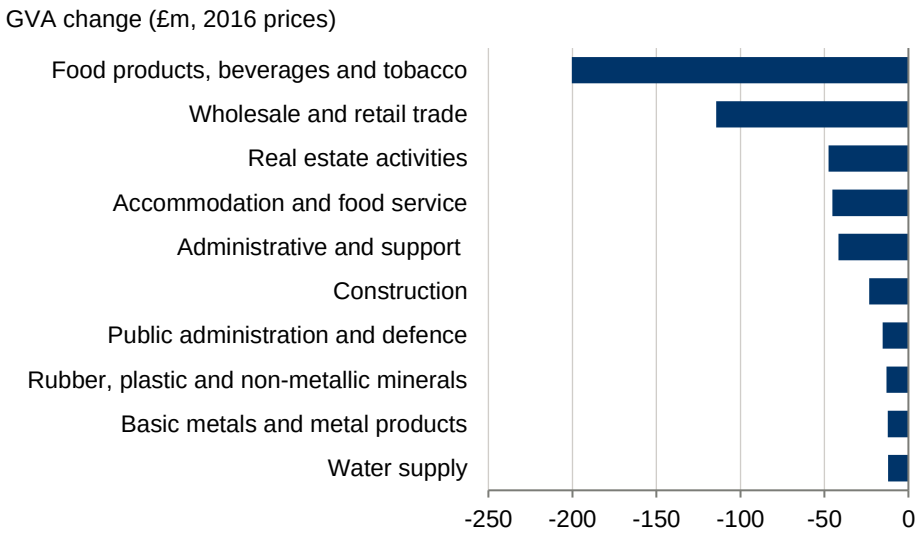
Source: ONS, NISRA, Oxford Economics

At a sectoral level the largest adverse impact is felt by the manufacturing sector, given the concentration of EU26 workers. For example, we forecast that GVA would be some £285m less than it would have been in 2030 (a fall of 4.6% compared to the baseline forecast for 2030), with £200m in the manufacturing of food products, beverages and tobacco sub-sector alone, which is equivalent to a 11.6% fall on the 2030 baseline level of GVA (see Fig. 26).

Wholesale & retail trade (£114m, or a 1.7% reduction by 2030) and accommodation and food service (£45m or a 3.5% reduction by 2030) are also estimated to experience a significant decline in GVA by 2030 relative to the baseline forecast. The impact on these sectors is partly due to the impact of weaker migration and a smaller overall population—discussed further in the following section. More sectoral detail is provided in the Additional Tables Annex.

[43] Productivity in the model is defined as GVA per job. Therefore, the GVA impact is estimated as *(GVA = Productivity x employment)*.

Fig. 26. GVA difference with baseline forecasts (top 10), 2030[44]



Source: Oxford Economics

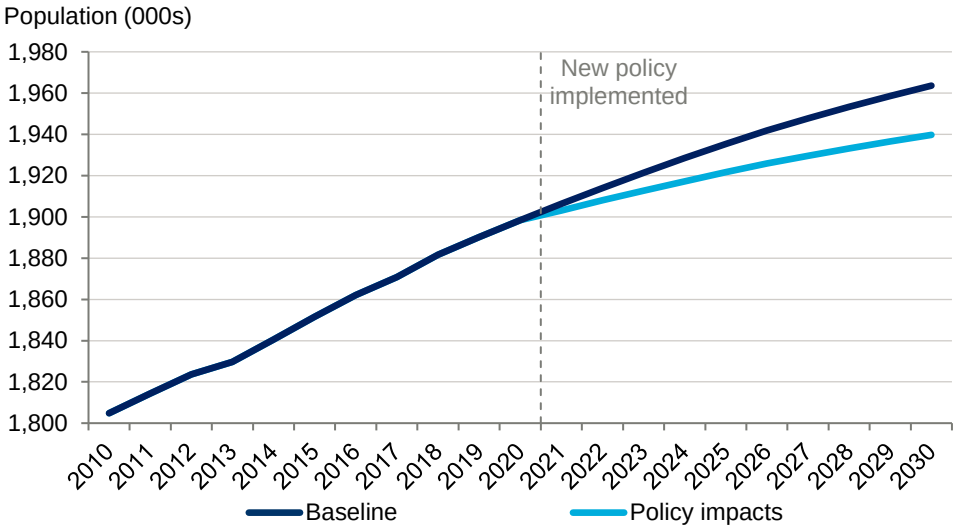
3.2.2 Demographic impacts

As noted earlier, being unable to replace the annual outflow of EU26 migrants would result in an estimated cumulative loss of 25,600 EU26 born residents. This falls slightly however when we factor in the safeguarded public sector occupations and the "new entrants"— currently those under the age of 26, as well as people switching from a study visa to a work visa.

Overall, we estimate there would be nearly 23,900 fewer EU26 citizens in NI, or 1.2% lower than the baseline population outlook by 2030.

[44] In estimating the sectoral GVA impact we use sectoral productivity and the change in sectoral employment. Real estate productivity is significantly large due to the inclusion of imputed rents. As result the GVA impact is larger than one might expect given the number of EU26 working in the sector.

Fig. 27. Baseline population forecasts and policy impacts, 2010 to 2030

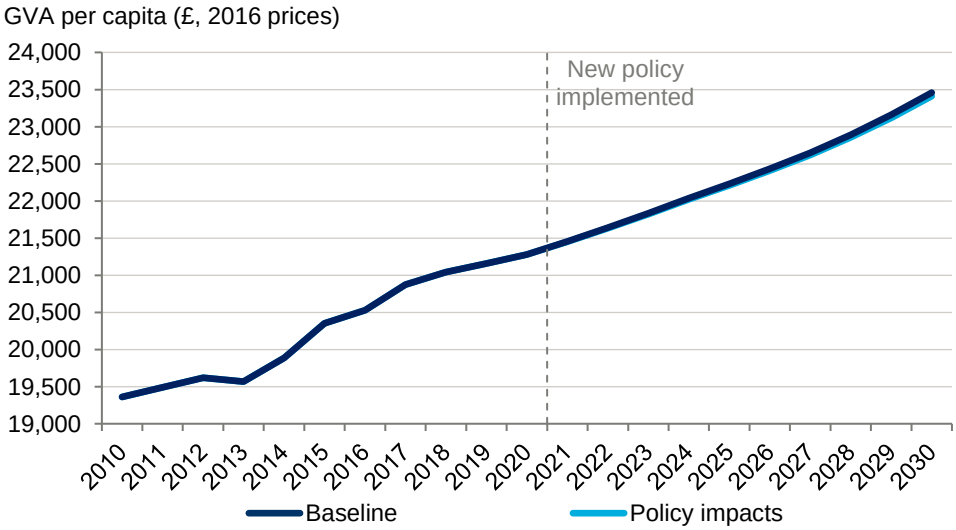


Source: ONS, NISRA, Oxford Economics

3.2.3 GVA per capita impacts

Given the above we estimate GVA per capita would be 0.2% (or £47.50 per person) lower by 2030, compared to the baseline forecast. The impact on future GVA (1.4% lower by 2030) will be largely offset by a smaller population (1.2% lower).

Fig. 28. Baseline GVA per capita forecasts and policy impacts, 2010 to 2030



Source: ONS, NISRA, Oxford Economics

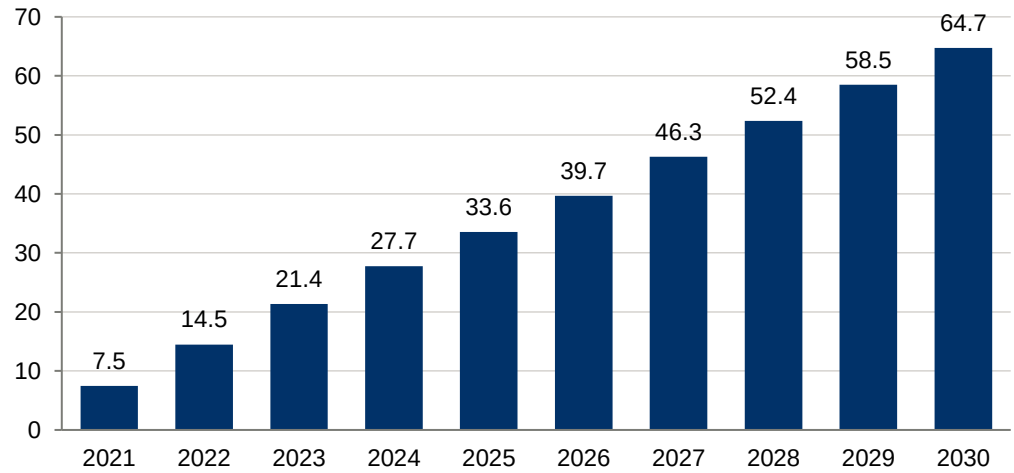
3.2.4 Fiscal impacts

Reducing migrant numbers who are typically of working age and who are more likely to be employed (relative to the current population) will have a negative impact on Government finances. The policy changes will increase the

dependency ratio (i.e. push up the share of the population aged under 16 and over 64) in NI and reduce tax revenue by a greater extent than Government expenditure will fall due to the lower population level.

We estimate the income tax, employees National Insurance Contributions (NICs) and employer NICs will fall by £125.6 million by 2030, or £706 million cumulatively. This equates to a loss of approximately £64.70 per capita by 2030.

Fig. 29. Lost income tax and NICs per capita, 2021 to 2030



Source: Oxford Economics

In addition to the above, there could also be a reduction in VAT payments through lost consumer spending. Likewise, corporation tax could be lost through reduced turnover and if unfilled jobs or pressure to increase wages results in business closures.

3.3 WIDER IMPLICATIONS (SUPPLY CHAIN AND CONSUMER SPENDING)

The impacts discussed so far are the direct results of the new approach to migration policy. However, the estimates above might slightly underestimate the total impacts. A reduction in activity in one sector will inevitably also have implications for its supply chain, while reduced levels of employment will affect consumer spending levels.

We expect lower employment levels particularly in wholesale & retail, food manufacturing, administrative and support, and accommodation & food services, arising from the changes in migration policy.[45] However, the scale of losses in these sectors might have negative supply chain and / or consumer spending impacts over and above the estimated loss of jobs arising from the policy change.

[45] See the additional tables in the annex for more detail.

3.4 SUMMARY

In summary we estimate that:

- The new migration system will have an adverse impact on the NI economy, reducing employment levels by nearly 17,100 by 2030 (a 1.9% loss) relative to the baseline forecast.
- Lower employment levels will be concentrated in sectors that typically support higher shares of EU26 workers, such as wholesale & retail, manufacturing and accommodation & food services.
- Lower employment levels will reduce GVA by 1.4% or £650 million (in 2016 prices) compared to our baseline outlook by 2030.
- Given the restrictions on new migrants taking up new jobs and the inability of employers to replace workers leaving NI (replacement demand), population is estimated to be 23,900 people or 1.2% lower than our baseline forecast by 2030.
- We find safeguarding public sector occupations, and rules around "new entrants" currently under the age of 26, will have a limited overall mitigating impact, offsetting the lower employment by just 1,700 jobs.
- A smaller workforce will result in lower income tax, employee and employer NICs, equating to £125.6 million in 2030, or a £706 million cumulative loss of tax revenues throughout the 2020s.

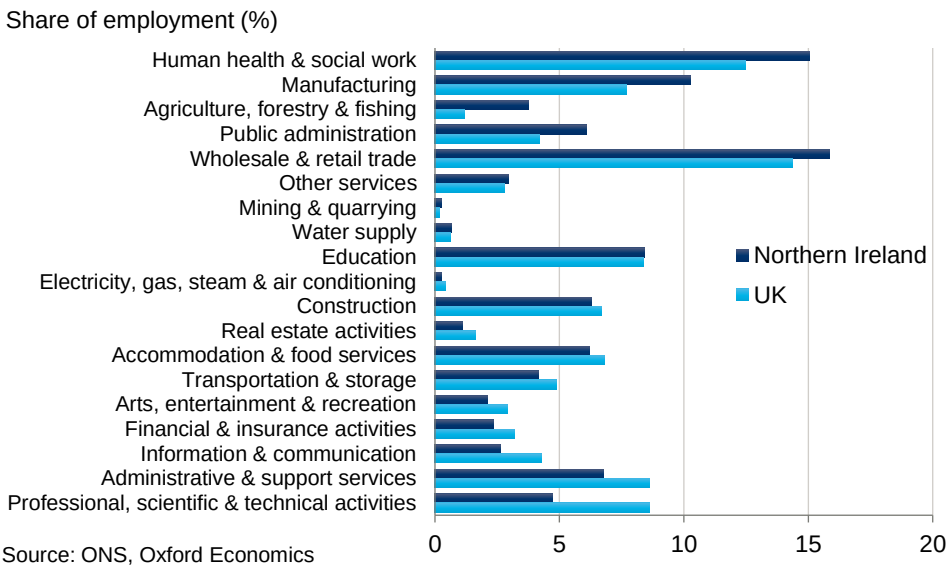
4. SPECIFIC REGIONAL ISSUES

Constraining firms' access to migrant labour in any economy will inevitably have implications for NI businesses. In this section we show how NI's structure leaves it particularly vulnerable. In addition, the characteristics of NI's Local Government Districts that border the Republic of Ireland, both in terms of their economic geography and the structure of their economies, indicate that these areas may be particularly adversely impacted by the changes to migration policy.

4.1 A LOWER-PAID ECONOMY

There are a variety of factors unique to NI that may influence the extent to which the Immigration policy may affect the economy. The sectoral mix of the NI economy leaves it particularly vulnerable to shortages in typically labour-intensive sectors. The employment base is comparatively dominated by manufacturing and agriculture, forestry & fishing sectors, alongside typically public-sector activities including human health & social work and public administration.

Fig. 30. Employment by sector, NI and UK, 2017

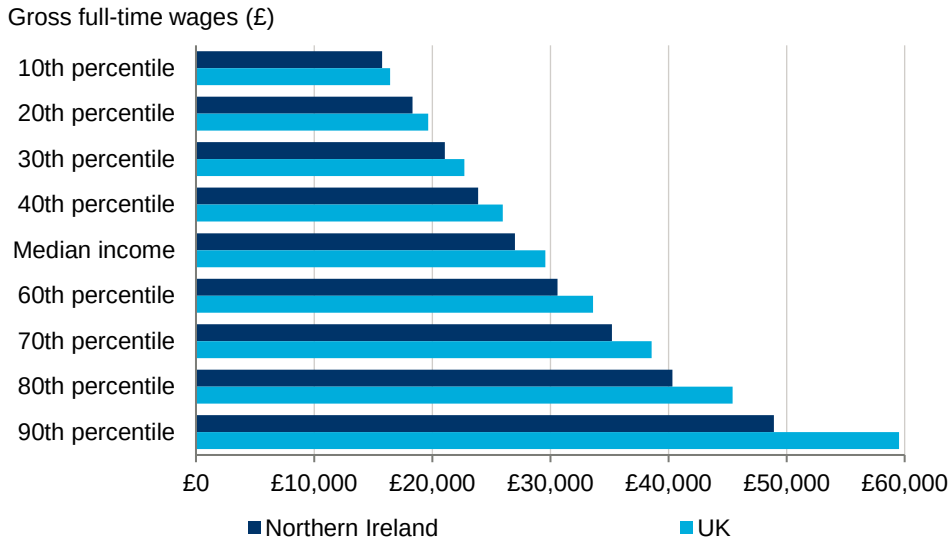


Source: ONS, Oxford Economics

At the other end of the scale, NI tends to support lower shares of the private sector services which in general tend to offer higher wages: including professional, scientific & technical activities, administrative & support services, information & communication and financial & insurance activities.

This is reflected in the income distribution across the workforce. Wages across NI are generally lower than elsewhere in the UK. Indeed, for each percentile, gross average earnings lag the equivalent benchmark across the UK. Not only are average earnings lower within each percentile, but the proportional 'wage gap' increases with earnings: from 4% for the 10th percentile, to 10% for the median income, to 21% for the 90th percentile.

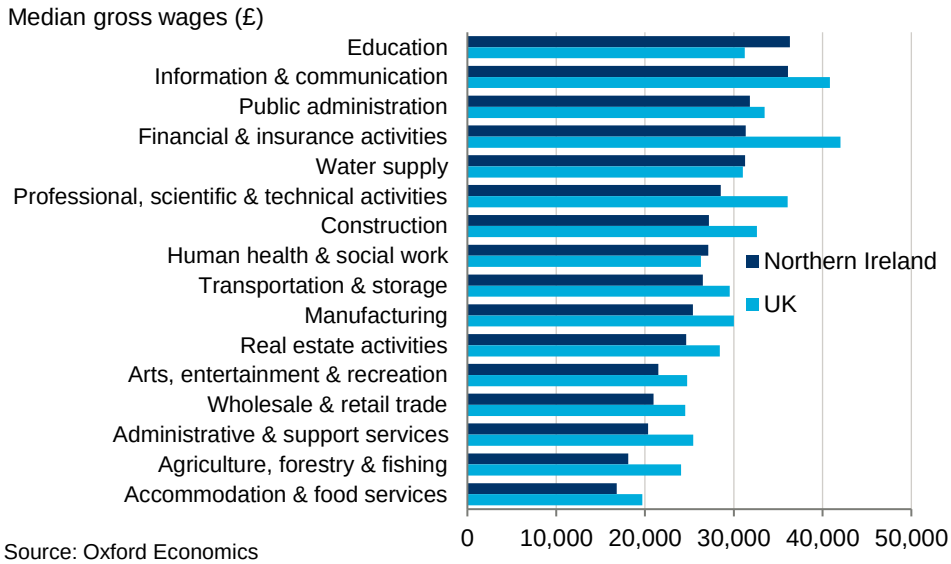
Fig. 31. Gross full-time wages distribution, NI and UK, 2018



Source: ONS, ASHE

Only nine sectors across NI have median wages that exceed £25,600 per year, while only three sectors—education, water supply and human health & social work—support a higher median wage than across the UK. Those sectors that tend to support higher wages are generally linked to the public sector or typically private-sector services[46].

Fig. 32. Median gross wages by broad sector (all employees), NI and UK, 2018



Source: Oxford Economics

[46] Note that information on mining & quarrying, electricity, gas, steam & air conditioning supply and other sectors is disclosive and hence has not been included in this series.

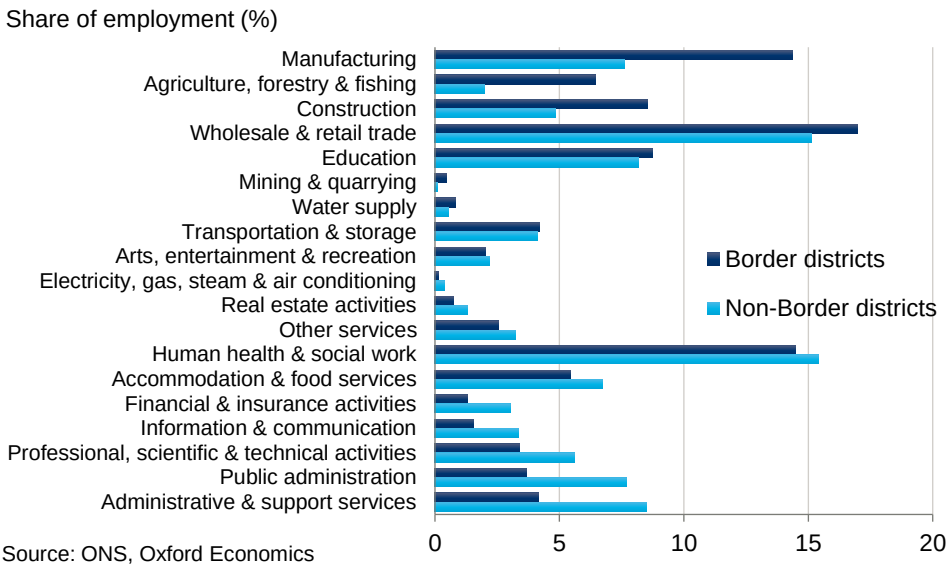
4.2 GEOGRAPHICAL IMPACTS

While NI in general tends to be a lower-wage economy, relative to elsewhere in the UK, the extent of this is by no means uniform across its districts. To explore these regional variations in more detail, we contrast those five 'Border' districts that share a land-border with the Republic of Ireland[47] with other districts elsewhere in NI.

Sectors that are typically most vulnerable to shortages in labour have larger concentrations of employment in the five Border districts. Indeed, manufacturing is the second largest employer across the Border districts (14.4%), while its share of total employment is almost twice as high as the Non-Border districts.

Agriculture also has larger shares of employment in these more rural border economies. Given the large presence of food manufacturing in particular across this region, these two sectors are likely linked through up- and down-stream supply chain relationships. Conversely, the private sector services that operate in NI typically locate in Non-Border districts, particularly in or nearby Belfast (though Derry / Londonderry as well as Newry play important roles in financial services, IT and fintech / insurance).

Fig. 33. Employment by sector, Border and Non-Border districts, 2017



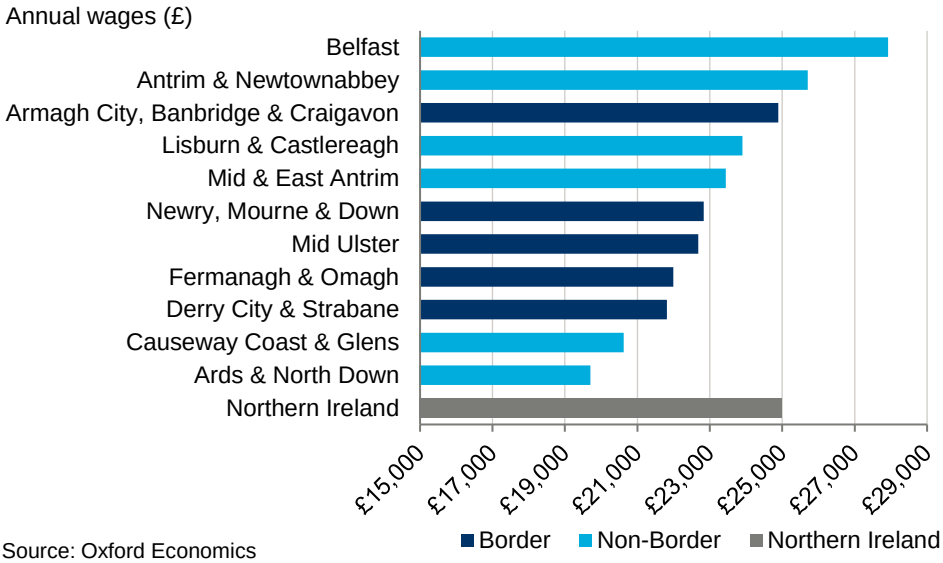
Source: ONS, Oxford Economics

As the sectoral mix can in part influence the gap in earnings between workers in NI and the UK as a whole, we see a similar pattern between the Border and Non-Border districts. Four of the five districts rank sixth or lower for median weekly incomes across Northern Ireland, with Armagh City, Banbridge & Craigavon (third) the main exception. However, in each case, median incomes lag Northern Ireland as a whole.

[47] Armagh, Banbridge & Craigavon, Derry & Strabane, Fermanagh & Omagh, Mid Ulster, and Newry, Mourne & Down.

Indeed, although not part of the Border geography, both Causeway Coast & Glens and Ards & North Down—which support the lowest median wages—also share some of the rural characteristics of the Border economies.

Fig. 34. Median annual wages, Northern Ireland Districts, 2018



Source: Oxford Economics

4.3 A LAND BORDER WITH THE EU

While the industrial structure of the Border economies may make them more vulnerable to the changes to migration policy, this may be further compounded by their location. NI is the only region of the UK with an international land border, and cross border commuting, which adds further complication to the potential dynamic impacts of this policy.

Firms operating in this region are to a large extent operating in the same labour markets as rivals in the Republic of Ireland. As a result, a shortfall of labour within these Border districts could have a range of distorting effects on the cross-border labour market. While lower levels of migration may put upward pressure on wages in NI, the increased costs for firms may hinder their ability to compete with firms in the Republic of Ireland—particularly when you consider the often low-margin, highly competitive markets many firms operate in, which tend to compete on cost.

With relatively higher wages, workers in the Republic of Ireland could be attracted to NI for work (though anecdotal evidence suggests NI wages would need to rise notably to be above those in the border areas of the Republic of Ireland). This would result in greater commuting inflows to NI, to fill jobs that were previously taken by EU26 workers, or at a more extreme level may result in ‘capital flight’, where firms that would otherwise operate in NI are instead displaced to Republic of Ireland.

Now that the UK has left the EU there will be a range of factors influencing private sector investments. Access to labour is an important consideration, but so too will be free trade arrangements, visas, regulation, skills, etc. Therefore, the future performance of NI businesses will be impacted by a range of factors, of which migration policy is one.

4.4 SUMMARY

In summary we find that:

- Border districts on average tend to draw a larger share of employment from comparatively labour-intensive sectors, such as agriculture and manufacturing, and thus may be vulnerable to shocks to the labour supply.
- Increasing wages could hinder the profitability of these firms—many of whom tend to operate in low-margin, cost-competitive markets.
- While some of the labour shortages may be met by workers based in the Republic of Ireland, there is a risk of 'capital flight' from NI to the Republic of Ireland.

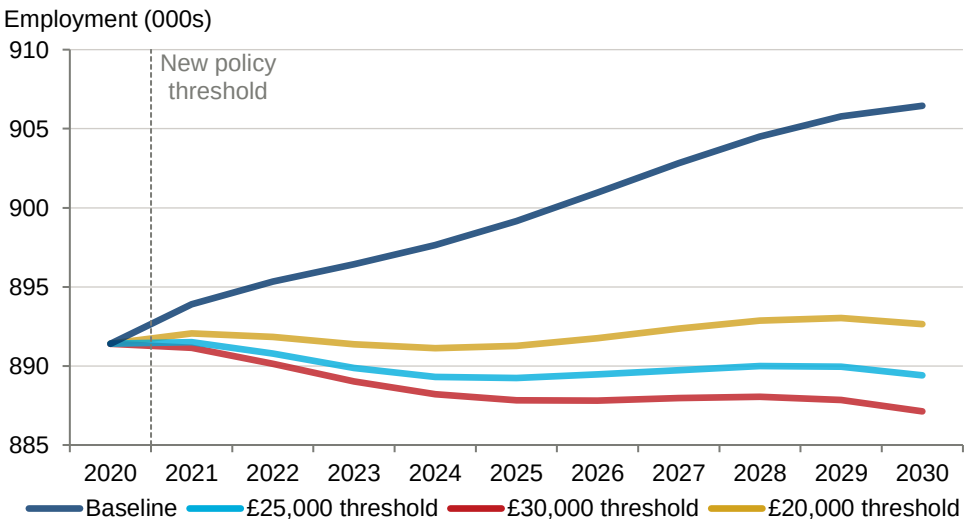
5. ALTERNATIVE POLICY SCENARIOS

In this section we consider two alternative migration policy scenarios: the original salary threshold of £30,000, and a reduced threshold of £20,000. We find that reducing the salary threshold reduces the negative impacts on the NI economy and the impacts are more sensitive to changes below the £25,000 threshold than above it. However, given the large share of EU26 workers earning salaries below £20,000, the salary threshold would need to be reduced substantially to effectively mitigate the adverse impacts of this policy approach.

5.1 EMPLOYMENT AND ECONOMIC IMPACTS

With a £30,000 threshold, the employment impacts increase from 17,100 to 19,300 by 2030, equivalent to 2.1% lower than the baseline value in 2030[48]. By contrast, the £20,000 threshold results in a loss of 13,800 jobs (or 1.5% on the baseline value). The lower alternative scenario therefore has a larger magnitude of impact relative to the £25,000 scenario (3,300 fewer jobs lost) than the higher alternative threshold (2,300 more jobs lost). This reflects a greater propensity for EU26 workers earning over £20,000 to typically have lower salaries—indeed, ONS Microlab data suggests that 56% of those earning over this threshold also earn under £25,000, a rate almost twice the equivalent for all workers (30%).

Fig. 35. Employment forecasts under alternative scenarios



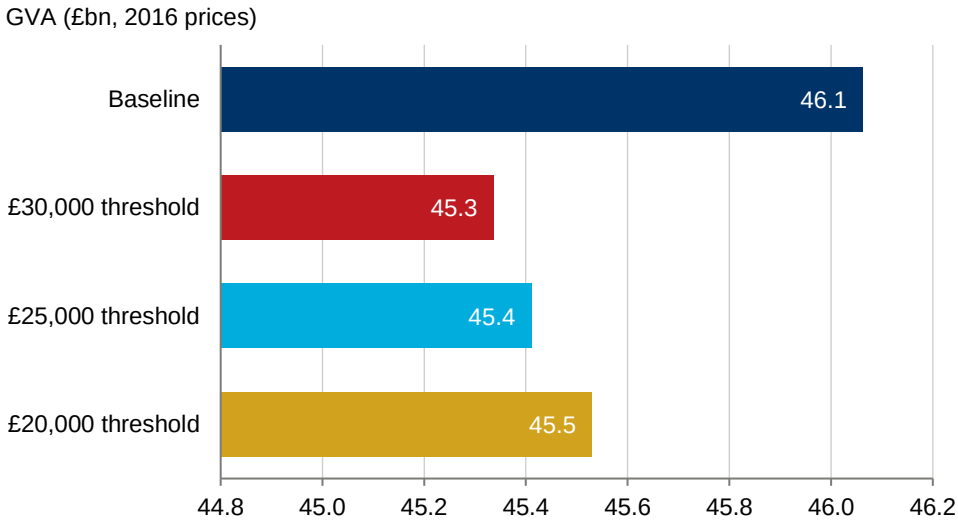
Source: ONS, NISRA, Oxford Economics

The £25,000 threshold was estimated to result in GVA levels 1.4% below the baseline by 2030. Under the two alternative scenarios, we estimate a GVA

[48] For reference, Portes and Forte's (2019) study on the impact of migration policy changes on Wales[48] estimated the UK workforce would fall by 2.5% over a 10-year period, while Wales would experience a 1.5% reduction. The larger impacts on employment in NI reflect a variety of factors, one of which is the proportionately larger contribution of EU26 workers to the NI workforce (5.6%) than in Wales (3.5%).

impact of 1.6% or £730m with a £30,000 threshold[49], and 1.2% or £530m in the case of a £20,000 threshold.

Fig. 36. GVA levels under different outlooks, 2030



Source: ONS, NISRA, Oxford Economics

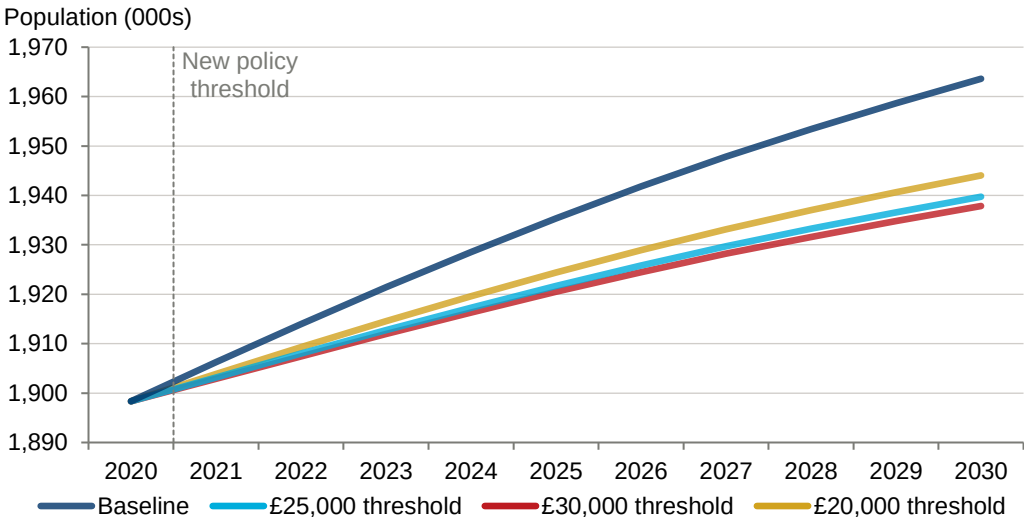
5.2 POPULATION IMPACTS

Our analysis of population shows that lowering the salary threshold reduces the adverse impact on the NI economy, but again only marginally. Reducing the salary threshold from £25,000 to £20,000 limits the reduction in population from 23,900 to 19,600 by 2030. By contrast, increasing the threshold to £30,000 results in a contraction in the population of 25,700 by 2030, 1,900 more than under the £25,000 scenario[50].

[49] The estimated magnitude of the GVA impact across NI is at the higher end of the estimates of Portes & Forte (2019) for Wales, which ranged between 1.1% to 1.6%. Our GVA impact estimate is also consistent with their UK impact estimate of between 1.4% to 1.9%. Our estimates are also of similar magnitude to HM Government's (2018) estimate that UK GVA would fall by 0.4% to 0.9% by 2025; our comparable figure for NI is a GVA loss of 0.9% by 2025.

[50] For reference, the Welsh study suggested that the UK population would be 1.0% lower and the Welsh population 0.8% lower over 10 years.

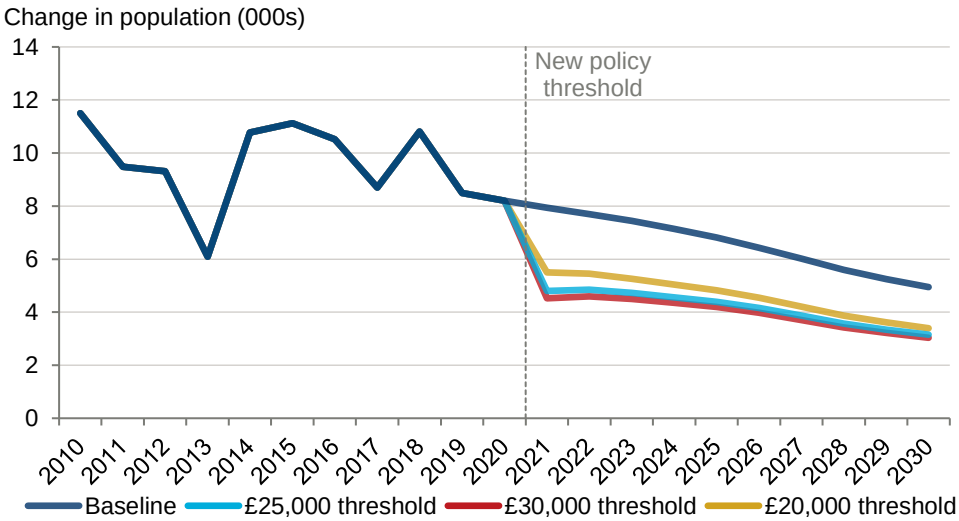
Fig. 37. Population forecasts under alternative scenarios



Source: ONS, NISRA, Oxford Economics

In terms of annual changes, there tends to be a greater divergence between the three scenarios in the early years of the policy impact. As earnings increase into the future (in real terms), the annual impact on population change between the three scenarios will partly converge over time.

Fig. 38. Population changes under alternative scenarios



Source: ONS, NISRA, Oxford Economics

5.3 GVA PER CAPITA IMPACTS

The adverse impact on GVA per capita is only marginally limited by reducing the threshold. We estimate the £30,000 threshold would result in GVA per capita being £63 per person lower than the baseline forecast by 2030, rather than £47.50 per person with a £25,000 threshold[51]. By contrast, the £20,000

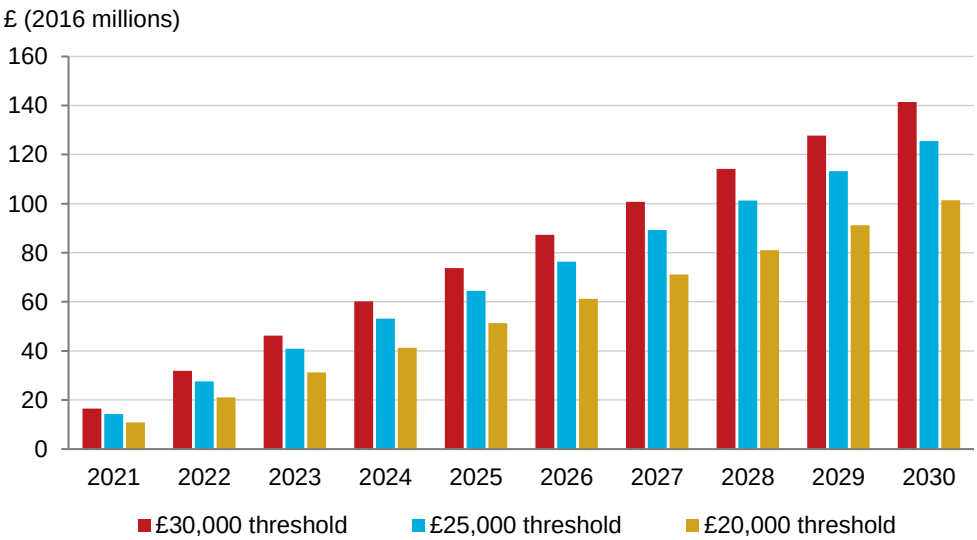
[51] For reference, the Welsh report suggested a 0.4% reduction in GVA per capita in the UK and a 0.3% reduction in Wales.

threshold would restrict the fall in GVA per capita to just nearly £38 per person by 2030.

5.4 FISCAL IMPACTS

The approach to migration policy would lead to a loss of £125.6m in income related tax by 2030. Under our two alternative scenarios this increases to £141.1m in lost tax with a £25,000 salary threshold, and £101.5m of lost tax with a £20,000 salary threshold.

Fig. 39. Lost income tax, employees NICs and employer NICs under alternative scenarios



Source: Oxford Economics

5.5 SUMMARY

In summary we find that, as expected, a higher salary threshold will result in a more adverse impact on the NI economy than the £25,000 threshold scenario, and vice versa. Interestingly, the impacts of the two alternative scenarios are not equivalent in scale—reducing the threshold by £5,000 (to £20,000) will mitigate proportionately more of the adverse impacts on the NI economy, than raising the threshold by £5,000 (to £30,000) will cause. The impacts are therefore more sensitive to changes below the £25,000 threshold than above it. However, given the large share of EU26 workers earning salaries below £20,000, the salary threshold would need to be reduced substantially to effectively mitigate the adverse impacts of this policy approach.

Fig. 40. Summary of scenario results

	Employment		GVA		Population		GVA per capita	
	000s	%	£bn (2016)	%	000s	%	£ (2016)	%
£30,000 threshold	-19.3	-2.1	-0.73	-1.6	-25.7	-1.3	-63.1	-0.3
£25,000 threshold	**-17.1**	**-1.9**	**-0.65**	**-1.4**	**-23.9**	**-1.2**	**-47.5**	**-0.2**
£20,000 threshold	-13.8	-1.5	-0.53	-1.2	-19.6	-1.0	-38.0	-0.2

Source: Oxford Economics

6. HOW MIGHT THE NI ECONOMY, BUSINESSES, AND PEOPLE REACT?

As noted earlier, our modelling framework does not consider the dynamic effects of changes in behaviour by employers, residents and potential migrants to the new policies. For instance, some employers could increase wages above the £25,600 threshold to hold on to existing staff or to attract new migrants to NI to fill vacancies. Others may react to an increase in the relative "cost" of labour by increasing capital investment.

While the extent of these behavioural changes is highly uncertain, and hence did not form a component of our modelling exercise, in this chapter we discuss potential responses to the changes in migration policy.

6.1 CHANGES IN WAGE RATES AND IMPLICATIONS

Response 1: employers increase wages to attract workers to fill vacancies.

This could encourage NI residents, who would not otherwise be in work, to join the labour force. Alternatively, in certain sectors employers may push wages above the thresholds set out in the new policy, to enable them to attract a broader international pool of potential applicants to fill job vacancies.

However, firms will only be able to increase wages if it is economically viable to do so. Increasing costs through offering higher wages will reduce each firms' profit margins—which in turn may hinder their ability to reinvest in production to boost output. Firms however may also reinvest this profit, or part of, into capital and not solely labour—see the next section for further discussion.

However, the balance of evidence suggests that immigration tends to have a minor impact on wages. Indeed, The Migration Observatory (2018) and the Migration Advisory Committee (September 2018) find that immigration has only small impacts on the overall average wages of UK workers, with some dampening effect on low-waged workers[52]. Any increases in wages as a result of the new migration policy are therefore likely to be of a limited scale.

Response 2: unemployed and inactive workers respond to higher wages.

Alongside the response of employers, we may also consider the potential suitability of the 'supply' of potential workers across the existing population. Our baseline forecast indicates that the pool of unemployed residents of NI will increase over time, from 31,200 in 2019 to 34,500 by 2030[53].

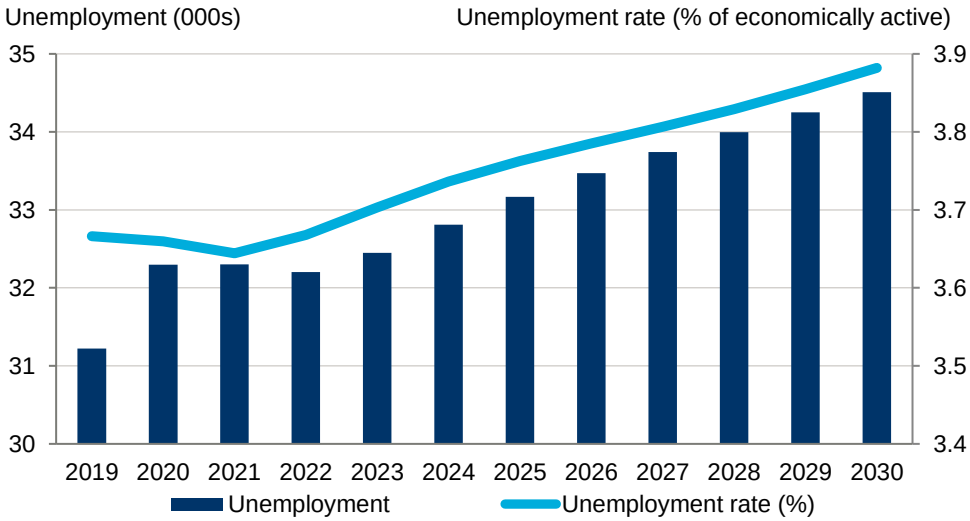
On face value that might suggest some scope for non-employed locals to replace lost EU26 workers. However, unemployment is historically low and

[52] The Migration Observatory (2018), "The Labour Market Effects of Immigration" (December 2018) and The Migration Advisory Committee (2018), "EEA migration in the UK: Final report" (September 2018).
[53] This has been taken from Oxford Economics baseline forecasts which incorporate the official population projections.

while the pool of potential workers will increase, it is not necessarily the case that they will have sufficient skills to meet the needs of employers. Indeed, were the unemployed population sufficiently skilled, it is likely that these unemployed residents would have secured jobs, rather than local businesses having to rely on migrant labour from the EU26. Therefore, the scope for non-working NI born population taking jobs is limited.

Similarly, their wage demands may be higher than local firms are offering. The ability of firms to therefore draw on the existing unemployed population is therefore likely to be limited.

Fig. 41. Unemployment, Northern Ireland, 2019 to 2030



Source: ONS, Oxford Economics

The same arguments hold for the inactive population in NI. In addition, there are a host of reasons for working age individuals to be inactive, and an increase in wage rates being offered in lower value-added jobs, is unlikely to attract significant numbers of inactive people back into the labour market.

6.2 REDUCTION IN NI-BORN OUTFLOWS, INCREASE IN ROI/REST OF UK INFLOWS

Response 3: UK born workers choose to remain in NI for work.

As detailed in the previous chapter, much of the impact of migration policy arises from an inability of employers to replace the churn of workers leaving the NI workforce each year.

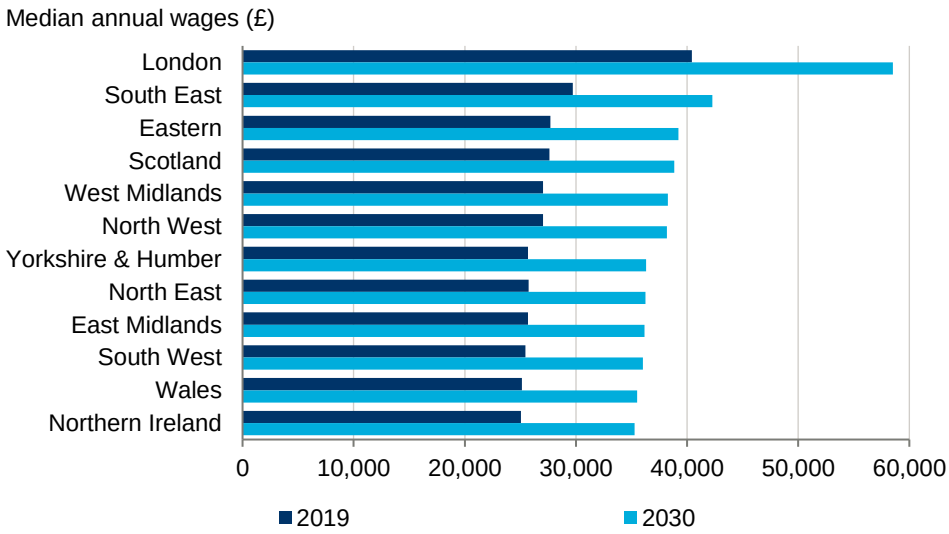
Each year, more than 10,000 UK born individuals leave NI, largely offset by an equivalent UK-born population moving to NI. While some leave to study or for family reasons, many do so to work. With an increase in unfilled vacancies there could be greater incentives for those who would otherwise leave NI to remain within its workforce. Likewise, the increase in employment opportunities and any uplift in wage rates could attract more workers from the Republic of Ireland, but the wage increases would need to be large enough to attract these workers.

Response 4: UK born workers in Great Britain choose to move to NI for work.

While the potential also exists to attract a greater inflow of workers from the rest of the UK, the likelihood of this changing significantly into the future is low. Any migration policy affecting NI will also apply to the other regions of the UK. While our analysis shows that the impacts in NI are comparatively greater than suggested for Wales by the Wales Centre for Public Policy (2019)[54], there nevertheless remains the possibility that other regions—particularly those with a higher existing share of EU26 workers—will be more adversely impacted than NI or Wales. Indeed, even if NI firms were able to respond to the scarcity of workers by increasing wages, it is likely that NI will continue to lag all other regions of the UK, as our baseline forecast shows. Indeed, if NI firms respond with higher wages, then so will firms across Great Britain which could result in a greater outflow of NI working age residents to the rest of the UK.

So, workers who would otherwise be based in other regions in the baseline forecast, would have little incentive to move to NI as a result of this policy change. Overall, this suggests that there may be limited if any potential to greatly increase the inflow of movements from the rest of the UK.

Fig. 42. Median annual wages, UK regions, 2019 and 2030



Source: Oxford Economics

6.3 CAPITAL INVESTMENT AND ARTIFICAL INTELLIGENCE (AI)

Response 5: Firms invest in capital to replace labour.

Given the relative scarcity of migrant labour following the implementation of the new migration policy, firms may react by substituting workers for machinery through increased capital investment. This would manifest itself by an increase

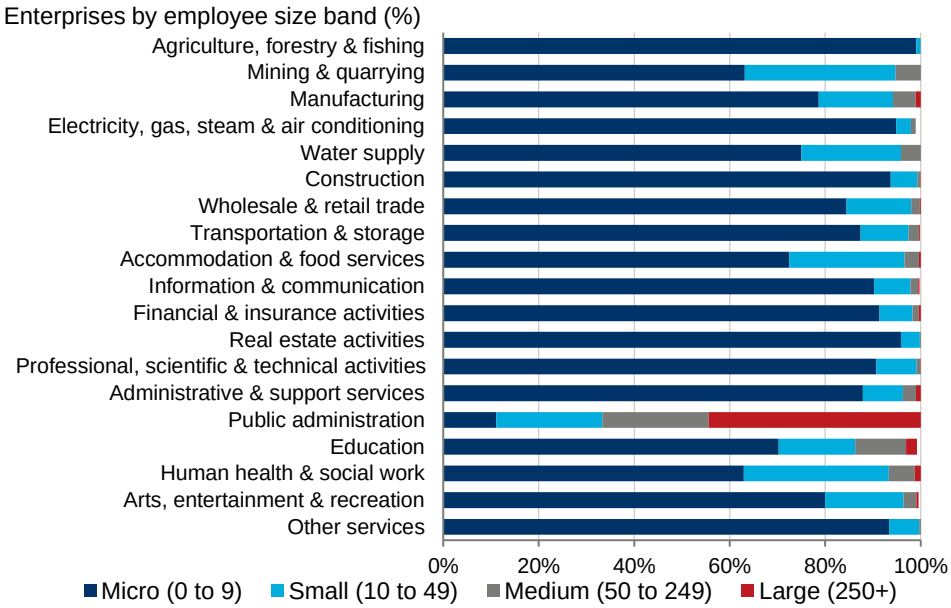
[54] Wales Centre for Public Policy (2019), "Migration in Wales: the impact of post-Brexit policy changes" (February 2019).

(over and above that in our baseline forecasts) in the take-up of automation technologies that will underpin productivity growth into the future.

The extent to which firms will invest more in capital than they otherwise would have done will in part depend on firms' access to finance for capital investment and the activity / sector in which the business is [55]. Sectors at most risk to a reduction in labour supply however typically have narrow profit margins which limits their capacity to internally finance capital investment, all else equal.

The ability of firms to increase capital investment is linked to their size. The composition of the business base is therefore an important consideration. Almost all agricultural firms are either small or micro-sized, employing fewer than 50 workers, while other sectors typically reliant on EU26 migration—including wholesale & retail (98%), accommodation & food services (97%) and manufacturing (94%)—all have similarly high proportions of smaller firms.

Fig. 43. Businesses by size and sector, Northern Ireland, 2018



Source: ONS, Oxford Economics

Smaller firms are typically less able to secure access to capital or may have a more risk-averse attitude to investment, than larger firms. The composition of the business base is therefore an important consideration. Smaller firms may have comparatively limited scope to increase capital investment, given that many tend to be relatively low-margin operations that compete largely on cost. Indeed, although some of these firms are start-ups, those that are more mature and smaller in size have, by definition, been unable or unwilling to 'scale-up' production—indicating that substituting workers for greater capital investment is an unlikely response to this policy.

So, NI firms that are most likely to be affected by the new policy, will face a range of barriers to investing in capital. Although it is difficult to quantify the

[55] For example, manufacturing may have more scope for substituting labour for capital, though those in hospitality (a sector with a large reliance on EU26 labour) will have much less opportunities.

scale of NI businesses ability to substitute labour for capital, we can assume that these types of firms are unlikely to be able to respond quickly to the reduction in available labour.

For businesses who are unable to invest in capital, reduced access to migrant labour could reduce production in a variety of ways: including producing fewer goods and/or services, a reduction in the range of products offered, or their quality. The extent of these impacts of course depends on the labour-intensity of the business and how much is supported by migrant workers. Indeed, many of the sectors reliant on migrant workers that do not produce products—such as in the accommodation & food services and arts, entertainment & recreation sectors—may lack viable substitutes to its workforce.

Finally, there is little evidence that levels of migration influence the rate of capital accumulation within the economy. As the MAC (2018)[56] discuss, there is no clear link identified in academic literature between the extent of migration and higher capital spend domestically. Although this is not proof that investment in capital is unlikely to be a solution to lower levels of EU migrants, it does add to the argument that the dynamic adaptation of firms to increase capital investment may be limited.

Finally, the magnitude of the impacts of the new approach to migration policy are unlikely to result in a vastly different approach to capital investment across all firms. While greater scarcity of migrant workers may make investing in capital a viable prospect for a small number of firms at the margin, who would not otherwise do so, this is unlikely to result in significant levels of investment across the NI economy.

6.4 SUMMARY

In summary we find that:

- Potential responses by businesses and individuals are likely to have a limited mitigating effect.
- We believe higher wages following a supply side shock to labour is unlikely given the existing evidence and the types of businesses affected.
- There is no guarantee that the unemployed resident population would have a sufficient skills profile to meet the needs of employers.
- The change in policy would impact all of the UK limiting the possibility of within UK labour flows to address unfilled vacancies.
- There are limits on the extent to which NI businesses could increase their capital investment to replace labour. Indeed, there is no clear link identified in academic literature between the extent of migration and higher capital spend domestically.

[56] https://www.gov.uk/government/publications/migration-advisory-committee-mac-report-eea-migration.

7. CONCLUSIONS

EU26 migrants play an important role in NI

Our analysis shows that EU26 born individuals make up a notable share of the population in NI. Importantly, they tend to be of working age and a significantly greater share are employed than the average of the NI economy.

Migration policy changes will have adverse impacts

Given these characteristics, the changes to migration policy will have significant impacts on employment, GVA, population and GVA per capita. We estimate these changes will reduce employment levels in 2030 by 1.9% (or 17,100 jobs) relative to the baseline forecast. GVA is estimated to be 1.4% lower (or £650 million in 2016 prices) and population levels will be 1.2% lower (equivalent to nearly 23,900 people). Given the impact on GVA is greater than the impact on population, we estimate GVA per capita to be 0.2% lower by 2030.

However, modelling the impact of alternative policy thresholds (£30,000 and £20,000) show that the impacts of the migration policy changes could be marginally reduced if Government reduced the threshold to £20,000. However, given the high proportion of EU26 workers earning salaries at and below this level, the salary threshold would need to be reduced substantially to effectively mitigate the adverse impacts of this policy approach.

It is unlikely that businesses will be able to react adequately

We have considered the potential responses to the policy and conclude that rising wage levels are unlikely given the types of businesses affected and their ability to reduce profit margins. We also conclude that greater capital investment and automation (above long-term trends) is unlikely, again given the types of firms affected.

Parts of the economy are particularly vulnerable

Sectors such as manufacturing of food and hospitality are likely to be particularly vulnerable. So too are border economies of NI that not only have high concentrations of sectors that employ EU26 born workers, but who also are competing with companies in the Republic of Ireland. It is likely that at a minimum cross border flows of people and goods will be affected by the policy changes, at worst it could result in firm closure or capital flight from NI.

Policy implications

After comparing our modelling results to those of HM Government and the Welsh study, we can conclude that NI will be disproportionately affected by the policy changes. The local economy is dominated by relatively lower paid sectors and within sectors, wage levels tend to be lower than the UK average.

Therefore, NI is more vulnerable to a UK wide salary threshold that might be imposed in new migration policy.

The exempt public service occupations and rules for new entrants provide some mitigation against the adverse impacts of the policy changes, but they are limited in scale.

While reducing the salary threshold is increasingly effective at mitigating against the adverse impacts, consideration of an effective route for lower skills may be required to safeguard key industries such as Agri-food and the growing tourism sector. In addition, the development of a NI specific Shortage Occupations List (SOL) will aid in mitigation of impacts in those roles which are at a medium to higher skill level.

TECHNICAL APPENDIX

MODELLING APPROACH

Quantifying the impact of a £25,000 threshold

We have modelled the impact of the new migration policy in three stages. The first is to estimate the employment, GVA and demographic impacts caused by a reduction in EU26 migrant inflows arising from a £25,000 salary threshold.

The modelling starts by estimating the current number of EU26 migrants working in each sector of the economy, before estimating the number earning under £25,000 and forecasting both series out to 2030.

- We estimate **the number of EU26 employed in each sector** by using LFS data (obtained from an ONS Microlab[57]) on the share of sectoral employment taken by individuals born in a) the UK, b) the EU26, c) the Republic of Ireland, and d) the rest of the world. This LFS data is not available for all sectors for the non-UK born groups, and so we augment this with a survey from DAERA on the share of manufacturing of food employment taken by EU26 born workers[58]. We also estimate missing sectoral data (for 5 of the 32 sectors covered in the model) by using the known UK figure, the overall total for the EU26 which we need to constrain to and the sectoral distribution in the UK.
- We also use LFS data on the **number of EU26 earning under £25,000.** The LFS data provides some sectoral information which we also use alongside data on Full time earning percentiles by sector from the published Annual Survey of Hours Earnings (ASHE).

The sectoral shares above are then applied to our baseline forecasts (which align with official population projects from the ONS) for sectoral employment. This **produces a baseline set of forecasts for the number of EU26 workers by sector and the number earning under £25,000 by sector**. With the new Tier 2 rules applying to EU citizens from 2021 onwards, the number of EU26 migrants employed in each sector who are estimated to be earning less than £25,000 are then subtracted from the forecast, and therefore so is the GVA associated with that employment.

Given EU26 citizens currently resident in the UK can apply to stay after 2021[59], we have assumed that those already resident in NI by 2021 will apply to remain—and have therefore subtracted only the additional EU26 migrants who would have been coming to NI to fill net additional jobs in the economy. So, if a sector is forecast to grow by 1,000 jobs, and EU26 workers earning under £25,000 account for an estimated 100 of those additional jobs, we subtract 100 jobs from the baseline outlook. At this stage we make no adjustment for sectors that are expected to contract in employment terms (and hence demand less EU26 workers).

We then estimate the outflow of EU26 migrants each year, the number that will be employed, and the number earning under £25,000. The ONS population projects provide us with future outflows. We then split into our four categories of people (UK, EU26, Republic of Ireland and rest of world) by drawing on detailed data on long-term migration for the UK. We assume the UK outflows are a good proxy for NI and apply this split to the ONS outflows to produce forecasts of the number of EU26

[57] The detailed cuts of LFS data use the three-year average from 2016 to 2018 given the small sample sizes.
[58] https://www.daera-ni.gov.uk/publications/migrant-labour-and-trade-enquiry
[59] https://www.gov.uk/settled-status-eu-citizens-families

outflows. We then apply our estimated share of EU26 migrants who are employed and earning under £25,000.

This outflow of EU26 migrants earning under £25,000 are apportioned to sectors based on the concentration of EU26 workers in our adjusted forecasts. We assume that all of these EU26 workers are not replaced given policy changes and hence they are lost to the economy (as is their GVA).

To estimate the GVA impacts we apply our sectoral productivity forecasts. In doing so we assume productivity is unaffected by the shock to the labour supply.

Accounting for public service occupations

We then account for those public service occupations that are exempt from the salary threshold. In doing so we use occupational data from ONS to identify the share of public sector occupations that are:

- Medical radiographers
- Nurses
- Secondary education teaching professionals
- Paramedics

We then apply this share to our estimates and forecasts of the number of EU26 workers earning under £25,000. We also estimate the number that are earning under £20,800, again using ASHE data. The difference between the two totals in the number of EU26 migrants that will be exempt from a £25,000 threshold. We therefore add this total back into the number employed and estimate the GVA forecasts accordingly.

Accounting for new entrants to labour market (graduates from EU26 countries)

We have used data on the destinations of leavers by activity, country of HE provider, level of qualification obtained, mode of study and domicile that is published by HESA. The data allows us to estimate the number of graduates from NI universities that are UK born and EU born. We assign the EU26 born graduates to sectors of the economy using UK wide data.

By applying a further estimate of graduate starting salaries (by drawing on ASHE data) we can estimate the number of EU26 graduates in each sector that are likely to earn over £25,000, or if below the number that earn above £20,800.

Our estimate of new entrants to the labour market that earn over £20,800 for three years or who earn the salary threshold are added back into the pool of EU26 workers. Given their likely age profile we assume they do not have dependents.

ADDITIONAL TABLES

Baseline employment forecasts vs policy impacts, 2020 to 2030

Employment change from 2020 to 2030 (£25,000 threshold)	Baseline		Scenario		Difference
	No. (000s)	%	No. (000s)	%	No. (000s)
Agriculture, forestry & fishing	0.1	0.4	-0.1	-0.4	-0.2
Mining & Quarrying	-0.7	-31.0	-0.7	-31.2	0.0
Manufacturing	-11.5	-12.5	-16.5	-18.0	-5.0
Food products, beverages and tobacco	-1.7	-7.2	-5.2	-21.7	-3.4
Textiles, wearing apparel and leather products	-0.5	-16.5	-0.6	-18.9	-0.1
Wood, paper products and printing	-1.0	-14.5	-1.2	-16.9	-0.2
Coke and refined petroleum products	0.0	-21.0	0.0	-21.6	0.0
Chemicals and chemical products	-0.4	-18.7	-0.4	-20.5	0.0
Basic pharmaceutical products	-0.2	-5.5	-0.2	-7.6	-0.1
Rubber, plastic and non-metallic minerals	-1.7	-15.3	-2.0	-17.7	-0.3
Basic metals and metal products	-1.3	-12.8	-1.5	-15.3	-0.3
Computer, electronic and optical products	-0.7	-15.4	-0.8	-17.3	-0.1
Electrical equipment	-0.6	-19.3	-0.7	-21.5	-0.1
Machinery and equipment nec	-0.9	-13.1	-1.0	-15.1	-0.1
Transport equipment	-1.6	-14.1	-1.8	-16.1	-0.2
Other manufacturing and repair	-0.9	-16.7	-1.0	-19.1	-0.1
Electricity, gas, steam and air	-0.1	-5.6	-0.1	-5.9	0.0
Water supply	-0.7	-10.7	-0.8	-13.0	-0.1
Construction	4.1	7.3	3.5	6.2	-0.6
Wholesale and retail trade	1.3	1.0	-1.9	-1.4	-3.2
Transportation and storage	-0.3	-0.7	-0.6	-1.6	-0.3
Accommodation and food service	2.2	4.0	-0.5	-0.9	-2.7
Information and communication	0.9	3.8	0.7	2.9	-0.2
Financial and insurance	-0.3	-1.2	-0.4	-1.8	-0.1
Real estate activities	0.5	4.7	0.3	3.4	-0.1
Professional, scientific and tech	4.5	10.0	4.3	9.4	-0.2
Administrative and support	8.0	12.9	5.2	8.4	-2.8
Public administration and defence	-3.6	-6.7	-3.9	-7.3	-0.3
Education	-1.2	-1.7	-1.5	-2.0	-0.2
Human health and social work	8.0	5.9	7.8	5.7	-0.2
Arts, entertainment and rec	2.2	11.2	1.8	9.2	-0.4
Other service activities	1.6	6.2	1.4	5.4	-0.2
Total	**15.1**	**1.7**	**-2.0**	**-0.2**	**-17.1**

Source: Oxford Economics

Baseline GVA growth vs policy forecast, 2020 to 2030

GVA (£2016 prices) change from 2020 to 2030 (£25,000 threshold)	Baseline		Scenario		Difference
	£ (millions)	%	£ (millions)	%	£ (millions)
Agriculture, forestry & fishing	10	1.0	0	0.4	-10
Mining & Quarrying	-30	-13.8	-30	-14.0	0
Manufacturing	730	13.4	440	8.2	-290
Food products, beverages and tobacco	290	20.1	90	6.2	-200
Textiles, wearing apparel and leather products	20	8.5	10	6.2	-10
Wood, paper products and printing	40	10.7	30	8.4	-10
Coke and refined petroleum products	0	2.5	0	1.9	0
Chemicals and chemical products	10	5.6	10	3.8	0
Basic pharmaceutical products	60	22.6	50	20.6	-10
Rubber, plastic and non-metallic minerals	60	9.9	40	7.5	-20
Basic metals and metal products	70	13.3	60	10.9	-10
Computer, electronic and optical products	30	9.8	20	7.9	-10
Electrical equipment	10	4.8	10	2.6	0
Machinery and equipment nec	60	12.8	50	10.9	-10
Transport equipment	70	11.4	60	9.5	-10
Other manufacturing and repair	20	8.5	20	6.3	0
Electricity, gas, steam and air	110	20.1	110	19.8	0
Water supply	80	15.2	70	13.0	-10
Construction	300	10.5	270	9.6	-30
Wholesale and retail trade	810	14.1	700	12.1	-110
Transportation and storage	160	9.6	150	8.9	-10
Accommodation and food service	180	15.9	130	11.9	-50
Information and communication	420	29.9	410	29.1	-10
Financial and insurance	310	19.0	300	18.6	-10
Real estate activities	910	20.3	870	19.2	-40
Professional, scientific and tech	500	28.5	490	28.0	-10
Administrative and support	300	27.1	260	23.3	-40
Public administration and defence	-80	-2.3	-90	-2.7	-10
Education	-70	-3.1	-80	-3.4	-10
Human health and social work	860	20.6	860	20.5	0
Arts, entertainment and rec	50	10.4	40	8.9	-10
Other service activities	110	12.9	110	12.3	0
Total	**5,670**	**14.0**	**5,020**	**12.4**	**-650**

Source: Oxford Economics
Note: Figures rounded to nearest £10m

VERIFYING MICROLAB DATA

To inform our modelling, we accessed an ONS Microlab where we could extract bespoke cuts of LFS and APS data. To boost sample sizes and therefore the accuracy of this data, we combined datasets for 2016, 2017 and 2018. In this section, we compare some of the data extracted from the ONS Microlab with published data to understand the degree of difference (if any).

We were able to extract data (though gaps still exist) on the share of employment by sector in NI that is taken by workers born in the UK, Republic of Ireland, EU26 and rest of the world. The closest published dataset from the APS shows the share of employment by broad sector taken by EU27 (so including Republic of Ireland) workers. The table below compares the 2016-2018 averages extracted from Microlab with the average APS data for 2017 and 2018. Across the sectors we have data for, the two data series are fairly consistent. Importantly the sectors with the largest share of EU workers are accurate to within 0.5 percentage points.

Share of employment by sector taken by EU27 migrants

Share of employment taken by EU migrants (includes RoI)	Microlab	APS	Difference
A: Agriculture, forestry & fishing	*	4.2%	*
B,D,E: Energy & water	*	8.3%	*
C: Manufacturing	17.7%	18.0%	-0.3
F: Construction	5.8%	6.3%	-0.5
G,I: Distribution, hotels & restaurants	10.3%	10.7%	-0.4
H,J: Transport & communication	5.5%	4.9%	0.6
K,L,M,N: Banking & finance	5.5%	5.8%	-0.3
O,P,Q: Public admin, education & health	4.4%	3.5%	0.9
R,S,T,U: Other services	4.9%	6.0%	-1.0
Total	**7.3%**	**7.2%**	**0.1**

Source: ONS Microlab (Labour Force Survey), Annual Population Survey, Oxford Economics

Similarly, a comparison of occupation data show that, for the sectors we have published LFS data for, the Microlab extracts are close in most cases. We can also compare the 2016 to 2018 averages to Census 2011 data. We find that for the sectors we don't have LFS data, the Census 2011 results are similar.

Share of employment by occupation taken by EU26 migrants

Share of occupation taken by EU26 migrants	Microlab	NISRA (LFS)	Difference	Census 2011	Difference
1: Managers, Directors & Senior Officials	2.0%	*	*	1.7%	**0.3**
2: Professional Occupations	2.2%	*	*	1.9%	**0.4**
3: Associate Professional & Technical Occupations	2.5%	*	*	2.4%	**0.1**
4: Administrative & Secretarial Occupations	1.2%	*	*	1.5%	**-0.3**
5: Skilled Trades Occupations	6.0%	6.9%	**-0.9**	4.2%	**1.9**
6: Caring, Leisure & Other Service Occupations	4.6%	*	*	3.0%	**1.6**
7: Sales & Customer Service Occupations	4.0%	*	*	3.3%	**0.7**
8: Process, Plant & Machine Operatives	13.9%	14.7%	**-0.8**	9.2%	**4.7**
9: Elementary Occupations	14.9%	15.6%	**-0.7**	9.3%	**5.6**
Total	**5.3%**	**5.7%**	**-0.4**	3.8%	**1.5**

Source: ONS Microlab (Labour Force Survey), Labour Force Survey, ONS Census, Oxford Economics

We also extracted median and mean annual pay estimates for UK born, EU26, Republic of Ireland and rest of world workers in NI, who were working over 30 hours per week. The Annual Survey of Hours and Earnings (ASHE) does not have this split of data, but we can compare NI averages. We find that the Microlab extracts provide estimates slightly below the ASHE estimate. We use the median annual pay to inform the modelling, and it is 7.6% lower than the ASHE average over the period 2016 to 2018. However, it is important to note that our modelling results do not overinflate the scale of a salary threshold. In our modelling approach we use ASHE data were possible (e.g. income distributions by sector). We only use the Microlab data to estimate the ratio of EU26 to NI average earnings. This is then applied to income distribution data taken from ASHE.

Median and mean annual pay comparisons, average for 2016 to 2018

	Microlab	ASHE	Difference	
			£	%
Median annual pay (£)	£24,200	£26,198	-£1,998	-7.6%
Mean annual pay (£)	£27,200	£30,479	-£3,279	-10.8%

Source: ONS Microlab (Labour Force Survey), Annual Survey of Hours and Earnings, Oxford Economics

Potential weakness' of using LFS data for earnings

- The primary purpose of the Labour Force Survey (LFS) is to collect information on labour market activity. It also collects some data on employee earnings for a subset of its sample. However, ASHE is the preferred source for average earnings data for individuals in employment as it has a larger sample size. The LFS earnings data can be analysed alongside a range of characteristics of employees[60].
- Although the APS has a much-improved sample size compared with the LFS, it still suffers from some shortcomings when compared with ASHE. For instance, as a survey of businesses, ASHE is thought to capture more accurate earnings information, as employers can consult payroll records when responding to the survey. In comparison, earnings information collected in the LFS and APS is self-reported and as such is likely to be subject to a higher degree of recall error[61].

[60] Further information about the LFS can be found at: http://www.ons.gov.uk/about-statistics/user-guidance/lmguide/sources/household/lfs/index.html

[61] https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/methodologies/explainingincomeearningsandthegenderpaygap

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