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Productivity in Northern Ireland

Dr David Jordan

Lecturer in Economics at Queen's Business School, Queen's University Belfast, Research Associate at the Northern Ireland Productivity Forum and The Productivity Institute, and Independent Expert Advisor on Productivity to the Northern Ireland Department for the Economy.

1. Introduction

1.1. The evidence presented below is based on my work as a Research Associate for the Northern Ireland Productivity Forum, alongside my colleagues Professor John Turner and Ruth Donaldson. The Northern Ireland Productivity Forum is based at Queen's Business School, and is part of The Productivity Institute (TPI), a UK-wide organisation that works across academia, business and policy to better understand, measure and enable productivity across the UK. The TPI is funded by the Economic and Social Research Council (Grant number ES/V002740/1).

1.2. Since its inception in 2020, the Northern Ireland Productivity Forum has produced a series of publications examining the issue of productivity in Northern Ireland. These include:

- Northern Ireland's Productivity Challenge: Exploring the issues
- Northern Ireland Productivity Dashboard 2022
- Do Managers Matter? Management Practices in post-COVID Northern Ireland
- Northern Ireland Productivity Dashboard 2023

2. Why is productivity important?

2.1. Productivity is what defines our current standard of living, and productivity growth is what raises our standard of living over time. Productivity measures the total value of what we produce relative to the amount of inputs required to produce it. As productivity increases, it means the total value an economy's output has grown faster than the total inputs used.

2.2. Higher productivity is beneficial for businesses, as it makes them more competitive, as they require relatively fewer inputs to produce a given amount of goods or services, which in turn makes them more resilient to an economic downturn. For workers, higher productivity means higher wages, through their share of the increased total output. For the public sector, higher productivity can mean higher public revenue collected through taxation, while improvements in public sector productivity can mean better and more efficient provision of public goods and services.

3. How is productivity measured?

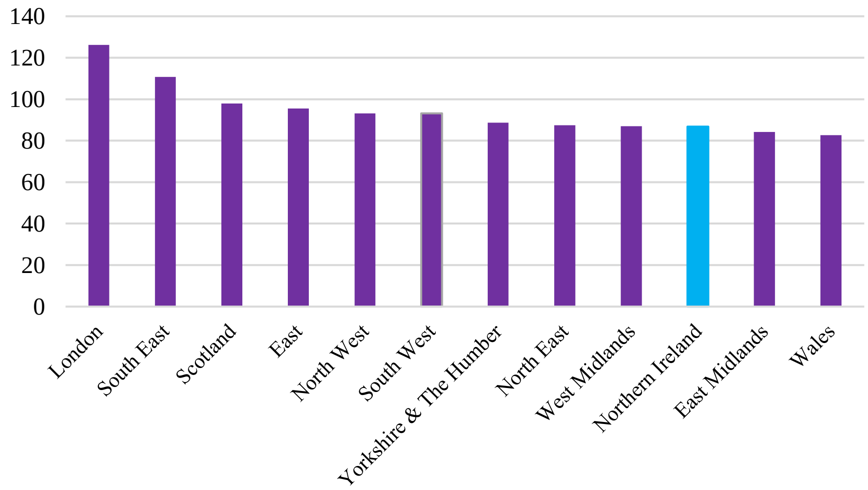
3.1. The concept of productivity can mean different things to different people. A business's view of productivity might focus on its turnover or sales generated per employee. In the public sector, productivity could be measured as the number of patients treated in a certain period of time. In wider society, productivity would commonly be viewed as how much work an individual completes as part of their job.

3.2. When examining productivity for an economy, the most widely used measure is labour productivity, which is the total value of output per job or per hour worked. An alternative measure of productivity is multi-factor productivity, which takes into account both the amount of labour and the amount of capital (such as machinery) used as inputs. However, we do not currently have estimates for the total amount of capital in Northern Ireland's economy, and so we are limited to using labour productivity as our main measure of productivity.

4. Northern Ireland's productivity performance

4.1. Northern Ireland's economy currently suffers from the problem of low productivity, with a productivity gap to the UK level. In the most recently published ONS data for 2022, Northern Ireland's productivity was 13.2 per cent below the UK average, when measured as Gross Valued Added (GVA) per hour worked (**Figure 1**). This placed Northern Ireland in 10th place of the UK's twelve regions, closely behind the West Midlands (13.0 per cent below), and ahead of only the East Midlands (15.8 per cent below) and Wales (17.3 per cent below).

Figure 1: Value of output per hour worked in 2022, UK=100



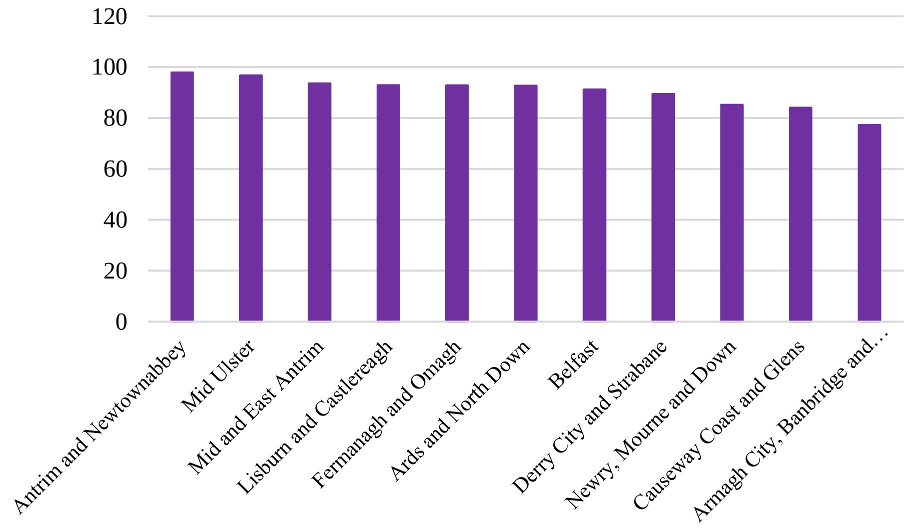
Source: ONS 2024

4.2. When measuring Northern Ireland's productivity as GVA per job, Northern Ireland's relative position improves to 7th place. This reflects that the workforce in Northern Ireland works relatively more hours to produce its total output.

4.3. Over the past twenty years, Northern Ireland's productivity gap, when measured per hour worked, has remained between 15 per cent and 20 per cent below the UK average. In 2021, Northern Ireland saw a substantial improvement, with the productivity gap shrinking to 10.3 per cent. In our NI Productivity Dashboard 2023 (Donaldson, Jordan and Turner, 2023), we found this improved performance was the result of Northern Ireland experiencing the largest reduction in hours worked of any UK region between 2019 and 2021. We expected this was likely a temporary effect of the Covid-19 pandemic, at a time when restrictions remained in place. The most recently published ONS data for 2022 supports this view, with Northern Ireland's productivity gap widening again to 13.2 per cent, albeit still lower than prior to Covid-19. Only when we see data for 2023 onwards will we have a better idea of whether Northern Ireland has maintained some of this improvement in productivity – potentially through the external shock of Covid-19 forcing business to change how they operate – or if the effect was temporary.

4.4. The productivity gap is not evenly spread across Northern Ireland, with some local government districts (LGDs) being productivity leaders, and others underperforming (**Figure 2**). The most recently published ONS data shows the highest productivity LGD, when measured per hour worked, is Antrim and Newtownabbey (2.1 per cent below the UK average). The lowest productivity LGD is Armagh City, Banbridge and Craigavon (22.8 per cent below the UK average).

Figure 2: Value of output per hour worked in 2022 by LGD, UK=100



Source: ONS, 2024

4.5. It should be noted that the performance of individual LGDs, and their relative ranking, can vary substantially, depending on the measure of productivity and year used. When productivity is instead measured per job, Belfast is the best performing LGD (0.3 per cent above the UK average), while Ards and North Down is the worst performer (24.9 per cent below the UK average). These differences will partly reflect the differences in economic structure of each LGD, with different industries being associated with relatively higher or lower numbers of hours worked. There have also been large changes in the number of hours worked in the ONS productivity data for LGDs since the beginning of the Covid-19 pandemic. This means we may not get a full picture of current performance at LGD level until post-pandemic data is published for 2023 onwards.

4.6. Northern Ireland's productivity performance can be compared to the Republic of Ireland. Comparisons are subject to uncertainty, due to the distortions caused by multinationals to the data for the Republic of Ireland's total output. In our NI Productivity Dashboard 2023 (Donaldson, Jordan and Turner, 2023), we estimated that, when measured using modified Gross National Income, productivity in the Republic of Ireland was 8 per cent higher than the UK level in 2021. This in turn in turn meant Northern Ireland's productivity was around 17 per cent below the Republic of Ireland level. Other estimates place the productivity gap at a much higher level: a report by the Economic and Social Research Institute (ESRI) (Bergin and McGuinness, 2022) estimated that productivity in the Republic of Ireland was around 40 per cent higher than in Northern Ireland (i.e. Northern Ireland's productivity was around 29 per cent below the Republic of Ireland).

5. Reasons for Northern Ireland's poor productivity performance

5.1. Northern Ireland's productivity gap is long-standing: it existed prior to the 2008 Great Financial Crisis, the Troubles, and even partition. There has been a wide variety of research, over many decades, that has examined why low productivity in Northern Ireland persists, with differing emphasis placed on different explanations. In our insights paper for the TPI, ‘Northern Ireland’s Productivity Challenge: Exploring the issues’ (Jordan and Turner, 2021), we identified seven key explanations, which are briefly summarised below.

5.2. The first explanation is **economic structure**, where Northern Ireland’s economy has a relatively higher concentration of low productivity sectors, and a relatively lower concentration of high productivity sectors. Policy tends to view Northern Ireland’s problem of low productivity through this structural lens. However, even if Northern Ireland had the same economic structure as Great Britain, the evidence suggests this would close only half of the productivity gap (see Mac Flynn, 2016). The productivity gap is therefore as much the result of within-sector productivity failings, where sectors in Northern Ireland underperform relative to their peers in the rest of the UK. The implication for policy is that, while it is important to support the growth of high productivity sectors, closing the productivity gap requires the within-sector productivity gap to be closed too.

5.3. The second explanation is **peripherality**. In the past, this focused on Northern Ireland’s geographic peripherality, as a region physically distant from centres of economic activity, resulting in higher transport costs, limiting the industries that could profitably establish here. Today, this ‘hard peripherality’ appears to have been replaced by the problem of ‘soft peripherality’, where Northern Ireland’s distance from networks relating to knowledge, innovation, and new technology, contribute to the persistence of the productivity gap (see Brownlow, 2013).

5.4. The third explanation is lower levels of **capital and investment**. In the mid-twentieth century, levels of capital per worker in Northern Ireland lagged behind those in Great Britain, but this shortfall had disappeared by the 1980s. Despite this improvement, the productivity gap remained. This suggests Northern Ireland’s persistent underinvestment in research and development (R&D) is part of the explanation for low productivity, although the evidence suggests it has higher R&D investment than other low productivity UK regions, when R&D investment is scaled by the number of jobs in the total workforce.

5.5. The fourth explanation is lower levels of **human capital**. Northern Ireland has persistently suffered from an attainment gap, where too many individuals leave school with no or low skills; and a brain drain, where we have too few individuals with tertiary education. There is evidence that deficiencies exist in management skills in certain types of local businesses, as examined in our recent report, ‘Do managers matter? Management practices in post-COVID Northern Ireland’ (Jordan, Pramanick, and Turner, 2023), while lower levels of entrepreneurship, alongside a cultural problem of satisficing – where firms set themselves a minimum acceptable level of achievement, rather than seeking to maximise profits – may also contribute to low productivity.

5.6. The fifth explanation is **infrastructure**. While this is an area where it is more difficult to benchmark Northern Ireland’s performance, the evidence suggests that underinvestment has contributed to Northern Ireland’s poor productivity performance (see FitzGerald and Morgenroth, 2020). Our annual NI Productivity Dashboard has similarly highlighted that infrastructure in Northern Ireland lags behind other UK regions, particularly in areas of new investment, such as the 5G network coverage and electric vehicle charging (see Donaldson, Jordan and Turner, 2023). Current problems around the water and sewerage network add further evidence to the view that Northern Ireland is underinvesting in its infrastructure, creating a barrier to productivity growth.

5.7. The sixth explanation is **public policy**. Improving Northern Ireland's poor productivity has been an aspiration of policy and economic strategies for several decades, yet the productivity gap has persisted. Three direct reasons can be identified for why this is the case: problems have been misdiagnosed; policy silos have prevented joined-up policies; and productivity has rarely been used to evaluate the success of policies.

5.8. The seventh explanation is **institutions and governance**. This covers the interactions between individuals, businesses, politicians, and policymaking, and is perhaps the most important reason for the persistence of the productivity gap. The legacy of the Troubles, and the interaction between institutions and political stability in Northern Ireland, may pose a constraint on closing the productivity gap. For example, the Troubles saw public expenditure used to stabilise the regional economy, with policymakers attempting to balance economic and non-economic considerations, rather than maximising productivity (see Brownlow, 2013). The record of devolved government in Northern Ireland since 1998 suggests a policy inertia that remains biased towards this approach.

6. What should policy focus on to improve Northern Ireland's productivity?

6.1. Beyond the implementation of individual policies to improve productivity, there are three main areas that policy should address.

6.2. First, given its central importance in determining our current and future standard of living, productivity needs to be a central policy priority. The inclusion of productivity as one of DfE Minister Conor Murphy's key priorities is an important and welcome first step. However, productivity also needs to be a central priority for the Northern Ireland Executive, to provide both a guiding principle around which policy interventions can be designed, and as a clear target to measure success against. The recognition of the issue of productivity within the current Draft Programme for Government 2024-2027 is a welcome improvement on previous documents, but the lack of any target being set for productivity means it runs the risk of repeating past policy failings, where improving productivity remains simply an aspiration.

6.3. Second, greater coordination of policies needs to take place, both within and across government departments. Productivity is a complex issue, meaning that an individual policies may affect other areas beyond their immediate implementation, and their effectiveness may be determined by their interaction with other policies. For example, our research on management practices in Northern Ireland showed that firms with better management also had greater digitalisation of their firm's processes: supporting firms in their adoption of new digital technology will therefore require firms to be supported in improving their management practices. As our NI Productivity Dashboard also shows, addressing low productivity is relevant to policy areas beyond the Department for the Economy, such as health, education, infrastructure, and the wellbeing of communities. All Executive departments therefore have important roles to play in designing and implementing coordinated policies to raise productivity.

6.4. Third, addressing Northern Ireland's productivity gap needs to be a long-term priority for government policy. Low productivity is a deep-seated problem with multiple causes, and no single policy solution. Improving Northern Ireland's productivity performance will therefore be a long-term project, and go beyond the work of a single Executive term. This also means investment will be required to better measure and understand Northern Ireland's productivity performance, if appropriate policy interventions are to be designed and implemented.

7. References

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