Box D: Northern Ireland's productivity problem

By David Jordan[1]

Introduction

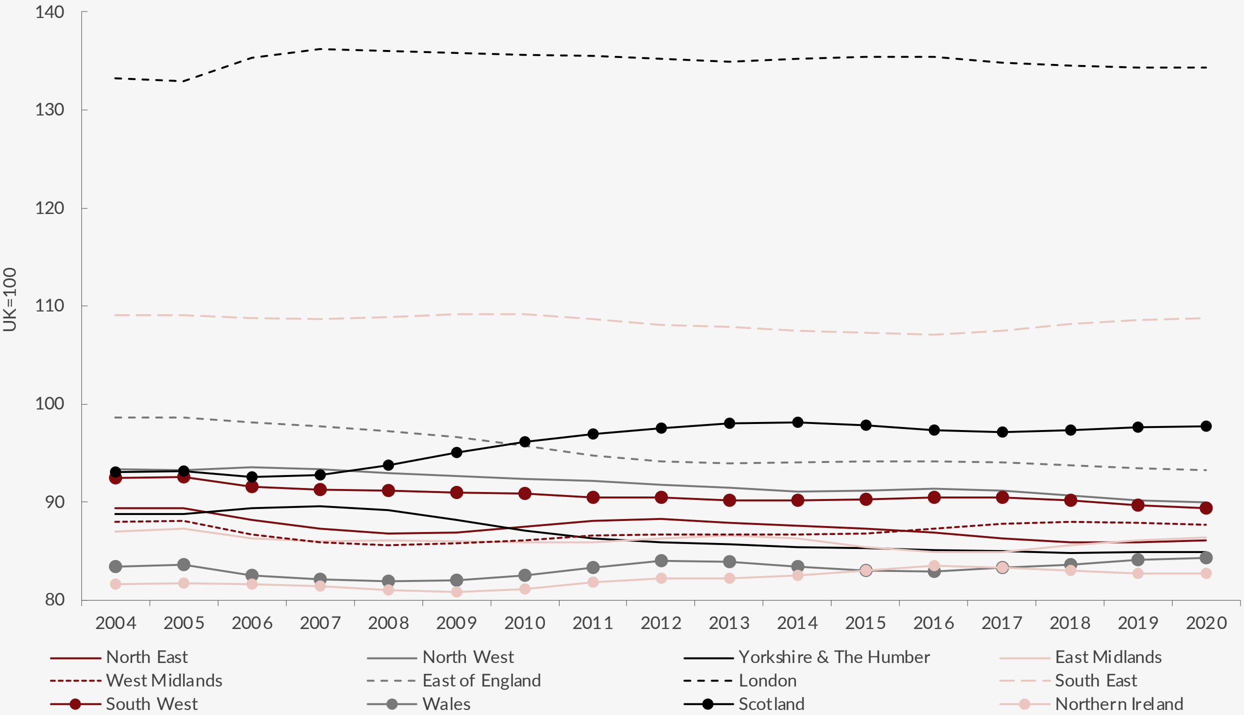
Recent discussion of Northern Ireland's economy has focused on the pandemic and the rising cost of living, alongside how the Northern Ireland Protocol is affecting local businesses and consumers. Yet these issues have obscured the importance of Northern Ireland's persistent problem of low productivity.

Productivity measures the total value of output produced for a given amount of work, and is a key driver of higher wages and living standards. The UK's productivity growth has been poor since the financial crisis of 2007-08, and it has fallen further behind other advanced economies, including the USA, Germany, and France (NIESR, 2022). But, this problem is even more pronounced in Northern Ireland. It has been described as "the central problem of the Northern Ireland economy", and is responsible for the region's slow growth of GDP per capita over the past two decades (FitzGerald and Morgenroth, 2020).

How does Northern Ireland perform?

Northern Ireland has the lowest productivity of any UK region: 17 per cent below the UK average when measured by gross value added (GVA) per hour worked (Figure D1). Northern Ireland saw a slight improvement between 2015 and 2017, briefly overtaking Wales, but has since returned to being the worst performer. The productivity gap closes slightly to 13 per cent when measured by GVA per job, but this means workers in Northern Ireland must work longer hours to produce the same value of output as other poorly performing regions.

Figure D1 GVA per hour worked (smoothed), UK=100

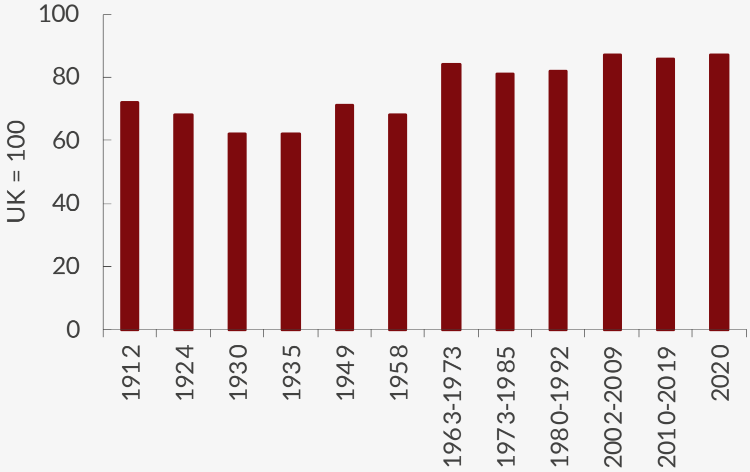


Source: ONS, 2022a.

1 Queen's University, Belfast.

This productivity gap has been a persistent feature of the past one hundred years (Figure D2). Prior to partition, productivity in 1912 for the counties that would become Northern Ireland was 28 per cent below the UK level. This situation worsened during the interwar period, with the gap widening to almost 40 per cent. A period of catch-up took place during the 1960s, but the productivity gap has remained similar since then. Despite the effects of the pandemic in 2020, Northern Ireland's position remained almost unchanged compared to the previous decade.

Figure D2 Northern Ireland's long-run productivity per job (UK=100)



Notes: For 1912-1992: manufacturing productivity only, calculated as net output per head. For 2002-2020: productivity across all sectors, calculated as gross value added per job filled. Grouped years are averages per year.
Sources: For 1912-1992: Birnie and Hitchens, 1999, p.34. For 2002-2020: ONS, 2022a.

Why is productivity so low in Northern Ireland?

Research has identified a number of explanations for Northern Ireland's poor performance, across seven key areas: economic structure, peripherality, capital and investment, human capital, infrastructure, public policy, and institutions and governance (Jordan and Turner, 2021).

One of the earliest suggested explanations is the structure of the local economy. During the first half of the twentieth century, Northern Ireland was highly concentrated in the declining staple industries of shipbuilding and textiles (Johnson, 1985). The long-term decline of these industries, and Northern Ireland's continued high concentration in other low productivity industries, such as agriculture and retail, might be expected to explain low productivity. Yet analysis of the productivity gap shows it is not simply the result of economic structure. If Northern Ireland had the same structure as Great Britain across all sectors of the economy, it would reduce the productivity gap by less than half (Mac Flynn, 2016).

Another early explanation suggested for the productivity gap is geographic peripherality. Producers in Northern Ireland may face higher costs of importing and exporting goods and raw materials, while a small domestic market might limit the opportunities for growth and agglomeration (Isles and Cuthbert, 1957). However, transport costs have been shown to be only marginally higher, and not of a scale sufficient to explain differences in productivity (Birnie and Hitchens, 1989). Instead, distance from networks and knowledge, when combined with Northern Ireland's relatively small size and geographic peripherality, may result in a 'soft peripherality' problem, creating a barrier to productivity growth (Birnie and Hitchens, 1999; Brownlow, 2013).

For many decades, policymakers focused on the level of capital as a major reason for the local economy's persistent underperformance. However, by the 1980s, capital per worker in manufacturing had reached similar levels and sophistication as Great Britain, yet the productivity gap persisted (Borooah and Lee, 1991).

Recently released ONS data suggests aggregate levels of capital in Northern Ireland remain similar to the rest of the UK. Table 1 measures average gross fixed capital formation per job, between 2011 and 2020. Northern Ireland is only 2 per cent below the UK average for this period, and significantly outperforms other low productivity regions.

Table D1 Regional gross fixed capital formation per job, 2011-2020

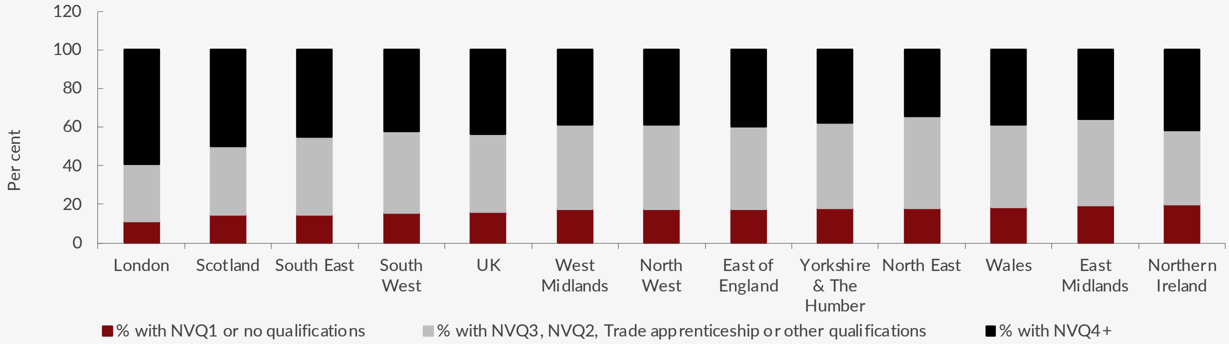
Region	(UK=100)
London	126
East of England	111
South East	110
Scotland	101
Northern Ireland	**98**
South West	94
West Midlands	89
East Midlands	88
North West	88
North East	86
Yorkshire & The Humber	82
Wales	72

Source: ONS 2022b,c.

While the level of capital may no longer be as important a factor, underinvestment in R&D remains a persistent weakness. Northern Ireland is one of the UK regions with the lowest R&D intensity, particularly from public sector investment (Forth and Jones, 2020). While R&D expenditure per job is only slightly below the UK average, and higher than in other low productivity regions, this reflects R&D expenditure being concentrated in a small number of large firms (Mac Flynn, 2016; Jordan and Turner, 2021).

Low levels of human capital is consistently identified as one of the main sources of Northern Ireland's productivity gap (Hitchens et al., 1990; Crafts, 1995; FitzGerald and Morgenroth, 2020). This skills deficit can be seen in the educational attainment of the working age population (Figure 3). Northern Ireland has the highest proportion of individuals with no or low (NVQ1) skills of any UK region, at almost 20 per cent. Northern Ireland has also suffered from a brain drain: in 2011, almost one-third of those born in Northern Ireland who possessed a graduate level education were living in Great Britain (FitzGerald, 2019). Recently, the proportion with a tertiary education (NVQ4+) has increased dramatically, from 31 per cent in 2016, to 42 per cent in 2021. While this has seen Northern Ireland overtake several UK regions, it is yet to be translated into improved productivity.

Figure D3 Educational attainment of individuals aged 16-64, in 2021



Source: ONS, 2022c, Annual Population Survey

An infrastructure gap within Northern Ireland has the potential to create further barriers to productivity growth, by making it more difficult to attract new investment, and limiting the growth of existing firms. Relatively low levels of public expenditure on transport infrastructure has been linked to the productivity gap (FitzGerald and Morgenroth, 2020), reflecting a long-run pattern of underinvestment (Harris, 1991; Jordan, 2020). While Northern Ireland scores well for internet connectivity (Johnston et al., 2021), a lack of investment in water and sewerage has been highlighted as constraining economic development (NI Water, 2021).

Policymakers have tried to address Northern Ireland's productivity gap, but policy interventions have a poor track record. For many decades, policy prioritised addressing high levels of unemployment, particularly in manufacturing, through generous financial support (Crafts, 1995; Brownlow, 2020). This led to a relatively low skilled workforce producing low value added goods, and allowing low productivity firms to survive (Hitchens et al., 1990; Hitchens and Birnie, 1994). Recent policy has targeted stimulating entrepreneurship and innovation, alongside attracting greater foreign direct investment, but competitiveness problems have remained (Brownlow, 2020), and, in 2019, Northern Ireland had the second lowest level of FDI per job of any UK region (ONS, 2021).

There are several potential reasons for the failure of policy to improve Northern Ireland's relative performance. Past problems were often misdiagnosed (Brownlow and Birnie, 2018), while policy has not been sufficiently 'joined-up' to address poor productivity (Nelles et al., 2020). Productivity is also rarely used as a means to measure and evaluate policy outcomes (Jordan and Turner, 2021). Northern Ireland's relatively large public sector has been suggested as a further reason for the productivity gap, by absorbing skilled labour and crowding out private investment (FitzGerald and Morgenroth, 2020). However, others have argued that the effectiveness of public policy, and the ability to build a successful private sector, is of greater importance for competitiveness (Brownlow and Birnie, 2018).

Institutions and governance may best explain the past failures of policy. During the first period of devolution, between 1920 and 1972, financial support was directed towards politically connected firms (Brownlow, 2007; Jordan, 2020). During the Troubles, public expenditure was used to stabilise the economy, with policymakers balancing economic and non-economic considerations, rather than maximising productivity (Brownlow, 2013). More recently, the legacy of a divided society has been linked to emigration of skilled labour (FitzGerald and Morgenroth, 2019), and to long-term health problems affecting the productivity of those in work (Ferry et al., 2015). Greater fiscal powers for Northern Ireland's devolved government at Stormont have been suggested as a way to raise economic performance through improving incentives for local policymakers. But, Northern Ireland's previous experience of greater fiscal devolution, during the twentieth century, suggests more fiscal powers do not automatically lead to improved economic performance, and any effect will be determined by the incentives present (Brownlow, 2007; Jordan, 2020).

Conclusion

Raising productivity is key to raising wages and living standards in Northern Ireland, but the productivity gap has been a persistent feature of the past one hundred years. Economic structure, geographic peripherality, and levels of capital were important factors in the past, but soft peripherality, underinvestment in R&D, low human capital, and infrastructure all display sizeable deficiencies today. Despite numerous policy interventions, the productivity gap has persisted, with weaknesses in institutions and governance being an important underlying factor. While the pandemic, inflation, and the Protocol have captured most attention recently, the biggest long-term economic challenge for local policymakers remains Northern Ireland's low productivity. Tackling this will require coordinated and long-term policies, together with a political commitment to prioritise productivity.

References

Birnie, E. and Hitchens D.M.W.N (1989) Manufacturing productivity in Northern Ireland: a comparison with Great Britain, Belfast: Northern Ireland Economic Research Centre.

Birnie, E. and Hitchens D.M.W.N (1999) Northern Ireland economy: performance, prospects, policy, Aldershot, UK: Ashgate Publishing Ltd.

Borooah, V.K. and Lee, K.C. (1990) 'The regional dimension of competitiveness in manufacturing: Productivity, employment and wages in Northern Ireland and the United Kingdom', Regional Studies, 25(3), pp.219-229.

Brownlow, G. (2007) 'The causes and consequences of rent-seeking in Northern Ireland, 1945–72', Economic History Review, 60(1), pp.70-96.

Brownlow, G. (2013) Ulster since 1600: politics, economy, and society - Chapter 18, Business and labour since 1945, Oxford, United Kingdom: Oxford University Press.

Brownlow, G. (2020) 'Industrial policy in Northern Ireland: past, present and future', Economic and Social Review, 52(3), pp.407-424.

Brownlow, G. and Birnie, E. (2018) 'Rebalancing and regional economic performance: Northern Ireland in a Nordic mirror', Economic Affairs, 38(1), pp.58-73.

Crafts, N. (1995) 'The Golden Age of economic growth in postwar Europe: why did Northern Ireland miss out?', Irish Economic and Social History, 22, pp.5-25.

Ferry, F.R., Brady, S.E., Bunting, B.P., Murphy, S.D., Bolton, D. and O'Neill, S.M. (2015) 'The economic burden of PTSD in Northern Ireland', Journal of Traumatic Stress, 28(3), pp.191-197.

FitzGerald, J. (2019) 'Investment in education and economic growth on the island of Ireland', Journal of the Statistical and Social Inquiry Society of Ireland, XLVIII (172nd Session), pp.195-210.

FitzGerald, J. and Morgenroth, E. (2020) 'The Northern Ireland economy: Problems and prospects', Statistical and Social Inquiry Society of Ireland, 173.

Forth, T. and Jones, R.A.L. (2020) The missing £4 billion: Making R&D work for the whole UK, UK: NESTA.

Harris, R. (1991) Regional economic policy in Northern Ireland 1945-1988, Aldershot, UK: Avebury.

Hitchens, D.M.W.N. and Birnie, J.E. (1994) The competitiveness of industry in Ireland, Aldershot, UK: Avebury.

Hitchens, D.M.W.N., Wagner, K. and Birnie, J.E. (1990) Closing the productivity gap: a comparison of Northern Ireland, the Republic of Ireland, Britain and West Germany, Aldershot, UK: Avebury.

Isles, K.N. and Cuthbert, N. (1957) An economic survey of Northern Ireland, Belfast: H.M. Stationery Office.

Johnson, D.S. (1985) 'The Northern Ireland Economy, 1914-39', in Kennedy, L. and Ollerenshaw, P. (eds.) An economic history of Ulster, 1820-1940. Manchester: Manchester University Press, pp.184-223.

Johnston, R., Bonner, K., McCausland, G. and Flaherty, T. (2021) Addressing NI's competitiveness challenges, UK: Ulster University Economic Policy Centre.

Jordan, D. (2020) The Economics of Devolution: Evidence from Northern Ireland 1920-1972, Unpublished PhD Thesis: Queen's University Belfast.

Jordan, D., and Turner, J. (2021) Northern Ireland's Productivity Challenge: Exploring the issues, Productivity Insights Paper, No. 004, Manchester: The Productivity Institute.

Mac Flynn, P. (2016) 'Productivity and the Northern Ireland economy', NERI Working Paper Series, 2016(39).

National Institute of Economic and Social Research (2022) Productivity in the UK: Evidence Review, UK: NIESR.

Nelles, J., Brown, A. and Vorley, T. (2020) Mapping the cognitive landscape of productivity in Northern Ireland: A systems approach to understanding productivity policy, UK: Productivity Insights Network.

Northern Ireland Water (2021) Annual Integrated Report & Accounts 2020/21, Belfast, UK.

Office for National Statistics (2021) Foreign direct investment, experimental UK sub-national statistics: July 2021, Available at: https://www.ons.gov.uk/economy/nationalaccounts/balanceofpayments/articles/foreigndirectinvestmentexperimentaluksubnationalstatistics/july2021 (Accessed: 11th July 2022).

Office for National Statistics (2022a) Subregional productivity: labour productivity indices by UK ITL2 and ITL3 subregions, Available at: https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/labourproductivity/datasets/subregionalproductivitylabourproductivitygvaperhourworkedandgvaperfilledjobindicesbyuknuts2andnuts3subregions (Accessed: 7th July 2022).

Office for National Statistics (2022b) Experimental regional gross fixed capital formation (GFCF) estimates by asset type, Available at: https://www.ons.gov.uk/economy/regionalaccounts/grossdisposablehouseholdincome/datasets/experimentalregionalgrossfixedcapitalformationgfcfestimatesbyassettype (Accessed: 11th July 2022).

Office for National Statistics (2022c) Annual Population Survey, Available at: https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=17 (Accessed: 11th July 2022).