

# Spatial analysis of Northern Ireland trade over the period 2014 to 2020

Author: Anne Marie Ward, Stuart Henderson, Esmond Birnie, Thomas Bell & Fred Booth

Date: May 2023

**This Data Insight report explores Northern Ireland (NI) trade by region over the period 2014 to 2020, with particular emphasis on the impact of COVID-19.**

## What we did

The dataset was cleaned and the data adjusted to remove the effect of inflation, so that real patterns in trade could be observed. Trade data (sales, purchases and gross value added (GVA)) was weighted to provide population estimates for Northern Ireland and its regions. The resultant data was analysed by region.

In terms of geographical disaggregation (meaning separation), data was only available to the Local Government District level. This restricted our ability to create regions of interest based on characteristics such as proximity to the border. Moreover, when the data is disaggregated into the eleven Local Government District regions, the outputs breach the Office for National Statistics Secure Research Service minimum counts necessary for anonymity.

As a result, we created eight regions of interest, influenced by the NUTS III classification (a way of dividing EU and UK economic territory) and factors deemed to influence trade. Belfast has favourable endowments (such as proximity to ports, airports, universities, knowledge hubs, peer businesses and talent pool) and as a result is treated as a

## Background

The vision for Northern Ireland set out in the [“10X Economy”](#) is an innovation-led growth underpinned by trade and investment (Department for the Economy, 2021). Trade is critical to the amplification of benefits emerging from innovatory success and is crucial to Northern Irish development.

Northern Ireland has significant variability in trade endowments across the region. Coupled with this, the UK’s exit from the European Union has reconfigured trading norms for Northern Ireland - most obviously via an increased administrative burden and physical checks.

This combination of emerging policy and political change, alongside geographic heterogeneity, represents a timely setting in which to examine Northern Irish trading behaviour at regional level.

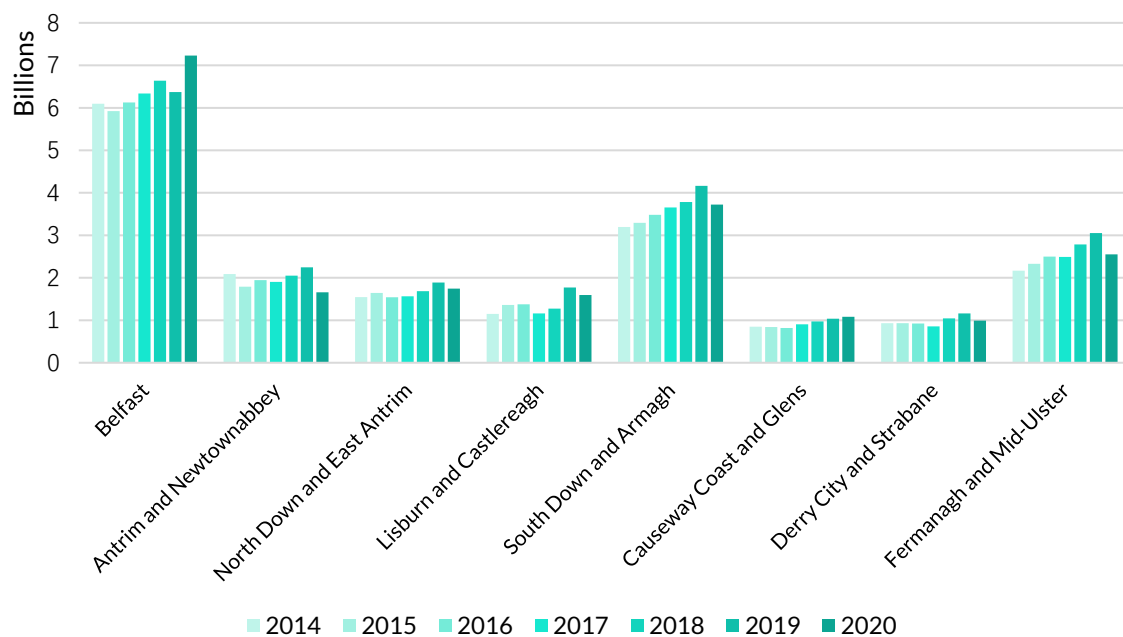
Our study uses the de-identified Northern Ireland Annual Business Inquiry (NIABI) dataset, including the Broad Economy Sales and Exports Statistics (BESES) dataset which contains data on trade sources and destinations. We examine the trading ecosystem that prevails for Northern Irish businesses, with a particular focus on activity at regional level.

region. The other regions were identified based on distance from Belfast, access to infrastructure, and proximity to the border. The eight regions are: Belfast, Antrim and Newtownabbey, North Down and East Antrim (note, defined to include all of Mid and East Antrim), Lisburn and Castlereagh, South Down and Armagh, Causeway Coast and Glens, Derry City and Strabane, and Fermanagh and Mid-Ulster.

## What we found<sup>1</sup>

Figure 1 shows the total real GVA over time for each of the eight regions identified in our study.

**Figure 1: Real GVA by region, 2014–2020**



In Table 1, this data is further analysed by the growth of the key trade components making up real GVA – total sales and purchases. This analysis is split into two time periods due to the seismic impact of COVID-19 – growth from 2014 to 2019 and growth in GVA from 2019 to 2020.

**UK's decision to exit the European Union (EU):** As shown in Table 1, GVA (value added) has been increasing in each region over the period 2014 to 2019. The strongest increases are observed in the Lisburn and Castlereagh, Fermanagh and Mid-Ulster, and South Down and Armagh regions. This may suggest a border effect. The other border region, Derry City and Strabane, also experienced an increase in real GVA of 24.62%, though real sales from businesses in that region declined by 7.07%.

<sup>1</sup> When considering the output from our findings, please be aware that weightings are designed for use at Northern Ireland level and not at the regional level. In addition, when considering overall sales, purchases and GVA, it is not advisable to compare one region to another as this typically reflects the concentration of businesses within that area, as opposed to reflecting the performance of the businesses. In addition, large businesses with operations over a number of regions of Northern Ireland typically complete a single return, which is included in the region the head office is typically situated (usually Belfast). Movement across regions when businesses relocate is also not recorded. Nonetheless, patterns over time enable an analysis of the general state of play within that region.

**Table 1: Analysis of the overall growth in total trade by sector**

Growth period:	2014 to 2019			2019-2020
Growth in (real terms):	Sales	Purchases	Total GVA	Total GVA
Belfast	↓ 9.19%	↓ 17.14%	↑ 3.98%	↑ 13.67%
Antrim and Newtownabbey	↑ 4.37%	↑ 1.29%	↑ 7.46%	↓ 26.09%
North Down and East Antrim	↑ 0.99%	↓ 11.84%	↑ 22.10%	↓ 7.78%
Lisburn and Castlereagh	↑ 19.68%	↑ 8.30%	↑ 53.52%	↓ 9.50%
South Down and Armagh	↑ 15.41%	↑ 5.95%	↑ 30.19%	↓ 10.77%
Causeway Coast and Glens	↑ 2.57%	↓ 2.37%	↑ 19.26%	↑ 11.88%
Derry City and Strabane	↓ 7.07%	↓ 20.47%	↑ 24.62%	↓ 15.01%
Fermanagh and Mid-Ulster	↑ 14.16%	↑ 4.20%	↑ 40.95%	↓ 16.48%
Total	↓ 3.00%	↓ 4.04%	↑ 14.89%	↓ 3.26%

*Note: Underlying data is weighted (NISRA, NIABI (2023) and indexed to 2019 prices (ONS, 2022)*

Though sales in the two main city regions, Belfast and Derry City and Strabane, reduced over the period 2014 to 2019, purchases reduced by greater amounts, resulting in higher reported real GVA. An examination of Figure 1 identifies that annual growth rates can be quite volatile. For example, in Belfast total real GVA declined in 2019 relative to 2018, and declines were identified in 2017 in Antrim and Newtownabbey, Derry City and Strabane, and Fermanagh and Mid-Ulster. These reductions are not consistent with the overall pattern observed in the period 2014 to 2019. Our assessment is that the decline is not a consequence of the EU exit decision, which occurred in 2016, but is a result of the weighting process in that period.

**COVID-19:** As shown in Table 1, two regions, Belfast and Causeway Coast and Glens, reported increases in total real GVA. Further analysis in Table 2, identifies that businesses in the Belfast region experienced reduced sales, with the positive growth in real GVA arising from relatively deeper reductions in purchase activity. COVID-19 subsidies are likely to have contributed to the strong growth in GVA (13.67%). In contrast to all other regions, businesses in the Causeway Coast and Glens region reported a small increase in real sales and a small reduction in real purchases resulting in a 11.88% increase in reported real GVA (Table 1). Businesses in the Antrim and Newtownabbey region were most negatively impacted by the UK's exit from the EU. They reported the largest reduction in real GVA (Table 1, 26.09%), sales (Table 2, 30.58%) and purchases (Table 2, 31.32%).

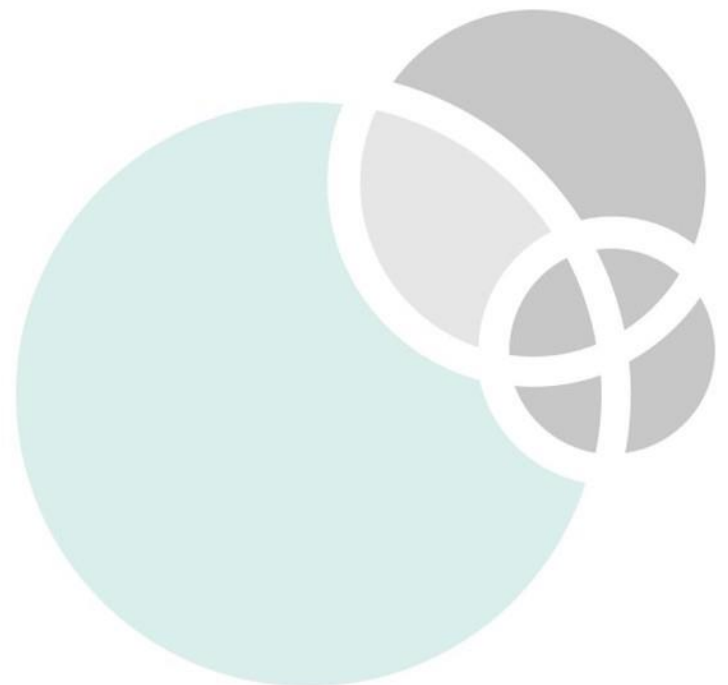


Table 2: Growth in real sales and purchases by region (£'000s), 2014–2020

	Sales			Purchases		
	2019	2020	Growth(%)	2019	2020	Growth(%)
Belfast	15,815,016	13,871,625	↓ 12.29	9,830,413	7,830,976	↓ 20.34
Antrim and Newtownabbey	7,452,939	5,173,886	↓ 30.58	5,231,215	3,592,655	↓ 31.32
North Down and East Antrim	4,444,305	4,101,762	↓ 7.71	2,577,977	2,471,584	↓ 4.13
Lisburn and Castlereagh	5,338,514	4,407,588	↓ 17.44	3,598,200	3,445,078	↓ 4.26
South Down and Armagh	12,424,422	11,101,698	↓ 10.65	8,330,439	7,480,905	↓ 10.20
Causeway Coast and Glens	2,881,656	3,035,992	↑ 5.36	1,962,127	2,015,698	↑ 2.73
Derry City and Strabane	2,748,156	2,442,695	↓ 11.12	1,625,006	1,482,096	↓ 8.79
Fermanagh and Mid-Ulster	9,982,019	8,198,305	↓ 17.87	6,674,000	5,744,504	↓ 13.93

Note: Data is weighted (NISRA, NIABI (2023) and indexed to 2019 prices (ONS, (2022) Regional GVA (balanced) by industry

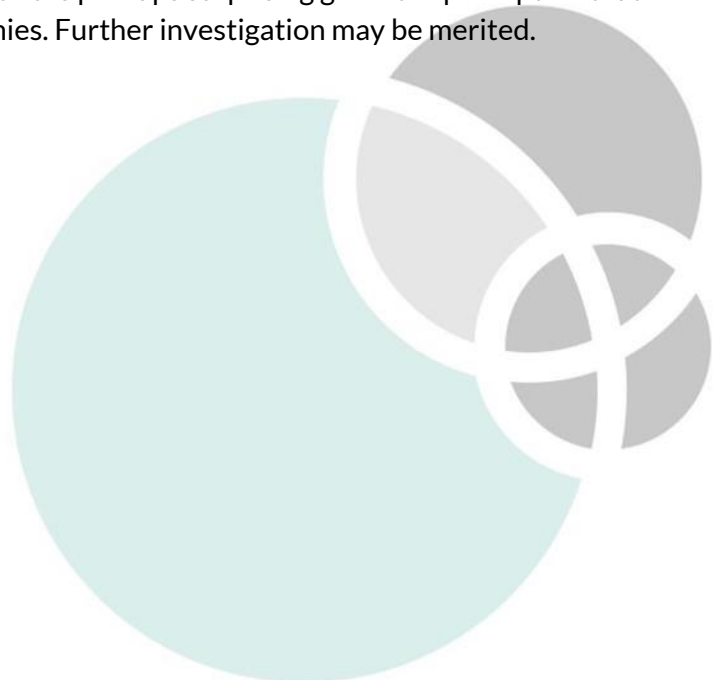
## Why it matters

The policy implication of our findings is that location is important, with differences in growth in real GVA, sales and purchases observed over the period 2014 to 2020. The scale of growth is generally greater in regions outside Belfast and Antrim and Newtownabbey. This may suggest that Belfast, in particular, has limiting factors that are restricting business growth.

## What next?

We suggest several possible future avenues for research:

- (1) Though differentiating the impact COVID-19 from the EU exit is difficult, further analyses of the behaviour of businesses across the regions, in terms of the pattern of their sales with external markets, would be of interest.
- (2) It may be useful to extend the analysis to include periods post-2020, when businesses became subject to the physical checks at the border with Great Britain (protocol operating from 1 January 2021).
- (3) Belfast's relatively strong real GVA growth in 2020 is perhaps surprising given the perception that COVID-19 particularly impacted on city centre economies. Further investigation may be merited.



## Acknowledgements

Administrative Data Research - Northern Ireland (ADR-NI) takes privacy protection very seriously. All information that directly identifies individuals/organisations will be removed from the datasets by trusted third parties before researchers access them. All researchers using ADR-NI are trained and accredited to use sensitive data safely and ethically, they will only access the data via a secure environment and all their findings will be vetted to ensure they comply with strict confidentiality requirements. The help provided by the staff of the Administrative Data Research Centre - Northern Ireland (ADRC-NI) and the ADR-NI support officers within NISRA Research Support Unit (RSU) is acknowledged. ADR-NI is funded by the Economic and Social Research Council (ESRC). The authors alone are responsible for the interpretation of the data and any views or opinions presented are solely those of the author and do not necessarily represent those of ADR-NI. The NISRA ELMS data has been supplied for the sole purpose of this project.

## About ADR UK

ADR UK (Administrative Data Research UK) is a partnership transforming the way researchers access the UK's wealth of public sector data, to enable better informed policy decisions that improve people's lives. By linking together data held by different parts of government and facilitating safe and secure access for accredited researchers to these newly joined-up and de-identified data sets, ADR UK is creating a sustainable body of knowledge about how our society and economy function – tailored to give decision makers the answers they need to solve important policy questions.

ADR UK is made up of four national partnerships (ADR England, ADR Northern Ireland, ADR Scotland and ADR Wales), and the Office for National Statistics (ONS), which ensures data provided by UK Government bodies is accessed by researchers in a safe and secure form with minimal risk to data holders or the public.

## Contact

Anne Marie Ward

Tel: 028 95365973

Email: [am.ward@ulster.ac.uk](mailto:am.ward@ulster.ac.uk)

SFR/SB: 05/2023