

# Analysis of NI trade by sector: A focus on the 10X priority clusters

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**This Data Insight report explores Northern Ireland (NI) trade by sector over the period 2014–2020 with a particular emphasis on 10X priority clusters<sup>1,2</sup>.**

## What we did

The dataset was cleaned and errors were removed or adjusted. The data was then adjusted to remove the effects of inflation, so that patterns in trade, in real terms, could be observed. Trade data (sales, purchases and gross value added [GVA]) was weighted to provide population estimates for Northern Ireland.

As 10X priority businesses were not identified in the original dataset, a new sector variable, distinguishing between six non-10X and four 10X sectors, was created.

The resultant data was analysed over time using tables and graphs.

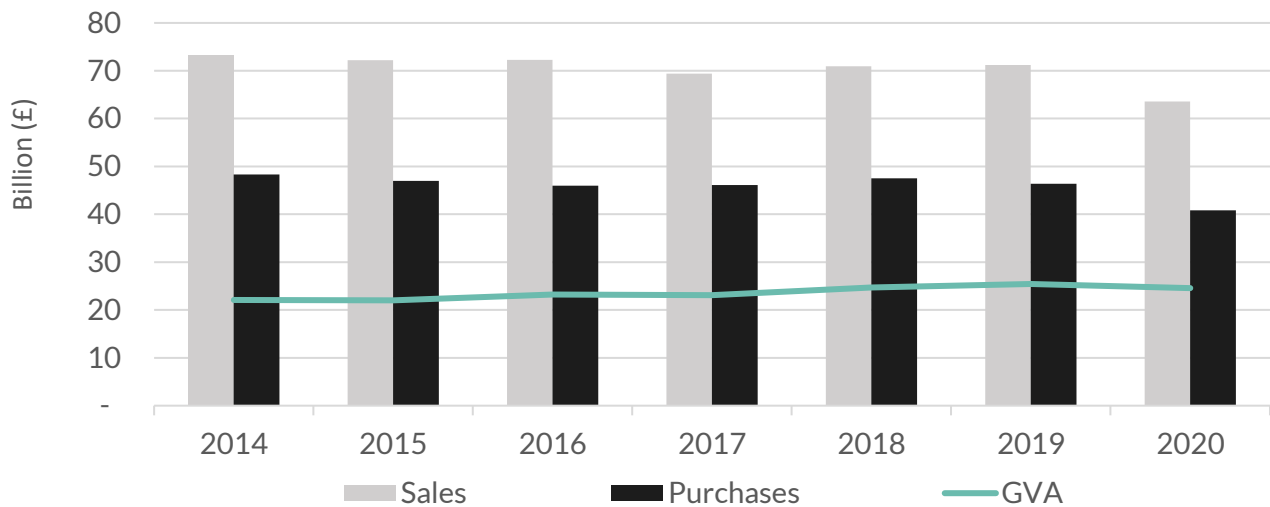
## What we found

As shown in Figure 1 and Table 1, after adjustment for inflation, total sales by businesses in Northern Ireland fell by 2.87% over the period 2014 to 2019. However, as purchases fell by more (3.98%) in the same timeframe, total GVA (value added) increased by 14.99%. There is a slight dip in sales, purchases and GVA in 2017, with steady increases observed in the period 2017 to 2020. However, this decline is likely due to weighting issues as a large number of zero entries are noted in that year in the underlying data.

## Background

This project responds to an Economic and Social Research Council funding call to expand the use of the “Business Data for Research” (NI) database by researchers. The vision for Northern Ireland set out in the “10X Economy” is innovation-led growth underpinned by trade and investment (Department for the Economy, 2021a). Growing external sales is critical to the development of a strong Northern Irish economy and this is best achieved by businesses that innovate (Department for the Economy, 2021b) – underscoring the importance of research in this area.

As part of the testing of the database, our study uses the de-identified Northern Ireland Annual Business Inquiry dataset, including the Broad Economy Sales and Exports Statistics dataset which includes data on trade sources and destinations. This provides insight into the trading ecosystem that prevails for Northern Irish businesses, with a particular focus on 10X priority type trading activity.

**Figure 1: Total sales, purchases and GVA (real terms) for NI, 2014–2020**


As expected, there is a large decline in sales and purchases during 2020 as a result of COVID-19, though the net impact on real GVA is a reduction of 3.43%. The low rate of decline is likely because of the generous support packages awarded by the government. Subsidies increase total GVA but are not included in sales.

**Table 1: Analysis of changes in total trade by sector, real terms, 2014–2020**

	2014-2019			2019-2020
	Sales	Purchases	Total GVA	Total GVA
<b>Non-10X</b>				
Other services	↑ 5.04%	↑ 8.71%	↑ 12.30%	↓ 1.95%
Other production	↑ 32.91%	↓ 28.65%	↑ 40.40%	↓ 8.70%
Manufacturing	↓ 47.77%	↑ 13.30%	↓ 20.35%	↑ 5.02%
Construction	↑ 9.42%	↓ 2.27%	↑ 33.92%	↓ 19.75%
Wholesale and retail	↓ 6.85%	↓ 10.60%	↑ 6.70%	↓ 3.24%
Professional & technical	↑ 13.70%	↓ 7.30%	↑ 24.71%	↓ 15.91%
<b>10X</b>				
Agri-tech	↑ 1.30%	↑ 6.79%	↑ 32.22%	↓ 13.32%
Health and life science	↑ 27.81%	↑ 48.93%	↑ 6.42%	↑ 19.67%
Advanced manufacturing	↑ 15.55%	↑ 12.19%	↑ 10.56%	↑ 11.77%
Software and screen	↑ 42.57%	↑ 15.61%	↑ 81.64%	↑ 14.85%
<b>Total</b>	↓ 2.87%	↓ 3.98%	↑ 14.99%	↓ 3.43%

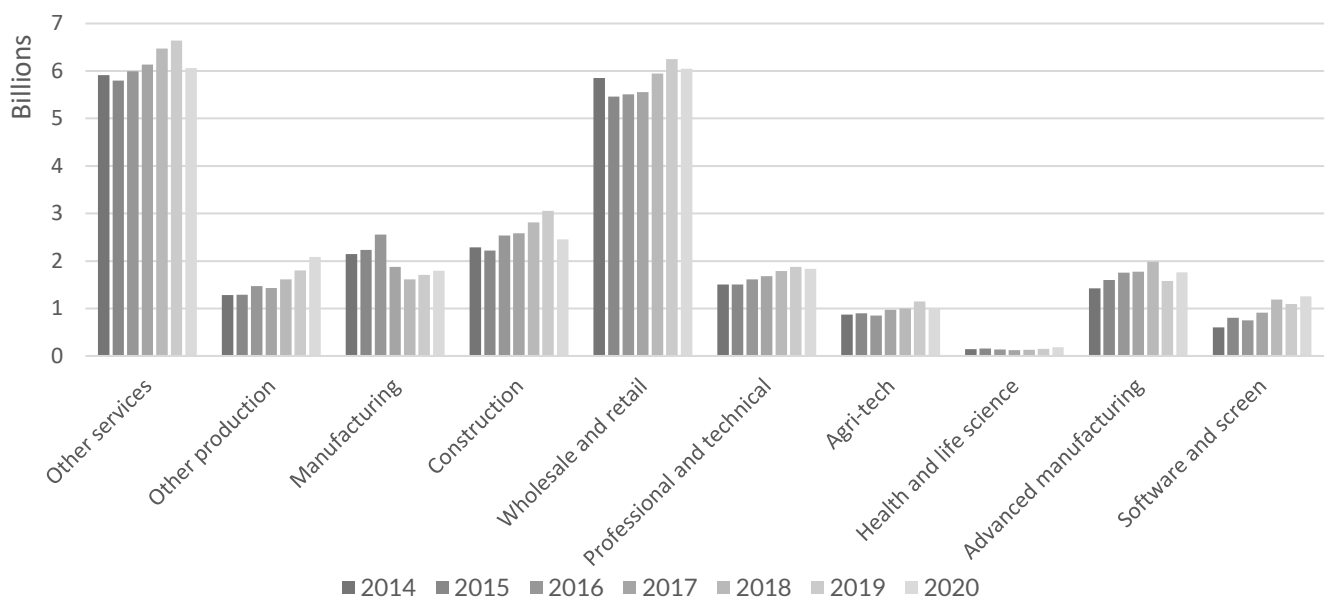
Note: Data is weighted (NISRA, 2023) and indexed to 2019 prices<sup>3</sup>

As highlighted in Table 1, apart from non-10X manufacturing which experienced a decline in GVA in real terms of 20.35%, all other sectors experienced growth in real GVA over the period 2014 to 2019. All 10X sectors experienced growth in sales, purchases and GVA over the period 2014 to 2019. The strongest performing sectors were software and screen (81.64%), other production (40.40%), construction (33.92%)

and agri-tech (32.22%). Sales by two sectors contracted between 2014 and 2019, non-10X manufacturing (47.77%), and wholesale and retail (6.85%).

As shown in Figure 2 and Table 1, many sectors contracted in 2020 as a result of COVID-19. The construction, professional and technical, and agri-tech sectors suffered the largest drops in overall real GVA. By contrast, the manufacturing, health and life science, advanced manufacturing and software and screen sectors continued to increase overall real GVA. Given the nature of the COVID-19 crisis, it is not surprising that the health and life science sector made gains in 2020. Continued gains in the advanced manufacturing and software and screen sectors suggest resilience in the face of the severe shocks impacting on the overall economy and society at that time.

**Figure 2: Total GVA (£'bn) by sector 2014-2020 (inflation-adjusted and weighted)**



## Why it matters

Our findings suggest that in real terms the Northern Ireland economy has seen contraction in the (non-10X) manufacturing sector. In this respect, Northern Ireland is probably not that dissimilar to other Western economies where such deindustrialisation was continuing.

Growth by businesses within the 10X sectors, both in terms of scale (sales) and value added (GVA), helped to offset the negative impact of contraction in manufacturing, wholesale and retail over the period 2014-2019. Other non-10X support sectors, such as construction and other services, have also experienced strong gains, perhaps to support the needs of the growing 10X sectors.

Our findings suggest benefits of policies that adopt a targeted approach, especially in terms of promoting advanced technologies.

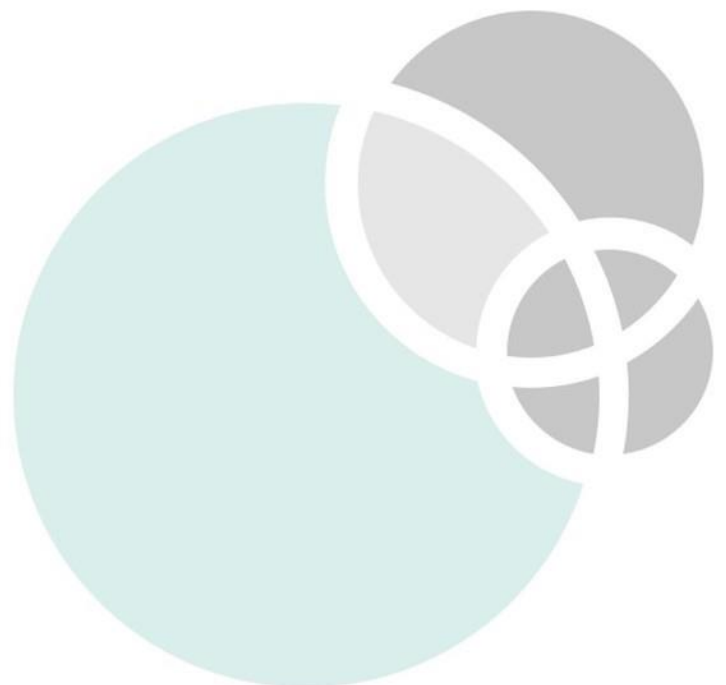
## **What next?**

We suggest several possible future avenues:

- (1) Further analysis of the trading behaviour of the sectors is required to determine if there have been changes in the exporting activity of businesses within Northern Ireland due to growth in the use of advanced technologies.
- (2) Our dataset spans the period of the UK's decision to exit the European Union (EU). Deeper analysis by sector would help to determine the early impact of the EU exit decision in 2016 on business performance and trading behaviour.

## **References**

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3. ONS (2022) Regional GVA (balanced) by industry: ALL ITL Regions DATASET, Office for National Statistics, available at : <https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/nominalandrealregionalgrossvalueaddedbalancedbyindustry> [accessed 31 March 2023]



## Acknowledgements

Administrative Data Research Northern Ireland (ADR NI) takes privacy protection very seriously. All information that directly identifies individuals will be removed from the datasets by trusted third parties, before researchers get to see it. All researchers are trained and accredited to use sensitive data safely and ethically, they will only access the data via a secure environment, and all of their findings will be vetted to ensure they adhere to the strictest confidentiality standards. The help provided by the staff of Administrative Data Research Centre Northern Ireland (ADRC NI) and the Northern Ireland Statistics and Research Agency (NISRA) Research Support Unit is acknowledged. ADR NI is funded by the Economic and 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 the ADR NI. NISRA's data has been supplied for the sole purpose of this project. This work was funded through a grant from ESRC and NISRA and made possible thanks to data provided by ADR UK: Business Data for Research Northern Ireland

This work was produced using statistical data from Office for National Statistics (ONS). The use of the ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce ONS aggregates.

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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.

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