

Internationalisation Trends in Northern Ireland Firms



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Introduction

The internationalisation of firms in Northern Ireland (NI) has received increasing attention in recent years due to a policy focus on trade as a means to growth, regional balance and prosperity¹. Meanwhile the Covid disruption on supply chains, the impact of EU exit and the recent US tariff regime announcements have also focused attention on the “how and where” of firms’ trading patterns. Although data is produced on the aggregate trading trends for NI² less is known about the extent to which individual firms engage in external trade³ - whether it is intermittent or continuous over time – and the extent to which an increasing number of firms sell into export markets and/or increase the value of sales to existing or new markets over time.

To shed light on the firm-level trends in exporting behaviour this short research paper uses data provided by Northern Ireland Statistics and Research Agency (NISRA) in their newly constructed Business Data for Research (BDR) dataset. This comprises financial variables from the NI Annual Business Inquiry (NIABI) and export / import data from the NI Economic Trade Statistics (NIETS) dataset. Data was made available for the years 2014 to 2020. The aim of the research is to provide some initial insights into the number of markets sold to over time and the intensity of those sales, and how both contribute to overall export growth for the NI economy. The focus will be on the extent to which sales growth and export sales growth is driven by firms selling more in existing markets and/or by firms selling into new markets; and whether the sales intensity to these markets is increasing over time.

For the purposes of this paper the original BDR dataset produced by NISRA is restricted firstly to the 2014-2019 period (before the trade impacts of the pandemic began in 2020). Secondly, to enable an analysis of continuous and intermittent exporters, we have restricted our dataset to those firms that appear on each of the annual datasets and therefore have a complete trading history over the observation period. This results in a balanced panel of 1,666 firms between 2014-19 enabling an analysis of the continuity of export sales over time and/or the movement into new markets.

The rest of this paper provides a brief background on exporting behaviour by firms and why this matters, followed by an analysis of the panel of 1,666 firms and where they export to, whether continuously or not and how much their share of overall sales can be attributed to exporting markets. The paper concludes with some reflections on what the analysis means for broader exporting policy as well as how the NISRA BDR dataset may be further developed to allow future analysis and evaluation of policy.

¹ DETI (2016), Export Matters: Enabling the conditions for increasing exports in Northern Ireland; DfE (2024) Sub-Regional Economic Plan <https://www.economy-ni.gov.uk/sites/default/files/publications/economy/subregional-economic-plan.pdf>

² <https://www.nisra.gov.uk/statistics/business-statistics/broad-economy-sales-and-exports-statistics>

³ External trade refers to any trade outside NI, including to Britain, whereas exports are generally used to mean sales outside the UK.

Literature Review

A number of stylised facts arise from the literature on exporters, namely that exporters tend to be larger firms with greater resources available to invest in export activities (Harris and Li, 2009); they are more productive and typically more capital and technology intensive than non-exporters; and they also pay higher wages and sell higher quality products (Ilmakunnas and Nurmi, 2010).

Within this consistency in findings there is less consensus over whether these preferable characteristics arise as a result of exporting (the learning-by-exporting effect) or whether stronger performing firms self-select into export markets. Learning-by-exporting assumes that, due to the increased competition in international markets and the knowledge flows from buyers and other international competitors, exporting firms subsequently increase their productivity in order to remain competitive. Alternatively, the self-selection argument suggests that there are a number of sunk costs involved with selling internationally (such as the setting up of distribution channels, transportation costs, product modification, etc.) and that these costs form an entry barrier which only the more productive, and financially healthy, firms can overcome. Given such sunk costs, the hypothesis also suggests a persistence in exporting. Although the competing hypotheses are not mutually exclusive, evidence to date tends to lend support for the self-selection of more productive firms into exporting rather than that of learning-by-exporting (The International Study Group on Exports and Productivity (2008).

The literature on the market selections and entry and exit of exporters is smaller but growing (review by Wagner, 2016). Leadership is key to export entry decisions. Managers' and owners' knowledge and prior experience (through formal education, international work experience, or previous export exposure), increase the likelihood that a firm will engage in exporting. These capabilities equip leaders with the skills and global mindset necessary to navigate foreign markets and reduce the perceived risks associated with internationalisation (Mozas-Moral et al., 2016; Muñoz-Bullón et al., 2015; Vaillant & Lafuente, 2019; Costa et al., 2024).

Regarding market entry, it is suggested that firms that are large, young, highly productive, and with high-capital intensity are likely to enter export markets earlier and to survive in export markets longer (Ilmakunnas and Nurmi, 2010). Wider research has also produced a number of stylised points including the concentration of exporting in a few firms (Mayer & Ottaviano, 2007); that the greatest proportion of exporters sell in small volumes to a small number of markets (Erickson et al, 2009); exporting engagement is very dynamic, with huge market churn rates (Rahu, 2015); and in small economies the growth rates in destination markets is the key factor (Lawless, 2013). Indeed, smaller and less productive firms appear more reactive to foreign demand changes and therefore are more likely to be intermittent exporters (Bernini et al. 2016).

The decision to re-enter export markets is closely linked to how firms interpret and respond to previous challenges. Negative experiences, such as underperformance or poor returns, can generate organisational learning and lead to improved re-entry strategies (Surdu & Narula, 2021; Crick et al., 2023). However the learning process is not always linear, with knowledge

decaying over time or failing to translate into action without the right internal capabilities (Surdu et al., 2018; da Fonseca & da Rocha, 2023). The length of time between exit and re-entry also matters, as extended periods of non-exporting can erode managerial confidence and operational readiness (Ganotakis et al., 2022). Maintaining export readiness and internal capabilities between periods of inactivity is crucial to facilitate re-entry (Gulubova, 2024).

Furthermore, if firms are exporting intermittently rather than continuously, they can still learn from exporting but the value of any accumulated knowledge is reduced. As such, these firms may remain stuck in a pattern of less intensive engagement and will have shorter future exporting spells than those that have accumulated knowledge from continuous exporting (Love and Manez, 2019). In addition, export persistence is often rooted in fundamental business strengths: in larger, more productive, and financially robust firms (Bandick, 2020; Manez & Vicente-Chirivella, 2021). Other enabling factors include a high share of sales derived from exports, involvement in multiple international markets, and diversification of products or destinations (Van den Berg et al., 2022; Díaz-Mora et al., 2015). Importing activities also correlate with sustained exporting, as they support competitive sourcing and market knowledge (Gulubova, 2024). The significant productivity premium of persistent exporters, compared to intermittent exporters, is further enhanced by a more highly educated workforce which increases the ability to learn from exporting (Bartoloni et al. 2023).

The selection of export markets in which to trade is related to the distance between countries, with a larger distance from the home market having a negative effect on trade due in part to transportation costs (Disdier and Head, 2008). Due to such costs, firms that cannot export enough to cover their costs will not export at all. Distance is therefore found to affect the number of firms exporting to a market. The impact of distance on the *average value* of exports is mixed however; while reducing trade costs increases the sales of existing exporters in a market it can also result in new marginal exporters to that market with lower average sales (Lawless, 2010). Research on Irish firms has further shown that prior exporting experience increases the probability of entry to a new market and reduces the probability of exit. More importantly, it is the marginal distance from an existing export market to a new one that is found to be important in increasing the probability of entry to that new market, outweighing the distance from the home market (Lawless, 2013). Geographic export diversification may therefore be preferred as it can enable economies of scale and scope and can help to diversify risk despite the increase in costs in logistics and adaptations (Boehe and Jimenez, 2016).

Export intensity is a separate but related concept to geographic diversification. It is measured by a firm's export sales as a share of total sales and reflects the relative commitment to exporting versus domestic sales (Navarro-Garcia, 2016). It is suggested that low intensity exporters have fewer incentives to commit resources to their export market strategy as foreign sales have a limited impact on overall firm performance while the learning costs of exporting remain high. In contrast higher export intensity firms have stronger incentives to commit more resources to foreign markets, enabling them to accelerate their market learning and achieve export market competitiveness more quickly. It also means the costs of exporting can be spread over a larger volume of export sales and hence reduce the unit costs. Combining the two effects of export intensity and geographic diversification suggests that low export

intensity reduces the benefits of geographic export diversification while high export intensity amplifies it (Boehe and Jimenez, 2016).

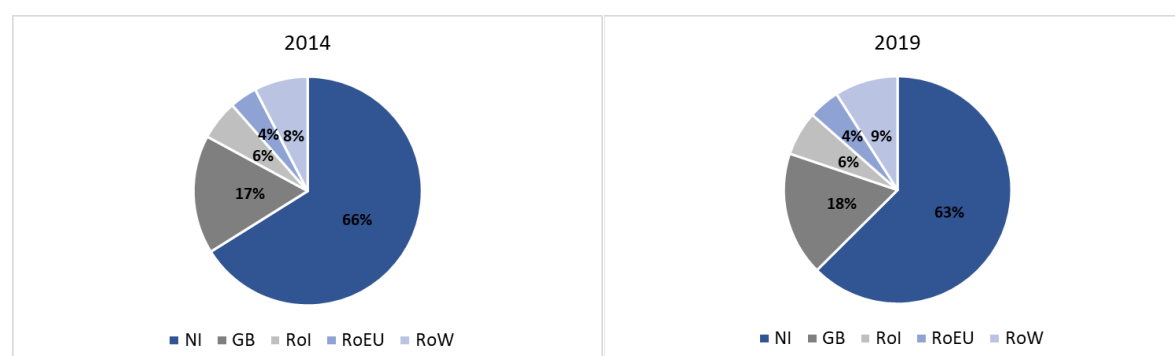
Broad Market Analysis

The panel data comprises 1,666 firms that had annual observations over the 2014-19 period on the BDR dataset. Given the nature of the sampling frame for the underlying dataset, whereby the largest firms are fully enumerated⁴, it is unsurprising that those in the panel dataset were on average larger in size than the full BDR sample, both in terms of employees and turnover. They were more concentrated in the Manufacturing sector and a higher share were companies rather than other legal forms (see Appendix One for details).

Sales by Broad Market Destination

Total (weighted) nominal sales by the 1,666 firms on the panel dataset grew by 16% between 2014 and 2019, from £34bn to £39bn. Sales within NI comprised the majority of all sales (Figure 1) and, although the value of sales to NI increased between 2014 and 2019, their contribution to total sales fell from 66% of all sales in 2014 to 63% in 2019, indicating a declining reliance on the domestic market. The value of sales also increased to all other markets but the share of sales from each remained broadly unchanged between 2014 and 2019 with only minor increases in the contribution of the Great Britain (GB) market and the Rest of the World (RoW) to total sales.

Figure 1: Share of sales to broad market destinations 2014 and 2019

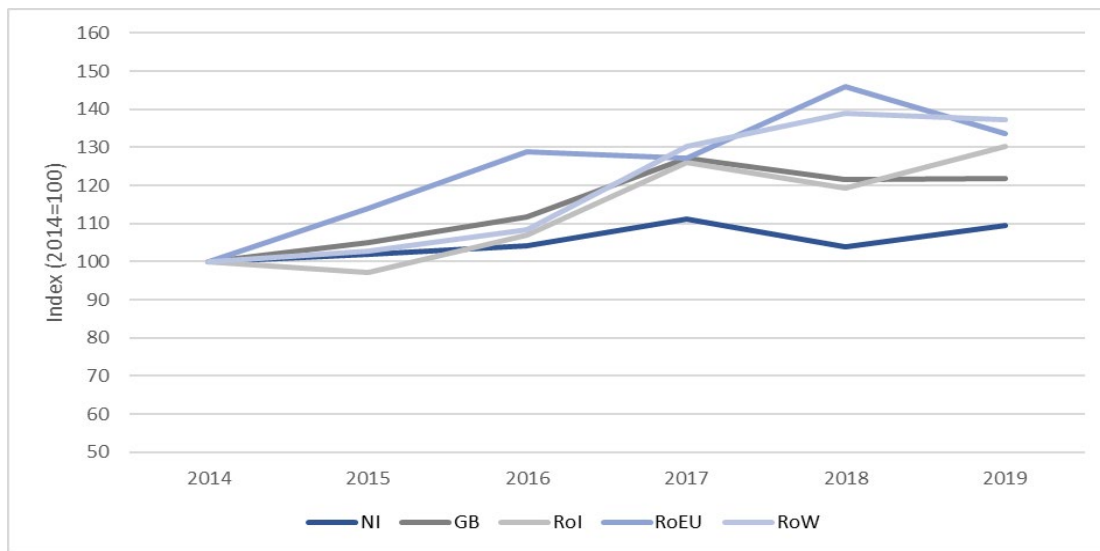


Source: BDR dataset

Although sales to each broad market rose over the period the scale of increases for the panel of firms were higher in export market destinations (Figure 2). Relative to their sales value in 2014, sales to the RoW increased by 37% in 2019, those to the Rest of the EU (RoEU) increased by 34% and sales to the Republic of Ireland (RoI) rose by 30%. In comparison, sales to the GB market rose by 22% and the NI market by 10%.

⁴ The sampling frame for the NIABI, which forms the BDR, includes full enumeration of all businesses with 50+ employees, or where they have 20+ employees and more than one local unit. Businesses falling below that threshold are selected on a random stratified basis. <https://www.nisra.gov.uk/statistics/annual-business-inquiry/abi-sample-coverage>

Figure 2: Index of nominal sales growth to broad market destinations 2014 – 2019 (2014=100)



Source: BDR dataset

In each of the five broad markets those with continuous sales to that market (i.e. selling continuously in each of the six years), make up both the majority of sellers and of sales annually⁵ (Table 1). The number of intermittent sellers is variable across the years but has increased over time in each market. The RoI market is the only one in which there were fewer intermittent sellers in 2019 compared to 2014 although there had been an increase between 2014 and 2018. Table 1 shows that there are relatively few firms that sell intermittently in NI, with continuous sellers accounting for around 96% of sellers to that market in each year. In each of the other markets continuous sellers comprise approx. 60% - 80% of sellers in any particular year. The largest increase in the number of intermittent sellers was to the RoEU market, increasing by one third between 2014 and 2019.

Table 1: Number of intermittent and continuous sellers by broad market destination 2014-19

| | NI | | GB | | RoI | | RoEU | | RoW | |
|------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|
| | Intermittent | Continuous | Intermittent | Continuous | Intermittent | Continuous | Intermittent | Continuous | Intermittent | Continuous |
| | N | N | N | N | N | N | N | N | N | N |
| 2014 | 62 | 1,501 | 130 | 554 | 178 | 641 | 92 | 238 | 89 | 221 |
| 2015 | 74 | 1,501 | 120 | 554 | 164 | 641 | 89 | 238 | 86 | 221 |
| 2016 | 69 | 1,501 | 137 | 554 | 181 | 641 | 106 | 238 | 91 | 221 |
| 2017 | 73 | 1,501 | 154 | 554 | 173 | 641 | 108 | 238 | 94 | 221 |
| 2018 | 82 | 1,501 | 200 | 554 | 207 | 641 | 147 | 238 | 128 | 221 |
| 2019 | 70 | 1,501 | 165 | 554 | 174 | 641 | 122 | 238 | 104 | 221 |

Source: BDR dataset

As detailed above, continuous sellers account for the majority of sellers to a market in any year while their contribution to total sales in those markets also dominates. In fact, sales by continuous sellers comprise 85% or more of total sales to each market annually (Table 2). In all markets the value of sales by continuous sellers increased between 2014-19 but, with the

⁵ The number of firms is based on the unweighted counts but the value of sales is weighted.

exception of GB, their contribution to total sales to that market fell over the period indicating that sales by intermittent sellers became relatively more important. This was particularly the case for the RoEU, where continuous sellers accounted for 94% of all sales in 2014 but this had dropped to 85% in 2019 (and gradually over time). In the RoI and RoW markets the drop in contribution was smaller at 2 percentage points for each. GB was the only market whereby sales by continuous sellers accounted for a higher share in 2019 than 2014, at 95% of total sales compared to 91% in 2014. Given that Table 1 above indicates that the number of intermittent sellers to GB had risen over the same period, the greater number of intermittent sellers in 2019 had a lower value of sales.

Table 2: Sales by continuous sellers by broad market destination 2014-19

| | <i>NI Sales</i> | | <i>GB Sales</i> | | <i>RoI Sales</i> | | <i>RoEU Sales</i> | | <i>RoW Sales</i> | |
|------|-----------------|------------|-----------------|------------|------------------|------------|-------------------|------------|------------------|------------|
| | Sales | % of total | Sales | % of total | Sales | % of total | Sales | % of total | Sales | % of total |
| | £000s | | £000s | | £000s | | £000s | | £000s | |
| 2014 | 22,216,100 | 99% | 5,192,603 | 91% | 1,786,815 | 94% | 1,238,041 | 94% | 2,498,992 | 97% |
| 2015 | 22,472,410 | 98% | 5,517,108 | 92% | 1,734,832 | 94% | 1,327,881 | 88% | 2,554,062 | 96% |
| 2016 | 23,074,820 | 99% | 5,933,279 | 93% | 1,865,105 | 91% | 1,519,802 | 89% | 2,671,366 | 96% |
| 2017 | 24,563,000 | 98% | 6,783,411 | 94% | 2,197,577 | 91% | 1,430,888 | 85% | 3,168,750 | 94% |
| 2018 | 22,843,850 | 98% | 6,435,345 | 93% | 2,051,307 | 90% | 1,653,644 | 86% | 3,342,812 | 93% |
| 2019 | 24,034,150 | 98% | 6,610,340 | 95% | 2,292,921 | 92% | 1,498,923 | 85% | 3,366,381 | 95% |
| N | 1,501 | | 554 | | 641 | | 238 | | 221 | |

Source: BDR dataset

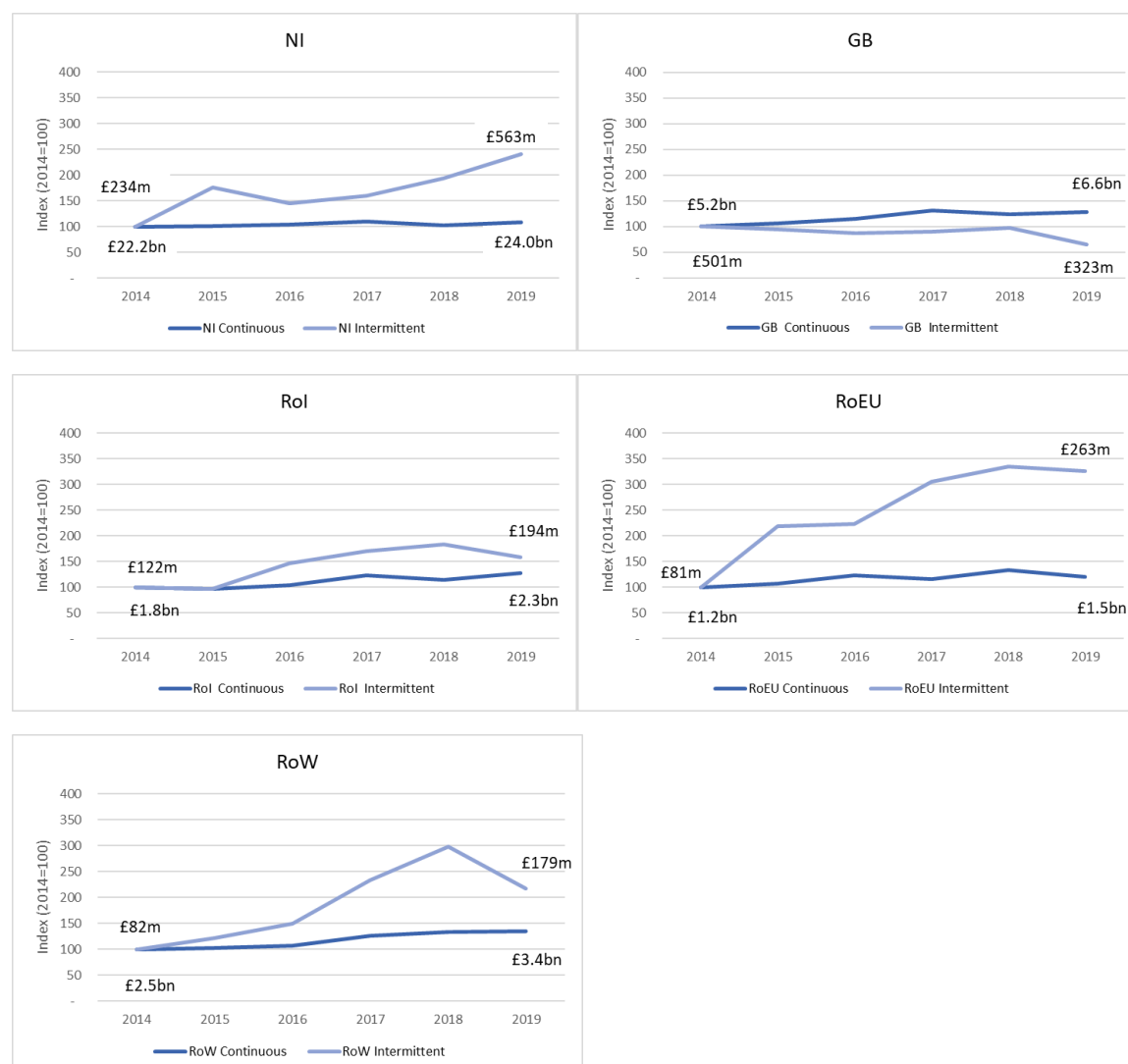
Figure 3 shows the growth in sales to each market by those with six years of continuous sales to that market and those with intermittent sales to that market. In all markets, bar GB, growth in sales by intermittent sellers was higher than for continuous sellers. The two markets with the largest increase in sales by intermittent sellers by 2019 were the RoEU market and the NI market⁶. Sales by intermittent sellers to the RoEU market rose more than three-fold between 2014-19, with their sales contributing £263m, or 15% of the total, to that market in 2019. By contrast, the GB market saw falling sales by intermittent sellers between 2014-19 by 36%, although sales made by continuous sellers grew by 27% over the period.

Sales by intermittent sellers to the RoI market and RoW markets both peaked in 2018 before dropping back in 2019. Despite this fall, sales by intermittent sellers to the RoI market increased by 59% between 2014 and 2019, while those to the RoW grew by 217% in the same period. Of the three broad export markets, the most important market (by value of sales) for intermittent sellers in 2014 was the RoI market at £122m but, by 2019, this had been overtaken by the RoEU market with intermittent sellers making £263m of sales there.

For all markets sales by continuous sellers increased over the period. This was highest for sales to the RoW with an increase of 35% between 2014-19. Growth was also strong in the RoI and GB markets at 28% and 27% respectively. Continuous sellers in NI had the lowest growth in sales at just 8% over the period.

⁶ Sales to the NI market by intermittent sellers more than doubled over the period but, due to the sheer scale of sales by continuous sellers, their contribution in 2019 was just 2% of the total.

Figure 3: Index of nominal sales growth to broad market destinations by continuous and intermittent sellers 2014 – 2019 (2014=100)



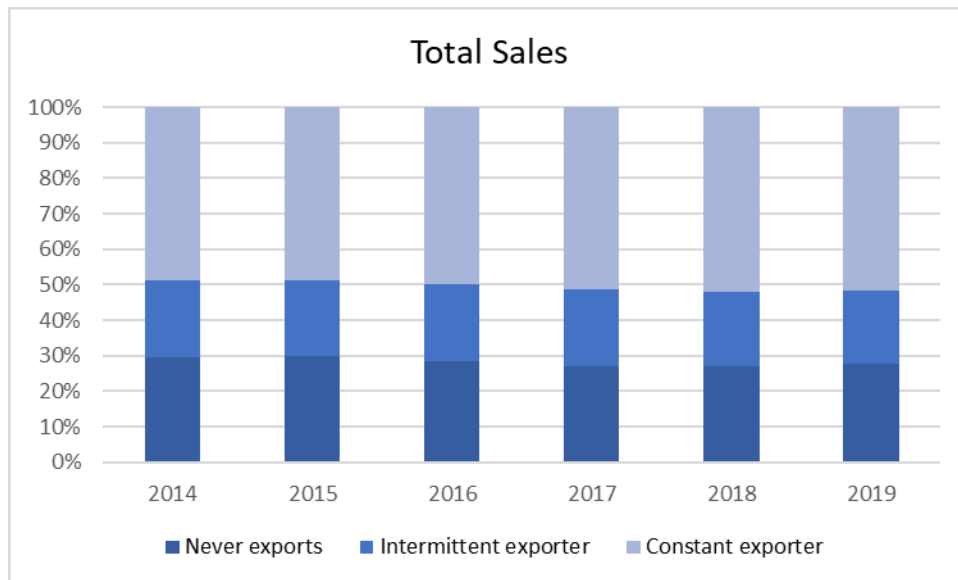
Source: BDR dataset

Sales by Export Type

Focusing specifically on exporters, rather than the five broad markets, we categorise the firms into one of three export states based on their sales markets and longevity of sales to those markets. We identify three types of firm: those who never export; those who export intermittently; and those who constantly export. Appendix One, Table Two shows characteristics of these three types of firm. Those who never export are predominantly service sector firms, with a higher average size and more local units than the other two exporter groups, most likely due to larger firms in the Wholesale and Retail sector who account for around one quarter of the never export group. Unsurprisingly, a higher share of the exporter firms are in Manufacturing, with over half of the constant exporters in this sector. Exporters are also larger in turnover size and their average productivity is higher, with the median productivity of constant exporters, in particular, around twice that of the never exporters.

Assessing the contribution to total sales by each group shows that constant exporters, who account for 44% of firms in the panel, contribute around half of all total sales made annually by NI firms (Figure 4). Those who export intermittently, who account for 20% of firms, also account for around 20% of total sales. Those who never export account for 36% of firms but just under 30% of total sales. This suggests that constant exporters punch above their weight in terms of share of sales but those who never export are underrepresented. Notably there was little change in these shares over time.

Figure 4: Share of total sales by type of exporter 2014 – 2019



Source: BDR dataset

Figure 5 shows the same analysis but for export markets only, excluding the firms who never export. Constant exporters account for 68% of all exporting firms and contribute the lion's share of export sales, ranging from 95% to 97% annually. Consequently, those who sell in export markets intermittently, who account for 32% of firms, contribute only 3-5% of export sales annually. Again, these shares have not changed over time. Taking an average of their export sales suggests sales of around £700,000 annually compared to an average of over £9m for constant exporters.

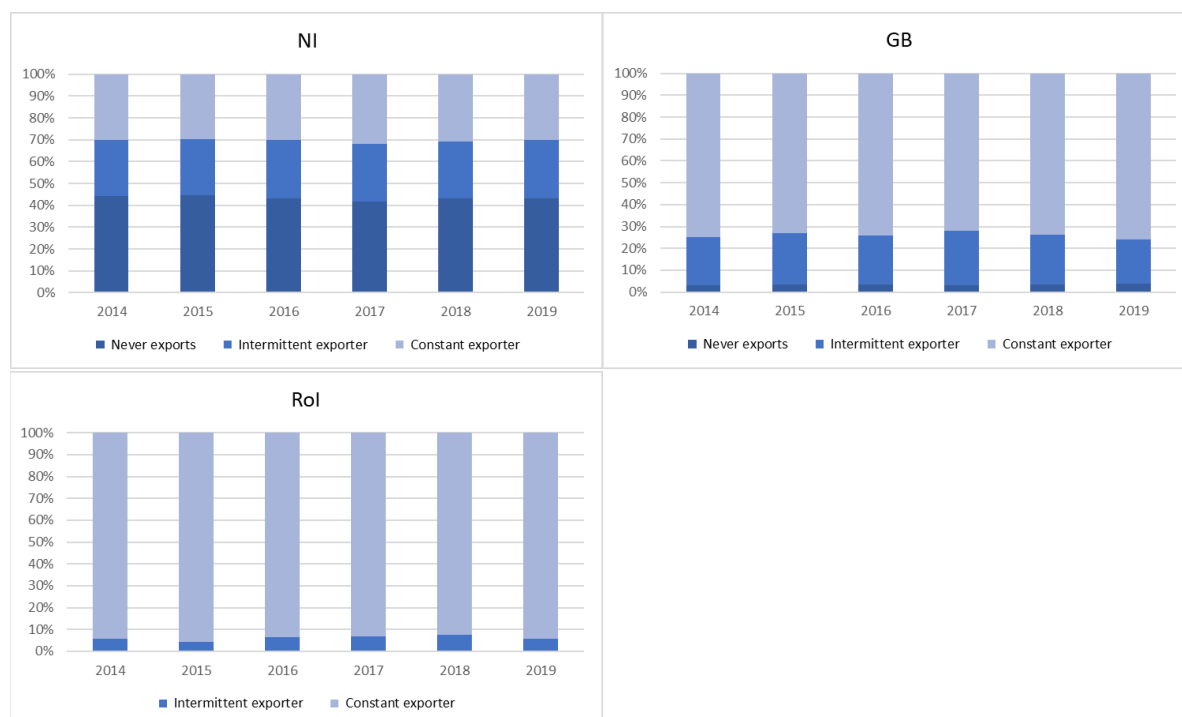
Figure 5: Share of export sales by type of exporter 2014 – 2019



Source: BDR dataset

Interestingly, analysing the NI and GB market sales by the categories of exporter also shows that exporters also account for the majority of sales to those two markets (Figure 6). In NI the intermittent and constant exporters combined account for just under 60% of sales within NI, with the constant exporters accounting for a slightly higher share of the two. GB sales are also dominated by firms that are also constant exporters. Those who never export have little presence in the GB market, accounting for around 3% of sales to GB annually. This indicates that external sellers to NI are predominantly also exporters. As with total export sales above, constant exporters also account for over 90% of sales to the RoI.

Figure 6: Share of NI, GB and RoI sales by type of exporter 2014 – 2019



Source: BDR dataset

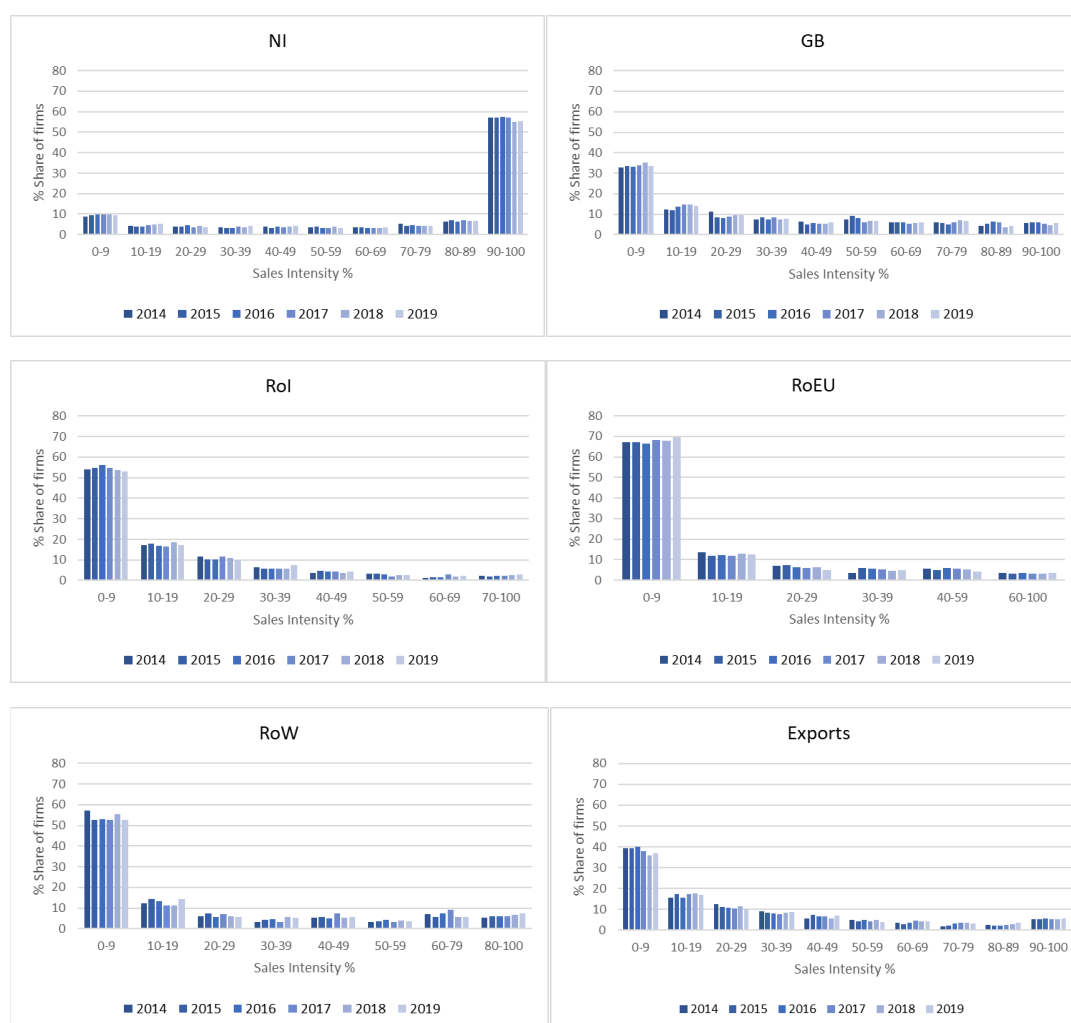
Sales Intensity

Sales intensity is defined as sales to a particular market as a percentage share of total sales. It is calculated for each firm for each market they sell to thus enabling an analysis as to the degree to which markets are comprised of few high intensity sellers versus many low intensity sellers or a combination of both. The NI market stands out from the others due to the predominance of high intensity sellers (Figure 7), whereby almost 60% of firms selling to the NI market annually sell between 90%-100% of their sales there. At the other end of the spectrum around 10% of firms sell less than 10% of sales to NI.

Sales intensity to all other markets is left skewed, particularly in the individual, and combined, export markets. This indicates that sellers to these markets are largely low intensity. In each of the RoI, RoEU and RoW markets at least half of firms sell less than 10% of their sales in those respective markets. Of the three broad export markets the RoW has the highest share of high intensity exporters, with between 12%-15% of firms annually selling more than 60% of sales to the ROW market⁷. In comparison, only 3-4% of firms selling to the RoEU market sell 60% or more of sales there, and 3-5% of those selling to the RoI market. Considering the export market as a whole, between 13-17% of firms annually sell over 60% in export markets, this share being driven by the higher intensity of those selling into RoW markets.

⁷ Due to disclosure issues it is not possible to show the sales intensity by each decile for all markets in Figures 7 and 8.

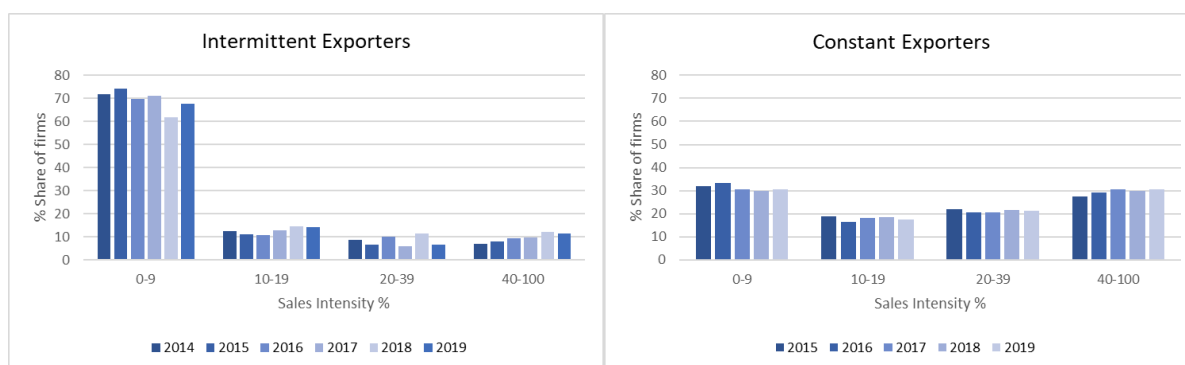
Figure 7: Sales Intensity by broad market destination 2014 – 2019



Source: BDR dataset

Focusing on exporters only, Figure 8 shows the difference in sales intensity between intermittent and constant exporters. The majority of intermittent exporters (over 60%) sell less than 10% of their sales in export markets. In contrast, only around 30% of constant exporters have an export intensity of less than 10%. Meanwhile an almost equal share, of around one third, make 40% or more of their sales in export markets. In general, constant exporters have a higher export intensity than intermittent exporters. It is important to note that both sets of firms have increased their export intensity over time. In 2014 just 7% of intermittent exporters made 40% or more of their sales in export markets, by 2019 this was 11% of firms. Likewise, 27% of constant exporters sold 40% or more into export markets in 2014, by 2019 this had risen to 31%.

Figure 8: Sales Intensity by exporter type 2014 – 2019



Source: BDR dataset

Summary and Conclusions

Summary

The panel element of the BDR dataset enables an in-depth analysis of the trading patterns of 1,666 NI firms as it includes those with six years of continuous trade data (2014-19). Given the underlying sampling frame it is more heavily biased towards larger firms, nevertheless the trends provide an indication of the direction of change over time in terms of broad market entry, and continuity and intensity of sales. It also enables identification of potential opportunities for further expansion into export markets.

Between 2014 and 2019, total nominal sales by the firms in the panel dataset increased by 16%, rising from £34 billion to £39 billion. While NI remained the largest market, its share of total sales declined from 66% to 63%, indicating a small but gradual shift away from reliance on the domestic market. Sales to international markets experienced the strongest growth over the period: sales to the RoW rose by 37%, to the RoEU by 34%, and to the RoI by 30%. In contrast, sales to GB increased by 22%, and to NI by just 10%.

Continuous sellers to the broad markets (i.e. those selling to a particular market in all six years) dominate, consistently contributing over 85% of total sales in every market. However, over time, intermittent sellers have become more significant with their sales growth outpacing that of continuous sellers in all markets except GB. Continuous sellers also experienced sales growth in all markets, with the export markets of the RoW (35%) and RoI (28%) showing the largest increases. While the GB market saw a drop in sales by intermittent sellers (down 36%) this was somewhat offset by a 27% increase in the value of sales by continuous sellers.

Categorizing the firms into three distinct groups based on their export behaviour: never exporters, intermittent exporters, and constant exporters, shows that firms that never export are predominantly in the service sector (especially Wholesale and Retail) and tend to be larger in size, with more local units. In contrast, exporters, particularly constant exporters, are more likely to be in the Manufacturing sector, tend to have higher turnover and significantly greater productivity, with constant exporters showing median productivity levels roughly double that of firms that never export.

Constant exporters dominate export sales, comprising 68% of exporting firms and contributing between 95% and 97% of export sales annually. Intermittent exporters, despite comprising 32% of exporting firms, contribute only 3–5% of export sales annually. On average, intermittent exporters generate around £700,000 in export sales annually, compared to over £9 million for constant exporters, highlighting a significant disparity in export performance. The analysis also reveals that exporters play a major role in the NI and GB markets. Looking at the latter, constant exporters dominate sales.

Sales intensity refers to the percentage of a firm's total sales made to a specific market. The NI market is dominated by high intensity sellers, with nearly 60% of firms selling 90–100% of their total sales there. For all other markets, sales intensity is skewed toward the lower end. In the RoI, RoEU, and RoW markets, at least half of firms sell less than 10% of their total sales in each respective market. In the export markets only 13–17% of firms sell more than 60% of their total sales there. This figure is largely driven by firms selling to the RoW, which tends to have a higher proportion of high-intensity exporters than either the RoEU or RoI. Constant exporters also show significantly higher export intensity, with one third selling 40% or more abroad, while the majority of intermittent exporters sell less than 10% of sales in export markets.

Conclusions

Overall, the analysis points to the fact that while the NI domestic market still dominates for NI firms, its reliance is declining over time with a gradual shift towards sales in export markets. The continuing high concentration of firms selling the majority of their output locally is consistent with the notion that exporting is concentrated in few firms, but it also raises the question as to whether there is significant untapped potential for these firms to sell into other markets.

It is the case that while export sales are increasing, most firms selling to these markets do so at low intensity. This is evident for those selling intermittently to export markets; they are increasing in number but remain marginal to total sales. If exporting has taken place and the sunk costs have already been incurred, this suggests scope for intermittent sellers to expand both their scale of sales in export markets and the consistency of doing so. The need for doing this is clear in the literature which indicates that learning from exporting is reduced if export sales are not continuous and that future export engagements will also be short.

The BDR data has, so far, been restricted to broad markets, rather than individual countries, so it is difficult to assess the extent of individual market penetration. However, if firms are selling to individual markets within a region (e.g the EU), then findings from the literature about the importance of marginal distance between existing export markets and new ones may also be relevant here in terms of the potential for exporters to also move into neighbouring export markets.

The critical importance of constant exporters to both overall sales and export sales, accounting for a significant share of sales even in the NI and GB markets, is clear. These firms are typically in the Manufacturing sector and generally more productive than non-exporters. This aligns with the literature which finds that exporters tend to be larger, more productive, and more capital- and technology-intensive. The ability of these firms to sustain exporting also reflects these resource advantages and may align with the self-selection theory, although it may also reflect the benefits of persistence and internal leadership capabilities.

While around one third of constant exporters sell more than 40% in export markets there may be room to encourage them to invest further in export markets, given the suggestion that higher export intensity firms have stronger incentives to commit more resources to foreign markets as it enables them to accelerate their market learning and achieve export market competitiveness more quickly. Geographic diversification has also been seen to be more beneficial when paired with high intensity exporting. Although the BDR data doesn't permit analysis of individual markets, further analysis may point to the potential of encouraging constant exporters to expand into new markets, thus helping to spread risk and further enhance learning-from-exporting. For the other two thirds of constant exporters, who sell less than 40% in export markets, there may be opportunities to increase their sales intensity abroad, given that they have already incurred the costs of entering the broad markets. By doing so, this could reduce their unit costs of exporting.

Appendices

Table 1: Characteristics of full dataset compared to panel dataset (unweighted)

| | Full Dataset (n=16,250) | | Panel Dataset (n=1,666) | |
|--|-------------------------------------|---------------------------|-------------------------|---------------------------|
| Legal Status | N | % | N | % |
| Company | 10,851 | 67 | 1,429 | 86 |
| Sole Proprietor | 2,848 | 18 | 40 | 2 |
| Partnership | 1,346 | 8 | 88 | 5 |
| Public Corp, Govt & Non-profit & Unknown | 1205 | 7 | 109 | 7 |
| Sector | N | % | N | % |
| A-B, D-E (Agriculture, Mining, Elec & Water) | 811 | 5 | 58 | 3 |
| C Manufacturing | 2,219 | 14 | 636 | 38 |
| F Construction | 2,515 | 15 | 78 | 5 |
| G Wholesale & Retail | 2,902 | 18 | 351 | 21 |
| H-S Other Services | 7803 | 48 | 543 | 33 |
| Local Govt District | N | % | N | % |
| Antrim and Newtownabbey | 1,003 | 6 | 130 | 8 |
| Ards and North Down | 1,084 | 7 | 80 | 5 |
| Armagh City, Banbridge and Craigavon | 1,555 | 10 | 179 | 11 |
| Belfast | 3,238 | 20 | 386 | 23 |
| Causeway Coast and Glens | 1,024 | 6 | 87 | 5 |
| Derry City and Strabane | 971 | 6 | 81 | 5 |
| Fermanagh and Omagh | 1,059 | 7 | 65 | 4 |
| Lisburn and Castlereagh | 1,215 | 7 | 117 | 7 |
| Mid Ulster | 1,580 | 10 | 163 | 10 |
| Mid and East Antrim | 907 | 6 | 76 | 5 |
| Newry, Mourne and Down | 1,574 | 10 | 143 | 9 |
| Unknown | 1,040 | 6 | 159 | 10 |
| Employee Sizeband | N | % | N | % |
| 0 | 4,331 | 27 | 18 | 1 |
| 1-9 | 6,387 | 39 | 146 | 9 |
| 10-49 | 3,843 | 24 | 717 | 43 |
| 50-249 | 1,382 | 9 | 593 | 36 |
| 250+ | 307 | 2 | 192 | 12 |
| Characteristics | Mean⁸ (range) | Median (range) | Mean (range) | Median (range) |
| No. local units | 1-3 | 1-3 | 3-6 | 1-3 |
| Employees | 25-30 | 1-5 | 140-145 | 40-45 |
| Directors | 0-3 | 0-2 | 0-3 | 0-2 |
| Turnover (£000) | 3,000 - 6,000 | 150-155 | 14,000 - 17,000 | 2,000 - 5,000 |
| Productivity (£000) | 60-65 | 30-35 | 45-50 | 30-35 |

⁸ Note that due to disclosure rules a range is provided for mean and median values rather than point estimates.

Table 2: Characteristics of exporter types

| <i>Sector</i> | Never exports (n=596) | | Intermittent exporter (n=340) | | Constant exporter (n=730) | |
|---|------------------------------|-----------------------|--------------------------------------|-----------------------|----------------------------------|-----------------------|
| | N | % | N | % | N | % |
| A-B D-F (Agriculture, Mining, Elec & Water, Construction) | 35 | 6 | 41 | 12 | 60 | 8 |
| C Manufacturing | 102 | 17 | 121 | 36 | 413 | 57 |
| G Wholesale & Retail | 139 | 23 | 96 | 28 | 116 | 16 |
| H-S Other Services | 320 | 54 | 82 | 24 | 141 | 19 |
| <i>Characteristics</i> | Mean (range) | Median (range) | Mean (range) | Median (range) | Mean (range) | Median (range) |
| No. local units | 5-10 | 2-6 | 5-10 | 1-5 | 1-5 | 1-5 |
| Employees | 160-165 | 55-60 | 125-130 | 35-40 | 130-135 | 35-40 |
| Directors | 0-3 | 0-2 | 0-3 | 0-2 | 0-3 | 0-2 |
| Turnover (£000) | 6,000-8,000 | 700-900 | 10,000-12,000 | 1,000 - 3,000 | 20,000 - 22,000 | 6,000 - 8,000 |
| Productivity (£000) | 35-40 | 20-25 | 65-70 | 30-35 | 50-55 | 40-45 |

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UUEPC is an independent research centre focused on producing evidence-based research to inform policy development and implementation. It engages with all organisations that have an interest in enhancing the Northern Ireland economy. The UUEPC's work is relevant to Government, business and the wider public with the aim of engaging those who may previously have been disengaged from economic debate.

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