



NEW ZEALAND
FOREIGN AFFAIRS & TRADE
Manatū Aorere

All for Trade and Trade for All:

Inclusive and productive
characteristics of New Zealand
goods exporting firms

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Executive Summary

The Ministry of Foreign Affairs and Trade (MFAT) is committed to deepening understanding of the benefits and costs of international trade and how these are distributed across society. While evidence shows that trade and other forms of international engagement provide aggregate economic and other benefits, these impacts are typically not evenly spread. Unfortunately, existing data in the New Zealand context is insufficient to understand these disparities properly.

This paper attempts to bridge some of these gaps as part of a research program to support the Government's Trade for All agenda. It makes use of firm and individual-level data from Stats NZ's Longitudinal Business Database (LBD) and Integrated Data Infrastructure (IDI) to generate a "bottom-up" picture of New Zealand's goods exporting and non-exporting firms in 2018. While many studies have highlighted how dimensions such as employment, wages, and productivity differ between exporting and non-exporting firms, this paper adds a gender, ethnicity, and firm-size lens based on administrative data. As we rely on official export entries to identify exporting firms, our dataset only includes firms that exported goods (not services).

The impacts of trade on distributional outcomes is very much an emerging area of research, both in New Zealand and globally. As such, our understanding of these effects, the complex interactions involved, and their underlying drivers are still developing. The findings in this paper are descriptive with the aim of establishing a clearer picture of the current "state of play". Future analytical work will attempt to better understand the drivers of these trends.

OVERALL EXPORTING CHARACTERISTICS

Our dataset confirms the conventional wisdom that New Zealand's goods exports are heavily focused on primary-based products, predominantly from the manufacturing and wholesale trade industries. Almost half of all New Zealand's goods exports headed to China, Australia, and the United States in 2018. China was the largest market by volume of trade and Australia by far the most popular market in terms of the number of firms involved. More than three times the number of firms exported to Australia than to the next most popular market, the United States.

The economic importance of large firms in New Zealand's exporting landscape is also clear. Despite making up only 1% of the total number of exporters, large firms (those with more than 250 employees) were responsible for more than two-thirds of goods exports and employed more than half of all employees in goods exporting firms. Large exporters are able to exploit economies of scale to diversify across markets while smaller exporters tend to concentrate on single markets. Over half of exporting firms in our dataset exported to a single market but collectively represented only 4% of total goods exports, whereas only 13% of firms exported to more than five markets but were responsible for 82% of all goods exports.

We also find that exporting firms tend to be more productive than non-exporting firms and perform better across a number of metrics. Goods exporting firms had on average 89% higher output-per-worker than non-exporting firms, as well as three times' higher sales, four times' higher capital intensities, and significantly higher intermediate consumption. These benefits were more pronounced in large firms, with the average productivity gap between exporters and non-exporters rising to 130% in firms with more than 250 employees.

It also appears the benefits of exporting firms' higher productivity are shared with employees, as employees of exporting firms earn considerably more on average than those in non-exporting firms – i.e. they earn an “export premium” relative to employees in non-exporting firms. Average monthly earnings for employees of exporting firms were higher than in non-exporting firms across almost all industries, including manufacturing (41% higher), wholesale trade (31%), and mining (108%).

GENDER DIFFERENCES IN EXPORTING FIRMS

Our dataset shows that women continue to be under-represented in goods exporting firms – a long-standing feature of New Zealand's export landscape. While men and women were evenly represented in New Zealand's labour force overall, women comprised only 40% of employees in goods exporting firms, with particularly low representation in key industries. In the manufacturing, wholesale trade, and agriculture, forestry and fishing industries women made up only a third of employees in exporting firms – industries that were responsible for more than half of employment across all New Zealand's goods exporting firms.

The nature of occupations traditionally held by men and women likely contributes to this. Women have long been under-represented in farming, low-skilled manual jobs, and technical professions. As New Zealand's goods exports are heavily concentrated in manufacturing and primary production, there is an occupational bias towards men in export-related jobs. The causes of this occupational segregation are multiple and complex, and analysis of the underlying drivers lies beyond the scope of this paper. However, these factors appear to be less constraining in larger exporters, where female representation tends to be higher (44% female) than in SME exporters (33% female).

Employees of both genders experienced higher average earnings in exporting firms than their counterparts did in non-exporting firms. However, it appears that men experience these benefits disproportionately more, with slightly larger earnings gaps between men and women in exporting firms than in non-exporting firms. Average monthly earnings for males in exporting firms were 24% higher than females, compared with 22% higher in non-exporters. In addition, men received a higher “export premium”, with men in exporting firms earning 13% more than their non-exporting male counterparts compared with 10% for women. Interestingly, despite higher female representation in large exporters, earnings gaps were similar across firm sizes.

While data on female firm leadership and ownership in the LBD and IDI is limited, female participation in these areas also appears more unequal in goods exporting firms than in non-exporting firms. For example, using the 5% highest paid employees in a firm as a proxy for its senior leadership, we find that 82% of goods exporting firms had a male majority in their leadership team compared with 69% for non-exporting firms. When firm size is considered, the difference is even starker. Outside of SMEs, only 4% of large goods exporting firms had a female majority on their leadership teams. Since large firms are responsible for the bulk of goods exports, this means that exporting firms with a male majority in leadership accounted for over 96% of all goods exports.



ETHNICITY DIFFERENCES IN EXPORTING FIRMS

Unlike for gender, the overall ethnic composition of employees in goods exporting firms is broadly reflective of New Zealand's workforce more widely. Relative to the total labour force, Māori and Pacific employees were slightly overrepresented, while New Zealand European and Asian employees were slightly under-represented, but these differences were small.

However, the ethnic profile of export employment varies more noticeably across industries. Māori, for example, are particularly prevalent in the primary sector. Around a third of Māori workers in goods exporting firms were employed in the agriculture, forestry and fishing industry, compared with 23% of New Zealand Europeans and 18% of Pacific workers. Meanwhile, Pacific peoples were highly represented in the manufacturing industry and Asian workers were more likely than other ethnicities to be employed in retail trade. Ethnic representation also varied by firm size, with Māori having slightly higher representation in exporting SMEs than larger exporters.

Employees of all ethnicities who work for exporting firms earn more, on average, than those of non-exporting firms. However, the size of the positive earnings effect from exporting varies by ethnicity. New Zealand Europeans had the largest "export premium" of any ethnic group, with New Zealand European employees in exporting firms earning 18% more on average than those in non-exporting firms. This compares with 15% for Asian and Middle Eastern, Latin American, and African employees, 13% for Pacific employees, and 12% for Māori employees. This suggests employees of non-New Zealand European ethnicities are benefiting less from exporting than New Zealand Europeans. Earnings disparities for Māori and Pacific employees more pronounced in large exporting firms.

When looking at firm leadership and ownership, there was higher representation of Māori in senior leadership in exporting firms than in non-exporting firms, largely due to their strong presence in the export-focussed agriculture, forestry and fishing industry. For the same reason, Māori-led exporting firms derived a higher proportion of their sales from exports on average (39%) than non-Māori led firms (25%). However, Māori-led exporting firms experienced smaller average productivity and earnings benefits from exporting than non-Māori firms, a finding that also applied to Māori-owned firms with working proprietors (i.e. where an owner is employed in the firm).



1 Introduction

The Ministry of Foreign Affairs and Trade (MFAT) is committed to improving understanding of the benefits and costs of international trade and how these are distributed across society. While evidence shows that trade and other forms of international engagement often provide aggregate economic and other benefits, we know from theory, overseas experience, and partial indicators for New Zealand that these impacts are typically not evenly spread. However, there is insufficient data in a New Zealand context to understand these disparities properly.

Achieving a better understanding of the impacts of trade at the firm and individual levels, in addition to the economy-wide level, helps to improve what we know about the distributional aspects of trade. This in turn can inform future policy development—whether for trade or domestic policies—to ensure international trade delivers more sustainable and inclusive outcomes for New Zealand.

This paper attempts to bridge some of the current data gaps in the New Zealand context, in particular around understanding the extent to which different genders and ethnicities experience the benefits of trade and how experiences differ across firm sizes. It makes use of firm and individual-level data from Stats NZ’s Longitudinal Business Database (LBD) and Integrated Data Infrastructure (IDI) to generate a “bottom-up” picture of New Zealand’s goods exporting and non-exporting firms. While many studies have already highlighted how dimensions such as employment, wages, and productivity differ between exporting and non-exporting firms, this paper adds a specific firm size, gender, and ethnicity lens. The underlying data also provides a new dataset that will be published on the MFAT website and publicly available for further research.

Developing a more accurate understanding of the gender and ethnicity characteristics of exporting firms is fundamental for ensuring an inclusive approach to trade. It can help us understand issues including: how remuneration in exporting and non-exporting firms differs between males and females; how female leadership or ownership of firms may affect firm exporting characteristics; how representation within key exporting sectors differs across ethnicities; or how the experience of Māori-owned exporting firms may be different to non-Māori.

This paper is part of an MFAT research program that supports the Government’s Trade for All agenda. It complements recent work to develop a ‘Productive, Sustainable and Inclusive Trade Channels Framework’ and to identify metrics that measure trade’s influence on productivity, sustainability, and inclusiveness in New Zealand¹. However, this remains an emerging area of research, both in New Zealand and globally, with limited empirical evidence available currently to understand the complex interactions involved. As such, the descriptive findings from the LBD and IDI discussed in this paper are intended to supplement the evidence base, but future work is required to understand the factors that are driving these trends.

This paper proceeds as follows: Section 2 provides an overview of the methodology and dataset used; Section 3 discusses findings about the overall firm-level characteristics of New Zealand’s goods exporters and non-exporters; and Sections 4 and 5 discuss these characteristics from a gender and ethnicity perspective respectively.

DISCLAIMER

Access to the data used in this study was provided by Stats NZ under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975. The results presented in this study are the work of the author, not Stats NZ or individual data suppliers. As such, they are not official statistics. They have been created for research purposes from the IDI and LBD, which are carefully managed by Stats NZ. For more information, please visit <https://www.stats.govt.nz/integrated-data/>.

The results are based in part on tax data supplied by Inland Revenue to Stats NZ under the Tax Administration Act 1994 for statistical purposes. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes, and is not related to the data’s ability to support Inland Revenue’s core operational requirements.

¹ The MFAT Working Paper ‘Understanding the Linkages Between Trade and Productivity, Sustainability, and Inclusiveness’ provides an overview of existing evidence on the impacts of trade for productivity, sustainability, and inclusiveness in New Zealand. The accompanying paper ‘Productive, Sustainable, and Inclusive Trade Channels Framework’ complements this with a theoretical framework that underpin these impacts.





2 Methodology

This paper makes use of administrative data on employees and enterprises held by Stats NZ to explore distributional differences within and between New Zealand's goods exporting and non-exporting firms. Particular dimensions of interest are firm performance, employee characteristics (gender and ethnicity), ownership characteristics, and business leadership characteristics. However, a number of data limitations are worth noting, most notably the fact that it is only possible to identify goods exporting firms (not those that exported services).

INTRODUCTION TO THE DATASET²

The data used to create the firm characteristics and employee information in this paper lies within Stats NZ's administrative databases. There are two main schemas used:

- The Integrated Data Infrastructure (IDI), which tracks individual-level data from a wide source of administrative records on people and households. The Linked Employee-Employer Data is the main dataset used within the IDI, which connects firm-level information to individual-level data and relies heavily on the Employee Monthly Schedule for employment and pay information.
- The Longitudinal Business Database (LBD), which contains firm-level enterprise information on topics including business financials, employment, and international trade³. The LBD complements the IDI's focus on people and households, and the two databases are linked by tax data⁴.

Individuals and firms in both databases are de-identified by Stats NZ to protect privacy.

From these two databases, we generated several populations of interest for the 2018 financial year. In total, there were more than one million New Zealand firms in the business register. Of these, 12,800 firms lodged export entries through the New Zealand Customs Service, with goods exports totalling \$53 billion across 9,837 product lines (HS 10-digit level). After filtering to identify only firms that were currently active, economically significant⁵, and identifiable by industry, our main firm population reduced to around 620,000 firms, of which 11,400 firms lodged export entries.

ACCIDENTAL AND INDIRECT EXPORTERS

The extent to which New Zealand firms export varies widely, even when considering only firms that export in any given year. This includes variability in terms of the value of firms' exports and their export intensities – i.e. the proportion of their sales derived from exports. There are a large number of firms that are either micro-sized and whose export revenue is economically insignificant, or larger firms for whom export revenue represents only a tiny fraction of total sales (e.g. 1-2%).

While the experiences and characteristics of small exporters are important, a clearer picture of the impacts of trade can be obtained by focusing on firms for whom exporting is a material focus of their business activities. To do this, for most of the analysis in this paper we remove “accidental exporters” from our definition of exporting firms – i.e. we reclassify any firms that exported less than \$100,000 or whose exports made up less than 5% of their sales as “non-exporting firms”. This reduces the number of exporters in the LBD dataset by roughly half, to 5,900 firms. After also removing firms for which employment information is unavailable, the number of direct exporting firms in our population reduces to 3,900 firms, which were responsible for goods exports worth \$44 billion (80% of total goods exports).

² A detailed description of the methodology will be made available at www.mfat.govt.nz alongside the forthcoming release of the dataset.

³ We rely on intermediate tables constructed in the LBD by Fabling and Maré (2015b, 2019) for productivity estimations.

⁴ For further reading on the LBD, Fabling and Sanderson have produced a useful guide: “A Rough Guide to New Zealand's Longitudinal Business Database (2nd Edition)”.

⁵ Stats NZ deems an enterprise to be economically significant if it meets any of a number of conditions, including paying more than \$30,000 annual GST expenses or sales, having more than three paid employees, or having a live geographic unit classified to agriculture. Further details will be provided in the forthcoming detailed methodological information.



Another adjustment we make is to include “indirect exporters” in our definition of “exporting firms”. This takes into account the heavy export orientation of New Zealand’s primary sector and difficulties attributing exports in this sector to producing firms in our dataset (see more below). More than three quarters of the output in New Zealand’s agriculture, forestry and fishing industry is exported to overseas markets, ranging from around 60% in the horticulture industry to nearly 90% in dairy farming⁶. As a result, the business conditions, wages, and competitive pressures in the industry are heavily influenced by overseas markets, even for firms that do not directly export themselves.

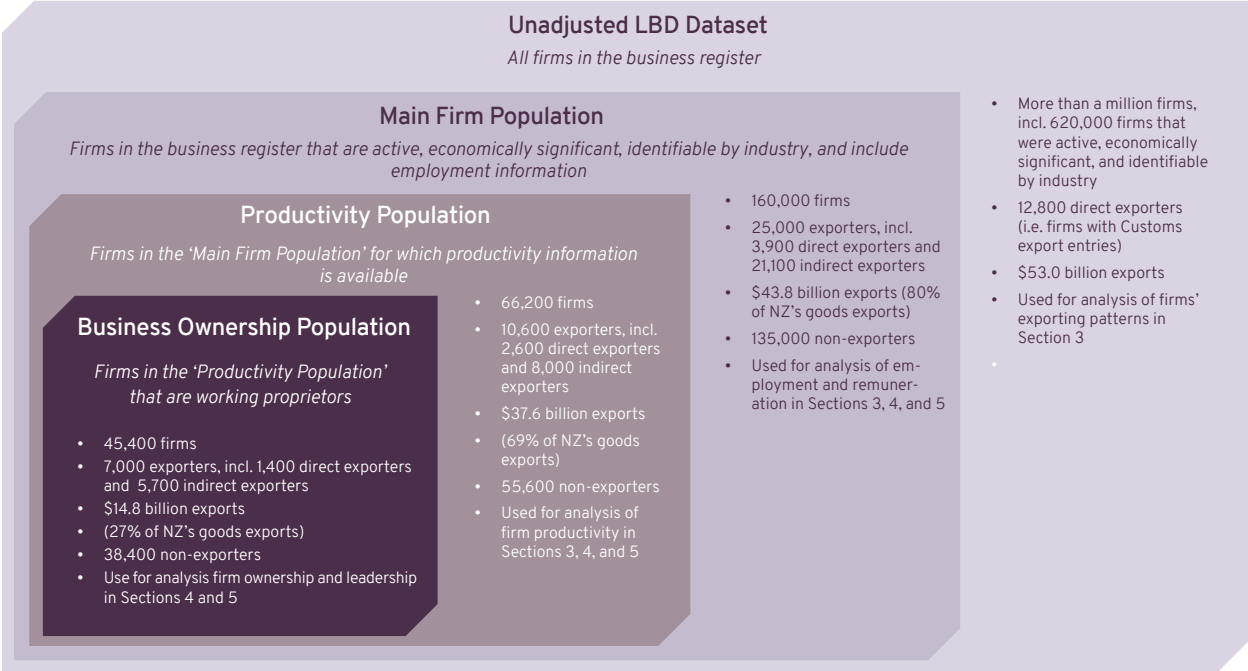
To obtain a more complete picture of the impacts of exporting, we classify any agriculture, forestry and fishing firm that is not a direct exporter in the first instance as an “indirect exporter”. Once these “indirect exporters” are included, this produces our main exporter population of 25,000 firms, comprised of 3,900 direct exporters and 21,100 indirect exporters. We acknowledge there are likely to be many more indirect exporters, for example packaging suppliers whose products may be mostly exported, but we are unable to systematically identify these firms.

KEY CAVEATS AND CAUTIONS

There are a number of caveats to bear in mind when interpreting and applying the findings in this paper. These derive from the nature of the underlying data. While the use of individual and firm-level administrative data allows for a much more extensive “bottom-up” picture than is otherwise available for analysing distributional characteristics, it also involves a number of limitations.

Firstly, not all information is available for each dimension of interest for every firm. As a result, the populations used in this paper vary depending on the particular characteristics discussed. While employee information is available for all firms in our main exporter population, financial information for analysing firm productivity is only available for roughly two-thirds of firms, and information on business ownership is further constrained to only those firms that have working proprietors – i.e. firms where an owner or part owner is also employed by that firm⁷. The different firm populations in our dataset are summarised in Figure 1.

Figure 1 – Summary of firm populations used in this paper



⁶ Stats NZ, 'National Accounts Input-Output tables: Year ended March 2013'
⁷ See Fabling and Maré (2015a) for a more in depth discussion of working proprietors in the LBD. However, we follow a similar approach taken to Te Puni Kōkiri (2020).



Secondly, the dataset relies on export entries from the New Zealand Customs Service to identify exporting firms. As these entries only record the export of goods, only firms that exported goods in 2018 are included in our dataset. While services firms are not entirely excluded, since some exporting of goods occurs by firms in services industries, it does mean the analysis is heavily skewed towards goods industries. As exports of services represented almost a third of New Zealand's total exports in 2018 (\$25 billion) this is a notable gap. However, the unavailability of data currently prevents further analysis. Suggestions from practitioners of the IDI and LBD on how to bridge this gap would be welcomed.

The inability to identify services exports in the IDI and LBD also means that it is not possible to distinguish between purely domestic-focused firms (i.e. those that did not export either goods or services exports) and those that exported only services. As a result, our population of “non-exporters” includes firms that exported services. This is a key limitation for making comparisons between exporting firms and non-exporting firms, as the characteristics of our “non-exporter” population are influenced by services exporting firms. Again, we welcome suggestions from IDI and LBD practitioners on how to address this.

There are further challenges involved with linking trade data to individual firms⁸. New Zealand firms are organised in the LBD into different enterprise groups – plant level firms, legal entities, and greater enterprise firms. These are organised in a vertical manner such that trade is often lodged at the wholesale or retail level further down the production chain, and it is not always possible to identify the firm that initially produced the exported good at the plant level. This can result, for example, in the allocation of a substantial proportion of goods trade to sectors for which no goods trade is expected to exist (for example, professional and financial services). In addition, as industry classifications are based on the industry of the final exporting firm rather than the product itself, the industry profile of exports differs to what is more commonly seen in trade analysis. In particular, manufacturing and wholesale trade exports are inflated while the significance of primary industry exporters is materially reduced. These issues are discussed in Section 3.

Finally, the data provides a cross-sectional analysis for 2018. As our dataset provides a “snapshot” of trade in the 2018 financial year, it will not pick up longitudinal aspects of firms' exporting patterns. It also does not capture the impacts of the COVID-19 pandemic on New Zealand's exporting landscape. However, given the most significant trade impacts from COVID-19 have been on services trade, the findings in this paper are unlikely to be materially affected by the pandemic. We plan to expand the research to longitudinal analysis in the future.

⁸ For a full discussion of the underlying issues in the LBD see Fabling and Sanderson's 'A Rough Guide to New Zealand's Longitudinal Business Database (2nd Edition)'.



3 Firm Characteristics

Our dataset confirms the conventional wisdom that exporting firms tend to have higher productivity, employ more staff, and pay higher wages on average than non-exporting firms. Large firms are responsible for the majority of New Zealand's goods exports and export employment, despite comprising only a minority of firms, and they typically diversify across multiple markets whereas small firms tend to rely on only one or two key markets. Performance disparities between exporters and non-exporters tend to be wider in large firms.

EXPORTING PATTERNS OF NEW ZEALAND FIRMS⁹

While New Zealand firms exported goods to over 200 overseas markets in the 2018 financial year, the vast majority (around 85%) went to only ten export markets. In terms of value, China was our largest goods export market, taking around \$12 billion of New Zealand's goods exports (Table 1). This was followed by Australia (\$9 billion), the United States (\$5 billion), and Japan (\$3 billion). However, Australia was the most popular export market by a large margin in terms of the number of New Zealand firms that exported to it. Over 7,200 firms exported goods across the Tasman, with the United States the second most popular destination (2,871 firms), followed by the United Kingdom (1,662 firms), and China (1,599).

Table 1 – Number of firms exporting goods to top ten markets

Market	Firm count	Exports (millions)
China	1,599	\$ 12,074
Australia	7,209	\$ 8,872
United States	2,871	\$ 4,994
Japan	1,041	\$ 3,208
South Korea	654	\$ 1,575
United Kingdom	1,662	\$ 1,370
Singapore	1,302	\$ 1,140
Taiwan	645	\$ 1,131
Malaysia	726	\$ 994
Hong Kong	1,320	\$ 985

Note: The firm count exceeds the total number of exporting firms in New Zealand as firms are counted multiple times, once for each market they export to.

Source: Stats NZ, based on author calculations

⁹ This analysis of exporting patterns is for all New Zealand firms in the LBD business register that lodged export entries with Customs NZ – i.e. the dataset is unadjusted for accidental and indirect exporters. This is the only part of the paper that does not rely on the adjusted main firm population described in Section 2.

The large number of firms exporting to Australia supports the common rhetoric that New Zealand firms who look to export often ‘cut their teeth’ on the Australian market. Factors such as Australia’s close geographic proximity and close economic integration with New Zealand make it a logical market for many small or first-time exporters. Cultural familiarity, particularly English language usage, and institutional similarity may also be a factor in smaller firms’ market decisions. Five of New Zealand’s six most popular export markets in 2018 have English as an official language and a common working language (Australia, the US, the UK, Singapore, and Hong Kong). This is despite the fact that more of New Zealand’s goods exports in value terms went to both Japan and South Korea than Singapore and Hong Kong.

There is also a clear pattern of larger New Zealand exporters tending to diversify across several markets while smaller exporters concentrate on just a single market. Over half of goods exporting firms in New Zealand exported to one market, but these firms made up only 4% of the total value of goods exports (Table 2). Whereas at the other end of the spectrum, only 13% of New Zealand’s goods exporting firms operated across more than five markets but made up 82% of total exports.

Table 2 – Market diversification of exporting firms

No. of markets exported to	% of firms	Value of exports (millions)	Share of total exports
1	52%	\$2,130	4%
2	18%	\$1,627	3%
3	9%	\$1,785	3%
4	6%	\$1,897	4%
5	3%	\$1,999	4%
6+	13%	\$43,530	82%
Total		\$52,968	

Source: Stats NZ, based on author calculations

This pattern is reinforced when comparing the distribution of firms’ exports to a market with the share of each firm’s exports to that market. There was a strong negative correlation between the size of a firm’s exports and that firm’s concentration in a single market, suggesting that the more a firm exports the more likely it is to be exporting to multiple markets (Figure 2). While this was consistent across all of New Zealand’s top goods export markets, Australia had a notably weaker correlation and a larger proportion of firms concentrating the majority of their exports in that market.

This is consistent with both theory and international experience. Exports globally tend to be driven by large firms, which are better able to take advantage of economies of scale to overcome the costs of trade and expand across multiple markets. Costs involved with international trade include market research and product development, establishing distribution networks, complying with different regulatory frameworks, and absorbing the financial risks associated with trade. Micro and small-sized firms tend to focus on single or fewer markets, as their more limited financial and human resources mean they are less equipped to overcome these challenges.



Figure 2 – Firm exports and concentrations for top goods export markets



Note: Each dot represents a grouping of nine firms to preserve anonymity.

Source: Stats NZ, based on author calculations

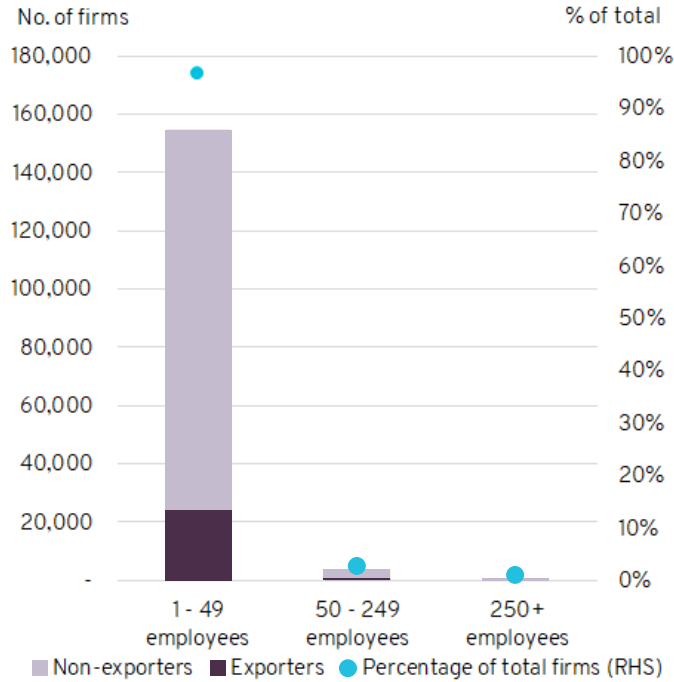
FIRM SIZE AND INDUSTRY COMPOSITION OF GOODS EXPORTERS

Despite the challenges faced by small exporters, the vast majority of New Zealand exporters are small or medium sized enterprises (SMEs). This is reflective of the fact that SMEs—typically defined as those that have less than 50 employees—are a key feature of New Zealand’s economy generally, representing 97% of all firms (exporters and non-exporters) in our main firm population (Figure 3). SMEs represented the majority of businesses across all sectors of the economy, but were particularly prevalent in rental, hiring and real estate, agriculture, forestry and fishing, construction, and professional, scientific and technical services.

While SMEs form the vast majority of exporting firms in absolute terms, they make up only a small portion of New Zealand’s total trade. SMEs represented 96% of firms involved in direct or indirect exporting of goods in 2018, compared with only 3% of exporting firms that had 50 to 249 staff and only 1% with more than 250 staff. However, SMEs contributed only 12% of New Zealand’s total goods exports. SMEs are also much less likely to participate in exporting than larger firms. Only 16% of all SMEs were involved in goods exporting compared with 35% of all firms that had more than 250 employees (Figure 4).

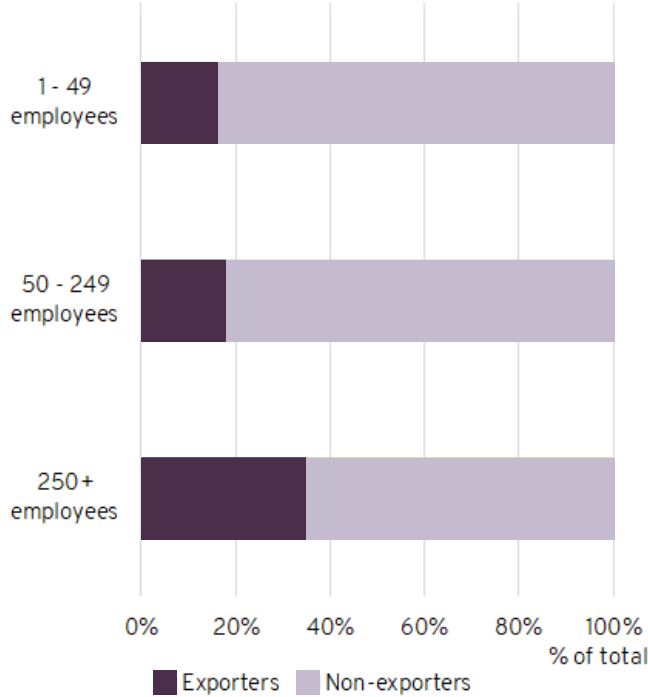


Figure 3 – Number of firms by firm size



Source: Stats NZ, based on author calculations

Figure 4 – Share of exporting firms by firm size

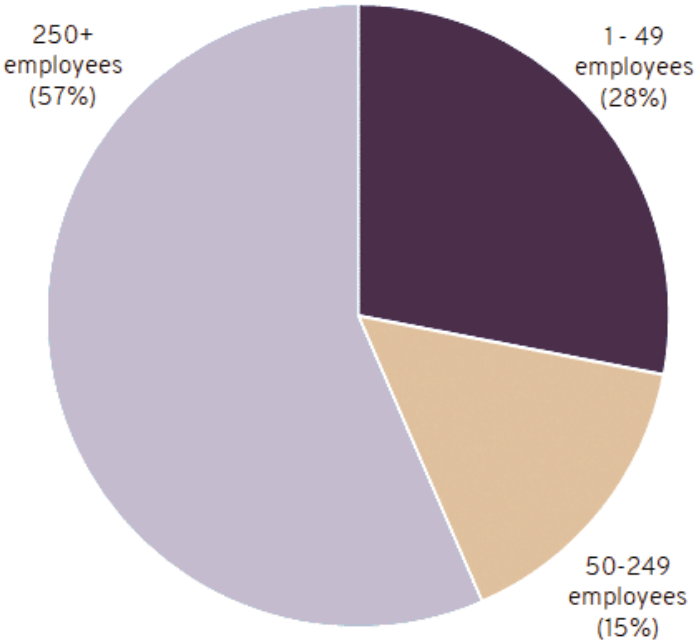


Source: Stats NZ, based on author calculations



The economic importance of large firms in New Zealand’s exporting landscape is reinforced by their share of export employment. Despite the fact that firms with more than 250 employees comprised only 1% of the number of goods exporting firms, they employed more than half (57%) of the roughly 580,000 people involved in direct or indirect goods exporting in 2018 (Figure 5). Large exporters were also on average 18% larger in terms of employee numbers than similar-sized non-exporting counterparts (Figure 6). It is difficult to estimate from our dataset how much of this size disparity for larger exporters reflects their greater ability to exploit the benefits of trade (and therefore grow larger due to exporting), or whether it reflects a greater likelihood of larger firms choosing to export to begin with (i.e. the self-selection hypothesis). It is also worth noting that there was little difference in average firm size between exporters and non-exporters amongst smaller firms.

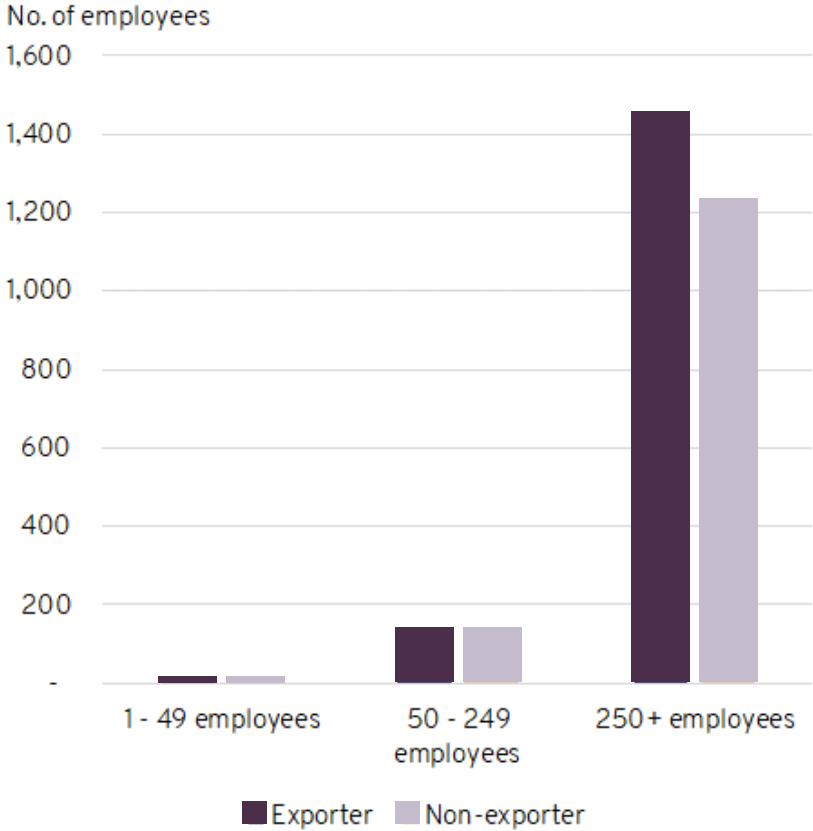
Figure 5 – Share of export employment by firm size



Source: Stats NZ, based on author calculations



Figure 6 – Average number of employees by firm size

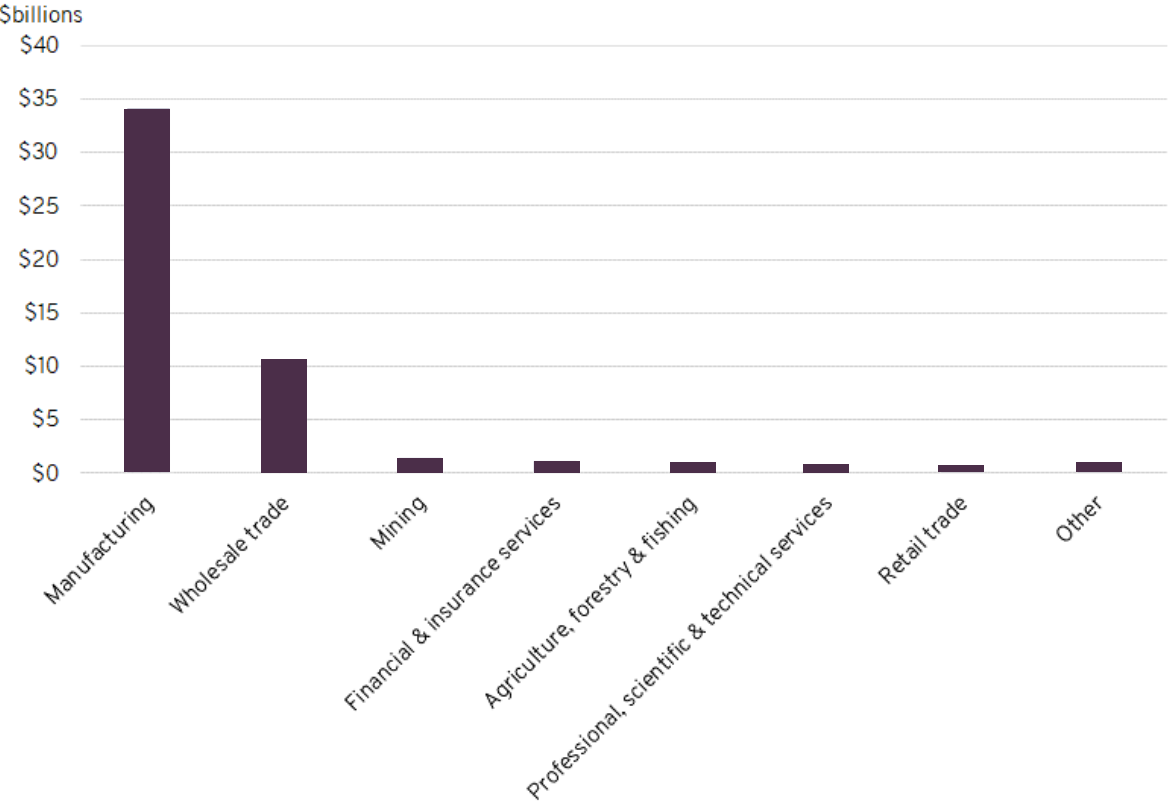


Source: Stats NZ, based on author calculations

In terms of the industry composition of exports, the manufacturing and wholesale trade industries represented 88% of the value of all goods exports in our firm population, with roughly 1,400 firms in each industry (Figure 7). Exporters in the wholesale trade industry comprise firms that sell goods or merchandise, typically in bulk, to buyers other than a standard consumer (e.g. to retailers and industrial or commercial business users).

One striking feature of the export profile is the relative absence of the agriculture, forestry and fishing industry. Although the majority of New Zealand’s goods exports consist of primary industry products, exports from the agriculture, forestry and fishing industry made up only 2% of the total value of goods exports in our firm population. This reflects the fact that LBD industry classifications are based on the industry of the exporting firm rather than the original producer of the good. While individual farms, growers, and orchards produce many primary products, the products are usually processed and marketed for export by larger manufacturing firms, cooperatives, and/or marketing boards. In these cases, the final exporting manufacturer, processor, or wholesaler will be identified as the exporting firm rather than the original primary industry producer.

Figure 7 – Industry profile of goods exports

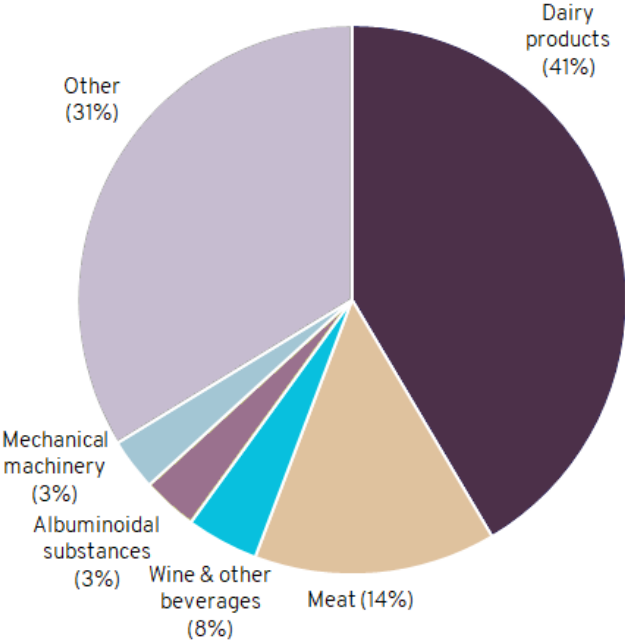


Source: Stats NZ, based on author calculations

The effects of this on the classification of primary-based exports can be seen in the product breakdown of exports in the manufacturing and wholesale industries (Figures 8 and 9). More than half of goods exports in the manufacturing industry were dairy or meat products, which represented almost all (97%) of New Zealand’s total dairy exports and 89% of meat exports in 2018. Similarly, fresh fruit and vegetables comprised a quarter of exports in the wholesale trade industry, which represented 80% of New Zealand’s total horticultural exports. This means that caution should be applied when interpreting industry comparisons in this paper, particularly if used in relation to trade analysis in other studies that may use product-based rather than exporting-firm based industry classifications.

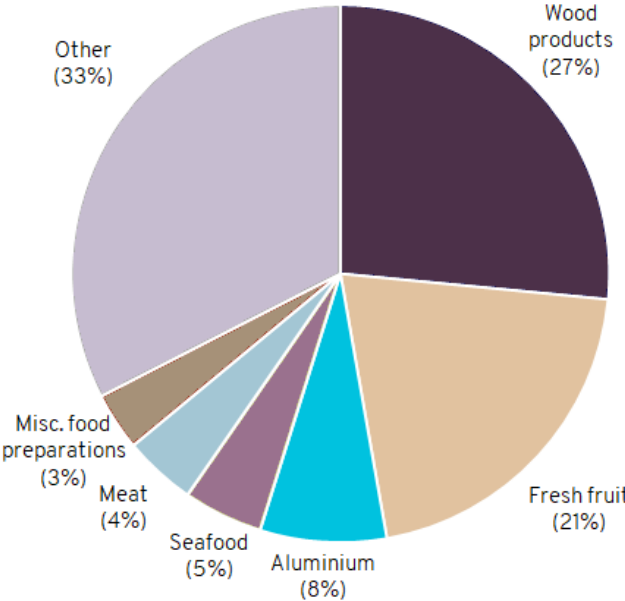


Figure 8 – Breakdown of goods exports in manufacturing industry



Source: Stats NZ, based on author calculations

Figure 9 – Breakdown of goods exports in wholesale industry



Source: Stats NZ, based on author calculations

Another surprising feature of the export profile in Figure 7 is the presence of the financial and insurance services industry and the professional, scientific and technical services industry. As we would not intuitively expect goods exports in these industries, it is likely this reflects challenges attributing exports to producing firms in the LBD – in this case, where the producing firm is a subsidiary of a larger enterprise group. For these firms, it is possible that exports were lodged with the enterprise or legal entity (e.g. a financial or professional services firm), rather than the subsidiary firm that produced the good. Goods exports lodged in the financial and insurances services industry were predominantly processed food or dairy products (51%) and precious metals (20%), while exports lodged in the professional, scientific and technical services industry were predominantly wood products (49%) and raw hides (16%).

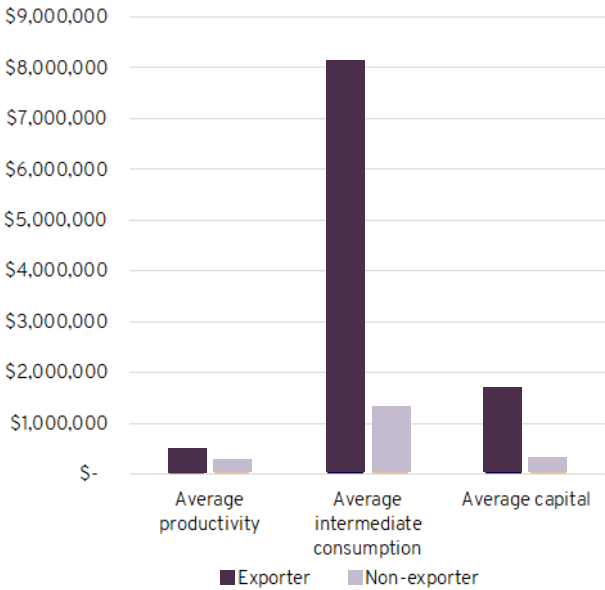
PERFORMANCE OF GOODS EXPORTING VS NON-EXPORTING FIRMS

When comparing exporting and non-exporting firms in our dataset, productivity is materially higher among exporters. Theory suggests that exporting firms tend to have higher productivity levels than domestically focussed firms in part because, as discussed, exporting involves significant fixed costs that only larger and already more productive firms can overcome. However, it is also because exporting helps firms to become more productive by providing access to a larger market. This allows them to exploit economies of scale, provides them with greater exposure to competitive pressures, global knowledge and skills, and facilitates greater access to investment.

Of the 66,200 firms for which productivity data is available in our firm population, exporting firms were on average 89% more productive in terms of gross output per full-time equivalent employee (FTE) (Figure 10). Exporting firms also tended to have higher average sales (more than three times that of non-exporters) and higher capital intensities (more than four times that of non-exporters). They also had significantly higher average intermediate consumption – i.e. the value of goods and services consumed as inputs into the production process. The higher levels of capital input and intermediate consumption likely reflect exporting firms’ larger average scale of production.

The productivity gap between exporters and non-exporters was also notably wider for large firms (Figure 11). While output per FTE in non-exporting firms was broadly similar across firm sizes, for exporters it was highest for those with more than 250 employees. As a result, the productivity gap between exporters and non-exporters grows to 130% for firms with more than 250 employees.

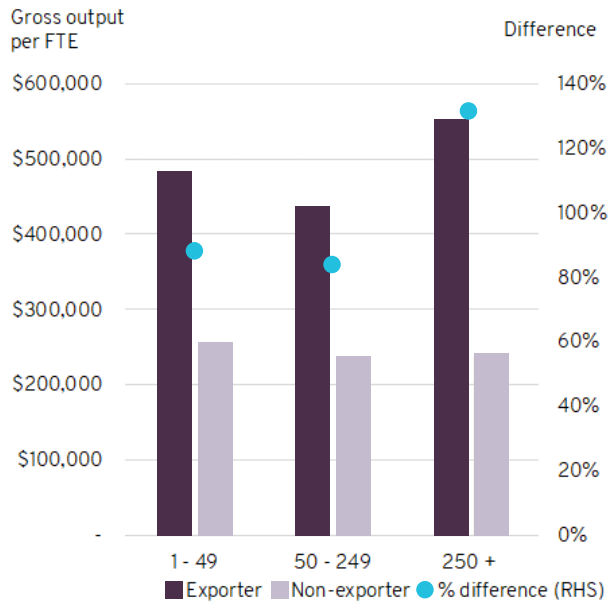
Figure 10 – Performance indicators of firms



Source: Stats NZ, based on author calculations



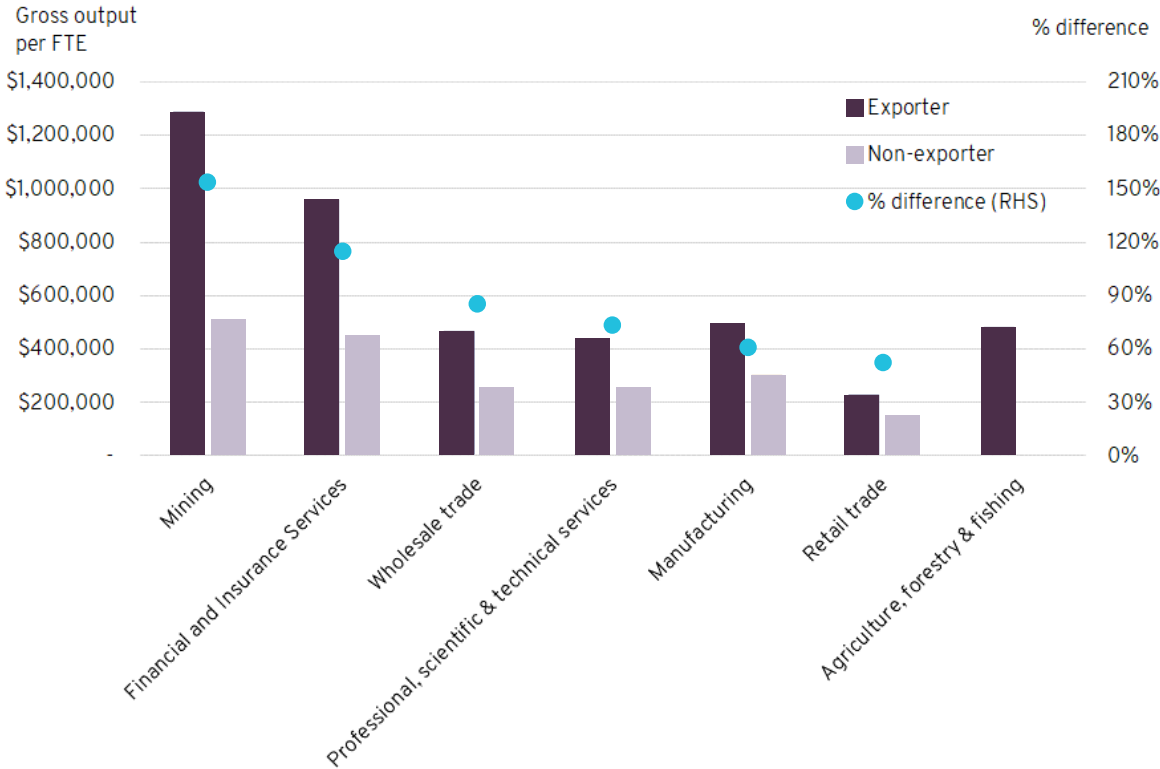
Figure 11 – Average productivity by firm size



Source: Stats NZ, based on author calculations

In terms of industry comparisons of productivity, the manufacturing and wholesale industries—two of New Zealand’s largest exporting industries—have productivity gaps a bit below the overall average at 61% and 86% respectively (Figure 12). On the other hand, the mining industry appears to be New Zealand’s most productive export sector and has one of the largest gaps between exporters and non-exporters. The productivity of mining exporters is more than 150% higher than non-exporters.

Figure 12 – Average productivity by exporting and non-exporting firms in largest goods exporting industries



Note: A non-exporter comparison for 'Agriculture, forestry and fishing' is not possible as non-exporting firms are considered "indirect exporters".

Source: Stats NZ, based on author calculations

EMPLOYEE EARNINGS OF GOODS EXPORTERS VS NON-EXPORTERS

While it is difficult to identify exactly how the benefits of higher exporter productivity flow through to individuals and households, employee wage information shows some transmission between exporters' higher productivity and higher earnings for employees.

The difference in average employee earnings between exporters and non-exporters varies depending on firm size. Employees in exporting firms with more than 250 employees earn on average 13% more than their counterparts in non-exporting firms, while those in firms with 49 to 250 employees earn 23% more than their non-exporting counterparts (Figure 13). However, for SMEs, the reverse is true – i.e. employees in exporting firms earn 7% less than non-exporting employees. The reason for this appears to be the large share of agriculture-based indirect exporters in our SME firm population and the relatively low wages in this industry. When comparing only direct exporters (i.e. those that lodged export entries), there is a much clearer "export premium" for employees of exporting firms than non-exporters across all firm sizes. For example, average employee earnings for direct exporting SMEs is 46% higher than non-exporting SMEs, while for larger firms the gap grows to 31% for firms with 49 to 250 employees and 14% for firms with over 250 employees. Some of these differences in wages between exporters and non-exporters will be due to occupation and skill level differences.



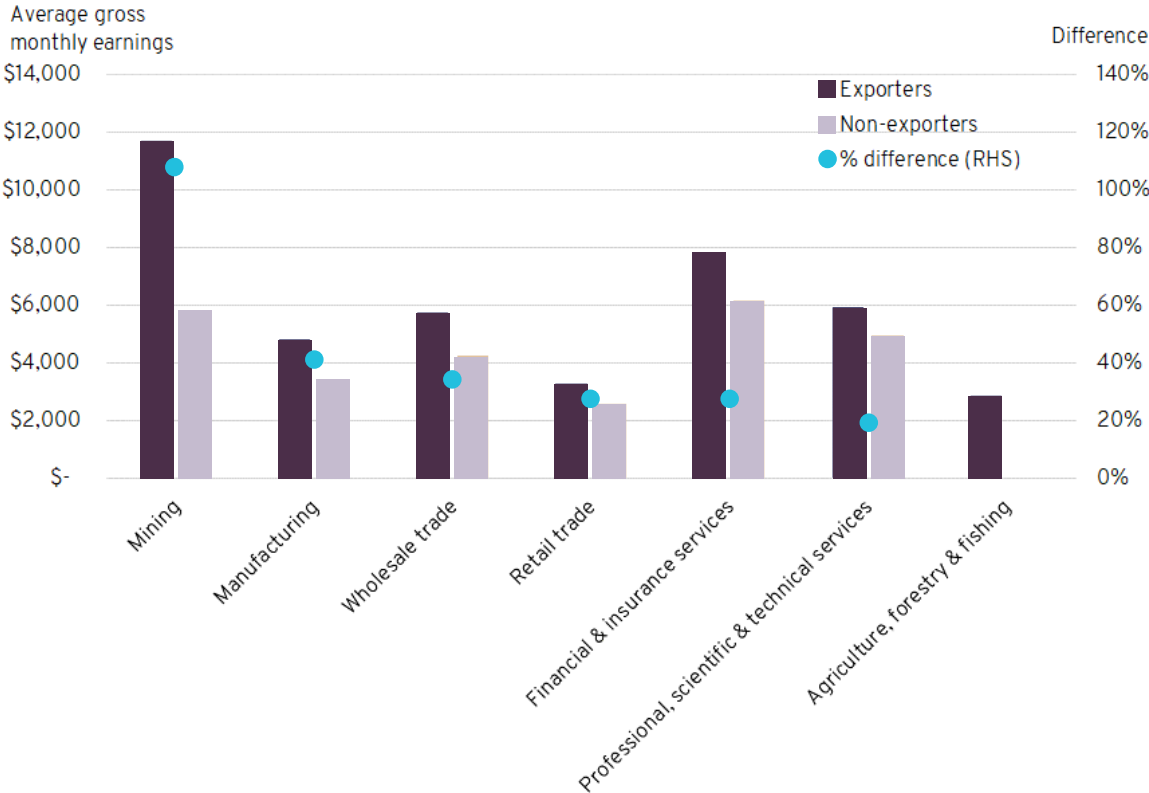
When comparing across industries, an “export premium” for earnings exists in all industries. In terms of the largest goods exporting industries, manufacturing employees earned on average 41% more if they worked for an exporting firm than for a non-exporting firm, while employees in wholesale and retail trade exporters earned 34% and 28% more respectively than non-exporters (Figure 14). The mining industry had the largest pay gap between exporting and non-exporting firms, consistent with its significant productivity gap.

Figure 13 – Average monthly employee earnings by firm size



Source: Stats NZ, based on author calculations

Figure 14 – Export premium for employee earnings in largest goods exporting industries



Note: A non-exporter comparison for 'Agriculture, forestry and fishing' is not possible as non-exporting firms in this industry are considered "indirect exporters".

Source: Stats NZ, based on author calculations





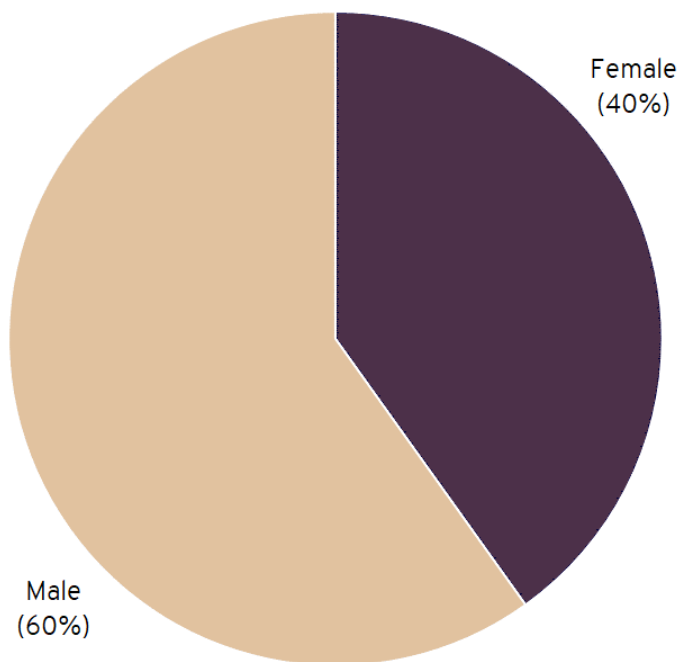
4 Gender

Based on our dataset, New Zealand women are under-represented as employees, leaders, and owners of goods exporting firms, driven partly by low representation in the primary sector and manufacturing. While women in exporting firms benefit from higher average earnings than women in non-exporting firms, on average they earn less than men across all industries and experience larger gender earnings gaps in exporting firms than in non-exporting firms. Gender disparities are more noticeable in large exporting firms, including wider earnings gaps and lower rates of female leadership and ownership.

FEMALE REPRESENTATION IN EMPLOYMENT OF GOODS EXPORTERS

The proportion of male and female employees in our main firm population (around 2.5 million individuals) was roughly equal, at 51% and 49% respectively. However, this representation changes notably when considering employment by exporting firms. Women were heavily under-represented in goods exporting firms in 2018, comprising only 40% of employees (Figure 15). Conversely, women were slightly over-represented in non-export employment, making up 53% of those employed in non-exporting firms (Figure 16).

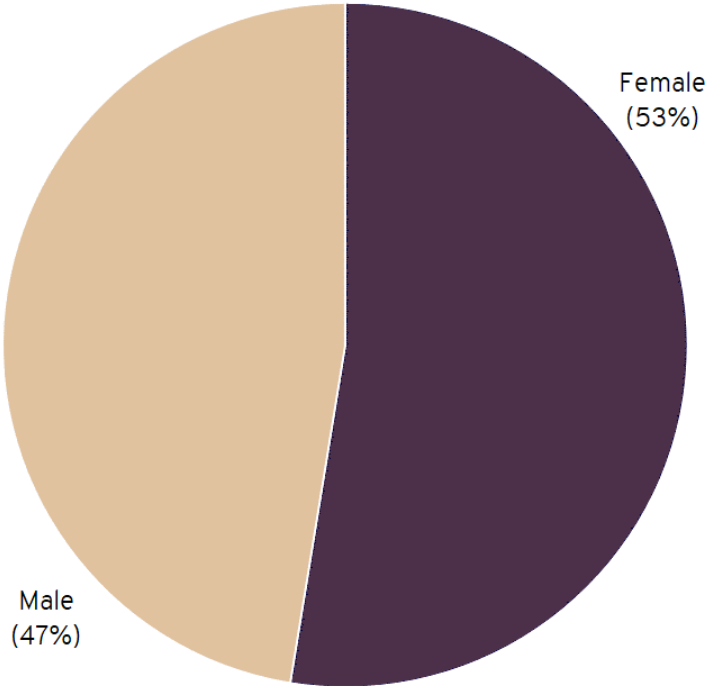
Figure 15 – Employment in exporting firms



Source: Stats NZ, based on author calculations



Figure 16 – Employment in non- exporting firms



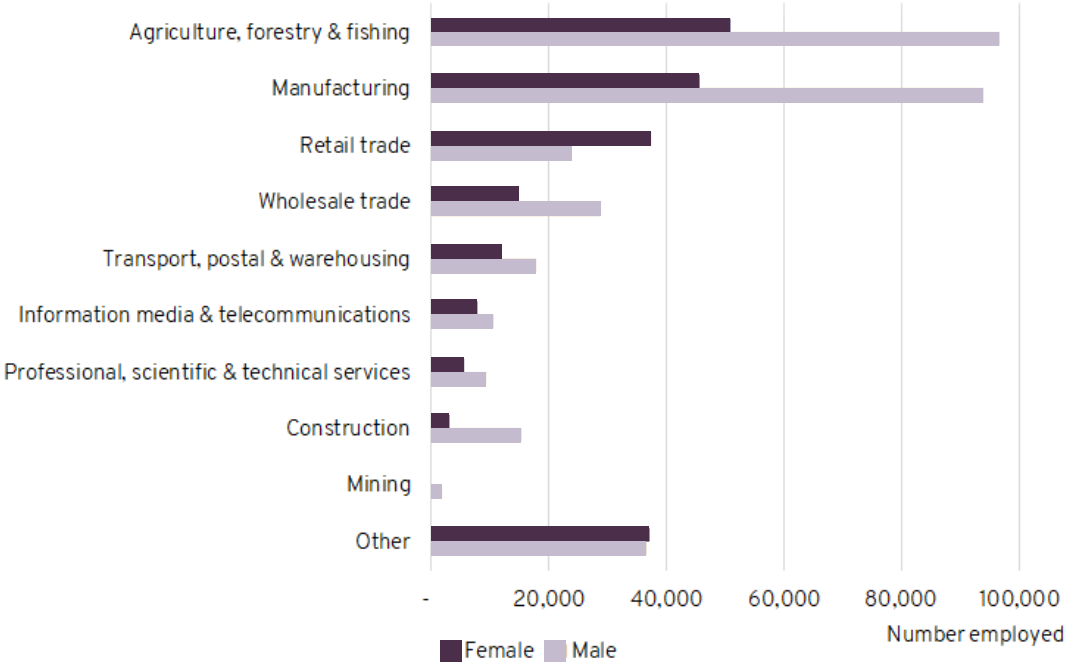
Source: Stats NZ, based on author calculations

The under-representation of women in New Zealand’s export employment is a long-standing feature of the export landscape, due partly to the nature of the occupations that women have traditionally held. Studies of New Zealand’s occupational gender segregation have found persistent over-representation of women in ‘caring professions’ (such as nursing, teaching, and social work), administrative and sales roles, and lower-skilled service jobs (such as personal care and hospitality)¹⁰. On the other hand, there is long-standing under-representation in farming, lower-skilled manual jobs (such as labouring and machine operating), and technical professions (such as engineering and information technology).

Given New Zealand’s goods exports are heavily concentrated in primary industries and manufacturing, these occupational differences contribute to significantly lower representation of women in goods exporting industries. Almost half of all employment in exporting firms in 2018 was in the manufacturing or agriculture, forestry and fishing industries. However, in both of these industries, women represented only a third of employees in exporting firms (Figure 17). Other goods exporting industries also had disproportionately low female employment, including wholesale trade (34% female employees in exporting firms) and transport, postal and warehousing (40%). Retail trade is the only notable goods exporting industry where women outnumber men in export employment.

¹⁰ For example, see ‘Women at Work: 1991-2013’ by Stats NZ (2015) for a discussion of trends in gender-based occupational segregation from 20 years of New Zealand’s census data.

Figure 17 – Employees of exporting firms by industry



Source: Stats NZ, based on authors calculations

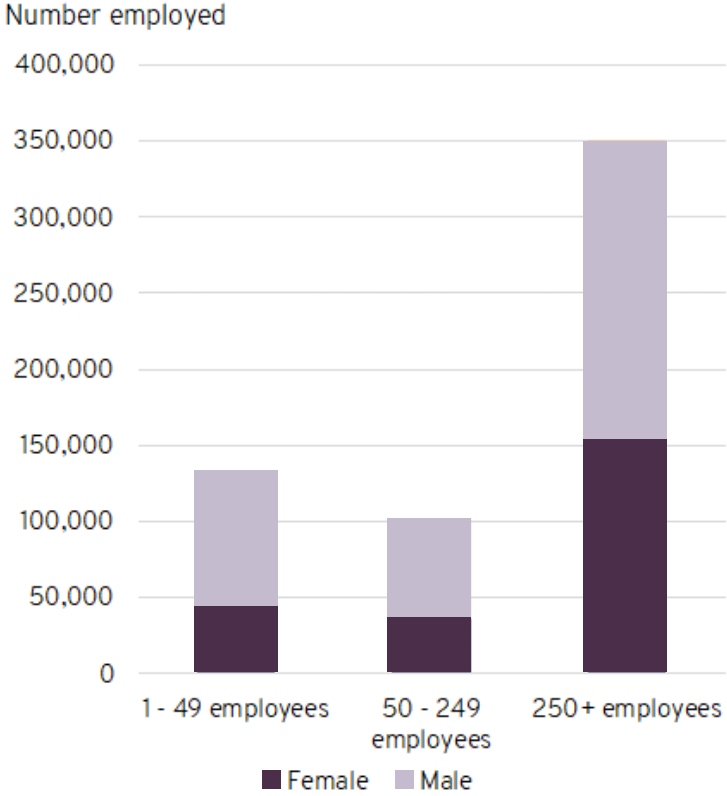
The causes of this occupational segregation are multiple and complex. For example, evidence suggests that gender stereotyping influences girls’ and boys’ conceptualisation of work and careers from an early age. Women’s unpaid work responsibilities can be another factor, as women are almost twice as likely as men to work part-time and shoulder more family responsibilities and unpaid work in the household¹¹. The availability of flexible and part-time work arrangements therefore influences female participation in the labour market. Similarly, the availability of alternative childcare may be a factor, as recent research has shown that rural women in New Zealand tend to have poorer access to childcare, which may affect participation in rural-based industries such as agriculture, forestry and fishing¹².

While analysis of the drivers of occupational differences lies beyond the scope of this paper, it appears the constraints contributing to female under-representation in exporting industries are lower in larger firms. Whereas women made up only 33% of the workforce in exporting SMEs, they comprised 44% of employees in exporting firms with more than 250 staff (Figure 18). Occupational differences may partly explain this as very large firms tend to have more roles in which women have higher representation (e.g. professional, sales, and administrative roles), particularly given the manufacturing and agricultural focus of New Zealand’s goods exporters.

¹¹ The most recent Stats NZ time use survey from 2009 found that men on average participate in two more hours of paid work per day than women, with women engaging in nearly twice the amount of unpaid work as males
¹² See ‘Access to Childcare Interim Report 1: Who Has Difficulty Accessing Affordable Childcare?’, Motu Working Paper (2021)



Figure 18 – Employees of exporting firms by firm size



Source: Stats NZ, based on author calculations

GENDER EARNINGS DIFFERENCES IN GOODS EXPORTERS

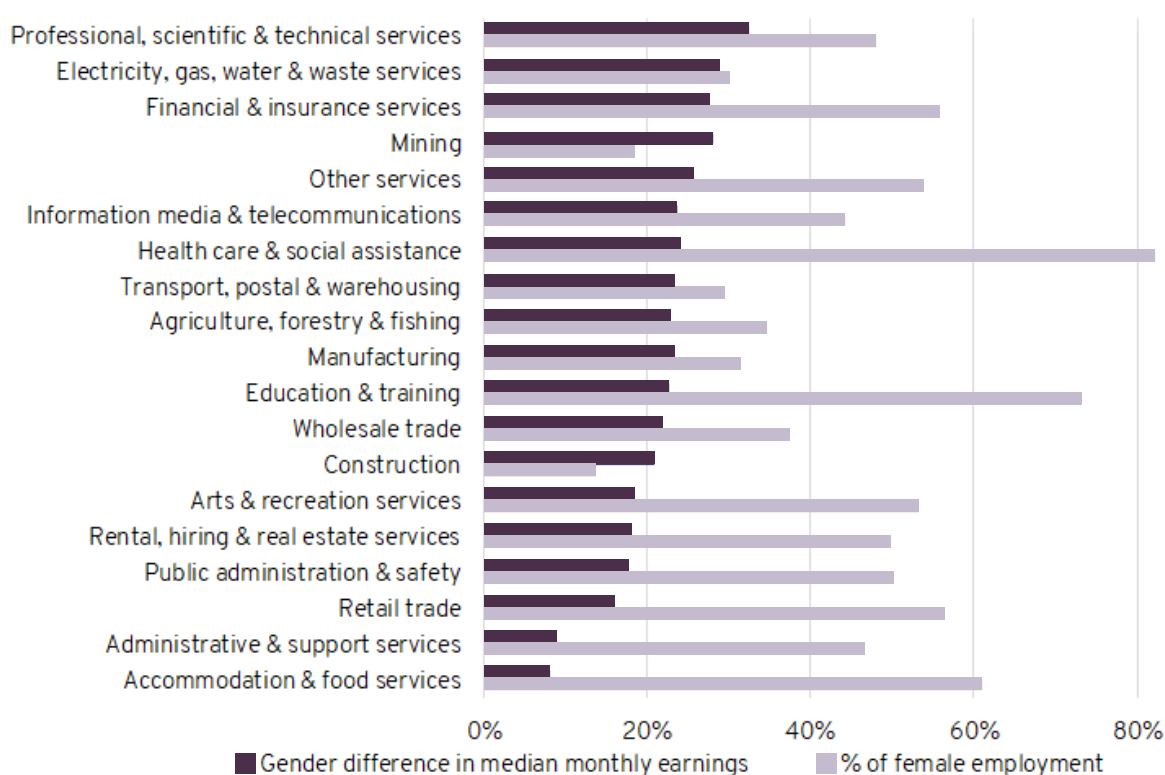
Our dataset shows New Zealand women continue to earn less than men on average across all industries. The earnings gap between men and women is a persistent feature of New Zealand’s labour market, which has changed little in recent years. For all firms in our main firm population (i.e. exporters and non-exporters), average monthly earnings for men were 23% higher than for women. Industry-based gender earnings gaps ranged from 8% in the accommodation and food services industry to 32% in professional, scientific and technical services (Figure 19).

It is important to note that the median monthly earnings figures discussed in this section are different to the more commonly discussed “gender pay gap”, which is usually defined as the difference in median hourly earnings. While both measures show earnings differences between men and women, median hourly earnings is a more direct estimate of remuneration levels per hour worked, whereas monthly earnings includes differences in the number of hours worked. As women are more likely than men to work part-time and less likely to work overtime, the difference in median monthly earnings (23% in our main firm population) tends to be larger than the official gender pay gap based on hourly earnings, which has averaged around 10% in New Zealand over the past decade.



While some studies have found that gender earnings gaps tend to be lower in industries dominated by women, in New Zealand there appears little correlation at an aggregate level between the earnings gap in an industry and the proportion of female employment (Figure 19). For example, the gender difference in median monthly earnings was larger in the health and financial services industries where women made up more than half the total workforce compared to the more male-dominated construction, transport, postal and warehousing, and agriculture, forestry and fishing industries where women comprised less than a third of total employment.

Figure 19 – Gender earnings gap and female employment by industry for all firms



Source: Stats NZ, based on authors calculations

Interestingly, the earnings gap between men and women is slightly larger in exporting firms than it is in non-exporting firms. Median monthly earnings for men were 24% higher than women in exporting firms, whereas they were 22% higher in non-exporting firms (Figure 20). For direct exporters, the difference is even more marked at 26%. This suggests men in New Zealand are disproportionately likely to receive the benefits of higher productivity and wages associated with trade. Indeed, men employed in goods exporting firms earned on average 13% more than men in non-exporting firms – often referred to as the earnings “export premium”. By contrast, the export premium for women in exporting firms was 10%.

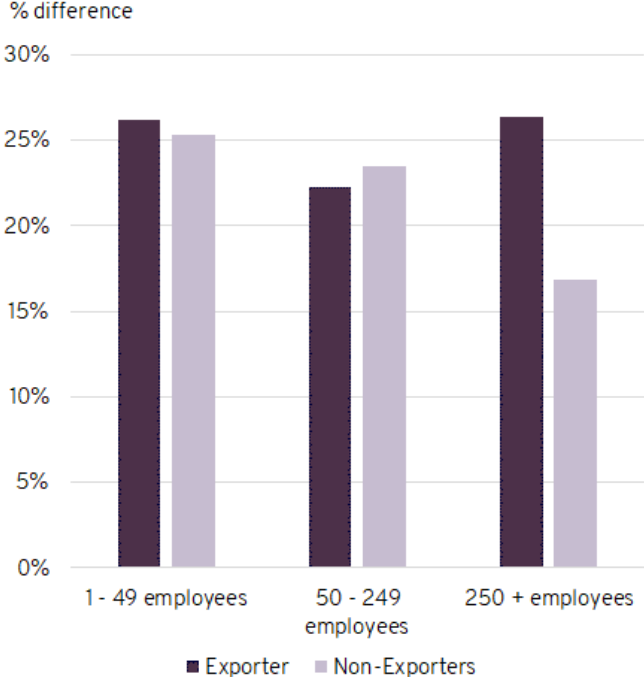


Figure 20 – Monthly earnings of men and women in exporting and non-exporting firms



Source: Stats NZ, based on author calculations

Figure 21 – Gender earnings gap for exporting and non-exporting firms by firm size

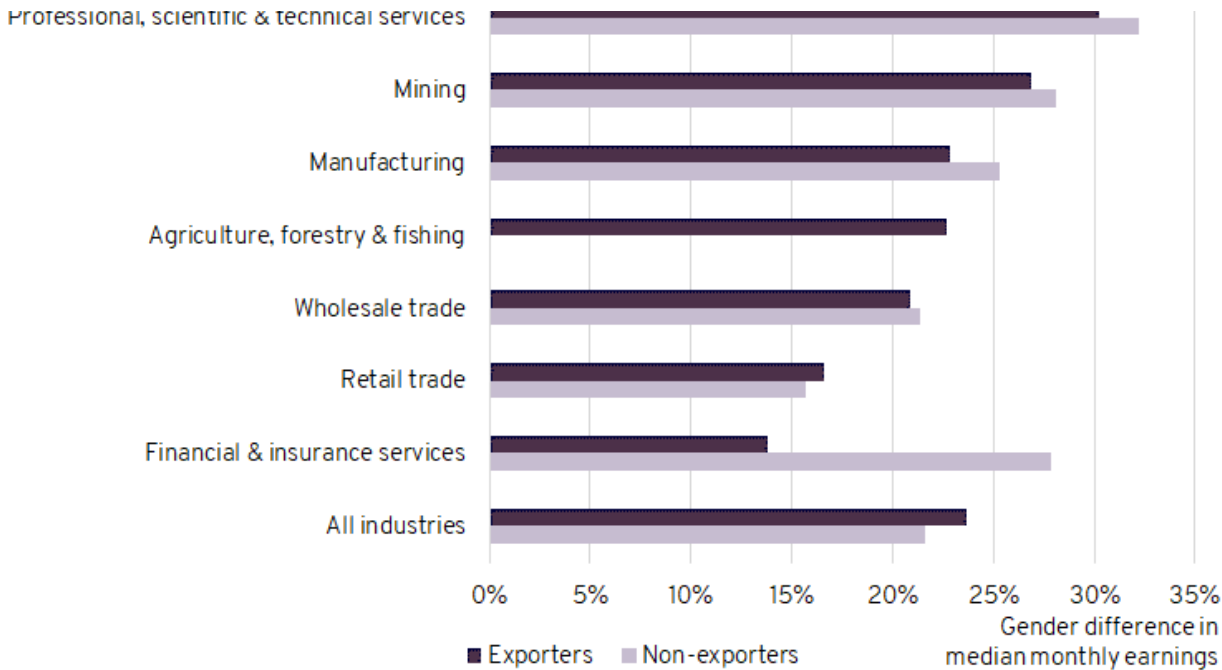


Source: Stats NZ, based on author calculations

It is also notable that the gender difference in earnings is similar across exporting firms of all sizes, whereas amongst non-exporting firms it is notably smaller in larger firms (Figure 21). The gender gap in exporting firms was the same in firms with more than 250 employees as it was in SMEs, whereas in non-exporting firms the gap was more than a third lower in SMEs. This is particularly surprising given the higher female employment representation in large exporting firms, which was not mirrored in non-exporting firms.

The slightly wider earnings gap in goods exporting firms is present in many industries. For example, the gender earnings gap in exporting firms was 2 percentage points larger than non-exporting firms in the retail trade and transport, postal and warehousing industries (Figure 22). There were also industries where the reverse was true – i.e. where the gender earnings gap was larger in non-exporting firms. These included information, media and telecommunications and professional, scientific and technical services. However, these tend to be predominantly services industries where the sample of goods exporting firms was relatively small.

Figure 22 – Gender earnings gaps for exporting and non-exporting firms in largest goods exporting industries



Note: A non-exporter comparison for 'Agriculture, forestry and fishing' is not possible as non-exporting firms in this industry are considered "indirect exporters".

Source: Stats NZ, based on author calculations



GENDER REPRESENTATION IN LEADERSHIP OF GOODS EXPORTERS

For around 10,500 exporting firms in our firm population, it is possible to estimate the gender composition of senior management teams based on employment and earnings data. Unfortunately, we are not able to determine this definitively – for example, we do not know how individuals’ earnings correspond to specific roles and decision-making responsibilities in each firm. However, using earnings as a proxy for seniority in a firm does enable some insights regarding gender representation in the leadership of exporting firms and whether differences exist in exporting characteristics between predominantly male-led or female-led firms.

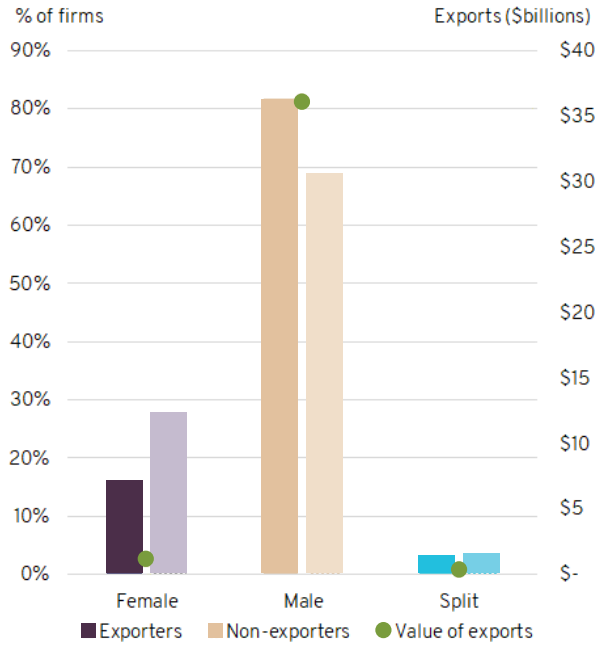
To do this, we assume that the 5% highest paid employees in each firm constitute the firm’s managers and leaders. Where more than half of these employees were women, we define these as “female-led firms”; where more than half were men we define them as “male-led firms”; and where there were equal numbers of men and women we regard them as “split-led firms”. In small firms (i.e. those with less than 20 employees), the top 5% will be a single person, which in many cases will also be the owner. However, for the largest firms, the top 5% is likely to consist of the senior leadership team and perhaps the next tier of managers.

Using this definition, there is a significant gender bias towards men in senior leadership roles in goods exporting firms. The low female representation in exporting firms is even more significant than the low representation in firms more widely. In 82% of goods exporting firms, men made up a majority of senior leadership roles, compared with only 15% with a female majority (Figure 23). By comparison, in non-exporting firms, male-led firms made up 69% of total firms while women-led firms made up 28%. These figures are somewhat sensitive to the leadership proxy chosen – for example, setting the threshold at the top 10% of paid employees provides a slightly more even distribution. Nonetheless, it clearly shows unequal participation at the senior leadership level across firms in general and goods exporting firms in particular.

There is also a notable difference in gender representation in leadership between smaller and larger firms, with SMEs more than twice as likely as other firms to be female led. Outside of SMEs, only 4% of goods exporting firms in our population had a majority of females on their leadership teams compared with 93% that had a male majority (Figure 24). Given SMEs make up only a small proportion of total exports, this contributed to exporting firms led by men accounting for over 96% of the value of all goods exports sold, while female-led firms accounted for just 3%.

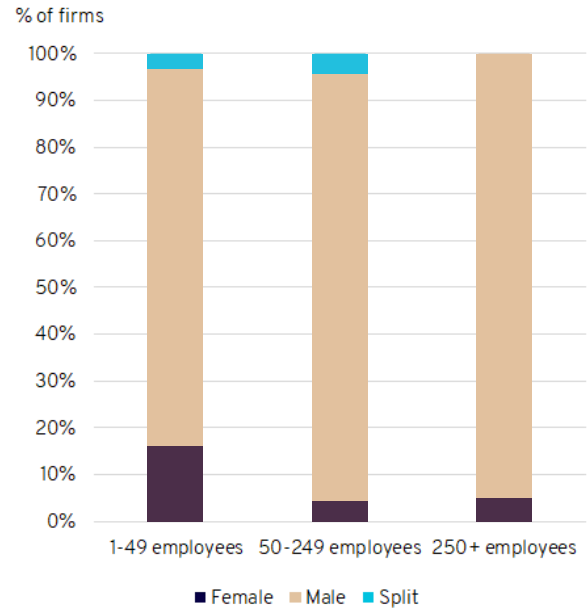
The much lower proportion of female led large firms is surprising given the higher overall representation of women in large exporting firms. It suggests that while female employees may be better represented in larger exporting firms than in SMEs, they are less likely to be in leadership positions – a finding consistent with the larger gender earnings gaps present in larger exporting firms.

Figure 23 – Gender of leadership of exporting firms and export values



Source: Stats NZ, based on author calculations

Figure 24 – Gender of leadership of exporting firms by firm size

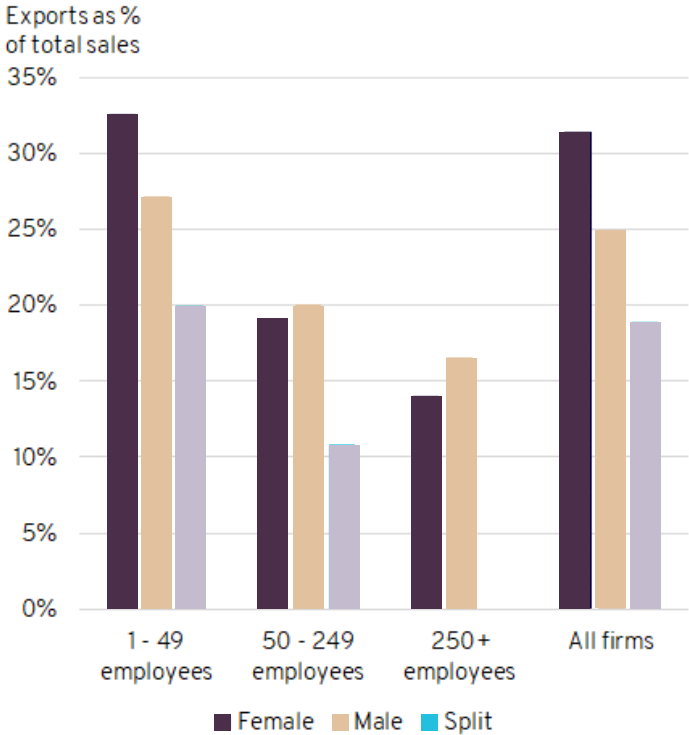


Source: Stats NZ, based on author calculations



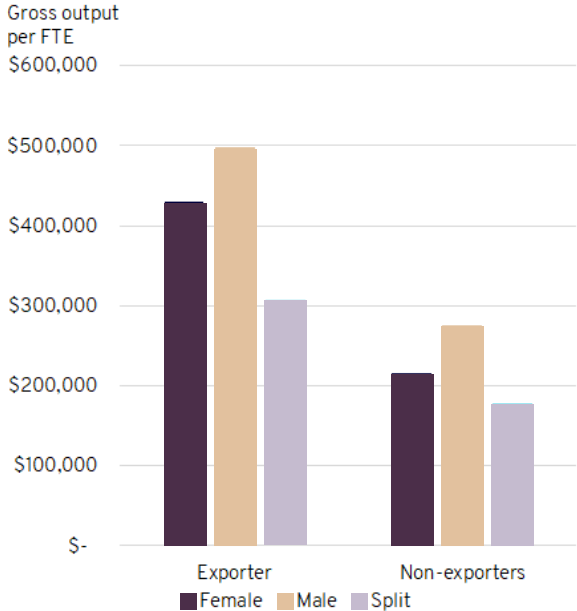
Notwithstanding the low representation of women in leadership, female-led firms in our firm population have a marginally higher export intensity than other firms – i.e. their exports as a proportion of total sales. So while women appear to be significantly less likely to lead firms, the firms they do lead are more likely to export (Figure 25). A key factor behind this is the higher export intensity of SMEs led by women. For medium and large firms, the differences between female and male-led firms are small.

Figure 25 – Export intensity by gender of firm leadership and firm size



Source: Stats NZ, based on author calculations

Figure 26 – Firm productivity by gender of firm leadership



Source: Stats NZ, based on authors calculations

There are also differences in average firm productivity and gender earnings gaps between female-led and male-led firms in our sample, although the patterns appear broadly similar across exporting and non-exporting firms. Male-led firms had higher average productivity than female-led firms and gender earnings gaps were larger on average in male-led firms than in female-led firms (Figures 26 and 27). However, it is not possible from our dataset to determine whether the gender of leadership has any effect on these trends or if it derives primarily from underlying characteristics of firms (e.g. firm size and industry) that may be correlated with gender differences.

Figure 27 – Average earnings of employees by gender of firm leadership



Source: Stats NZ, based on author calculations

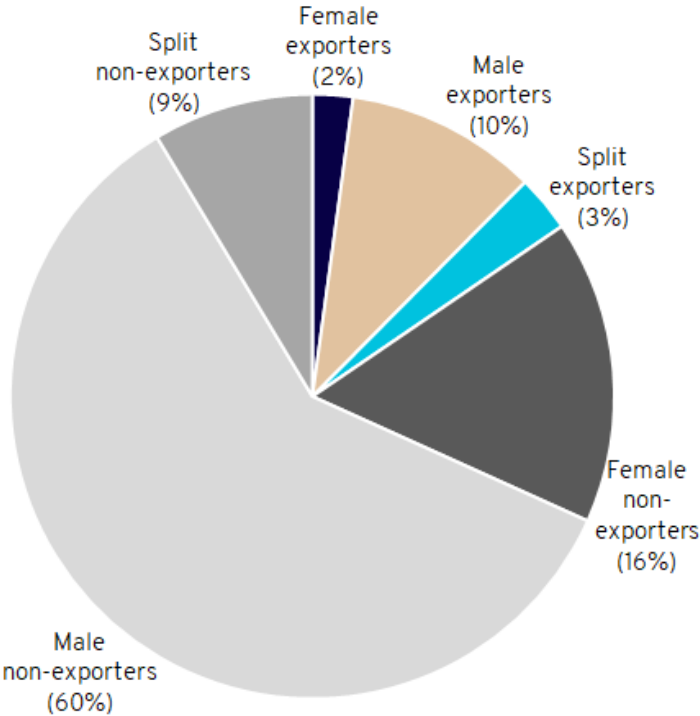


GENDER REPRESENTATION IN EXPORTING FIRMS WITH WORKING PROPRIETORS

While firm-level data on ownership is limited, it is possible to investigate the characteristics of firms in our firm population that are denoted as having working proprietors – i.e. individuals who work in a business they own or part own. Firms with working proprietors accounted for \$15 billion of goods exports in 2018 and comprised 7,000 exporting firms, of which 95% were SMEs. Unsurprisingly given the large number of family-run farms and orchards in New Zealand, 82% of exporting firms with working proprietors were in the agriculture, forestry and fishing industry, with 8% in manufacturing and 6% in wholesale trade.

Two thirds of exporting firms with working proprietors were owned by men, while only 14% were owned by women and 20% were jointly owned by both men and women¹³ (Figure 28). This gender profile is broadly similar to that of non-exporting firms, which were 71% male owned and 19% female owned, and partly reflects the low representation of women in the primary industries more generally. The proportion of firms with a female working proprietor as either the sole owner or joint-owner was similar to women’s share of overall employment in agriculture, forestry and fishing.

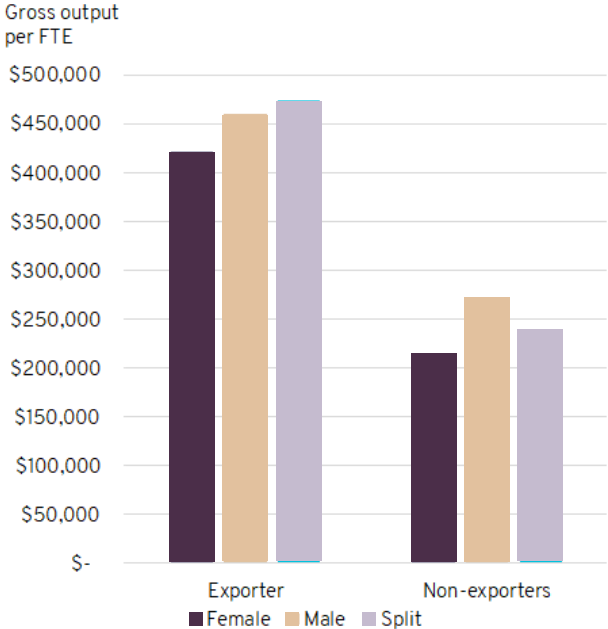
Figure 28 - Gender and firm export status of working proprietors



Source: Stats NZ, based on author calculations

¹³ Most jointly-owned exporters are indirect exporters, the majority of which are likely to be family-owned farms and orchards.

Figure 29 - Firm productivity by gender of working proprietor



Source: Stats NZ, based on author calculations

The insights from firms with working proprietors largely mirror those of the leadership analysis. Firms with male working proprietors had higher productivity levels on average and paid higher average salaries than firms with female working proprietors, although the differences were less stark than for firms led by men or women (Figures 29 and 30). Similarly, firms with female working proprietors had a marginally higher export intensity (Figure 31).

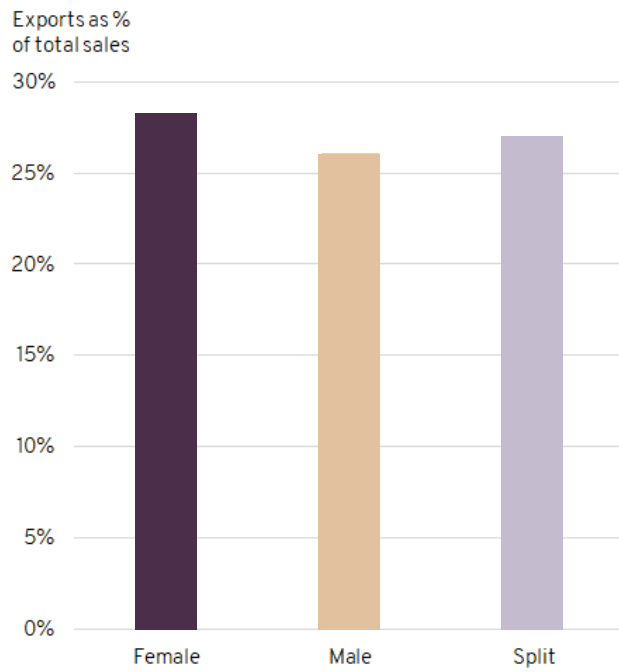
Figure 30 - Average earnings of employees by gender of working proprietor



Source: Stats NZ, based on author calculations



Figure 31 - Export intensity by gender of working proprietor



Source: Stats NZ, based on author calculations

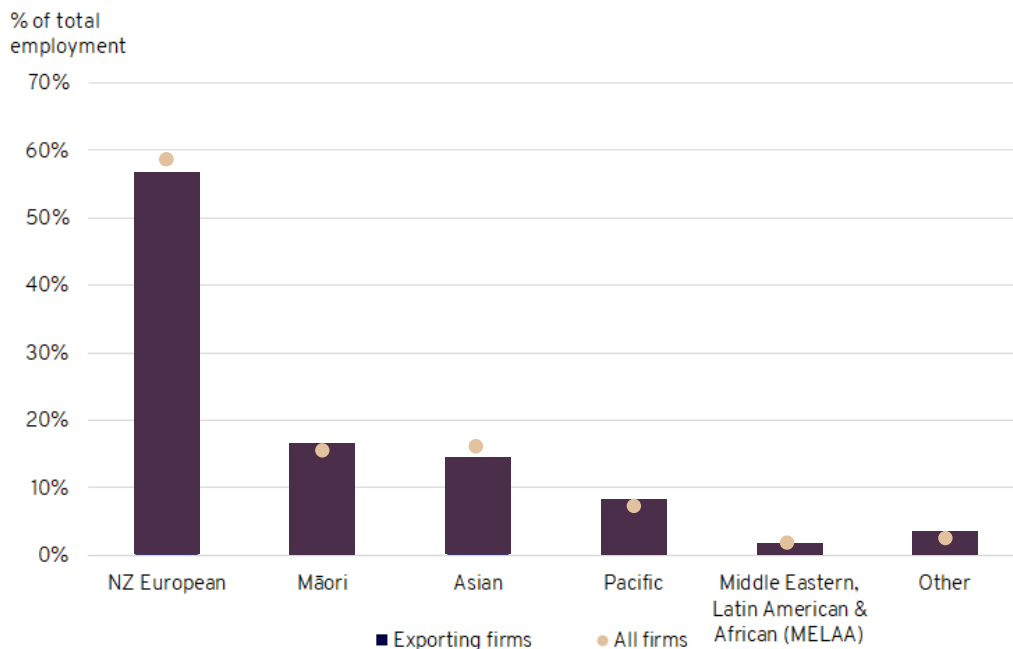
5 Ethnicity

Ethnic representation in goods exporting firms broadly aligns with New Zealand’s labour force overall, although ethnic composition varies across key exporting industries. While employees of all ethnicities earn more on average in exporting firms than in non-exporting firms, non-New Zealand European ethnicities earn less than New Zealand Europeans, with disparities larger in exporting firms. Māori are underrepresented as leaders and owners of exporting firms, and tend to experience smaller productivity and earnings benefits from exporting than non-Māori led and owned firms.

ETHNIC COMPOSITION OF EMPLOYMENT IN EXPORTING FIRMS

Unlike for gender, the ethnic composition of employees in goods exporting firms is broadly consistent with the makeup of New Zealand’s workforce more widely. Of the 580,000 employees in goods exporting firms in our dataset, New Zealand Europeans comprised 57% of employees, Māori 16%, Asian 14%, Pacific 8%, and Middle Eastern, Latin American, and African (MELAA) 2% (Figure 32). Relative to the total workforce, Māori and Pacific employees were slightly overrepresented, while New Zealand European and Asian employees were slightly under-represented. However, these differences were relatively small.

Figure 32 – Ethnic representation of employees in exporting and all firms



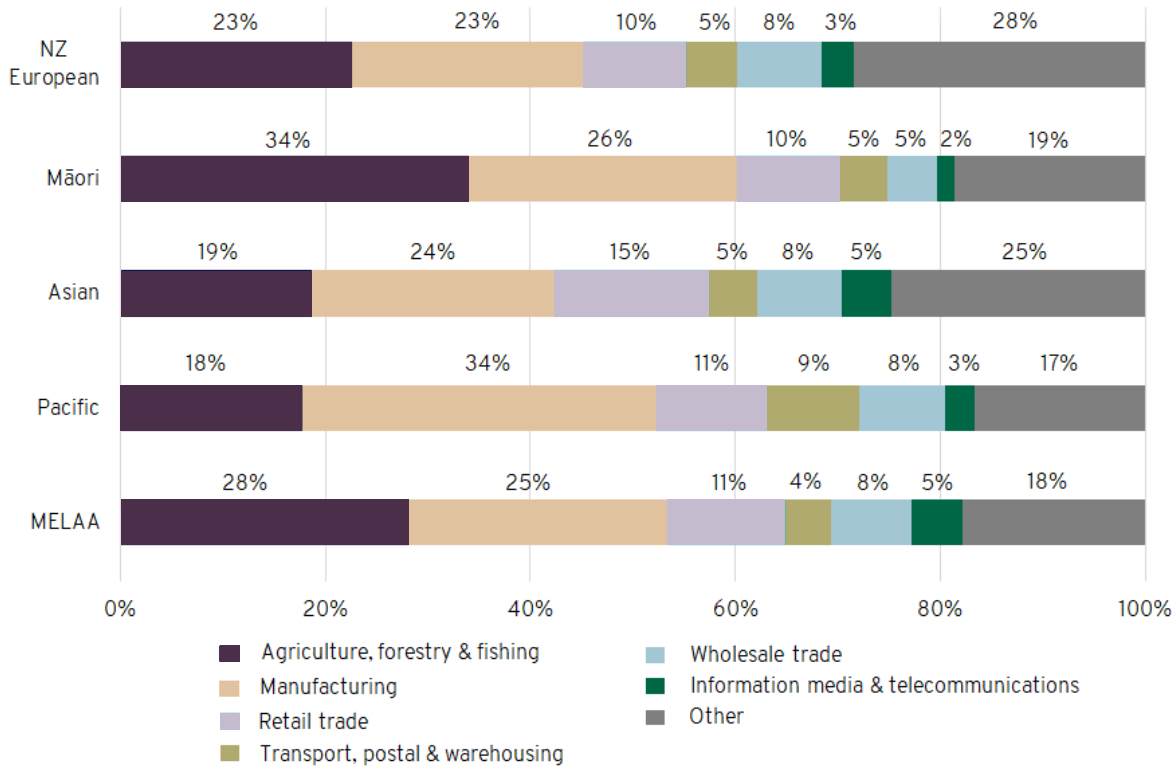
Source: Statistics New Zealand, based on authors calculations

However, the ethnic profile of export employment varies more noticeably across industries, with Māori employees particularly prevalent in the primary sector. Around a third of Māori workers in goods exporting firms were in agriculture, forestry and fishing, compared with 23% of New Zealand Europeans and 18% of Pacific



workers (Figure 33). When viewed on an industry basis, nearly a quarter of the workforce in exporting firms in the agriculture, forestry and fishing industry were Māori (Figure 34). This partly reflects the relatively high share of land and other primary sector assets in the Māori asset base, with Māori enterprises accounting for 40% of New Zealand’s forestry, 50% of the fishing quota, 30% of sheep and beef production, and 10% of dairy production¹⁴.

Figure 33 – New Zealand European, Māori, Asian and Pacific employees in exporting firms in

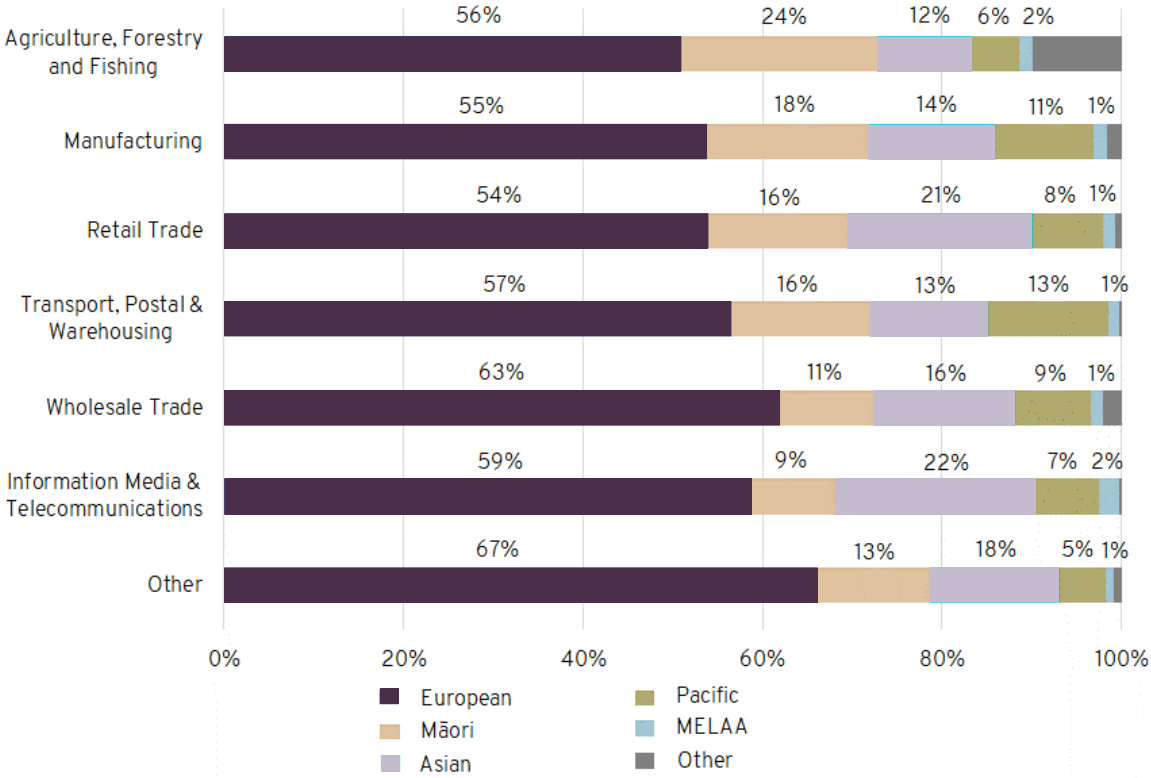


Source: Stats NZ, based on author calculations

¹⁴ See Chapman Tripp, 'Te Ao Māori Trends and Insights', 2017.



Figure 34 – New Zealand European, Māori, Asian and Pacific employees in exporting firms in goods exporting industries



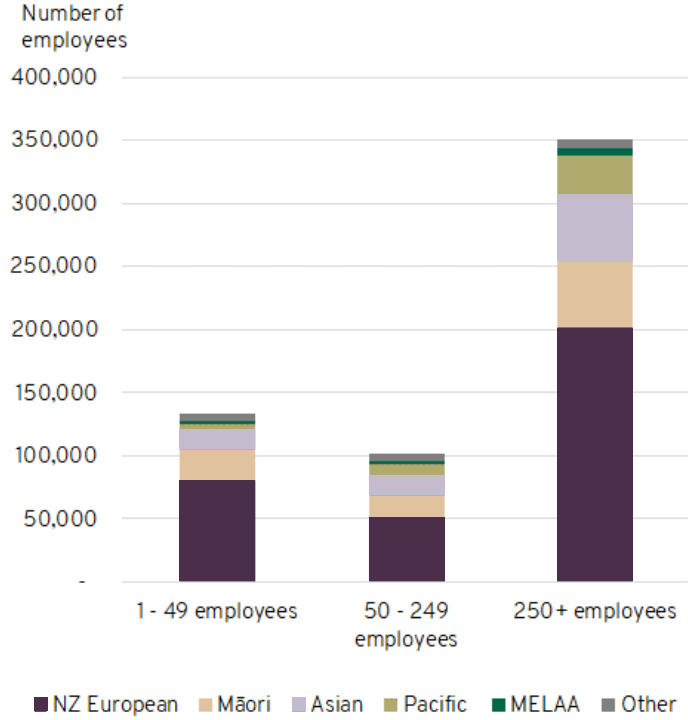
Source: Stats NZ, based on author calculations

A number of other features are notable in the ethnic composition of goods exporting firms’ employment. For example, Pacific peoples were the least likely of all ethnic groups to be employed in the agriculture, forestry and fishing industry, but were highly represented in manufacturing with 34% of Pacific employees in goods exporting firms employed in manufacturing. They were also overrepresented in transport, postal and warehousing firms. Meanwhile, Asian employees in exporting firms were more likely than other ethnicities to be employed in retail trade and information, media and telecommunications firms and less likely to be employed in agriculture, forestry and fishing. This likely partly reflects the geographic distribution of different ethnic populations in New Zealand – for example, Pacific peoples are disproportionately concentrated in Auckland, which is a hub for the manufacturing and transport and logistics industries.

The representation of ethnicities also varied by firm size. Māori had a slightly higher representation in exporting SMEs than in larger exporting firms, making up 11% of the workforce in exporting SMEs compared to 9% in firms with more than 50 employees (Figure 35). Whereas Pacific and Asian employees had their highest representation amongst firms with 50 to 249 employees.



Figure 35 – Ethnic employment in exporting firms by firm size



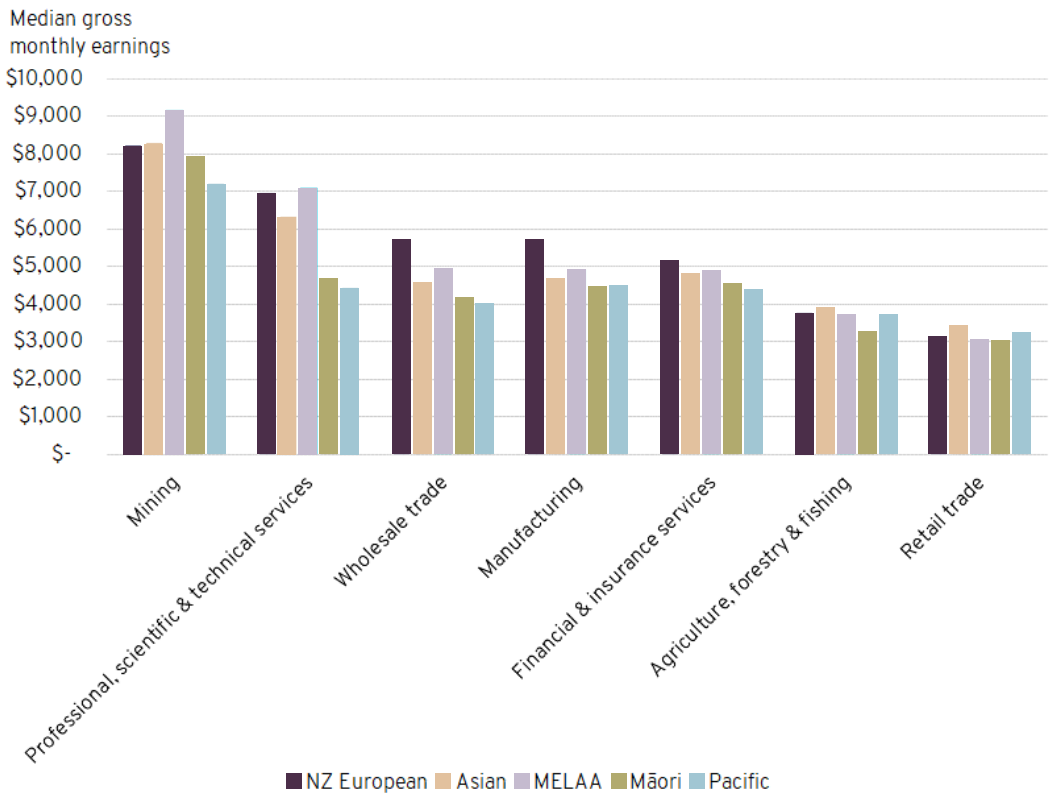
Source: Stats NZ, based on author calculations

EARNINGS DIFFERENCES IN EXPORTING FIRMS BY ETHNIC GROUPS

Employees of all ethnicities who work for exporting firms earn more, on average, than those of the same ethnicity that work for non-exporting firms. However, the size of the positive earnings effects from exporting varies by ethnicity.

Consistent with trends in the wider economy, New Zealand Europeans in exporting firms typically had higher average earnings than other ethnicities. The median monthly earnings of Māori and Pacific people employed in exporting firms were 19% and 15% less respectively than those of New Zealand European employees, and 12% less for both Asian and MELAA employees. This pattern was broadly similar across industries, although the size of the difference varied. The largest difference was in the professional, scientific and technical services industry, where New Zealand European employees earned on average 57% more than Pacific employees, 49% more than Māori employees, and 10% more than Asian employees (Figure 36). The smallest ethnic disparities were in retail trade and agriculture, forestry and fishing, where average earnings of New Zealand Europeans were roughly consistent with employees of other ethnicities.

Figure 36 – Average earnings in exporting firms by ethnicity across top goods exporting industries

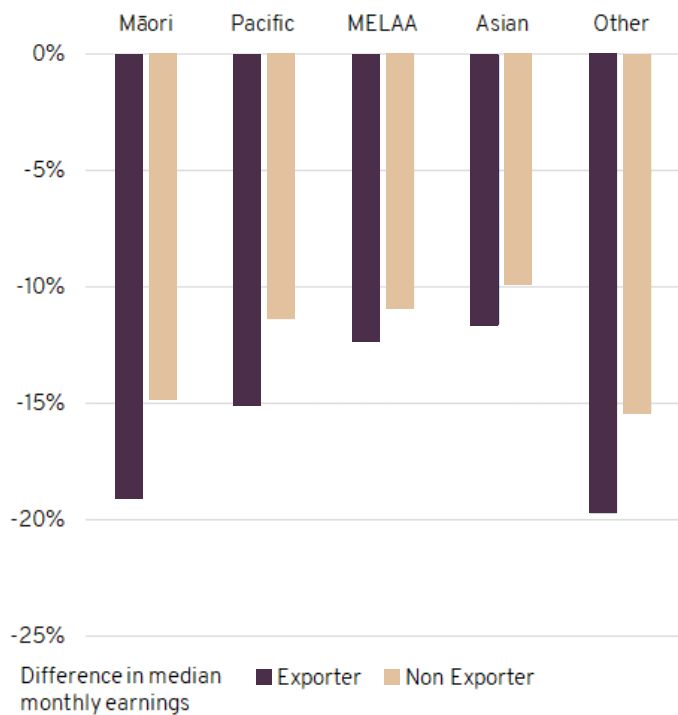


Source: Stats NZ, based on author calculations

While ethnic earnings disparities were also present in non-exporting firms, the earnings gap relative to New Zealand European employees was larger for all ethnicities in exporting firms (Figure 37). This suggests employees of non-New Zealand European ethnicities are benefiting less from participating in export activities than their New Zealand European counterparts. Also, the export pay premium—i.e. the difference in earnings between employees of exporting and non-exporting firms—was larger for New Zealand Europeans than other ethnicities. New Zealand European employees in exporting firms earned, on average, 18% more than New Zealand Europeans employed in non-exporting firms (Figure 38). By contrast, the pay premium was 15% for Asian and MELAA employees, 13% for Pacific employees, and 12% for Māori employees.

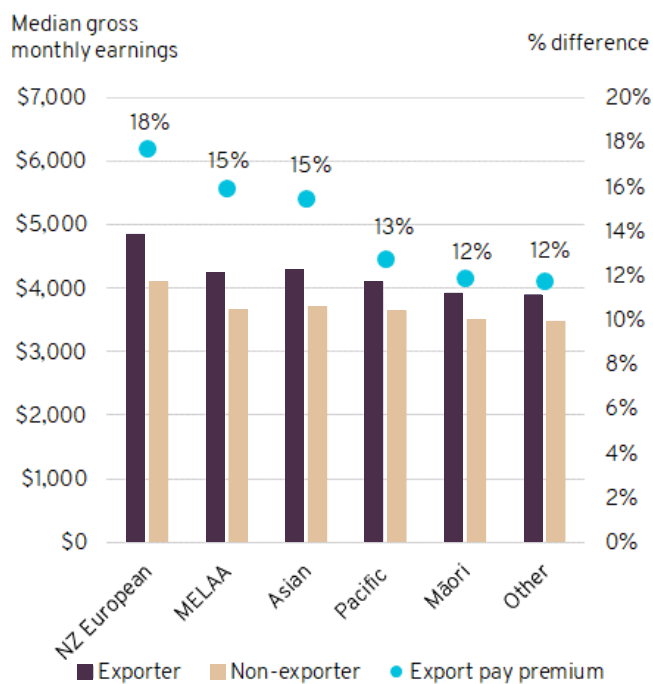


Figure 37 – Earnings gap relative to New Zealand Europeans



Source: Stats NZ, based on author calculations

Figure 38 – Earnings and export pay premium

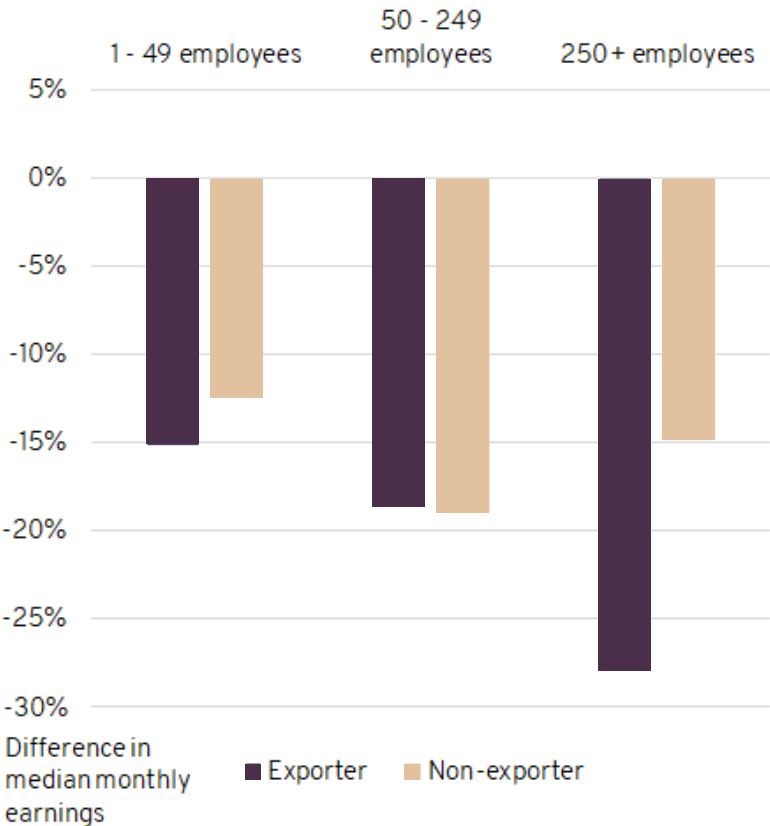


Source: Stats NZ, based on author calculations



For Māori and Pacific employees, the pay disparity with New Zealand Europeans in exporting firms vis-à-vis non-exporting firms was generally more pronounced in larger firms. For both ethnicities, the earnings gap with New Zealand Europeans in large exporting firms was roughly double what it was in large non-exporters (Figures 39-40). Interestingly, for Asian and MELAA employees the largest disparity was in SMEs, where Asian and MELAA employees in exporting firms earned slightly more than New Zealand Europeans (Figures 41 and 42).

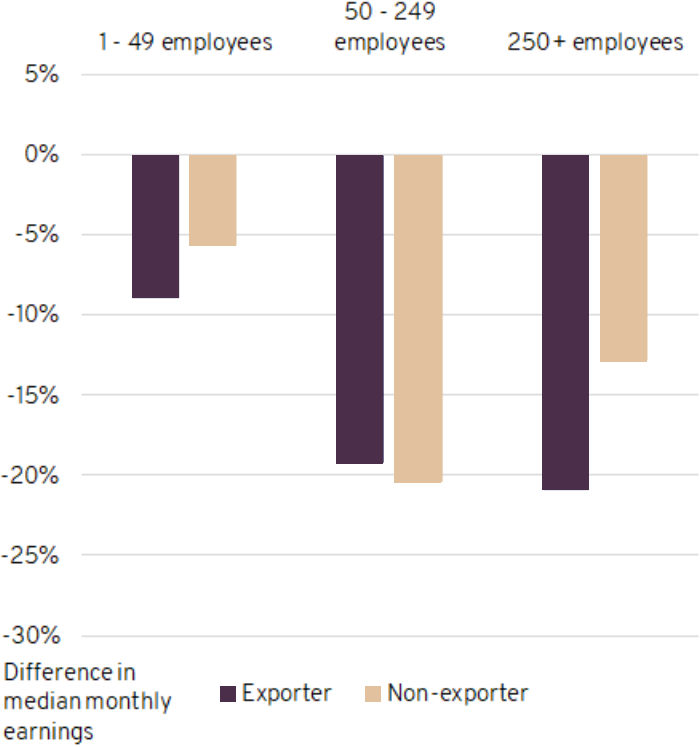
Figure 39 – Earnings gap of Māori employees relative to New Zealand Europeans by firm size



Source: Stats NZ, based on author calculations

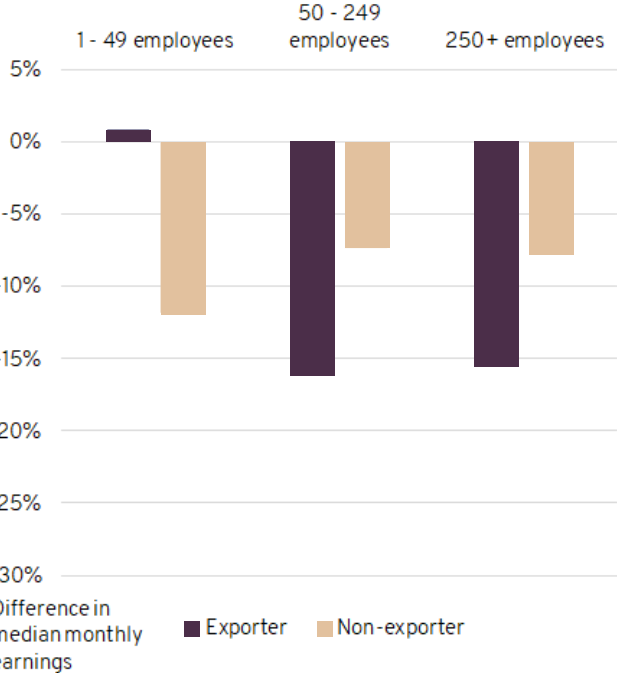


Figure 40 – Earnings gap of Pacific employees relative to New Zealand Europeans by firm size



Source: Stats NZ, based on author calculations

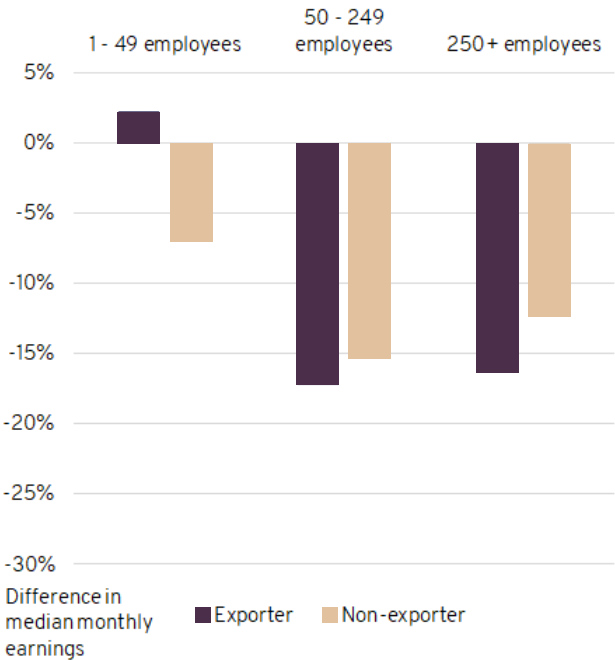
Figure 41 – Earnings gap of Asian employees relative to New Zealand Europeans by firm size



Source: Stats NZ, based on author calculations



Figure 42 – Earnings gaps of MELAA employees relative to New Zealand Europeans by firm size



Source: Stats NZ, based on author calculations

MĀORI LEADERSHIP IN GOODS EXPORTING FIRMS

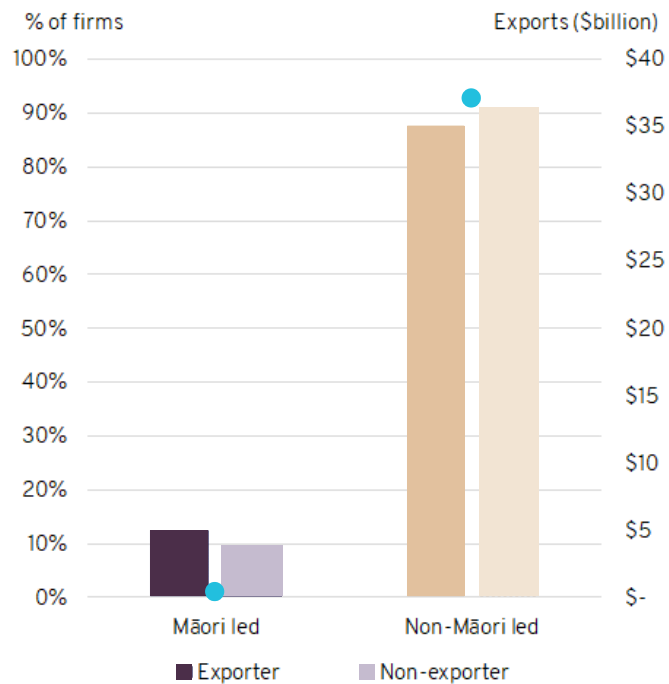
Similar to the gender analysis in Section 4, we use employment and earnings data for around 10,500 exporting firms in our population to estimate the proportion of firms led by Māori. We assume the 5% highest paid employees constitute the firms’ senior leadership and classify firms as Māori-led if Māori represented more than half of the firm’s highest paid employees. While this is only a rough proxy for decision-making responsibilities, it provides some insight into the representation of Māori in leadership roles in exporting firms.

In this subset of our firm population, 12% of exporting firms had a Māori majority on their leadership teams (Figure 43). This was higher than the proportion of non-exporting firms that were led by Māori (9%), supported by the high proportion of Māori-led indirect exporting firms involved in agriculture, forestry and fishing (15%). However, when only direct exporting firms were considered—i.e. those that lodged export entries—the proportion of exporting firms with majority Māori leadership fell to only 3%.¹⁵ In addition, it appears that Māori-led firms are more likely to be small exporters, with Māori-led firms providing only 1% of the value of exports in our sample.

¹⁵ While the definition of Māori business differs, the firm counts and export value attributed to Māori firms is broadly consistent with Stats NZ official data: Tatauranga umanga Māori – Statistics on Māori Businesses.

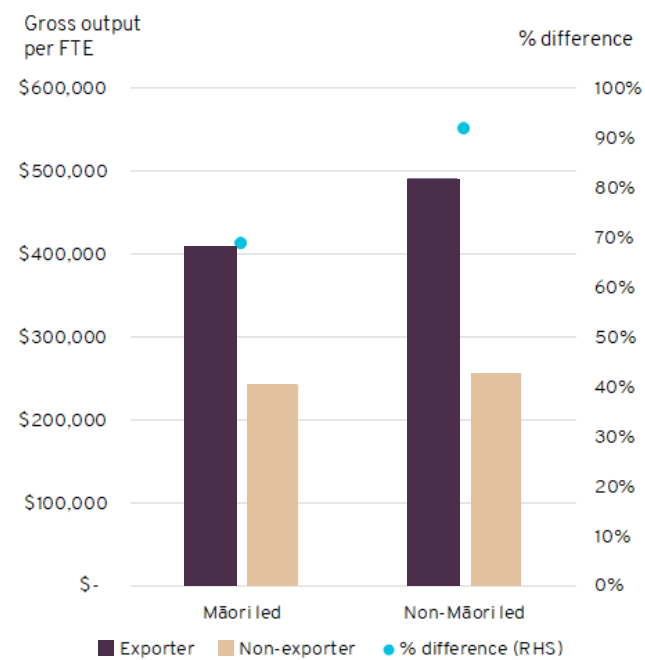


Figure 43 – Number of firms with a Māori majority in leadership



Source: Stats NZ, based on author calculations

Figure 44 – Average firm productivity in Māori and non-Māori led firms



Source: Stats NZ, based on author calculations

It also appears that Māori-led exporting firms experience smaller productivity and earnings benefits than non-Māori led firms relative to non-exporting counterparts. While productivity levels in Māori-led firms were on average 69% higher than in Māori-led non-exporters, this was lower than the 92% higher productivity experienced by non-Māori led exporters over non-exporters (Figure 44). In addition, whereas employees in exporting firms led by non-Māori had 8% higher monthly earnings on average than in non-Māori led non-exporting firms, amongst Māori-led firms employees in exporting firms earned 10% less on average than in non-exporting firms (Figure 45).

Māori-led firms in our sample also had a marginally higher export intensity than non-Māori led firms. So while Maori appear to be significantly less likely to lead a firm (including an export firm), the firms they do lead have a higher proportion of their sales coming from overseas (39%) than non-Māori owned firms (25%).

Figure 45 – Average earnings of employees in Māori and non-Māori led firms



Source: Stats NZ, based on author calculations

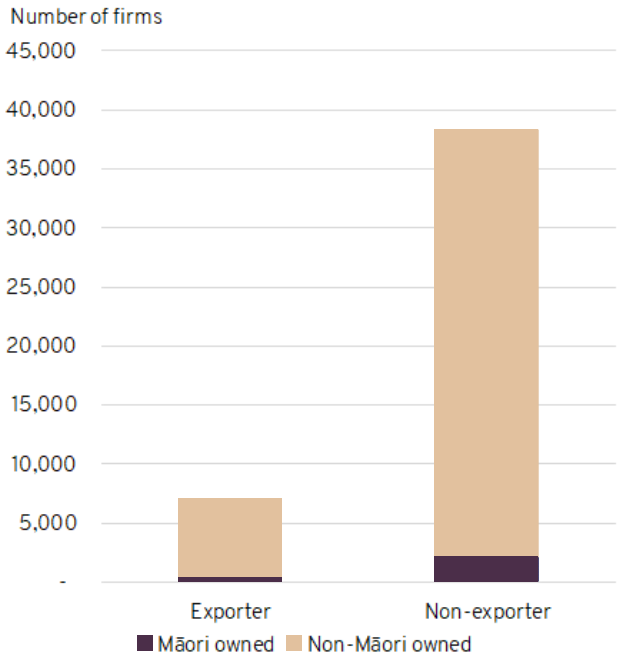
MĀORI AS WORKING PROPRIETORS OF EXPORTING FIRMS

We made use of data on working proprietors in the LBD to understand the characteristics of exporting firms that were owned by a Māori working proprietor. While this is the best ownership data available in our dataset, it should be noted that it is a narrow definition so provides only limited insights into the nature of firm ownership in a wider sense – i.e. it only includes individuals who work in a business they own or part own.



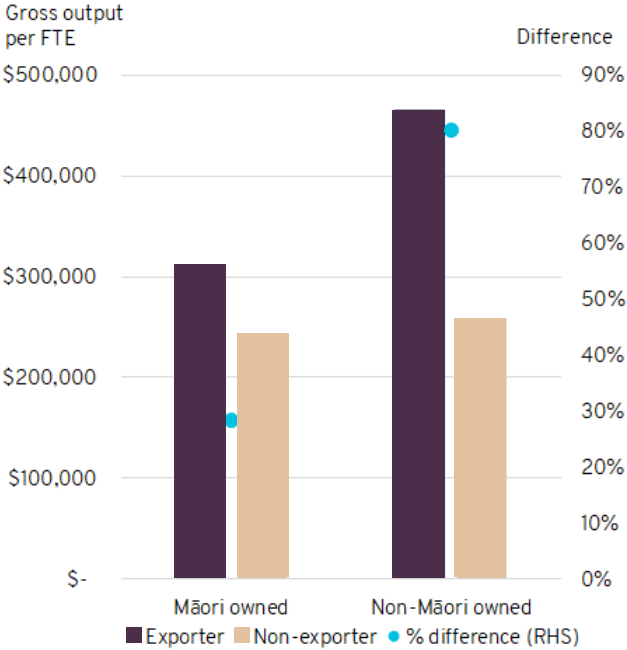
Of the 7,000 exporting firms with working proprietors for which ethnicity data is available, only 5% were Māori (Figure 46). The vast majority of these were in the agriculture, forestry and fishing industry, with an average firm size of 15 employees. Similar to the leadership analysis, firms with Māori working proprietors had lower productivity levels than their non-Māori counterparts, with a particularly large difference in average firm productivity between exporting and non-exporting firms with Māori working proprietors (Figure 47). Their employees also had slightly lower average monthly earnings, although this difference was consistent across both exporters and non-exporters (Figure 48). However, Māori-owned firms had a marginally higher export intensity (27% of total sales from exports) than non-Māori owned firms (26%) (Figure 49).

Figure 46 – Number of firms with Māori ownership



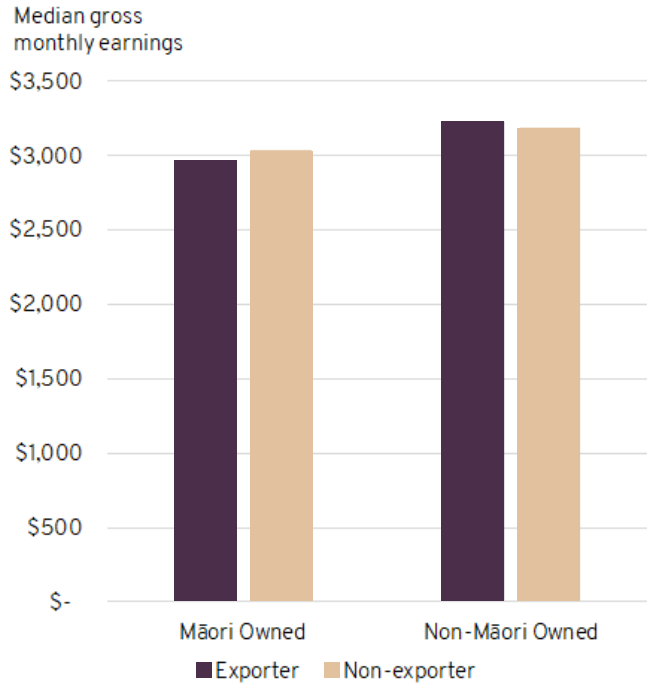
Source: Stats NZ, based on author calculations

Figure 47 – Average firm productivity in Māori and non-Māori owned firms



Source: Stats NZ, based on author calculations

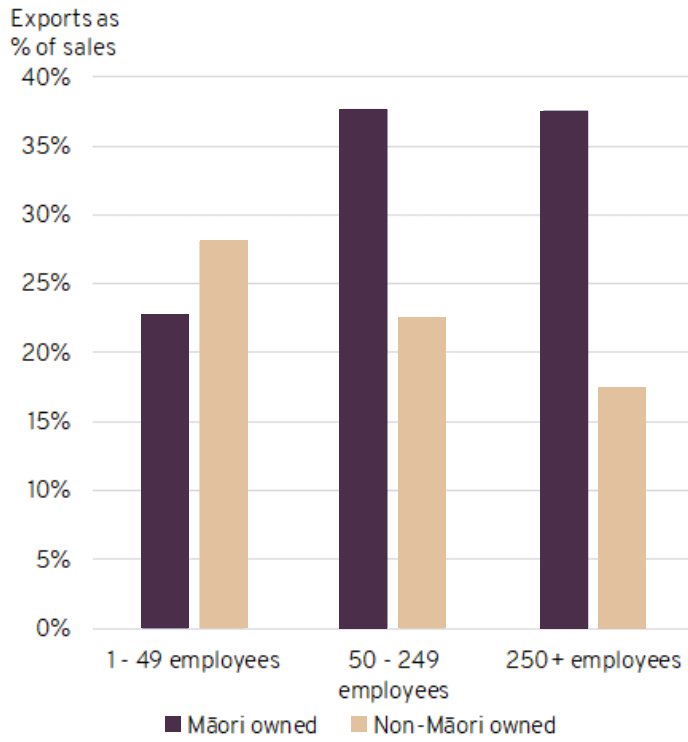
Figure 48 – Average earnings of employees in Māori and non-Māori owned firms



Source: Stats NZ, based on author calculations



Figure 49 – Export intensity of Māori and non-Māori owned firms



Source: Stats NZ, based on author calculations

6 Conclusion

This paper presents analysis of a new dataset that attempts to bridge some of the gaps in our understanding of the distributional aspects of trade in New Zealand, particularly the impacts of trade across gender and ethnicity. In doing so, it aims to inform future policy development to ensure international trade delivers more sustainable and inclusive outcomes across New Zealand.

Due to the nature of the data, in particular its inclusion of only goods exporting firms, a degree of caution should be taken in how these findings are applied. However, the administrative data behind this analysis provides a more extensive “bottom-up” picture than has previously been available for analysing distributional characteristics of goods exporting firms and making comparisons with non-exporting firms.

It confirms the conventional wisdom that exporting firms in New Zealand have, on average, higher productivity and pay higher wages than non-exporting firms. It also finds that the majority of goods exports are undertaken by a minority of large firms that export to multiple markets. Smaller firms often rely on only one or two overseas markets, with Australia by far the most popular market.

We also find that women are significantly under-represented in New Zealand’s goods exporting firms and appear to experience the benefits of trade less than men do. Most indicators of gender gaps considered in this paper show slightly wider gaps exist in exporting firms than in non-exporting firms. Women are under-represented as employees, leaders, and owners of exporting businesses, and are remunerated less than men for their participation in exporting activities. While women who work for exporting businesses earn more than those employed in non-exporting businesses, their remuneration is on average less than male employees who work for exporting firms.

Ethnic representation in goods exporters largely reflects the composition of the wider New Zealand workforce, with employees of all ethnicities who work for exporting firms earning more, on average, than those of the same ethnicity that work for non-exporting businesses. However, non-New Zealand European ethnicities earn less on average than their New Zealand European counterparts, with larger differences in exporting firms than in non-exporting firms. Māori are also underrepresented in trade as both leaders and owners of exporting businesses.

While this paper provides an initial analysis of findings from the LBD and IDI, substantial further research possibilities exist. A particular focus for future work will be on better understanding the factors contributing to the trends described in this paper. The underlying data for this paper will be made available on MFAT’s website, along with a detailed description of the methodology used, and we welcome interest from researchers who may be keen to use the dataset for their own research¹⁶.

¹⁶ These can be found at <https://www.mfat.govt.nz/de/trade/trade-statistics-and-economic-research/>.





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