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MANUFACTURING TRADERS

ALONG CALIFORNIA'S SOUTH-CENTRAL COAST

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THE RESEARCH QUESTION:

Engaging in international trade requires a business to identify new markets, meet new standards, participate in different regulatory frameworks, and connect to relevant professional networks. In this respect, businesses need to innovate to extend their reach to international markets. It is with this intuition that we explored the question, are manufacturers who trade internationally qualitatively different from non-trade manufacturers?

To answer this question, we examined the age, employment, and sales patterns of manufacturing establishments engaging in international trade along the south-central coast of California and compared them to non-trade manufacturing establishments in the region. We found a few key patterns that distinguish the two groups;

- Trade manufacturers tend to be older with more years-in-business, suggesting they may also have better survival rates than non-traders.
- Trade manufacturers tend to employ more workers and report higher annual sales on average than non-trade manufacturers of the same age.
- Since about 2017, trade manufacturers' year-over-year sales growth rate has declined sharply relative to that of the non-trade manufacturers.

THE RESEARCH MODEL:

To conduct our preliminary analysis, we used privately collected firm-level data from Business Dynamics Research Consortium (BDRC) which is commonly used for firm-level research. However, this data does not report on trade activity of businesses so we applied a unique approach to get around this limitation – we inferred a business establishment to be a 'trader' if it has received a trade-related loan from EXIM bank or from the Small Business Administration's (SBA) international loan program.

Although this model allows us a preliminary look into the economic trends, it limits our pool of traders, and biases us toward firms that are able to secure loans. To reduce this bias and expand our pool, we also included manufacturers listed on the Port Import/Export Reporting Service (PIERS) database of top importers.

This still results in a small total of 665 international trade establishments in the region, 235 of which were manufacturers between 1997 and 2018. By contrast, for this same region and time period we have a comparative group of about 45,000 'non-trade' manufacturing establishments. We understand that some share of these 45,000 firms may be traders, though their inclusion in the pool of non-traders almost certainly reduces the distinction between our pools of identified traders and non-traders. As noted in further detail below, we find the differences between traders and non-traders to be significant.



THE FINDINGS:

Notwithstanding the limitations of the data, our preliminary findings are stark and interesting. Trade manufacturers tend to outperform non-traders significantly and thus contribute more to the regional economy. However, over the past two years there has been a significant drop in their annual sales growth. This warrants a more detailed analysis of economic and policy factors that may be driving this shift, but also policies that can help reverse this trend.



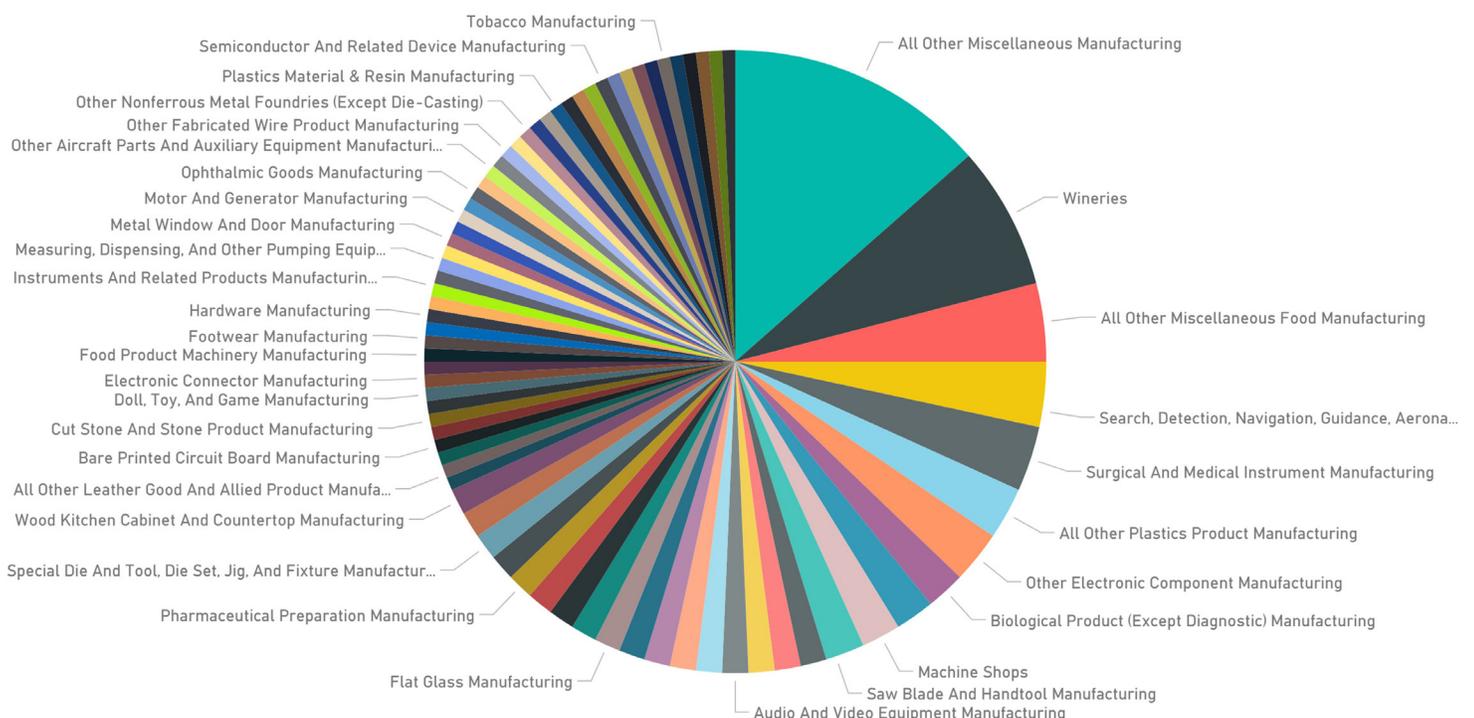
Trade manufacturers tend to outperform non-traders significantly and thus contribute more to the regional economy.

DETAILED INDUSTRIES OF MANUFACTURERS

A total of 235 manufacturers were identified in our sample as engaging in international import or export activity from 1997 through 2018. Figure 1 below provides a detailed industry breakdown of the 148 manufacturing traders that were operational as of 2018.

- Top categories for manufacturing traders are concentrated in “Miscellaneous Manufacturing” (20 establishments); “Wineries” (11 establishments); “Miscellaneous Food Manufacturing” (6 establishments); “Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing” (5 establishments); and, “Surgical and Medical Instrument manufacturing” (5 establishments).
- Of these 148 establishments, 40 businesses have received a loan for trade activity: 15 businesses have received a trade related 7(a) loan from the Small Business Administration, and another 25 businesses have received a loan from the EXIM bank.

FIGURE 1
TYPE OF MANUFACTURERS BY DETAILED INDUSTRY

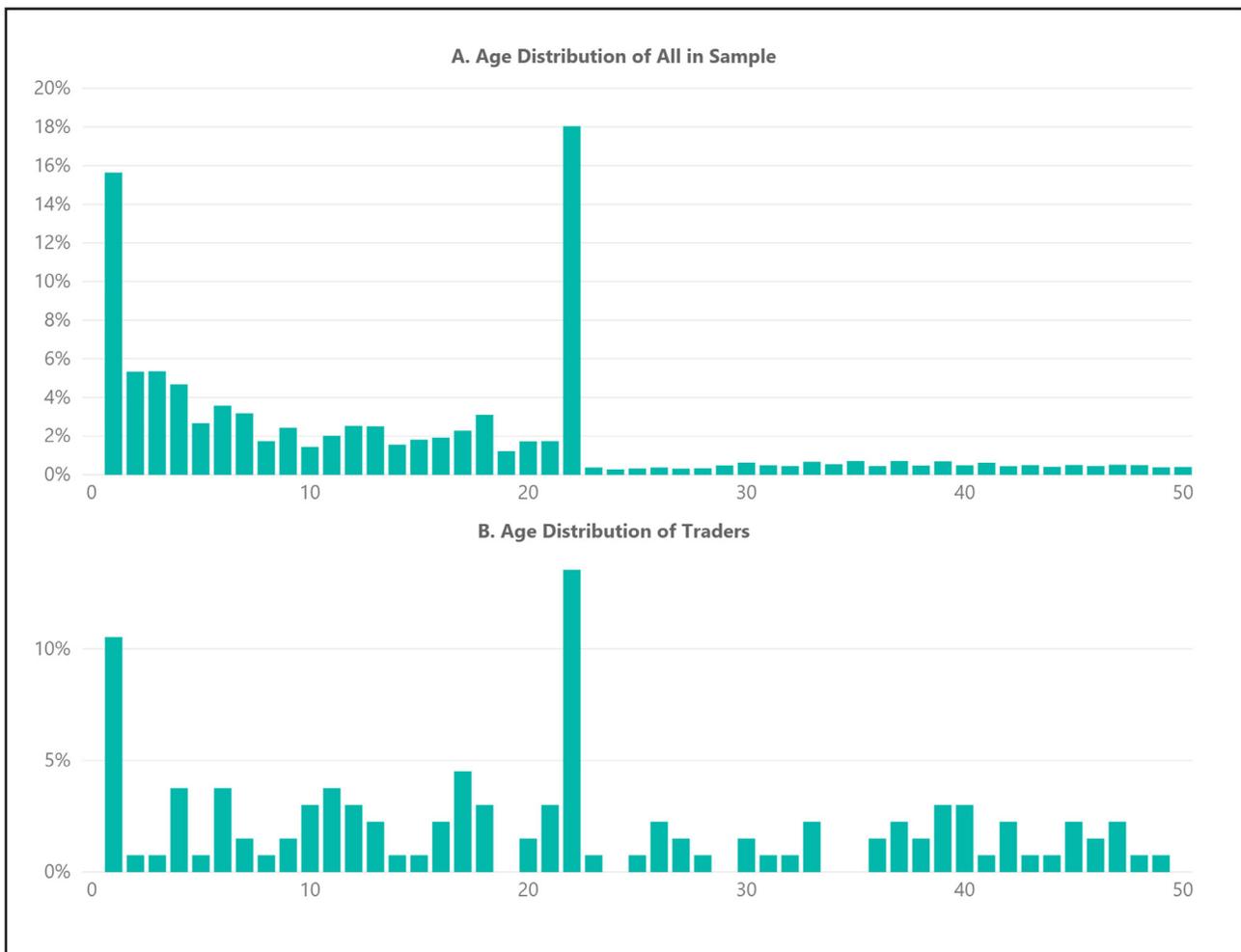


YEARS-IN-BUSINESS FOR TRADE MANUFACTURERS

As of 2018, the average years-in-business for a manufacturing establishment in the region was about 19 years. In contrast, manufacturers that trade have been in business for over 24 years on average. Part of this differential is a result of the distribution of establishments along different age categories. Figure 2 below elaborates on this pattern highlighting the fact that, compared to all manufacturers (panel A), trade manufacturers (panel B) are more evenly distributed across age categories.

- Comparing across the entire sample, traders have on average been in business for 10 years longer than non-trade manufacturers in the region.
- Manufacturers that trade also tend to stay in business for longer. This is apparent in the relatively even distribution of establishment counts across age categories compared to all manufacturers.
- These patterns hold the same when considering only loan recipients. This suggests there is no bias relating to age that affects the probability of a trade manufacturer receiving a trade-related loan.

FIGURE 2
AGE DISTRIBUTION OF MANUFACTURERS, ALL AND TRADER



Note: The spike at 22 years results from BDRC starting to collect data in 1997. A relatively high proportion of businesses reported for the first time in this database in 1997.

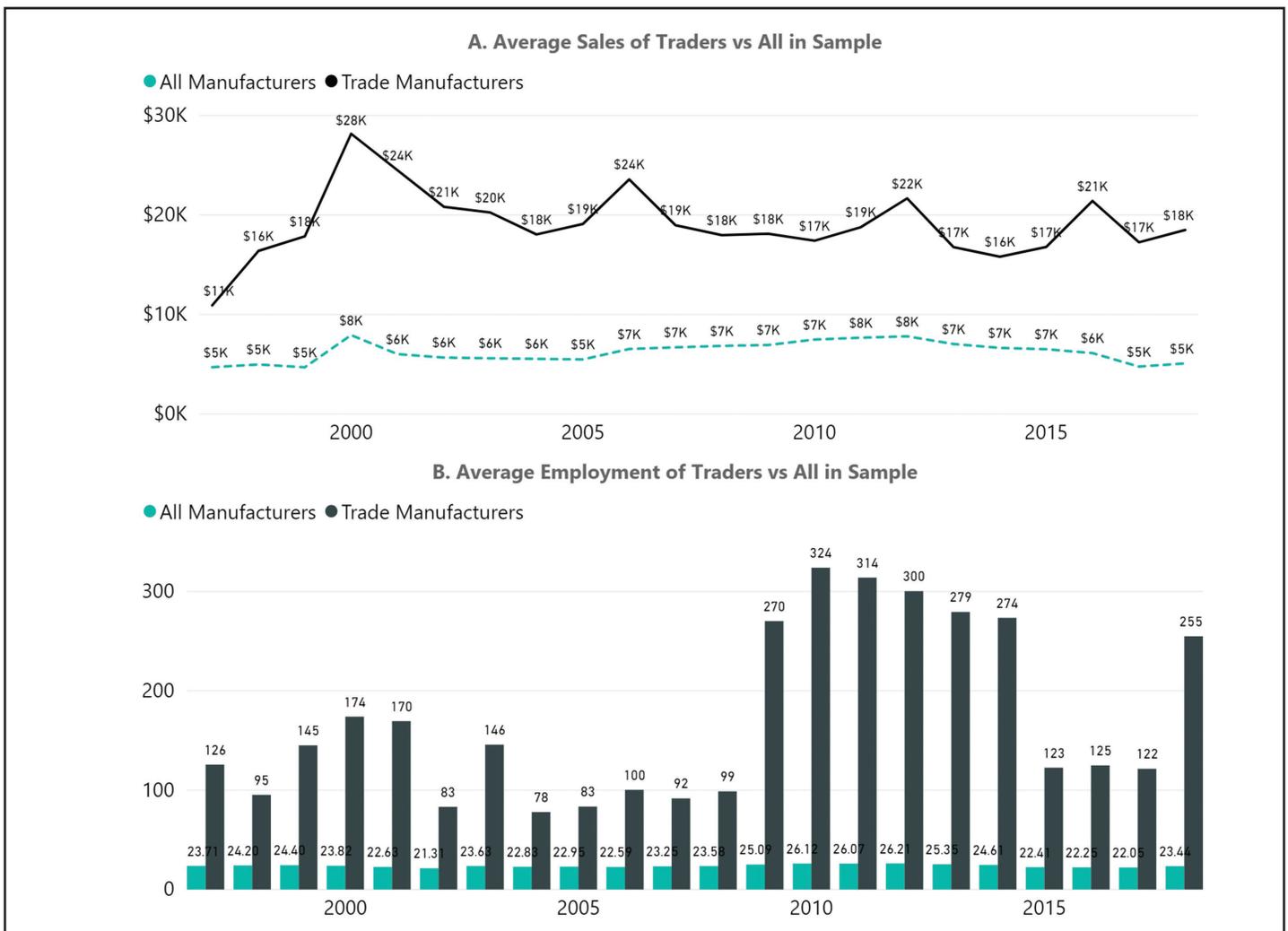
Source: Numbers are computed by Xopolis LLC using data from BDRC/YTS database.

EMPLOYMENT AND SALES FOR TRADE MANUFACTURERS

As trade manufacturers are on average older with better chances of survival, they also tend to report higher annual sales and employment than non-traders. Figure 3 below shows these comparative trends annually from 1997 to 2018 for sales (panel A) and employment (panel B).

- Trade manufacturers on average employ over 3 times as many workers annually and report sales between 2 – 3 times that of non-trade manufacturers.
- In terms of financial productivity, traders earn about \$269,000 per employee annually, while manufacturers in general earn about \$256,000 per employee, a relatively small but noticeable difference.
- Trade manufacturers were more susceptible to the global recession as seen in the relatively steeper decline in average sales and employment for traders around 2008. But traders also boosted sales significantly faster during the recovery.

FIGURE 3
ANNUAL AVERAGE SALES AND EMPLOYMENT OF TRADE MANUFACTURERS VS ALL, 1997-2018



Source: Numbers are computed by Xopolis LLC using data from BDRG/YTS database

YEAR-OVER-YEAR SALES GROWTH FOR TRADERS VS NON-TRADERS

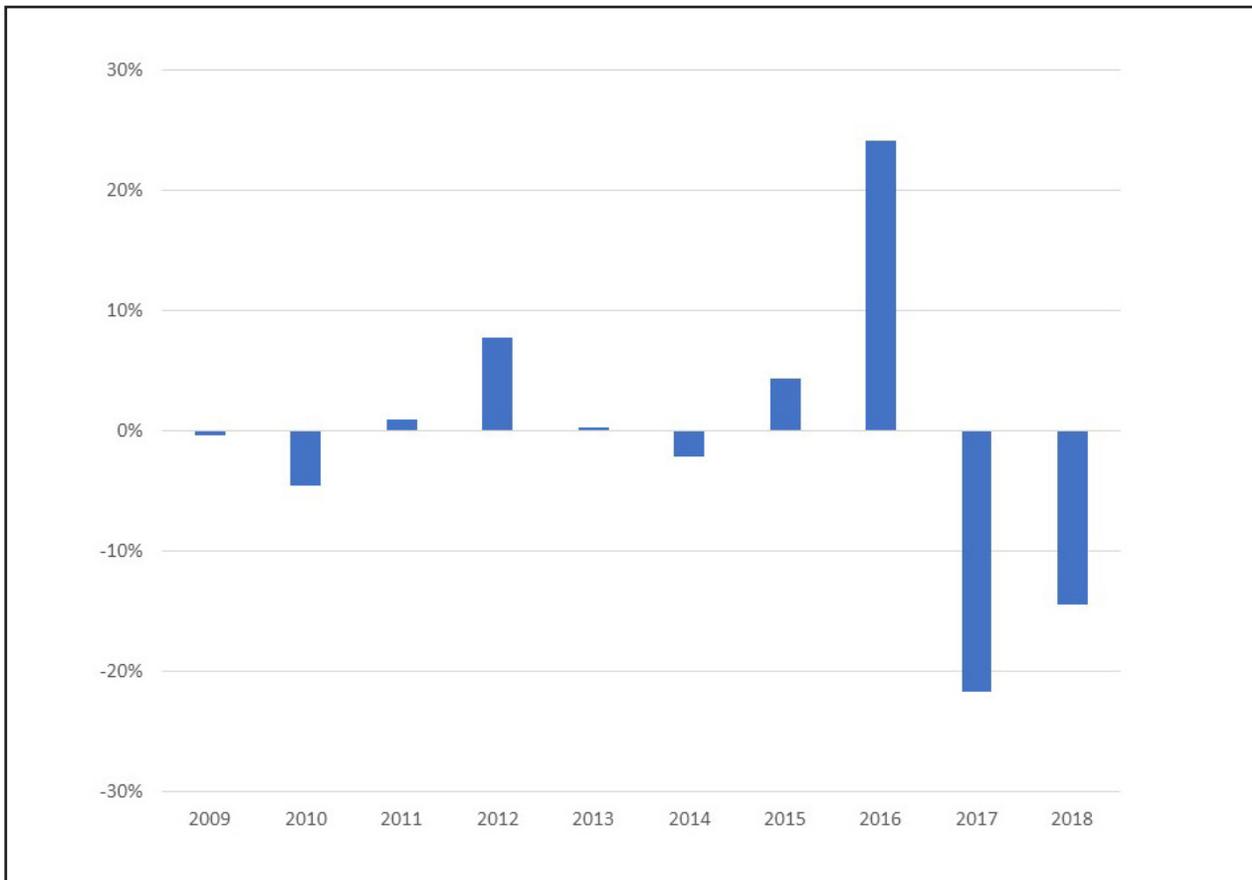
Figure 4 below shows the difference in annual growth rate in sales for trade manufactures as compared to non-trade manufacturers over the past 10 years. To put it simply, we calculated the average year-over-year sales growth for each year for both groups and subtracted the average for traders from the non-traders. This difference is reported in the chart below.

The immediate concern is that after 2016, trade manufacturer sales growth has declined relative to non-traders. A deeper look into the data reveals that for trade manufacturers with over 50 employees this trend has exacerbated to the point that their sales have declined for two years.

It is difficult to draw conclusions on what is driving this big and sudden change. Though there is an apparent correlation of the decline to a change in U.S. trade policy, more research is needed. Our future efforts in research would be well directed at identifying the mechanisms driving this sharp downturn, and possible policy interventions to remedy it.

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FIGURE 4
DIFFERENCE IN YEAR-OVER-YEAR GROWTH IN SALES BETWEEN TRADERS AND NON-TRADERS



Source: Numbers are computed by Xopolis LLC using data from BDRC/YTS database.



SUMMARY

Our interest is to identify whether our regional manufacturing firms engaged in international trade experience qualitatively different economic outcomes than their non-trade peers. While there are challenges in separating trade vs. non-trade firms on a large scale, using a rigorous definition of trade firms we are able to draw some conclusions.

Trade manufacturers tend to outperform non-traders significantly and thus contribute more to the regional economy. Trade firms appear to have better survival rates than non-traders, tend to employ more workers and report higher sales than non-traders of the same age.

Recognizing this performance advantage has implications for the practice of economic development. More specifically, it's not just about encouraging businesses to pursue international trade, it's about the development of resources and technical assistance capacity to effectively facilitate business's entry into, and success in, global markets.

Of some concern, however, for moving forward, over the past two years there has been a significant drop in the traders' annual sales growth. This warrants a more detailed analysis of economic and policy factors that may be driving this shift, but also policies that can help reverse this trend.

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