

Channels of Influence*

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ABSTRACT

We demonstrate that simply by using the ethnic makeup surrounding a firm's location, we can predict, on average, which trade links are valuable for firms. Using customs and port authority data on the international shipments of all U.S. publicly-traded firms, we show that firms are significantly more likely to trade with countries that have a strong resident population near their firm headquarters. We use the formation of World War II Japanese Internment Camps to isolate exogenous shocks to local ethnic populations, and identify a causal link between local networks and firm trade links. Firms that exploit their local networks (strategic traders) see significant increases in future sales growth and profitability, and outperform other importers and exporters by 5%-7% per year in risk-adjusted stock returns. In sum, our results document a surprisingly large impact of immigrants' economic role as conduits of information for firms in their new countries.

JEL Classification: F16, F30, G14

Key words: Information networks, trade links, firm behavior

Firms buy and sell goods in a global marketplace. As this becomes increasingly true, understanding how firms differentially navigate this marketplace is critical to identifying which firms will ultimately succeed, and how investors should allocate capital amongst these firms. Success in this global setting depends not only on the goods or services that firms can provide, but also on the information networks that firms can access. We show that these networks have a first-order impact on the trade decisions undertaken by these firms, both in terms of imports and exports. We further explore how quickly the capital markets can separate the “strategic” importers and exporters from other firms, and show that the market appears to have a difficult time deciphering even openly observable channels.

Increasing exposure to foreign operations has been a consistent time-series trend in the United States. The Bureau of Economic Analysis’s National Income and Product Accounts (NIPA) broad measure of economy-wide firm profits shows that the percentage of NIPA national profits coming from overseas has increased from roughly 21% in 2000 to 38% in 2010 (Hodge (2011)). Further, this is not a small firm phenomenon, as the entire S&P 500 received 46% of their sales revenue from overseas in 2010, growing from only 30% ten years prior.

Yet although a large and growing number of public firms engage in international transactions, we still do not have a full understanding of *why* firms choose to trade with firms in certain countries, and how these decisions affect firm value. To shed light on this question, we exploit variation in ethnic population breakdowns across metropolitan statistical areas (MSAs) in the U.S. Specifically, we examine how local residents’ ties to their home-countries can play a role in creating bilateral trade linkages and whether (and importantly *which of*) these trade links are value-enhancing for firms.

We do this by focusing on the import and export activity of all US publicly-traded firms for the past seventeen years. We obtain import and export data through public records that must be reported by shippers, and then made publicly available through customs and port authorities. We use this data to ask

the question of whether there are strategic trade decisions that a firm can make, given the immigration patterns that result in concentrated ethnic populations close to certain firms.

An example of our identification strategy is the following. Suppose we consider a firm located in Jersey City, New Jersey, where a common ethnicity is Indian. We first test whether this firm is more likely to trade (either import or export) with a firm in India, than a firm located in Bangor, Maine, where Indian is not a common ethnicity. We hypothesize that local ethnicities may help lower the information barriers for local companies, and thus that firms may enjoy benefits from this local advantage. In addition, ethnic make-up may also proxy for local demand for a firm's goods, which can impact optimal importing decisions. We then test the value enhancement of these links.

We find evidence that firms export more to (and import more from) countries with which they have stronger information links. We measure firm-country information networks as the share of residents in a firm's headquarter MSA that have the same ethnicity as the country to which the firm is exporting/importing (a variable we call "Connected Population"). A one standard deviation increase in connected population increases the amount the firm exports to (imports from) a country by 63%, $t=4.71$ (33%, $t=2.66$).

Next we use the formation of World War II Japanese Internment Camps to isolate exogenous shocks to local ethnic populations, and identify a causal link between local networks and firm trade links. These internment camps were established throughout the country to house Japanese and Japanese-Americans originally from the West Coast who were relocated to camps following the bombing of Pearl Harbor in 1941. The camps represented a sizable shock to the Japanese populations surrounding them, and had an enduring impact on these areas as many internees ultimately settled around these camps, having no home or work to return to when the war ended. We find that sixty years later, these internment camp locations had significantly higher Japanese populations. Further, using the instrumented value of Japanese population (with internment

camp locations as an instrument), we show that this exogenously determined Japanese ethnic population density had a large and significant impact on local firm trading decisions, establishing more cleanly a causal link from surrounding ethnic population to firm-level import and export decisions.

We also show that this increased importing (and exporting) provides a tangible benefit to the firm in terms of increased sales and increased profitability in their respective industries. For instance, “strategic exporters” (i.e., firms that export to a country that has a large connected population immediately surrounding its firm headquarters) significantly increase their future profitability (EBITDA/Assets) by over 0.9%, relative to a mean of roughly 2.2%.

We next go on to explore whether the market understands the value of the strategic use of information networks, and the resultant import and export decisions of firms. We find evidence that it does not. For instance, strategic exporters outperform other firms that export to the *same* countries but that do not have local information networks by 50 basis points per month ($t=2.15$) in excess returns, and 57 basis points per month ($t=2.78$) in 4-factor abnormal returns. Importantly, this outperformance is unaffected by known risk determinants, and does not reverse, suggesting that this strategic trading behavior is truly important for fundamental firm value, but is only gradually realized by the market.

We also run a number of tests to better establish our proposed mechanism. For example, if it really is these information linkages that are increasing the amount of importing (and exporting) to the countries represented by the connected population, then we might expect that when these connections are more valuable, we should see these connections utilized more heavily. We test this idea by looking at tariff controls between the US and a given connected country for a given product. Consistent with lower (higher) tariffs increasing (decreasing) the value of the information network connection, we see significantly more strategic trading by firms (i.e., trading to the country of the connected

population) where US import tariffs are lower. This is consistent with the variation in the value of the network causing variation in strategic trading.

Next, we dig deeper into the exact manner in which the information is transferred across the network, and thus profitably used by firms. While we cannot obtain the ethnic make-up of the entire employee base or management of all firms, we do collect the ethnic makeup of the firm's entire board of directors for all firms in our sample. From this data, we can identify one channel, through the board of directors, that this information network may be utilized. We first show that local ethnic population is a strong predictor of a board's ethnic make-up (i.e., if there is a larger Chinese population in a given state, the exporting/importing firm's board is significantly more likely to have Chinese board members). We then find that when a strategic importer (exporter) has a connected board member on its firm board, it trades significantly more with the connected country. For instance, firms export 68% more than the median firm ($t=2.87$) to countries from which they have a connected board member. Further, as is the case with strategic importers (exporters), the market does not fully understand the value of these connected board members: firms that exploit these connected board members in their trading decisions have predictable future positive abnormal stock returns.

Lastly, we show that in addition to market participants not fully realizing the value of the information network for strategic importing and exporting firms, sell-side analysts make the same mistakes. Specifically, analysts are significantly less accurate in their earnings forecasts of strategic importers and exporters. Further, when their increased sales and profitability are reported at quarterly earnings announcements, strategic importers and exporters have significantly more positive earnings surprise returns.

The remainder of the paper is organized as follows. Section I provides a brief background and literature review. Section II describes the data, while Section III documents the impact of the connections on firm-level trade. Section

IV establishes the returns to strategic importers and exporters that utilize these connected information networks. Section V concludes.

I. Background and Literature Review

Our research adds to a large literature analyzing the strategic entry mode choices of firms seeking to expand their businesses to overseas markets. According to Agarwal and Ramaswami (1992), these choices include exporting, joint venture, licensing, and direct investment. The underlying theme in this literature is that few companies can afford to do business in all countries at the same time; therefore firms should weigh the relative advantages of these entry modes in different regions of the world. The early marketing literature provides normative guidelines on the process of internationalizations include Cavusgil and Nevin (1981) and Green and Allaway (1985), among others; whereas recent research on the topic focuses on the consequences of entry mode on firm operations. For example, Pan, Li, and Tse (1999) show that early entrants have significantly higher market shares and profitability than late followers. In addition, several papers investigate whether cultural proximity of foreign markets to local markets affects entry timing and mode, and find conflicting results. For example, the findings in Mitra and Golder (2002) suggest that cultural distance to domestic market is not a significant factor in entry timing; whereas Loree and Guisinger (1995) argue that it is. Our paper demonstrates that local ethnic populations around the headquarters of a firm impact the bilateral trade relations to connected countries. We also show that board members who are connected to trade partners through their nationalities provide information advantages that generate value for firms.

Our paper also links to a vast literature investigating the drivers and implications of international trade. Bernard et al. (2005) argue that, when investigating the causes and implications of international trade, the literature emphasizes several factors including comparative advantage, increasing returns to scale and consumer preference for variety, but focuses less on the firms that

actually drive trade flows. They show that firms that export differ substantially from firms that solely serve the domestic market in several dimensions: across a wide range of countries and industries, exporters have been shown to be larger, more productive, more skill- and capital-intensive, and to pay higher wages than non-trading firms. Gould (1994) shows that immigrant ties in the United States (and Canada) play a role in increasing bilateral trade flows and conclude that immigrant ties (or links) provide knowledge of home-country markets, language, preferences, and personal contacts that have the potential to decrease trading transactions costs. We add to this literature by introducing the effects of local ethnicities as a determinant of firm-level imports and exports.

Lastly, our research is broadly related to prior studies that analyze investors' delayed and biased reactions to information. The basic theme of this strand of literature is that, if investors have limited resources and capacity to collect, interpret, and finally trade on value-relevant information, we would expect asset prices to incorporate information only gradually. One of the contributions of our paper is to highlight the importance of scrutinizing local resources in understanding asset prices. If investors pay less attention to firms exploiting local advantages, asset prices may exhibit predictable patterns. There is an extensive literature on investors' limited attention to information. On the theoretical side, numerous studies, such as Merton (1987), Hong and Stein (1999), and Hirshleifer and Teoh (2003), argue that, in economies populated by investors subject to binding attention and resource constraints, delayed information flows can lead to expected returns that are not explained by traditional asset pricing models. Subsequent empirical studies find evidence that is largely consistent with these models' predictions. For example, Huberman and Regev (2001), Barber and Odean (2006), DellaVigna and Pollet (2006), Hou (2006), Hong, Torous, and Valkanov (2007), and Cohen and Frazzini (2008), Huang (2011), and Nguyen (2011) find that investors respond quickly to information that catches their attention (e.g., news printed on the New York Times, stocks that have had extreme returns or trading volume in the recent past, and stocks that more people follow), but tend to ignore information that is

less salient yet nonetheless essential to firm values. In addition, Cohen and Lou (2011) find that investors have difficulty in incorporating industry news into conglomerates (as opposed to simple stand alone firms in the same industry), while Cohen, Diether, and Malloy (2011) find that investors do not understand and price the predictable innovation ability of firms. These behaviors on the part of investors usually result in significant asset return predictability in financial markets. We document exactly this type of return predictability by showing that the stock market is slow to recognize the value of firms' strategic use of information networks, and the resultant import and export decisions of firms.

II. Data

We obtain data from several sources. Our international trade data comes from Journal of Commerce's Port Import Export Reporting Service (Piers), a subsidiary of UBM Global Trade. Piers collects "bill of lading" level import and export data from three major sources: U.S. Customs and Border Protection Automated Manifest System, Piers' own reporters located in 88 major ports in the U.S., and foreign partners whose national Customs authorities provide comparable data. A bill of lading is a legal document between the shipper and the carrier that outlines the type, quantity and destination of the good being carried. Our data includes standard information provided on bill of lading and value added fields such as content (HS Code level) and the value of the cargo, both of which are estimated by Piers. We match Piers data to public firm names using shipper (for exports) and receiver (for imports) firm names using name matching algorithms. Panels A and B of Table I reports the firm characteristics of public firms that import and export, and Panel C of Table I provides industry breakdowns of exporters and importers. Appendix Table A1 provides the analogous firm characteristics for non-importers and non-exporters. Table II reports the top 4 destination and target ports for imports and exports.

We obtain local ethnicity data as follows. We use metropolitan statistical area (MSA)-level population data drawn from the American Communities

Project (ACP), provided by Spatial Structures in the Social Sciences at Brown University.¹ The Census Bureau uses a standard set of definitions of the area included in each MSA. In most cases an MSA includes both a central city (or sometimes two or more central cities) and the ring of surrounding suburbs. ACP data contain data for 331 MSAs. To match MSA to zipcodes of firm headquarters, we use Census U.S. Gazetteer files for 1990 and 2000.²

Unlike Census data, ACP data help identify the national origins of Hispanic and Asian ethnicities. ACP data allows us to disaggregate Hispanic ethnicity to 19 nations and Asian ethnicities to 7 nations. In cases where we cannot map a given nation that exists in export/imports files, we use the mapping in ethnicity to identify a nation that is more likely to proxy for population of that nation's presence in the U.S. For example, we use Filipino population figures to proxy for Philippines, Thailand, Malaysia, Cambodia and Malaysia. Appendix Table A2 presents our country-to-MSA population mappings.

In various robustness tests, we also use coarser definitions of ethnicity drawn directly from the 1990 and 2000 U.S. Census, and which are available at the state level. The ethnicity information in the Census is based on self-identification questions in which residents choose their origin(s) or descent(s). Appendix Table A3 presents these country-to-Census ethnicity mappings.

We determine the nationality of corporate board members using biographical information provided by BoardEx of Management Diagnostics Limited, a private research company specialized in social network data on company officials of US and European public and private companies.

Finally, we also obtain Harmonized System Code (HS Code) level tariff information from TRAINS dataset provided by United Nations Conference on Trade and Development (UNCTAD). A typical entry in this dataset would be as follows: In year 2003, U.S. applied 4% tariff rate for Brazil nuts (HS Code 080120) to Brazil. Tariff information contains not only most favorite nation

¹ <http://www.s4.brown.edu/cen2000/data.html>.

² <http://www.census.gov/geo/www/gazetteer/gazette.html>.

(MFN) tariff rates, but also, rates agreed upon in various preferential regimes including *regional trade agreements* (RTA), *preferential trade agreements* (PTA) and bilateral agreements. If tariff data is missing for a particular importing country in a particular year for a given HS code, we use the most recent values as major tariff changes take place very infrequently.

III. The Impact of Connections on Firm-Level Trade

A. Import and Export Decisions of Firms

We first test the hypothesis that firms export more to (and import more from) countries with which they have stronger information links. We measure firm-country information networks as the share of residents surrounding a firm’s headquarters that have the same ethnicity as the country to which the firm is exporting/importing (a variable we call “Connected Population”), where we use the fine measure of Metropolitan Statistical Areas (MSAs) to define surrounding area (with an analogous state-level measure included in Appendix Table A4). As joint location can be influenced by many factors, Section A can be seen as documenting the base relationship between surrounding ethnicities and firm trade decisions, while we establish a cleaner causal relationship in Section C.

The dependent variable in our tests is a firm’s import/export behavior in a given year. Specifically, for each firm in each year we compute its “Export Ratio” as the total amount that a given firm exports to a destination country in a given year scaled by the total amount of exports by the firm in that year ($E_{ict} / \text{Sum}(E_{it})$).³ We define “Import Ratio” analogously for imports. All export and import figures are converted to U.S. dollars, and represent the dollar value of exports and imports by a given firm.

³ If we instead scale by exports of all U.S. public firms to the given country in the same year, we also find strong and significant results. The magnitudes are actually quite close, on average roughly 4-7% larger than in Table III, while each analogous specification is highly statistically significant ($p < 0.01$).

In Table III we present results from a panel regression of firm-level export and import behavior on firm-country information networks, plus a host of fixed effects. The unit of observation in these regressions is firm-country-year, and all standard errors are clustered at the year level to broadly allow for any correlations that impact all firms over a given year (i.e., tariff changes, conflicts, shipping blockages, etc.).⁴ Panel A presents the results with Export Ratio as the dependent variable; each specification shows that Connected Population (CP_{ct}) is a positive and significant predictor of a firm’s country-level export share. We add fixed effects across specifications in Columns 1-3 for firm, year, MSA, country, firm x year, and MSA x country, with the coefficient on Connected Population remaining large and significant. In terms of magnitude, the coefficient of 0.039 ($t=4.71$) on CP_{ct} in Column 2 implies that for a one-standard deviation increase in CP_{ct} , a firm’s Export Ratio increases by 1.30%; relative to median Export Ratio 2.06%, this implies a 63% increase, which is large in magnitude.

Panel B presents the identical set of tests using Import Ratio as the dependent variable. As in the export tests, we find that ethnic information links are strong positive predictors of firm-level import behavior. The magnitude of this effect is again large: the coefficient of 0.032 ($t=2.70$) on CP_{ct} in Column 2 implies that for a one-standard deviation increase in CP_{ct} , a firm’s Import Ratio increases by 1.05%, which this translates into a 34% increase (when compared to the median Import Ratio of 3.14%).

A.1 Connected Board Members and Trade Decisions

We next explore in more depth the exact manner in which the information is transferred across the network. While we cannot obtain the ethnic make-up of the entire employee base or management of all firms, we do collect the ethnic makeup of the firm’s entire board of directors for all firms in our sample. From

⁴ We have run these analyses also clustering standard errors at the firm level, MSA level, and state level, which give comparable standard errors, and all results remain significant.

this data, we can identify one channel, through the board of directors, that this information network may be utilized. These directors are involved with important firm-level decisions, such as the establishment and continuation of export and import relationships with foreign firms (Gevurtz (2004)). We first show that local ethnic population is a strong predictor of a board’s ethnic make-up (i.e., if there is a larger Chinese population in a given MSA, the exporting/importing firm’s board is significantly more likely to have Chinese board members). Specifically, the correlation between the percentage population from a certain country and having that country represented on the board of a firm in that MSA is highly significant ($\rho=0.20$, $p<0.01$).

The variable we use to capture the impact of this ethnic link seen through the board of directors is Connected Board Member, which is a categorical variable equal to 1 if the firm has board member whose nationality is the same as that to which the firm is importing (exporting), and 0 otherwise. From Panel A and Panel B of Table III, this connected board measure is a large and significant determinant of firms’ trading decisions. For instance, in Column 4 of Panel A, the coefficient estimate of 0.014 ($t=2.87$) implies that a firm exports 68% more to countries from which it has a connected board member.

B. Tariff Analysis

In our next set of tests, we exploit shocks to the value of firm-country links. In particular, we use product-level data on imports for the firms in our sample, and identify situations where country-specific tariffs set by the US on types of goods are higher or lower. Thus our tests are similar to those in Table III, except that they are now run at the product level, and hence the unit of observation in the regressions is the firm-product-country-year. In addition, we include new variables designed to measure the impact of tariffs, for example a variable called “Tariff” which is equal to the US import tariff on the given product imported from the given country in the given year. These tariffs are gathered from TRAINS dataset maintained by United Nations Conference on

Trade and Development (UNCTAD). We also include the interaction term between tariff cuts and firm-country information links (Connected Population*Tariff). Since US tariffs only bind for imports, we only run these tests using the Import Ratio as the dependent variable.

Table IV presents the results of these tests. Specifically, we run panel regressions of import ratios on firm-country information links, plus the tariff variables described above, along with various fixed effects including firm-, year-, and product-fixed effects. From Column 3, the coefficient on the interaction term (Connected Population*Tariff), which is negative and significant ($=-0.0022$, $t=4.49$), suggests that Connected Population has only roughly 20% the impact when tariffs are one standard deviation larger to the country. In other words, precisely when it is more costly to utilize the advantages of the Connected Population, Connected Population has a significantly smaller effect on import decisions of firms.

Taken as a whole, the results in this section are consistent with firms exporting (importing) significantly more to (from) countries with which they have stronger information links. Both effects are economically large, and indicate that firms exploit their information networks when making their trade decisions. Further, at times when particular products are most attractive (such as after a tariff cut), the impact of these information linkages on product-level import behavior is most pronounced.

C. Japanese Internment Camps of World War II

Although we have shown a strong correlation between surrounding ethnic population and trade activity, nothing up to this point has addressed the direct causal impact of ethnic population on import/export activity. This relationship could be driven by a number of factors and not necessarily be a direct causal channel through ethnic population to trade. For instance, it could be that groups of firms are simply bringing in the foreign population when they plan to import/export to the resultant country. It may also be that some outside factor

is causing both people of a certain ethnicity, and firms planning to trade with their home country, to locate in the same location, but the ethnic population themselves have no direct impact on trade. One example of this is geographic distance. For instance, it is both easiest for Vietnamese immigrants to reach California (as opposed to New York), along with it being cheaper for California firms to ship goods to and from Vietnam (relative to a New York firm). Although we control for this particular channel in Table III, other types of these common attributes could drive both ethnic population and trade, but have no causal path.

In order to establish causality, we need to either exogenously “drop” firms in random locations, or exogenously drop ethnic populations in random locations, and then run our test to see if these exogenously matched firm-surrounding ethnicities product the same impact. We run exactly this latter experiment by examining the Japanese Internment Camps of World War II.

The Japanese Internment Camps were part of a program by the United States government to relocate and intern Japanese and Japanese-Americans following the attack on Pearl Harbor in Hawaii. The relocation stemmed from a worry⁵ that if there were an invasion by Japan, these citizens might work against US interests. The camps were constructed in 1942, and held nearly 115,000 Japanese and Japanese-Americans. The internment camps were distributed unevenly throughout the US, as shown in the Figure I, with peak populations shown in the accompanying table. An additional important aspect of the relocations is that they represented substantial increases in terms of Japanese-origin population for states of the relocation camps. To illustrate this, we collected data from the 1940 for the states that had internment camps, and show this also in Figure 1. From this, for instance, Arkansas had only 3 people of Japanese descent in the 1940 census. Accordingly, the number of Japanese that were interned in these camps represented a substantive shock to the total Japanese population in these states.

⁵ The order to create the camps and authorize the relocations themselves was Executive Order 9066, signed into law on February 19, 1942.

The camps were fully evacuated by 1946 (Burton et. al (2000)). However, prior to internment, many of these internees had to quickly sell their homes and other assets before leaving, as they were not sure what would happen to them, nor how long they were to be interned, causing the assets to sell at depressed prices (Okamoto (2000)). Added to this were the acts of violence and discrimination faced by those that did try to return to their former West Coast home cities, resulting in many internees resettling in the regions surrounding their internment camps (Ina et al. (1999)).

Our identification comes from these internees who decide to remain, settle, and form communities in the regions around the internment camps. However, we need to formally establish the fact that they do materially impact the population of Japanese origin in the decades following, and particularly during our sample period. This first-stage regression is shown in Panel A of Table V. It is simply testing whether the states that housed internment camps see a larger percentage of Japanese origin population today. The dependent variable is thus *Connected Population* from Table III, the percentage of the population of Japanese origin. The independent variable *Japanese Internment Camp* is then a categorical variable indicating whether there was an Internment Camp in that state or not. In this analysis we are restricting the sample solely to connections to Japan, and so are only finely estimating the varying connections to Japan across the geographic MSAs given the Japanese Internment relocation camp locations.

From Panel A of Table V, we see that MSAs in states that had a Japanese Internment camp during World War II have a significantly higher fraction of Japanese origin connected population today. All four columns (run for the MSAs that export to Japan in the Columns 1 and 2, and MSAs that import from Japan in Columns 3 and 4) deliver this same message. Column 2 (4) addresses that some of the MSAs that had Japanese Internment Camps were located along the western coast, and so may have more Japanese origin citizens because of this geographic proximity to Japan. So, we include fixed effects for all states on the western coast and Hawaii. Even including these fixed effects, the impact is large and significant. From Column 2, the coefficient of 0.0017

($t=22.53$), implies a 45% larger current Japanese population in areas surrounding Japanese Internment Camps of World War II relative to areas without. For the same specification for Japanese importing MSAs from Column 4, the coefficient of 0.0019 ($t=27.01$) suggests a 50% larger current Japanese population in areas surrounding Internment Camps relative to areas without.

This provides strong evidence for the first stage of the instrumental variable test. For the second stage, we then regress trade activity today on this instrumented value of connected population to see its impact. In other words, we examine the impact on trade activity of *solely* the part of the Japanese connected population today that was determined by having (vs. not having) a Japanese Internment Camp in the surrounding area in World War II. These second stage regressions are shown in Panel B of Table V. All four columns show that this instrumented connected population has a large and significant impact on trade activity today. For instance, the coefficient in Column 2 of 60.612 ($t=4.89$) implies that a one standard deviation increase in connected population increases the Export Ratio by 65% (from 22.5% to 37.2% of exports to Japan). For imports, the estimated coefficient in Column 4 of 45.099 ($t=2.28$) implies that a one standard deviation increase in connected population increases the Import Ratio by 62% (from 21.9% to 35.5% of imports from Japan). These are similar in magnitude to the estimates from Table III.

C.1 Firms founded before World War II

As a last remaining concern, one might think that firms location choices may still be impacted by the population ethnicities it observes. So, although the Japanese origin citizens are exogenously assigned, firms who plan to trade with Japan may be responding by deciding to establish themselves around Japanese population centers. In a sense, this is in line with our explanation, as firms' trade decisions are still impacted by the population ethnicity, and so given that part of that ethnic profile was exogenously determined, it would simply

mean that even firm establishment locations are impacted by the same population ethnicities.

However, to even more cleanly measure the impact of the exogenous population ethnicity on firm decisions, we examine only firms that were founded before the Japanese Internment Camps populations existed.⁶ We thus restrict solely to firms founded before 1946, the year in which the Japanese Internment Camps dissolved and had released all internees. Although this obviously reduces the sample size, the same results from Table V obtain. Namely, the first stage regressions still have large and significant coefficients on the impact of Japanese Internment Camps on Japanese population today. For instance, the analogous coefficient from Column 2 of Table V Panel A is 0.0016 ($t=14.25$) is nearly identical to the 0.0017 from full sample. The second stage is where the sample size drop is more severe (as these are at the firm level). Even taking this into account, all of the magnitudes are similar with 3 of 4 of the coefficients even statistically significant. For instance, the analogous coefficient to Table V Panel B, Column 4, now solely run on those firms founded before 1946, is 31.553 ($t=1.78$), implying a 35% increase in exports to Japan for these firms following a one standard deviation increase in instrumented Japanese ethnic population (using Internment Camps established after the firms founding dates in those locations).

All of the evidence in this section helps provide a causal link to the results from Tables III and IV regarding the impact of surrounding ethnic population on firms' international trade decisions, and the influence they exert on these decisions.

IV. Strategic Traders and the Returns to Information Networks

In this section we build on the results above, and ask to what extent do firms benefit from using their firm-country networks in their import and export

⁶ We obtain firm founding date data from the Field-Ritter Founding Date Dataset available at: <http://bear.warrington.ufl.edu/ritter/FoundingDates.htm>, as used in Field and Karpoff (2002) and Loughran and Ritter (2004).

decisions. For example, one could imagine firms overweighting certain countries in their import and export decisions due to a form of familiarity bias; alternatively one might expect firms to tilt their trading focus as a result of superior private information about certain countries.

We try to disentangle these two possibilities by examining the future outcomes of firms that exploit their firm-country linkages in their trading decisions. We term those firms that exhibit strong links between their ethnic environment and their major trading partners as “Strategic Traders.” The essence of our approach is to isolate firms that export primarily to countries where there is a match between the destination country’s ethnicity and the firm’s headquarter location’s ethnic composition. Since each firm can have an export/import relationship with several different countries over the same time period, a goal of our approach is to identify firms that choose their export countries in line with their various potential information linkages. Because some firms will trade with only 1 country across a given time period, and others will trade with many, the number of possible “informed” or “linked” shipments each month will vary by firm. As a result, we first create buy/sell signals (to denote “linked” versus “non-linked” shipments) based on a firm’s export amount in a given month, its destination country, and the match between the destination country’s ethnicity and the firm’s headquarter MSA’s (metropolitan statistical area) ethnic composition. We employ MSA-level ethnicity shares, and match these to destination countries as shown in Appendix Table A2. In every year for each MSA, we compute the share of each ethnicity that resides in each MSA. We then rank the share of each ethnicity across all MSAs in the US. The buy signal equals one if (i) a firm’s share of total industry exports to a given country in a given month is ranked in the top 3,⁷ and (ii) the firm is located in an MSA

⁷ Our results are similar if we measure export intensity within-firm (e.g., using the “Top 3” export amounts within a given firm in a given month), or if we use industry export decile breakpoints (top decile) rather than a “Top 3” ranking. Finally, our results are also virtually identical if we use firm-level export shares to a given industry rather than absolute amounts. For example, Firm A could export \$100 worth of materials to Italy and \$100 to Germany, while Firm B could export \$10 worth to Italy and \$5 to Germany; in absolute terms Firm A exports more, but

where the MSA’s ethnicity share across all MSAs in the US is ranked in the top 3. The sell signal equals one if (i) a firm’s share of total industry exports to a given country is ranked in the top 3, but (ii) the firm is **not** located in an MSA where the MSA’s ethnicity share across all MSAs in the US is ranked in the top 3. For the real outcomes tests below, we define a firm as a “Strategic Exporter” if the firm has at least one buy signal for any of its exports in a given year; meanwhile a firm is defined as a “Non-Strategic Exporter” if it has zero buy signals in a given year, and has at least one sell signal.

A simple example helps to clarify our approach. Consider two firms: A and B. Firm A is located in an MSA (e.g., Jersey City, New Jersey) where the share of Indian residents is in the top 3 across all MSAs. Firm A exports a significant amount (relative to its industry) in a given month to India. By contrast, Firm B is located in a different MSA (e.g., Bangor, Maine) where the share of Indians is not in the top 3 across all MSAs (Bangor is ranked 156th in population share of Indians across all MSAs), and yet Firm B also exports a significant amount (again relative to its industry) in a given month to India. Thus although Firm A and Firm B are engaging in identical behavior (exporting a significant amount to India in a given month), Firm A will be classified as a “Strategic Exporter,” and Firm B will be classified as a “Non-Strategic Exporter.”

Using this classification procedure, we then examine the future real outcomes and future stock returns of these strategic traders.

A. Future Real Outcomes of Strategic Traders

We first investigate whether strategic traders on average achieve superior real outcomes in the future, relative to their non-strategic counterparts. To do so, we run panel regressions of future sales and future profitability on lagged strategic trading activity. The dependent variables are: 1) future sales (in year $t+1$) divided by lagged assets (in year t); and 2) ROA (defined as future

its within-firm share (50%) would be smaller than Firm B’s (66%) within-firm share; our results are similar for both of these ranking measures.

EBITDA in year $t+1$ divided by lagged assets in year t). We also include a series of control variables, including size (log of market capitalization), B/M (log of the book-to-market ratio), leverage (long-term debt in year t divided by lagged assets in year t), and cash (future cash in year $t+1$ divided by lagged assets in year t). We also include fixed effects for time (year) and firm in all of these regressions.

Table VI presents the results of these real outcome tests. Specifically, Column 1 shows that strategic exporters achieve higher sales in the future. The coefficient of 0.026 ($t=2.89$) implies that relative to a mean sales-to-lagged assets figure of 0.57, strategic exporters achieve 1.5% higher future sales. Meanwhile the coefficient indicator variable for non-strategic exporters is close to zero, and insignificant. In terms of future profitability (EBITDA/Assets), Column 3 indicates that strategic importers achieve significantly higher profitability (coefficient=0.009, $t=2.05$); relative to average profitability of 0.022, strategic exporters experience a 43% increase in profitability. At the same time, non-strategic exporters show a statistically significant decline in profitability (coefficient=-0.006, $t=2.95$) in the year after their non-strategic export decisions, on the order of 27%. Columns 5-8 repeat the same tests for imports, and reveal that strategic importers earn significantly higher sales (coefficient=0.019, $t=3.24$), but do not achieve significantly higher profitability. Non-strategic importers show no increases in sales or profitability in the future. Collectively, the results in Table VI suggest that strategic traders do receive real, tangible benefits from their firm-country networks in their import and export decisions, as strategic traders achieve higher sales (for both imports and exports) and higher profitability (for exports) relative to non-strategic traders.

B. Future Stock Returns of Strategic Traders

Next we examine the future stock returns of strategic traders versus non-strategic traders. The goal of these tests is to determine if the market properly prices the real outcome benefits that strategic traders receive from their import and export decisions. We begin with exports, and construct buy/sell signals for all export decisions as in the real outcome tests from Table VI; however, since

returns are available monthly (unlike accounting variables), we now define a firm as strategic exporter if the firm has at least one buy signal for any of its exports in a given month. A firm is defined as a non-strategic exporter if it has zero buy signals in a given month, and has at least one sell signal. Each month we construct calendar-time portfolios that buy stocks of strategic exporters and sell non-strategic exporters. Portfolios are rebalanced monthly, and stocks are held for one month.

Table VII shows the results. The first row of each panel presents excess returns (raw returns minus the risk-free rate), the second row shows DGTW-adjusted returns, the third row shows CAPM alphas, the fourth row shows Fama-French 3-factor alphas, and the fifth row shows Carhart 4-factor alphas. In Panel B, we replicate the calendar time portfolio approach from Panel A for our imports sample.

Panel A of Table V indicates that a portfolio strategy that buys strategic exporters and shorts non-strategic exporters as described above earns large abnormal returns. The value-weight excess returns on this long-short portfolio equals 50 basis points per month ($t=2.15$); the corresponding value-weight four-factor alpha is 57 basis points per month ($t=2.78$). The long-short DGTW-adjusted returns are 39 basis points per month ($t=2.23$).⁸ These estimates translate to annual abnormal returns of roughly 5-7% per year. Most of the return spread comes from the long side of the portfolio; for example, the long portfolio return earns a 4-factor alpha of 53 basis points ($t=2.82$), while the short portfolio alpha is small and insignificant.⁹ Panel B reveals similar, but

⁸ As we weaken the strength of the ethnic connection, for example by using a Top 5/Top5 cutoff or a Top 10/Top 10 cutoff (rather than a Top 3/Top 3 cutoff as described in Section IV.A) in order to define our strategic importers, the results are weaker, as we would expect. For example, the DGTW-adjusted returns on the long-short portfolio are 37 basis points per month ($t=1.88$) using a Top 5/Top 5 cutoff, and 29 basis points per month ($t=1.64$) using a Top 10/Top 10 cutoff.

⁹ As described in Section IV.A, the short portfolio here includes the set of non-strategic exporters, i.e., firms that are located in regions without a strong ethnic link to a particular country, and yet choose to export to that country anyway. We have also run tests where the short portfolio includes the subset of non-strategic exporters who have a strong ethnic tie to at least one particular country, and yet choose to export to a *different* country. These long-short portfolio returns are even larger in magnitude, and the short portfolio returns are more negative, but the

statistically weaker, results for importers. For example, the value-weight excess returns on the imports long-short portfolio equals 45 basis points per month ($t=1.75$); the corresponding value-weight four-factor alpha is 38 basis points per month ($t=1.45$), and the long-short DGTW-adjusted returns are 45 basis points per month ($t=1.92$).

Collectively, the calendar-time portfolio results in Table VII indicate that strategic traders (particularly strategic exporters) earn substantial abnormal returns relative to their non-strategic counterparts. This result suggests that these firms are not overweighting certain countries in their import and export decisions due to a form of familiarity bias, but rather as a result of superior private information about certain countries. Further, the market does not seem to recognize the advantage of these types of strategic export/import decisions by firms, as the mimicking portfolios in Table VII produce economically meaningful abnormal returns.

C. Connected Board Members and Future Returns

From Table III, connected board members had a large and significant relationship with trade decisions by firms. In this section, similar to Section B, we test whether the market realizes the potentially positive impact to firm value of import and export decisions made by firms who have the strategic link to their trading partners of a connected board member. The measure we use for this is Pct of Board Strategically Connected, which is simply the percentage of the board that is from countries to which the firm is actively engaged in importing or exporting. In Table VIII, we run Fama-MacBeth cross-sectional predictive regressions of future returns with this variable, controlling for other known return

long-short portfolios contain fewer stocks, and hence these returns are noisier and statistically insignificant. For example, the long-short CAPM, 3-factor and 4-factor alphas from Panel A are 78 basis points ($t=1.08$), 96 basis points ($t=1.39$) and 58 basis points ($t=0.86$) for this finer specification.

determinants.¹⁰ If these connected board members are helpful in making strategically valuable decisions, and the market does not fully understand this (much like the strategic trading in Section B more generally), then we expect a positive coefficient on Pct of Board Strategically Connected. This is precisely what we see in all four columns of Table VIII. Examining both the full sample of firms, and solely the subsample of firms that have at least 1 connected board member (to test whether the percentage of board members, and not simply the existence of any connected board member relative to zero), we see a large and significant coefficient on Pct of Board Strategically Connected. To give an idea of magnitude, the coefficient in Column 4 of 0.077 ($t=2.13$), implies that a firm with a strategically connected board member to the country it is trading with has future returns of 60 basis points per month higher than a firm trading with same country but no connected board member.

D. Analyst Attention to Information in Imports and Exports

In Sections A-C above we showed that strategic importing and exporting had an impact on real firm outcomes, but that this impact was not fully understood by investors in setting market price. In this section we test whether other, potentially more sophisticated financial agents, namely sell-side securities analysts, are better able to assess the large value of this strategic information link advantage. A large part of an analyst's job is to research, produce, and disclose reports forecasting aspects of companies' future prospects, and to translate their forecasts into earnings forecasts. Thus, we test whether analysts understand the value-enhancing nature of these strategic importing and exporting decisions by analyzing analysts' ability to correctly impound this information into their earnings forecasts of firms who exploit these strategic networks versus firms that do not.

¹⁰ Given the smaller number of firms that have board members from foreign countries in general, the portfolio approach of Table VII yielded too thin of portfolios, and so we utilize the Fama-MacBeth regression framework to test the thesis in Table VIII.

We report two sets of tests of this idea in Table IX. The first test simply examines whether analysts are more inaccurate in their forecasts of strategic trading firms versus non-strategic trading firms. We do this using the variable Earnings Forecast Error, which is defined as is the absolute value of the actual reported earnings (EPS) value minus the consensus mean of the most recent analyst forecasts (in the month leading up to the announcement), scaled by the absolute value of actual EPS reported (winsorized at the 0.01 level). We regress Earnings Forecast Error for each firm on whether or not the firm is a strategic importer (exporter), along with a number of other controls (from Table VIII), and fixed effects for month and industry. Standard errors are clustered at the monthly level. Columns 3 and 4 (and 7 and 8) tell a consistent story: analysts do not seem to be correctly taking into account the information in strategic importing or exporting, and so are significantly more inaccurate on these firms. To give an idea of the magnitude, the coefficient in Column 4 of 2.874 ($t=2.53$) suggests that analysts are 15% less accurate on strategic exporting firms than on other firms. In contrast, we see no such inaccuracy on non-strategic importers or exporters, as analysts appear to be able to roughly correctly forecast their earnings, on average.

Given that firms' strategic trading yields real value in terms of future sales growth and profitability, and that both price setters and analysts seem to not fully understand or impound this information into prices, earnings announcements might be the exact times that the information embedded in these real quantities is impounded into prices (as it is revealed to the markets in these quarterly statements). We test this directly by examining whether the earnings surprise cumulative abnormal returns (CARs) of strategic traders are different than those of non-strategic traders. Earnings Surprise CAR is defined as the cumulative abnormal return (t-1,t+1) around the earnings date (t). The main independent variable of interest (strategic importer (exporter)) remains the same, as do all controls and specifications, with the addition of one new control variable, (Act EPS - Est), controlling for the magnitude and direction of the actual earnings surprise itself. These regressions are in Columns 1 and 2 (and 5

and 6) of Table IX. All four columns show that strategic importers (exporters) have significantly larger Earnings Surprise CARs, consistent with these being times that the advantages of strategic trading are revealed to the market and impounded into prices. Again, we see no such increased Earnings Surprise CARs for the non-strategic firms.

Taken together, the evidence in Section IV indicates that it is precisely the firms that exploit their ethnic information links that achieve higher sales growth and profitability. Firms that exhibit the exact same behavior as these firms, but that do not have these ethnic links (i.e., non-strategic importers and exporters), experience neither of these favorable outcomes. Further, the market does not fully understand or incorporate this advantage into strategic firms' prices, generating predictably large, future abnormal returns (which also exist for firms exploiting connected boards). Lastly, analysts also do not appear to take into account the advantages of strategic importing and exporting, and so are significantly less accurate in their earnings forecasts on these strategic trading firms.

V. Conclusion

In this paper, we exploit variation in ethnic population breakdowns across the U.S. to examine how local residents' ties to their home-countries can influence firms' international trade decisions. We exploit novel customs and port authority data detailing the international shipments of all U.S. publicly-traded firms, and show that firms import and export significantly more with countries that have a strong resident population near their firm headquarters location. We use the formation of World War II Japanese Internment Camps to isolate exogenous shocks to local ethnic populations, and identify a causal link between local networks and firm trade.

We find that firms that exploit these local networks in their international trade decisions (strategic traders) experience significant increases in future sales growth and profitability. We show that although we can predict which trade

links, on average, are valuable for firms using simple measures of connected population that are publicly available, the market seems to ignore this information. In particular, strategic importers and exporters outperform other importers and exporters by 5%-7% per year in risk-adjusted returns. The increased value of strategic traders is also missed by analysts, who are significantly less accurate in their earnings forecasts on these firms, with these firms having significantly more positive earnings surprises.

We then provide additional evidence on the mechanism by showing that at times when the information network represents a more valuable link, specifically at times of tariff cuts to the connected country, our effects are even larger. We show that one particular channel of the information network is through board members: a connected local population predicts more board members from that same country, and a significantly higher value for those firms that exploit connected board members in their trade decisions.

While we focus on immigration and how demographic factors affect the import and export behavior of firms, we believe that our approach can be readily adapted to study other local advantage factors. Our research also provides new evidence on the economic impact of immigration and ethnic diversity in the United States. Immigrants' conduit roles in economic transactions almost surely stretch far beyond those we document in this paper.

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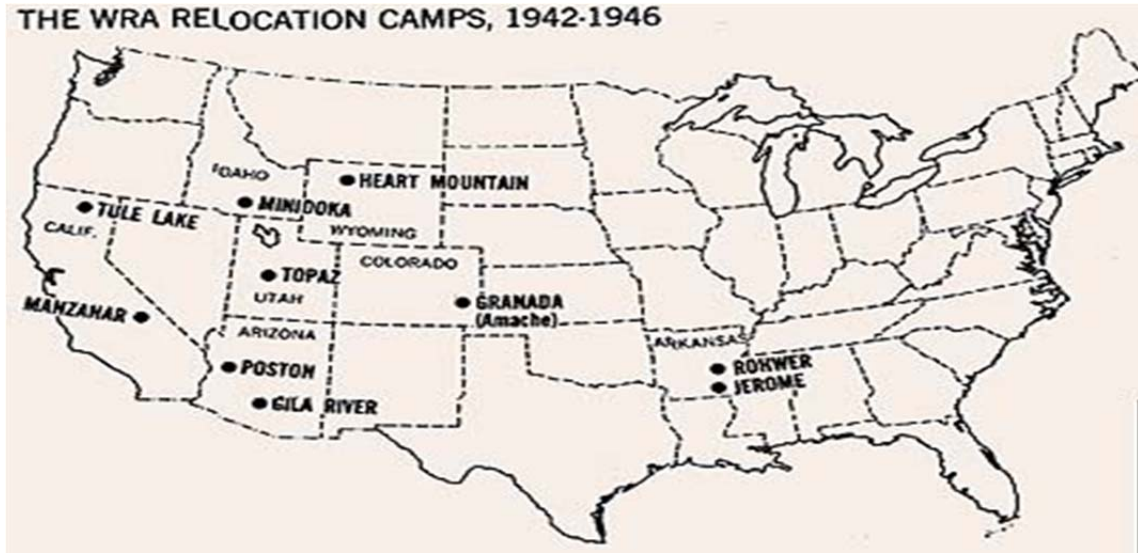
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Figure 1: Japanese Internment Camps of World War II

This figure presents summary statistics on aspects related to the Japanese Internment Camps of World War II. Panel A shows a map of the US, indicating where the ten internment camps were located, delineating them with a dot (Daniel (1993)). Panel B is a table giving the location of the 10 internment camps, along with peak populations in each camp (CLPEF (1998)). Panel C shows the Japanese population in 1940 in each of the seven states that would later house internment camps, from the United States Census of 1940.

Panel A: Map of 10 Internment Camps



Panel B: Populations of 10 Internment Camps

| Center | State | Date of first arrival | Peak Population | Date of peak | Date of last |
|----------------|-------|-----------------------|-----------------|--------------|--------------|
| Gila River | AZ | 7/20/42 | 13,348 | 12/30/42 | 11/10/45 |
| Granada | CO | 8/27/42 | 7,318 | 2/1/43 | 10/15/45 |
| Heart Mountain | WY | 8/12/42 | 10,767 | 1/1/43 | 11/10/45 |
| Jerome | AR | 10/6/42 | 8,497 | 2/11/43 | 6/30/44 |
| Manzanar | CA | 3/21/42 | 10,046 | 9/22/42 | 11/21/45 |
| Minidoka | ID | 8/10/42 | 9,397 | 3/1/43 | 10/28/45 |
| Poston | AZ | 5/8/42 | 17,814 | 9/2/42 | 11/28/45 |
| Rohwer | AR | 9/18/42 | 8,475 | 3/11/43 | 11/30/45 |
| Topaz | UT | 9/11/42 | 8,130 | 3/17/43 | 10/31/45 |
| Tule Lake | CA | 5/27/42 | 18,789 | 12/25/44 | 3/20/46 |

Panel C: Pre-Internment Camps Population (from 1940 census)

| State | ST | Total Population | Japanese Population |
|------------|----|------------------|---------------------|
| Arizona | AZ | 499,261 | 632 |
| Arkansas | AR | 1,949,387 | 3 |
| California | CA | 6,907,367 | 93,717 |
| Colorado | CO | 123,296 | 2,734 |
| Idaho | ID | 524,873 | 1,191 |
| Utah | UT | 550,310 | 2,210 |
| Wyoming | WY | 250,742 | 643 |

Table I: Summary Statistics for Importers and Exporters

This table presents summary statistics on the firms included in the tests. MVE is the market value of equity calculated as the price end of calendar year prior to fiscal year end multiplied by number of shares outstanding. B/M is the book to market ratio where the book value of equity is calculated as sum of stock holders equity (SEQ), Deferred Tax (TXDB), Investment Tax Credit (ITCB) minus Preferred Stock (PREF). Leverage is long-term debt (DLTT) plus debt in current liabilities (DLC), divided by the numerator plus market equity. Momentum is the twelve month return prior to fiscal year end. ROA (return on asset) earnings before tax and depreciation (EBITDA) scaled by total assets (TA). PPE/TA is the ratio of plant, property, and equity (PPENT) scaled by total assets. Unit of observation is firm-year. Panel A (B) reports the summary statistics for public firms, which exported (imported) at least once in a given year. The sample period covers 1994 to 2010. Panel C reports the industry breakdown of importers and exporters by 2-digit NAICS code.

| Panel A: Firm level data for exporters | | | | | | |
|--|--------|--------|----------|----------|--------|--------|
| | MVE | B/M | Leverage | Momentum | ROA | PPE/TA |
| mean | 4,929 | 0.723 | 0.223 | 0.175 | 0.119 | 0.284 |
| sd | 20,899 | 1.591 | 0.174 | 0.714 | 0.146 | 0.201 |
| p5 | 9 | 0.125 | 0.000 | -0.558 | -0.066 | 0.029 |
| p10 | 19 | 0.185 | 0.000 | -0.419 | 0.015 | 0.059 |
| p25 | 74 | 0.314 | 0.071 | -0.177 | 0.078 | 0.132 |
| p50 | 404 | 0.527 | 0.209 | 0.081 | 0.129 | 0.241 |
| p75 | 2,044 | 0.858 | 0.339 | 0.365 | 0.182 | 0.392 |
| p90 | 8,598 | 1.345 | 0.455 | 0.754 | 0.239 | 0.579 |
| p95 | 20,142 | 1.822 | 0.534 | 1.158 | 0.279 | 0.692 |
| N | 20,073 | 20,073 | 20,122 | 19,713 | 20,021 | 20,046 |

| Panel B: Firm level data for Importers | | | | | | |
|--|--------|--------|----------|----------|--------|--------|
| | MVE | B/M | Leverage | Momentum | ROA | PPE/TA |
| mean | 4,889 | 0.711 | 0.211 | 0.182 | 0.107 | 0.265 |
| sd | 20,595 | 0.934 | 0.175 | 0.783 | 0.160 | 0.201 |
| p5 | 11 | 0.127 | 0.000 | -0.583 | -0.104 | 0.020 |
| p10 | 23 | 0.185 | 0.000 | -0.434 | -0.003 | 0.043 |
| p25 | 87 | 0.313 | 0.051 | -0.187 | 0.068 | 0.109 |
| p50 | 455 | 0.523 | 0.195 | 0.078 | 0.122 | 0.220 |
| p75 | 2,110 | 0.847 | 0.328 | 0.371 | 0.175 | 0.372 |
| p90 | 8,626 | 1.320 | 0.448 | 0.789 | 0.232 | 0.564 |
| p95 | 19,450 | 1.800 | 0.528 | 1.208 | 0.273 | 0.676 |
| N | 23,743 | 23,743 | 23,787 | 23,298 | 23,687 | 23,722 |

Table I: Summary Statistics (continued)

Panel C: Industry Breakdown of Exporters and Importers

| NAICS 2 | Importers | Exporters | Definition |
|---------|-----------|-----------|---|
| 11 | 17 | 16 | Agriculture, Forestry, Fishing and Hunting |
| 21 | 114 | 112 | Mining, Quarrying, and Oil and Gas Extraction |
| 22 | 78 | 52 | Utilities |
| 23 | 43 | 39 | Construction |
| 31-33 | 2,358 | 1,994 | Manufacturing |
| 42 | 194 | 184 | Wholesale Trade |
| 44-45 | 340 | 274 | Retail Trade |
| 48-49 | 93 | 80 | Transportation and Warehousing |
| 51 | 290 | 163 | Information |
| 52 | 245 | 169 | Finance and Insurance |
| 53-54 | 221 | 159 | Professional, Scientific, and Technical Services |
| 56 | 77 | 58 | Admin/Support/Waste Management and Remediation Services |
| 61 | 8 | 4 | Educational Services |
| 62 | 36 | 32 | Health Care and Social Assistance |
| 71 | 19 | 13 | Arts, Entertainment, and Recreation |
| 72 | 59 | 43 | Accommodation and Food Services |
| 81 | 49 | 39 | Other Services (except Public Administration) |
| Total | 4,241 | 3,431 | |

Table II: Major U.S. and Foreign Ports

This table reports the top 5 ports used by the sample firms for imports and exports in U.S. and foreign countries. The figures reported are annual dollar value of imports and exports (in billions) throughout the sample period (1994-2010).

Panel A: Top 5 Importing U.S. Ports

| | |
|-------------|-----|
| LOS ANGELES | 185 |
| LONG BEACH | 159 |
| NEW YORK | 95 |
| SEATTLE | 62 |
| NORFOLK | 61 |

Panel B: Top 5 Exporting U.S. Ports

| | |
|-------------|-----|
| HOUSTON | 110 |
| LOS ANGELES | 85 |
| NEW YORK | 75 |
| NORFOLK | 66 |
| CHARLESTON | 61 |

Panel C: Top 5 Origination Ports for U.S. Imports

| | |
|--------------|-----|
| HONG KONG | 125 |
| RICHARDS BAY | 105 |
| YANTIAN | 76 |
| KAOHSIUNG | 63 |
| SHANGHAI | 61 |

Panel D: Top 5 Destination Ports for U.S. Exports

| | |
|-----------|----|
| ANTWERP | 66 |
| ROTTERDAM | 57 |
| VANCOUVER | 50 |
| HONG KONG | 43 |
| SINGAPORE | 37 |

Table III: The Impact of Ethnic Connections on Firm-Level Trade

Panel A of this table presents coefficient estimates of OLS (first column) and fixed effects regressions (second and third column) of export ratio (ER) on Connected Population (CP) and control variables: $ER_{ict} = b_1 + b_2 * CP_{ct} + b_3 * \text{Connected Board Member} + \text{fixed effects}$. Export Ratio (ER) is total amount a given firm exports to a destination country in a given year scaled by total amount of exports of the same firm in the same year ($E_{ict} / \text{Sum}(E_{it})$). Connected population is the number of residents in a firm's headquarter MSA connected to the export country scaled by total population in that state (CP_{ct}). Connected Board Member is a binary variable that takes a value of 1 if the firm has a board member with an ethnic background the same as the export destination. Panel B of this table presents coefficient estimates of the following specification: $IR_{ict} = b_1 + b_2 * CP_{ct} + b_3 * \text{Connected Board Member} + \text{fixed effects}$, where import ratio (IR) is total amount a given firm imports from a country in a given year scaled by total amount of imports of the same firm in the same year ($I_{ict} / \text{Sum}(I_{it})$). T-stats, clustered by year, are reported below coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Exports

| | Export Ratio | Export Ratio | Export Ratio | Export Ratio |
|---------------------------------------|--------------------|--------------------|--------------------|--------------------|
| Connected Population | 0.039*** (5.14) | 0.039*** (4.71) | 0.122*** (4.35) | 0.043*** (5.42) |
| Connected Board Member | | | | 0.014*** (3.42) |
| Firm Fixed Effects | Yes | No | No | No |
| Year Fixed Effects | Yes | No | No | No |
| Firm x Year Fixed Effects | No | Yes | No | Yes |
| Country Fixed Effects | Yes | Yes | No | Yes |
| State x Partner Country Fixed Effects | No | No | Yes | No |
| Adj. R2 | 0.46 | 0.59 | 0.10 | 0.59 |
| Number of Observations | 80,529 | 80,529 | 80,529 | 80,529 |

Table III: The Impact of Ethnic Connections on Firm-Level Trade (continued)

Panel B: Imports

| | Import Ratio | Import Ratio | Import Ratio | Import Ratio |
|---------------------------------------|-------------------|--------------------|--------------------|--------------------|
| Connected Population | 0.022** (2.00) | 0.032*** (2.70) | 0.154*** (5.97) | 0.035*** (3.04) |
| Connected Board Member | | | | 0.015*** (4.94) |
| Firm Fixed Effects | Yes | No | No | No |
| Year Fixed Effects | Yes | No | No | No |
| Firm x Year Fixed Effects | No | Yes | No | Yes |
| Country Fixed Effects | Yes | Yes | No | Yes |
| State x Partner Country Fixed Effects | No | No | Yes | No |
| Adj. R2 | 0.39 | 0.49 | 0.10 | 0.49 |
| Number of Observations | 84,296 | 84,296 | 84,296 | 84,296 |

Table IV: Tariff Analysis

This table presents coefficient estimates of fixed effects regressions of product import ratio (PIR) on Connected Population (CP) and control variables: $PIR_{icpt} = b1 + b2 * CP_{ct} + b3 * Tariff + b4 * CP_{ct} * Tariff + Fixed\ Effects$. Product Import Ratio (PIR) is total amount a given firm imports from a foreign country in a given year scaled by total amount of imports of the same firm in the same year ($I_{icpt} / \text{Sum}(I_{it})$). Connected population is the number of residents in a firm's headquarter MSA connected to the import country scaled by total population in that state (CP_{ct}). Tariff is the value of the US tariff on the given product to the given country, taken from the TRAINS dataset maintained by United Nations Conference on Trade and Development (UNCTAD). Fixed effects for firm, year, and product are included where indicated. T-stats, clustered by year, are reported below coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

| | Product Import Ratio | Product Import Ratio | Product Import Ratio | Product Import Ratio |
|-------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Connected Population | 0.0046** (2.43) | 0.0046** (2.46) | 0.0074*** (3.93) | 0.0020 (1.06) |
| Tariff | | -0.00003 (0.18) | 0.0001 (0.73) | 0.0004 (1.61) |
| Connected Population x Tariff | | | -0.0022*** (4.49) | -0.0014*** (3.48) |
| Firm Fixed Effects | Yes | Yes | Yes | Yes |
| Year Fixed Effects | Yes | Yes | Yes | Yes |
| Product Fixed Effects | No | No | No | Yes |
| Adj. R2 | 0.40 | 0.40 | 0.40 | 0.48 |
| Number of Observations | 34,062 | 34,062 | 34,062 | 34,062 |

Table V: Japanese Internment Analysis

This table presents coefficient estimates of instrumental variable estimation for exports (imports) in the first (last) two columns. The sample includes only the exports to (or imports from) Japan. In the first two columns, the dependent variable in the second stage is the export ratio (ER). Export Ratio (ER) is total amount a given firm exports to a destination country in a given year scaled by total amount of exports of the same firm in the same year ($E_{ict} / \text{Sum}(E_{it})$). In the last two columns, the dependent variable in the second stage is the import ratio (IR). Import ratio (IR) is total amount a given firm imports from a country in a given year scaled by total amount of imports of the same firm in the same year ($I_{ict} / \text{Sum}(I_{it})$). Connected population is the number of residents in a firm's headquarter MSA connected to the export (import) country scaled by total population in that state (CP_{ct}). The instrument, Japanese Internment is a binary variable that takes a value of 1 if the headquarter of the firm is located in a state that housed one of the internment camps. T-stats, clustered by year, are reported below coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

| First Stage | | | | |
|-----------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| | Connected Population | Connected Population | Connected Population | Connected Population |
| Japanese Internment | 0.0080*** (35.29) | 0.0017*** (22.53) | 0.010*** (31.07) | 0.0019*** (27.01) |
| Year Fixed Effects | Yes | Yes | Yes | Yes |
| CA, OR, WA, HI Fixed Effects | No | Yes | No | Yes |
| Second Stage | | | | |
| | Export Ratio | Export Ratio | Import Ratio | Import Ratio |
| Instrumented Connected Population | 11.865*** (4.04) | 60.612*** (4.89) | 8.668*** (5.02) | 45.099** (2.28) |
| Year Fixed Effects | Yes | Yes | Yes | Yes |
| CA, OR, WA, HI Fixed Effects | No | Yes | No | Yes |
| Cragg-Donald Wald F statistic | 548.74 | 129.75 | 3407.60 | 203.70 |
| Number of Observations | 3,167 | 3,167 | 4,805 | 4,805 |

Table VI: Real Effects of Strategic Trading Activity

This table reports panel regressions of different measures of future firm-level real outcomes on lagged strategic trading activity. For exports, we first create buy/sell signals based on a firm's export amount in a given month, its destination country, and the match between the destination country's ethnicity and the firm's headquarter MSA's (metropolitan statistical area) ethnic composition. We classify the American Communities Project (ACP) ethnicity classifications, and match these to destination countries as shown in Appendix Table A2. In every year for each MSA, we compute the share of each ethnicity that resides in each MSA. We then rank the share of each ethnicity across all MSAs in the US. The buy signal equals one if (i) a firm's share of total industry exports to a given country in a given month is ranked in the top 3, and (ii) the firm is located in an MSA where the MSA's ethnicity share across all MSAs in the US is ranked in the top 3. The sell signal equals one if (i) a firm's share of total industry exports to a given country is ranked in the top 3, but (ii) the firm is *not* located in an MSA where the MSA's ethnicity share across all MSAs in the US is ranked in the top 3. We define a firm as strategic exporter if the firm has at least one buy signal for any of its exports in a given year. A firm is defined as a non-strategic exporter if it has zero buy signals in a given year, and has at least one sell signal. The dependent variables are: 1) future sales (in year $t+1$) divided by lagged assets (in year t); and 2) ROA (defined as future EBITDA in year $t+1$ divided by lagged assets in year t). Control variables include Size (log of market capitalization), B/M (log of the book-to-market ratio), Leverage (long-term debt in year t divided by lagged assets in year t), and Cash (future Cash in year $t+1$ divided by lagged assets in year t). Fixed effects for time (year) and firm are included in all regressions. t -stats, clustered by year, are reported below coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

| | Sales _{t+1} /Assets _t | | EBITDA _{t+1} /Assets _t | | Sales _{t+1} /Assets _t | | EBITDA _{t+1} /Assets _t | |
|-------------------------------------|---|----------------------|--|---------------------|---|----------------------|--|---------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Strategic Exporter | 0.026*** (2.89) | 0.021** (2.16) | 0.009* (2.05) | 0.010** (2.47) | | | | |
| Non-Strategic Exporter | -0.000 (0.01) | 0.001 (0.15) | -0.006*** (2.95) | -0.006*** (3.14) | | | | |
| Strategic Importer | | | | | 0.019*** (3.24) | 0.021*** (3.86) | 0.005 (0.64) | 0.001 (0.015) |
| Non-Strategic Importer | | | | | 0.002 (0.72) | 0.004 (1.14) | 0.001 (0.36) | 0.001 (0.24) |
| Size | | -0.048*** (13.47) | | 0.011** (2.32) | | -0.054*** (14.48) | | 0.011** (3.13) |
| B/M | | -0.122*** (7.99) | | -0.063*** (4.82) | | -0.134*** (8.53) | | -0.070*** (6.03) |
| Leverage | | -0.478 (1.72) | | -0.014 (0.05) | | -0.003 (0.01) | | -0.419 (1.02) |
| Cash _{t+1} /A _t | | -1.448** (2.52) | | -0.270 (0.40) | | -1.686*** (3.33) | | -1.508 (1.43) |
| Time Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Firm Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Adjusted R ² | 0.88 | 0.89 | 0.68 | 0.69 | 0.89 | 0.90 | 0.66 | 0.68 |
| No. of Obs. | 14,260 | 14,203 | 14,205 | 14,152 | 17,412 | 17,345 | 17,343 | 17,279 |

Table VII: Portfolio Returns to Strategic Trading Activity

This table presents value-weight returns to calendar-time portfolios that buys stocks of strategic exporters and sell stocks of non-strategic exporters. In Panel A, we first create buy/sell signals based on a firm’s export amount in a given month, its destination country, and the match between the destination country’s ethnicity and the firm’s headquarter MSA’s (metropolitan statistical area) ethnic composition. We use the American Communities Project (ACP) ethnicity classifications, and match these to destination countries as shown in Appendix Table A2. In every year for each MSA, we compute the share of each ethnicity that resides in each MSA. In every year for each MSA, we compute the share of each ethnicity that resides in each MSA. We then rank the share of each ethnicity across all MSAs in the US. The buy signal equals one if (i) a firm’s share of total industry exports to a given country in a given month is ranked in the top 3, and (ii) the firm is located in an MSA where the MSA’s ethnicity share across all MSAs in the US is ranked in the top 3. The sell signal equals one if (i) a firm’s share of total industry exports to a given country is ranked in the top 3, but (ii) the firm is **not** located in an MSA where the MSA’s ethnicity share across all MSAs in the US is ranked in the top 3. We define a firm as strategic exporter if the firm has at least one buy signal for any of its exports in a given month. A firm is defined as a non-strategic exporter if it has zero buy signals in a given month, and has at least one sell signal. Each month we construct calendar-time portfolios that buy stocks of strategic exporters and sell non-strategic exporters. Portfolios are rebalanced monthly, and stocks are held for one month. The first row of each panel presents excess returns (raw returns minus the risk-free rate), the second row shows DGTW-adjusted returns, the third row shows CAPM alphas, the fourth row shows Fama-French 3-factor alphas, and the fifth row shows Carhart 4-factor alphas. In Panel B, we replicate the calendar time portfolio approach from Panel A for our imports sample. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

| Panel A: Export Value-Weight Portfolio Returns | | | |
|--|-------------------|-----------------|-------------------|
| | Long Return | Short Return | (L-S) Return |
| Excess returns | 0.92*** (3.07) | 0.42 (1.38) | 0.50** (2.15) |
| DGTW-adjusted returns | 0.28 (1.52) | -0.11 (1.16) | 0.39** (2.23) |
| CAPM alpha | 0.62*** (2.72) | -0.02 (0.19) | 0.64*** (2.93) |
| Fama-French 3-factor alpha | 0.64*** (3.30) | -0.02 (0.24) | 0.66*** (3.18) |
| Carhart 4-factor alpha | 0.53*** (2.82) | -0.04 (0.41) | 0.57*** (2.78) |

Table VII: Portfolio Returns to Strategic Trading Activity (continued)

| Panel B: Import Value-Weight Portfolio Returns | | | |
|--|------------------|-----------------|-----------------|
| | Long Return | Short Return | (L-S) Return |
| Excess returns | 0.87** (2.31) | 0.42 (1.38) | 0.45* (1.75) |
| DGTW-adjusted returns | 0.34 (1.52) | -0.11 (1.36) | 0.45* (1.92) |
| CAPM alpha | 0.43* (1.75) | -0.02 (0.15) | 0.44* (1.71) |
| Fama-French 3-factor alpha | 0.43* (1.74) | -0.01 (0.06) | 0.44* (1.68) |
| Carhart 4-factor alpha | 0.37 (1.48) | -0.01 (0.11) | 0.38 (1.45) |

Table VIII: Connected Board Members and Returns

This table reports predictive regressions of future month returns on connectedness of a firm's board from 1999-2010. The independent variable of interest is Pct of Board Strategically Connected, which is equal to the percentage of the board of directors that are from a foreign country to which the firm is either importing from, or exporting to, in the month prior. Other control variables include Size, the natural logarithm of market capitalization, B/M, the natural logarithm of the ratio of book value to market value, Past Month Returns, returns in the month prior to the earnings announcement, and Past Returns (t-2,t-12), return from month t-2 to t-12. In Columns 1 and 2, the full sample of firms are included, while Columns 3 and 4 are run on only the sample of firms that have at least one strategically connected board member. Month fixed effects and Industry-Month fixed effects are included where indicated. Standard errors, adjusting for clustering at the month level, are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

| <i>Dependent Variable:</i> | Future-month returns | | | |
|--------------------------------------|----------------------|---------------------|--|---------------------|
| <i>Sample:</i> | Full Sample | | Only if have at least one connected board member | |
| | (1) | (2) | (3) | (4) |
| Pct of Board Strategically Connected | 0.082** (2.41) | 0.091*** (2.80) | 0.075** (2.10) | 0.077** (2.13) |
| Board Size | 0.000 (0.66) | 0.000 (1.08) | 0.000 (0.57) | 0.000 (0.37) |
| Size | -0.002*** (2.81) | -0.002*** (2.67) | -0.003*** (2.96) | -0.002*** (2.68) |
| B/M | 0.011* (1.87) | 0.011* (1.80) | 0.012 (1.58) | 0.011 (1.36) |
| Past Ret(t-2,t-12) | -0.002 (0.59) | -0.002 (0.54) | -0.001 (0.18) | -0.001 (0.18) |
| Past Month Returns | -0.034** (2.33) | -0.032** (2.27) | -0.026 (1.33) | -0.027 (1.48) |
| Time Fixed Effects | Yes | | Yes | |
| Industry x Time Fixed Effects | | | Yes | |
| Adjusted R ² | 0.23 | 0.28 | 0.26 | 0.36 |
| No. of Obs. | 38,040 | 38,040 | 11,039 | 11,039 |

Table IX: Errors in Analyst Forecasts and Earnings Surprises

This table reports regressions of earnings forecast error and earnings surprise cumulative abnormal returns (CARs) on strategic trading of firms. In the first two columns, the dependent variable is Earnings CAR. This is defined as the cumulative abnormal return (t-1,t+1) around the earnings date. The dependent variable in Column 3 and Column 4 is earnings Forecast Error. This is the absolute value of the actual reported earnings (EPS) value minus the consensus mean of the most recent analyst forecasts (in the month leading up to the announcement), scaled by the absolute value of actual EPS reported. This is then winsorized at the 0.01 level. The main variables of interest, Strategic Exporter/Importer, are defined in Table VI. Other control variables include Size, the natural logarithm of market capitalization, B/M, the natural logarithm of the ratio of book value to market value, Past Month Returns, returns in the month prior to the earnings announcement, Past Returns (t-2,t-12), return from month t-2 to t-12, and (Actual EPS-Estimate), which is the magnitude of the earnings surprise in the earnings announcement. Month and industry fixed effects are included where indicated. Standard errors, adjusting for clustering at the month level, are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

| | Earnings CAR | | Forecast Error | | Earnings CAR | | Forecast Error | |
|-------------------------|---------------------|---------------------|----------------------|----------------------|---------------------|--------------------|----------------------|----------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Strategic Exporter | 0.487* (1.90) | 0.577** (2.24) | 2.861** (2.48) | 2.874** (2.53) | | | | |
| Non-Strategic Exporter | 0.046 (0.36) | 0.063 (0.50) | 0.414 (0.78) | 0.233 (0.43) | | | | |
| Strategic Importer | | | | | 0.634** (2.58) | 0.665*** (2.66) | 3.880*** (2.66) | 3.886*** (2.64) |
| Non-Strategic Importer | | | | | -0.046 (0.41) | -0.03 (0.27) | -1.034* (1.86) | -1.357** (2.42) |
| Past Month Returns | -0.93 (1.15) | -0.914 (1.13) | -3.544 (0.91) | -3.841 (0.99) | -1.114 (1.40) | -1.131 (1.41) | -2.138 (0.65) | -2.036 (0.62) |
| Size | -0.083** (2.04) | -0.072* (1.77) | -3.693*** (18.10) | -3.678*** (17.92) | -0.099** (2.50) | -0.090** (2.25) | -3.935*** (23.12) | -3.981*** (23.17) |
| B/M | -0.072 (0.60) | -0.053 (0.44) | 6.378*** (14.41) | 6.327*** (14.19) | -0.137 (1.31) | -0.136 (1.30) | 6.569*** (15.21) | 6.464*** (14.78) |
| Past Ret(t-2,t-12) | 0.007 (0.04) | -0.007 (0.05) | -4.465*** (3.78) | -4.538*** (3.78) | -0.138 (0.77) | -0.14 (0.79) | -4.519*** (5.39) | -4.639*** (5.46) |
| (Act EPS – Est) | 3.594*** (12.40) | 3.585*** (12.43) | | | 4.189*** (17.01) | 4.19*** (16.97) | | |
| Time Fixed Effects | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Fixed Effects | | Yes | | Yes | | Yes | | Yes |
| Adjusted R ² | 0.08 | 0.08 | 0.11 | 0.11 | 0.07 | 0.07 | 0.11 | 0.11 |
| No. of Obs. | 15,951 | 15,951 | 15,951 | 15,951 | 20,383 | 20,383 | 20,384 | 20,384 |

Channels of Influence:
Internet Appendix

Table A1: Summary Statistics on Firms that Do Not Import/Export

MVE is the market value of equity calculated as the price end of calendar year prior to fiscal year end multiplied by number of shares outstanding. B/M is the book to market ratio where the book value of equity is calculated as sum of stockholders equity (SEQ), Deferred Tax (TXDB), Investment Tax Credit (ITCB) minus Preferred Stock (PREF). Leverage is long-term debt (DLTT) plus debt in current liabilities (DLC), divided by the numerator plus market equity. Momentum is the twelve month return prior to fiscal year end. ROA (return on asset) earnings before tax and depreciation (EBITDA) scaled by total assets (TA). PPE/TA is the ratio of plant, property, and equity (PPENT) scaled by total assets. Unit of observation is firm-year. Panel A (B) reports the summary statistics for public firms, which exported (imported) at least once in a given year. The sample period covers 1994 to 2010. Panel C reports volume imports and exports in top 20 ports of United States.

| Panel A: Firm level data for Non-Exporters | | | | | | |
|--|---------|-----------|----------|----------|---------|---------|
| | MVE | B/M | Leverage | Momentum | ROA | PPE/TA |
| mean | 1,896 | 16.515 | 0.216 | 0.172 | -0.011 | 0.271 |
| sd | 11,222 | 1,721.287 | 0.215 | 1.084 | 1.646 | 0.277 |
| p5 | 3 | 0.063 | 0.000 | -0.694 | -0.536 | 0.003 |
| p10 | 7 | 0.132 | 0.000 | -0.547 | -0.255 | 0.010 |
| p25 | 24 | 0.301 | 0.018 | -0.265 | -0.005 | 0.039 |
| p50 | 108 | 0.579 | 0.163 | 0.039 | 0.071 | 0.161 |
| p75 | 555 | 0.974 | 0.352 | 0.363 | 0.141 | 0.448 |
| p90 | 2,569 | 1.605 | 0.527 | 0.844 | 0.213 | 0.741 |
| p95 | 6,854 | 2.339 | 0.639 | 1.364 | 0.270 | 0.840 |
| N | 144,330 | 144,330 | 167,639 | 106,365 | 161,877 | 163,223 |

| Panel B: Firm level data for Non-Importers | | | | | | |
|--|---------|-----------|----------|----------|---------|---------|
| | MVE | B/M | Leverage | Momentum | ROA | PPE/TA |
| mean | 1,824 | 16.929 | 0.218 | 0.170 | -0.012 | 0.273 |
| sd | 10,942 | 1,743.596 | 0.216 | 1.084 | 1.665 | 0.278 |
| p5 | 3 | 0.061 | 0.000 | -0.694 | -0.541 | 0.002 |
| p10 | 6 | 0.130 | 0.000 | -0.547 | -0.259 | 0.010 |
| p25 | 23 | 0.301 | 0.019 | -0.265 | -0.006 | 0.039 |
| p50 | 102 | 0.581 | 0.165 | 0.038 | 0.071 | 0.164 |
| p75 | 521 | 0.980 | 0.354 | 0.361 | 0.141 | 0.454 |
| p90 | 2,418 | 1.617 | 0.530 | 0.838 | 0.214 | 0.745 |
| p95 | 6,523 | 2.353 | 0.641 | 1.357 | 0.271 | 0.843 |
| N | 140,660 | 140,660 | 163,974 | 102,780 | 158,211 | 159,547 |

Table A2: Country-MSA Population Mapping

| | Country Name | Population in US | | Country Name | Population in US |
|----|----------------|------------------|----|----------------|------------------|
| 1 | Argentina | Argentinian | 36 | Japan | Japanese |
| 2 | Australia | White | 37 | Korea, Rep. | Korean |
| 3 | Austria | White | 38 | Latvia | White |
| 4 | Barbados | Mexican | 39 | Lithuania | White |
| 5 | Belgium | White | 40 | Malaysia | Filipino |
| 6 | Belize | Mexican | 41 | Malta | White |
| 7 | Brazil | Mexican | 42 | Mexico | Mexican |
| 8 | Bulgaria | White | 43 | Netherlands | White |
| 9 | Cambodia | Filipino | 44 | New Zealand | White |
| 10 | Canada | White | 45 | Nicaragua | Nicaraguan |
| 11 | Chile | Chilean | 46 | Norway | White |
| 12 | China | Chinese | 47 | Panama | Panamanian |
| 13 | Colombia | Colombian | 48 | Paraguay | Paraguayan |
| 14 | Costa Rica | Costa Rican | 49 | Peru | Peruvian |
| 15 | Cuba | Cuban | 50 | Philippines | Filipino |
| 16 | Czechoslovakia | White | 51 | Poland | White |
| 17 | Denmark | White | 52 | Portugal | White |
| 18 | Dominican Rep. | Dominican | 53 | Puerto Rico | Puerto Rican |
| 19 | Ecuador | Ecuadorian | 54 | Romania | White |
| 20 | El Salvador | Salvadorian | 55 | Russia | White |
| 21 | Finland | White | 56 | Singapore | Chinese |
| 22 | France | White | 57 | Spain | Mexican |
| 23 | Germany | White | 58 | Sweden | White |
| 24 | Greece | White | 59 | Switzerland | White |
| 25 | Guatemala | Guatemalan | 60 | Taiwan, China | Chinese |
| 26 | Haiti | Mexican | 61 | Thailand | Filipinos |
| 27 | Honduras | Honduran | 62 | Turkey | White |
| 28 | Hong Kong | Chinese | 63 | Ukraine | White |
| 29 | Hungary | White | 64 | United Kingdom | White |
| 30 | Iceland | White | 65 | Uruguay | Uruguayan |
| 31 | India | Indian | 66 | Venezuela | Venezuelan |
| 32 | Indonesia | Filipino | 67 | Vietnam | Vietnamese |
| 33 | Ireland | White | 68 | Yugoslavia(FR) | White |
| 34 | Israel | White | 69 | South Africa | White |
| 35 | Italy | White | | | |

Table A3: Country-Census Ethnicity Mapping

| Country Name | Ethnicity | Country Name | Ethnicity |
|-------------------|-----------|-------------------|------------|
| 1 Argentina | HISPANIC | 36 Japan | JAPANESE |
| 2 Australia | WHITE | 37 Korea, Rep. | KOREAN |
| 3 Austria | WHITE | 38 Latvia | WHITE |
| 4 Barbados | HISPANIC | 39 Lithuania | WHITE |
| 5 Belgium | WHITE | 40 Malaysia | FILIPINO |
| 6 Belize | HISPANIC | 41 Malta | WHITE |
| 7 Brazil | HISPANIC | 42 Mexico | HISPANIC |
| 8 Bulgaria | WHITE | 43 Netherlands | WHITE |
| 9 Cambodia | FILIPINO | 44 New Zealand | WHITE |
| 10 Canada | WHITE | 45 Nicaragua | HISPANIC |
| 11 Chile | HISPANIC | 46 Norway | WHITE |
| 12 China | CHINESE | 47 Panama | HISPANIC |
| 13 Colombia | HISPANIC | 48 Paraguay | HISPANIC |
| 14 Costa Rica | HISPANIC | 49 Peru | HISPANIC |
| 15 Cuba | HISPANIC | 50 Philippines | FILIPINO |
| 16 Czechoslovakia | WHITE | 51 Poland | WHITE |
| 17 Denmark | WHITE | 52 Portugal | WHITE |
| 18 Dominican Rep. | HISPANIC | 53 Puerto Rico | HISPANIC |
| 19 Ecuador | HISPANIC | 54 Romania | WHITE |
| 20 El Salvador | HISPANIC | 55 Russia | WHITE |
| 21 Finland | WHITE | 56 Singapore | CHINESE |
| 22 France | WHITE | 57 Spain | HISPANIC |
| 23 Germany | WHITE | 58 Sweden | WHITE |
| 24 Greece | WHITE | 59 Switzerland | WHITE |
| 25 Guatemala | HISPANIC | 60 Taiwan, China | CHINESE |
| 26 Haiti | HISPANIC | 61 Thailand | FILIPINO |
| 27 Honduras | HISPANIC | 62 Turkey | WHITE |
| 28 Hong Kong | CHINESE | 63 Ukraine | WHITE |
| 29 Hungary | WHITE | 64 United Kingdom | WHITE |
| 30 Iceland | WHITE | 65 Uruguay | HISPANIC |
| 31 India | INDIAN | 66 Venezuela | HISPANIC |
| 32 Indonesia | FILIPINO | 67 Vietnam | VIETNAMESE |
| 33 Ireland | WHITE | 68 Yugoslavia(FR) | WHITE |
| 34 Israel | WHITE | 69 South Africa | WHITE |
| 35 Italy | WHITE | | |

Table A4: State-level Connected Population

Panel A of this table presents coefficient estimates of OLS (first column) and fixed effects regressions (second and third column) of export ratio (ER) on Connected Population (CP) and control variables: $ER_{ict} = b_1 + b_2 * CP_{ct} + b_3 * \text{Connected Board Member} + \text{Firm Fixed Effect} + \text{Year Fixed Effect} + \text{Ethnicity Fixed Effect} + \text{FirmxYear Fixed Effect}$. Export Ratio (ER) is total amount a given firm exports to a destination country in a given year scaled by total amount of exports of the same firm in the same year ($E_{ict} / \text{Sum}(E_{it})$). Connected population is the number of residents in firm's headquarter state connected to export country scaled by total population in that state (CP_{ct}). Connected Board Member is a binary variable that takes a value of 1 if the firm has a board member with an ethnic background similar to export destination. Panel B of this table presents coefficient estimates of the following specification: $IR_{ict} = b_1 + b_2 * CP_{ct} + \text{Firm Fixed Effect} + \text{Year Fixed Effect} + \text{Ethnicity Fixed Effect} + \text{FirmxYear Fixed Effect}$, where import ratio (IR) is total amount a given firm imports from a country in a given year scaled by total amount of imports of the same firm in the same year ($I_{ict} / \text{Sum}(I_{it})$). T-stats, clustered by year, are reported below coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Exports

| | Export Ratio | Export Ratio | Export Ratio | Export Ratio |
|------------------------------------|--------------------|-------------------|--------------------|--------------------|
| Connected Population | 0.027*** (2.70) | 0.025** (2.50) | 0.313*** (5.13) | 0.027*** (2.94) |
| Connected Board Member | | | | 0.012*** (3.31) |
| Firm Fixed Effects | Yes | No | No | No |
| Year Fixed Effects | Yes | No | No | No |
| FirmxYear Fixed Effects | No | Yes | No | Yes |
| Ethnicity Fixed Effects | Yes | Yes | Yes | Yes |
| StatexPartnerCountry Fixed Effects | No | No | Yes | No |
| Adj. R2 | 0.48 | 0.64 | 0.04 | 0.64 |
| Number of Observations | 106,788 | 106,788 | 106,788 | 106,788 |

Table A4: State-Level Connected Population (continued)

Panel B: Imports

| | Import Ratio | Import Ratio | Import Ratio | Import Ratio |
|------------------------------------|--------------------|--------------------|--------------------|--------------------|
| Connected Population | 0.049*** (4.08) | 0.058*** (4.46) | 0.381*** (5.01) | 0.061*** (4.85) |
| Connected Board Member | | | | 0.013*** (4.02) |
| Firm Fixed Effects | Yes | No | No | No |
| Year Fixed Effects | Yes | No | No | No |
| FirmxYear Fixed Effects | No | Yes | No | Yes |
| Ethnicity Fixed Effects | Yes | Yes | Yes | Yes |
| StatexPartnerCountry Fixed Effects | No | No | Yes | No |
| Adj. R2 | 0.39 | 0.57 | 0.06 | 0.57 |
| Number of Observations | 103,829 | 103,829 | 103,829 | 103,829 |