

Resident Networks and Corporate Connections: Evidence from World War II Internment Camps

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ABSTRACT

Using customs and port authority data, we show that firms are significantly more likely to trade with countries that have a large resident population near their firm headquarters, and that these connected trades are their most valuable international trades. Using the formation of World War II Japanese Internment Camps to isolate exogenous shocks to local ethnic populations, we identify a causal link between local networks and firm trade. Firms are also more likely to acquire target firms, and report increased segment sales, in connected countries. Our results point to a surprisingly large role of immigrants as economic conduits for firms.

JEL Classification: F16, F30, G14

Key words: Information networks, trade links, firm behavior

Firms buy and sell goods in a global marketplace. Nearly half of all S&P 500 firms' sales, for instance, come from abroad. Understanding how firms differentially navigate this marketplace is critical to identifying which firms will ultimately succeed, and hence how investors should allocate capital among these firms. Success in a global setting depends not only on the goods or services that firms provide, but also on the various networks that firms can exploit to access foreign markets.

In this paper we investigate one type of network that firms can employ in accessing foreign markets; namely, local resident networks. Specifically, we exploit variation in ethnic population breakdowns across metropolitan statistical areas (MSAs) in the U.S to investigate whether local residents' ties to their home-countries play a role in creating important bilateral country linkages for firms headquartered in these areas. We show that local resident networks have a first-order impact on each of the primary ways in which corporations operate globally: import and export behavior, international M&A activity, and segment sales abroad, as well as on the value implications of such trade decisions.

We begin by using micro-level import and export data collected from customs and port authorities. Combined with census-tract demographic data, this micro-level trade data allows us to link individual firms' trade decisions to their local resident populations. For the universe of publicly traded U.S. firms over our 20-year sample period we find that firms export more to – and import more from – countries with which they have stronger local resident network connections.

Because residents' location decisions are themselves influenced by firm-level trade activity and the factors that drive this trade activity, the effect of resident location is endogenously related to the factors that cause these locations to change. To address this endogeneity concern, we identify a set of plausibly exogenous shocks to population residence – the forced relocation of Japanese and Japanese-Americans into Japanese Internment Camps during World War II – and show that these shocks have a large and significant impact on firm-level trade decisions. The Japanese internment camps, established throughout the country to house Japanese and Japanese-Americans from the West Coast following the bombing of Pearl Harbor in 1941, represented a sizable shock to the Japanese populations surrounding them. For example, in the 1940 census (pre-internment camps), the Japanese population of Arkansas was three people. Arkansas was then a site of two internment camps – a shock of over 17,000 Japanese residents into the state. Such shocks had an enduring impact on the affected areas as many internees ultimately settled around these camps, having no home or work to return to

after the war ended. Indeed, MSAs surrounding WWII Japanese internment camps have roughly three times ($t=9.19$) higher Japanese populations *today* than MSAs that did not house internment camps.

In addition, the MSAs surrounding WWII Japanese internment camps have over 3 times ($t=4.34$) as many sister cities to Japan as similar cities throughout the rest of the US. Further, as a placebo test, we examine the growth of other Asian ethnicities in the same locations surrounding internment camps. We find no evidence that they grew, nor is there any significant Asian population (besides Japanese) in these surrounding areas today. Taken as a whole, our evidence suggests that the Japanese internment camps of WWII represent significant exogenous shocks to Japanese populations that persist through the present day.

Having established their exogeneity, we examine the effect of new Japanese populations on firms' trade decisions. Firms in MSAs surrounding internment camps import and export significantly more to Japan today than other firms. In terms of magnitude, a one standard deviation increase in exogenous Japanese population increases exports by 67% ($t=2.81$) and imports by 101% ($t=4.51$).

We show that our findings extend across the entire universe of US firms and firm-country trade destinations, over a nearly 20-year sample period. To do so, we exploit novel import and export data collected 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. We measure firm-country 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"). We find evidence that firms export more to (and import more from) countries with which they have stronger information links. Specifically, we show that a one standard deviation increase in Connected Population increases the amount the firm exports to (imports from) a country by 63%, $t=4.93$ (60%, $t=5.59$).

This increased exporting (and importing) associated with resident networks leads to increased sales and increased profitability. For instance, when we compare the profitability of "strategic exporters" – that is, firms that export to a country with which they have a large connected population - and "nonstrategic exporters" – firms that export the same amount to the same country but do not have a large connected population - we find that strategic exporters

experience a statistically significant 11% increase in their future profitability (EBITDA/Assets) relative to nonstrategic exporters.

We next show that the effect of local resident networks in international transactions is not confined to imports and exports. Local resident networks also have large and significant effects on M&A activity and segment sales in connected countries. For example, firms are significantly more likely to purchase target firms in countries they are connected to through their local resident networks. Moreover, using information disclosed in segment filings, we show that firms are more likely to have an international presence in countries that they are connected to through their resident networks.

We further explore how information is transferred across resident networks. While we cannot obtain the ethnic makeup of the firms' entire employee base, we are able to collect the ethnic makeup of sample firms' board of directors (including top management). These data allow us to identify a specific channel through which resident populations can influence firm decisions – connected boards of directors. We find that local ethnic population is a strong predictor of a board's ethnic makeup (e.g., if there is a larger Chinese population in a given firm's MSA, the firm's board is significantly more likely to have Chinese board members). More importantly for our purposes, we show that when a strategic importer (exporter) has a connected board member on its board, it trades significantly more with the connected country. For instance, firms export 68% more than the median firm ($t=4.03$) to countries that they are connected to with a connected board member.

Finally, to shed further light on the mechanism behind our findings, we test the prediction that when local resident networks are more valuable, strategic trading utilizing these networks should be more pronounced. To do so, we first examine the role of tariff controls between the U.S. and a given connected country for a given product. Consistent with lower (higher) tariffs increasing (decreasing) the value of local resident networks, we find significantly more strategic trading (i.e., importing from the country of the connected population) when U.S. import tariffs are lower. Next, we examine the role of differentiated products (products that are not traded over organized exchanges). Again consistent with variation in the value of resident networks leading to variation in strategic trading, we find that the benefits of networks are more pronounced when importing differentiated products. Lastly, using micro-level data on the estimated values of the shipments in our trade data, we find that firms charge higher prices on their exports to connected countries (and face lower prices on imports from connected countries), which helps explain why connected trading increases firm profitability.

The remainder of the paper is organized as follows. Section I provides background and a literature review, while Section II describes the data. Section III documents the impact of local resident networks on firm-level import and export decisions. Section IV establishes a causal link using the formation of the Japanese internment camps of World War II as plausibly exogenous population shocks. Section V examines the returns to strategic importers and exporters that use local resident networks, while Section VI examines other transactions with connected countries. Section VII explores additional channels at work through the resident networks, while Section VIII concludes.

I. Background and Literature Review

Our paper contributes to the literature investigating the drivers and implications of international trade on firm operations and values. Bernard et al. (2007) 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.

In particular, we add to the literature on the role that networks and informational barriers play in impacting international trade. For example, Rauch (1999) argues that informational barriers play a key role in hampering trade, and shows that geographic proximity is more important for trade in non-homogenous (i.e., differentiated) goods.¹ Meanwhile Chaney (2012) develops a theoretical model where firms only export to countries where they have a contact, and he provides empirical evidence that this model is consistent with the dynamics of trade in France.² Finally, within-country evidence also examines measures of social networks and trade; for example, Combes, Lafourcade and Mayer (2005) explore networks and trade between regions within France; Garmendia, Llano, Minondo and Requena (2012) examine social and business networks and the extensive margin of trade in Spain; and Burchardi and Hassan (2013) find West German regions that have closer social links with East Germany grew faster and invested more into East Germany after the German reunification.³ Again, our main contribution to this literature is through our unique identification of exogenous residents surrounding firms, thus firmly establishing the causal mechanism missing heretofore in the literature.

More importantly, our research adds to the 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 that 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. Relatedly Dinc and Erel (2013), Ahern et al. (2012), and Erel et al. (2012) focus specifically on cross-border M&A activity, and find that variables such as country-wide geographic and cultural distance play a role. Our paper demonstrates that local resident populations around the headquarters of a firm significantly impact the bilateral trade relations to connected countries, along with international M&A decisions and international segment sales. We also show that board members who are connected to trade partners through their nationalities provide information advantages that generate value for firms.⁴

II. Data

We obtain data from several sources. Our international trade data come from the Journal of Commerce's Port Import Export Reporting Service (PIERS), a subsidiary of UBM Global Trade. PIERS collects import and export data at the "bill of lading" level, where 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. PIERS obtain their data from three major sources: U.S. Customs and Border Protection Automated Manifest System, PIERS' own reporters located in 88 major U.S. ports, and foreign partners whose national customs authorities provide comparable information. Our data include standard information provided on the bill of lading and value added fields such as the content (six-digit Harmonized System Code⁵) and value of the cargo, both of which are estimated by PIERS. We match PIERS data

to public firm names by shipper (for exports) and receiver (for imports) using hand-matching as well as name-matching algorithms. PIERS data start in 1994 and go through 2010, and hence our main sample period is 1994 to 2010. Panels A and B of Table II report summary statistics for exporters and importers, respectively, while Panel C provides the distribution of industries by exporters and importers. Internet Appendix Table IA I provides analogous summary statistics for non-importers and non-exporters. Table III reports the top 5 destination and target ports for imports and exports.⁶

To obtain local ethnicity data, we use MSA-level population data from the American Communities Project (ACP) of Brown University's Spatial Structures in the Social Sciences program.⁷ The Census Bureau uses a standard set of definitions in delineating MSAs. In most cases an MSA includes both a central city (or sometimes two or more central cities) and the surrounding suburbs. The ACP data contain data for 331 MSAs. To match MSAs to zip code of firm headquarters, we use the Census Bureau's 1990 and 2000 U.S. Gazetteer files.⁸

Unlike Census data, ACP data can be used to identify the national origins of Hispanic and Asian ethnicities. In particular, ACP data allows us to disaggregate Hispanic ethnicities into 19 nations of origin and Asian ethnicities into seven nations of origin. In cases in which we cannot map a nation in the export/imports files to ACP data, we use ethnicity to identify the nation that is most likely to proxy for the population of that nation's presence in the U.S. For example, we use Filipino population figures to proxy for the Philippines, Thailand, Indonesia, Cambodia, and Malaysia. Internet Appendix Table IA II presents our country-to-MSA population mappings; we map countries to global geographic regions in this table as well.

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

In some tests we also use the nationality of corporate board members (and top management), which we obtain from biographical information provided by BoardEx of Management Diagnostics Limited, a private research company that specializes in social network data on officials of U.S. and European public and private companies.

Finally, we obtain HS code-level tariff information from the TRAINS data set provided by the United Nations Conference on Trade and Development (UNCTAD). A typical entry in this data set is as follows: "In the year 2003, U.S. applied a 4% tariff rate for Brazil nuts (HS Code 080120) to Brazil." Tariff information contains not only most favored nation (MFN) tariff

rates, but also rates agreed upon under various preferential regimes including regional trade agreements (RTA), preferential trade agreements (PTA), and bilateral agreements. If tariff data are missing for a particular importing country-year for a given HS code, we use the most recent values as major tariff changes are infrequent.

III. The Impact of Local Resident Networks on Firm-Level Trade

A. Import and Export Decisions

We first test the hypothesis that firms export more to and import more from countries with which they have stronger local resident networks. We measure local resident networks as the share of residents in the MSA in which a firm's headquarters is located that have the same ethnicity as the country to (from) which the firm is exporting (importing); we denote this variable *Connected Population*. Results using an analogously defined state-level measure are reported in Internet Appendix Table IA IV.

The dependent variable in our tests is a firm's import/export behavior in a given year. Specifically, for each firm-year we compute its *Export Ratio* as the total amount that the firm exports to destination country c in the year scaled by the total amount of exports by the firm in that year ($E_{ict} / \text{Sum}_c(E_{ict})$).⁹ We define *Import Ratio* equivalently for imports. All export and import figures are converted to U.S. dollars and hence represent the dollar value of a firm's exports and imports.

In Table IV we present results from a panel regression of firm-level export and import behavior on local resident networks, a host of fixed effects (e.g., year, region, MSA, MSA x year, MSA x region, country, and firm x year), and other control variables (e.g., literacy rate, unemployment rate, the number of manufacturing establishments per 1,000 people, full-time and part-time payroll per person for retail establishments, and MSA-level population density). The unit of observation in these regressions is the firm-country-year. All standard errors are clustered at the year level, to broadly account for any correlations that impact all firms over a given year (e.g., tariff changes, conflicts, shipping blockages), and all regressions control for the (log of) distance in miles between the state of a firm's headquarters and the destination country.¹⁰ Panel A presents results with *Export Ratio* as the dependent variable. In each specification we find that *Connected Population* (CP_{ct}) is a positive and significant predictor of a firm's country-level export share. In terms of magnitude, the coefficient of 0.037 ($t=4.93$) on CP_{ct} in our baseline specification in Column 1 implies that for a one-standard-deviation increase

in CP_{ct} , a firm's *Export Ratio* increases by 1.30%; relative to the median *Export Ratio* 2.06%, this implies a 63% increase.¹¹ In our preferred specification in Column 3, which includes, state-year, region, MSA fixed effects, and a host of MSA-level control variables and thereby ensures that our results are not induced by differences in openness/trade concentration across MSAs. In Column 5 we investigate the extensive margin of exporting and find that a connected population around a firm's headquarters is a significant predictor of the firm's likelihood of exporting to a given country.¹² In particular, a one-standard-deviation increase in CP_{ct} increases the likelihood of exporting to a given country by 2.19%. Compared to the mean export extensive margin of 0.38%, this implies a sizable impact of a more than five times larger likelihood of exporting to a given country.

Panel B presents analogous tests using *Import Ratio* as the dependent variable. As in the export tests, we find that ethnic resident links are strong positive predictors of firm-level import behavior. The magnitude of this effect is again large: the coefficient of 0.056 ($t=5.59$) on CP_{ct} in Column 1 implies that a one-standard-deviation increase in CP_{ct} increases a firm's *Import Ratio* by 1.05%, which translates into a 60% increase when compared to the median *Import Ratio*. Furthermore, Column 5 implies that a one-standard-deviation increase in CP_{ct} increases the likelihood of importing from a given country by 1.73%. Compared to the mean import probability of 3.22%, this again implies a sizable impact.

Of course, a potentially confounding factor when examining imports (as opposed to exports) relates to local demand-driven import activity: the mere presence of a connected population might drive firms to cater to local preferences for goods from the country of ethnic origin. To rule out a possible local demand channel, we rerun our analysis limiting attention to imports of products in industries that are unlikely to be affected by local demand, such as utilities and mining. Specifically, in Internet Appendix Table IA VII we focus on the sample of imports from firms whose first two digits of the NAICS code are 21 or 22 (i.e., Utilities and Mining industries); Column 2 of Internet Table IA VII shows that the impact of *Connected Population* on imports for these sectors is large and significant (coefficient=0.116, $t=3.28$), which suggests that local demand is unlikely to be driving our results. Note, however, that a more nuanced version of this story holds that local demand can affect exports if firms learn about a foreign country through their import activities and then use this information in making decision about export activities. We examine this possibility by rerunning the regressions in Table IV on the subset of firms that never import. We find identical results (coefficient=0.15, t -stat=3.36), which suggests that exporting firms are not simply "learning by importing."

B. Connected Board Members

We next explore the manner in which resident populations impact firm decisions. While it is impossible to obtain the ethnic makeup of the entire employee base of all firms, we are able to collect the ethnic makeup of all sample firms' board of directors (including top management: CEO, CFO, and Board Chairperson). These data allow us to identify a specific channel through which resident populations can influence firm behavior – connected boards of directors. Local ethnic population is a strong predictor of a board's ethnic makeup (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 representation of that country on the board of a firm in the same MSA is highly significant ($\rho=0.20$, $p<0.01$).

To capture the impact of this ethnic link through the board of directors, we construct the dummy variable *Connected Board Member*, which is equal to one if the firm has a board member whose nationality is the same as that from (to) which the firm is importing (exporting), and zero otherwise. Panels A and B of Table IV show that this measure is a large and significant predictor of firms' trading decisions. For instance, in Column 7 of Panel A, the coefficient estimate of 0.016 ($t=4.03$) implies that a firm exports 68% more to countries with which it has a connected board member.

IV. Japanese Internment Camps of World War II

In the tests above we find evidence of a strong, positive correlation between local resident networks and trade activity. However, such evidence does not establish a causal impact of ethnic population on import/export activity. This relationship could be driven by a number of factors and not necessarily by a direct causal channel from ethnic population to trade. It could be the case, for instance, 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 the case that some external 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. Consider, for example, the role of geographic distance: not only is it easier for, say, Vietnamese immigrants to reach California (as opposed to New York), but it is also cheaper for California firms to ship goods to and from Vietnam

(relative to a New York firm). Although we control for the geographic distance channel in Table IV, other types of common attributes could drive both ethnic population and trade, with no causal link between the two.

In order to establish causality, we need exogenous variation, such as exogenously “dropping” firms in random locations, or exogenously “dropping” ethnic populations in random locations, and then running our tests to see if these exogenously matched firm-surrounding ethnicities produce the same impact. We run this latter experiment in the following section using the Japanese internment camps of World War II.

A. Natural Experiment

Our empirical strategy exploits a natural experiment involving the Japanese internment camps of World War II in order to isolate the causal impact of local resident networks on firm-level trade. The Japanese internment camps were part of a program by the U.S. government to relocate and intern Japanese and Japanese-Americans following the attack on Pearl Harbor in Hawaii. The forced relocations stemmed from a concern that if there were an invasion by Japan, these citizens might not act in the interests of the U.S.¹³ The camps were established based on criteria laid out by the War Relocation Authority (WRA), which was established on March 18, 1942. In particular, the camp locations had to be 1) limited to federally owned lands, 2) suitable enough to house from five to eight thousand people, and 3) located, as the War Department required, “a safe distance from strategic works.” The camps were constructed in 1942 and together held nearly 120,000 Japanese and Japanese-Americans.¹⁴

The internment camps were distributed unevenly throughout the US, as shown in Figure 1, with peak populations as reported in Panel A of Table I. An additional important aspect of the relocations is that they represented substantial increases in terms of Japanese-origin population for states housing the relocation camps. To help see this, Panel B of Table I reports the Japanese population in the states that had internment camps, according to the 1940 U.S. Census. These data show that Arkansas, for instance, had only three people of Japanese descent listed in the 1940 census. In comparison, Panel A of Table I shows that roughly 17,000 Japanese and Japanese Americans were relocated to the internment camps in Arkansas. Accordingly, the number of Japanese that were interned in these camps represented a substantive shock to the total Japanese population in these states.

The internment camps were fully evacuated by March of 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 (Okamoto (2000)). In addition, internees that did try to return to their former West Coast home-cities faced acts of violence and discrimination (Ina et al. (1999)). Both of these factors resulted in many internees resettling in the regions surrounding their Internment Camps (Ina et al. (1999)). Our identification comes from these internees who decided to settle and form communities in the areas around the internment camps.

We begin our analysis by formally establishing the fact that the internees who decided to stay 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.¹⁵ This panel tests whether the areas surrounding Internment Camps are those with large Japanese resident networks today. Specifically, we measure local resident networks (*Connected Population*) as the share of the local population that is of Japanese origin. We define the relevant local population at the Metropolitan Statistical Area (MSA)-level. The independent variable, *Japanese Internment*, is a dummy variable indicating whether an MSA is within a 250 mile radius of an internment camp.¹⁶ Note that throughout the paper, any references to “treated MSAs,” or MSAs that had an internment camp, all refer to the specific categorical variable construction described above. We include various MSA-level control variables to these tests. These controls are motivated by the discussion above regarding the placement of the camps, and also to control for other impacts documented in the literature. Specifically, we include the (log) distance in miles between the MSA in which a firm’s headquarters and Japan, as well as a West Coast dummy to account for the role of geographic distance; the Japanese population in 1940 in each MSA (prior to the construction of the camps); the population of the MSA in 2000; the population of other non-Japanese Asian ethnicities (Korean, Chinese, Hindu, and Filipino) in an MSA, scaled by the MSA’s population; immigration from Asia (which measures the immigration growth from all other Asian ethnicities listed in the US Census--other than Japanese--from 1940 – 1990, which is before the internment to the beginning of our sample period); and population density (measured as the MSA’s 1940 population (in thousands) scaled by the area of the MSA per square mile); we include these variables in both the first and second stages of the Table V regressions.¹⁷ The distance variable is a standard control variable in the international trade literature (see Rauch (1999), Chaney (2012), etc.). And the idea of including the immigration from Asia control, for instance, is that immigration may have been growing in

general in all states over this time period, and for some reason these internment states may have been the recipient of a shock of immigration.

The first-stage results in Panel A of Table V consistently show that MSAs in which Japanese internment camps were located during World War II have a significantly higher fraction of Japanese-origin connected populations today.¹⁸ All six columns in Panel A deliver this same message. Columns 1 and 2 run the test on the sample of firms that export to Japan (Column 3 explores the extensive margin for exports), while Columns 4 and 5 run the test on the sample of firms that import from Japan (Column 6 explores the extensive margin for imports). Columns 2 and 5 also show results that include a series of additional control variables.¹⁹

In terms of magnitude, in Column 2 we find that the coefficient of 0.0016 ($t=13.04$) on *Japanese Internment* implies an 82% larger Japanese population today in areas surrounding Japanese internment camps of World War II relative to areas in which there were no internment camps. One caveat to point out is that although the result is strong and statistically significant even after the inclusion of additional controls, the coefficient on *Connected Population* is cut by more than half in Column 2 compared to Column 1. Turning to imports, the Column 5 coefficient of 0.0021 ($t=24.56$) on Japanese Internment implies a difference of over 96% larger. Collectively, these findings provide strong evidence for the first stage of the instrumental variable test.

In the second stage we then regress firm-level trade activity today on this instrumented value of connected population to assess its impact. In other words, we examine the impact on trade activity *solely* attributable to the part of the Japanese connected population today that was determined by having (versus not having) a Japanese internment camp in World War II in the MSA in which a firm is located. The dependent variable in these second stage regressions is a firm's import/export behavior in a given year. Specifically, for each firm-year we compute the firm's *Export Ratio* as the total amount that the firm exports to Japan in that year scaled by the total amount of exports by the firm in that year ($E_{ict} / \text{Sum}_c(E_{ict})$). We define *Import Ratio* analogously. All export and import figures are converted to U.S. dollars and represent the dollar value of a firm's exports and imports.

These second stage regression results are shown in Panel B of Table V. The table shows that this instrumented connected population has a large and significant impact on firm-level trade activity today. The coefficient on *Connected Population* is large and significant across all

specifications, including at the extensive margin, for both imports and exports, and with or without controls.

The implied magnitudes in Table V are comparable to the baseline regressions presented earlier in Table IV, for the entire sample. Specifically, Column 1 of Table IV (in both Panels A and B), which includes year and destination region fixed effects is the most analogous specification to the baseline specification in Columns 1 and 4 of Table V Panel B. For example, for a one-standard deviation increase in *Connected Population*, the implied increase in Column 1 of Table IV Panel A, for exports, is 63%; and in Column 1 of Table IV Panel B, for imports, is 60%. Meanwhile, the implied increase in the instrumented *Connected Population* effect here in Column 1 of Table V Panel B is 67% for exports; and is 101% for imports (from Column 4 of Table V Panel B). These results suggest that the relative magnitudes are comparable across the two sets of tests. In terms of the extensive margin magnitudes, the coefficient of 1.784 ($t=8.260$) on CP_{ct} in Column 3 of Table V Panel B implies that for a one-standard deviation increase in instrumented CP_{ct} , a firm's *Export Ratio* increases by 0.67%. Compared to the mean export extensive margin of 0.63%, this implies a sizable impact in economic magnitude at more than a 100% larger likelihood. The coefficient of 0.5236 ($t=1.830$) on CP_{ct} in Column 6 implies that for a one-standard deviation increase in instrumented CP_{ct} , a firm's *Import Ratio* increases by 0.49%, which corresponds to a 24.2% increase relative to the mean *Import Ratio* of 0.54%.

B. Placebo Tests and Additional Evidence on the Instrument

In this section we run additional tests to verify the validity of our instrumental variables approach. We present these results in Table VI. First, in Column 1 of Panel A, we collapse our analysis at the MSA level and run a pure cross-sectional regression. We continue to see a strong and significant relationship between Japanese internment camps and Japanese-origin populations decades later.²⁰ In Column 2, we include the same control variables as in Table V, and find that our estimates remain large in magnitude and significant after the inclusion of these additional controls.

We next run a placebo test for our main analysis. If the areas in which the camps were located were also centers of attraction for immigration that happened after WWII, then it is possible that our instrument is essentially capturing the variation in growth of immigration across MSAs, rather than the presence of the Japanese population caused by the Internment Camps. However, if our Japanese Internment variable is truly capturing a lasting connection with Japan, then it should have predictive ability only for Japanese population concentration.

To run this test, we compare the ability of *Japanese Internment* to predict Japanese-origin population connections versus those of all other Asian ethnicities reported in the census other than Japanese (specifically, Korean, Chinese, Hindu, and Filipino). We run this placebo test examining the same link (Japanese internment camps) for other Asian ethnicities in Column 3 of Panel A. In contrast to the Japanese population impact, we find that the impact of Japanese Internment Camps on the non-Japanese Asian population today is nearly zero and statistically insignificant.

To test whether the Japanese population surrounding the camps increased immediately following the dissolution of the camps, in Internet Appendix Table IA XII Panels B and C we regress the change in Japanese population from 1930 to 1940 and the change from 1950 to 1960, along with the change from 1940 to 1950 for comparison purposes, on the same variables as in Table VI Panel A. The results show that the Japanese internment camp population variable (scaled by the Japanese population in 1940 in Panel B or unscaled in Panel C) is a positive and significant predictor of the change in MSA-level Japanese population *only* in the 1940 to 1950 period, and not in early (1930 to 1940) or later (1950 to 1960) periods.

To further confirm that the location of internment camps is orthogonal to factors other than the settlement of the Japanese population that could plausibly affect trade with Japan, we test whether the MSAs in which Japanese internment camps were located are different (or grew differently) from comparable MSAs across a variety of measures (e.g., urbanization) that might be related to trade with Japan. We identify comparable MSAs by employing a nearest-neighbor matching procedure: we match every Japanese internment camp MSA with three MSAs with the closest population density per square mile (total population scaled by the area of the MSA) in 1940. The metrics we use to compare MSAs are literacy (population 7 to 20 years of age attending school scaled by total population), unemployment (percentage of the population out of a job, able to work, and looking for a job), number of manufacturing establishments per one million people, and payroll per person (full-time and part-time payroll of retail establishments). Panel B of Table VI shows that across all of these measures, Japanese internment camp MSAs are not significantly different from population density-matched MSAs, both in the pre-war period (using either the 1930 or 1940 Census), or as of 1990.²¹ In Panel C we test whether the *future* population densities are different between the Japanese internment camp MSAs and comparable MSAs, when the MSAs are matched by 1940 (pre-internment camp) population densities, and again find no statistically significant differences. Similarly, in Panel D we compare firms that trade with Japan and are treated by the instrument to firms making

identical trade decisions that are untreated (the firm sample used in Table V), and find that the firms that are treated are roughly similar across a variety of firm-level characteristics to firms that are untreated by the instrument, although treated firms do have higher Tobin's Q and investment (CAPX/sales) values.

Next in Panel E of Table VI we compare the characteristics of firms in internment MSAs that trade a significant amount with Japan (i.e., firms with total trade with Japan > 10% of their international trade volume) to the characteristics of firms in those same MSAs that do not trade a significant amount with Japan. The problem with looking firms that do not trade at all with Japan is that these firms tend not to trade with any country and tend to be substantially smaller than firms that do trade with any country. The results show that even within treated MSAs, the firms that trade significantly with Japan are not noticeably different from firms that do not. Next, in Panel F of Table VI we compare the characteristics of all firms (without conditioning on trade with Japan) in internment MSAs to all firms (again without conditioning on trade with Japan) in non-internment MSAs. We find that these two sets of firms are not significantly different on any dimension except for Capex, where we see that treated firms invest more than nontreated firms.

In Panel F of Table VI, we examine the importance of Japan as a trading partner more generally. We find that of all U.S. international shipping partners, Japan is the largest source of imported goods for publicly traded firms over the sample period, averaging 11.38% of all imports per year. On the export side, it is the third most important for exports, averaging 6.19% of exports over the sample period.

In sum, for any unobservables story to be the true driver of changes in Japanese population growth, the unobservable would have had to attract solely the Asian population from the Japan (i.e., not China, Korea, etc.), solely around the time of the internment camps (as we find a significant shock to Japanese populations from 1940 to 1950), and in internment MSAs solely with respect to Japanese population (not on any of the other observables we measure such as manufacturing establishments, wages, or population density, which grow identically in internment MSAs and matched MSAs). Collectively, our tests involving these Japanese internment camps strongly indicate that the large Japanese population shocks caused by the camps were indeed exogenous shocks, rather than explained by a plausible time-, ethnicity-, or location-specific unobservable.

C. Corroborating Evidence

The Japanese internment camps of World War II appear to have had long-lasting impacts on the areas in which they were located. In Table VI we explore these impacts further with a number of corroborating pieces of evidence. Ina et al. (1999) show that many cities in which the internment camps were located continue to have organizations that serve former internees and their children. Here, as another measure of long-lasting ties to Japan, we gather the list of all sister cities to United States cities.²² In Panel A of Table VI Columns 4 to 8, we run a simple regression of the number of sister cities an MSA has with Japan on *Japanese Internment* (whether or not the MSA had an internment camp during WWII). We collapse this analysis at the MSA level, and use the 282 MSAs that have reported census data on ethnicity going back to 1940. We find that while the average MSA without an internment camp had 0.36 sister cities in Japan, those with an internment camp had 3.5 times as many, with 1.26 sister cities in Japan. Despite the small sample size, this large difference of 0.90 cities is significant ($t=4.34$). In Columns 5 to 7 of Panel A, we also show that this sister city result is robust to the inclusion of controls for the local population of other Asian ethnicities (Korean, Chinese, Hindu, and Filipino populations in an MSA, scaled by the MSA's population), as well as the total population of the MSA as of 2000, plus the other control variables employed in Table IV. Importantly, Table VI shows that the MSA-level *Japanese Internment* indicator predicts the number of Japanese sister cities, even after controlling for the physical distance to Japan, and even after including a West Coast dummy variable; thus these tests show that even within the West Coast, and even comparing MSAs that are similarly far from Japan, we find a positive relation between Japanese internment and the formation of Japanese sister cities.

In Column 8 of Panel A we include the Japanese population today as an additional control variable. The idea behind this test is that if the positive and significant coefficient on *Japanese Internment* survives the inclusion of this control, it suggests that even after controlling for Japanese population today, the MSAs affected by the instrument have an especially strong bond with Japan (perhaps due to the experience they went through in the camps). If, however, the effect of internment camps disappears, then this would suggest that internment camps affected Japanese population but did not have an independent effect on the strength of the bond with Japan. In this case, Japanese populations across the U.S. might be similar whether or not they had close experience with the internment camps. Column 8 shows that the sister city coefficient is weakened somewhat (coefficient=0.360, $t=1.65$) but is still positive and marginally

significant, indicating that the internment camp MSAs appear to have especially strong connections with Japan.

D. Firms Founded before World War II

A remaining concern is that firms' location choices may continue to be impacted by the population ethnicities they observe. So, although Japanese-origin citizens were exogenously assigned, firms that plan to trade with Japan may respond by establishing 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 more cleanly measure the impact of exogenous population ethnicity on firm decisions, we examine only firms founded before the Japanese internment camp populations existed.²³ 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 selection obviously reduces the sample size considerably, we obtain similar results in this subsample of firms. For example, in Internet Appendix Table IA XVIII we show that the first stage regressions continue to have large and significant coefficients on the impact of Japanese internment camps on Japanese population today for these firms; the second stage coefficients on instrumented *Connected Population* are positive and significant on the extensive margin for exports, and positive but insignificant for imports. In addition, the implied magnitudes from these tests are similar to those for the full sample, suggesting that our results are not driven by the potential relocation of firms that want to trade with Japan to MSAs with significant Japanese populations.

In summary, our main Japanese internment camp tests, the corroborating evidence, and the placebo tests consistently deliver the message that the Japanese internment camps led to exogenous population shocks that have a *causal* impact on firms' trade decisions.

V. The Real Effects of Strategic Trading Activity

Building on the results above, in this section we examine the extent to which firms benefit from using local resident networks in their import and export decisions. For example, one could imagine firms overweighting certain countries in their import and export decisions due

to a form of familiarity bias. Alternatively, firms may tilt their trading focus as a result of the benefits they receive (e.g., private information about local demand) from local resident networks.

We try to disentangle these possibilities by examining the future outcomes of firms that exploit local resident networks in their trading decisions. We refer to 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 ethnic composition of the MSA in which the firm's headquarters is located. Since each firm can have an export/import relationship with several different countries over a given period, our approach aims to identify firms that choose their export countries in line with their resident connections. Because some firms trade with only one country over a given period, while others trade with many, the number of possible connected shipments each month will vary by firm. As a result, we distinguish connected and nonconnected shipments by creating buy/sell signals that are based on the amount of a firm's exports in a given month, the destination country, and the match between the destination country's ethnicity and the ethnicity of the MSA in which the firm's headquarters is located. To do so, we employ MSA-level ethnicity shares and match these to destination countries as shown in Internet Appendix Table IA II. For each MSA-year, we compute the share of each ethnicity that resides in the MSA. We then rank the share of each ethnicity across all MSAs in the U.S. 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 3²⁴ and (ii) the firm is located in an MSA in which the MSA's ethnicity share across all MSAs in the U.S. 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 in which the MSA's ethnicity share across all MSAs in the U.S. 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, and a nonstrategic exporter if it has zero buy signals in a given year and at least one sell signal.

A simple example helps clarify our approach. Consider two firms: A and B. Firm A is located in an MSA (e.g., Jersey City, New Jersey) in which 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 an MSA (e.g., Bangor, Maine) in which the share of Indians is not in the top 3 across all MSAs (Bangor is ranked 156th in the

population share of Indians across all MSAs), and but it 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 is classified as a strategic exporter, while Firm B is classified as a nonstrategic exporter.

Using this classification scheme, we examine whether strategic traders on average achieve superior real outcomes in the future, relative to their nonstrategic counterparts. We view such trade links as improving the trade prospects of connected firms. This could work through a sales channel (e.g., through links to new foreign trade partners that an unlinked competitor does not receive introductions to) or perhaps through a profitability channel (e.g., through access to lower cost inputs in the connected country for its existing production processes). To test this conjecture we run panel regressions of future sales and future profitability on lagged strategic trading activity for all firms across all MSAs. The dependent variables we examine are: 1) *sales* in year $t+1$ divided by assets in year t ; and 2) *ROA*, defined as EBITDA in year $t+1$ divided by assets in year t . We include a series of control variables in these tests, including *size* (log of market capitalization), *B/M* (log of the book-to-market ratio), *leverage* (long-term debt in year t divided by assets in year t), and *cash* (future cash in year $t+1$ divided by assets in year t). We also include year and firm fixed effects in all of these regressions.

Table VII presents the results of these real outcome tests. Column 1 shows that strategic exporters achieve higher sales in the future. Specifically, the coefficient of 0.026 ($t=2.89$) implies that relative to a median sales-to-lagged assets figure of 0.56, strategic exporters achieve almost 5% higher future sales. Meanwhile the coefficient for nonstrategic exporters is close to zero, and insignificant. In terms of future profitability (*EBITDA/Assets*), Column 3 indicates that strategic exporters achieve significantly higher profitability (coefficient=0.009, $t=2.05$); relative to a median profitability of 0.083, strategic exporters experience approximately 11% higher profitability. At the same time, nonstrategic exporters observe 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 -7%. Columns 5 to 8 repeat these 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, while nonstrategic importers show no increase in future sales or profitability.

Taken together, the evidence in Table VII indicates that it is precisely those firms that exploit local resident networks that achieve higher sales growth and profitability. Firms that

exhibit the same import and export behavior as these firms but that do not have local resident networks available to them (i.e., nonstrategic importers and exporters) do not experience such favorable outcomes. We also find in Internet Appendix Table IA XIV that the market does not fully understand or incorporate this advantage of ethnic links into the stock prices of strategic firms, which leads to predictably large future abnormal returns (which also obtain for firms that exploit connected boards); similarly, equity analysts 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.²⁵

VI. The Impact of Resident Networks on Other Firm-Level Decisions:

M&A Activity and Segment Sales

In this section we examine whether the impact of local resident networks on international transactions is confined to trade behavior, or if it extends to the other ways in which firms operate and interact globally. In particular, we examine the effect of local resident networks on international M&A activity, as well as segment sales in connected countries.

A. Cross-Border Mergers and Acquisitions

What are the determinants of cross-border acquisitions? Erel et al. (2012) provide evidence that acquisitions between two countries are more likely when countries are closer together. Further, firms in high corporate income tax regimes acquire firms in low tax regimes, and cross-border acquisitions are higher between countries that have higher synergies, such as a common cultural background. While these results are consistent with proxies for country-level information frictions helping to explain country-level M&A activity, we have limited firm-level evidence of the factors that influence a given firm's acquisition decision.

In this section, we investigate whether firms that are linked to foreign countries through a connected population (or a connected board member) engage in more M&A transactions in those countries. To do so, we use the SDC database to identify all mergers that involve a U.S. firm as an acquirer and a foreign firm as a target. Then, for each merger that involves firm i and a target in country j , we create a merger opportunity set that involves potential mergers that could have happened between firm i and firms in all countries except j .²⁶ Our dependent variable is a dummy variable, *M&A Target*, which takes a value of one for the actual merger,

and zero for the potential deals that did not occur. The independent variables include Number of Firms in Country, which is the total number of M&A targets involving a U.S. acquirer in that country-year, and Number of Mergers, which is the total number of M&A deals that a given firm had in that year. Our main variables of interest in this test are *Connected Population* and *Connected Board Member*, which are defined as in Table IV. We include both firm- and country-fixed effects in the first two specifications to capture the level of M&A activity in a particular year or country. In the final specification, we include country-year fixed effects to control for any country-year factors that could be related to *M&A Target*, such as the exchange rate level or political environment shocks (Erel et al. (2012)).

Table VIII presents the results. We find that both *Connected Population* and *Connected Board Member* are strong positive predictors of the country in which a given firm acquires a foreign target. Specifically, for a one standard deviation increase in *Connected Population* around the US firm, the coefficient in Column 3 of 0.0362 ($t=6.37$), implies that the probability of acquiring a firm in that country goes up by 1.44%, a doubling from the unconditional probability. Similarly, if the firm has a board member that is connected to a given foreign country, the probability of the firm conducting M&A in that country increases by 2.75%, nearly a 200% increase ($t=3.30$). In sum, these findings suggest that firms are significantly more likely to purchase target firms in countries with which they are linked through their local resident networks.

B. Segment Sales

In this section, we investigate whether firms that have connections to foreign countries through their resident populations (and board members) have a generally broader presence in those countries. Specifically, using geographic segment information filed by corporations to determine the volume of sales originating from a certain country or region, we test whether this sales measure is impacted by the firms' surrounding ethnic populations (and connected boards). The sales measure represents all sales done in a given country, and thus could be due to joint ventures, physical segments in the country, or direct sales to the foreign country.

Our dependent variable in this analysis is *Segment Sales Ratio*, which equals the sales of a foreign segment scaled by the total sales reported across all foreign segments in that year. Data on geographic segment sales come from the Compustat geographic segment files. In these files, a geographic segment may refer to a country (e.g. China) or a region (Asia). Because the segment reporting is not standardized, we created concordance files to map regions to companies using the United Nations Cartographic maps. We exclude observations that do not contain any

geographic reference to a region or country. While *Segment Sales Ratio* is thus more noisily measured, it captures variation resulting from firms' various types of relationships with foreign partners. Our main independent variables of interest (as in Table VIII) are *Connected Population* and *Connected Board Member*. We also include a number of control variables. The variable *Number of Firms in Country* equals the total number of firms reporting segment sales in that country. By including this variable, we intend to capture the effect of the clustering of U.S. corporations doing business in certain countries. *Number of Countries* is the total number of unique countries that a firm reports in its segment files. We additionally include year- and country-fixed effects in each specification.

Table IX shows that both *Connected Population* and *Connected Board Member* are statistically significant predictors of *Segment Sales Ratio*. In terms of magnitude, a one standard deviation increase in *Connected Population* (*Connected Board Member*) increases segment sales in that country by 1.8% (0.7%). These results support our earlier evidence in Tables IV to VI. In particular, the results here suggest that not only do local resident networks impact firms' importing and exporting decisions, but they also impact firms' global sales and expansion decisions more broadly.

Taken together, the results in Tables VIII and IX, combined with our earlier findings on trade behavior, indicate that local resident networks have a first-order impact on an array of ways in which corporations operate globally: importing and exporting decisions, international M&A activity, and sales in foreign markets.

VII. Additional Tests of the Mechanism

In this section we run additional tests to better establish the mechanism behind our findings above.

A. Tariffs and Differentiated Products

We expect that when network connections are more valuable, we should see these connections used to a great extent. To test this idea, we examine tariff controls between the U.S. and a given connected country for a product, as such controls represent shocks to the value of firm-country links. In particular, we use product-level data on sample firms' imports to identify situations in which country-specific tariffs set by the U.S. on a given type of good are higher or lower. These tests are therefore similar to those in Table IV, except that they are now run at the product level, with the unit of observation the firm-product-country-year. In

addition, we include a variable designed to measure the impact of tariffs, *Tariff*, which is equal to the U.S. import tariff on the given product imported from the given country in the given year. We also include the interaction term between tariff cuts and firm-country links (*Connected Population* Tariff*), along with various fixed effects including destination-country and firm-year fixed effects.²⁷ As U.S. tariffs only bind for imports, we run these tests using the *Import Ratio* as the dependent variable.

Table X presents the results. In Column 1, the coefficient on the interaction term (*Connected Population* Tariff*), which is negative and significant ($=-0.0018$, $t=3.19$), implies that a one standard deviation increase in tariffs to a country decreases the impact of local resident networks on imports by roughly 35%. In other words, 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. Note, however, that it is possible that only connected firms choose to import under high tariff regimes (because of their informational advantages) while all firms find it affordable to import under low tariff regimes. Hence, we view our tariff results as merely suggestive.

In the last two columns, we investigate whether the effects of resident networks are more pronounced for certain types of products. For this purpose, we use the differentiated versus homogeneous product classification of Rauch (1999). Homogeneous products are those that trade on organized exchanges.²⁸ Rauch (1999) provides a theory that the impact of information links on trade should be greatest for differentiated products and smallest for homogeneous products. Column 2 of Table X shows that the network effects we identify are indeed significantly more pronounced when firms import differentiated products as opposed to homogeneous products. We find no significant differential effect across product types for exports. Of course, we cannot rule out the possibility that connected firms are simply exporting higher-quality products or more differentiated varieties of the same products.

B. Shipment-Level Prices

We use micro-level data on the estimated values of the shipments in our trade data to investigate whether the benefits of resident networks manifest themselves in shipment prices.

Our data provider supplies a shipment's total estimated value as well as its quantity (such as weight in metric tons). Using these two pieces of information, we calculate unit prices by dividing the total estimated value by the quantity.²⁹ We then collapse our data to the MSA level for each product exported to (or imported from) a given country in a given year. The unit

of observation that we analyze is thus the median price paid for a given product exported to a given country from a given MSA. We include the triple interaction term Product x Year x Country to capture variation between *Connected Population* and prices within a product, year, and country cluster. We also include MSA fixed effects to control for price levels specific to a given location.

We present the results in Table XI. We find that export prices are positively correlated with *Connected Population* ($t=3.98$), which indicates that exports to connected countries command higher prices. Import prices, however, are not correlated with Connected Population.

We also replicate this analysis without collapsing the data to the MSA level. This specification allows us to include the connected board member dummy, which varies across firms within a given MSA. We obtain similar results for *Connected Population* in both the exports and imports samples, that is, we find higher export prices but no difference in import prices. However, we find a weak relation between import prices and the connected board member dummy, which suggests that firms with a connected board member pay less for their connected imports. Taken together, the results in Table XI indicate that firms are able to extract higher prices on exports to connected countries (and suggestive evidence that firms face lower import prices through connected board members), which helps explain why connected trading increases firm profitability.

VIII. Conclusion

In this paper, we exploit variation in ethnic populations across the U.S. to provide evidence on how local residents' ties to their home countries influence firms' international transactions. We show that resident network effects are wide-ranging and impact each of the primary ways that firms interact globally, from trade decisions with other firms, to international mergers and acquisition (M&A) activity, to selling products in foreign markets through segments established abroad. Utilizing novel customs and port authority data detailing the international shipments of all publicly traded U.S. firms, we show that firms import and export significantly more with countries that have a strong resident population near their firm headquarters.

We use the formation of Japanese internment camps during World War II to isolate exogenous shocks to local ethnic populations, and identify a causal link between local resident networks and firm trade. Specifically, we first show that the Japanese internment camps had a large and lasting impact on the Japanese population in MSAs surrounding the internment

camps. These internment camps had zero impact on immigration patterns for other Asian populations. The MSAs surrounding internment camps appear identical to other MSAs in terms of growth, employment, industries, etc., apart from the exogenous shocks to the Japanese population that persist today. These MSAs surrounding internment camps today also have an abnormally large number of Japanese sister cities relative to other MSAs, providing additional corroborating evidence on the long-lasting nature of these shocks. We show that this exogenously relocated Japanese population impacts firm trade: firms surrounding former internment camp locations export significantly more to (and import significantly more from) Japan than other firms.

Firms that exploit local resident networks (i.e. strategic traders) experience significant increases in future sales growth and profitability. Resident networks also have effects beyond simply influencing trade behavior: firms are more likely to acquire target firms, and report increased segment sales, in countries with which they are connected. Finally, we find that connected board members represent a possible mechanism by which information is transferred along the local resident network.

While we focus on immigration and how demographic factors affect the behavior of firms, we believe that our approach can be readily adapted to study other local advantage factors. Immigrants' role as conduits in economic transactions stretch far beyond those that we document in this paper, such as in the growing bilateral remittance channel, which represents a nontrivial portion of total GDP for many developing nations. Our research could thus be extended to provide further novel evidence on the economic impact of immigration and ethnic diversity.

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THE WRA RELOCATION CAMPS, 1942-1946

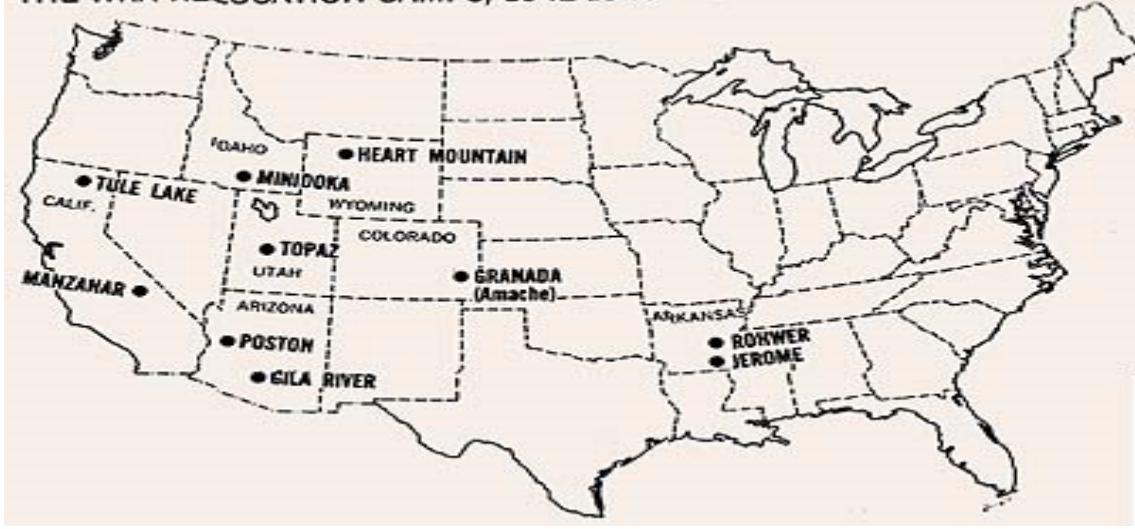


Figure 1. Map of Japanese internment camps during World War II. This figure shows a map of the U.S., indicating where the 10 internment camps were located (Daniel (1993)).

Table I
Summary Statistics for Importers and Exporters

Panel A lists the location of the 10 Japanese internment camps, along with their peak populations (CLPEF (1998)). Panel B shows the Japanese population in 1940 in each of the seven states in which internment camps were later located, based on the U.S. Census of 1940.

Panel A. Internment Camp Populations					
	State	Date of first arrival	Peak Population	Date of peak	Date last prisoner left
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 B. Pre-Internment Camp Populations (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 II
Summary Statistics for Importers and Exporters

This table presents summary statistics for the sample firms. MVE is the market value of equity calculated as the price at the end of calendar year prior to the 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), and 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. Past Return is the 12-month return prior to fiscal year end. ROA (return on assets) is earnings before tax and depreciation (EBITDA) scaled by total assets (TA). PPE/TA is plant, property, and equity (PPENT) scaled by total assets. The unit of observation is the firm-year. Panel A (B) reports summary statistics for public firms that exported (imported) at least once in a given year. The sample period is 1994 to 2010. Panel C reports the breakdown of importers and exporters by industry (two-digit NAICS code).

Panel A. Firm Level Data for Exporters						
	MVE	B/M	Leverage	Past Return	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	Past Return	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 II (ctd.)
Summary Statistics

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 III
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 the annual dollar value of imports and exports (in billions) over the sample period (1994 to 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 IV
The Impact of Ethnic Connections on Firm-Level Trade Across All MSAs and All Countries

Panel A presents coefficient estimates of fixed effects regressions of *Export Ratio (ER)* on *Connected Population (CP)* and control variables: $ER_{ict} = b_1 + b_2 * CP_{ct} + b_3 * \text{Connected Board Member} + b_4 * \text{Distance} + \text{Fixed Effects}$. *Export Ratio (ER)* is the total amount a 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 headquarters MSA connected to the export country scaled by the total population of that MSA in the most recent census (CP_{ct}). *Connected Board Member* is a binary variable that takes a value of one if the firm has a board member with an ethnic background the same as the export destination or import origin. Panel B presents coefficient estimates of the following specification: $IR_{ict} = b_1 + b_2 * CP_{ct} + b_3 * \text{Connected Board Member} + b_4 * \text{Distance} + \text{Fixed Effects}$, where *Import Ratio (IR)* is total amount a firm imports from a country in a given year scaled by total amount of imports of the same firm in the same year ($I_{ict} / \text{Sum}(I_{it})$). *Distance* is the (log) distance between the state firm's headquarters is located and the import/export country (in miles). *Population Density* is the population of an MSA scaled by area of MSA ($\times 10^6$). *Literacy* is an MSA's population 7 to 20 years of age attending school scaled by its total population. *Unemployed* is the percent of an MSA's population that is out of job, able to work, and looking for a job. An MSA's number of *Manufacturing Establishment* is calculated per 1000 people. *Payroll* (per person) is the total full-time and part-time payroll of retail establishments in the MSA. t-statistic is clustered by year, is reported below coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Exports							
	Export Ratio (1)	Export Ratio (2)	Export Ratio (3)	Export Ratio (4)	Export Ratio (extensive margin) (5)	Export Ratio (6)	Export Ratio (7)
Connected Population	0.037*** (4.93)	0.047*** (8.43)	0.048*** (8.71)	0.062*** (9.51)	0.0018*** (10.06)	0.032*** (8.38)	0.032*** (8.11)
Distance	-0.038*** (4.84)	-0.038*** (6.76)	-0.043*** (7.57)	-0.035*** (2.86)	-0.0010*** (3.26)	-0.003 (0.73)	-0.003 (0.64)
Connected Board Member							0.016*** (4.03)
Population Density			-0.332 (1.08)				
Literacy			-0.453 (1.06)				
Unemployment			-0.357** (2.57)				
Manufacturing Establishment			-0.212 (1.51)				
Payroll			-0.001 (1.24)				
Year FE	Yes	Subsumed	Subsumed	Yes	Yes	Subsumed	Subsumed
Region FE	Yes	Yes	Yes	Subsumed	Subsumed	Yes	Yes
MSA x Year FE	No	Yes	No	No	No	No	No
State x Year FE	No	No	Yes	No	No	No	No
MSA FE	No	Subsumed	Yes	Subsumed	Subsumed	Subsumed	Subsumed
MSA x Region FE	No	No	No	Yes	Yes	No	No
Firm x Year FE	No	No	No	No	No	Yes	Yes
Adj. R ²	0.02	0.13	0.09	0.11	0.02	0.57	0.57
Number of Observations	80,529	80,529	80,529	80,529	2,966,539	80,529	80,529

Table IV (ctd.)
The Impact of Ethnic Connections on Firm-Level Trade Across All MSAs and All Countries

Panel B: Imports							
	Import Ratio (1)	Import Ratio (2)	Import Ratio (3)	Import Ratio (4)	Import Ratio (extensive margin) (5)	Import Ratio (6)	Import Ratio (7)
Connected Population	0.056*** (5.59)	0.057*** (6.87)	0.058*** (7.01)	0.086*** (10.11)	0.0028*** (9.20)	0.031*** (3.89)	0.031*** (3.86)
Distance	-0.038*** (10.37)	-0.051*** (10.79)	-0.049*** (10.38)	-0.043*** (3.84)	-0.0012*** (3.45)	-0.030*** (6.60)	-0.029*** (6.54)
Connected Board Member							0.014*** (5.10)
Population Density			-0.017*** (7.28)				
Literacy			0.997 (1.91)				
Unemployment			0.261* (2.08)				
Manufacturing Establishment			0.852*** (4.70)				
Payroll			-0.0003 (3.14)				
Year FE	Yes	Subsumed	Subsumed	Yes	Yes	Subsumed	Subsumed
Region FE	Yes	Yes	Yes	Subsumed	Subsumed	Yes	Yes
MSA x Year FE	No	Yes	No	No	No	No	No
State x Year FE	No	No	Yes	No	No	No	No
MSA FE	No	Yes	Yes	Subsumed	Subsumed	Subsumed	Subsumed
MSA x Region FE	No	No	No	Yes	Yes	No	No
Firm x Year FE	No	No	No	No	No	Yes	Yes
Adj. R2	0.05	0.11	0.11	0.11	0.02	0.46	0.47
Number of Observations	84,926	84,926	84,926	84,926	2,634,115	84,926	84,926

Table V
Japanese Internment Camps: Main Analysis

This table presents instrumental variable estimation results using Japanese internment camps. Panels A and B present results for exports (imports) in Columns 1, 2, and 3 (4, 5, and 6). The sample includes only exports to (imports from) Japan. *Export Ratio (ER)* is the total amount a firm exports to a destination country in a year scaled by the total amount of exports of the same firm in the same year ($E_{ict} / \text{Sum}(E_{it})$). *Import Ratio (IR)* is the total amount a firm imports from a country in a year scaled by total imports of the same firm in the same year ($I_{ict} / \text{Sum}(I_{it})$). *Connected Population* is the number of Japanese people in the MSA in which a firm's headquarters is located scaled by the total population of the MSA in the most recent census (CP_{ct}). *Immigration from Asia* is the growth rate of Asian-Pacific Islander ethnicities except Japanese (e.g., Korean, Chinese, Hindu, and Filipino) over 1930 to 1990 period. *Population Density* is the 1940 population (in thousands) scaled by the area of MSA in square miles. *West Coast Dummy* takes a value of one if the internment camp is located in one of the West Coast states (California, Oregon, and Washington). *Distance* is the (log) distance between the MSA in which a firm's headquarters is located and Japan (in miles). *Japanese Population* in 1940 and MSA Population in 2000 are the population in the corresponding years. *Other Asian Ethnicities* in 2000 is the Korean, Chinese, Hindu and Filipino population in an MSA in 2000. Distance and population figures are logged. The instrument, *Japanese Internment*, is a dummy variable that takes a value of one if a firm's headquarter is located within 250 miles of an internment camp. All standard errors are adjusted for clustering at the year level, and t-statistic using these clustered standard errors are included in parentheses below the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: First Stage						
Sample	Exporters	Exporters	Exporters (extensive margin)	Importers	Importers	Importers (extensive margin)
Dependent Variable:	Connected Population (1)	Connected Population (2)	Connected Population (3)	Connected Population (4)	Connected Population (5)	Connected Population (6)
Japanese Internment	0.0037*** (14.960)	0.0016*** (13.040)	0.0018*** (9.950)	0.0052*** (28.930)	0.0021*** (24.560)	0.0022*** (21.160)
Distance	-0.0240*** (21.880)	-0.0042 (6.140)	-0.0043 (5.990)	-0.0256 (25.540)	-0.0038 (9.950)	-0.0041 (6.400)
Immigration from Asia		-0.0001 (3.090)	-0.0001 (3.370)		-0.0001 (5.750)	-0.0001 (5.460)
Population Density		-0.0622 (3.630)	-0.0206 (1.760)		-0.1410 (8.300)	-0.0841 (7.790)
West Coast Dummy		0.0054 (32.190)	0.0063 (37.070)		0.0058 (32.170)	0.0063 (62.470)
Japanese Population in 1940		0.0000 (1.840)	0.0001 (12.500)		-0.0001 (5.860)	0.0001 (11.470)
MSA Population in 2000		-0.0022 (25.180)	-0.0017 (18.890)		-0.0030 (15.020)	-0.0023 (11.270)
Other Asian Ethnicities' Population in 2000		0.0019 (29.200)	0.0015 (30.750)		0.0025 (18.960)	0.0019 (16.210)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R ²	0.63	0.88	0.92	0.70	0.91	0.93
Number of Observations	3,165	3,165	112,366	4,799	4,799	161,159

Table V (ctd.)
Japanese Internment Camps : Main Analysis

Panel B: Second Stage						
Sample	Exporters	Exporters	Exporters (extensive margin)	Importers	Importers	Importers (extensive margin)
Dependent Variable:	Export Ratio (1)	Export Ratio (2)	Export Ratio (3)	Import Ratio (4)	Import Ratio (5)	Import Ratio (6)
Instrumented	13.1909	22.7566	1.7874	10.6300	13.5261	0.5236
Connected Population	(2.810)	(2.850)	(8.260)	(4.510)	(1.810)	(1.830)
Distance	0.0072 (0.060)	-0.2241 (1.890)	0.0021 (0.470)	0.1050 (0.970)	-0.0871 (0.590)	0.0004 (0.100)
Immigration from Asia		0.0050 (0.960)	0.0004 (2.510)		-0.0172 (2.900)	-0.0007 (4.780)
Population Density		-5.2600 (1.440)	0.1430 (0.910)		-27.4000 (6.090)	-0.7370 (5.720)
West Coast Dummy		-0.1453 (2.720)	-0.0098 (3.980)		-0.2495 (3.920)	-0.0078 (3.390)
Japanese Population in 1940		-0.0024 (0.460)	-0.0001 (0.680)		0.0115 (6.070)	0.0002 (2.420)
MSA Population in 2000		0.0017 (0.080)	0.0015 (1.880)		-0.0550 (2.100)	-0.0021 (1.940)
Other Asian Ethnicities in 2000		-0.0136 (0.790)	-0.0029 (5.610)		0.0286 (1.350)	0.0008 (0.970)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R ²	0.03	0.03	0.03	0.03	0.05	0.05
Underidentification test						
F-stat (Kleibergen-Paap)	10.41	11.09	10.338	14.8	13.71	13.92
Weak identification test						
F-stat (Kleibergen-Paap)	223.73	169.97	99.04	836.83	603	447.93
Number of Observations	3,165	3,165	112,366	4,799	4,799	161,159

Table VI (ctd.)
Japanese Internment Camps: Placebo Tests and Supporting Evidence

Panel B: Differences in Urbanization Measures between Japanese Internment MSAs and Census year X Population Density Matched MSAs				
Census	Literate (1)	Unemployment (2)	Manufacturing Establishment (3)	Payroll (4)
1930	-0.48%	0.12%	-5.32	0.47%
z-stat	(0.35)	(0.61)	(0.05)	(1.42)
1940	0.31%	-0.23%	-40.6	0.37%
z-stat	(0.20)	(0.84)	(0.46)	(1.47)
1990	-0.99%	0.97%	4.13	0.08%
z-stat	(0.78)	(1.52)	(1.28)	(0.40)

Panel C: Differences in <i>Future</i> Population densities between Japanese Internment MSAs and 1940-Population Density Matched MSAs		
	1990 Census (1)	2000 Census (2)
Population Density	67.53	82.65
z-stat	(1.16)	(1.23)

Panel D: Firm Characteristics of Japanese Trade Partner							
	Firms Outside of Camp Area with Japanese Trade (N=1,148)			Firms Around Camps with Japanese Trade (N=348)			t-stat (7)
	Mean (1)	Median (2)	SD (3)	Mean (4)	Median (5)	SD (6)	
MVE	3,725.21	436.14	14,039.88	4,286.92	369.84	20,010.46	-0.49
Assets	5,629.08	505.80	31,698.63	5,030.09	298.94	34,881.36	0.29
Employees	12.80	2.94	31.70	11.23	1.33	68.06	0.42
Tobin's Q	1.69	1.42	0.84	2.02	1.74	1.05	-5.37
Sales growth	0.09	0.08	0.11	0.10	0.11	0.16	-1.47
CAPX/Sales	0.07	0.04	0.11	0.09	0.04	0.17	-2.38

Panel E: Firm Characteristics of within treated MSAs (trading with Japan vs. Not Trading With Japan)							
	Firms with total trade with Japan < 10% of International Trade Volume (N=711)			Firms with total trade with Japan > 10% of International Trade Volume (N=128)			t-stat (7)
	Mean (1)	Median (2)	SD (3)	Mean (4)	Median (5)	SD (6)	
MVE	2664.90	277.96	14379.81	2199.73	340.33	6868.73	0.57
Assets	2711.85	187.78	24427.91	2247.66	239.68	7076.40	0.42
Employees	6.54	0.65	48.27	5.96	1.13	18.42	0.24
Tobin's Q	2.23	1.93	1.14	2.13	1.71	1.22	0.84
Sales growth	0.11	0.11	0.19	0.10	0.10	0.15	0.71
CAPX/Sales	0.10	0.05	0.17	0.11	0.05	0.23	-0.63

Table VI (ctd.)
Japanese Internment Camps: Placebo Tests and Supporting Evidence

Panel F. Firm Characteristics within MSAs that had the camps vs. firms within closest 3 1940-Population Density Matched MSAs							
	Firm in treated MSAs			Firms in matched MSAs			t-stat
	(N=839)			(N=668)			
	Mean (1)	Median (2)	SD (3)	Mean (4)	Median (5)	SD (6)	(7)
MVE	2,593.93	296.82	13,504.54	2,302.70	229.94	11,541.60	0.12
Assets	2,641.04	194.16	22,653.77	3,884.04	231.97	25,878.70	1.18
Employees	6.46	0.68	45.02	7.07	1.31	21.04	0.75
Tobin's Q	2.21	1.89	1.16	2.04	1.99	1.02	-1.39
Sales growth	0.10	0.11	0.18	0.09	0.08	0.16	-1.34
CAPX/Sales	0.10	0.05	0.18	0.08	0.04	0.12	-2.60

Panel G: Top U.S. Trading Partners			
	Public Firms		
	% Imports (1)	% Exports (2)	
Japan	11.38%	6.19%	
China	5.30%	13.63%	
Germany	3.13%	1.96%	
Canada	6.37%	6.98%	
Mexico	2.70%	4.22%	

Table VII
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 ethnic composition of the MSA in which the firm's headquarters is located. We use the American Communities Project (ACP) ethnicity classifications, and match these to destination countries as shown in Internet Appendix Table IA II. 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 U.S. 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 U.S. 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 EBITDA in year $t+1$ divided by 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* (Cash in year $t+1$ divided by assets in year t). Fixed effects for time (year) and firm are included in all regressions. t -statistics, clustered by year, are reported below the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Sales _{<i>t</i>+1} /Assets _{<i>t</i>}		EBITDA _{<i>t</i>+1} /Assets _{<i>t</i>}		Sales _{<i>t</i>+1} /Assets _{<i>t</i>}		EBITDA _{<i>t</i>+1} /Assets _{<i>t</i>}	
	(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 _{<i>t</i>+1} /A _{<i>t</i>}		-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
Adj. R ²	0.88	0.89	0.68	0.69	0.89	0.90	0.66	0.68
Number of Observations	14,260	14,203	14,205	14,152	17,412	17,345	17,343	17,279

Table VIII
The Impact of Resident Networks on Mergers and Acquisitions (M&A)

This table presents coefficient estimates of fixed effects regressions of *M&A Target* on *Connected Population (CP)* and control variables: $M\&A\ Target_{ict} = b_1 + b_2 * CP_{ct} + b_3 * Connected\ Board\ Member + Year\ Fixed\ Effects + Country\ Fixed\ Effect$. For a given firm in a given year, the sample contains all foreign countries, some of which may have a M&A target. The left-hand side variable, *M&A Target*, takes a value of one for observations in which the M&A target is in a given country in that year. *Number of Firms in Country* is the total number of M&A targets in a given country. *Number of Mergers* is the total number of M&A deals firm had in a given year. *Connected Population* refers to the number of residents in the MSA in which a firm's headquarter is located that are connected to a foreign country scaled by the total population in that MSA (CP_{ct}), and *Connected Board Member* takes the value of one if the firm has a board member who has an ethnicity tie to that country. t-statistics, adjusted for clustering at the year level, are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	M&A Target	M&A Target	M&A Target
Connected Population	0.0362*** (7.57)	0.0369*** (7.48)	0.0362*** (6.37)
Connected Board Member		0.0290*** (2.08)	0.0275*** (3.30)
Number of Firms in Country	0.0024*** (7.41)	0.0024*** (7.44)	Subsumed
Number of Mergers	0.0239*** (18.54)	0.0239*** (18.72)	0.0239*** (50.90)
Year Fixed Effects	Yes	Yes	Subsumed
Country Fixed Effects	Yes	Yes	Subsumed
Country x Year	No	No	Yes
Adj. R ²	0.115	0.060	0.112
Number of Observations	102,584	102,584	102,584

Table IX
The Impact of Resident Networks on Segment Sales

This table presents coefficient estimates of fixed effects regressions of *Segment Sales Ratio* on *Connected Population (CP)* and control variables: $Segment\ Sales\ Ratio_{ict} = b_1 + b_2 * CP_{ct} + b_3 * Connected\ Board\ Member + Year\ Fixed\ Effects + Country\ Fixed\ Effects$. *Segment Sales Ratio* is the sales of a foreign segment scaled by the total sales reported in all foreign segments in that year. *Number of Firms in Country* is the total number of firms reporting a segment sale in that country. *Number of Countries* is the total number of countries a firm reported in its segment files. If the reported segment is a country, *Connected Population* is the number of residents in a firm's headquarters MSA connected to the export country scaled by the total population of that MSA in the most recent census (CP_{ct}), and *Connected Board Member* takes the value of one if the firm has a board member who has an ethnicity tie to that country. If the reported segment is a region, *Connected Population* refers to the average of individual counties' connected population in a firm's headquarter MSA scaled by the total population in that MSA, and *Connected Board Member* is the sum of connected board member values attached to each country in that region. t-statistics, adjusted for clustering at the year level, are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Segment Sale Ratio (1)	Segment Sale Ratio (2)	Segment Sale Ratio (3)
Connected Population	0.08722*** (5.83)	0.05267*** (3.60)	0.0562*** (3.97)
Connected Board Member			0.0040*** (7.37)
Number of Firms in Country		0.0001 (0.50)	0.00003 (0.60)
Number of Countries		-0.0054*** (17.53)	-0.0054*** (17.91)
Year Fixed Effects	Yes	Yes	Yes
Country/Region Fixed Effects	Yes	Yes	Yes
Adj. R2	0.192	0.328	0.334
Number of Observations	39,140	39,140	39,140

Table X
Mechanism: Tariffs and Differentiated Product Analysis

This table presents coefficient estimates of fixed effects regressions of the product import ratio (PIR) on Connected Population (CP), Tariffs, and control variables: $PIR_{i_{cpt}} = b_1 + b_2 * CP_{ct} + b_3 * Tariff + b_4 * CP_{ct} \times Tariff + Fixed\ Effects$. *Product Import Ratio (PIR)* is total amount a firm imports a given product from a foreign country in a given year scaled by total amount of imports of the same firm in the same year ($I_{i_{cpt}} / \text{Sum}(I_{it})$). *Connected Population* is the number of residents in a firm's headquarters MSA connected to the export country scaled by the total population of that MSA in the most recent census (CP_{ct}). *Tariff* is the value of the U.S. tariff on the product to the given country, taken from the TRAINS data set maintained by United Nations Conference on Trade and Development (UNCTAD). In the last two columns, we introduce a variable that indicates whether the product is a differentiated product as defined by Rauch (1999). Fixed effects for firm, year, and product are included where indicated. t-statistics, clustered by year, are reported below coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Product Import Ratio (1)	Product Import Ratio (2)	Product Export Ratio (3)
Connected Population	0.0105 (0.98)	0.00434** (2.48)	0.0079*** (5.23)
Tariff	0.0001 (0.75)		
Connected Population x Tariff	-0.0018*** (3.19)		
Differentiated Product		0.0020*** (8.89)	0.0050*** (9.85)
Connected Population x Differentiated Product		0.0027*** (3.95)	-0.0010 (1.67)
MSA Fixed Effects	Absorbed	Absorbed	Absorbed
Firm x Year Fixed Effects	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes
Adj. R ²	0.40	0.63	0.64
Number of Observations	34,062	563,563	422,237

Table XI
Mechanism: The Impact of Resident Networks on Shipment Prices

In the first (second) column, the left hand side is the median price (logged) of a product that firms located in a given MSA exported to (imported from) a given country. In the third (fourth) column, the left-hand side is the price (logged) of a product a given firm exported to (imported from) a given country. Regressors include *Connected Population*, which is the number of residents in a firm's headquarters MSA connected to the export country scaled by the total population of that MSA in the most recent census. *Connected Board Member* is a binary variable that takes a value of one if the firm has a board member with an ethnic background the same as the export destination or import origin. We include triple interaction fixed effects (Product x Year x Country) to capture variation coming from a given product exported to a given country in a given year. We also include MSA fixed effect to capture price variation due to a firm's location. In the second column, we use price (logged) of a product (HS Code) in a given MSA imported from a given country. t-statistics, clustered by year, are reported below the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Log (Price) (1)	Log (Price) (2)	Log (Price) (3)	Log (Price) (4)
	Exports	Imports	Exports	Imports
Connected Population	0.075*** (3.98)	-0.001 (0.13)	0.0875*** (4.73)	0.0061 (0.46)
Connected Board Member			0.0009 (0.16)	-0.0095** (2.10)
Product x Year x Country Fixed Effects	Yes	Yes	Yes	Yes
MSA Fixed Effects	Yes	Yes	Yes	Yes
Adj. R ²	0.82	0.84	0.83	0.85
Number of Observations	402,738	498,920	451,859	563,058

¹ See also Gould (1994), Rauch (2001), Rauch and Trindade (2002), and Casella and Rauch (2002) for theory and evidence on information-sharing networks among internationally dispersed ethnic minorities.

² For broader evidence on the impact of firm-level networks, see Hidalgo, Klinger, Barabási and Hausmann (2007) for evidence on how the network connectedness of products impacts country-level development, and Acemoglu, Carvalho, Ozdaglar and Tahbaz-Salehi (2012) for evidence that microeconomic idiosyncratic shocks can be transmitted through supplier-customer links and impact aggregate volatility in the economy.

³ See also Falck, Guenther, Heblich, and Kerr (2013) who analyze the movement of the machine tool industry from the Soviet zone of post-war Germany to western regions in the wake of World War II.

⁴ Our paper is also related to a large literature on limited attention, as evidence in Appendix Tables IA XIII- IA XVI shows that market participants respond to resident network-related value creation with a delayed reaction. In economies populated by investors subject to binding attention and resource constraints, delayed information flows may lead to expected returns that are not explained by traditional asset pricing models (e.g. Merton (1987), Hong and Stein (1999), and Hirshleifer and Teoh(2003)). Subsequent empirical studies find evidence consistent with predictions of these models (see, Huberman and Regev (2001), Barber and Odean (2008), Da, Gurun, and Warachka (2014), DellaVigna and Pollet (2006), Hou (2007), Hong, Torous, and Valkanov (2007), Cohen and Frazzini (2008), Huang (2012), Cohen and Lou (2012), Cohen, Diether, and Malloy (2013), and Nguyen (2011)).

⁵ Harmonized System (HS) is a standard classification system for internationally traded products. It is developed and maintained by the [World Customs Organization](#) (WCO).

⁶ According to U.S. Customs and Border Protection rules, importers may request that their company name not be disclosed on vessel manifests, and on occasion these requests are granted for a period of two years. (<http://www.gpo.gov/fdsys/pkg/CFR-2009-title19-vol1/pdf/CFR-2009-title19-vol1-sec103-31.pdf>).

Our sample would not contain these firms. Inspection of our sample indicate that almost all large firms exist in our sample without a two-consecutive-year break, which suggests that firms that constitute the majority of import activity have not applied for (and been granted) privacy protection over the sample period.

⁷ See <http://www.s4.brown.edu/cen2000/data.html>.

⁸ See <http://www.census.gov/geo/www/gazetteer/gazette.html>.

⁹ If we instead scale by the total amount of exports of all U.S. public firms to the given country in the same year, we continue to find strong and significant results. The magnitudes are actually quite similar, on average roughly 4 to 7% larger than in Table IV, with each specification highly statistically significant ($p < 0.01$).

¹⁰ We have also run these analyses clustering standard errors at the firm level, MSA level, and state level, which give comparable standard errors, and all results remain significant. Appendix IA V presents additional specifications, and we find that the results are robust to the inclusion of various other fixed effects (e.g., firm x region fixed effects). Internet Appendix Table IA VI also presents the results for alternate definitions of *Connected Population*, for example; a) using information on European nationalities to further refine the “white” category; b) excluding the white ethnicity category entirely, and c) including ethnicity information on African nations. All of these specifications produce similar results.

¹¹ These results are even stronger if we separate sample firms into highly concentrated firms (i.e., those that operate primarily in their state of headquarters, using the data from Garcia and Norli (2012) to classify firms in this way) versus geographically dispersed firms. In particular, *Connected Population* is a significantly stronger predictor of exports for concentrated firms than for dispersed firms.

¹² These tests are constructed similarly to those in the other columns of Table IV, except that here we include all possible trade partners in the world (whether or not the firm traded with these nations); if the firm trade with this country, the left-hand-side variable is set equal to one, while if it did not, the left-hand side variable is set to zero.

¹³ The order authorizing the creation of the camps and the relocations themselves was Executive Order 9066, signed into law on February 19, 1942. According to the Institute for Research of Expelled Germans, “After the bombing of Pearl Harbor in 1941, the United States government evicted nearly 120,000 residents of Japanese descent from the Pacific coast (Toye, 2008)... Almost seventy percent were American citizens who were either naturalized or born in the country (DiStasi, 2001). Simultaneously, the FBI orchestrated the transfer of 2,264 ethnic Japanese from Colombia, Peru, Chile, and Panama to camps in the United States (Friedman, 2003). At the same time, the US government surveilled, arrested, and interned at least 10,905 ethnic Germans and 288 Italians alongside the Japanese (Krammer, 1989). Almost the entire Japanese population was evacuated, including citizens and non-citizens. Although many German and Italian internees had US citizenship, the internment of European enemy nationalities focused on illegal aliens.” (see: Institute for Research of Expelled Germans. "Comparing the American Internment of Japanese-, German-, and Italian-Americans during World War II." <http://expelledgermans.org/germaninternment.htm> (accessed 1-1-2014)).

¹⁴ There were three types of camps: 1) Civilian Assembly Centers, which were temporary camps where the detainees were sent as they were removed from their communities; 2) Relocation Centers, which were internment camps where detainees were sent following their temporary imprisonment at the Civilian Assembly Centers (we use these Relocation Centers as our instrument), and 3) Justice Department detention camps, which mainly housed German-American and Italian-American detainees in addition to Japanese-Americans.

¹⁵ These results are robust to a variety of different specifications. For example, if we define the relevant population at the (coarser) state level (as in Internet Appendix Table IA IV), as opposed to at the MSA level, we find very similar results. Table IA VIII provides additional specifications for these IV regressions, including clustering by MSA, and Table IA IX shows the results for simple OLS specifications as opposed to the IV approach. The implied magnitudes in the OLS tests are somewhat smaller than the IV results, however (24% for exports, as opposed to 67% from Table IV; and 52% for imports, as opposed to 101% from Table IV).

¹⁶ Results are similar if we use a 125-mile radius (which reduces the total treatment area by 75%), as shown in Internet Appendix Table IA X. When we use a continuous measure (Japanese internment population as a share of total MSA population) instead of this dummy variable (see Table IA XI), the results are very similar in magnitude and significance.

¹⁷ For a copy of the full 1940 census instructions, see

<http://1940census.archives.gov/downloads/instructions-to-enumerators.pdf>.

¹⁸ We run these tests at the trading firm level (importing or exporting), that is, on the same sample on which we run the second stage tests on trade decisions. In Table VI, Panel A below we run the same regression on the pure cross-section of MSAs and find similarly strong results in terms of magnitude and significance.

¹⁹ We also run these tests after removing *all* observations from any state along the West Coast, and continue to find economically large and statistically significant results.

²⁰ In Panel A of Internet Appendix Table IA XII we show that the second-stage results using the instrumented values from this pure cross-sectional test are very similar in magnitude and significance to those reported in Table IV.

²¹ We also examine whether the MSAs in Washington state (located on the West Coast, but with no “treated” areas) look more like those on the East coast on the dimensions we evaluate in Table VI Panel B (e.g., literacy rate, unemployment rate, manufacturing presence, and payroll per person) or like other West Coast cities. We find no statistically significant differences between MSAs in Washington and population density-matched MSAs along the rest of the West Coast (constructed as in Table V Panel B). We also find no statistically significant differences between Washington MSAs and those on the East Coast, lending credence to our matching procedure adjusting for many of the cross-sectionally observable differences across MSAs.

²² These data come from <http://www.sister-cities.org/>.

²³ 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).

²⁴ Our results are similar if we measure export intensity on a within-firm basis (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 the top 3 ranking. Additionally, our results are virtually identical if we use firm-level export shares to a given industry rather than absolute amounts. For example, if Firm A exports \$100 worth of materials to Italy and \$100 to Germany while Firm B exports \$10 worth to Italy and \$5 to Germany, in absolute terms Firm A exports more, but its within-firm share (50%) would be smaller than that of Firm B (66%). Finally, Internet Appendix Table IA XIII shows that if we expand the export intensity threshold to include all firms with above-median export intensity, rather than just the top 3, we again find similar results.

²⁵ These results can be found in the Internet Appendix Table IA XIV (which reports calendar-time portfolio returns to strategic importers/exporters), Table IA XV (which reports results of Fama-MacBeth (1973) cross-sectional return regressions including the Connected Board dummy variable), and Table IA XVI (which presents analyst forecast errors and earnings surprises associated with strategic trading behavior).

²⁶ Our results are not sensitive to whether we define the merger opportunity set: (1) excluding countries that have never attracted a U.S. acquirer for one of its firms over the past 5 years, or (2) including only those countries that have attracted a U.S. acquirer in that particular year.

²⁷ Internet Appendix Table IA XVII presents additional specifications for these tests.

²⁸ We thank James Rauch for providing product classifications (http://weber.ucsd.edu/~jrauch/research_international_trade.html).

We use the conversion tables maintained by the United Nations to map these Standard International Trade Classification (SITC Rev. 2) codes to HS Codes used in vessel manifests (<http://unstats.un.org/unsd/trade/conversions/HS%20Correlation%20and%20Conversion%20tables.htm>).

²⁹ Our data provider, PIERS, estimates waterborne values using information on product type, U.S. port cluster, direction, and country. In our email exchanges with the company, they disclosed that export and import transactions use separate inputs in the estimation of the waterborne value.

**Internet Appendix to
“Resident Networks and Corporate Connections:
Evidence from World War II Internment Camps”**

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This document is an appendix to the main article.¹ In this document we include a series of additional tables that provide robustness checks and ancillary findings for the interested reader. The tables we include are as follows:

- Table IA I : Summary Statistics for Firms that Do Not Import/Export
- Table IA II: Country-MSA Population-Global Region Mapping
- Table IA III: Country-to-State-Level Census Ethnicity Mapping
- Table IA IV: Using State-Level Connected Population Across All States and All Countries
- Table IA V: The Impact of Ethnic Connections on Firm-Level Trade Across All MSAs and All Countries (Additional Specifications)
- Table IA VI: The Impact of Ethnic Connections on Firm-Level Trade Across All MSAs and All Countries (Revised Population Definitions)
- Table IA VII: The Impact of Ethnic Connections on Firm-Level Trade Across All MSAs and All Countries (Industry Split)
- Table IA VIII: Instrumental Variable Analysis Japanese Internment Camps (Additional Specifications, Including Clustering by MSA)
- Table IA IX: OLS Analysis: Japanese Internment Camps
- Table IAX: Instrumental Variable Analysis: Japanese Internment Camps (Using 125-Mile Threshold)
- Table IA XI: Instrumental Variable Analysis with Continuous Measure: Japanese Internment Camps
- Table IA XII: Instrumental Variable Analysis with First Stage Estimated Only with Cross-Sectional MSA Data; and Analysis of Japanese Population Directly Following Camp Closures
- Table IA XIII: Real Effects of Strategic Trading Activity (Alternative Definition of Top Exporters)
- Table IA XIV: Portfolio Returns to Strategic Trading Activity
- Table IA XV: Connected Board Members and Returns
- Table IA XVI: Errors in Analyst Forecasts and Earnings Surprises

¹ Cohen, Lauren, Umit G. Gurun, and Christopher Malloy, Internet Appendix for “Resident Networks and Corporate Connections: Evidence from World War II Internment Camps,” *Journal of Finance* [DOI String]. Please note: Wiley-Blackwell is not responsible for the content or functionality of any additional information provided by the authors. Any queries (other than missing material) should be directed to the authors of the article.

- Table IA XVII: Tariff and Differentiated Product Analysis (Additional Specifications)
- Table IA XVIII: Instrumental Variable Analysis: Japanese Internment Camps (Firms Founded before WWII)

Table IA I
Summary Statistics for Firms that Do Not Import/Export

This table provides summary statistics for publicly traded firms that do not engage in import (or export) activities. *MVE* is the market value of equity, calculated as the price at the end of the calendar year prior to the fiscal year-end multiplied by the number of shares outstanding. *B/M* is the book-to-market ratio, where the book value of equity is calculated as the sum of stockholders equity (SEQ), *Deferred Tax* (TXDB), and *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. *Past Return* is the 12-month return prior to the fiscal year-end. *ROA* (return on assets) is earnings before tax and depreciation (EBITDA) scaled by total assets (TA). *PPE/TA* is the ratio of plant, property, and equity (*PPENT*) to total assets. The unit of observation is the firm-year. Panel A (B) reports summary statistics for public firms that did not export (import) at all over the sample period (1994 to 2010).

Panel A: Firm-Level Data for Non-Exporters						
	MVE	B/M	Leverage	Past Return	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	Past Return	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 IA II
Country-MSA Population-Global Region Mapping

This table reports mappings between country names, MSA (metropolitan statistical area) population ethnicity categories, and global region codes.

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

Table IA III
Country-to-State-Level Census Ethnicity Mapping

This table reports mappings between country names and state-level census ethnicity categories.

	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	Czech Republic	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	South Africa	White
25	Guatemala	Hispanic	60	Switzerland	White
26	Haiti	Hispanic	61	Taiwan, China	Chinese
27	Honduras	Hispanic	62	Thailand	Filipino
28	Hong Kong	Chinese	63	Turkey	White
29	Hungary	White	64	Ukraine	White
30	Iceland	White	65	United Kingdom	White
31	India	Indian	66	Uruguay	Hispanic
32	Indonesia	Filipino	67	Venezuela	Hispanic
33	Ireland	White	68	Vietnam	Vietnamese
34	Israel	White	69	Croatia/Serbia/Bosnia	White
35	Italy	White			

Table IA IV
Using State-Level Connected Population Across All States and All Countries

Panel A of this table presents coefficient estimates of fixed effects regressions of *Export Ratio* (ER) on *Connected Population* (CP) and control variables: $ER_{it} = b_1 + b_2 * CP_{it} + b_3 * \text{Connected Board Member} + \text{Fixed Effects}$. *Export Ratio* (ER) is the total amount a firm exports to a destination country in a given year scaled by the total amount of exports of the same firm in the same year ($E_{it} / \text{Sum}(E_{it})$). *Connected Population* is the number of residents in the state in which a firm's headquarters is located that are connected to the export country, scaled by the total population in that state (CP_{it}). *Connected Board Member* is a binary variable that takes a value of one if the firm has a board member with an ethnic background similar to the export destination or import origin. Panel B of this table presents coefficient estimates of the following specification: $IR_{it} = b_1 + b_2 * CP_{it} + \text{Fixed Effects}$, where *Import Ratio* (IR) is the total amount a firm imports from a country in a given year scaled by the total amount of imports of the same firm in the same year ($I_{it} / \text{Sum}(I_{it})$). *t*-statistics, clustered by year, are reported below the 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
	(1)	(2)	(3)	(4)
Connected Population	0.027*** ¹	0.025**	0.313***	0.027***
	(2.70)	(2.50)	(5.13)	(2.94)
Connected Board Member				0.012***
				(3.31)
Firm Fixed Effects	Yes	No	No	No
Year Fixed Effects	Yes	No	No	No
Firm x Year Fixed Effects	No	Yes	No	Yes
Ethnicity Fixed Effects	Yes	Yes	Yes	Yes
State x Partner Country Fixed Effects	No	No	Yes	No
Adj. R ²	0.48	0.64	0.04	0.64
Number of Observations	106,788	106,788	106,788	106,788

Table IA IV (Ctd.)
Using State-Level Connected Population Across All States and All Countries

Panel B: Imports				
	Import Ratio	Import Ratio	Import Ratio	Import Ratio
	(1)	(2)	(3)	(4)
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
Firm x Year Fixed Effects	No	Yes	No	Yes
Ethnicity Fixed Effects	Yes	Yes	Yes	Yes
State x Partner Country Fixed Effects	No	No	Yes	No
Adj. R ²	0.39	0.57	0.06	0.57
Number of Observations	103,829	103,829	103,829	103,829

Table IA V
The Impact of Ethnic Connections on Firm-Level Trade Across All MSAs and All Countries
(Additional Specifications)

This table presents coefficient estimates of the following specification for the *Import Ratio* (*Export Ratio*) on *Connected Population* (*CP*) and control variables: IR_{it} (ER_{it}) = $b_1 + b_2 * CP_{it} + Fixed\ Effects$, where *Import Ratio* (*IR*) is the total amount a firm imports from a country in a given year scaled by the total amount of imports of the same firm in the same year ($I_{it} / \text{Sum}(I_{it})$). *Export Ratio* (*ER*) is the total amount a firm exports to a destination country in a given year scaled by total amount of exports of the same firm in the same year ($E_{it} / \text{Sum}(E_{it})$). *Connected Population* is the number of residents in the MSA in which a firm's headquarters is located in that are connected to the export country, scaled by the total population in that MSA in the most recent census (CP_{it}). *t*-statistics, clustered by year, are reported below the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Import Ratio (1)	Import Ratio (extensive margin) (2)	Import Ratio (3)	Export Ratio (4)	Export Ratio (extensive margin) (5)	Export Ratio (6)
Connected Population	0.022** (2.00)	0.0578*** (25.56)	0.052*** (7.26)	0.039*** (5.14)	0.0457*** (30.34)	0.019*** (3.98)
Firm Fixed Effects	Yes	No	No	Yes	No	No
Year Fixed Effects	Yes	No	Yes	Yes	No	Yes
Country Fixed Effects	Yes	No	No	Yes	No	No
State x Partner Country Fixed Effects	No	Yes	No	No	Yes	No
Firm x Region Fixed Effects	No	No	Yes	No	No	Yes
Adj. R ²	0.39	0.003	0.64	0.46	0.002	0.63
Number of Observations	84,296	2,634,115	84,296	80,529	2,966,539	80,529

Table IA VI
The Impact of Ethnic Connections on Firm-Level Trade Across All MSAs and All Countries
(Revised Connected Population Definitions)

Columns 1, 3, and 5 of this table present coefficient estimates of fixed effects regressions of *Export Ratio (ER)* on *Connected Population (CP)* and control variables: $ER_{it} = b_1 + b_2 * CP_{it} + b_3 * Connected\ Board\ Member + Fixed\ Effects$. *Export Ratio (ER)* is the total amount a given firm exports to a destination country in a given year scaled by the total amount of exports of the same firm in the same year ($E_{it} / \text{Sum}(E_{it})$). Columns 2, 4, and 6 report the fixed effects regression estimates for $IR_{it} = b_1 + b_2 * CP_{it} + b_3 * Connected\ Board\ Member + Fixed\ Effects$, where *Import Ratio (IR)* is the total amount a given firm imports from a country in a given year scaled by the total amount of imports of the same firm in the same year ($I_{it} / \text{Sum}(I_{it})$). Connected Population is the number of residents in the MSA in which a firm's headquarters is located in that are connected to the export country, scaled by the total population in that MSA in the most recent census (CP_{it}). Connected Board Member is a binary variable that takes a value of one if the firm has a board member with an ethnic background the same as the export destination. In the first two columns, we use country of origin information on the following nations to redefine Connected Population: Germany, England, Ireland, Italy, Poland, and Russia. In columns 3 and 4, we exclude white ethnicity from the analysis. In the last two columns, we include trade and connected population information on counties in Africa to redefine Connected Population. *t*-statistics, clustered by year, are reported below the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Export Ratio (1)	Import Ratio (2)	Export Ratio (3)	Import Ratio (4)	Export Ratio (5)	Import Ratio (6)
Connected Population	0.046*** (5.29)	0.023* (1.82)	0.036** (2.29)	0.037* (1.87)	0.016* (1.75)	0.024*** (4.83)
Connected Board Member	0.014*** (3.35)	0.014*** (4.73)	0.015*** (3.23)	0.013*** (3.05)	0.041*** (4.26)	0.039*** (3.39)
Year Fixed Effects	Subsumed	Subsumed	Subsumed	Subsumed	Subsumed	Subsumed
MSA Fixed Effects	Subsumed	Subsumed	Subsumed	Subsumed	Subsumed	Subsumed
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm x Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R ²	0.59	0.60	0.48	0.61	0.49	0.60
Number of Observations	80,529	84,926	68,771	63,178	89,800	88,629

Table IA VII
The Impact of Ethnic Connections on Firm-Level Trade Across All MSAs and All Countries
(Industry Split)

This table reports the fixed effects regression estimates for $IR_{it} = b_1 + b_2 * CP_{it} + b_3 * Connected\ Board\ Member + Fixed\ Effects$, where *Import Ratio (IR)* is the total amount a given firm imports from a country in a given year scaled by the total amount of imports of the same firm in the same year ($I_{it} / \text{Sum}(I_{it})$). *Connected Population* is the number of residents in the MSA in which a firm's headquarters is located in that are connected to the import country, scaled by the total population in that MSA in the most recent census (CP_{it}). *Connected Board Member* is a binary variable that takes a value of one if the firm has a board member with an ethnic background the same as the export destination. The first two columns use the sample in which the first two digits of the NAICS code is 21 or 22 (e.g., Utilities and Mining industries). In the last two columns, we use all industries excluding NAICS codes 42, 43, 44, and 45 (e.g., Wholesale Trade and Retail Trade). *t*-statistics, clustered by year, are reported below the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Import Ratio (1)	Import Ratio (2)	Import Ratio (3)	Import Ratio (4)
Connected Population	0.115*** (3.18)	0.116*** (3.28)	0.051*** (3.42)	0.054*** (3.69)
Connected Board Member		0.031 (0.76)		0.016*** (4.99)
Year Fixed Effects	Subsumed	Subsumed	Subsumed	Subsumed
MSA Fixed Effects	Subsumed	Subsumed	Subsumed	Subsumed
Region Fixed Effects	Yes	Yes	Yes	Yes
Firm x Year Fixed Effects	Yes	Yes	Yes	Yes
Adj. R ²	0.45	0.46	0.48	0.48
Number of Observations	1,947	2,111	68169	68169

Table IA VIII
Instrumental Variable Analysis: Japanese Internment Camps (Additional Specifications, Including Clustering By MSA)

This table presents the instrumental variable estimation for exports (imports) in Columns 1 and 2 (3 and 4) of Panels A and B. The sample includes only the exports to (imports from) Japan. *Export Ratio* (*ER*) is the total amount a firm exports to a destination country in a given year scaled by the total amount of exports of the same firm in the same year ($E_{it} / \text{Sum}(E_{it})$). *Import Ratio* (*IR*) is the total amount a firm imports from a country in a given year scaled by the total amount of imports of the same firm in the same year ($I_{it} / \text{Sum}(I_{it})$). Connected Population is the number of Japanese residents in the MSA in which a firm's headquarters is located in that are connected to the export (import) country, scaled by the total population in that MSA in the most recent census (CP_{ct}). The instrument, Japanese Internment, is a dummy variable that takes a value of one if the headquarters of the firm is located within 250 miles of an internment camps. Immigration from Asia refers to the growth rate of Asian-Pacific Islander ethnicities except Japanese (i.e., Korean, Chinese, Hindu, and Filipino), over the 1930 to 1990 period. All standard errors are adjusted for clustering at the MSA level, and *t*-statistics using these clustered standard errors are included in parentheses below the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: First Stage				
Sample:	Exporters	Exporters	Importers	Importers
Dependent Variable:	Connected Population	Connected Population	Connected Population	Connected Population
	(1)	(2)	(3)	(4)
Japanese Internment	0.0069*** (3.98)	0.0065*** (3.78)	0.0091*** (4.79)	0.0087*** (4.57)
Immigration from Asia		-0.0007*** (2.23)		-0.0007*** (2.31)
Year Fixed Effects	Yes	Yes	Yes	Yes
Adj. R ²	0.60	0.62	0.70	0.71
Number of Observations	3165	3165	4804	4804
Panel B: Second Stage				
Sample:	Exporters	Exporters	Importers	Importers
Dependent Variable:	Export Ratio	Export Ratio	Import Ratio	Import Ratio
	(1)	(2)	(3)	(4)
Instrumented Connected Population	13.050*** (3.61)	13.271*** (3.43)	8.80** (2.38)	8.26** (2.07)
Immigration from Asia		0.0030 (0.34)		-0.0086* (0.82)
Year Fixed Effects	Yes	Yes	Yes	Yes
Adj. R ²	0.03	0.03	0.04	0.04
Number of Observations	3165	3165	4804	4804

Table IA IX
OLS Analysis: Japanese Internment Camps

This table presents the OLS estimation for specifications reported in Table IV in the main text. Connected Population is the number of Japanese people in the MSA in which a firm's headquarters is located, scaled by the total population of the MSA in the most recent census (CP_{it}). Immigration from Asia refers to the growth rate of Asian-Pacific Islander ethnicities except Japanese (i.e., Korean, Chinese, Hindu, and Filipino), over the 1930 to 1990 period. *Population Density* refers to 1940 population (in thousands) scaled by area of MSA per square mile. *Other Asian Ethnicities* refers to Korean, Chinese, Hindu, and Filipino population in an MSA (in millions). West Coast Dummy takes a value of one if the internment camp is located in one of the west coast states (i.e., California, Oregon, and Washington). *Distance to Japan* is the distance of the state in which the MSA is located to Japan in miles. *Japanese Population in 1940* and *MSA Population in 2000* refer to the population in the corresponding years. Distance and population figures are logged. All standard errors are adjusted for clustering at the year level, and *t*-statistics using these clustered standard errors are included in parentheses below the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Dependent Variable:	Exporters		Importers	
	Export Ratio	Export Ratio	Import Ratio	Import Ratio
	(1)	(2)	(3)	(4)
Connected Population	4.694** (2.39)	7.700** (2.13)	5.523** (2.48)	8.918*** (3.49)
Distance to Japan	-0.254*** (3.13)	-0.286** (2.36)	-0.353*** (4.01)	-0.056 (0.52)
Immigration from Asia		0.005 (0.64)		-0.014** (2.08)
Population Density		-9.860 (1.32)		-11.500* (1.88)
West Coast Dummy		-0.054 (1.25)		-0.150*** (3.92)
Japanese Population in 1940		0.001 (0.13)		0.019*** (4.96)
MSA Population in 2000		-0.016** (2.11)		-0.007 (1.04)
Other Asian Ethnicities' Population in 2000		0.052 (0.84)		-0.116** (2.45)
Year Fixed Effects	Yes	Yes	Yes	Yes
Adj. R ²	3,165	3,165	4,804	4,804
Number of Observations	0.03	0.03	0.06	0.06

Table IA X
Instrumental Variable Analysis: Japanese Internment Camps
(125-Mile Threshold)

This table presents the first stage of the instrumental variable estimation using Japanese Internment Camps. Columns 1 and 2 (3 and 4) present results for exports (imports). The sample includes only exports and imports to Japan. *Export Ratio (ER)* is the total amount a firm exports to a destination country in a given year scaled by the total amount of exports of the same firm in the same year ($E_{it} / \text{Sum}(E_{it})$). *Import Ratio (IR)* is the total amount a firm imports from a country in a given year scaled by the total amount of imports of the same firm in the same year ($I_{it} / \text{Sum}(I_{it})$). *Connected Population* is the number of Japanese people in the MSA in which a firm's headquarters is located, scaled by the total population of the MSA in the most recent census (CP_{it}). *Immigration from Asia* refers to the growth rate of Asian-Pacific Islander ethnicities except Japanese (i.e., Korean, Chinese, Hindu, and Filipino), over the 1930 to 1990 period. *Population Density* refers to 1940 population (in thousands) scaled by area of MSA per square mile. *Other Asian Ethnicities* refers to Korean, Chinese, Hindu, and Filipino population in an MSA (in millions). *West Coast Dummy* takes a value of one if the internment camp is located in one of the west coast states (i.e., California, Oregon, and Washington). *MSA Population in 2000* refers to the MSA population in 2000. The instrument, *Japanese Internment* is a dummy variable that takes a value of one if the headquarters of the firm is located within 125 miles of an internment camp. All standard errors are adjusted for clustering at the year level, and *t*-statistics using these clustered standard errors are included in parentheses below the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

First Stage Regressions:				
Sample:	Exporters	Exporters	Importers	Importers
Dependent Variable:	Connected Population	Connected Population	Connected Population	Connected Population
	(1)	(2)	(3)	(4)
Japanese Internment	0.0040*** (14.92)	0.0007*** (3.99)	0.0042*** (30.27)	0.0014*** (16.58)
Immigration from Asia		0.0001*** (18.55)		-0.0001*** (16.95)
Population Density		0.00074*** (13.37)		-0.0006*** (11.25)
Other Asian Ethnicities		0.0090*** (20.22)		0.0079*** (17.96)
Ln (MSA Population in 2000)		-0.0002*** (10.07)		-.0003** (17.58)
West Coast Dummy		0.0080*** (28.58)		0.0096*** (22.55)
Year Fixed Effects	Yes	Yes	Yes	Yes
Adj. R ²	0.40	0.86	0.41	0.72
Number of Observations	3165	3165	4804	4804

Table IA XI
Instrumental Variable Analysis with Continuous Measure:
Japanese Internment Camps

This table presents the instrumental variable estimation for exports (imports) in Columns 1 and 2 (3 and 4) of Panels A and B. The sample includes only the exports to (or imports from) Japan. Export Ratio (*ER*) is the total amount a firm exports to a destination country in a given year scaled by the total amount of exports of the same firm in the same year ($E_{it} / \text{Sum}(E_{it})$). Import Ratio (*IR*) is the total amount a firm imports from a country in a given year scaled by the total amount of imports of the same firm in the same year ($I_{it} / \text{Sum}(I_{it})$). *Connected Population* is the number of Japanese people in the MSA in which a firm's headquarters is located, scaled by the total population of the MSA in the most recent census (CP_{it}). The instrument, Interned Population/MSA Population is the ratio of the number of interned Japanese scaled by the population of the MSA in 1940. *Immigration from Asia* refers to the growth rate of Asian-Pacific Islander ethnicities except Japanese (i.e., Korean, Chinese, Hindu, and Filipino), over the 1930 to 1990 period. All standard errors are adjusted for clustering at the year level, and *t*-statistics using these clustered standard errors are included in parentheses below the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: First Stage				
Sample:	Exporters	Exporters	Importers	Importers
Dependent Variable:	Connected Population	Connected Population	Connected Population	Connected Population
	(1)	(2)	(3)	(4)
Interned Population/MSA Population	0.0358*** (12.33)	0.0323*** (11.79)	0.0328*** (12.50)	0.0292*** (11.61)
Immigration from Asia		-0.0010*** (23.55)		-0.0013*** (27.72)
Year Fixed Effects	Yes	Yes	Yes	Yes
Adj. R ²	0.45	0.48	0.47	0.51
Number of Observations	3165	3165	4804	4804
Panel B: Second Stage				
Sample:	Exporters	Exporters	Importers	Importers
Dependent Variable:	Export Ratio	Export Ratio	Import Ratio	Import Ratio
	(1)	(2)	(3)	(4)
Instrumented Connected Population	15.688*** (4.32)	16.352*** (4.16)	11.91*** (3.89)	11.703*** (3.59)
Immigration from Asia		0.0030 (1.09)		-0.0027 (0.52)
Year Fixed Effects	Yes	Yes	Yes	Yes
Adj. R ²	0.02	0.02	0.03	0.03
Number of Observations	3165	3165	4804	4804

Table IA XII
Instrumental Variable Analysis with First Stage Estimated Only with Cross-Sectional MSA Data, and
Analysis of Japanese Population Directly Following Camp Closures

Panel A presents the second-stage instrumental variable estimation for exports (imports) in Columns 1 and 2 (3 and 4) where the first-stage is estimated (in Table V, Panel A) using only cross-sectional data. The sample includes only the exports to (imports from) Japan. *Export Ratio* (ER) is the total amount a firm exports to a destination country in a given year scaled by the total amount of exports of the same firm in the same year ($E_{it}/\text{Sum}(E_{it})$). *Import Ratio* (IR) is the total amount a firm imports from a country in a given year scaled by the total amount of imports of the same firm in the same year ($I_{it}/\text{Sum}(I_{it})$). *Connected Population* is the number of Japanese people in the MSA in which a firm's headquarters is located, scaled by the total population of the MSA in the most recent census (CP_{it}). To obtain the Instrumented Connected Population for each MSA, we regress *Connected Population on Japanese* internment dummy using only a cross-sectional regression. *Immigration from Asia* refers to the growth rate of Asian-Pacific Islander ethnicities except Japanese (i.e., Korean, Chinese, Hindu and Filipino), over the 1930 to 1990 period. In Panels B and C, the dependent variables are *Change in Japanese Population from 1930 to 1940* as a percentage of the Japanese population in 1930 (column 1), *Change in Japanese Population from 1940 to 1950* as a percentage of the Japanese population in 1940 (column 2), and *Change in Japanese Population from 1950 to 1960* as a percentage of the Japanese population in 1950 (column 3). In panel B, the Japanese population shock is captured by the ratio of the internment camp population to the Japanese population in 1940 (Camp Population/ Japanese Population in 1940). In panel C, the Japanese population shock is proxied by the camp population. In Panels B and C we use all states except Hawaii and Alaska (which did not become states until 1959). All standard errors are adjusted for clustering at the year level, and *t*-statistics using these clustered standard errors are included in parentheses below the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Second Stage (First-Stage in Table V, Panel A)				
Sample:	Exporters	Exporters	Importers	Importers
Dependent Variable:	Export Ratio	Export Ratio	Import Ratio	Import Ratio
	(1)	(2)	(3)	(4)
Instrumented	22.417***	22.345***	19.908***	18.861***
Connected Population	(4.67)	(4.46)	(3.68)	(4.93)
Immigration from Asia		-0.001 (0.09)		-0.009 (-2.00)
Year Fixed Effects	Yes	Yes	Yes	Yes
Adj. R ²	0.02	0.02	0.04	0.04
Number of Observations	3,165	3,165	4,804	4,804

Panel B: Connected Japanese Population Following Camp Closures - Camp Population/ Japanese Population in 1940

Dependent Variable:	Change in Japanese Population from 1930 to 1940	Change in Japanese Population from 1940 to 1950	Change in Japanese Population from 1950 to 1960
	(1)	(2)	(3)
Camp Population/ Japanese Population in 1940	-0.012*** (2.75)	0.366*** (3.99)	-0.057** (2.09)
MSA Population in 2000	-2.153 (0.95)	-26.484 (0.57)	-6.495 (0.47)
Japanese Population in 1940	-2.586* (1.87)	-214.861*** (7.36)	-71.504*** (8.5)
Distance to Japan	51.042 (1.14)	382.645 (0.41)	134.252 (0.49)
West Coast Dummy	35.177*** (2.94)	528.832** (2.13)	353.075*** (4.84)
Population Density	0.411 (0.18)	67.937 (1.41)	7.3 (0.51)
Immigration from Asia	0.100*** (3.99)	-2.612*** (5.02)	1.661*** (10.83)
Constant	-428.45 (1.1)	-1397.28 (0.17)	-648.04 (0.27)
Adj. R ²	0.19	0.38	0.61
Sample Size (# of MSA)	282	282	282

Panel C: Connected Japanese Population Following Camp Closures - Camp Population

Dependent Variable:	Change in Japanese Population from 1930 to 1940 (1)	Change in Japanese Population from 1940 to 1950 (2)	Change in Japanese Population from 1950 to 1960 (3)
Camp Population	0.000 (0.25)	0.015* (1.86)	0.002 (1.04)
MSA Population in 2000	-2.743 (1.17)	-34.081 (0.69)	-11.957 (0.84)
Japanese Population in 1940	-1.907 (1.37)	-243.516*** (8.31)	-69.272*** (8.27)
Distance to Japan	40.346 (0.89)	482.382 (0.51)	60.864 (0.22)
West Coast Dummy	29.837** (2.42)	555.911** (2.16)	314.386*** (4.21)
Population Density	1.364 (0.57)	62.168 (1.24)	14.217 (0.98)
Immigration from Asia	0.111*** (4.35)	-2.766*** (5.2)	1.728*** (11.2)
Constant	-336.179 (0.86)	-2.00E+03 (0.24)	13.387 (0.01)
Adj. R ²	0.16	0.35	0.6
Sample Size (# of MSA)	282	282	282

Table IA XIII
Real Effects of Strategic Trading Activity
(Alternative Definition of Top Exporters)

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 ethnic composition of the MSA in which the firm's headquarters is located in. We use the American Communities Project (ACP) ethnicity classifications, and match these to destination countries as shown in Table IA II. In every year for each MSA, we compute the share of each ethnicity that resides in the MSA. We then rank the share of each ethnicity across all MSAs in the U.S. In columns 1 to 4, the buy signal equals one if (i) a firm's share of total industry exports to a given country in a given month is above the median and (ii) the firm is located in an MSA where the MSA's ethnicity share across all MSAs in the U.S. is ranked in the top 3, and the sell signal equals one if (i) a firm's share of total industry exports to a given country in a given month is above the median but (ii) the firm is *not* located in an MSA where the MSA's ethnicity share across all MSAs in the U.S. is ranked in the top 3. In columns 5-8: the buy signal equals one if (i) a firm's share of total industry exports to a given country in a given month is below the median and (ii) the firm is located in an MSA where the MSA's ethnicity share across all MSAs in the U.S. is ranked in the top 3, and the sell signal equals one if (i) a firm's share of total industry exports to a given country in a given month is below the median but (ii) the firm is *not* located in an MSA where the MSA's ethnicity share across all MSAs in the U.S. is ranked in the top 3. In all columns, 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; a firm is defined as a *nonstrategic 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 (year $t+1$) divided by lagged assets (year t); and 2) *ROA* (EBITDA in year $t+1$ divided by 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 assets in year t), and *Cash* (future Cash in year $t+1$ divided by assets in year t). Year and firm fixed effects are included in all regressions. t -statistics, clustered by year, are reported below coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Above-Median Exporters				Below-Median Exporters			
	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	0.032*** (3.79)	0.027*** (3.14)	0.006 (1.10)	0.006 (1.11)	-0.013 (0.87)	-0.013 (0.84)	0.003 (0.36)	0.009 (0.82)
Nonstrategic Exporter	-0.001 (0.27)	-0.001 (0.27)	-0.007** (2.32)	-0.007** (2.56)	-0.006 (0.74)	0.000 (0.06)	0.014* (1.86)	0.017** (2.27)
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes	No	Yes
Adj. R ²	0.90	0.89	0.74	0.69	0.88	0.89	0.68	0.69
Number of Observations	14,260	14,203	14,205	14,152	14,260	14,203	14,205	14,152

Table IA XIV
Portfolio Returns to Strategic Trading Activity

This table presents value-weight returns to calendar-time portfolios that buy stocks of strategic exporters and sell stocks of nonstrategic 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 ethnic composition of the MSA in which a firm's headquarters is located. We use the American Communities Project (ACP) ethnicity classifications, and match these to destination countries as shown in Table IA II. In each 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 *nonstrategic 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 *nonstrategic 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 reports DGTW-adjusted returns, the third row reports CAPM alphas, the fourth row reports Fama-French three-factor alphas, and the fifth row reports Carhart four-factor alphas. In Panel B, we replicate the calendar-time portfolio approach from Panel A for our imports sample. *t*-statistics, adjusted for clustering at the month level, are reported below the coefficient estimates. *, **, 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
	(1)	(2)	(3)
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 IA XIV (ctd.):
Portfolio Returns to Strategic Trading Activity**

Panel B: Import Value-Weight Portfolio Returns			
	Long Return (1)	Short Return (2)	(L-S) Return (3)
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 IA XV
Connected Board Members and Returns

This table reports predictive regressions of future month returns on the connectedness of a firm's board over the 1999 to 2010 period. 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 prior month. 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 Return (t-2,t-12)*, the 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 the sub-sample of firms that have at least one strategically connected board member. Month fixed effects and Industry-Month fixed effects are included where indicated. *t*-statistics, adjusting for clustering at the month level, are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Dependent Variable:	Future-Month Returns			
	Full Sample		Only if have at least one connected board member	
Sample:	(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 Return(t-2,t-12)	-0.002 (0.59)	-0.002 (0.54)	-0.001 (0.18)	-0.001 (0.18)
Past Month Return	-0.034** (2.33)	-0.032** (2.27)	-0.026 (1.33)	-0.027 (1.48)
Month Fixed Effects	Yes		Yes	
Industry x Month Fixed Effects			Yes	
Adj. R ²	0.23	0.28	0.26	0.36
Number of Observations	38,040	38,040	11,039	11,039

Table IA XVI
Errors in Analyst Forecasts and Earnings Surprises

This table reports regressions of earnings forecast error and earnings surprise cumulative abnormal returns (CAR_t) on the strategic trading of firms. In the first two columns, the dependent variable is Earnings CAR, the cumulative abnormal return (t-1,t+1) around the earnings date. The dependent variable in Columns 3 and 4 is earnings *Forecast Error*, the absolute value of the actual reported earnings (EPS) 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, and then winsorized at the 0.01 level. The main variables of interest, Strategic Exporter/Importer, are defined in Tables IA XIII-XV. 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 Return (t-2,t-12)*, the 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. t-statistics, 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)				
Nonstrategic 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)
Nonstrategic Importer					-0.046 (0.41)	-0.03 (0.27)	-1.034* (1.86)	-1.357** (2.42)
Past Month Return	-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 Return(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)
Actual EPS – Estimate	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
Adj. R ²	0.08	0.08	0.11	0.11	0.07	0.07	0.11	0.11
Number of Observations	15,951	15,951	15,951	15,951	20,383	20,383	20,384	20,384

Table IA XVII
Tariff and Differentiated Product Analysis (Additional Specifications)

This table presents coefficient estimates of fixed effects regressions of product-level import ratio (*PIR*) on *Connected Population* (*CP*) and control variables: $PIR_{i,pt} = b_1 + b_2 * CP_{i,t} + b_3 * Tariff + b_4 * CP_{i,t} * Tariff + Fixed\ Effects$. *Product Import Ratio* (*PIR*) is the total amount a given firm imports from a foreign country in a given year scaled by the total amount of imports of the same firm in the same year ($I_{i,pt} / \text{Sum}(I_{i,t})$). *Connected Population* is the number of residents in the MSA in which a firm's headquarters is located that are connected to the import country, scaled by the total population in that MSA in the most recent census ($CP_{i,t}$). Tariff is the value of the U.S. tariff on the given product to the given country, taken from the TRAINS dataset maintained by United Nations Conference on Trade and Development (UNCTAD). In the last two columns, we introduce a variable that denotes whether the product is a differentiated product as defined by Rauch (1999). Fixed effects for firm, year, and product are included where indicated. *t*-statistics, clustered by year, are reported below coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Product Import Ratio (1)	Product Import Ratio (2)	Product Import Ratio (3)	Product Import Ratio (4)	Product Export Ratio (5)
Connected Population	0.0074*** (3.93)	0.0076*** (2.99)	0.0020 (1.06)	0.0029*** (2.29)	0.0018*** (8.39)
Tariff	0.0001 (0.73)	0.0002 (0.42)	0.0004 (1.61)		
Connected Population x Tariff	-0.0022*** (4.49)	-0.0015*** (3.60)	-0.0014*** (3.48)		
Differentiated Product				0.0074*** (2.41)	0.0049*** (9.10)
Connected Population x Differentiated Product				0.0042*** (4.61)	-0.0011 (1.37)
Firm Fixed Effects	Yes	No	Yes	Yes	Yes
Year Fixed Effects	Yes	No	Yes	Yes	Yes
MSA Fixed Effect	No	Yes	No	No	No
Product Fixed Effects	No	Yes	Yes	No	No
Adj. R2	0.40	0.23	0.48	0.41	0.47
Number of Observations	34,062	34,062	34,062	563,552	422,237

Table IA XVIII
Instrumental Variable Analysis:
Japanese Internment Camps (Firms Founded before WWII)

This table presents the instrumental variable estimation using Japanese internment camps. Panels A and B present results for exports (imports) in Column 1 (2). The sample includes only exports to (imports from) Japan. *Export Ratio (ER)* is the total amount a firm exports to a destination country in a given year scaled by the total amount of exports of the same firm in the same year ($E_{it} / \text{Sum}(E_{it})$). *Import ratio (IR)* is the total amount a firm imports from a country in a given year scaled by total amount of imports of the same firm in the same year ($I_{it} / \text{Sum}(I_{it})$). *Connected Population* is the number of Japanese people in the MSA in which a firm's headquarters is located scaled by the total population of the MSA in the most recent census (CP_{it}). *Immigration from Asia* refers to the growth rate of Asian-Pacific Islander ethnicities except Japanese (i.e., Korean, Chinese, Hindu, and Filipino), over the 1930 to 1990 period. *Population Density* refers to 1940 population (in thousands) scaled by area of MSA per square mile. *Other Asian Ethnicities* refers to Korean, Chinese, Hindu, and Filipino population in an MSA (in millions). *West Coast Dummy* takes a value of one if the internment camp is located in one of the west coast states (i.e., California, Oregon, and Washington). *Distance to Japan* is the distance of the state in which the MSA is located to Japan in miles. *Japanese Population in 1940* and *MSA Population in 2000* refer to the population in the corresponding years. Distance and population figures are logged. The instrument, *Japanese Internment*, is a dummy variable that takes a value of one if the headquarters of the firm is located within 250 miles of an internment camp. All standard errors are adjusted for clustering at the year level, and *t*-statistics using these clustered standard errors are included in parentheses below the coefficient estimates. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A: First Stage		
Sample:	Exporters (extensive margin)	Importers (extensive margin)
Dependent Variable:	Connected Population	Connected Population
	(1)	(2)
Japanese Internment	0.0033*** (9.36)	0.0045*** (8.66)
Distance	0.0046*** (3.5)	-0.0014* (2.02)
Immigration from Asia	0.0000 (0.88)	-0.0001 (1.11)
Population Density	0.0000 (1.25)	0.0000** (2.71)
West Coast Dummy	0.0072*** (7.89)	0.0049*** (10.39)
Japanese Population in 1940	0.0001 (0.94)	-0.0001 (0.99)
MSA Population in 2000	-0.0008** (2.59)	-0.0012** (2.92)
Other Asian Ethnicities' Pop in 2000	0.0009*** (3.65)	0.0011*** (4.17)
Year Fixed Effects	Yes	Yes
Adj. R ²	0.94	0.95
Number of Observations	5,890	5,019

Panel B: Second Stage		
Sample:	Exporters (extensive margin)	Importers (extensive margin)
Dependent Variable:	Import Ratio	Export Ratio
	(1)	(2)
Instrumented Connected Population	1.9151*** (3.36)	0.6972 (0.61)
Distance	-0.0030 (0.61)	0.0124 (0.46)
Immigration from Asia	0.0000 (0.02)	0.0007 (0.41)
Population Density	0.0000 (0.15)	0.0000 (0.91)
West Coast Dummy	-0.0063*** (2.73)	0.0255*** (4.60)
Japanese Population in 1940	-0.0010* (1.69)	-0.0012 (1.2)
MSA Population in 2000	-0.0023 (0.81)	0.0122*** (3.09)
Other Asian Ethnicities' Pop in 2000	0.0004 (0.21)	-0.0104*** (3.48)
Year Fixed Effects	Yes	Yes
Adj. R ²	0.01	0.01
Underidentification test F-stat (Kleibergen-Paap)	12.11	10.68
Weak identification test F-stat (Kleibergen-Paap)	75.01	85.76
Number of Observations	5890	5019

References

Rauch, James, 1999, Networks versus markets in international trade, *Journal of Economic Literature* 48, 7-35.