

THE ETHNIC CONNECTION: ARMENIAN DIASPORA INVESTMENT*

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Abstract – I explore whether Armenian diaspora investors are more sensitive to local conditions than non-diaspora investors. I also investigate if Armenian diaspora investors are more likely to invest in a manner in line with the regulations and business norms of the owner’s background than are foreign investors. With survey data I collected on Armenian diaspora, local, and foreign firms, I examine firm behavior, characteristics, and culture. I find that large firms owned and managed by diasporan Armenians are more sensitive to local conditions than non-diasporan foreign firms. I also find that small diasporan-owned firms are more likely to have policies in line with the owner’s background, whereas large diasporan firms are less likely to report having policies in line with the owner’s background.

Keywords: Diaspora, Business investments, Armenia.

1. INTRODUCTION

The Republic of Armenia is a small Caucasian country located on the eastern border of Turkey, surrounded by its bordering countries of Georgia, Iran, and Azerbaijan. Due to political and military conflict, Armenia’s only open borders are with Georgia and Iran. The dominating country in the region, Russia, is also a major source of investment and trade, particularly following Armenia’s membership in the Eurasian Economic Union in 2014 (EAEU 2020). Like many post-Soviet countries, Armenia also receives investments and trades with nations from all around the globe. However, unlike most other countries, Armenia has vast diaspora communities in Europe, the Middle East, and the Americas, which gives it the opportunity to leverage and benefit from unique ethnic connections in international business and trade matters.

According to the Oxford English Dictionary, a diaspora is “any group of people who have spread or become dispersed beyond their traditional homeland or point of origin” (OED). The Jewish diaspora is the most well-known example and exists in many countries outside of the State of Israel. Though they may be far from the homeland, members of diasporas continue to identify with their ethnicity and origin country, often maintaining a connection with that state through investment, philanthropy, or even repatriation. As the second oldest diaspora in history, the Armenian diaspora has been significantly involved with its homeland, whether through diaspora communities extending the silk trade to Europe or connecting the flow of goods through the Ottoman and Asian markets (Tololyan 2004). Today, the Armenian diaspora continues

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to maintain a high level of engagement with Armenia through cultural exchanges, donations, as well as large- and small-scale investments (AGBU 2019). Outside of the Armenian context, countries such as India, China, Russia, Mexico, and Syria have large diasporas that are considered instrumental in developing the homeland through both investment and remittances (UN DESA 2019). For example, in the Chinese context, their diaspora contributed 70 percent of China's foreign direct investment (FDI) from 1985-2000 (Kuznetsov 2006). Oddly enough, the role of diaspora entrepreneurs in this massive increase was not mentioned in policy debates or development studies, and their contributions were "treated as a residual effect of China's reform" (Ye 2014).

Beyond simply serving as foreign direct investment, diaspora investment also comes with positive spillovers, such as raising the home country's profile to nondiasporans as a place to trade, invest, and even visit (Constant and Zimmerman 2016). Though it is notoriously difficult to measure diaspora investment, and the spillovers even more so, Constant and Zimmerman (2016) point to the abnormally high levels of foreign aid to Israel and Armenia as another indicator of the power of diaspora in assisting the homeland through the use of lobbyists (*ibid*). Similarly, one can assume that these diasporans also work toward the reduction in trade barriers and strive to facilitate trade between the origin country and resettlement country through the use of chambers of commerce and personal connections, as Armenians have done through groups such as the Armenian American Chamber of Commerce, Armenian National Committee of America, and Armenian Trade Network (ANCA 2018). Another distinguishing characteristic of diasporan investors is that, often, they are among the first to invest in their home countries after periods of conflict, for a variety of reasons, including their "perceived ethnic advantage, a more informed risk analysis, or altruism" (Brinkerhoff 2011; Brinkerhoff 2016). Specifically concerning the Armenian case, regarding its territory of Artsakh that is engaged in a frozen conflict with the bordering country of Azerbaijan, the diaspora can be seen as a more sustainable or reliable source of investment.

Identifying and analyzing investment characteristics of the global Armenian community—now 8 million members strong, in comparison to the roughly 3 million Armenians living in the country—is key for economic development and creating better investment policies during these crossroads in modern Armenian times (ArmStat 2020). Armenia has typically received the most investments from countries with large diaspora communities, from both the diasporans and non-Armenian foreign investors in those countries (UNCTAD 2019; Armenian Weekly 2019). This is the case despite there being virtually no investment policies targeted toward diasporans. One of the few policies that the government implemented in Armenia was providing loans at lower interest rates, information sessions on Armenian business regulations, and free accounting and bookkeeping services through the Small and Medium Enterprises Development National Center. These services were specifically targeted towards Armenian diasporans fleeing from the

Syrian Civil War (Ministry of Diaspora of the Republic of Armenia 2015). Many countries have government institutions specially created to meet their diaspora's needs, including ministries, sub-ministries, consulates and/or committees that attempt to develop mutually beneficial policies and provide connections for those living abroad that would like to engage with the homeland (Agunias 2012). That is not to mention the private institutions created and maintained abroad by diasporans themselves, which for some, provide better, more targeted services for their investment needs. For a geographically isolated and resource-constrained country such as Armenia, the diaspora serves as a source of investment. It presents itself as a potentially more mindful pool of businesswomen and businessmen who might also bring with them new business cultures and policies.

Given the potential and power that diasporas have to transform economies, there is a pressing need to understand their investment and business characteristics further. This paper answers two questions regarding Armenia's modern diaspora investors' behavior compared to non-Armenian foreign investors. The first (for reasons of ethnic solidarity), are Armenian diaspora investors more sensitive to local conditions than non-diaspora investors? And second, are Armenian diaspora investors more or less likely to invest in a manner in line with regulations and business norms of the countries where they have resettled, compared to local investors? In this paper, I consider a diaspora manager or owner a person who has primarily studied, worked and lived outside of Armenia.

My prior is that Armenian diaspora investors are more sensitive to local conditions than non-diaspora investors. I would argue this for several reasons. Namely, the ethnic connection that diasporans feel motivates them to ensure that their businesses, in addition to being successful, are supporting the local Armenian community through best practices and better treatment of local employees. The literature on diasporas shows that diasporas are seriously interested in investing in the homeland for altruistic reasons (Gillespie 1999). More recently, research has found weak evidence that diaspora-affiliated firms had a more positive effect on development than non-diaspora-affiliated in the Philippines and the Republic of Georgia (Graham 2019). Historically, members of the Armenian diaspora had very few opportunities to engage in the affairs of the Armenian Soviet Socialist Republic, except for providing humanitarian aid after the 1988 Spitak earthquake. The earthquake was a tragedy that revealed Armenians' solidarity from all over the world, as they worked together to send money, volunteers, and goods to Armenia to help victims and those displaced by that natural disaster (Armenian Mirror-Spectator 2018).

My second argument is that diasporans are more sensitive than foreigners because diasporans are often willing to invest despite the risks in the country. We see that, in the literature, diasporans do distinguish themselves from other foreign investors because of their willingness to overlook domestic political or economic issues and take on higher-risk investments (Ye 2014). Looking again at recent history, after the

collapse of the USSR, diasporans were among the first people to donate and invest in the country, despite the instability of privatization, hyperinflation, lingering chaos from the earthquake, and then active war with Azerbaijan. From 1989-1999, it is estimated that Armenian diasporan organizations have provided over \$630 million for various projects humanitarian and otherwise for the development of the homeland (Armenia-Diaspora Conference Report 1999). Thus, over the years, there has been the perception of diasporans being the bearers of an “ethnic discount.” However, it is worth noting that there is also a changing perception of Armenia—many diasporans are shifting their motivations from purely emotionally-based to profit-based. They see a real opportunity to benefit from the resources Armenia has, including booming human capital in the technology sector, natural resources, a growing construction industry, and other service sectors. This point will be further addressed in the case study discussion of this paper.

I also hypothesize that it is unclear whether diaspora investors will invest in a manner in line with the business culture and policies of the countries where they have resettled or follow the business norms and policies of local Armenians. My argument is that the wave of immigration of the owner is most strongly related to the firm’s business culture. Members of the Armenian diaspora come from worldwide, with large communities in Russia, the United States, Canada, Syria, Lebanon, France, Argentina, and Australia, among other countries, and the waves of immigration vary due to several significant historical events. The Armenian diaspora of the twenty-first century can trace its origins to 1) the Armenian Genocide of 1915, 2) the collapse of the USSR, and 3) economic migration to the Russian Federation (European Training Foundation 2011). Armenians living in Western Armenia, what is now eastern Turkey, were victims of racial extinction and religious persecution as Christian minorities of the Ottoman Empire, and those who survived death marches carried out by Ottoman forces primarily found refuge in Syria, Lebanon, France, and the United States (Kassabarian 2013). I argue it is likely that descendants of Armenians from this wave bring the culture and norms of Syrian, Lebanese, or American firms and are probably indistinguishable from ordinary foreign investors from those countries in that regard. I believe this to be true because, having not been in the home country for long periods, they are likely to have been heavily influenced by the environment where they have lived, worked, and studied. They are likely to have less personal or familial connections with locals have a less acute perception of what is or is not the norm in the country,

By contrast, there was a massive chain of outward migration and diaspora creation after the collapse of the USSR, as people seeking to escape the disastrous socio-economic conditions of newly-independent Armenia migrated again to the US and Canada, and European countries (Tololyan 2004). To me, this group of Armenians will likely have some distinction from foreign investors and bring a culture that is not very assimilated but also not completely identical to that of local businesses. Finally, we see a distinct outward migration of Armenians to Russia in the mid-2000s, mostly of Armenian young- and middle-aged men

who had initially decided to relocate to pursue better employment (European Training Foundation 2011) temporarily. In my view, this group of first-generation diasporans will likely maintain much of the same mentality and perspective on business policies as the locals in Armenia and differ culturally from non-diasporan investors who come from the same foreign countries of their birth or of their resettlement. I strongly believe that diasporans from these two groups are much more likely to have family, friends, and contacts in Armenia and to have been exposed to the local Armenian mentality than a descendant of a diasporan from an earlier period of migration or the owner of a foreign firm which has no ties in Armenia. Additionally, even having lived in Armenia during one's youth or young-adult life could profoundly influence what types of policies and culture an Armenian diasporan believes to be appropriate and normal.

There has been limited data on the Armenian diaspora members' attitudes towards Armenia that distinguishes between generations of being Armenian. Still, existing surveys show concerns of assimilation spread equally across all generations (Armenian Diaspora Survey 2019). However, there is ambiguity associated with classifying by generation of Armenian and by wave of immigration due to many potential combinations of generation and waves of migration outside those above three large periods. Considering the above arguments about how the wave of migration can influence assimilation across the board, this paper explores how diaspora firms are influenced by their owner's background relative to foreign investors. It seems plausible that the diasporan owners behave more like locals because they are members of a generation or descendant of one who has recently migrated from the country. At the same time, if a diasporan is a descendant of a generation that left Armenia a century ago, it seems plausible that the owner would be more likely to implement policies and culture from their country of resettlement in a manner no different from a non-Armenian foreign investor.

This paper expands on the literature by focusing on a country with a diaspora community, which, unlike many others, has a long historical existence and withstanding connection to the homeland. The Armenian context may provide stronger evidence for the theories tested by previous scholars due to the presence of these historic diaspora communities and also a different institutional framework regarding diaspora-investor relations. The relationship between diaspora and homeland for Armenia is unique in that there have existed official government entities, formerly the Ministry of Diaspora, but now a special institution known as the High Commissioner's Office for Diaspora Affairs, in charge of incorporating and connecting diasporans with existing ministries rather than a separate, disconnected office. The transition from a Ministry to an office is meant to transform diasporans from simply donating and visiting to becoming active participants by promoting interaction and engagement with local institutions (ArmPress 2019). One such action taken by the government is the "Neruzh" diaspora startup contest, in which diasporan Armenians pitch their startup ideas or existing businesses in a competition, with several selected winners receiving

prize money provided by the High Commissioner's Office for Diaspora Affairs and other sponsors (Neruzh 2020).

Thus, this paper expands our understanding of diasporan firms in Armenia, which, by extension, may also apply more generally to other countries which have historic and large diasporas themselves. Furthermore, policymakers can take the suggestive evidence about diasporan firms' behavior from this study to motivate their own, more rigorous analysis of the impact of diasporan firms and investment in the homeland. Ultimately, the better-informed countries are, the more likely they will be to make better use of this important relationship.

The most important contribution of this study is the collection and use of original survey data on firms' business culture and policies and the demographic background of the firms' owners and managers. Data on the Armenian diaspora are not readily available. There have been various attempts to understand diaspora populations across the world through small-scale studies, such as the Armenian Diaspora Survey, which was created by the Armenian Communities Department of the Calouste Gulbenkian Foundation and conducted by the Armenian Institute in London. However, none of these projects has been able to collect representative data on diasporan populations and communities. Regarding Armenian diaspora investment, there exists no official data in the Republic of Armenia, and even within specific diaspora-related institutions, such as the Armenian chambers of commerce and the High Commissioners Office for Diaspora Affairs. The lack of data is likely due to difficulty identifying firms and no particular interest of government institutions in collecting the information, despite the major policy implications and important relationship between the diaspora and homeland.

I examine sensitivity to local conditions, namely the firm-level behavior in terms of pay, labor standards, professional development opportunities, environmental impact, and charitable donations, among other firm-level policies. I follow the survey questions of Graham's 2019 study, with modifications for my own definition of diaspora and additional questions to collect data on firms in Armenia. A substantial difference between my study and Graham (2019) is that I choose to sample local firms to understand better what degree diasporan firms differ from one another and how both differ from local-owned businesses. This is an important and needed distinction because it could be that diaspora and foreign firms are slightly different from one another (though perhaps both generally follow local standards in how they organize their investment). And knowing the nature of this difference provides more clarity about the true impact of diaspora and foreign investment. The respondents in my data were either the managers or owners of the firm to capture the perspective and vision set out by the upper levels of management of the business. A priori, the measures of sensitivity to local conditions and respondents' ability to accurately describe

the business's activity remain imperfect, a point which will be discussed in further detail in the data and methodology sections.

The main findings of this paper suggest that large firms owned and managed by diasporan Armenians are more sensitive to local conditions than non-diasporan, foreign investors. That small diasporan-owned firms are more likely to have policies in line with the owner's background, in contrast to large diasporan-owned firms that are less likely to report having policies in line with the owner's background.

The paper is organized as follows: Section II summarizes the data and reports summary statistics. The empirical strategy is presented in Section III. Section IV describes the main results, underlying causes, and limitations of this study. Section V describes case studies of diasporan firms, distinguishing between country of resettlement and investment size. I conclude in Section VI.

2. DATA ON DIASPORA OWNED FIRMS

There is no data on diaspora-owned firms in Armenia that allows us to study their behavior and attributes that differentiate them from other firms operating in the country. Accordingly, I designed my own survey and collected data for a sample of all firms with ongoing operations in Armenia. These include locally owned firms, foreign-owned firms, and diaspora-owned firms. The survey design follows Graham (2019) that was used to understand Philippine diaspora investments. The survey includes questions on company profile, the background of managers and owners, and the firm's policies being surveyed. The survey was conducted by myself and students at the American University of Armenia by using phone call enumeration of the questions to firm owners.¹ Between December 2019 and February 2020, 396 firms were surveyed, with 234 local, 72 foreign, and 90 diasporan-owned firms in the dataset.

Data for large firms was obtained by scraping the top 1000 tax-paying firms in Armenia from a list made publicly available through the Tax Service of the Republic of Armenia. Thus, the sample of large firms is only representative of the top 1000 tax-paying companies, which is a drawback to making generalizations about diaspora-related firms.

To ensure the firms in that list are active businesses, I cross-check that they are paying the mandatory government payment to the national military fund, the "Insurance Foundation for Servicemen." Firm contact

¹I designed the survey to be enumerated over the phone, rather than through mailed surveys or emails because it is uncertain who would respond to the survey and the lack of email culture in typical Armenian business practices. If it were possible, the best method of survey enumeration would be through in person meetings with managers and owners, but given financial and time constraints this is not feasible. The survey is designed to take approximately 10 minutes over the phone, which I chose to ensure the maximal uptake by those firms which were contacted, and thus this limited the scope and number of questions I could ask. Further details on logistics are provided in the appendix. Survey questionnaire is available upon request.

information was obtained from a public online database of phone numbers, Spyur, which is not officially regulated, thus another drawback of this data. From the top 1000, we were able to find and contact 756 that met all criteria.

Data on small firms was obtained by finding diaspora-compiled lists on social media, such as SiraMark, a platform created by and for Syrian-Armenians to promote diaspora-owned businesses. Additionally, by manually compiling a list of firms known to my research team to be diasporan and asking diasporans at the end for the contact information of other diaspora-affiliated businesses, I was able to create a larger group of diasporans to survey. Similarly, contact information on local Armenian and foreign small firms was obtained through Spyur. The typical small firms include clothing stores, supermarkets, startups, boutiques, and restaurants.

Given that there is no comprehensive or official data collected on diaspora firms in Armenia, I cannot guarantee that the sample I have is representative. In my dataset, I believe the number of diasporan and foreign firms has been oversampled compared to the true proportions of both in Armenia. However, of the foreign and diaspora firms, both appear generally representative within each group.

Survey Design

The survey is split into an identification section used to obtain a profile of the firm, the firm's owner, and the firm's business policies and culture. I designed the questions following Graham (2019), keeping in mind the cultural context of Armenia and what questions and enumeration format is suitable. Questions regarding corruption were not possible due to the nuances of Armenian society regarding the common practice of bribes to bypass bureaucracy and the fear that asking such a question would result in the termination of the survey. The survey was conducted in Armenian, Russian, and English, depending on the owner's preference.

Firm Profile

In the first section, I collect information about the firm's basic characteristics. I distinguish whether or not the firm is state-owned or foreign-owned, and percent pertains to either the government or foreigners. Additionally, in this section of the survey, I distinguish whether or not the firm is a new firm (i.e., a startup), an expansion of an existing firm, a merger or acquisition, or other type of firm. The purpose of this section is to ensure I account for important differences between firms that are associated fully or even partially with the state or foreign owners, as particular regulations may restrict the types of policies firms are able or mandated to implement.

Firm Characteristics

In the second section, I ask several questions regarding the firm's treatment of workers, social responsibility, and the owner's background and culture in the business. I follow Graham (2019) in asking firms to

report whether or not they offer higher salaries, provide employees a higher quality of life and opportunities for professional development, focus narrowly on profit, work to minimize labor costs, prioritize local employment, provide a low environmental impact, and make donations to charity.

Regarding standards of living, payment, providing professional development opportunities, and quality of life, I ask if they believed their firm provided higher, lower, or the same level as other firms in the same industry. Regarding the remaining questions, owners were asked if they strongly disagreed, disagreed, were neutral, agreed, or strongly agreed with a sentence such as "This firm makes any donations to charitable causes."

Additionally, I decided to explore how much the owner's background influenced a firm's policies and culture; for example, "This firm's business culture is in line with the owner's background, i.e., the owner has an American background, the office has American office culture." The firms were asked how much they agreed with that statement on a scale of "strongly disagree" to "strongly agree."

These questions are intended to explore my second hypothesis. Still, they are limited in terms of the specificity of how assimilated the person interviewed is in their country of resettlement and how that country influences their management style. An additional drawback of these questions is that they capture the perception of the business from a top-down perspective, and the reality could potentially differ from the owner's intentions. Despite these drawbacks, the questions still provide information regarding the perceived influence of the resettlement country and are useful for this research.

Owner Profile

In the final profile section, I ask questions regarding the degree of involvement of the owners in the business's day-to-day operations and identify the firm owners' and managers' backgrounds. Identifying a person as diasporan is a challenge due to the various definitions used in previous literature and the Armenian community. Still, I have chosen to use three questions to create this indicator. In the survey, I ask where the owner has primarily studied, primarily worked, and primarily lived. If the response to those three questions is not Armenia, that person is counted as a "diasporan." I choose these questions to create the distinction because I believe the work, education, and living environment strongly influence the values and behavior brought into the business. Those experiences truly differentiate diasporans and foreigners from locals.

Initially, I ask "Is the firm's majority owner Armenian?". The second question is "We define diasporan as any Armenian whose primary country of residence, work, or education is not Armenia. Is the owner of the firm diasporan?" Some diasporan Armenians, even though they have primarily lived, studied, and worked outside of Armenia, might choose to not identify as diasporans because of a strong connection they feel with the homeland and a desire not to be perceived as different, even though they clearly have a different

experience. Thus, following that question, I ask the owner to provide their primary country of residence, education, and work. Using these questions, I am able to create an accurate diasporan indicator in which the owner must both be an Armenian and have not primarily lived, studied, or worked in Armenia.

Limitations of Study

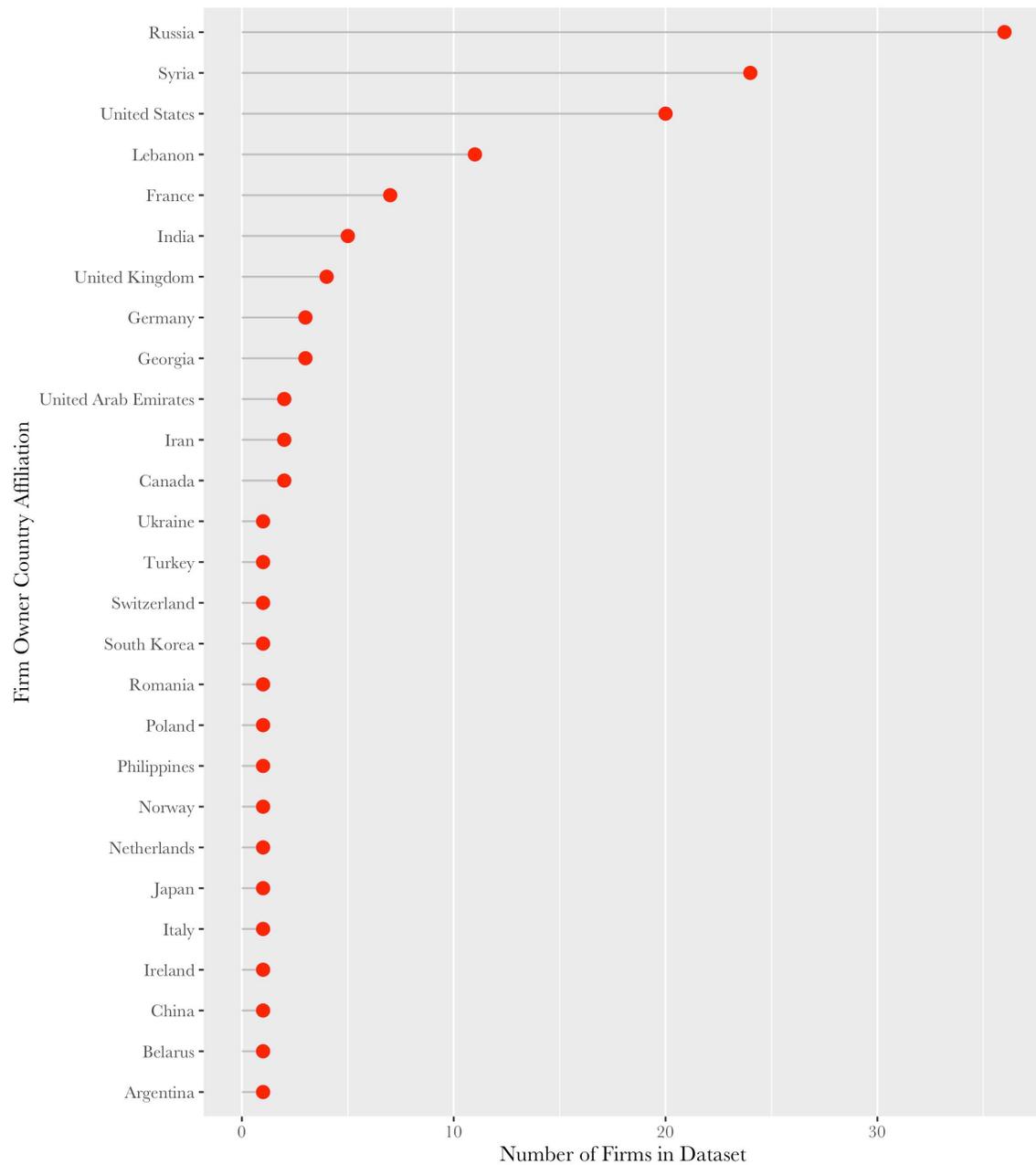
The study design has several limitations. Primarily, it is unclear whether or not our survey respondents are entirely honest. Though we emphasize that the survey is anonymous during enumeration, and we are collecting data for an academic project, there is always the concern that the firm owners are not truthful. Additionally, I would have more confidence in the responses if there had been the opportunity to use some proxy measures to validate the responses, such as tax deductions for donations to charity.

Another concern is that the sample we have may not be entirely representative of the local, diasporan, and foreign firms. Unfortunately, given that there is no record of diasporan-owned firms and access to the number of foreign-registered firms in Armenia is considered private information, it would be very challenging to address this concern. Similarly, given that the survey was enumerated over the phone and the firms in our dataset are those which have their numbers available in Spyur or social media, we are leaving out a group of the population with numbers not found in those sources, which could potentially bias our sample.

If it were possible to access an updated list of foreign and locally registered firms in Armenia and draw a stratified random sample, that would be ideal. However, after months of requesting such data from the Armenian State Revenue Committee, the Armenian Tax Service, the High Commissioner's Office for Diaspora Affairs, the Central Bank of Armenia, the Ministry of Economic Development and Investments, the Armenian Trade Network, the European Bank for Reconstruction and Development's Business Support Office of Armenia, and countless other government institutions and business organizations, it was clear such lists either did not exist, were not updated, or were considered private information and thus not provided to me for this study. In total, my team and I were able to survey 234 local, 72 foreign, and 90 diasporan firms.

Summary statistics in Figures 1 and 2 show that the survey respondents come from various backgrounds but primarily are from the Russian Federation, Syria, the United States, Lebanon, and other European countries. Looking across firm ownership and breakdown in Figures 8 - 16 in the Appendix, we see that diaspora- and foreign-owned businesses are generally balanced regarding firm sector. In contrast, locally-owned firms are majority new companies or startups. CEO management of firms is also similar across all three groups. More notable differences arise when we examine the owners' responses to survey questions

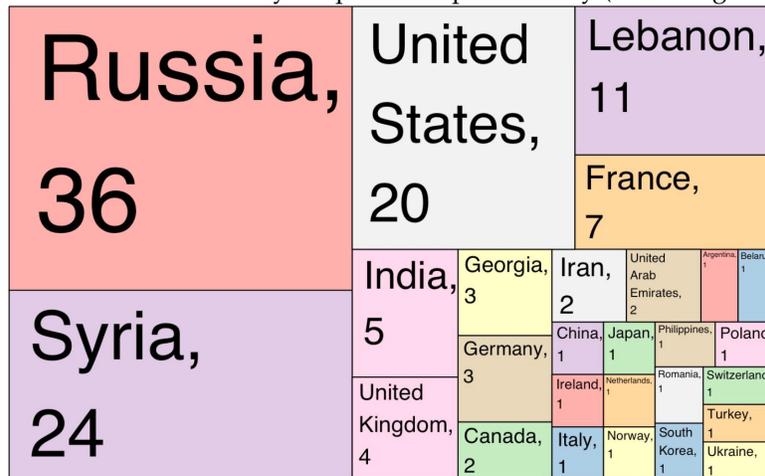
FIGURE 1. Diasporan and Foreign Firm Owner Country Affiliation



The data presented in this figure display the number of firms per country of origin of a firm owner of both diasporan and foreign firms. The country surveyed the most was Armenia, with 262 survey responses, and is not included in this graphic in order to best display the amount of owners from other countries.

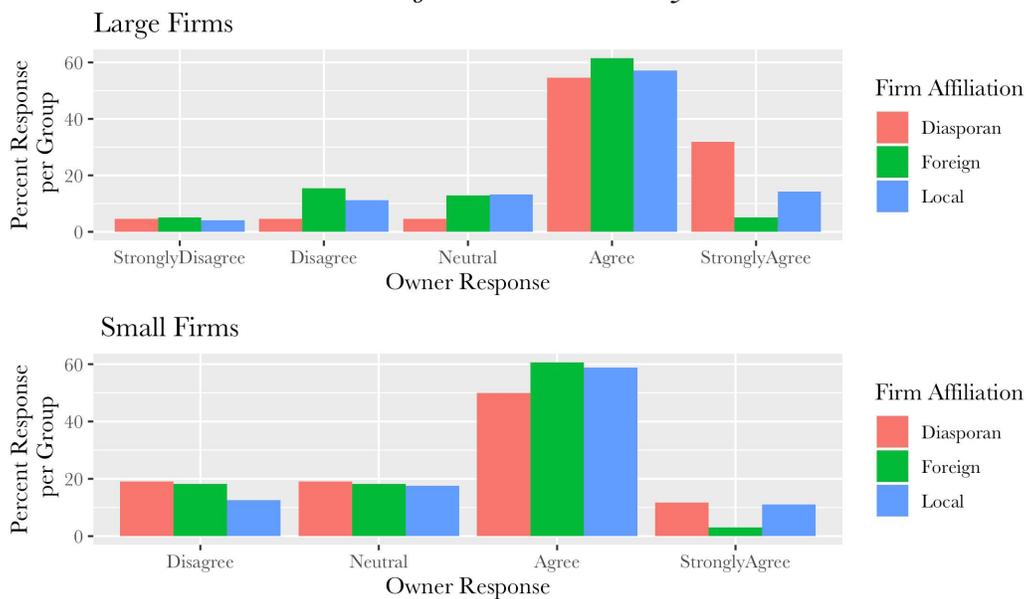
regarding donations to charity, firm pay, labor cost priorities, and measures of firm background corresponding to the owner's background. Another notable difference across diasporan, local, and foreign-owned firms is that the measures can vary depending on firm size.

FIGURE 2. Number of Survey Respondents per Country (excluding Armenia)



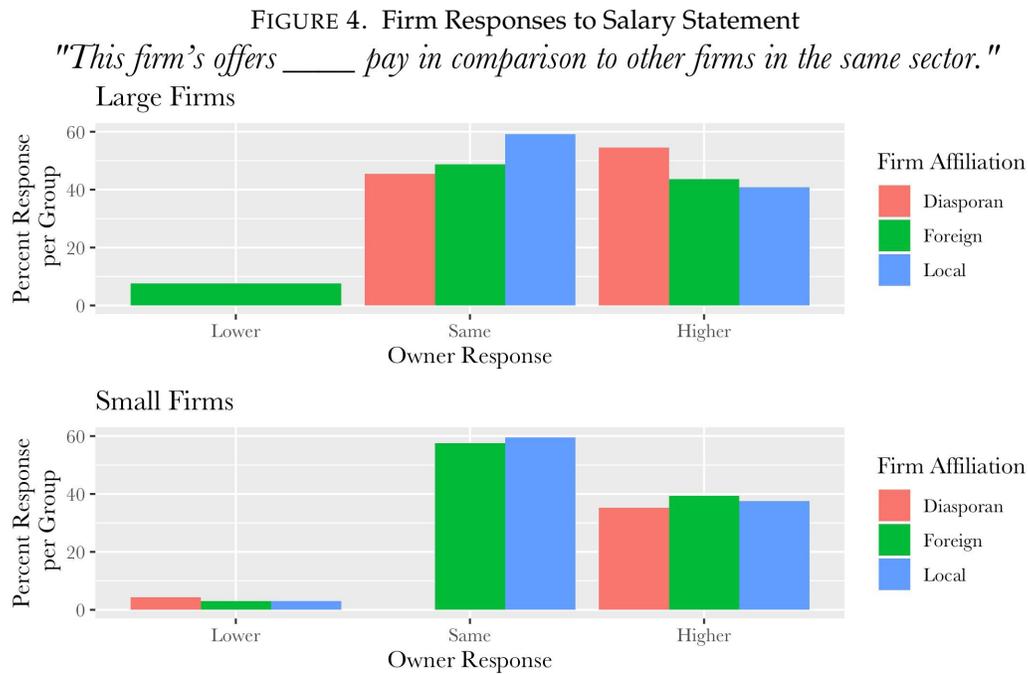
This graphic shows the number of firms from a country in our dataset, excluding Armenia.

FIGURE 3. Firm Responses to Charity Donation Statement
"This firm donates to charity"



Looking specifically at donations to charity in Figure 3, it appears that more large diasporan-owned firms strongly agree that their firms donate to charity compared to local and foreign firms. For small firms, more diasporan owners strongly agree that they donate to charity than foreign-owned firms do but are roughly the same as locals.

When we look at firm pay in Figure 4, it appears that large diasporan-owned firms are more likely to report paying their workers higher wages compared to local and foreign-owned firms. For small firms, we



see diasporan owners only have slightly more responses to paying higher salaries than foreigners and have responses closer to local owners.

Looking at labor costs in Figure 5, we see two interesting trends among large diasporan-owned firms. Compared to local- and foreign-owned firms, diasporan owners reported with much greater frequency, roughly 40%, that their firm minimizes labor costs. The majority of responses for small diaspora-owned firms, however, note that they minimize labor costs.

There are also noticeable differences when looking at the firm business culture measure of diasporan and foreign firms. In Figure 6, we see that both small and large diasporan firms are more likely to respond strongly agree or agree that their firm's business culture reflects the owner's background.

When looking at business policies in Figure 7, it is less clear that diasporan firms are much different than foreign ones. Larger firms had the most responses that the firm's policies were in line with the owner's background, whereas for smaller firms, we see the most answers that diasporan firms disagree with that claim.

Based on the summary statistics and overview of respondents' answers, there appear to be distinctions among our three groups, which are further investigated in the methodology and results sections.

FIGURE 5. Firm Responses to Labor Cost Statement
"This firm does not minimize labor costs."

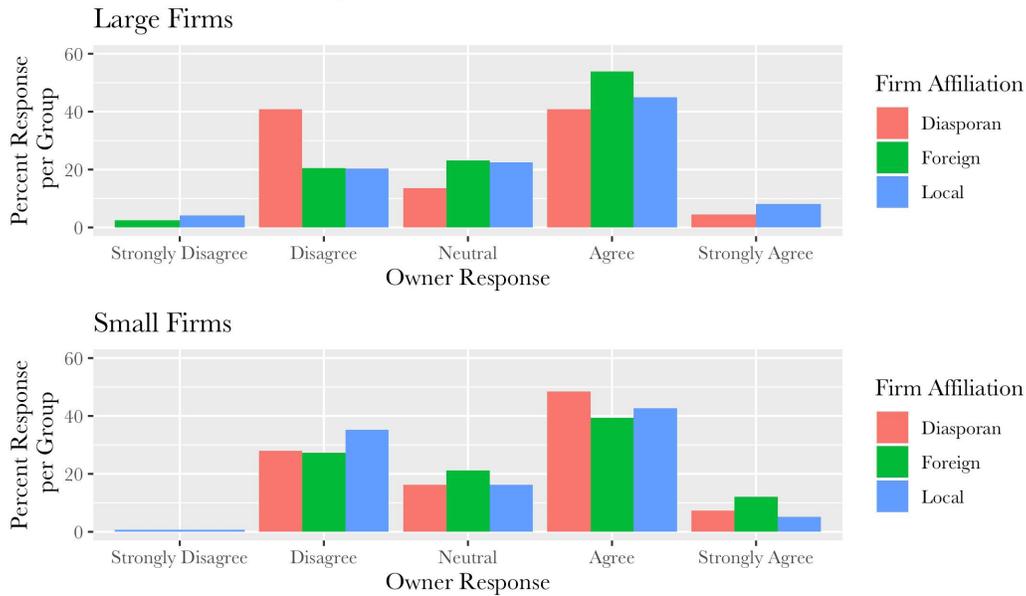
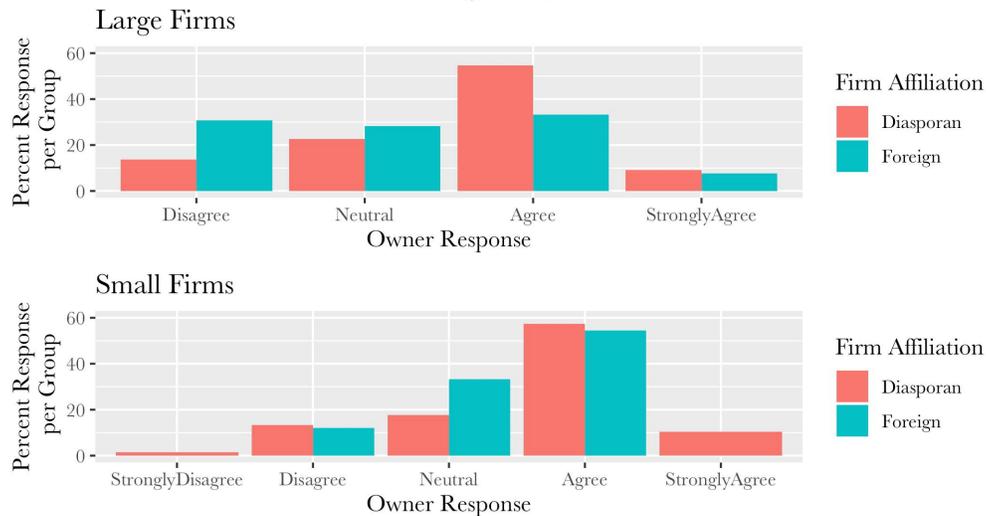


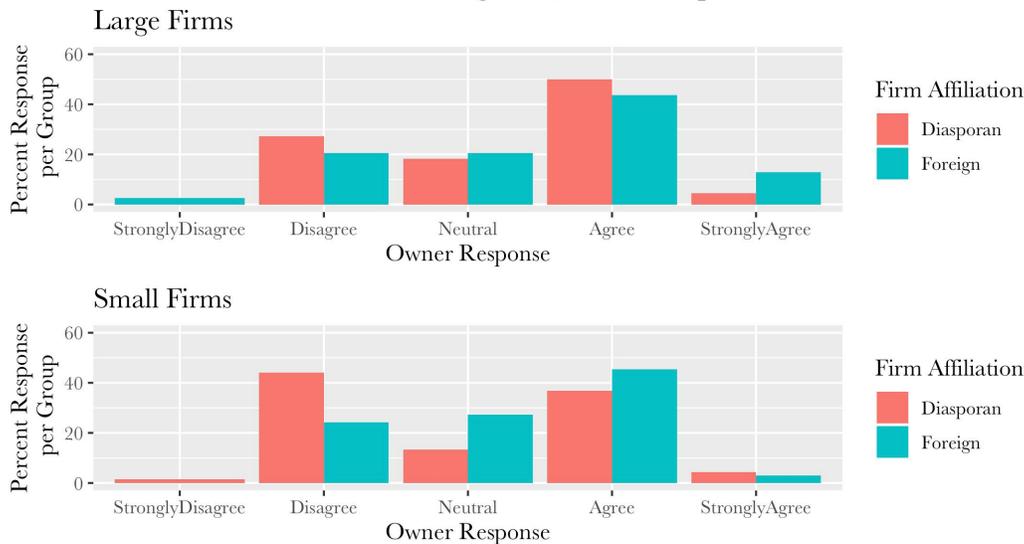
FIGURE 6. Firm Responses to Business Culture Statement
*"This firm's business culture is in line with the owner's background.
 - i.e American background, American culture"*



3. ESTIMATION METHODOLOGY

I implement two estimation strategies to understand best the general trends and specific effects of diasporan, local, and foreign-owned firms. In the first, I estimate a linear regression on the behavior, characteristics, and culture indices described earlier. And in the second, I employ ordered logit and estimate the marginal effects for the individual measure which makes up the three indices.

FIGURE 7. Firm Responses to Business Policy Statement
*"This firm's business policies are in line with the owner's background
 - i.e American background, American policies."*



3.1. Linear Regression Using Indices. A novel interpretation of this type of data is the creation of an index which better captures the effect of sensitivity grouped in terms of worker treatment, firm business culture, and firm policies. Using an index rather than the individual 19 variables on diaspora sensitivity allows me to understand better the behavior of firms across many categories and capture trends that are not apparent otherwise.

Following the Econometrica article by Kling, Liebman, and Katz (2007), I created multiple indices intended to capture the broader effects of related individual measures. These are the GenerousBehaviorIndex, the ConsiderateCharacteristicsIndex, and the CultureIndex.

The *GenerousBehaviorIndex* aggregates the survey responses on questions providing its workers higher salaries and higher quality of life, minimizing labor costs, and providing professional development opportunities, with a baseline of locally-owned firms. The index is meant to capture how generous and caring the firm is toward its workers and the treatment of individuals in Armenia.

The *ConsiderateCharacteristicsIndex* aggregates the survey responses on questions on investment even if it is not profitable, donating to charity, investing in an environmentally-friendly way, and preference to hire locals rather than foreigners. This index is intended to capture the degree to which a firm has altruistic characteristics and has a more conscientious attitude toward Armenia.

The *CultureIndex* aggregates the survey responses on questions about how much the firm's business culture and policies are in line with the background of the firm owner, with a baseline of foreign-owned

firms. This index aims to measure the strength of how much a firm owner's background influences the business policy and culture.

The index equally weighs the average of z-scores of its components, with the sign of each measure oriented such that more beneficial outcomes have higher scores. The z-scores are calculated by subtracting the local group mean and dividing by the local group standard deviation. The components of the model have a mean of 0 and a standard deviation of 1 for the baseline group, which are local firms. Thus, for example with the Generous Behavior Index and Considerate Characteristics Index the "Diaspora Owned" coefficient in the regressions show the effect of a diasporan-owned (b1) firm in standard deviation units compared to local-owned firms, as foreign ownership (b2) is controlled for and local ownership is the baseline. Additionally, I investigate the effect of diaspora management (b3) on its own and in terms of the interaction (b4) with a diasporan owner to capture the effect of a firm that is both diasporan-owned and managed.

Additionally, I control for firm type (b6), with the baseline being "New Firm or Startup" and involvement of the firm owner in the day-to-day affairs of the firm (b5), with the baseline being "Owner Somewhat Involved", and use fixed country effects (ac). By using these control variables and fixed effects, and distinguishing between large and small firms, I am able to make a more accurate "apples to apples" comparison of the different firms in our dataset. The estimated regression for Equation (1) is as follows:

:

$$(1) \text{ Index}_i = \beta_1 \text{DiasporanOwned}_i + \beta_2 \text{ForeignOwned}_i + \beta_3 \text{DiasporanManaged}_i \\ + \beta_4 \text{DiasporanOwned}_i * \text{DiasporanManager}_i + \beta_5 \text{HowInvolvedDayToDay}_i \\ + \beta_6 \text{WhatBestDescribesYourBusiness}_i + \alpha_c + \epsilon_i$$

This Equation above is estimated in linear regressions, which distinguish between large and small firms, thus showing us variation between these categories. When looking at firm behavior and culture, I only observe effects for diasporan-owned and diasporan-owned/managed firms, compared to a baseline of foreign-owned firms. Thus, for the Culture Index, I use the same Equation but exclude local businesses from the data set and the foreign ownership variable of the regression in order to compare the culture of firms that are only diasporan- and foreign-owned, with foreign ownership as the baseline. Doing so allows me to make a comparison between who is more likely to report bringing back culture from the owner's country of resettlement/origin. By excluding locals, I can discern if diasporans are more or less likely than foreigners to report that the owner's background country influences the business.

3.2. Ordered Logistic Regression. I follow Graham (2019) and estimate an ordered linear regression on the various dependent variables of firm behavior, characteristics, and culture using Equation (2). I report the marginal effects of the dependent variable, which show us the marginal difference in probability of either disagreeing, being neutral, or agreeing with the survey measure. To best understand the effect of ownership on the dependent variable, I recoded the survey responses to disagree, neutral, and agree from strongly disagree, disagree, neutral, agree, strongly agree. In doing so, we lose some of the variations in responses but can still capture the general trend moving higher on agreeing with positive firm measures. Additionally, we have a similar interpretation of our dependent variable when looking at ordered measures such as “Offering (lower, same, higher) pay”, which are coded as lower, same, or higher. Equation (2) is the same as Equation (1) regression, except the dependent variable is now one of the individual measures rather than one of the indices. The estimated ordered logistic model, Equation (2), is as follows:

$$(2) \text{ Measure}_i = \beta_1 \text{DiasporanOwned}_i + \beta_2 \text{ForeignOwned}_i + \beta_3 \text{DiasporanManaged}_i \\ + \beta_4 \text{DiasporanOwned}_i * \text{DiasporanManager}_i + \beta_5 \text{HowInvolvedDayToDay}_i \\ + \beta_6 \text{WhatBestDescribesYourBusiness}_i + \alpha_c + \epsilon_i$$

When interpreting marginal effects, I am only reporting the marginal change in probability of either disagreeing, being neutral, or agreeing with the dependent coefficients, for diasporan-owned and foreign-owned, compared to the baseline of a locally-owned firm. In the dependent variables of firm behavior and culture, I only observe marginal effects for diasporan-owned firms, excluding local businesses and using foreign ownership as the baseline.

4. RESULTS AND ANALYSIS

4.1. Indices Analysis. Results from the linear regressions are presented in Tables 3 - 6 found in the Appendix, and summarized below in Table 1 and Table 2. In Table 1, we see that, for small firms, that the coefficients for diasporan-owned, diasporan-owned and managed, and foreign-owned, are all negative for the Generous Behavior Index, indicating that both diasporan- and foreign-owned firms are less generous than the average local firm. These coefficients suggest the opposite of what I was expecting. However, looking at the p-values, we see that none of them are statistically significant.

The only statistically significant coefficient we see among the regressions for small firms is the diasporan-owned indicator of the Considerate Characteristics Index, which is -0.396, meaning that diasporan-owned firms are associated with -0.397 lower standard deviation units on this measure compared to local firms.

The sign for the total effect of diasporan-owned and managed is also negative, though lower in magnitude than solely diasporan-owned, and smaller in magnitude than foreign-owned, though both are statistically insignificant.

Table 1: Summary of Results for Small Firms

Variable	Diasporan Owned	Diasporan Owned and Managed	Total Effect Diasporan Owned and Managed	Foreign Owned	Same Sign	Expected Result
Index						
Behavior Index (P-value)	-.031 (0.896)	-.248 (0.503)	-0.279 (0.746)	-.083 (0.691)	Yes	No
Characteristics Index (P-value)	-.396 (0.036)	.260 (0.414)	-0.136 (0.110)	-.212 (0.108)	Yes	No
Culture Index (P-value)	-.130 (0.549)	.476 (0.132)	0.346 (0.1328)	-	-	Yes

Notes: This table shows selected coefficients of the linear regressions on our three indices for small firms, which can individually be found in the Appendix. I have chosen to display the coefficient of Diaspora Owned, Diasporan Owned and Manager, the summary of the coefficients to show the total effect, and Foreign Owned Coefficient. The Behavior Index is an index created from the average of measures of providing higher salaries, donating to charity, providing higher quality of life, prioritize working conditions, and providing professional development opportunities, with a baseline of locally owned firms. The Characteristics Index is an index created from the average of measures of investment even if it is not profitable, invest in an environmentally friendly way, and preference to hire locals rather than foreigners. The Culture Index is an index created from the averages of measures of how much the firm's business culture and business policies are in line with the background of the firm owner, with a baseline of foreign owned firms. The index equally weights average of z-scores of its components, with the sign of each measure oriented such that more beneficial outcomes have higher scores. The z-scores are calculated by subtracting the local group mean and dividing by the local group standard deviation, with components of the model having a mean 0 and standard deviation 1 for the baseline group, which are local firms. Thus, for example, the "Diaspora Owned" coefficient shows the effect of a Diasporan owned firm in standard deviation units compared to local and foreign owned firms, as foreign ownership is controlled for and local ownership is the baseline, for the Behavior and Characteristics Index. For the Cultural, for example, the "Diaspora Owned" coefficient shows the effect of a Diasporan owned firm in standard deviation units compared to foreign owned firms, with foreign ownership as the baseline. Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

When looking at large firms, we again do not see many statistically significant coefficients for our ownership coefficients except for the diasporan coefficient on the Generous Behavior Index. There is a large, significant, and positive coefficient on the diasporan-owned variable compared to a smaller, insignificant, negative one on the foreign-owned one. This suggests that diasporans behave differently than both locally-owned and foreign-owned firms on this metric.

Generally, though our coefficients are statistically insignificant, the signs of the coefficients for diasporan-owned and diasporan-owned and managed show us our expected result that diasporan firms are positively contributing through the firms which they both own and manage; foreign firms have negative coefficients, which are also statistically insignificant. Thus, it is clear that, based on these regressions, it is very difficult to draw any conclusions regarding firms based on these three indices due to a lack of statistical power.

Table 2: Summary of Results for Large Firms

Variable Index	Diasporan Owned	Diasporan Owned and Managed	Total Effect Diasporan Owned and Managed	Foreign Owned	Same Sign	Expected Result
Behavior Index (P-value)	.664 (0.044)	-.386 (0.276)	0.278 (0.127)	-.067 (0.703)	No	Yes
Characteristics Index (P-value)	-.057 (0.856)	.431 (0.347)	0.375 (0.613)	-.212 (0.108)	No	Yes
Culture Index (P-value)	-.088 (0.734)	.134 (0.752)	0.046 (0.561)	-	-	Yes

Notes: This table shows selected coefficients of the linear regressions on our three indices for large firms, which can individually be found in the Appendix. I have chosen to display the coefficient of Diaspora Owned, Diasporan Owned and Manager, the summary of the coefficients to show the total effect, and Foreign Owned Coefficient. The Behavior Index is an index created from the average of measures of providing higher salaries, donating to charity, providing higher quality of life, prioritize working conditions, and providing professional development opportunities, with a baseline of locally owned firms. The Characteristics Index is an index created from the average of measures of investment even if it is not profitable, invest in an environmentally friendly way, and preference to hire locals rather than foreigners. The Culture Index is an index created from the averages of measures of how much the firm's business culture and business policies are in line with the background of the firm owner, with a baseline of foreign owned firms. The index equally weights average of z-scores of its components, with the sign of each measure oriented such that more beneficial outcomes have higher scores. The z-scores are calculated by subtracting the local group mean and dividing by the local group standard deviation, with components of the model having a mean 0 and standard deviation 1 for the baseline group, which are local firms. Thus, for example, the "Diaspora Owned" coefficient shows the effect of a Diasporan owned firm in standard deviation units compared to local and foreign owned firms, as foreign ownership is controlled for and local ownership is the baseline, for the Behavior and Characteristics Index. For the Cultural, for example, the "Diaspora Owned" coefficient shows the effect of a Diasporan owned firm in standard deviation units compared to foreign owned firms, with foreign ownership as the baseline. Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

4.1.1. *Sample Size Calculation.* To understand the necessary sample size needed to have statistically significant effects on my diaspora coefficients, I conducted a power analysis for a two-sample means test using the characteristics of my sample. An important caveat to this is that I conduct my sample size calculation assuming that the point estimates of my data and regressions reflect the true magnitude of the effect of diasporan affiliation. I found that to say I have an 80% chance of detecting an effect, at the 5% significance level, I would need a sample of roughly 7,600 firms, with approximately 1,500 of them being diasporan, not distinguishing between large and small firms. In comparison, my sample is composed of 396 firms, with 90 diasporan firms. However, I do not believe that many diasporan-owned firms in Armenia even exist, thus further complicating the matter.

4.2. **Ordered Logistic Analysis.** The ordered logistic regressions are presented in Tables 7 – 12 of the Appendix. Among small firms, we only see statistically significant marginal probabilities on the variables investing despite risk, preferring to hire locals, green firm affiliation, and business culture and policy aligning with the owner's background. We see diasporan owners are less likely to agree that they invest despite risk, prefer to hire locals, and affiliate as green firms, with the baseline comparison of local firms. For foreign-owned firms, we do not see any statistically significant coefficients on those measures.

We also find that small diasporan-owned firms are more likely to respond “neutral” instead of agreeing or disagreeing, that their firm’s business culture is in line with the owner’s background, compared to foreign-owned firms. As to business policies, we see that diasporan-owned firms are more likely to report their firm’s policies are in line with the owner’s background than foreign firms.

Among large firms, we see statistically significant marginal probabilities on our dependent variables of providing workers with higher pay, prioritizing labor, providing workers with more training opportunities, donating to charity, and business policy aligning with the owner’s background. The regressions show that diasporan-owned firms are more likely to agree they provide higher pay, prioritize labor, offer more training opportunities, and donate to charity than local firms. We do not see any statistically significant coefficients on those measures for foreign-owned firms, but generally negative or smaller positive coefficients on their marginal probabilities of agreeing on those coefficients.

Additionally, for large diasporan-owned firms, we see that they are less likely than foreign firms to agree that their business policies align with the owner’s background. There are no statistically significant coefficients for business culture. However, the signs are similar and suggest that the business culture of large diasporan firms is also not in line with the owner’s background.

5. CASE STUDIES OF DIASPORAN FIRMS

Below I present some case studies of diaspora firms from the United States and Argentina in different sectors to illustrate the nuances, typical experiences, and challenges of diasporans who have decided to start a business in Armenia and how those investments compare to the results found in this study.

5.1. Gr̈uv - United States. For Gr̈uv startup cofounder Armand Yerjanian, investing in Armenia was a decision that he made after winning the Neruzh startup competition in 2018. Armand, an American Armenian from Los Angeles, decided to build Gr̈uv, a music recommendation and sharing startup, with other Armenian cofounders from his home community in the United States. He eventually took the company to Armenia. The decision to move the company to Armenia was primarily based on the founders’ understanding of the talent of the Armenian tech sector and a personal dream to one day start a business in Armenia. Armand had not heard of Neruzh when he and his fellow cofounders had initially begun the startup but describes the discovery of Neruzh as a fortunate coincidence because the program seemed to fit their needs perfectly. During that time, they did not have investors or grants. Had the opportunity not presented itself, Armand believes it would not have been possible to invest or try to establish themselves in Armenia.

Gr̈uv was one of three diaspora-created startups to win Neruzh’s main prizes, and the grant they received set the foundation for them to attract more capital and sustain the business in Armenia. One of

Grüv's cofounders actually repatriated to Armenia to run the business, which is one of the main goals of the Neruzh competition (Neruzh 2020). Their victory in the contest came not only with a grant but also with support from local startup institutions and the tech community in Armenia. Armand believes that, without that structure, they would not have been able to stay. While he admits that there is an emotional motivation to build the company from Armenia, there is no way of getting around the need for money and support to sustain the business.

Armand believes that the lack of capital and initial funds for diasporan entrepreneurs like himself is a big reason many talented diasporans are not investing. "Though the actual cost of starting an LLC is roughly 20 US dollars in Armenia, and the cost of labor is significantly lower like in any other country," Armand stated, "you need to be well resourced and connected." Despite being a diasporan Armenian company and having this ethnic connection, finding support from venture capitalists in Armenia as a startup was a challenge for Grüv. In Armand's view, foreign companies have an advantage to diasporan companies. They are not reliant on the Armenian infrastructure and can issue stocks, make orders, and take on investment worldwide. Thus, even though Grüv is registered in Armenia, it is also registered in the United States to have the legal jurisdiction needed to take advantage of the financial resources in the US and abroad. The lack of financial and legal infrastructure makes it difficult and, in some cases impossible, to attract investments from all over the world. Thus, being a diasporan investor in Armenia does not provide Armand with any advantage, in his opinion.

That being said, Armand believes that Grüv brings added value to Armenia in various ways. Because they were able to win a large grant through Neruzh and have access to outside sources of investment, Grüv is able to provide its workers with higher wages, professional development opportunities, and stock shares for investing back into the company. In this way, the company itself is generating a profit and helping the local Armenians through higher salaries. It also provides their employees with the opportunity to become engaged themselves and invest.

This type of relationship implies the transfer of knowledge in terms of technical skills and the business acumen and culture of the startup community in America. The startup community in Armenia is just forming, and as a landlocked and geographically isolated country, the means and ability to think "big" is often limited and unimaginable. Diasporan firm owners like Armand, who desire to be in Armenia and be profitable, and want to make sure their compatriots are on the same level as themselves, clearly transfer a novel and beneficial business culture and practices.

5.2. Corporación América International - Argentina. Corporación América International has a long history of involvement in Armenia. The company, founded by the Argentine-Armenian Eurnekian family that

immigrated to Argentina in the early 20th century after the Genocide, originally began in Argentina as a textile company. It has since been through various stages of development: from clothing manufacturing in the 70s, to cable television management in the 80s, eventually becoming a multimedia conglomerate. In the 90s, Corporación América won the tender for the operation of 33 airports in Argentina and became the largest private airport operator in the world, with 52 airports in 7 countries (Corporación América 2020). The company has also expanded to work in other industries and, given the Armenian connection of the Eurnekian family, created some of Armenia's largest and most successful businesses. But even before business creation, the Eurnekians began their involvement in Armenia when a family member traveled to the Artsakh territory to help establish medical camps for soldiers who were fighting to maintain that territory during the war Azerbaijan in the mid-1990s. The Eurnekians also donated their older television cameras and equipment to newly independent Armenia, which desperately needed aid in its war-stricken state. Years later, they would soon begin to invest in the country.

Corporación América Director Jorge Alberto Del Aguila, the nephew of long-time former Board Chairman and Member Eduardo Eurnekian, is currently in charge of the company's portfolio in Armenia. After graduating from university in Argentina, he began working closely with the firms they had in Armenia and lived in Armenia for two years before working as Director. Currently, Del Aguila is based out of Buenos Aires, Argentina, but visits the country roughly once every month and a half to check in with the firms. Thanks to technology, it has been easier now more than ever for him to maintain contact with the businesses in Armenia, and he described having frequent online or phone meetings. Today, there are five primary businesses that Corporación América owns in Armenia: Zvartnots International Airport, Karas Wines, HayPost (the Armenian postal service), a real estate firm, and Converse Bank.

Del Aguila described the initial business model as a direct transfer of knowledge from Argentina to Armenia. Their first big project was the creation of a modern 21st-century airport in 2001. The initiative to invest in the airport and take on the project was theirs, and the capital came from their savings. Until that point, Armenia was still utilizing the old Soviet airport infrastructure. The insights and experience of Corporación América were crucial to updating this outdated but important business for the country. Today, the CEO of the airport is Argentine but not an Argentine Armenian. The airport remains a key component of the Armenian economy due to its ability to handle the booming tourist industry and adapt to modern standards.

Years later, Corporación América created a wine company in Argentina and expanded that business to Armenia in 2005. Their team in Argentina was comprised of both local Argentine experts and agro engineers and specialists from France. The company they created in Armenia, Karas Wines, had the same

expertise and specialists who created the business by the Argentine model, though it was difficult to find similar large land spans to develop vineyards such as those in Argentina.

However, since then, the business has taken off, and there has been a “wine revolution,” as the number of major Armenian wine companies shifted from 5 to over 30 today. Del Aguila thinks this industry is important for Armenia’s economy because it provides rural workers with the ability to have well-paying jobs and has helped the development of local village economies, in contrast to the concentration of employment that is primarily based in the capital, Yerevan.

Del Aguila’s goal is to eventually phase out the presence of foreign managers in Armenia and train the locals to take control of management. However, it has been a challenge to find replacements for specialists and agro engineers because that education and industry are still relatively new in the country.

In an interesting twist, their investment in Converse Bank in 2007 was not based on having prior experience in Argentina with banks but rather with taking on the project in Armenia. Del Aguila mentions they are often presented with investment projects from a variety of private investors and also banks or institutions such as the European Bank for Reconstruction and Development, and this happened to be a new industry that Corporación América decided to take on in Armenia. Though the learning curve was steep, they were ultimately able to manage the bank so successfully that it has to become one of the major banks in the country.

Regarding HayPost, it was a project they took on from the previous Dutch owners. The latter Del Aguila believes were not familiar enough with the Armenian business climate to adequately manage the firm. With their extensive knowledge of the Armenian market and policies, Corporación América started to operate the postal services in 2008 and was granted a ten-year contract to manage the over 880 branches in Armenia. Again it was a new industry for their company, but they were willing to take the risk and invest in Armenia, despite the global financial crisis of 2008.

More recently, in 2014, Corporación América purchased a large building in Yerevan’s Republic Square, one of the most famous tourist attractions in the country, as one of their real estate projects. Del Aguila sees a big opportunity to develop real estate, specifically to meet the need for office, retail, and mall spaces in Armenia. The development of modern service industries and startups and increasing FDI and trade provided them with incentives to take on the investment. In 2016, Corporación América Real Estate was formed, and it now focuses primarily on Argentine and Armenian real estate investments.

Generally, Del Aguila states that their investments in Armenia started because of their connection to the country and a desire to provide good work opportunities to the locals. However, he also holds the view that projects they take on are not purely emotional investments, as “It is a business, after all, so the numbers

should work—and that’s on me!” Thus, the challenges he faces in the Armenian context are similar to challenges in other international investments Corporación América has.

Primarily, the distance makes it difficult to manage the businesses from Argentina. Still, given that there are managers and CEOs from the headquarters working in Armenia, the ability to travel frequently, and modern communications technology, that challenge has gotten easier to overcome. Another challenge that Armenia presents is institutional difficulties, particularly setting up compliance and governance of companies in a manner similar to that of the firms they have in Argentina.

It can be challenging to transfer or integrate their way of conducting business, in that Corporación América is a horizontal company operating in Armenia. And the latter is a country that tends to have more vertically structured industries. Nonetheless, they employ over 4,000 people in Armenia across all of their investments. They have local managers and CEOs for Converse Bank, HayPost, and Karas Wines, and have a strong desire to train locals to take more control over the firms.

6. CONCLUSION

In this paper, we see that, according to my limited regression analysis, smaller diasporan firms are less likely to report investing, preferring to hire locals, and identifying as green firms. Additionally, we see small diasporan-owned firms report that they don’t strongly agree or disagree that the owner’s background influences the business culture, and agree that the business policy of the firm is in line with the owner’s background. For large firms, diasporan firms are more likely to agree that their firm provides higher pay, higher labor priority, more training opportunities, and donations to charity when compared to local firms.

When looking at business policies, we see the opposite of small firms, in that larger diasporan firms are less likely to agree that their policies are in line with the owner’s background. In short, my hypothesis that diasporan-owned firms are more sensitive to locals holds for some measures when looking at large firms, but the opposite can be said for small firms. Concerning business culture and policies, it would appear smaller firms tend to more strongly hold the belief that their firm reflects the owner’s background, but the opposite can be said for large firms.

Looking at the case studies of Gr̄v and Corporación América, we see that there do appear to be distinctions between large and small diaspora firms. In many cases, the types of investments and large contributions that Gr̄v would like to contribute to Armenia are restricted by the source of capital and funds. The infrastructure they need may take years to develop something out of their control, and perhaps other small and medium-sized enterprises are in a similar situation. The contrast here with a large international firm

such as Corporación América is the access to funds from savings and bigger institutions, freeing them from constraints that smaller firms face.

It is clear that both companies' impetus to invest in Armenia was driven by an ethnic connection, as each one potentially had much easier opportunities to build a business in their home countries. Both Yerjanian and Del Aguila present a substantial effort on behalf of their companies to ensure their workers in Armenia learn new skills and are empowered to develop professionally by working in their businesses. Whether it's through teaching locals the potential of technology and providing them with beneficial investment salary plans or setting the foundation for a booming wine industry that trains and employees hundreds of rural Armenians, it is needless to say that diasporan firms are invested in Armenia for the long haul.

The evidence suggests that when they can, diasporans care more than their foreign counterparts to treat their compatriots better and often invest even when it is much easier for them not to do so. Regarding firm culture and behavior, perhaps the smaller firm size is more conducive to ensuring these differences in the background are felt throughout the business, as the evidence from our regression analysis shows.

For larger firms, identifying a similar degree of influence of an owner's background on the firm at such a granular level is perhaps not as easily achievable. Thus, based on both the quantitative and qualitative results, there is some suggestive evidence that my first hypothesis on diasporan sensitivity in investment appears to be correct. And that we can draw mixed conclusions with regards to the theory on the influence of background and culture, as I anticipated it would be the wave of immigration, not firm size, that distinguishes diasporan firms from foreign-owned firms.

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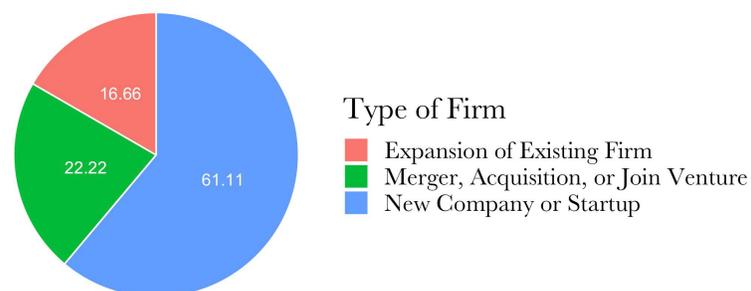
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7. APPENDIX

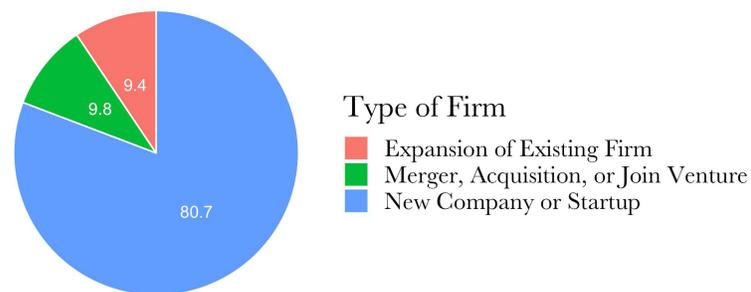
7.1. Sample Breakdown Figures.

FIGURE 8. Firm Types - Foreign-Owned Firms in Sample



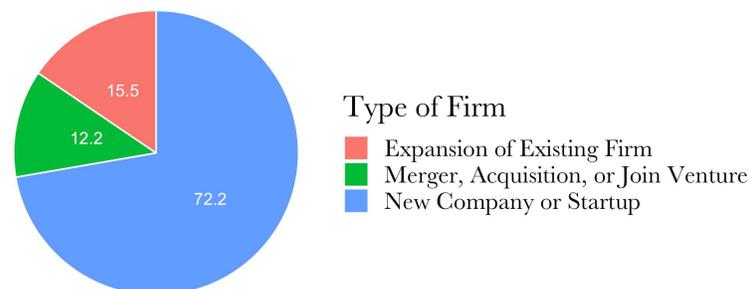
This chart shows the proportion of firm types for foreign-owned firms.

FIGURE 9. Firm Types - Local-Owned Firms in Sample



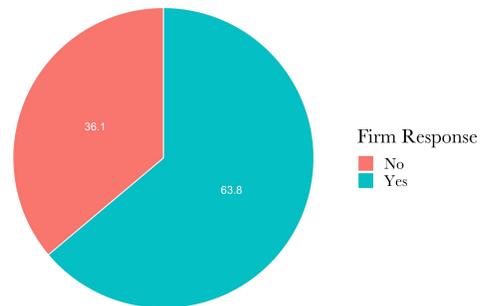
This chart shows the proportion of firm types for local-owned firms.

FIGURE 10. Diasporan-Owned Firms in Sample



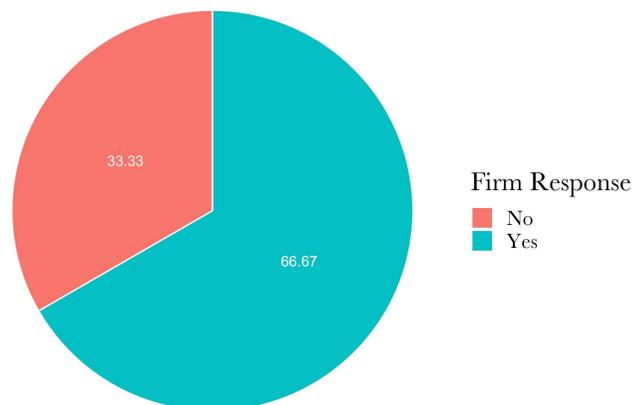
This chart shows the proportion of firm types for diaspora-owned firms.

FIGURE 11. "Is CEO Owner of Firm?" - Foreign-Owned Firms in Sample



This chart shows the proportion of foreign firms which responded their CEO is owner of the firm.

FIGURE 12. "Is CEO Owner of Firm?" - Local-Owned Firms in Sample



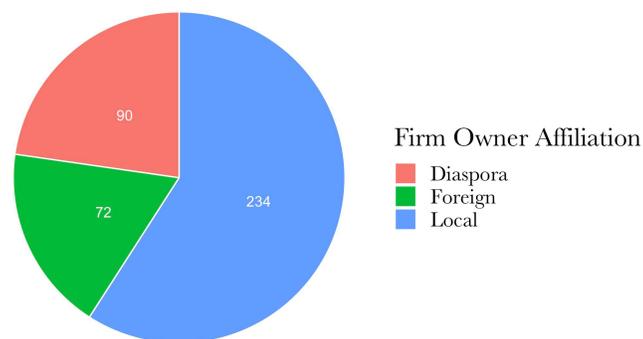
This chart shows the proportion of local firms which responded their CEO is a owner of the firm.

FIGURE 13. "Is CEO Owner of Firm?" - Diasporan-Owned Firms



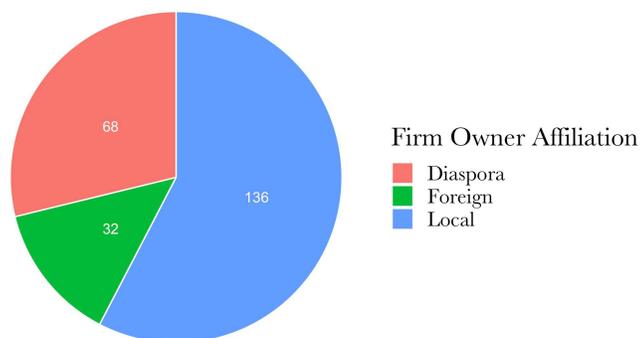
This chart shows the proportion of diasporan firms which responded their CEO owner of the firm.

FIGURE 14. Firm Composition by Affiliation in Entire Sample



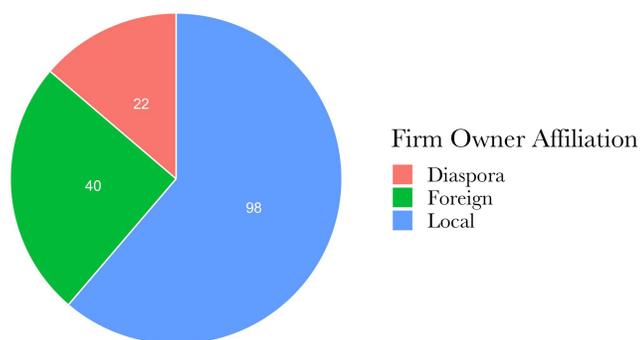
This chart shows the number of firms in the entire dataset, distinguishing by owner affiliation.

FIGURE 15. Firm Composition by Affiliation - Small Firms



This chart shows the number of small firms in the dataset, distinguishing by owner affiliation.

FIGURE 16. Firm Composition by Affiliation - Large Firms



This chart shows the number of large firms in the dataset, distinguishing by owner affiliation.

7.2. Regression and Marginal Probability Tables. Below you will find the regressions for Equation (1) estimated for each of the three indices. The regressions are split by firm size, distinguishing between large and small firms, as well as size interacted with firm culture and characteristics.

Additionally, I have included the ordered logit marginal effects tables of Equation (2). These tables show us the marginal probability of agreeing, being neutral, or disagreeing with a particular question asked in the survey, with a baseline of locally-owned firms for all dependent variables except those regarding business culture and policy, in which the baseline is foreign-owned firms.

Upon request, the author can provide the regression tables on the dependent variables, which provide minimal information about the questions of interest. The coefficients of these regressions are only useful in terms of understanding the direction of ownership and magnitude.

Table 3. Regressions on Firm Behavior and Characteristics Indices – Small Firms

	Behavior Index			Characteristics Index		
	(1)	(2)	(3)	(4)	(5)	(6)
Diaspora Owned	0.115 (0.143)	-0.086 (0.239)	-0.031 (0.241)	-0.103 (0.114)	-0.419** (0.185)	-0.396** (0.188)
Foreign Owned	0.028 (0.136)	-0.111 (0.205)	-0.083 (0.208)	-0.024 (0.097)	-0.236* (0.131)	-0.212 (0.131)
Diasporan Managed	0.127 (0.311)	0.050 (0.335)	0.104 (0.331)	0.048 (0.305)	-0.014 (0.287)	-0.030 (0.281)
Diasporan Managed and Owned	-0.275 (0.349)	-0.172 (0.375)	-0.248 (0.370)	0.160 (0.333)	0.260 (0.323)	0.260 (0.318)
Owner Not Involved in Day to Day		-0.207 (0.160)	-0.207 (0.161)		-0.125 (0.137)	-0.130 (0.137)
Owner Very Involved in Day to Day		-0.048 (0.099)	-0.013 (0.102)		-0.011 (0.084)	-0.011 (0.080)
Firm is Merger, Acquisition or Joint Venture			-0.024 (0.160)			-0.132 (0.100)
Firm is an Expansion of Existing International Firm			0.223 (0.140)			-0.009 (0.142)
R-squared	0.005	0.019	0.031	0.010	0.032	0.036
Country Fixed Effects	No	Yes	Yes	No	Yes	Yes

Note: The dependent variable for (1) – (3) is the Behavior Index that averages measures of providing higher salaries, donating to charity, providing higher quality of life, prioritize working conditions, and providing professional development opportunities, with a baseline of locally owned firms. The dependent variable for (4) – (6) is the Characteristics Index that averages measures of investment even if it is not profitable, invest in an environmentally friendly way, and preference to hire locals rather than foreigners. The index equally weights average of z-scores of its components, with the sign of each measure oriented such that more beneficial outcomes have higher scores. The z-scores are calculated by subtracting the local group mean and dividing by the local group standard deviation, with components of the model having a mean 0 and standard deviation 1 for the baseline group, which are local firms. Thus, for example, the “Diaspora Owned” coefficient shows the effect of a Diasporan owned firm in standard deviation units compared to local and foreign owned firms, as foreign ownership is controlled for and local ownership is the baseline. The baseline for the ownership variables is “Owner Somewhat Involved” and the baseline for the firm classification variables is “Firm is a New Company or Startup”. Standard errors in parentheses, ** p<0.01, * p<0.05, † p<0.1

Table 4. Regressions on Firm Culture Index - Small

	Culture Index		
	(1)	(2)	(3)
Diasporan Owned	-0.107 (0.189)	-0.129 (0.210)	-0.130 (0.216)
Diasporan Managed	-0.334*** (0.123)	-0.369** (0.159)	-0.373* (0.205)
Diasporan Owned and Managed	0.432* (0.235)	0.470* (0.271)	0.476 (0.313)
Owner Not Involved in Day to Day		-0.166 (0.193)	-0.167 (0.196)
Owner Very Involved in Day to Day		-0.001 (0.157)	-0.004 (0.170)
Firm is Merger, Acquisition or Joint Venture			0.003 (0.229)
Firm is an Expansion of Existing International Firm			-0.010 (0.184)
R-squared	0.005	0.010	0.010
Country Fixed Effects	No	Yes	Yes

Note: The dependent variable for (1) - (3) is the Culture Index that averages measures of how much the firm's business culture and business policies are in line with the background of the firm owner, with a baseline of foreign owned firms. The index equally weights average of z-scores of its components, with the sign of each measure oriented such that more beneficial outcomes have higher scores. The z-scores are calculated by subtracting the foreign group mean and dividing by the foreign group standard deviation, with components of the model having a mean 0 and standard deviation 1 for the baseline group, which are foreign firms. The baseline for the ownership variables is "Owner Somewhat Involved" and the baseline for the firm classification variables is "Firm is a New Company or Startup". Thus, for example, the "Diaspora Owned" coefficient shows the effect of a Diasporan owned firm in standard deviation units compared to foreign owned firms, as foreign ownership is the baseline. Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 5. Regressions on Firm Behavior and Characteristics Indices - Large Firms

	Behavior Index			Characteristics Index		
	(1)	(2)	(3)	(4)	(5)	(6)
Diaspora Owned	0.473** (0.205)	0.552 (0.335)	0.664** (0.326)	-0.080 (0.206)	-0.112 (0.314)	-0.057 (0.312)
Foreign Owned	-0.138 (0.138)	-0.112 (0.169)	-0.067 (0.175)	-0.227 (0.152)	-0.241 (0.177)	-0.221 (0.173)
Diasporan Managed	-0.243 (0.221)	-0.214 (0.218)	-0.230 (0.232)	-0.444 (0.360)	-0.456 (0.371)	-0.528 (0.370)
Diasporan Managed and Owned	-0.274 (0.340)	-0.309 (0.351)	-0.386 (0.353)	0.388 (0.444)	0.397 (0.454)	0.431 (0.457)
Owner Not Involved in Day to Day		-0.047 (0.191)	-0.011 (0.195)		0.068 (0.174)	0.047 (0.174)
Owner Very Involved in Day to Day		0.027 (0.129)	0.030 (0.126)		0.008 (0.141)	-0.030 (0.137)
Firm is Merger, Acquisition or Joint Venture			-0.145 (0.149)			0.159 (0.138)
Firm is an Expansion of Existing International Firm			-0.292* (0.169)			-0.230 (0.149)
R-squared	0.056	0.058	0.082	0.037	0.038	0.062
Country Fixed Effects	No	Yes	Yes	No	Yes	Yes

Note: The dependent variable for (1) - (3) is the Behavior Index that averages measures of providing higher salaries, donating to charity, providing higher quality of life, prioritize working conditions, and providing professional development opportunities, with a baseline of locally owned firms. The dependent variable for (4) - (6) is the Characteristics Index that averages measures of investment even if it is not profitable, invest in an environmentally friendly way, and preference to hire locals rather than foreigners. The index equally weights average of z-scores of its components, with the sign of each measure oriented such that more beneficial outcomes have higher scores. The z-scores are calculated by subtracting the local group mean and dividing by the local group standard deviation, with components of the model having a mean 0 and standard deviation 1 for the baseline group, which are local firms. Thus, for example, the "Diaspora Owned" coefficient shows the effect of a Diasporan owned firm in standard deviation units compared to local and foreign owned firms, as foreign ownership is controlled for and local ownership is the baseline. The baseline for the ownership variables is "Owner/Somewhat Involved" and the baseline for the firm classification variables is "Firm is a New Company or Startup". Standard errors in parentheses, **, p<0.01, *, p<0.05, †, p<0.1

Table 6. Regressions on Firm Culture Index - Large Firms

	Culture Index		
	(1)	(2)	(3)
Diasporan Owned	0.176 (0.214)	-0.169 (0.290)	-0.088 (0.258)
Diasporan Managed	-0.289 (0.340)	-0.367 (0.318)	-0.403 (0.329)
Diasporan Owned and Managed	0.166 (0.475)	0.201 (0.433)	0.134 (0.424)
Owner Not Involved in Day to Day		-0.262 (0.222)	-0.232 (0.233)
Owner Very Involved in Day to Day		0.110 (0.150)	0.104 (0.140)
Firm is Merger, Acquisition or Joint Venture			-0.075 (0.177)
Firm is an Expansion of Existing International Firm			-0.358* (0.204)
R-squared	0.007	0.046	0.065
Country Fixed Effects	No	Yes	Yes

Note: The dependent variable for (1) - (3) is the Culture Index that averages measures of how much the firm's business culture and business policies are in line with the background of the firm owner, with a baseline of foreign owned firms. The index equally weights average of z-scores of its components, with the sign of each measure oriented such that more beneficial outcomes have higher scores. The z-scores are calculated by subtracting the foreign group mean and dividing by the foreign group standard deviation, with components of the model having a mean 0 and standard deviation 1 for the baseline group, which are foreign firms. The baseline for the ownership variables is "Owner Somewhat Involved" and the baseline for the firm classification variables is "Firm is a New Company or Startup". Thus, for example, the "Diaspora Owned" coefficient shows the effect of a Diasporan owned firm in standard deviation units compared to foreign owned firms, as foreign ownership is the baseline. Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 7. Marginal Probabilities – Small Firms

Survey Measure	Higher Pay		Higher Standard of Living		Higher Labor Priority		Higher Training Opportunities	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Owner	Diaspora	Foreign	Diaspora	Foreign	Diaspora	Foreign	Diaspora	Foreign
Marginal Probability Disagree	0.0134 (0.033)	0.003 (0.024)	-0.004 (0.018)	0.000 (0.022)	-0.027 (0.162)	-0.010 (0.121)	0.013 (0.021)	0.014 (0.020)
Marginal Probability Neutral	0.073 (0.145)	0.017 (0.125)	-0.024 (0.155)	0.001 (0.121)	-0.003 (0.017)	-0.001 (0.018)	0.135 (0.120)	0.087 (0.101)
Marginal Probability Agree	-0.086 (0.177)	-0.020 (0.149)	0.028 (0.172)	-0.001 (0.143)	0.030 (0.178)	0.012 (0.139)	-0.148 (0.141)	-0.101 (0.120)

Note: This table displays the margin effects on various dependent variables of using order logistic regressions following Equation (2). The margin effects display the marginal probabilities of firm disagreeing, being neutral or agreeing that they provide a higher pay, higher standard of living, prioritize their labor, or provide higher training opportunities, with respect to other firms in the same industry. The effects have been separated between Diaspora or Foreign ownership, compared to the baseline of local firms. Thus, for example, the coefficient of "Probability Agree" for Diaspora in Regression (1), shows the probability of a diaspora firm agreeing with that it provides higher pay to its workers than local firms. Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 8. Marginal Probabilities – Small Firms

Survey Measure	Invest Despite Risk		Prefer to Hire Locals		Are a “Green” Firm		Donate to Charity	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Owner	Diaspora	Foreign	Diaspora	Foreign	Diaspora	Foreign	Diaspora	Foreign
Marginal Probability Disagree	0.167 (0.131)	0.081 (0.123)	0.204 (0.132)	0.013 (0.107)	0.127 (0.086)	0.052 (0.048)	-0.050 (0.089)	0.041 (0.070)
Marginal Probability Neutral	0.016 (0.060)	-0.035 (0.057)	0.056*** (0.018)	0.003 (0.025)	0.181*** (0.069)	0.094 (0.067)	-0.050 (0.060)	0.026 (0.040)
Marginal Probability Agree	-0.184** (0.071)	-0.046 (0.067)	-0.260** (0.121)	-0.016 (0.131)	-0.307** (0.141)	-0.145 (0.111)	0.099 (0.141)	-0.066 (0.109)

Note: This table displays the margin effects on various dependent variables of using order logistic regressions following Equation (2). The margin effects display the marginal probabilities of firm disagreeing, being neutral or agreeing that they invest despite risk, prefer to hire locals rather than foreigners, are environmentally friendly, or donate to charity, with respect to other firms in the same industry. The effects have been separated between Diaspora or Foreign ownership, compared to the baseline of local firms. Thus, for example, the coefficient of “Probability Agree” for Diaspora in Regression (1), shows the probability of a diaspora firm agreeing with that it is willing to invest in Armenia despite risk, in comparison local firms. Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 9. Marginal Probabilities – Small Firms

Survey Measure	Business Culture in Line with Owner's Background		Business Policies in Line with Owner's Background	
	(1) Diaspora		(2) Diaspora	
Owner				
Marginal Probability Disagree	0.042 (0.055)		-0.167** (0.073)	
Marginal Probability Neutral	0.080** (0.040)		0.085*** (0.020)	
Marginal Probability Agree	-0.121 (0.092)		0.082 (0.076)	

Note: This table displays the margin effects on various dependent variables of using order logistic regressions following Equation (2). The margin effects display the marginal probabilities of firm disagreeing, being neutral or agreeing that the firm's business culture or policies are in line with the owner's background, with respect to other firms in the same industry. The effects have been separated between Diaspora ownership, compared to the baseline of foreign firms. Thus, for example, the coefficient of "Probability Agree" for Diaspora in Regression (1), shows the probability of a diaspora firm agreeing with that it's business culture is in line with owner's background, in comparison foreign firms. Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 10. Marginal Probabilities - Large Firms

Survey Measure	Higher Pay		Higher Standard of Living		Higher Labor Priority		Higher Training Opportunities	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Owner	Diaspora	Foreign	Diaspora	Foreign	Diaspora	Foreign	Diaspora	Foreign
Marginal Probability Disagree	-0.019* (0.012)	-0.005 (0.007)	-0.014 (0.011)	0.015 (0.022)	-0.167* (0.089)	-0.082 (0.076)	-0.039** (0.019)	-0.006 (0.021)
Marginal Probability Neutral	-0.333** (0.155)	-0.057 (0.115)	-0.186 (0.200)	0.107 (0.104)	-0.103 (0.068)	-0.027 (0.030)	-0.290*** (0.113)	-0.030 (0.105)
Marginal Probability Agree	0.352** (0.160)	0.061 (0.122)	0.199 (0.208)	-0.121 (0.125)	0.270* (0.151)	0.110 (0.105)	0.329*** (0.125)	0.037 (0.125)

Note: This table displays the margin effects on various dependent variables of using order logistic regressions following Equation (2). The margin effects display the marginal probabilities of firm disagreeing, being neutral or agreeing that they provide a higher pay, higher standard of living, prioritize their labor, or provide higher training opportunities, with respect to other firms in the same industry. The effects have been separated between Diaspora or Foreign ownership, compared to the baseline of local firms. Thus, for example, the coefficient of "Probability Agree" for Diaspora in Regression (1), shows the probability of a diaspora firm agreeing with that it provides higher pay to its workers than local firms. Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 11. Marginal Probabilities – Large Firms

Survey Measure	Invest Despite Risk		Prefer to Hire Locals		Are a "Green" Firm		Donate to Charity	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Owner	Diaspora	Foreign	Diaspora	Foreign	Diaspora	Foreign	Diaspora	Foreign
Marginal Probability Disagree	0.163 (0.170)	0.048 (0.093)	0.041 (0.159)	0.030 (0.097)	0.149 (0.176)	0.069 (0.066)	-0.135** (0.062)	0.007 (0.062)
Marginal Probability Neutral	-0.083 (0.094)	-0.021 (0.042)	0.009 (0.008)	0.004 (0.012)	0.062 (0.051)	0.034 (0.027)	-0.073* (0.044)	0.004 (0.030)
Marginal Probability Agree	-0.080 (0.078)	-0.026 (0.051)	-0.050 (0.160)	-0.034 (0.109)	-0.211 (0.220)	-0.103 (0.090)	0.208** (0.101)	-0.010 (0.092)

Note: This table displays the margin effects on various dependent variables of using order logistic regressions following Equation (2). The margin effects display the marginal probabilities of firm disagreeing, being neutral or agreeing that they invest despite risk, prefer to hire locals rather than foreigners, are environmentally friendly, or donate to charity, with respect to other firms in the same industry. The effects have been separated between Diaspora or Foreign ownership, compared to the baseline of local firms. Thus, for example, the coefficient of "Probability Agree" for Diaspora in Regression (1), shows the marginal increase or decrease of a probability of a diaspora firm agreeing with that it is willing to invest in Armenia despite risk, in comparison local firms. Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 12. Marginal Probabilities – Large Firm

Survey Measure	Business Culture in Line With Owner's Background		Business Polices in Line with Owner's Background	
	(1)		(2)	
Owner	Diaspora		Diaspora	
Marginal Probability Disagree	-0.212 (0.141)		0.235** (0.119)	
Marginal Probability Neutral	-0.080 (0.093)		0.023 (0.038)	
Marginal Probability Agree	0.293 (0.189)		-0.258** (0.125)	

Note: This table displays the margin effects on various dependent variables of using order logistic regressions following Equation (2). The margin effects display the marginal probabilities of firm disagreeing, being neutral or agreeing that the firm's business culture or policies are in line with the owner's background, with respect to other firms in the same industry. The effects have been separated between Diaspora ownership, compared to the baseline of foreign firms. Thus, for example, the coefficient of "Probability Agree" for Diaspora in Regression (1), shows the marginal probability of a diaspora firm agreeing with that it's business culture is in line with owner's background, in comparison foreign firms. Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

7.3. **Survey.** The survey design followed Graham (2019) and created with the support of Dr. Chase Harrison, Associate Director of the Harvard Program on Survey Research and Preceptor in Survey Methods in the Department of Government. The survey questionnaire was translated by Liana Gharajyan, Project Coordinator and a Master's Student at the American University of Armenia (AUA) in the Political Science and International Affairs department. Survey respondents primarily answered the survey in English and Armenian and, when preferred by the owner, in Russian.

This survey was enumerated over the phone from the end of December 2019 until mid-February 2020. The survey results were recorded via Google Forms by the survey enumeration team. Occasionally, after first calls, owners were not available, and we thus had to reschedule and recall particular firms. Additionally, due to cultural sensitivity, questions regarding foreign and state ownership were asked at the end of the phone call due to respondent concerns that our team was calling from a government agency such as the Tax Service.

The team conducting and recording the survey responses were recorded by Liana Ghajaryan and the following AUA students: Roubina Seropian, Ani Shahinyan, Arpi Sargsyan, Heghine Poghosyan, Hermine Hovhannisyan, Inna Chukhajyan, and Angelina Khachaturian.