

Firm registration among White- and Latino-owned employer enterprises

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■ ABSTRACT

This study examines the scope and determinants of firm registration among employer firms of White-owned businesses (WOBs) and Latino-owned businesses (LOBs) in the US. The primary data is derived from the 2020 Stanford Latino Entrepreneurship Initiative nationally representative survey of 3,500 WOBs and 4,145 LOBs. The determinants of firm registration are derived from entrepreneur demographics and firm characteristics, utilizing a binomial logistic regression to predict the odds of group membership of (un)registered employer firms. The scope of firm registration reveals about 80% of employer firms are registered. LOBs and immigrant-owned firms outpace registration levels of WOBs and native-owned businesses. Larger employer firms by annual sales and number of employees are more likely to be registered than their smaller business counterparts.

Keywords: business in/formality, Anglo businesses, Hispanic businesses, Stanford Latino Entrepreneurship Initiative

Registro de negocio entre las empresas empleadoras de propiedad blanca y latina

■ RESUMEN

Este estudio examina el alcance y los determinantes del registro de firmas entre las empresas de empleadores blancos y latinos en los EEUU. Los datos primarios se derivan de la encuesta representativa a nivel nacional de 7,645 empresas de la Iniciativa Empresarial Latina de Stanford de 2020. Los determinantes del registro de empresas se derivan de la demografía del empresario y las características de la mediante una regresión logística binomial para predecir las probabilidades de pertenencia a un grupo de empresas empleadoras (no) registradas. En total, 80% de las empresas empleadoras están registradas. Las empresas de

propiedad de inmigrantes y latinos superan los niveles de registro de las empresas de blancos y nativos. Las empresas de empleadores más grandes por ventas anuales y número de empleados tienen más probabilidades de estar registradas que sus contrapartes comerciales más pequeñas.

Palabras clave: negocios in/formalidad, negocios anglosajones, negocios hispanos, Iniciativa de Emprendimiento Latino de Stanford

Introduction

It is a requirement for nearly all businesses in the US to publicly display their business license or registration. For brick-and-mortar locations, walk-in customers should be able to visibly see the license. For web-based enterprises, statements of business licensure and associated links are typically required on the website. While customers may often overlook or dismiss the ubiquitous business license, businesses may not. Firm registration is a signal of regulatory compliance and operating within the legal framework sanctioned by government. Simply, firm registration is necessary and lawful. Registered firms are part and parcel of a formal economy. Indeed, the average rate of firm registration and enterprise formality is high in the US, contributing over 92% of the value of GDP (Medina & Schneider, 2018).

Yet some businesses forgo firm registration and there are distinct pockets of urban and rural enterprise informality found throughout the US (Losby et al., 2002). For example, the classic unregistered business origin pathways of Apple (in a garage), Nike (in a bedroom), and Facebook (in a dorm room) are well known. With increased size and public notoriety, each of these enterprises became formally registered business entities. But not all business enterprises formally register. Perhaps this is a result of startup ignorance, insignificant sales and presence, cultural practices, unlawful activities, or willful avoidance of government supervision and taxation. Without business registration, a firm producing and selling otherwise lawful products essentially remains hidden from government recognition and oversight. In

this hidden condition, such a firm is considered part of the informal economy. The investigation of unregistered firms and enterprise informality in the American economy has received much less attention than the regularized or lawful enterprise sector. Of the little that is known about firm registration avoidance, most has come from more focused studies of Latino-owned businesses (LOBs) (see for example, Pisani, 2012; Pisani & Morales, 2020; Richardson & Pisani, 2012; Valdez, 2011).

A more generalized approach is needed to better understand the scope and rationale for the presence of unregistered enterprises in the US. For the first time with this research, the degree and determinants of firm non-registration across White- and Latino-owned employer enterprises are examined and contrasted.¹ This is noteworthy because employer enterprises are the backbone of the US private sector economy. Additionally, these two groups represent the fastest business growth segment in the US economy (i.e., LOBs) and the numerical majority of business entities in the US (i.e., WOBs) (Orozco et al., 2021). Since this research is an exploratory approach and the first to compare business registration among these groups, two research questions provide a foundation for a comparative understanding of business informality through business registration. The two research questions that focus this article are: (a) What is the scope of (un)registered businesses for White- and Latino-owned employer firms in the US? and (b) What are the determinants of (un)registered businesses for White- and Latino-owned employer firms in the US? Answers to these research questions comprise a fundamental contribution to informality studies in the US economy allowing subsequent research and researchers to explore, compare, and build upon this empirical and baseline foundation.

This comparison is possible by utilizing a unique and representative 2020 data set from the Stanford Latino Entrepreneurship Initiative (SLEI) that surveyed both Latino- and White-

¹ See Carter et al. (2019) for a study of Latino and non-Latino (mostly White-owned) enterprises through the comparative lens of human resource practices.

owned employer businesses. These groups have at least one paid employee beyond the owner and are distinct from own-account enterprises that are owner-operated without any paid employees. A preview of the SLEI survey from 2020 revealed that 84.3% of employer LOBs were formally registered; conversely, 15.7% of employer LOBs were unregistered. For WOBs in 2020, the SLEI survey found 78.8% were formally registered with the remaining 21.2% of White-owned businesses unregistered.²

The remainder of this article is organized and offered in the following order: a literature review encompassing related research; a description of the data, descriptive statistics, and methodology; a reporting and discussion of the results; and a conclusion proving a summary, public policy and managerial implications, and directions for future research.

Literature Review

Studies into firm registration have considered the impact of new business registrants as an indicator of business cycle position and health (Klapper et al., 2014), the process of firm registration as an indicator of the ease of doing business (De Soto, 1989; World Bank, 2020), and the impact of the time to business registration as an indicator of subsequent business wellbeing (Williams et al., 2017). Nonetheless, the bulk of studies that focus on firm registration are part and parcel of a larger framework centered on economic informality (De Soto, 2000; Pisani & Ovando Rivarola, 2019). In this regard, firm registration is utilized as a proxy for legal presence and firm formality. Where firm registration is absent, it signals that the firm is operating outside the structure of governmental authority, hence such firms are considered informal enterprises. It is this last approach—firm registration as a proxy of firm-level informality—that guides the present research.

² In this preview, firms unsure of their registration status were counted as unregistered. This approach resulted in slightly higher unregistered percentages as compared to omitting from the count firms unsure of their registration status.

Essentially, informal businesses do not appear in official government lists or registers so proxies are used to fill in this information gap. Firm registration is but one of a set of standard proxies to uncover informality (Pagán & Tijerina-Guajardo, 2000). Other proxies consider enrollment in social security (Portes & Schaufler, 1993), firm size (Tokman, 1992), and workforce contracts (Benería, 1989). As the literature on informality has deep roots and origins in developing and emerging markets (Hart, 1970, 1973), the proxies focused on social benefits (e.g., pensions and health care), organizational practices (e.g., firm registration, sales receipts, worker contracts), and firm size (e.g., employee count [under five or six]) all are acceptable proxy measures of informality (Perry et al., 2007). However, in contemporary developed markets with strong institutions, firm registration serves as key marker of (in)formality (Pisani & Morales, 2020).

Yet today's developed economies evolved over time whereby formality and firm registration is the current business norm. Early in the business history of the US (including the colonial and revolutionary eras), market exchanges and much economic movement of goods and services were done outside the purview of governmental institutions and oversight (Andreas, 2013). Indeed, the American Revolution was, in part, a backlash to the British implementation and enforcement of trade laws that sought to regularize business activities (e.g., the Sugar Act [1764], the Stamp Act [1765], and the Tea Act [1773]). Over the next century and a half, the US regulatory environment slowly adapted to the actual business reality. This meant often legalizing wide-spread and generally accepted extra-legal business practices; in essence, many laws followed and sanctioned practice rather than legislating such practices away through wishful legislative acts. This was especially the case for land tenure regimes as the US expanded westward (e.g., the Homestead Act [1862]) (De Soto, 2000). By the early twentieth century, US business regulation and legislation hardened and the evolution to a more formal economy had taken place, but not without occasional relapse (e.g., the Prohibition era).

Economic informality (or informality more generally) “consists of work that is in itself legal but avoids government regulation, oversight, and/or taxation” (Richardson & Pisani, 2012, p. 19). Informal work activity is done in conjunction with licit goods and services and is often performed in informal enterprises (Portes et al., 1989). The duality of informal and formal activities is not absolute, there are many areas of gray. This duality may perhaps be better represented as a continuum whereby the poles constitute either full governmental compliance (formality) or no governmental compliance (informality). In between the poles are business practices that may be quasi-(in)formal illustrating activities of non-compliance (Pisani et al., 2008).

For example, some sales may be fully recorded and reported, while others may go unrecorded and unreported to reduce tax liability or opportunistically seize sales taxes collected. In other instances, informal enterprises may pay a municipal fee for location rights, but otherwise avoid governmental oversight. Innumerable such quasi-(in)formal scenarios complicate the study of informality exponentially. The modifier “mostly” may provide the necessary nuance when considering mostly informal and mostly formal firms.

Regardless of location, the general trajectory of enterprise development is toward formality (Pisani, 2019), simplified in this article to informal or formal firms. While this is so, higher prevailing levels of informality are more tightly associated with emerging economies as compared to developed economies (Medina & Schneider, 2018). This may fuel a perception associated with immigrant and ethnic-origin business owners based in the US with roots in emerging and developing economies that their enterprises are more likely to skirt the law than White or Anglo counterparts (Richardson & Pisani, 2012). The literature has yet to address this empirically.

Pisani and Morales (2020) lay the foundational groundwork for measuring Latino-owned business (LOB) informality across the US. They found that roughly one-third of all LOBs were unregistered. Their 2018 representative sample included own-account

businesses (firms with no paid employees) as well as employer enterprises. Their key findings regarding the background of LOB owners include female-owned LOBs were more likely to be unregistered than their male-owned LOB counterparts. Married owners of LOBs were more likely to be registered than unmarried LOB owners. Within the panorama of Latino origins, Mexican-origin LOBs were more likely to be unregistered than other Latino-origin LOBs.

Pisani and Morales (2020) also found a direct relationship between education and LOB firm registration whereby higher levels of owner education resulted in higher levels of firm registration. Immigrant-owned LOBs had higher rates of firm registration than native-born Latino LOBs. Arising from this finding, they observed that more English dominate LOB owners were less likely to be registered than more dominant Spanish-speaking LOB owners. Lastly, Pisani and Morales observed a direct relationship between firm size (revenues and employee count) and LOB firm registration—larger firms by revenues and number of employees were more likely to be registered. There is no comparable work that has been undertaken with WOBs. The present study contributes and seeks, in part, to fill this research void within a comparative perspective.

Data, Descriptive Statistics, and Methodology

Data

The data for this research are derived from the Stanford Latino Entrepreneurship Initiative (SLEI), housed in the Stanford Graduate School of Business, in coordination with the Latino Business Action Network.³ The primary survey year data source is 2020 whereby SLEI conducted a nationally representative cross-sectional survey of Latino-owned employer firms and White-owned employer firms. Employer firms are businesses with one

³ See Orozco et al. (2020) for a fuller description of the Stanford Latino Entrepreneurship Initiative and the Latino Action Business Network.

or more paid employees. The survey excluded own-account enterprises (owner-operated concerns with no paid employees) and businesses reporting less than \$10,000 in annual revenue. The inclusion of a White-owned business sample are changes from past SLEI surveys that began annually in 2015 and focused on LOBs without revenue and employee count restrictions. In early 2020, SLEI surveyed 3,500 White-owned businesses and 4,145 Latino-owned businesses.⁴

Survey respondents were screened to ensure majority Latino or White ownership. The 2020 survey was administered and completed online and took about 15 minutes to finish. The survey instrument covered business owner characteristics and demographics and enterprise characteristics and operations (e.g., funding, networks, strategy, performance, and Covid-19 impacts). Respondents were chosen from proprietary business panels (Qualtrics) and SLEI outreach efforts (Orozco et al., 2021). While survey respondents are generally representative of WOBS and LOBs nationally, the data is adjusted (weighted) for sample differences using U.S. Census data applying the 2018 Annual Business Survey as the base.

Descriptive Statistics

Business Owners

Business owner descriptive statistics for Latino-owned businesses and White-owned businesses are reported in Table 1. Demographic variables available for consideration are age, gender, birth connection to the US, education level, residence, and parental self-employment. In each case, business owner descriptive statistics are statistically different for LOBs and WOBS. Latino business owners are on average somewhat younger than their White counterparts, though both groups are middle-aged. The 2020 SLEI sample illustrates a generally even gender mix for White owners with LOBs more represented by male than female owners. As expected, there is a much higher proportion of

⁴ Data and sample detail is derived from Orozco et al. (2021).

immigrant business owners among LOBs than WOBs. However, the immigrant experience is not exclusive to Latino business owners.

The generation score variable is a parsimonious proxy method for understanding acculturation and has been used in a dozen or more studies of Latinos in the US (see for example Richardson & Pisani, 2012, 2017). This variable tracks the country of birth of three generations, with a higher score indicating a closer birth connection to the US. The generation score (GS) is calculated by allotting a total of four points to each generation born in the United States, from respondent to grandparent. If a respondent is born in the United States, for example, he/she is assigned four points (zero if born outside the United States). Two points are allocated for each parent born in the United States (zero otherwise), and one point for each grandparent born in the United States (zero otherwise). This produces a GS range of 0 (all foreign born) to 12 (all U.S. born) with 0-4 points possible per generation level (respondent, parents, and grandparents). The mean GS score for owners of LOBs is 4.9 and 10.1 for White business owners reflecting much closer US birth ties of WOBs than for LOBs.

As a whole, over half of the business owners have earned a four-year college degree and over 80% have some college experience. Latino business owners possess a higher proportional level of four-year and advanced college degrees than their white business owner counterparts. As expected, higher concentrations of Latino business owners are found in the western, southwestern, and southeastern regions of the US (including Puerto Rico). White business owners are represented throughout the US. Close to half of all business owners come from families where at least one parent was self-employed, a legacy effect of self-employment.

Table 1

Business Owner Descriptive Statistics for Latino- and White-owned Employer Firms (2020)

Variable	Latino	White
Mean Age (std. dev.)	42.8 (12.2)	45.9 (12.8)
Gender (%)		
Male	57.8	51.7
Female	42.2	48.3
Immigrant (%)	40.1	11.8
Mean Generation Score (std. dev.)	4.9 (4.2)	10.1 (2.9)
Education* (%)		
Less than High School Degree	1.6	1.0
High School Degree or Equivalent	9.5	10.8
Technical, Trade or Vocational School	4.5	5.1
Some College, No Degree	14.9	17.7
Associate's Degree	11.1	14.3
Bachelor's Degree	35.2	30.5
Master's, Doctorate or Professional Degree	23.2	20.6
Regional Residence^ (%)		
Northeast	1.8	5.2
Mid-Atlantic	11.3	14.1
East North Central	6.1	14.7
West North Central	1.9	8.0
South Atlantic	25.5	19.6
East South Central	1.3	5.0
West South Central	16.4	10.2
Mountain	8.3	8.3
Pacific	27.4	14.8
Parental Business Ownership (%)		
Mother Owns/Owned Her Own Business	8.2	6.5
Father Owns/Owned His Own Business	23.6	24.5
Both Mother/Father Owns/Owned their Own Businesses	18.3	17.0
Neither Parent Owns/Owned a Business	49.9	52.1
N	4,145	3,500

Note 1. Italics = the two groups are statistically different (utilizing cross-tabulations or comparison of means tests). For variables with percentages, some rounding errors may be present.

Note 2. *Before the establishment of current enterprise.

Note 3. ^ Region definition: Northeast (Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont), Middle-Atlantic (New Jersey, New

York, Pennsylvania), East North Central (Illinois, Indiana, Michigan, Ohio, Wisconsin), West North Central (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota), South Atlantic (Delaware, Florida, Georgia, Maryland, North Carolina, Puerto Rico, South Carolina, Virginia, Washington, D.C., West Virginia), East South Central (Alabama, Kentucky, Mississippi, Tennessee), West South Central (Arkansas, Louisiana, Oklahoma, Texas), Mountain (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming), Pacific (Alaska, California, Hawaii, Oregon, Washington).

Source: Author's elaboration, SLEI Survey, 2020.

Businesses

Table 2 displays the descriptive statistics for LOB and WOB firms. The following variables are described: firm age, business revenue over the past 12 months, firm profitability, number of employees, industry field (activity), and firm registration. All of these variables are significantly different between Latino-owned and White-owned enterprises. WOBs have been in operation about three years longer than LOBs with the average for both groups exceeding ten years of business operation. The size by revenues over the past 12 months for LOBs and WOBs generally follows with approximately 20% of firms with annual revenues less than \$100,000 and roughly 40% of firms in each of the remaining annual revenue categories of \$100,000 to \$499,999 and \$500,000 or above.

White-owned enterprises reported a higher incidence of profitability than Latino-owned businesses. Fewer WOBs reported losses and a break-even status in contrast to their LOB counterparts. More than three-fourths of employer firms employ between one and nine employees with WOBs reporting somewhat higher employee counts as compared to LOBs. Industry economic activity stretches across sectors with LOBs reporting higher concentrations in leisure/hospitality, other services, and trade/transportation/utilities than WOBs. In all other sectors, White-owned businesses are more heavily concentrated than their Latino-owned business peers. Known firm registration is 5.6 percentage points higher for Latino-owned businesses than White-owned businesses.

Table 2

Enterprise Demographics for Latino- and White-owned Employer Firms (2020)

Variable	Latino	White
Mean Age of Business (std. dev.)	<i>10.9 (9.7)</i>	<i>13.6 (12.8)</i>
Business Revenue Last 12 Months (%)		
\$10,000-\$99,999	<i>21.5</i>	<i>18.7</i>
\$100,000-\$499,999	<i>40.2</i>	<i>39.9</i>
\$500,000 or Above	<i>38.3</i>	<i>41.4</i>
Profitability (%)		
Yes	<i>54.9</i>	<i>62.1</i>
No	<i>25.9</i>	<i>22.8</i>
Breakeven	<i>19.3</i>	<i>15.1</i>
Current Number of Employees		
One to Nine	<i>77.6</i>	<i>75.2</i>
Ten or More	<i>22.4</i>	<i>24.8</i>
Industry (%)		
Construction	<i>13.3</i>	<i>14.4</i>
Education/Health Services	<i>8.9</i>	<i>11.1</i>
Financial Activities	<i>7.9</i>	<i>10.8</i>
Information	<i>1.0</i>	<i>1.4</i>
Leisure/Hospitality	<i>14.9</i>	<i>9.9</i>
Manufacturing	<i>3.5</i>	<i>4.5</i>
Natural Resources and Mining	<i>0.7</i>	<i>1.0</i>
Other Services	<i>8.7</i>	<i>7.0</i>
Professional/Business Services	<i>20.7</i>	<i>20.4</i>
Trade/Transportation/Utilities	<i>20.5</i>	<i>19.4</i>
Firm Formally Registered (%)		
Yes	<i>84.3</i>	<i>78.7</i>
No	<i>10.2</i>	<i>14.3</i>
Not Sure	<i>5.6</i>	<i>6.9</i>
N	4,145	3,500

Note. Italics = the two groups are statistically different.

Source: Author's elaboration, SLEI Survey, 2020.

Firm Registration

In the two years prior to 2020, the annual SLEI survey of own-account and employer LOBs asked if the respondent firm was registered. As stated above, the 2020 survey excluded own-account enterprises and included both LOBs and WOBs. Because the SLEI surveys asked about employee count and firm revenues, comparable information for 2018 and 2019 are available for LOBs. As reported in Table 3 across panels, own-account LOBs have a lower incidence of firm registration than employer enterprises. In 2020 LOBs, have higher rates of firm registration than their WOB counterparts.

As it is expected that business owners know if they are formally registered or not, those owners indicating that they were unsure as to their registration status were categorized as unregistered. In Table 3, Panel A folds unsure registration survey respondents in with respondents indicating that they are unregistered. For comparison, Panel B omits the unsure respondents from the analysis. The unsure group is quite small (between five and seven percent of respondents across surveys) suggesting a more conservative final count for registered businesses. In both instances between LOBs and WOBs, a differential of about five percentage points is present and the difference is statistically significant. The remainder of the analyses merge the unsure registration responses with the not registered answers. This follows the previous work of Pisani and Morales (2020), keeps more of the surveyed firms in the analyses, and follows common sense.

Table 3

Firm Registration Among Latino- and White-owned Businesses

Panel A		Not registered also includes those responding not sure			
		Own-Account Enterprises (no paid employees)	Employer Enterprises (1 or more paid employees and annual sales ≥ \$10,000)		
LOBs~	Registered (%)	Not Registered (%)	Registered (%)	Not Registered (%)	N
2018	66.2	33.8	83.8	16.2	4,024
2019	51.8	48.2	78.1	21.9	4,937
2020	N/A	N/A	84.3	15.7	4,145
WOBs^					
2020	N/A	N/A	78.8	21.2	3,499

Panel B		Not sure responses omitted			
		Own-Account Enterprises (no paid employees)	Employer Enterprises (1 or more paid employees and annual sales ≥ \$10,000)		
LOBs	Registered (%)	Not Registered (%)	Registered (%)	Not Registered (%)	N
2018	77.2	27.8	87.7	12.3	3,706
2019	58.4	41.6	86.7	13.3	4,380
2020	N/A	N/A	89.2	10.7	3,914
WOBs					
2020	N/A	N/A	84.6	15.4	3,257

Note 1. ~ Denotes Latino-owned businesses.

Note 2. ^ Denotes White-owned businesses.

Note 3. Panel A, comparing LOBs and WOBs: Pearson Chi-square = 38.843, df=1, sig = .000.

Note 4. Panel B, comparing LOBs and WOBs: Pearson Chi-square = 33.954, df=1, sig = .000.

Source: Author's elaboration, SLEI Survey, 2020.

In further addressing the scope of (un)registered businesses for LOBs and WOBs (i.e., the first research question), additional descriptive statistics for immigration and acculturation, generally, and country of origin for LOBs, more specifically, are examined. Table 4 displays firm registration for LOBs and WOBs by birthplace and generation score, the latter is a proxy for acculturation. Panel A reports firm registration for immigrant business owners. Immigrant LOBs have a significantly higher rate of firm registration than immigrant WOBs. This is also true for native born business owners (see Panel B). Panel C reports the mean generation score—one measure of acculturation. A higher score indicates closer familial birth ties to the US and a lower score reveals closer familial birth ties outside the US. Firm registration for both LOBs and WOBs is associated with lower levels of familial birth ties to the US, this result is significant for LOBs and not significant for WOBs. Conversely, higher generation scores are associated with unregistered LOBs and WOBs. Hence, immigrant businesses and respondents with lower acculturation levels have higher firm registration rates across both White and Latino groups.

Table 4

Firm Registration Among LOBs and WOBs by Birthplace and Generation Score (2020)

Birthplace	Employer Enterprises		
Panel A	Registered	Not Registered	N
Immigrant (not born in USA)	(%)	(%)	
LOBs	88.8	11.2	1,660
WOBs	81.4	18.6	413
Total	87.3	12.7	2,073
Pearson Chi-square = 16.523, df=1, sig = .000			
Panel B	Registered	Not Registered	N
Native (born in USA)	(%)	(%)	
LOBs	81.2	18.8	2,483
WOBs	78.4	21.6	3,088
Total	79.7	20.3	5,571
Pearson Chi-square = 6.814, df =1, sig = .009.			

Panel C	Registered	Not Registered	N
Mean Generation Score			
LOBs (std. dev.)	4.75 (4.20)	6.02 (4.13)	4,000
ANOVA: F = 485.653, df=1, sig. = .000			
WOBs (std. dev.)	10.05 (2.92)	10.21 (2.97)	3,361
ANOVA: F = 14.311, df=1, sig. = .197			

Note. Not sure combined with not registered.
Source: Author's elaboration, SLEI Survey, 2020.

Methodology

The descriptive analysis above answered the first research question. The second research question seeks to explore the determinants of firm registration in LOBs and WOBs and requires a multivariate statistical approach. The decision to register the business is a dichotomous one: yes (registered) or no (not registered). Binomial logistic regression handles dichotomous choices well, is a robust multivariate statistical tool with few assumption requirements (Pampel, 2000), and is useful in predicting the odds or likelihood of group membership. In other words, this statistical technique (binomial logistic regression) provides an enhanced and empirical pathway to understand what business and entrepreneur characteristics best predict firm registration.

In the following analyses, a registered firm is coded as 1 and an unregistered firm is coded as 0. In this case, firm registration is the dependent variable. A set of independent or predictor variables which may predict firm registration are drawn from entrepreneur demographics and firm characteristics found in Tables 1 and 2. Independent variables allow the use of specific business and entrepreneur characteristics—firm characteristics include business age, sales, number of employees, profitability, and industry sector and entrepreneur characteristics include owner age, gender, immigrant status, acculturation (i.e., generation score), education, location (i.e., regional residence), and parental self-employment history—to help predict (or estimate) firm registration outcomes. These independent variables were chosen, a

priori, based upon more than two decades of extensive experience researching informality and variable availability in the SLEI data set. In all, two binomial logistic regression estimations are undertaken to explore the determinants of firm registration in LOBs and WOBs for 2020.

Results

Two binomial logistic regression estimations for Latino-owned businesses and White-owned businesses appear in Table 5. For each logistic regression, the dependent variable is firm registration (yes=1, no=0). For space considerations, only the odds ratios are presented—that is, displaying the odds of being a registered firm.⁵ Owner and firm characteristics comprise the independent variables; those variables that are significant are identified with the following notations, * = significant at the .10 level, † = significant at the .05 level, and ‡ = significant at the .01 level. Logistic regression diagnostics appear at the bottom of Table 5. Reported next are the significant results of each logistic regression estimation followed by a discussion.

LOBs - Results

The results of the logistic regression estimation for LOBs appear in Table 5 (column 2). Only those statistically significant variables are explored, beginning with owner characteristics followed by firm characteristics. For each additional year of age of Latino/a business ownership, the odds of firm registration increase by 2.8%.⁶ Closer birth ties to the US decrease the likelihood of firm registration by 5.4% per one-point increase in the

⁵ Complete logistic regression estimations are available from the author by request. Logistic regression and binomial logistic regression are used interchangeably in this article.

⁶ This is calculated as $|1 - \text{Exp}(\beta)|$. For example, the calculation for Latino/a age is $|1 - 1.028|$ or 0.028 or 2.8 percent (see column 2, line 5 of Table 5). Since this count variable is in years, the odds of firm registration is estimated by age in years, *ceteris paribus*. Since the odds are greater than 1 (1.028 for LOB owner age), this means the odds of the event occurring is positive.

generation score. In reference to the highest level of education (graduate degree or post-graduate professional studies), Latino/a owners with a high school diploma or less, some college, or an associate degree are less likely to own a registered firm by 32.5%, 49.7%, and 39.9%, respectively. The Pacific region is the reference category for owner residence in the US. Latino/a business owners residing in the Northeast, Mid-Atlantic, West North Central, South Atlantic, East South Central, and West South-Central areas are all more likely to be registered enterprises in comparison to LOBs in the Pacific region.⁷ Parental self-employment reduce the odds of Latino/a firm registration by 37.2% for owners where the mother was self-employed and by 29.4% where both parents were self-employed.

The longevity of a LOB is connected to firm registration. For every additional year of business operation, the LOB is 1.9% more likely to be registered. Smaller firms by both sales revenues and employee count are less likely to be registered. In reference to firms with over \$500,000 in annual sales, firms with between \$10,000 and \$99,000 in annual sales are 73.7% less likely to be registered and firms with between \$100,000 and \$499,000 in annual sales are 41.6% less likely to be registered, respectively. LOBs with 1 to 9 employees are 50.8% less likely to be registered in comparison to LOBs with 10 or more employees. With firms reporting a breakeven in profits as the base, both profitable and unprofitable firms are more likely to be registered. The odds of being registered increase by 46.0% for profitable firms and 32.1% for unprofitable firms in comparison to firms reporting breakeven profitability. Firms operating in the trade, transportation, and utilities space serve as the referent for industry or primary firm economic activity. The logistic regression reveals that in all significant comparable industry cases—construction, education and health services, financial activities, leisure and hospitality, natural

⁷ In reference to the Pacific region, residence in the Northeast, Mid-Atlantic, West North Central, South Atlantic, East South Central, and West South Central increases the likelihood of firm registration by 157.2%, 71.5%, 933.3%, 54.3%, 192.9%, and 41.8%, respectively.

resources and mining, and professional business services—a decrease in firm registration is likely.⁸

Table 5

Binomial Logistic Regression for Firm Registration (=1) Among LOBs, WOBS, and All Firms

	LOBs Exp(β)	WOBS Exp(β)
Constant	20.847‡	13.431‡
Owner Characteristics		
Age (years)	1.028‡	1.006
Gender (female=1)	1.121	.972
Immigrant (yes=1)	.927	.758
Generation Score	.946‡	1.005
Education	‡	‡
High School or Less	.675*	.718‡
Some College (no degree), Technical, Trade or Vocational School	.503‡	.736‡
Associate’s Degree	.601‡	.946
Bachelor’s Degree	.826	1.168
Master’s, Doctorate, or Professional Degree	Reference	Reference
Regional Residence	‡	‡
Northeast	2.572‡	.806
Mid-Atlantic	1.715‡	.906
East North Central	1.159	1.197
West North Central	10.333‡	1.367
South Atlantic	1.543‡	1.308*
East South Central	2.929‡	1.101
West South Central	1.418‡	.880
Mountain	1.380	.675‡
Pacific	Reference	Reference

⁸ In reference to firms in trade, transportation, and utilities, LOBs in construction, education and health services, financial activities, leisure and hospitality, natural resources and mining, and professional business services are 56.8%, 41.9%, 50.7%, 51.4%, 62.9%, and 26.9%, respectively less likely to be registered.

Mother was a Business Owner (yes=1)	.628†	.731
Father was a Business Owner (yes=1)	.815	.930
Both Parents were Business Owners (yes=1, neither = 0)	.706†	1.016

Firm Characteristics		
Firm Age – Years	1.019†	.994
Annual Firm Sales	‡	‡
10-99.9k	.263‡	.344‡
100-499.9k	.584‡	.705‡
500k+	Reference	Reference
Number of Employees (10 or more = 1)	.492‡	.643‡
Profitability	†	-
Yes	1.460‡	.1024
No	1.321†	1.045
Breakeven	Reference	Reference
Industry	‡	*
Construction	.432‡	.718†
Education/Health Services	.581‡	1.208
Financial Activities	.493‡	1.046
Information Technology	.646	.691
Leisure/Hospitality	.486‡	.794
Manufacturing	.916	.884
Natural Resources/Mining	.371*	.525
Other Services	.750	.698*
Professional/Business Services	.731*	.808
Trade/Transportation/Utilities	Reference	Reference
N	3,919	3,200

Diagnostics		
-2 Log Likelihood	2739.180‡	3168.912‡
Cox and Snell R ² Nagelkerke R ²	.116 .207	.063 .098
Hit Ratio (% Correct): Yes No Overall	99.0 11.3 86.4	99.1 2.2 79.0

Note 1. PPC Proportional Chance Criterion (PPC) = $a^2 + (1-a)^2$. A good model predicts 1.25 times the PPC. LOBs: $(.857)^2 + (1-.857)^2 = 0.754$; 1.25 times = 0.944; model predicts 86.4, less than 1.25 times chance. WOBs: $(.792)^2 + (1-.792)^2 = 0.671$; 1.25 times = 0.838; model predicts 79.0, less than 1.25 times chance.

Note 2. ^ Represents significance at the * $P \leq 0.10$; † $P \leq 0.05$; and ‡ $P \leq 0.01$ levels. Source: Author's calculation from 2020 SLEI survey.

WOBs - Results

The results of the logistic regression estimation for WOBs also appear in Table 5 (column 3). Only those statistically significant variables are reported, opening with owner characteristics followed by firm characteristics. White business owners with a high school education or less are 28.2% less likely to operate a registered firm in relation to White business owners with graduate and post-graduate professional degrees (the reference category). In addition, White business owners with some college education are 26.4% less likely to have a registered business in reference to the highest educated White business owners. With Pacific regional residence as reference, White business owners residing in the South Atlantic and Mountain regions are 30.8% and 32.5% less likely, respectively, to operate registered firms.

Larger WOBs by annual sales and number of employees are more likely to be registered. In reference to WOBs with \$500,000 or more in annual sales, WOBs with between \$10,000 to \$99,999 in annual sales and WOBs with between \$100,000 and \$499,999 in annual sales are 65.6% and 29.5% less likely to be registered, respectively. WOBs with 1 to 9 employees are 35.7% less likely to be registered in contrast to WOBs with 10 or more employees. With respect to WOBs engaged in trade, transportation, and utilities, WOBs in construction and other services are 38.2% and 30.2%, respectively, less likely to be formally registered.

Discussion

The discussion of results is segmented initially for LOBs and WOBs. Next, the discussion contrasts the logistic regression results for the groups together.

LOBs

For Latino-owned enterprises, experience and longevity matters. Longevity earned through living (owner age) and experience earned through owning a business (business age) increases the likelihood of firm registration. In essence, personal maturity

and firm maturity are important elements in the firm registration decision. Latino business owners with a more recent tie to the US are more likely to follow the institutional rules of business registration. This business registration compliance may be the result of harsh penalties for non-citizen rule-breaking (i.e., potential deportation) or general acceptance of the new institutional rules of the game in a new country with strong institutions. On the other hand, perhaps more acculturated Latino business owners (e.g., citizens) with a fuller understanding of the institutional environment can navigate around business registration requirements, or may feel more comfortable bending institutional business registration requirements. This tendency toward non-registration may also be the case for Latino business owners who grew up in homes with parents operating businesses of their own, where tacit knowledge of business processes is passed down through generations.

Clearly, highly educated Latino business owners comply with business registration obligations. The time and investment in education mitigate against thwarting business registration requirements because of high opportunity costs associated with high educational achievement. This is less so for those LOB owners with lower levels of educational attainment, hence higher rates of business non-registration. High densities of Latino population clusters may also provide cover for non-compliance of business registration as found in the Pacific region vis-à-vis other regions in the US. Co-ethnics may be less likely to report or insist upon business formality in the form of business registration.

Firm size matters in business registration for Latino-owned enterprises. The larger the firm by sales and number of employees, the greater the likelihood of business registration. It is difficult for larger business concerns to avoid government detection if the enterprise is relatively large. Hence, Latino-owned firms with at least \$500,000 in annual sales and/or LOBs with 10 or more employees possess high levels of business registration vis-à-vis their smaller LOB counterparts. Profitable and unprofitable LOBs are more likely to be registered business concerns in rela-

tion to LOBs that report no profits (i.e., breaking even). This may be the result of tax policies where business losses may reduce tax liabilities. Profits on the other hand may be difficult to hide from the community at-large and tax authorities. Firms with a break-even status may fall in-between the incentives and disincentives stated above.

Trade, transportation, and utilities is a large category bucket for industry activity. Nonetheless, lower levels of firm registration exist in comparison for firms in the areas of construction, education and health, finance, leisure and hospitality, natural resources and mining, and professional business services. In some cases, it may be easier to disguise firm registration in these industry segments, in other it may be some combination of other factors such as firm size. More discernment in this area awaits further investigation.

WOBs

As expected, those White business owners with the highest levels of education possess firms with the highest levels of firm registration. In comparison, White business owners with a high school education or less and those with some college education are much more likely to bypass firm registration requirements. This may be the result of ambivalence or arrogance toward or just ignorance of legal requirements. This lack of registration may also be a function of smallness, where detection is unlikely. Firm registration rates are lower for WOBS in the South Atlantic and Mountain regions when compared with WOBS in the Pacific US. Perhaps enforcement mechanisms are weaker in these regions.

For WOBS, enterprise size and firm registration fit together hand and glove. Firms with few employees and low sales are less likely to be registered than their larger counterparts. Economic activities of WOBS focused on construction and other services are also less likely to be registered than WOBS engaged in trade, transportation, and utilities. Firms, particularly smaller less visible businesses, in construction and other services may be better able

to operate under the government oversight and avoid official recognition as a registered enterprise. In doing so, these firms may enjoy the benefits of informality, perhaps at the cost of business growth and opportunity.

Comparing LOBs and WOBs

There are four primary variables Latino-owned business and White-owned business share regarding firm registration. These are owner education level, firm size, firm location, and firm activity. Simply put, the most highly educated business owners operate firms that are registration compliant. This is in stark contrast to business owners possessing a high school education or less. It is also clear that firm size is a demonstrable indicator of firm registration. Whether measured by sales and/or number of employees, larger firms are nearly all registered whereas the registration rates of smaller firms lag behind. The compliance of firm registration clearly aligns with the highest educated business owners and the largest firms indicating the benefits of firm registration outweigh the costs. Firms located in the South Atlantic region are less likely to register their business than Pacific-based counterparts. Construction firms are also less likely to be registered in regard to firms in trade, transportation, and utilities. Perhaps these findings are a result of enforcement distortions or some other explanation that requires further investigation.

While the four variables above are of concern to both groups, there are a few more variables that concern just LOBs in contrast to WOBs. For example, maturity of the firm and the business owner increase firm registration among LOBs. Age and experience in this regard increase firm registration rates. On the other hand, parental self-employment decreases firm registration rates among LOBs. This finding is contradictory to the experience (maturity) of firms, perhaps indicating a moderating consideration familial entrepreneurship may play in the firm registration decision. Further insights as to where parental self-employment occurred (US or elsewhere) may provide a more complete answer for future researchers.

Because of the higher incidence and recency of immigration among LOBs, acculturation plays a larger role in firm registration. In the case of LOBs, the greater the acculturation of Latino business owners results in lower levels of firm registration. This finding highlights the lawfulness of immigrant business owners vis-à-vis their co-ethnic, but native-born counterparts. Lastly, firm performance and economic activity in connection with firm registration needs further assessment for LOBs. Here there are more questions than answers.

Conclusion

Business registration or licensure is a lawful base requirement of businesses operating in the US. Firm registration indicates official compliance equating participation in the formal economy. Enterprises that forgo registration exposes an avoidance of compliance, an indicator or proxy for informal economy participation. Hence, this research set out, in part, to explore the scope of in/formality through firm registration utilizing a 2020 nationally representative sample of 7,645 US employer enterprises. A primary contribution of this article is the provision, for the first time, of a baseline for firm registration and in/formality for White-owned businesses (WOBs) and Latino-owned businesses (LOBs). Importantly, these two business groups—WOBs and LOBs—comprise the largest business owner and the fastest growing business owner segments in the US, respectively.

As far as the numbers for scope, approximately 80% or more of employer LOBs and employer WOBs are registered recognizing the strong institutional and regulatory framework present in the US. Yet nearly one-fifth of employer businesses decide not to register indicating a substantial subset of informal enterprises present in the US economy. So even in one of the most developed economies of the world with very strong institutions, informality is stubbornly persistent among employer enterprises.

Fundamentally, LOBs have a significantly higher rate of firm registration than WOBs. This result is due, in part, to the larger

proportion of foreign-born Latino business owners who are more likely to operate registered firms than their White native-born and White foreign-born counterparts. This finding may be revelatory especially within the backdrop of anti-Latino sentiment regardless of Latino birth origin (Richardson & Pisani, 2017). This last point deserves further attention and consideration as it collides with more populist rhetoric especially prominent during the Trump Administration (2017-2021). The rhetoric demonized “the other” based on bigotry and racism (Richardson & Pisani, 2017). As a matter of fact, this article illustrates empirically that informality (or extra-legality) is present with WOBs and at higher rates than minority-owned LOBs in comparison. This finding de-mystifies informality as inherently the sole domain of minority-owned businesses or immigrant business owners; rather, informality is present across the business spectrum, even more so in White-owned businesses.

A second major contribution of this research is the uncovering of the links or determinants associated with firm registration among employer WOBs and LOBs. These links are generalizable among WOBs and LOBs for the first time because of the nationally representative nature of the 7,645 sampled and studied firms. These links (determinants) find that firm registration and graduate education are tightly associated. At the personal level, Latino and White business owners with graduate degrees operate enterprises with very high levels of firm registration (roughly a 90% registration rate). Firm size and firm registration are also closely connected. About 90% of Latino and White businesses with annual sales above \$500,000 are registered. And Latino and White business with ten or more employees are registered at a rate just above 90%. Across the board in multivariate analyses, these variables of business owner education and business size are highly significant determinants of firm registration.

The present research offers public policy implications. If public officials and policymakers seek to decrease informality and increase regulatory compliance in the economy through firm registration, then enforcement resources to ensure business li-

censure may be better applied to less visible business actors in the public square. The targeting of smaller firms, regardless of race or ethnicity, may yield the greatest results toward increased firm registration. Additionally, information efforts concerning business registration should be targeted to reach high school educated entrepreneurs who have yet to register and formalize their businesses. Lastly, resources spent focused on immigrant entrepreneurs to ensure business registration may be resources wasted and misaligned with business registration reality.

The findings also offer managerial implications for employer WOBs and LOBs. Foremost among the determinants is that firm size (measured by sales and number of employees) and business registration go hand in hand. For growing unregistered firms, detection in the public square may be more likely and legally problematic; for such enterprises, firm registration would head off compliance challenges in this regard.

Future research may build upon the entrepreneur and business characteristics of WOBs and LOBs chartered here. For example, peering inside the firm as to its business networks and relationships (i.e., social network analysis), organizational design and behavior, and complementarity (e.g., conceptual frameworks) may provide fruitful pathways to extend the study of in/formality. Also, a focus on business non-registration as a structural endemic feature or residual of the US economy may be insightful. Future research may add a qualitative ethnographic approach as to why firms register, and why other firms do not register. This may uncover deeper motivations such as startup ignorance, insignificant sales and presence, embedded cultural practices, immigration status, unlawful activities, or willful avoidance of government supervision and taxation. Longitudinal studies may track the decision to register over time to uncover benefits and costs to the registration decision. Additional research may add other racial and/or ethnic groups for comparative study.

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