The effects of South American immigration in Chile

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1. **Economic Literature & Introduction**

The economic literature on immigration is vast and shows contradictory results. As pointed out by Friedberg **and Hunt (1995)**, immigration can have an opposite or complementary effect on the host nation's labour market dynamics, resulting in either competition between natives and immigrants in the labour markets or cooperation, where total welfare increases. Immigration can also have effects in both the labour demand side as shown in **Hong and McLaren (2015)** where the effect on labour demand from immigration can raise real wages in non-tradeable jobs. In addition, immigration has been shown to be a contributing factor of economic growth in host nations as described in **Borjas (2019)**, especially when the immigrant population is composed of high skill workers.

While there exists an important number of economic papers on immigration, the majority of research on the topic has focused on the effects of immigration trends on developed nations as is the case of **Olney (2014)**, **Hong and McLaren (2015)** and **Friedberg (2001)**, that explore the phenomena in Germany, United States and Israel. Nevertheless, there exists important migration patterns between developing nations as well as internal migration trends within a country.

In that context **Calderón-Mejía and Ibáñez (2009)** explore the effects of the internal migration crisis in Colombia (caused by guerilla groups) as a supply shock to multiple Colombian cities' labour markets. Their paper finds an inverse relationship between internal migration and informal worker's income. Adding to the Latin American immigration economic literature, **Caruso et al. (2014)** explores how the recent Venezuelan migration negatively affected the informal sector's wages in Colombia. Moreover, **Fuentes and Vergara (2019)** analyze immigrant wage premium/discount dynamics in Chile between 2006 and 2017. They conclude that there was an immigrant wage premium from 2006 to 2013, but after 2013 it evolved into an immigrant wage discount. In addition, **Contreras and Ruiz-Tagle (2013)** have used the 2006 and 2009 CASEN (National Socio-Economic Characterization Survey) results to examine the consequences of immigration in the labour market of Chile. They concluded that there has not been a significant influence on the labour market and no evidence of wage discrimination.

This case study aims to look closely at the recent migration trend in the Chilean labour market initially explored by **Fuentes and Vergara (2019)** and **Contreras and Ruiz-Tagle (2013)** in order to examine the effect of the South American immigrant population on native employment and wages between 2013 and 2017. We will measure the following relationships using OLS and instrumental variable (IV) econometric methods. In addition, this paper will use panel data to study the differential effects of the South American migration to three population groups based on levels of education (high school dropouts, high school educated and college educated). Lastly, the paper will address its limitations and use its conclusions in order to draw potential policy implications.

2. Background

a. Overall Immigration Trend

In recent years the South American continent has suffered multiple socio-economic shocks that have negatively affected the daily lives of a large segment of the population. In this decade the region has experienced mass protests, growing corruption, a downturn of global commodities and oil prices and the economic collapse of Venezuela. Among all of the recent negative economic shocks, Chile has consistently shown economic resilience and as pointed by **Contreras and Ruiz-Tagle (2013)** the country has achieved the second highest per capita GDP of the region. The positive economic momentum has transformed Chile into an attractive host country to emigrate for citizens of several neighboring South American nations.

As we can see in **Figure 1**, in the past 30 years the total immigrant population in Chile has seen an important increase, as it has quadrupled from 0.8% of the total population in 1992 to around 4.4% in 2017, according to the estimations by the INE (National Statistics Institute of Chile)[1]. Moreover, the INE calculates that around 85% percent of the migrant population arrived to the country before 1990, with 67% of the immigrants entering before 2010[2]. As pointed out by **Aldunante et al (2018)**, a significant proportion of the immigrant population in Chile arrived from neighboring South American nations. Taking a look at the demographic statistics provided by the INE 2017 Census data seen in **Figure 4**, around 76% of immigrants come from South American countries if we include Haiti in the calculations.

b. Immigrant Population Demographics

Among the South American population there is a visible concentration of nationalities. Focusing in **Figure 4**, the citizenship with the biggest share of the immigrant stock is Peruvian with an estimated 25% of the migrant population, in second

[1] www.ine.cl, Census 2017
[2] www.ine.cl, Census 2017

place Colombians with 14% and in third place Venezuelans with 11%. These three nationalities account for 50% of the immigrant population alone. Additionally, the immigrant population shows an important concentration in terms of the locations where they settle. Using information from the INE 2017 Census seen in **Table 1**, 65% of the immigrant population currently resides in the Santiago Metropolitan Region (Metropolitana). This should not come as a surprise given that around half of the Chilean population resides within or near the country's financial and political capital city Santiago. Similarly, there is an important percentage of the migrant population that have settled around the regions of Arica & Parinacota, Tarapaca and Antofagasta. Overall these three regions hold 16% of the immigrant stock, mainly composed of Bolivian and Peruvian citizens due to the regions' proximity to the border with these two nations.

Based on the INE estimates, the South American migrant population have on average a higher number of years of education compared to the native cohort. Based on the 2017 Census, the total immigrant population (including other non South American nationalities) had an average of 12.6 years of education compared to the 11 years of education of the native population[3]. Furthermore this result was also corroborated by our calculations based on the 2013, 2015 and 2017 CASEN survey data seen in **Table 2**, where the working South American migrant population had on average 12.39 years of education while its native counterpart had a slightly lower average of 11.91 years. Furthermore, there exists differences in education levels within different countries of origin and occupational qualifications among the immigrant population as pointed out by **Aldunante et al. (2018)** and seen in **Figure 2**. The authors calculations show that overall the Bolivian and Peruvian populations have a lower level of education compared to other South American nationalities.

In addition to educational demographics, we were also interested in the role of the migrant population in the labour market. Based on our dataset we calculated that the South American migrant population between the ages of 18 and 65 years old on average had a higher employment rate (93.4%) compared to the same cluster of the native population (90.4%) shown in **Table 2.** This result complements both the INE's 2017 Census and **Aldunante et al. (2018)** calculations, where the total immigrant stock had lower unemployment rates compared to the native population. We also looked at the industry distribution of the immigrant workforce. As we can see in **Figure 3**, the top five industries with South American immigrant workers are: Retail & Wholesale, Hotels & Restaurants, Domestic Services, Construction & Manufacturing and account for 65% of the immigrant population.

c. Chilean Immigration Policy

[3] www.ine.cl, Census 2017

It is important to understand the current migratory policies in Chile in order to provide context to our quantitative results. Compared to developed nations with high immigrant populations, Chile's immigration policy is flexible and shows a clear path for work permits and permanent stay for multiple South American nationalities, with the exception of recent policy changes for Venezuelans and Haitians. As Cristian Doña writes in his publication for the Online Journal of Migration Policy Institute[4]:

> The influx has renewed long standing calls to replace the Immigration Act of 1975, which today remains the only law on the books regulating visa administration...it leaves too much open to interpretation and facilitates illegal immigration by allowing foreigners to enter the country as tourists, overstay their permits, and then obtain a temporary visa—as is the case with many Haitians today. (Doña Reveco)

Nevertheless, the recent flow of Venezuelan and Haitian immigrants has given rise to more stringent migration policy. In another article by Diego Acosta et al. in 2018[5], the authors highlight the recent change in migration policies by the Chilean government in order to control mass migration from both countries by enforcing new visa categorizations and processes. Taking a look at the Chilean nationalization process. In order to become a Chilean citizen, the law requires close family ties (spouse, children or parent) with a Chilean national to get citizenship, according to the Department of Immigration of Chile[6].

3. Data and Variable Construction

For our case study we have used data from the 2013, 2015 and 2017 CASEN - National Socioeconomic Characterization Survey designed and implemented by the Ministry of Social Development and Family of Chile. The survey used annual samples of 69,816 (2017), 82,370 (2015) and 64,842 (2013) households from all regions of the country. The variables used were: employment status, place of birth, age, industry, region, marital status, urban or rural zone, head of household, weekly working hours and monthly income.

We defined a South American immigrant as an individual that doesn't hold Chilean citizenship at the time when the survey was conducted, and additionally has nationality from any South American nation (Ecuador, Peru, Bolivia, Uruguay, Paraguay, Argentina, Brazil, Guyana, Suriname and Venezuela), we decided to include Haiti in the analysis as it holds a significant portion of the immigrant population. All Chilean citizens

[4] Doña Reveco, Cristián (2018) : "Amid Record Numbers of Arrivals, Chile Turns Rightward on Immigration." The Online Journal of The Migration Policy Institute. *migrationpolicy.org*

[5] Acosta, Diego, Vera-Espinoza, Marcia and Brumat, Leiza (2018): "The New Chilean Government and Its Shifting Attitudes on Migration Governance." *Migration Policy Center Blog*, European University Institute.

[6] "Nacionalización." Departamento De Extranjería y Migración | Gobierno De Chile, www.extranjeria.gob.cl/nacionalizacion/.

that hold dual nationality were considered part of the native population. Chile is currently divided in 16 different regions with the newest region Ñuble formed in 2018, since the survey was performed in 2017 we will not include the region in our results.

Employment status is calculated using a dummy variable that takes into account if the individual is part of the labour force, has an age between 18 and 65 years old, and if he/she is currently working in exchange for a monthly wage or searching for a job opening. Using our definition of employment, we computed the wage variable used in our empirical model (described below) by taking the monthly wage reported by each employed individual and dividing it by the individual's number of monthly hours worked. Then we applied a logarithm base 10 to the variable in order to account for any non-linearities. For more detail on summary statistics of all the variables please see **Table 2**.

4. Empirical Method

In order to estimate the effect of the South American migrant population on the native employment we will use an individual level econometric approach similar to the method used by **Caruso et. al (2019)**:

$$E_{irt} = \beta_0 + \beta_1 M_{rt} + \beta_2 X_{irt} + \gamma_r + \gamma_t + \varepsilon_{irt}$$

Where E_{irt} is the employment outcome for individual i in region r at time t. On the left hand side, the variable M_{rt} is the South American immigrant labour force population as a percentage of the region r total labour force at time t. X_{irt} is a vector that controls for individual i demographics - age, sex, years of education, marital status, role in household and whether the individual lives in an urban or rural location. Additionally, we control for regional fixed effects γ_r and time variant effects γ_t.

Using a similar econometric approach we will be calculating the effect of the South American immigrant employed population on the logarithm monthly wages of the native employed population as seen in the equation below:

$$log(\frac{w}{h})_{irt} = \beta_0 + \beta_1 M_{rt} + \beta_2 X_{irt} + \gamma_r + \gamma_t + \varepsilon_{irt}$$

The right hand side of the equation will remain the same with the minor adjustment that only individuals with employment will be considered to be part of our sample for this regression. The M_{rt} will be the ratio of the South American migrant employed population in relation to region r total employed population at time t. X_{irt} is a

vector that controls for individual i demographics. γ_r and γ_t will control region fixed effects and time variant effects respectively.

One particular problem that could skew our results as pointed by **Hong and Mclaren (2015)**, **Freidberg (2001)** and **Caruso et al. (2019)**, involves the endogeneity of immigrant flows to specific geographical regions that exhibit good labour market indicators and economic opportunities. Following economic literature we will use an instrumental variable in order to reduce any potential correlation between the explanatory variable and the error term in our two regression equations. For the purposes of our research we will use the shift share instrumental variable presented by **Card (2001)** and used in **Hong and Mclaren (2015)**. The instrument has the following structure:

$$IV_{r,t} = \frac{1}{P_{r,t}} \sum_{c=1}^{C} M_{c,t,t+1} \frac{P_{c,r,t}}{\sum_{r'=1}^{R} P_{c,r',t}}$$

The calculation of the instrument as explained by **Hong and Mclaren (2015)**, will require us to calculate $M_{c,t,t+1}$ the aggregate inflow of immigrants from country c, between the time periods t and $t + 1$. Then the aggregate inflow of immigrants is multiplied by the share of immigrants from country c at the initial time period t. Finally, the product is divided by the region's initial total population.

5. Results

Firstly, let's take a look at the overall relationship between the South American immigrant population and wages. **Table 3** summarizes the OLS and IV regression coefficients between the explanatory and dependent variable. We have computed the effect of the independent variable on the Full Sample population that includes both employed natives and South American migrants, then we computed the specific effect on only the native employed population.

All of the coefficients point to a negative relationship between wages and the South American immigrant population. Nevertheless, only three results are statistically significant at the 1% level as the IV regression result between the explanatory variable and the native population wage was not statistically significant to draw a conclusion. There exists a small variation based on the empirical method used, that shows an overestimation by the OLS method. The OLS regression coefficients (- 0.67) and (- 0.45) in column 1 and 2 respectively display a negative relationship between South American immigration and wages for the two population clusters, though the negative effect on the native population is smaller. These results indicate that an increase of 1% in the South American migrants population decreases wages by 0.67% for everyone employed and 0.45% for natives. The 1% significant IV regression coefficient also gives a 0.64% decrease in full sample wages.

Moving to the employment individual level results shown in **Table 4**, we encounter a scenario where there is significant variation between the OLS and IV results, once again showing overestimation by the OLS results. Notwithstanding, both IV coefficients calculated are not statistically significant. The OLS coefficients (-0.22) and (-0.28) of column 1 and 2 display a negative relationship between both variables. The results indicate that a 1% increase in South American immigrants will decrease full sample employment by 0.22% and more importantly it will decrease native employment by 0.28%. Thus, the effect of the explanatory variable is stronger for the native population.

Although the overall results show a negative correlation between immigration and both wages and employment, there are several limitations that must be addressed. In the first place there could exist differences between multiple population groups. In order to address this situation we have developed an OLS and IV regression analysis for three population clusters based on educational level. We divided our data sample into three groups: 1) high school dropouts (HSD) with years of education below or equal to 11, 2) high school completed (HSC) with years of education between 12 and 15 (this population takes also into account individuals with some college education) and 3) college completed (CC) with years of education above or equal to 16.

Focusing on **Table 5**, we will see the summarized OLS regression results on employment for each specific education group. Additionally, we have subdivided each panel into both full sample and native groups in order to get more granularity as to the effects of the explanatory variable. If we take a look at the coefficients we see two different relationships. In first place the coefficients on the HSD and HSC groups show a negative relationship between immigration and employment for both the full sample and the natives clusters, with a larger effect on natives employment. A 1% increase in the South American immigrant population will decrease HSD and HSC native employment by 0.48% and 0.44% respectively. On the other hand there is a statistically positive relationship between the variables for the college completed group. Thus, an increase in immigration will increase college educated natives employment by 0.35%.

In order to account for the endogeneity problem described in immigration literature and in the methodology section, we used our IV instrument to reduce any correlation between the error term and the explanatory variable. If we look at **Table 6**, we got non-statistical significant results for both the full sample and native HSD panels, as well as the full sample HSC group. Nevertheless, the rest of the groups show significant results that once again display an important difference between IV and OLS results. For the native HSC panel, the IV coefficient was smaller than the OLS, but again shows a negative relationship between variables as a 1% increase in the immigrant

population decreases native HSC employment by 0.35%. As for the college educated group, the IV results point to a stronger positive relationship between South American immigration and employment than the OLS method. Therefore, a 1% increase in the South American immigrant population will increase native college educated employment by 0.63%.

We performed a similar panel analysis for our wage regression. The OLS results seen in **Table 7**, display a negative relationship between wages and immigration for the HSD and HSC panels, with a stronger effect on the HSC wages. A 1% increase in immigration will decrease by 0.65% and 0.88% the native HSD and native HSC wages. As for our college educated population, there is a smaller negative relationship between immigration and income, nevertheless, the results gathered did not yield statistically significant results.

Our next step was to perform the wage panel regression using the IV instrument in order to account for the endogeneity of immigration flows. These calculations resulted in only three coefficients that were statistically significant as seen in **Table 8**. As for the significant results, the coefficient for the HSD full sample wages negatively increased showing a stronger negative relationship than the OLS results. On the other hand both full sample and natives HSC coefficients showed a smaller negative relationship compared to OLS. To briefly summarize, we were able to confirm that a 1% increase in the South American migrant stock will decrease HSD full sample wages by 0.93% while at the same time the explanatory variable will decrease HSC native wages by 0.63%. For more detail on all our regression results please see Tables 3, 4, 5, 6, 7, 8 in the Appendix.

6. Conclusions

We would like to start our conclusion by pointing out several limitations that our econometric approach doesn't properly account for. In the first place, as discussed in **Hong and Mclaren (2015)** we could have yielded biased results given scale effects and heteroskedasticity problems. In order to correct for those biases **Hong and Mclaren (2015)** normalize both the dependent and explanatory variables by the location's initial population and calculate regional level regressions. Given that we are using individual level data we were not able to normalize the employment variable for the location's population at the specific time. Additionally, our regressions do not control for any industry level effects, thus, it would be important for subsequent studies to control for industry fixed effects.

With that being said, our results point out to an overall negative relationship between our explanatory variable (% South American immigration population in Chile) and the two dependent variables - employment and wages. In order to account for endogeneity in the flow of immigration, we use an instrumental variable that calculates

the supply push effect as seen in **Card (2001)** and **Hong and Mclaren (2015)**. In order to account for heterogeneity effects of the independent variable on different populations, we performed a panel analysis based on three educational level groups: HSD, HSC and CC. The results show that South American immigration has different effects depending on level of education, with stronger negative effects on both the high school dropouts and high school completed groups. The outcomes presented in this case study reinforce the importance of protecting negatively affected native population groups, while at the same time showing that South American immigration affected positively college educated employment. Lastly, we hope that future studies will focus on the long-term effects of South American migration in Chile, accounting for industry level differences.

7. References

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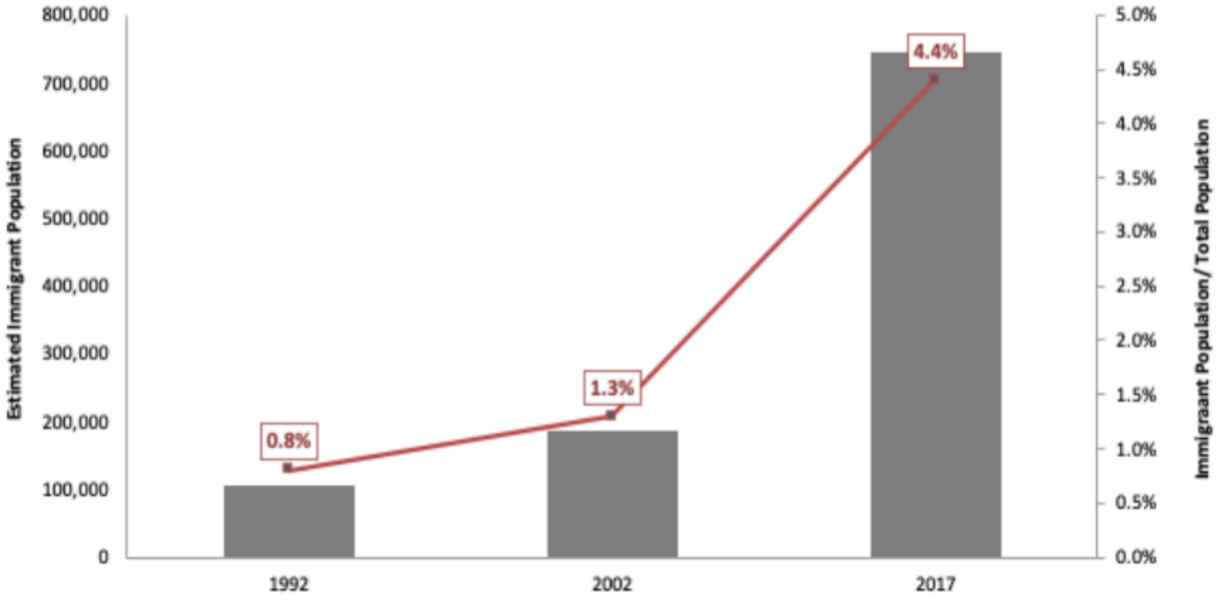
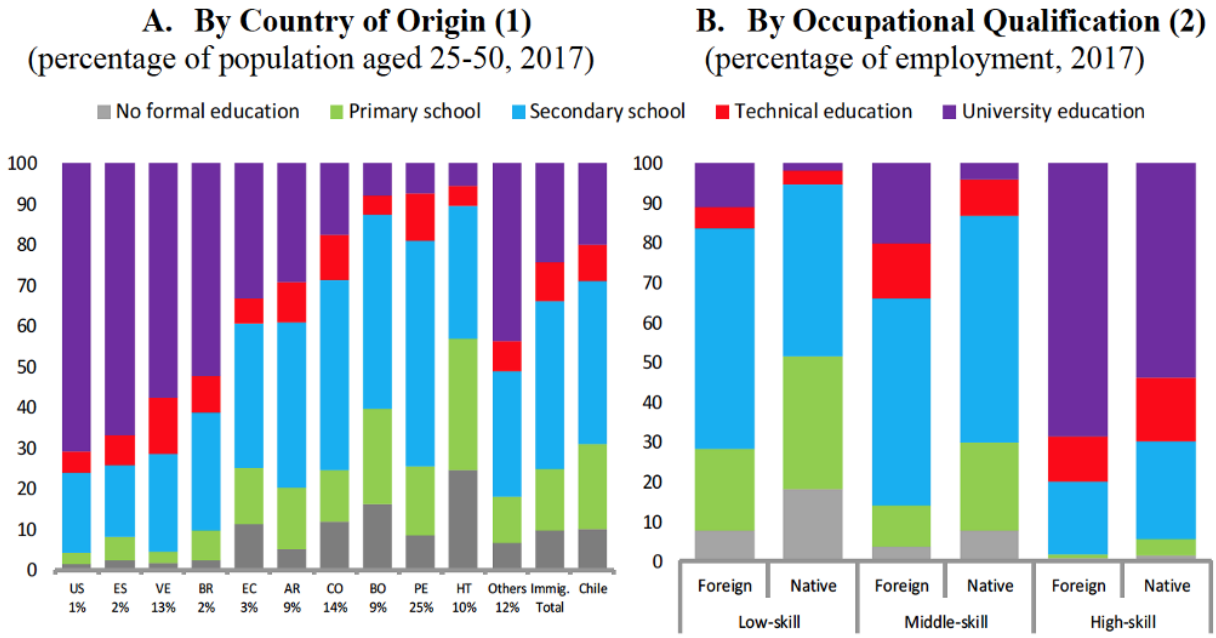
8. Appendix

Figure 1 - Estimated Immigrant Population and % of Immigrant Stock on Total Population (1992, 2002 & 2017)



Source: National Institute of Statistics of Chile (www.ine.cl), Census 1992, 2002, & 2017.

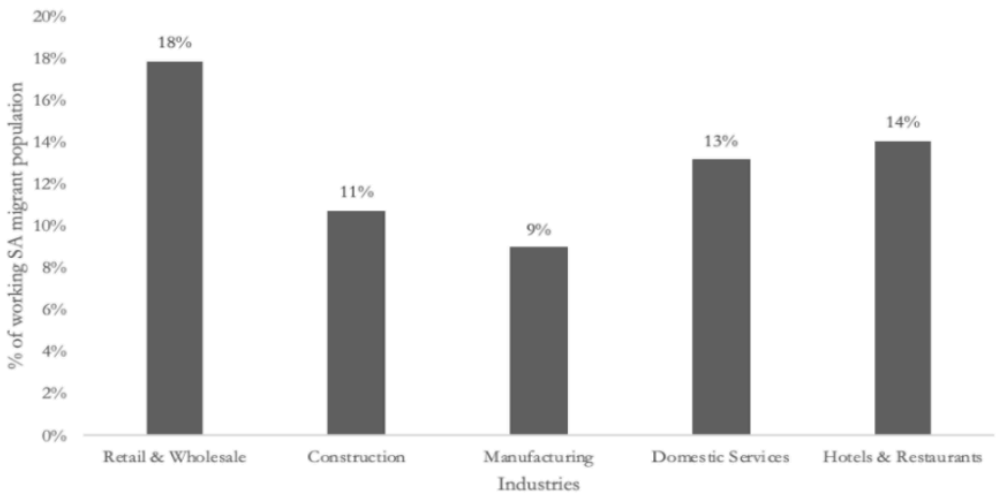
Figure 2 - Education Level of Natives and Immigrants by Nationality



Source: Aldunante et al., Notas de Investigación Journal Economía Chilena (The Chilean Economy), Central Bank of Chile, vol. 21(3), page 116, December 2018.

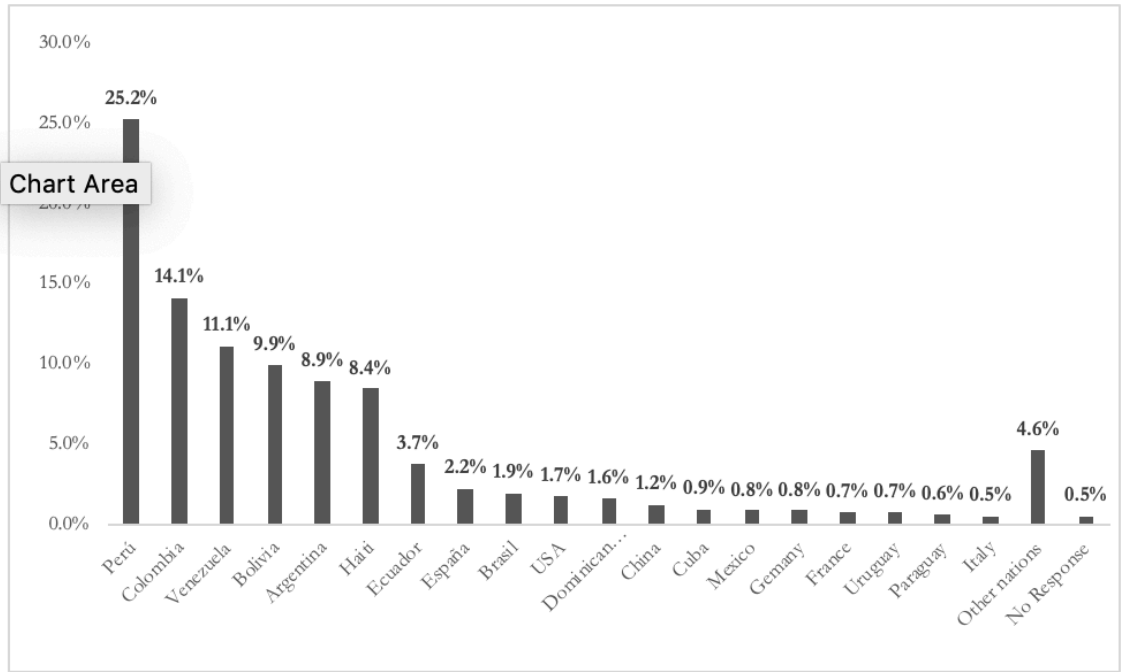
Aldunate et al. notes: (1) The ratio of immigrants to population aged 25 to 50 years by country of origin is denoted below each country. Each country is referred as follows: United States (US), Spain (ES), Venezuela (VE), Brazil (BR), Ecuador (EC), Argentina (AR), Colombia (CO), Bolivia (BO), Peru (PE), and Haiti (HT). (2) Classification of occupations by Lagakos et al. (2018), following ISCO-08. High-skill occupations include managers, professionals, technicians and associate professionals (codes 1-3). Middle-skill occupations comprise clerical support workers, service and sales workers and, craft and related trades workers (codes 4, 5, 7). Low-skill occupations comprehend agricultural, forestry, and fishery workers, plant and machine operators and assemblers and, elementary occupations (codes 6, 8, 9). Workers with missing occupations or employed in the armed forces are not included. Source: Authors' calculations based on data from Ministry of Social Development (CASEN Survey) and National Statistics Institute (2017 Census).

Figure 3 - South American Population Percentage Working in Top 5 Industries (2013 - 2017)



Source: Author's calculations using data from the 2013, 2015 & 2017 CASEN survey

Figure 4 - Percentage of International Immigrants according to Country of Birth



Source: National Institute of Statistics Chile (www.ine.cl), Census 2017.

Table 1 - Geographical Dispersion of Immigrant Population by Region (2017)

Region	% of Total Immigrants
Arica y Parinacota	2.4%
Tarapacá	5.9%
Antofagasta	8.4%
Atacama	1.2%
Coquimbo	2.0%
Valparaiso	5.4%
Metropolitana	65.3%
O'Higgins	1.8%
Maule	1.4%
Ñuble	0.5%
Biobio	1.6%
La Araucanía	1.4%
Los Rios	0.5%
Los Lagos	1.3%
Aysén	0.3%
Magallanes y La Antártica Chilena	0.6%

Source: National Institute of Statistics of Chile (www.ine.cl) (www.ine.cl), Census 2017.

Table 2 - Individual Level Summary Statistics

	South American	Native	South American	Native
	Mean	Mean	N	N
Age	34.66	39.40	5,137	232,166
Years of Education	12.39	11.92	5,108	231,328
% Men	49.43%	56.72%	5,137	232,166
% Employed	93.40%	90.39%	5,137	232,166
% Urban	92.89%	82.96%	5,137	232,166
% High School Dropout (HSD)	22.23%	30.35%	5,137	232,166
% High School Completed (HSC)	60.05%	52.42%	5,137	232,166
% College Completed (CC)	17.71%	17.23%	5,137	232,166
% Employed HSD	92.64%	90.76%	1,142	70,468
% Employed HSC	93.48%	89.59%	3,085	121,703
% Employed CC	94.07%	92.22%	910	39,995
Log(Wage/Hour)	7.57	7.56	5,127	206,087
High School Dropout Log(Wage/Hour)	7.37	7.23	1,212	62,616
High School Completed Log(Wage/Hour)	7.47	7.49	3,027	107,140
College Completed Log(Wage/Hour)	8.16	8.32	888	36,331
			Full Sample	N
% South American Imigrant Population 2013			1.51%	73,476
% South American Imigrant Population 2015			1.78%	90,478
% South American Imigrant Population 2017			3.29%	73,349

Source: Author's calculations using the 2013, 2015 and 2017 CASEN survey datasets

Table 3 - Individual Level Wage Regression Results

Dependent Variable: log(wage/hour)	OLS		IV	
	Full Sample	Natives	Full Sample	Natives
	1	2	3	4
South American Immigrant Population/Region Population	-0.67	-0.45	-0.64	-0.34
	(0.16)	(0.17)	(0.23)	(0.24)
Significance	***	***	***	
Individual Controls	Yes	Yes	Yes	Yes
Region Fixed Effects	Yes	Yes	Yes	Yes
Time Variant Effects	Yes	Yes	Yes	Yes
R^2	0.29	0.30	0.31	0.31
N	210,440	204,711	143,427	138,932

Source: Author's calculations using the 2013, 2015 and 2017 CASEN survey databases

Note: Robust standard errors in parenthesis. ***, **, and * respectively represent 1%, 5% and 10% significance levels. Regressions uses monthly log wage per hour of employed population between the ages of 18 and 65, we have excluded population that is self-employed or unemployed. Full sample takes into account both native and South American immigrant populations, while natives focuses only in the chilean nationals cohort.

Table 4 - Individual Level Employment Regression Results

Dependent Variable: Employment	OLS		IV	
	Full Sample	Natives	Full Sample	Natives
	1	2	3	4
South American Immigrant Population/Region Population	-0.22	-0.28	-0.06	-0.09
	(0.08)	(0.09)	(0.13)	(0.13)
Significance	***	***		
Individual Controls	Yes	Yes	Yes	Yes
Region Fixed Effects	Yes	Yes	Yes	Yes
Time Variant Effects	Yes	Yes	Yes	Yes
R^2	0.03	0.03	0.03	0.03
N	236,436	230,149	163,237	158,263

Source: Author's calculations using the 2013, 2015 and 2017 CASEN survey databases

Note: Robust standard errors in parenthesis. ***, **, and * respectively represent 1%, 5% and 10% significance levels. Regressions uses employement status of population between the ages of 18 and 65, are employed or currently looking for work. Full sample takes into account both native and South American immigrant populations, while natives focuses only in the chilean nationals cohort.

Table 5 - Individual Level Employment OLS Regression Results by Education Level Clusters

Dependent Variable: Employment	OLS					
	High School Dropouts		Completed High School		Completed College	
	Full Sample	Native	Full Sample	Native	Full Sample	Native
South American Immigrant Population/Region Population	-0.41	-0.48	-0.33	-0.44	0.33	0.35
	(0.16)	(0.17)	(0.11)	(0.12)	(0.17)	(0.18)
Significance	**	***	***	***	*	**
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
Region Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Time Variant Effects	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.03	0.03	0.04	0.04	0.05	0.05
N	71,610	69,942	124,788	120,405	40,038	38,150

Source: Author's calculations using the 2013, 2015 and 2017 CASEN survey results

Note: Robust standard errors in parenthesis. ***, **, and * respectively represent 1%, 5% and 10% significance levels. Regressions uses employement status of population between the ages of 18 and 65, are employed or currently looking for work. High School Dropout cluster calculated from employed and unemployed population with 11 years or below of education. Completed College population calculated from individuals that have 16 or higher years of education. Completed High School include the population in between High School Dropout and Completed College. Full sample takes into account both native and South American immigrant populations, while natives focuses only in the chilean nationals cohort.

Table 6 - Individual Level Employment IV Regression Results by Education Level Clusters

Dependent Variable: Employment	IV					
	High School Dropouts		Completed High School		Completed College	
	Full Sample	Native	Full Sample	Native	Full Sample	Native
South American Immigrant Population/Region Population	-0.10	-0.12	-0.29	-0.35	0.55	0.63
	(0.25)	(0.26)	(0.18)	(0.19)	(0.26)	(0.27)
Significance				*	***	***
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
Region Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Time Variant Effects	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.03	0.04	0.04	0.03	0.05	0.05
N	47,530	46,282	86,477	83,045	29,230	27,684

Source: Author's calculations using the 2013, 2015 and 2017 CASEN survey results

Note: Robust standard errors in parenthesis. ***, **, and * respectively represent 1%, 5% and 10% significance levels. Regressions use employement status of population between the ages of 18 and 65, and are part of the labour force. High School Dropout cluster calculated from employed and unemployed population with 11 years or below of education. Completed College population calculated from individuals that have 16 or higher years of education. Completed High School include the population in between High School Dropout and Completed College. Full sample takes into account both native and South American immigrant populations, while natives focuses only in the chilean natives cohort.

Table 7 - Individual Level Wage OLS Regression Results by Education Level Clusters

Dependent Variable: log(wage/hour)	OLS					
	High School Dropouts		Completed High School		Completed College	
	Full Sample	Native	Full Sample	Native	Full Sample	Native
South American Immigrant Population/Region Population	-0.69	-0.65	-1.00	-0.88	-0.58	-0.12
	(0.31)	(0.32)	(0.21)	(0.22)	(0.42)	(0.43)
Significance	**	**	***	***		
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
Region Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Time Variant Effects	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.07	0.07	0.11	0.12	0.19	0.19
N	63,828	62,336	110,167	106,205	36,445	34,694

Source: Author's calculations using the 2013, 2015 and 2017 CASEN survey results

Note: Robust standard errors in parenthesis. ***, **, and * respectively represent 1%, 5% and 10% significance levels. Regressions use monthly log wage per hour of employed population between the ages of 18 and 65, we have excluded population that is self-employed or unemployed. High School Dropout cluster calculated from employed population with 11 years or below of education. Completed College population calculated from individuals that have 16 or higher years of education. Completed High School include the population in between High School Dropout and Completed College. Full sample takes into account both native and South American immigrant populations, while natives focuses only in the chilean natives cohort.

Table 8 - Individual Level Wage IV Regression Results by Education Level Clusters

Dependent Variable: log(wage/hour)	IV					
	High School Dropouts		Completed High School		Completed College	
	Full Sample	Native	Full Sample	Native	Full Sample	Native
South American Immigrant Population/Region Population	-0.93	-0.64	-0.76	-0.61	-0.38	0.12
	(0.44)	(0.46)	(0.30)	(0.31)	(0.57)	(0.58)
Significance	***		***	**		
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
Region Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Time Variant Effects	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.05	0.06	0.12	0.12	0.21	0.22
N	41,638	40,543	75,367	72,293	26,422	24,994

Source: Author's calculations using the 2013, 2015 and 2017 CASEN survey results

Note: Robust standard errors in parenthesis. ***, **, and * respectively represent 1%, 5% and 10% significance levels. Regressions use monthly log wage per hour of employed population between the ages of 18 and 65, we have excluded population that is self-employed or unemployed. High School Dropout cluster calculated from employed population with 11 years or below of education. Completed College population calculated from individuals that have 16 or higher years of education. Completed High School include the population in between High School Dropout and Completed College. Full sample takes into account both native and South American immigrant populations, while natives focuses only in the chilean natives cohort.