

# **Internal Migration in Chile: an Empirical Analysis of the Indigenous Population**

## **Abstract**

Chile, like other countries in Latin America, has seen an increase in internal migration. However migration research in Chile tends to focus on and compare aggregated populations across regions. This aggregation masks significant socio-demographic differences within the population, differences that may influence the likelihood of migration. To date, there is little quantitative evidence verifying the socio-demographic correlates of internal migration in Chile. Using nationally representative data from a household survey in Chile the author uses descriptive and multivariate analyses to shed light on the social, demographic, and spatial factors associated with the likelihood of migrating. Using two measures of migration and logistic regression models, the author finds significant differences in the likelihood of migrating between the indigenous and the non-indigenous population. The results also indicate a need for further refinement in the definition of internal migration.

## **Introduction**

In the last few decades scholars, governments, and NGOs have increased their interest in the plight of indigenous people around the globe (ILO 1957; ILO 1989; Patrinos 1994; Dixon and Scheurell 1995). The increased interest is evident with the adoption of the 2007 Declaration on the Rights of Indigenous People (Cabo 1986; UN 1988; ILO 1989; UN 2007). While the word *poverty* never appears in that declaration, it clearly recognizes past injustices and emphasizes the right to freedom from discrimination in the pursuit of economic well-being. Internal migration is one such strategy in that pursuit of economic well-being.

This research draws on human capital, structural, and other theoretical approaches to provide a unique appraisal of migration among indigenous people in Chile. Chile is not known for having a large indigenous population, however in relative terms the proportion of the population that identifies as indigenous in Chile is much larger than that of the United States. Nationally representative household survey data are available that allow for analysis of internal migration in Chile. In this research we use these data to document and analyze differences in the prevalence and correlates of migration between the indigenous and non-indigenous populations.

## **Background**

In the past few decades Chile has gone through major political and economic changes. During the 1970s and 1980s Chile was ruled by a military dictator who adhered to economically conservative policies, imposed structural reforms, and privatized industries (Wiegand 1983; Scott 2000; Solimano 2000; Berdegue 2001). The dictatorship also diversified the exports of Chile, exports that before consisted heavily of mining, but grew to include fishing, forestry and agricultural products; all industries that encroach on traditional indigenous lands. When the dictatorship finally ended in 1990, Chile had a growing economy but over 40% of Chileans lived

below the official poverty line (MIDEPLAN 2006). The new democratic government implemented social reform programs with the intent to decrease the levels of poverty. With the social reform programs and a growing economy, poverty rates began to fall (WorldBank 2002; MIDEPLAN 2006; Mahia 2008). According to the government, in the past decade Chile has decreased poverty at a national level, however, the decrease in poverty and the economic growth have not been evenly distributed throughout the society (Barrientos 2006; de Alcantara 2008; Gonzalez-Parra and Simon 2008; Medeiros and Costa 2008; Patricia and Michael 2008; Sanjay 2008; Teichman 2008). In light of these rapid economic changes, and the continued growth of the indigenous population, analyzing the movement of indigenous people becomes increasingly relevant.

Access to education and employment is often affected by structural factors such as place. Geographic location determines the availability of many social and economic goods; however location is often omitted from studies on indigenous poverty. Some areas, usually urban areas with higher population, have greater infrastructural development, greater access to education, and greater employment opportunities. Rural areas are more remote and lack the means to increase human capital or find high paying jobs. Also some industries that provide jobs are located in areas where they can take advantage of the abundant natural resources. This puts people who live in resource scarce areas at a disadvantage (Friedland, Borton et al. 1981; Levy 1987; Bluestone 1990; Slack and Jensen 2004).

Chile consists of many resource rich areas however these areas are not distributed evenly throughout the country. Historically as indigenous groups tried to make a living on their ancestral lands, they were often forcibly removed and relocated to areas with less abundance. Presumably for indigenous people who remain in ideal locations, locations rich in resources or locations where gaining human capital is possible, the risk of living in poverty should be low. However living in these ideal places may not guarantee decreases in poverty. Human capital and structural factors, such as place, may not be the only factors that influence the migration of indigenous people.

## **Data**

The broad goal of this research is to advance the understanding of indigenous migration. Data from a nationally representative household survey in Chile are used to analyze the prevalence and correlates of indigenous poverty. This household survey is conducted by the Ministry of Planning and Cooperation (MIDEPLAN) in Chile in conjunction with the Economics department of the University of Chile. The survey is called the Encuesta Caracterizacion Socioeconomica Nacional or National Survey of Socio-economic Characteristics (CASEN).

The CASEN is the only regularly conducted survey of the socio-economic and demographic characteristics of Chilean households (Pizzolitto 2005). It is a government funded household survey of about 73,720 households (in 2006). The CASEN is a repeated cross-sectional survey

conducted biannually beginning in 1990. The sampling framework is based on the Population Census that was most recently conducted in 2002. It is a multi-stage random sample with geographic stratification by region and rural/urban residence. It represents the whole population in urban as well as rural areas (Pizzolitto 2005; MIDEPLAN 2006). I use the most recent CASEN available, the 2006 dataset that was released in 2007.

The CASEN is analogous to the U.S. Current Population Survey in content and sample size, though given Chile's much smaller total population the CASEN sample is proportionally much larger. The CASEN survey gathers basic demographic data about households and household members as well as information on the material situation of the household and socio-economic characteristics including those that measure human capital, structural factors, and migration.

## **Results**

**Table 1: Rates of In-migration, Emigration, and Net migration by Period and Region, Census 1982-2002**

Region	1977-1982			1987-1992			1997-2002		
	In	Out	Net Migration	In	Out	Net Migration	In	Out	Net Migration
Total	11.8	11.8	-	12.1	12.1	-	11.6	11.6	-
I de Tarapacá	31.4	17.5	13.9	24.6	22.0	2.6	22.3	21.7	0.6
II de Antofagasta	18.1	20.2	-2.1	20.2	21.1	-0.9	19.7	18.5	1.2
III de Atacama	15.1	26.4	-11.3	25.4	21.3	4.1	17.5	22.6	-5.1
IV de Coquimbo	13.2	16.3	-3.2	15.5	16.5	-1.0	17.8	13.3	4.5
V de Valparaíso	11.7	11.1	0.6	13.2	12.3	0.9	14.7	11.5	3.2
VI de O'Higgins	9.6	14.4	-4.8	13.0	13.4	-0.4	13.4	12.2	1.2
VII del Maule	8.6	14.9	-6.3	9.5	14.3	-4.8	11.3	11.7	-0.4
VIII del Bío-Bío	6.2	13.4	-7.2	8.6	12.1	-3.5	9.3	11.5	-2.2
IX de La Araucanía	9.4	16.5	-7.1	12.6	15.7	-3.1	13.7	14.2	-0.5
X de Los Lagos	6.8	16.1	-9.3	10.6	13.4	-2.8	12.7	12.0	0.7
XI Aysen	21.5	19.0	2.5	23.0	23.2	-0.2	21.9	22.5	-0.6
XII de Magallanes y A	48.0	18.2	29.8	28.1	30.7	-2.6	23.6	30.3	-6.7
Metropolitana de San	13.0	6.5	6.5	10.5	7.8	2.7	8.3	8.7	-0.4

Data: INE Chile

**Table 2: Absolute Value of Net Migration as a Proportion of Total Migration by Region**

Region	1982	1992	2002
Total	-	-	-
I de Tarapacá	28.5	5.6	1.3
II de Antofagasta	5.4	2.4	3.3
III de Atacama	27.1	8.9	12.9
IV de Coquimbo	10.7	3.1	14.7
V de Valparaíso	2.6	3.3	11.9
VI de O'Higgins	19.8	1.3	4.9
VII del Maule	26.9	20.3	1.8
VIII del Bío-Bío	36.8	16.9	10.6
IX de La Araucanía	27.1	10.7	1.7
X de Los Lagos	40.8	11.7	3.1
XI Aysen	6.1	0.4	1.3
XII de Magallanes y Antártica	45.1	4.4	12.4
Metropolitana de Santiago	33.6	14.8	2.7

Data: INE Chile

**Table 4: Logistic Regression Results for Likelihood of Migrating from Birthplace**

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Full Model
<b>Demographic</b>							
Indigenous	0.74***	0.78***	0.78***	0.76***	0.93***	0.94***	1.14***
Non-Indigenous (ref.)							
Female		1.10***					1.11***
Age		1.02***					1.03***
HH size		0.93***					0.93***
Married		1.37***					1.37***
Non-married (ref.)							
<b>Employment</b>							
Employed all other (ref.)							
Unemployed			0.65***				0.89***
Inactive			0.73***				0.88***
Employ Extractive			0.39***				0.77***
<b>Education</b>							
Years Education				1.02***			1.04***
<b>Residence</b>							
Santiago (ref.)							
Other Urban					0.35***		0.40***
Rural					0.17***		0.21***
<b>Regional Controls</b>							
Northern Regions						1.10***	1.07***
Central Regions						2.21***	1.39***
Southern Regions (ref.)							
<b>N</b>	204,313	204,313	204,313	204,313	204,313	204,313	204,313
<b>R<sup>2</sup> (Nagelkerke)</b>	0.002	0.073	0.022	0.004	0.104	0.045	0.189
<b>-2LL</b>	282394	271200	279242	282118	266095	275656	251545

Significance test reported as: \* p&lt;.05, \*\*p&lt;.01, \*\*\*p&lt;.001

**Table 5: Logistic Regression Results for Likelihood of Migrating in Last 5 Years**

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Full Model
<b>Demographic</b>							
Indigenous	0.89**	0.87***	0.92*	1.05	1.01	1.01	1.09*
Non-Indigenous (ref.)							
Female		1.04*					1.07***
Age		0.97***					0.98***
HH size		0.82***					0.84***
Married		1.20***					1.12***
Non-married (ref.)							
<b>Employment</b>							
Employed all other (ref.)							
Unemployed			0.98				0.97
Inactive			0.70***				0.88***
Employ Extractive			0.49***				0.84***
<b>Education</b>							
Years Education				1.13***			1.08***
<b>Residence</b>							
Santiago (ref.)							
Other Urban					0.61***		0.70***
Rural					0.39***		0.58***
<b>Regional Controls</b>							
Northern Regions						1.07*	1.06
Central Regions						1.53***	1.15***
Southern Regions (ref.)							
<b>N</b>	204284	204284	204284	204284	204284	204284	204284
<b>R<sup>2</sup> (Nagelkerke)</b>	0.000	0.038	0.008	0.037	0.016	0.006	0.066
<b>-2LL</b>	120752	117274	120050	117392	119307	120179	114636

Significance test reported as: \* p<.05, \*\*p<.01, \*\*\*p<.001

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