Trading Places: A Decade of Earnings Mobility in Chile and Nicaragua

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1. Social Mobility in Latin America

- High and stable immobility in the region (Wodon, 2001; Calónico, 2006; Ñopo et al., 2007);
- Less mobility in Brazil, Colombia, Argentina and Uruguay; more mobility in Mexico, Venezuela, Bolivia (Calónico, 2006; Ñopo et al., 2007);
- Chile: relative high mobility, education is a key factor (Scott and Litchfield, 1994), growth (Contreras et al., 2007) and out-of-poverty mobility (Paredes and Zubizarreta, 2005);
- Nicaragua: immobility is associated with characteristics of the labour markets (traditional sectors, informality and instability) and the ones of individuals (education, economical dependence, geographical location) (Davis and Stampini, 2002; Andersen, 2003).

3. Aim and Contributions

- Explore which factors are related with mobility patterns in two economies with different economic performance.

- Our main contributions are;
  - a novel methodology for measuring mobility;
  - the use of panel data for analyzing mobility in Nicaragua

4. Why Chile and Nicaragua?

- Chile:
  - high growth rates (5.7 percent) and a stable macroeconomic situation during the last 20 years;
  - considerable reduction on poverty rates (38.6 to 18.8 percent);
  - persistence of inequalities on the distribution of income.

- Nicaragua:
  - second poorest country in the LAC region;
  - high poverty rates (about 50 percent);
  - high economic dependence on foreign remittances and donations.

5. Data and sample

- The National Characterization Socio-economic Survey (CASEN) of Chile, 1996, 2001 and 2006.

- The Nicaraguan Living Standards Measurement Survey (LSMS) years 1998, 2001 and 2005.

Sample

- For being part of our sample, individuals in both countries need to:
  - be employed workers in *t, t+1* and *t+2*;
  - be aged between 25 and 65 years old in *t* and *t+2*;
  - not be non-remunerated family workers;
  - have strictly positive labor incomes in *t* and *t+2*

⇨ Final samples:

  - Chile: 1792 observations
  - Nicaragua: 1254 observations

Measuring mobility

1. Transition mobility matrices among quintiles of earnings.
2. Positional mobility:

$$\Delta Rank_i = \alpha_i + \beta x_{i,t} + \gamma \Delta z_i + \varepsilon_i$$

$\Delta Rank_i$ denotes the change in rank of individual *i* between *t* and *t+2*, x denotes a set of individual's and household's characteristics at time *t*, Δz denotes changes in the explanatory variables between time *t* and *t+2*.

7. Transition matrices

- Chile:

		2006				
		1	**2**	**3**	**4**	**5**
1996	**1**	40.59	30.07	16.38	8.56	4.4
	2	25.6	34.94	18.07	14.16	7.23
	3	13.65	26.55	19.85	24.57	15.38
	4	9.66	18.62	19.66	28.62	23.45
	5	6.98	8.66	11.73	20.67	51.96
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  - high mobility around the middle-earnings quintiles
  - evidence of vulnerability to poverty on quintiles 2 and 3

Transition matrices (cont.)

- Nicaragua:

		2005				
		1	**2**	**3**	**4**	**5**
1998	**1**	39.45	25	15.63	11.72	8.2
	2	23.58	28.05	22.76	15.04	10.57
	3	14.34	21.91	27.09	25.1	11.55
	4	13.94	15.14	23.51	27.09	20.32
	5	8.8	9.6	13.6	18.8	49.2
	Total	**20.1**	**19.94**	**20.49**	**19.54**	**19.94**

  - evidence of *cumulative advantage* (5:5) and *poverty traps* (1:1), but lower than in Chile
  - More homogeneity at middle-earnings quintiles
  - evidence of vulnerability to poverty on quintiles 4

Change in rankings: summary stat.

Variables	Chile mean / (s.d.)	Nicaragua mean / (s.d.)
Ranking changed=1	0.999 (0.02)	0.998 (0.04)
Ranking increased=1	0.505 (0.50)	0.511 (0.50)
Change in ranking	0.000 (508.00)	0.000 (387.90)
Change in ranking (absolute value)	381.40 (335.50)	291.50 (255.80)
Change in ranking (conditional on dow. mobility)	384.83 (348.43)	297.69 (258.80)
Change in ranking (conditional on upw. mobility)	378.02 (322.47)	285.60 (252.88)

Changes in ranking (cont.)

Variable	$\Delta Rank_i$	
	Chile	**Nicaragua**
Education	25.71 ***	2.11
	(8.16)	(7.04)
Male=1	-104.71 ***	-8.38
	(31.49)	(27.85)
Age	-5.12 ***	-3.09 **
	(1.70)	(1.39)
Number of children	-26.56 *	-41.64 *
	(15.41)	(23.39)
Number of adults	-43.43 ***	-30.40
	(15.76)	(31.05)
Contribution to pension system	68.38	113.60 ***
	(46.58)	(32.14)
Hours of work	3.89 ***	2.44 ***
	(0.69)	(0.48)
Secondary job	439.75 ***	156.43 ***
	(77.67)	(39.30)
Entrepreneurship	189.61 **	125.39
	(90.24)	(62.65)
Self-employment	-83.30 **	324.71 ***
	(41.49)	(88.39)

Note: * significant at 1%, ** significant at 5%, * significant at 10%**

Preliminary findings

- Nicaragua shows more mobility at the extremes of the earning distribution than Chile and a more homogenous middle class.

- Mobility in both countries is affected in a similar way by characteristics of the household and individual (number of economic dependent members, age), as well as by labor market's characteristics (hours of work, secondary job, entrepreneurship).

Preliminary findings (cont.)

- Particularly in Chile, education plays a important role for mobility in the distribution of earnings.

- In Nicaragua, formality on the job is associated with higher mobility.

- Self-employment is negatively associated with earnings mobility in Chile but positively associated in Nicaragua.

Future research

- Exploit the richness of the 3-waves longitudinal datasets, estimating FE/RE models;
- Incorporate information from wave 2 for each country;
- Consider 'reweighting' due to attrition and sample selection;
- Deal with transitions in and out of employment;
- Divide results by gender and age/work experience groups.

Thanks!