Income and Education Movility, a global review

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Abstract

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JEL: Código1 Código1 Código3 Código4 Código5

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1 Research Question

2 Literature Review

The paper seeks to complement the two studies by Van der Weite et.al (2021), on social mobility in the world. The difference is that we have more data available and the results will be presented using the same methodology without the need to mix our own results with those of other authors. Additionally we will perform an analysis using percentile correlation coefficients, which has been shown by Chetty et.al (2014) to be a more robust estimator. We will also perform a cross section analysis using the year in which the survey was conducted, together with a cohort analysis.

3 Data

In an effort to generate international evidence on different matters, the World Bank generated databases from household and labor market surveys in countries around the world. For the Chilean case, the databases come from the Casen survey from 1987 to 2020. In order to be able to do an international work, the databases were modified in terms of the number and content of their variables, so as to be able to standardize databases from all over the world. The vast majority of these databases are confidential only for people working at the World Bank, so Claudio Montenegro [1] kindly provided them to us in such a way that it maintain confidentiality by delivering the results of the estimates we made.

We calculate the coresidency rate, labor participation and social mobility, both in terms of income and education using over 2300 surveys around the world. To classify countries by income level and geographic region, we use another World Bank database updated to the year 2022. The income classification has 4 categories; High income, Low income, Upper middle and Lower middle (the only country that cannot be classified was Venezuela, since the data provided is not reliable for the World Bank.). The region classification has 7 categories; East Asia & Pacific, Europe & Central Asia, Latin America & Caribbean, Middle East & North Africa, North America, South Asia and Sub-Saharan Africa. Finally, to relate these concepts to macro variables of an economy in a specific year we use the Gothenburg University database.

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4 Descriptive Statistics

5 Empirical Approach

To measure social mobility across countries, we will use a cross-section approach (many cohorts in each survey) and a cohort approach (many surveys in each generation). The second way is the most used and allows us to see the situation of the older generations with respect to the newer ones.

To calculate the social mobility of countries, the following functional form is typically used

$$y_s = \beta_0 + \beta_1 y_f + \beta_2 X + \epsilon_i$$

Where:
y_s=ln(Children's income) or Children's Education
y_f=ln(Father's income) or Father's Education
X=Control variables (following the existing literature, we used age and age squared as control variables to control for the life cycle of the children)
The closer β_1 is to 0, the greater the social mobility

To correctly capture the importance of the father's income in the children's income, we annualize the salaries to isolate the effect that the different frequencies with which each one receives it could have.

Only analysis by coresidents is used in this work. This could potentially present problems of bias, but as has been documented in other papers this bias appears to be low enough that it is not relevant at least in education.
This is shown in the appendix

Coresidence rate

$$\boxed{\text{Coresidence Rate} = \frac{\text{Son's living with their father}}{\text{Son's not living with their father + Total of fathers}}}$$

Labor participation and Employment rate

$$\boxed{\text{Labor Force Participation Rate} = \frac{\text{Employed+Unemployed}}{\text{Working age population}}}$$

$$\boxed{\text{Ocupation Rate} = \frac{\text{Employed}}{\text{Working age population}}}$$

Filters

What we seek in this research is to see the persistence that the (permanent) income of the parents has on the (permanent) income of the children. To do so, we perform a series of filters on the regression observations as detailed below.

1) **The minimum working hours during the week are 22 hours**: A person is formally "employed" with at least one hour of work per week. What we are looking for is to stay with workdays that capture people's permanent income, so we believe this is a reasonable value for the purposes of the study.

2) **The age of the parents cannot be more than 65 years old**: With this we seek to avoid a problem of selectivity of people leaving the labor market to retire. This was initially intended for men in Chile, but analyzing the retirement age for men in other countries, we consider it to be a good cut-off age.

3) **We exclude from the regression those observations that are top 0.5% of the income distribution**: This is a World Bank practice in order to eliminate any typing errors that include one figure too many.

4) **The children are between 23 and 30 years old**: We believe that 23 years is a reasonable cut-off age for the coresident approach, given that around this age people finish their tertiary education cycle and start entering the labor market. Since the surveys are conducted 3 to 5 years per country, we decided to set the upper cutoff age at 30 years in order to see the effect that exists in a cohort at different ages. If we analyze the coresidency and labor participation rates of people in this age group, it is confirmed that this is an appropriate bracket.

6 Results

Coresidence rate

Labor participation and Employment rate

Social Movility

in line with the existing literature, it is observed that countries with higher income have higher income and education mobility than those with lower incomes

The literature has shown a negative relationship between income inequality, as measured by the gini index, and social mobility. This relationship is called the Great Gatsby Curve.

7 Conclusions

8 Bibliography

- Van der Weide R, Narayan A, et.al (2021). Fair Progress? : Economic Mobility Across Generations Around the World

-Van der Weide R, et.al (2021). Intergenerational Mobility around the World

- Nuñez J & Risco C "Movilidad intergeneracional del ingreso en un país en desarrollo. El caso de Chile", Departamento de Economía Uchile, 2004

- Nuñez Sanhueza (2015) - The expansion of education and the evolution of Intergenerational Mobility, Chile

9 Appendix

To see some results dynamically, click on the following link