**Working Paper CLIO-INFRA: Educational inequality**

1. Title

- Educational inequality.

2. Author(s)

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3. Production date

- 18-3-2013

4. Version

- 1st version.

5. Variable group(s)

- Human capital.

6. Variable(s)

-Educational inequality by country – The Gini (=a measure of inequality) of education in the total population of 15 years and older.

7. Unit of analysis

- Gini.

8. Keywords (5)

- human capital, education, world, inequality.

9. Abstract (200 words)

- The Gini of the spread of education in the total population aged 15 years and older is given annually for the period 1850-2010 (the time period varies by country).

10. Time period

- 1850-2000.

11. Geographical coverage

- Entire World.

12. Methodologies used for data collection and processing

- Bibliographical research, research of published and Online Databases, and cross-analysis of various datasets

13. Data quality

i. Central statistical agencies

ii. Historical reconstructions

iii. Estimates

iv. Conjectures

Virtually all benchmark data after 1960 (i.e. 1960, 1970, 1980, 1990, 2000, and 2010) are derived indirectly from Central Statistical Agencies and therefore probably better classify as historical reconstructions. The remaining data are estimates.

14. Period of collection

- October/2010 and February/2013.

15. Data collectors

- Bas van Leeuwen and Jieli van Leeuwen-Li.

16. Sources

The main sources, with the exception of some country-specific studies, are:

1. Mitchell, B.R. (2007), *International Historical Statistics: Africa, Asia & Oceania, 1750-2005,* Basingstroke [etc.]: Palgrave Macmillan (5th edition).
2. Mitchell, B.R. (2007), *International Historical Statistics: The Americas, 1750-2005,* Basingstroke [etc.]: Palgrave Macmillan (5th edition).
3. Mitchell, B.R. (2007), *International Historical Statistics: Europe, 1750-2005,* Basingstroke [etc.]: Palgrave Macmillan (5th edition).
4. US Department of Commerce, US Census Bureau, *International database*, downloaded from: <http://www.census.gov/population/international/data/idb/informationGateway.php>
5. Unesco, Statistical yearbook, Paris: Unesco, 1964-1999, 1963-1999
6. Blue books of the British colonies (various issues)

Some of the data are also taken from papers:

1. Péter Földvári and Bas van Leeuwen, 'Educational inequality in Europe, 1870-2000 ,' 20 August 2010.
2. Leeuwen, Bas van, Jieli van Leeuwen-Li, and Péter Földvári, 'Regional human capital in Republican and New China: Its spread, quality and effects on economic growth,' 26 July 2011.
3. Leeuwen, Bas van, Jieli van Leeuwen-Li, and Péter Földvári, 'Was education a driver of economic development in Africa? Inequality and income in the twentieth century,' 23 April 2012.
4. Didenko, Dmitry, Peter Foldvari, and Bas van Leeuwen, ‘A dataset on human capital in the former Soviet Union area: Sources, methods, and first results,’ CGEH Working Paper No. 35, Aug. 2012.

17. Text

Obviously, educational inequality is related to education and the same data are used there. For the method of calculating years of education, the reader is thus referred to the file on “average years of education”. Here we will only give a brief description on how the educational Gini is calculated.

We use the method as suggested by Thomas, Wang, and Fan (2000), Checchi (2004) and Castelló and Doménech (2000, 4). In order to convert the educational information in educational Ginis they start with



Where is average years of schooling in the population aged 15 years and over, *i* and *j* are different levels of education,  and  are the attainment per level of education, and  and  are the cumulative average years of schooling at each educational level. This equation can be rewritten as follows:



Where stands for the average years of schooling per level of education (0= no education, 1= primary education, 2 = secondary education, and 3 is higher education) divided by the percentage population with at least that level of education attained. , , , and  are the percentages of the population with no-, primary-, secondary-, and higher education respectively.

This equation gives the possibility to calculate the educational Gini for every year and country.

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References:

Castello, A. and Doménech, R. (2002). Human capital inequality and economic growth: some new evidence. *The Economic Journal* **112**, pp. 187-200.

Checci, D. (2001). Education Inequality and Income Inequality. *STICERD Distributional Analysis Research Programme Discussion Paper* No. 52

Thomas, V., Wang Y. and Fan X. (2000). Measuring Education Inequality: Gini Coefficients of Education. *Mimeo*. The World Bank, http://econ.worldbank.org/files/1341\_wps2525.pdf.