**A Multiple Variable Regression Model for School Life Expectancy in 2017 in the world using the World Bank Indicators**

By

**Jay and Fabrice**

Flatiron School, Data Science

Cohort: SideBayes – Project 2

August 2019

Abstract

1. Introduction
2. Literature review

School life expectancy (SLE) is the total number of years of schooling (primary to tertiary) that a child can expect to receive, assuming that the probability of his or her being enrolled in school at any particular future age is equal to the current enrollment ratio at that age. Caution must be maintained when utilizing this indicator in international comparisons. For example, a year or grade completed in one country is not necessarily the same in terms of educational content or quality as a year or grade completed in another country. SLE represents the expected number of years of schooling that will be completed, including years spent repeating one or more grades.

Data links: [https://databank.worldbank.org/source/education-statistics-%5e-all-indicators#](https://databank.worldbank.org/source/education-statistics-%5e-all-indicators)

1. The hypothesis and empirical approach

Hypothesis #1: The School life Expectancy is different across the country in the world

Hypothesis #2: The more a country spend in education the more will be its school life expectancy

For simplification and to avoid confusion while running the model, we change the columns name as below. In pandas we …

'Row Labels',🡪 'country'

'Adult illiterate population, 15+ years, both sexes (number)'🡪'adult\_illiterate'

'Duration of compulsory education (years)',🡪 'dur\_comp\_edu'

'Early school leavers from primary education, both sexes (number)',🡪 'esl\_primedu'

'Enrolment in early childhood education, both sexes (number)',🡪 'enrol\_early\_edu'

'Expenditure on education as % of total government expenditure (%)',🡪 'exp\_edu\_perc\_govexp'

'GDP per capita, PPP (current international $)',🡪 'gdp\_capita'

'Government expenditure on education as % of GDP (%)',🡪 'gov\_exp\_edu\_gdp'

'Initial household funding of education as a percentage of GDP', 🡪 'init\_hh\_fund'

'Labor force, total', 🡪 'labor\_force'

'Mortality rate, under-5 (per 1,000)',🡪 mortality\_rate

'Population, total',🡪 'pop'

'School life expectancy, primary and lower secondary (excluding repetition), both sexes (years)', 🡪 'SLE'

'Unemployment, total (% of total labor force)' 🡪 'unemploy'

Correlation -> remove

Model 1:

adult\_illiterate+dur\_comp\_edu+esl\_primedu+enrol\_early\_edu+exp\_edu\_perc\_govexp+gdp\_capita+gov\_exp\_edu\_gdp+init\_hh\_fund+labor\_force+mortality\_rate+pop+unempl

1. Estimation results
2. Conclusion

REFERENCES:

<http://www.toknowpress.net/ISBN/978-961-6914-09-3/papers/ML14-753.pdf>