Determinants of Youth Employment

Sub-Saharan Africa

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Background

- Youth employment is a major concern in developing countries
- Young people are up to 4x more likely than adults to be unemployed
- In developing countries, 85% of jobs taken by youth belong to informal markets
- A quarter of the young people cannot find a salary above extreme poverty line, $1.25 per day
- But youth are dissatisfied with their employment situation (rural & agricultural) and aspire to more
- Main reason for wanting to change: low pay, temporary nature of employment & poor working conditions

Problem statement

- Policy interventions from supply and demand side can be instrumented

- The International Labor Organization (ILO) designed the School-to-Work Transition Survey (SWTS):
  - Provide relevant labor market information on young people aged 15 to 29 years
  - Characteristics of youth
  - Characteristics of their jobs
  - Youth aspirations

The data

- 2014 surveys for 9 Sub-Saharan Africa countries: Benin, Liberia, Togo, Congo, Malawi, Zambia, Madagascar, Tanzania and Uganda
- Data wrangling:
  - Each database is labeled differently
  - +400 questions per survey
  - Select variables of interest
  - Merge databases
- Started with 3 countries: Benin, Liberia, Togo. N size: 9,400

Africa plot

3. The model

The objective of the project is to find a model that predicts the probability of young people to find a job, base on certain characteristics, in Sub-Saharan Africa countries.

$$Y = \beta_0 + \beta_n X_n + \epsilon$$

Where:

- Y is the probability of a youth to being employed
- X_n is a matrix of predictors based on the information from the survey

Logit regression

	Estimate	Std. Error	z value	Pr(>|z|)
(Intercept)	-1.8772640	0.5912589	-3.1750287	0.0014982
sex	0.1971974	0.1410717	1.3978518	0.1621576
age	0.0588442	0.0142165	4.1391382	0.0000349
married	-0.1215067	0.0748500	-1.6233345	0.1045179
work_while_study	-0.1360918	0.0926926	-1.4682058	0.1420483
intership	0.0027848	0.2016234	0.0138117	0.9889802
child	0.4744771	0.0786450	6.0331468	0.0000000

Next steps

- Complete the data wrangling for the rest of the countries
- Machine learning techniques to find the best predictable model:
  - Logit with training and test data
  - K-Nearest Neighbors
  - Classification and Regression Trees (CART)
  - Random Forest