

Assessing Present and Future Global Poverty: Prospects and Challenges for Achieving SDG1

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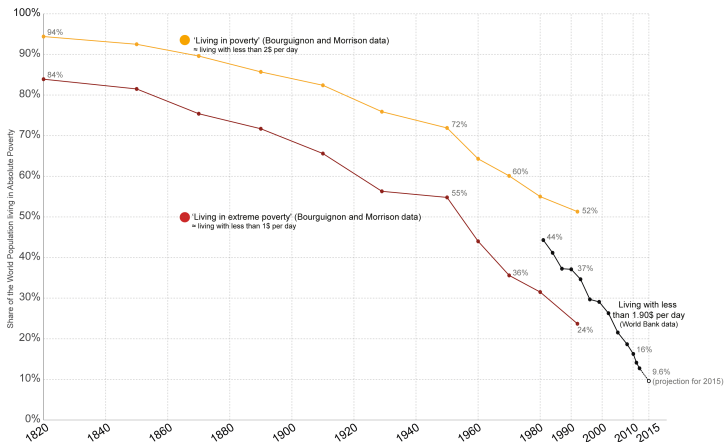
Inter-agency Expert Group Meeting on Implementation of the Third United Nations Decade for the Eradication of Poverty (2018-2027)
Food and Agriculture Organization (FAO) Headquarters - Rome

ROADMAP

- ▶ Modelling and projecting poverty rates worldwide
- ▶ The future of poverty: Will SDG1 be fulfilled?
- ▶ Thinking ahead: New methods to assess poverty
- ▶ Development policy and the future of poverty

THE DYNAMICS OF EXTREME POVERTY

- ▶ Need for monitoring poverty dynamics worldwide to assess the fulfilment of SDG1 and anticipate challenges to poverty reduction
- ▶ Modelling income per capita and its distribution



Data sources: 1820-1992 Bourguignon and Morrison (2002) - Inequality among World Citizens, In The American Economic Review; 1981-2015 World Bank (IPovcalNet)

The interactive data visualisation is available at OurWorldinData.org. There you find the raw data and more visualisations on this topic.

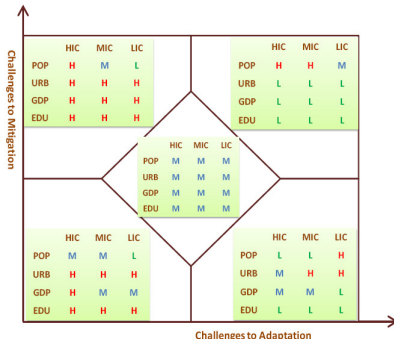
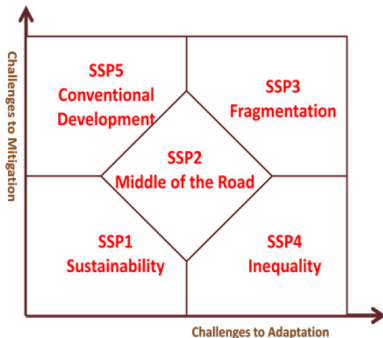
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HUMAN CAPITAL AND INCOME PROJECTIONS

- ▶ Assume an aggregate projection function where total income growth depends on the accumulation of physical and human capital (differentiated by age and educational attainment)
- ▶ In addition, assume that total factor productivity depends on the stock of human capital, the distance to the technology frontier and its interaction
- ▶ We estimate the parameters of the model using a global panel dataset which spans information for 120 countries for the period 1970-2010 at 5 year intervals
- ▶ Combine short and medium-term IMF forecasts with long-term forecasts computed for the IPCC's Shared Socioeconomic Pathways

SHARED SOCIOECONOMIC PATHWAYS

- Thinking about the future of climate change using projections (Kriegler et al., 2012; O'Neill et al., 2014)



POPULATION PROJECTIONS IN THE SSPs

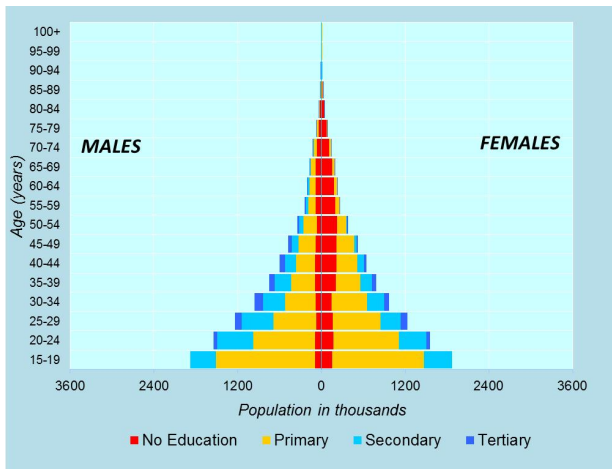


FIGURE: Kenya in 2000: Population by Age, Sex and Educational Attainment

POPULATION PROJECTIONS IN THE SSPs

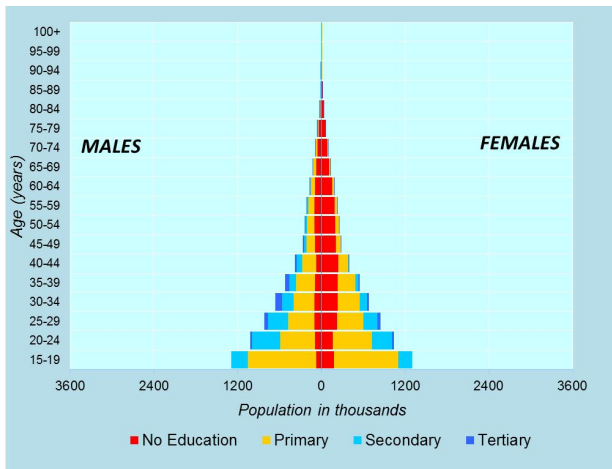


FIGURE: Kenya in 1990: Population by Age, Sex and Education

POPULATION PROJECTIONS IN THE SSPs

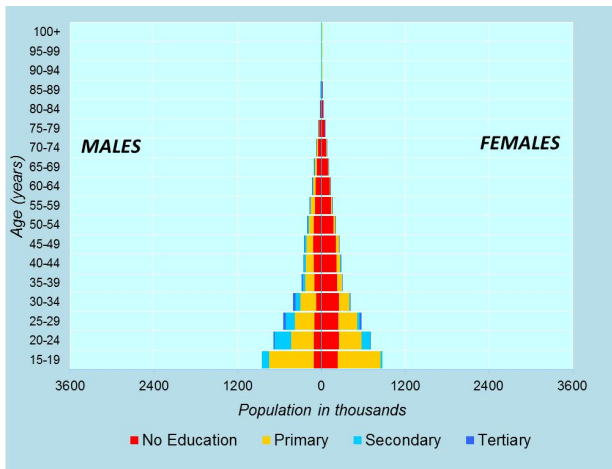


FIGURE: Kenya in 1980: Population by Age, Sex and Education

POPULATION PROJECTIONS IN THE SSPs

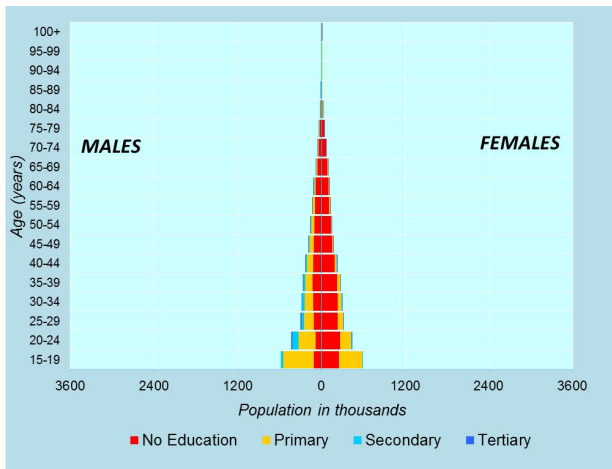
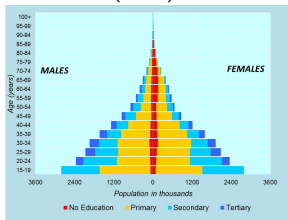


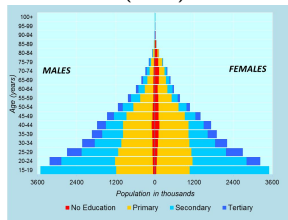
FIGURE: Kenya in 1970: Population by Age, Sex and Education

POPULATION PROJECTIONS IN THE SSPs

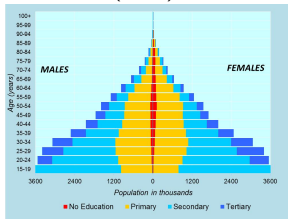
(2020)



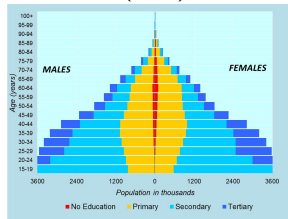
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(2040)



(2050)



SHARED SOCIOECONOMIC PATHWAYS

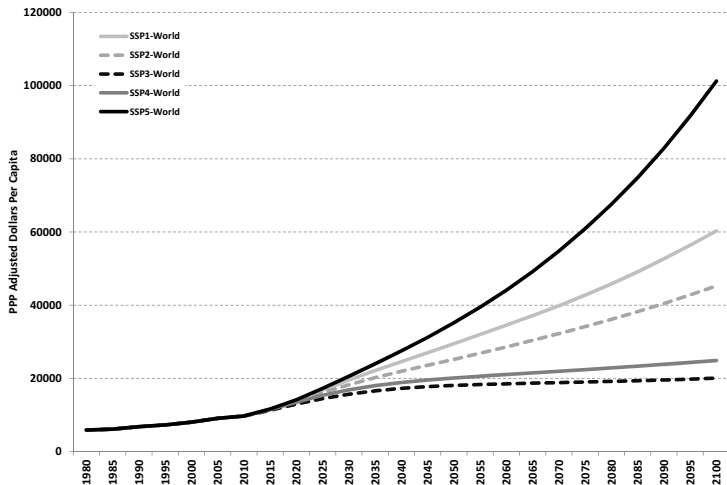
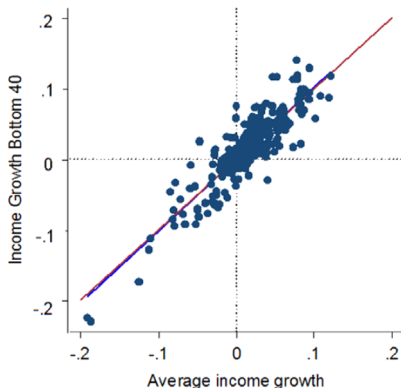


FIGURE: Projections of GDP per capita, world

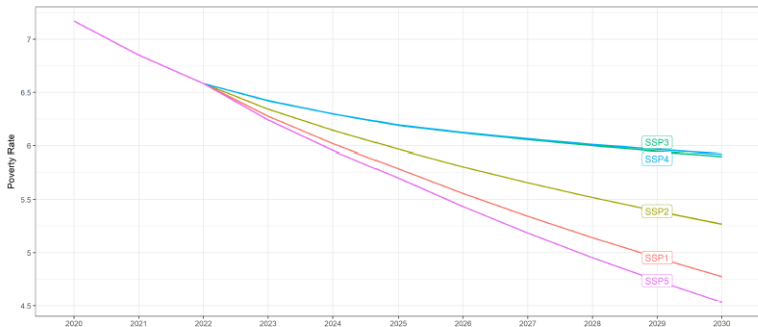
AVERAGE INCOMES AND THE POOR

- ▶ Reducing poverty:
 - ▶ increasing mean income for a given level of inequality
 - ▶ reducing inequality for a given level of income
- ▶ Economic growth (of mean incomes) is good for the poor:



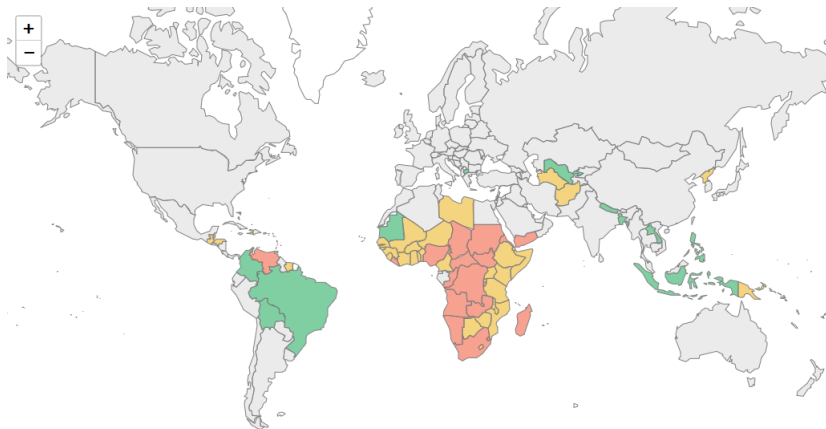
THE FUTURE(S) OF EXTREME POVERTY

- Shift distribution of income per capita for all countries of the world making use of GDP per capita projections to obtain poverty nowcasts and projections (Crespo Cuaresma, 2017; Crespo Cuaresma et al., 2018), documented at the [World Poverty Clock](#)



THE FUTURE(S) OF EXTREME POVERTY

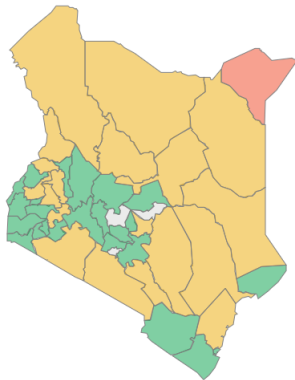
- ▶ SDG1 fulfilment prospects: 2020-230
- ▶ The world in 2020:



● Poverty is rising ● Off-track for SDG target ● On-track for SDG target ● Poverty below 3% ○ No data

THE FUTURE(S) OF EXTREME POVERTY

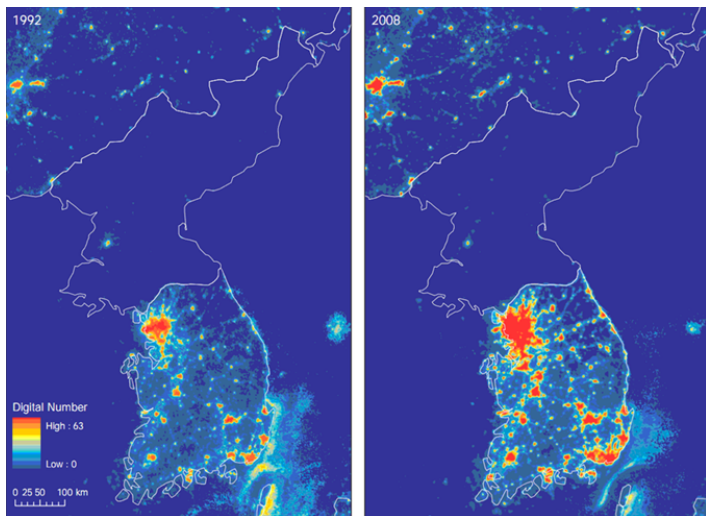
- ▶ SDG1 fulfilment prospects: 2020-230
- ▶ Going subnational, Kenya:



● Poverty is rising ● Off-track for SDG target ● On-track for SDG target ● Poverty below 3% ○ No data

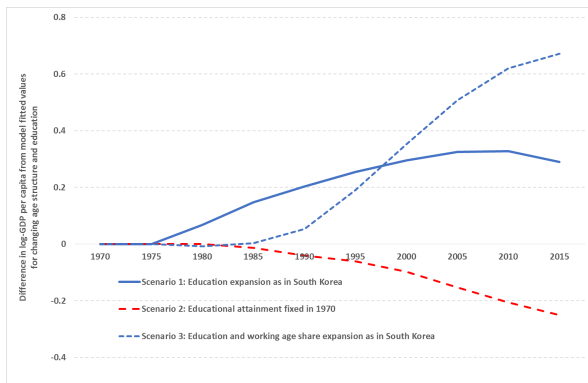
WHEN DATA ARE NOT AVAILABLE

- Night light emissions as proxy for income (Henderson et al., 2012)



DESIGNING DEVELOPMENT POLICY

- ▶ Natural link to the evaluation of education and health policy
- ▶ The demographic dividend as an education dividend (Lutz et al., 2019): the example of Nigeria



LITERATURE

- ▶ On night lights and income:
 - ▶ Henderson, J. V., Storeygard, A., and Weil, D. N. (2012). Measuring economic growth from outer space. *American Economic Review*, 102(2), 994-1028.
- ▶ On income and poverty projections:
 - ▶ Crespo Cuaresma, J. (2017). Income projections for climate change research: A framework based on human capital dynamics. *Global Environmental Change*, 42, 226-236.
 - ▶ Crespo Cuaresma, J., Fengler, W., Kharas, H., Bekhtiar, K., Brottrager, M., and Hofer, M. (2018). Will the Sustainable Development Goals be fulfilled? Assessing present and future global poverty. *Palgrave Communications*, 4(1), 29.
 - ▶ Lutz, W., Crespo Cuaresma, J., Kebede, E., Prskawetz, A., Sanderson, W. C., Striessnig, E. (2019). Education rather than age structure brings demographic dividend. *Proceedings of the National Academy of Sciences*, 116(26), 12798-12803.

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- ▶ On poverty and economic growth:
 - ▶ Dollar, D., and Kraay, A. (2002). Growth is Good for the Poor. *Journal of Economic Growth*, 7(3), 195-225.
 - ▶ Dollar, D., Kleinberger, T. and Kraay, A. (2016). Growth Still Is Good for the Poor. *European Economic Review*, 81, 68-85.