

# **Poverty, Inequality and Growth: Household Level Evidence from *Cameroon and Kenya***

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**UNU-WIDER/UNIANDES CONFERENCE,  
BOGOTA, October 5, 2022**

# Presentation outline

- ✓ Background
- ✓ Research objectives
- ✓ Literature, concepts & methods
- ✓ Data
- ✓ Results
- ✓ Policy messages

# ***Background***

To achieve SDGs in Africa, reforms are needed:

- ❑ To reduce inequalities of ***opportunities***.  
(exogenous sources of wellbeing).
- ❑ To initiate and sustain:
  - (i). ***inclusive*** growth – *pro-poor* growth -- that benefits the poorest 40% in ABS & REL terms.
  - (ii). ***pro-growth*** *poverty reduction* (poverty reduction -- that enables the poor to increase their own incomes (via participation in growth)).
- ❑ (The two approaches are complementary).

# ***Background...***

- ❑ To reduce poverty and inequality, policy makers need to know:
  - (i). What can be done to increase hhld incomes.
  - (ii). *What happens to income inequality when redistributive policies are implemented.*
- ❑ We use econometric analysis to show the role of **human capital** formation in (i).
- ❑ We use counter-factual simulations to generate evidence on (ii).

## *Key study objectives*

- To examine effects of human capital (HC) on household well-being (*per adult equivalent household consumption expenditure*).
- To assess impacts of ***circumstances*** and **effort** (HC) on inequality in household well-being, as proxied by income.

## ***Related literature***

- ❑ *Inequality of outcomes* (Heshmati, 2004);
- ❑ *Regression-based decompositions* (Oaxaca, 1973; Blinder, 1973; Juhn *et al.*, 1993; Fields and Yoo, 2000; Morduch and Sicular, 2002);
- ❑ *Exact decomposition* (Shapley, 1953).
- ❑ *inequality of opportunities* (Roemer 1998; Bourguignon *et al.*)
- ❑ *Poverty and inclusive growth:*
  - Pro-poor growth (Kakwani *et al.*)
  - On *shared prosperity* (World Bank, 2013, 2016).

# Concepts and methods\*\*

## □ Determinants of Wellbeing (*household income*)

- ✓ Effort: Human capital (*health & education*); *employment*.
- ✓ Circumstances: *Land, infrastructure, location, gender, family background, ethnicity, age, climate, institutions*).

□(1) Wellbeing =  $W$  (Circumstances; Effort, error).

--(Model needs to be corrected for **endogeneity**)

□ *Effort* =  $E\{\text{Circumstances; instruments; error term}\}$

□(2)  $W = W$  (*Circumstances; effort; predicted error term; efforts times predicted error term*).

✓ We use the control function approach for estimation (Wooldridge, 2015)

## ***Data***

- ✓ Cameroonian household survey data for **2007 and 2014**.
- ✓ Kenyan household data for **2005/6 and 2015/16**.
- ✓ Both data sets were collected using similar methods (World Bank LSMS; see esp. Deaton, 1989).

**MAIN RESULT: Human capital formation & circumstances** both affect the LEVEL of household wellbeing and its ***distribution*** but in complex ways. (Effects can vary by form & quality of HC; and by region & country).

\*Same applies to effects of circumstances.

**Table 1: CAMEROON: Household Wellbeing (Log Household Income per Adult Equiv), (2007-2014)**

<b>Years of Schooling</b>	<b>0.0335***</b>
Years of Schooling <i>times</i> Year-dummy	<b>0.0212***</b>
<b>Predicted Residual for years of schooling</b>	<b>-0.0222***</b>
Years of schooling <i>times</i> its residual	<b>0.0026***</b>
Residual of years of schooling <i>times</i> Year-dummy	<b>-0.0145***</b>
Fisher Stat.[24, 20957]	604.37
Prob > F	0.0000
R-squared R-squared	0.4090

**CONTROLS**

**Coefficients of *circumstance-based variables*:** age\*\*\*(-ve); age-squared\*\*\*(+ve); female\*\*\*(+ve); rural\*\*\*(-ve)

\*\*\* (p<0.01)

*Table 2: KENYA: Household wellbeing (Log Income per Adult Equivalent)*

<b>Sickness (1=yes and 0=otherwise)</b>	<b>-4.3665***</b>
<b>Has ever attended schooled (1=Yes)</b>	<b>0.1468***</b>
<b>Predicted residual for sickness</b>	<b>4.2843***</b>
Sickness <i>times</i> predicted residual	0.1686***
Fisher [15, 92735]	527.54
R-squared	0.1496
<b>CONTROLS</b>	
<i>Circumstance-based variables:</i>	
age***(-ve); age-squared***(+ve); female (+ve); rural***(-ve); experienced shocks***(-ve); lrural***(-ve)	
*** (p<0.01)	

Table 3: Inequality in the actual distributions of wellbeing (*Income per AE*), **Cameroon** and **Kenya**

Year	Overall Gini	Circumstances Gini	Effort Gini
<b><u>Cameroon</u></b>			
<b>2007</b>	<b>0.3902</b> (0.006)	0.1625 (0.003)	0.3312 (0.004)
<b>2014</b>	<b>0.4190</b> (0.006)	0.1549 (0.002)	0.3775 (0.004)
<b>Pooled (2007-14)</b>	0.4113* <i>Rose</i> (0.004)	0.1590* <i>Fell</i> (0.001)	0.3640* <i>Rose</i> (0.003)
<b><u>Kenya</u></b>			
<b>2005</b>	<b>0.3572</b> (0.006)	0.4103 (0.008)	0.3695 (0.005)
<b>2015</b>	<b>0.3197</b> (0.009)	0.3476 (0.008)	0.3568 (0.005)
<b>Pooled (2005-15)</b>	0.3198* <i>Fell</i> (0.009)	0.3481* <i>Fell</i> (0.008)	0.3569* <i>Fell</i> (0.005)

*Npte: Standard errors in parentheses*

Table 4: **CAMEROON**: Comparing actual and counterfactual inequalities by location, **Cameroon** (2007-2014)

	<b>Factual Gini</b>	<b>Counterfactual Gi</b>	<b>Diff in Ginis</b>
Impacts of <b>Equalizing Circumstances</b> (ASSETS) on <i>inequality</i>			
Overall	0.411***	0.364*** <b>FELL</b>	-0.047***
Urban	0.351***	0.347*** <b>FELL</b>	-0.003
Semi-Urban	0.335***	0.332*** <b>FELL</b>	-0.002
Rural	0.313***	0.296*** <b>FELL</b>	<b>-0.017***</b>
Impact of <b>equalizing education</b> on <i>inequality</i>			
Overall	0.411***	0.355*** FELL	-0.056***
Urban	0.351***	0.314*** FELL	-0.036***
Semi-Urban	0.335***	0.305*** FELL	-0.029***
Rural	0.313***	0.297*** FELL	-0.016***
*** p<0.01, ** p<0.05, * p<0.1			

Table 5: **KENYA**: Comparing actual and counterfactual inequalities (Ginis) by location, Kenya (2005-2015)

	<b>Factual</b>	<b>Counterfactual</b>	<b>Diff.</b>
Impacts of <i>Equalizing Circumstances</i> (SHOCKS) on Gini			
Overall	0.319***	0.356*** <b>Rose</b>	0.037***
Urban	0.389***	0.449*** <b>R</b>	0.059***
Semi-Urban	0.313***	0.363*** <b>R</b>	0.050***
Rural	0.291***	0.345*** <b>R</b>	0.053***
Impact on Gini of <i>Equalizing Sickness</i> Probabilities			
Overall	0.319***	0.815*** <b>R</b>	0.495***
Urban	0.389***	0.811*** <b>R</b>	0.421***
Semi-Urban	0.313***	0.821*** <b>R</b>	0.508***
Rural	0.291***	0.809*** <b>R</b>	0.517***
*** p<0.01, ** p<0.05, * p<0.1			

# Policy Messages

- ❖ Equalizing *effort*-related variables, e.g., education and health is *inequality-reducing*.
- ❖ Equalizing negative shocks, e.g., livelihood risks due to pandemics or crop failures is inequality increasing.
- ❖ Narrowing inequality in human *capital endowments* is associated with gains in growth and in *poverty reduction*.
  - \*There are *circumstances* (weather shocks & pandemics) we do not want to equalize and *amenities* we shouldn't withdraw from populations already benefiting from them..
- ❖ Effects of policies depend on how they are done.

**THANK YOU;**