

Gender inequality in employment in Mozambique

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Poverty and Inequality in Mozambique: What is at stake?

Pobreza e Desigualdade em Moçambique: O que está em causa?

Maputo, November 27, 2017

Inclusive growth in Mozambique – scaling-up research and capacity

Labor markets in low-income countries

- **Large agricultural sector, small family businesses** (e.g. Rosenzweig, 1988).
- **High Female LFP** but **U-shaped** relationship with structural change (e.g. Goldin, 1995; Mammen and Paxson, 2000).
 - 1) \uparrow blue-collar jobs \rightarrow \downarrow FLFP.
 - Social norms + high fixed cost of working out of home (low pay + high fertility rates).
 - 2) \uparrow white-collar jobs \rightarrow \uparrow FLFP.
 - \uparrow women's education, \downarrow fertility,
- Relevant historical **initial conditions** (Gaddis and Klassen, 2014).
 - Path followed by developed economies in the past, but **little empirical support** in current developing countries for declining portion of the U

SSA and Mozambique

- **Sex (F/M) employment ratio** in SSA (Anyanwu and Augustine, 2013):
 - + : democracy, gross domestic investment, **primary education, urbanization**
 - - : **real GDP pc**, foreign direct investment, sex ratio, oil-exporter.
- **Mozambique:**
 - **Male-dominated culture**: North being more traditional (Tvedten, 2011): low economic participation and literacy; early marriage, ...
 - Variety of **influences**: Muslims, Portuguese colonization, post-independence war, socialist policies, and FMI/BM structural policies (Tvedten, 2011).
 - **High FLFP** (WB, 2012) in the **subsistence agricultural sector**.
 - Economic growth brought an **emerging non-subsistence sector**.

Aim

- To analyze **post-war trends in employment rates** in Mozambique, especially **out of the subsistence sector**, to assess gender inequality of the growth pattern (SDGs):



- Identifying the distinct **roles** of
 - **worker characteristics**, such as human capital, marital status, age, location, ethnicity, or migration
 - **conditional employment probabilities** of men and women of certain characteristics (like married, highly educated, etc.).

Data

- **1997 and 2007 censuses** (INE), samples from IPUMS-I (Minnesota Population Center): 828,113 and 1,055,655 individual obs.
- **2008/09 and 2014/15 households budget surveys** (INE): *Inquéritos ao Orçamento Familiar* (IOF): 27,123 and 31,291 (pool of 3 quarters)
- **Total employment:** 15+ in private households, working during the ref. week for pay for an employer, self-employed persons, unpaid family workers engaged in the production of economic goods, and persons who have a job but were temporarily absent for some reason.
- **Employment in the non-subsistence sector:** Excluding the primary sector and family workers.

Methodology

$$P_i^g = F(X_i^g \beta^g) = \frac{\exp(X_i^g \beta^g)}{1 + \exp(X_i^g \beta^g)} \quad E^g = \overline{P^g} = \overline{F(X_i^g \hat{\beta}^g)} = \frac{1}{N^g} \sum_{i=1}^{N^g} F(X_i^g \hat{\beta}^g)$$

Aggregate decomposition

-/+ counterfactual

$$E^m - E^f = \underbrace{\left[\overline{F(X_i^m \hat{\beta}^m)} - \overline{F(X_i^m \hat{\beta}^f)} \right]}_{\text{Coefficients effect (unexplained)}} + \underbrace{\left[\overline{F(X_i^m \hat{\beta}^f)} - \overline{F(X_i^f \hat{\beta}^f)} \right]}_{\text{Characteristics effect (explained)}}$$

Coefficients effect (unexplained)

Characteristics effect (explained)

Detailed decomposition (Even and Macpherson, 1990, 1993; Yun, 2004)

$$W_k^{\Delta X} = \frac{(\bar{x}_k^m - \bar{x}_k^f) \hat{\beta}_k^f}{(\bar{X}^m - \bar{X}^f) \hat{\beta}^f} \left[\overline{F(X_i^m \hat{\beta}^f)} - \overline{F(X_i^f \hat{\beta}^f)} \right]$$

$$W_k^{\Delta \beta} = \frac{\bar{x}_k^m (\hat{\beta}_k^m - \hat{\beta}_k^f)}{\bar{X}^m (\hat{\beta}^m - \hat{\beta}^f)} \left[\overline{F(X_i^m \hat{\beta}^m)} - \overline{F(X_i^m \hat{\beta}^f)} \right]$$

Table 1. Employment in Mozambique

	Census				IOF			
	1997		2007		2008/09		2014/15	
Population 15+	F	M	F	M	F	M	F	M
Employed	67.5	74.4	65.8	73.7	86.3	86.5	80.5	83.1
Employed in non-subsistence sector	5.2	21.6	8.4	26.2	9.4	23.1	12.6	29.0
Employed population								
Self-employed	67.7	65.1	79.3	69.2	43.7	62.4	61.5	62.6
with employees	0.9	1.0	0.6	1.5	0.4	1.3	1.3	3.5
without employees	29.6	27.5	43.0	37.5	43.3	61.1	60.2	59.1
Public sector	0.7	3.3	1.3	3.7	1.8	5.8	2.5	5.9
Family worker	13.0	6.6	7.3	4.4	51.1	17.1	31.1	14.3
Permanent worker	-	-	-	-	88.8	86.3	86.9	83.9
Hours worked daily	7.0	8.9	9.9	10.6	6.7	7.3	4.8	5.8
By occupation								
Managers	0.2	0.6	0.3	1.0	0.2	0.7	0.2	0.5
Professionals	0.2	0.8	0.4	1.0	0.4	0.9	1.2	2.8
Technicians	0.5	1.8	1.7	3.7	1.4	3.6	1.1	1.9
Clerks	0.6	1.6	0.4	0.8	0.4	0.7	0.5	1.0
Service and sales	1.8	3.9	7.6	12.1	6.6	8.4	9.3	11.9
Agricultural	91.2	68.5	86.8	63.4	88.3	72.1	83.2	63.0
Crafts	0.8	10.0	0.7	11.4	0.8	7.2	1.0	9.7
Operators, assemblers	0.2	2.4	0.2	2.7	0.1	1.8	0.6	4.8
Elementary	3.7	9.4	1.8	3.7	71.9	4.2	2.9	4.3

Table 2. Education by gender, working-age population

	Census				IOF			
	1997		2007		2008/09		2014/15	
Education	F	M	F	M	F	M	F	M
None	70.2	43.0	54.1	27.8	38.6	16.3	41.7	19.2
Some primary	16.1	27.0	21.7	28.3	33.0	32.0	23.3	23.5
Lower primary	8.8	17.5	11.8	20.3	13.4	22.2	12.1	18.8
Upper primary	3.5	8.1	8.1	14.4	10.4	19.7	13.5	21.7
Lower secondary	0.7	2.2	2.0	4.3	2.5	4.7	4.6	7.4
Upper Secondary	0.3	0.8	0.6	1.5	0.8	2.1	2.6	4.4
Some university	0.1	0.6	0.5	1.3	0.4	1.1	0.5	1.3
Unknown	0.1	0.4	0.8	1.6	0.7	1.5	1.6	3.0
Literacy	23.8	52.9	35.0	64.9	36.1	66.8	40.7	68.6
Speaks Portuguese	28.3	56.7	39.9	67.4	-	-	-	-
Attending school	4.3	9.1	12.8	19.3	13.7	19.3	10.1	15.6
15-24	10.4	22.8	27.9	45.9	31.7	50.6	26.5	41.0

	Census 2007		IOF 2014/15	
	F	M	F	M
All	8.4	26.2	12.6	29.0
Rural	2.9	14.2	3.5	15.3
Urban	20.4	49.3	30.4	53.5
Maputo city	36.4	60.9	47.1	64.4
No schooling	3.5	11.7	4.7	12.2
Some primary	8.0	20.6	8.0	17.4
Lower primary	14.1	31.1	17.3	25.7
Upper primary	18.2	38.8	21.8	36.0
Lower secondary	30.4	52.2	29.5	47.0
Upper Secondary	55.4	74.0	45.9	69.0
Technical	37.8	54.7	41.6	52.7
University	58.2	68.7	62.4	79.2
Literate	17.3	34.2	24.2	36.6
Student	7.6	12.0	12.8	17.0
Speaks Portuguese	16.8	34.2		
1 household member	7.5	31.8	10.6	39.5
2 household members	6.9	23.9	10.1	28.7
3+ household members	8.6	26.3	12.9	28.7
No children (<6)	9.3	25.8	13.9	29.3
1 child (<6)	9.6	28.7	15.2	32.4
2+ children (<6)	6.7	25.0	10.0	26.4
Single	10.3	17.5	13.6	20.6
Divorced	13.9	27.7	23.0	44.6
Widowed	8.3	18.9	12.7	30.4
Non-working partner	7.1	43.7	17.1	62.9
Working partner	7.1	22.3	10.2	26.3
Other	7.9	41.8	12.1	46.0

Employment rates (non-subsistence sector)

The gender gap in employment is larger in:

- urban areas,
- 25-34-year-old,
- married, with children,
- with primary/secondary education completed,
- speaking Portuguese,
- ethnic minorities (white, Indian, Muslim),
- foreign-born and migrants.

	2007		2014/15	
	F	M	F	M
Urban	1.413***	1.500***	1.790***	1.529***
Some primary	0.267***	0.233***	0.143*	0.219**
Lower primary	0.400***	0.519***	0.391***	0.434***
Upper primary	0.679***	0.858***	0.728***	0.872***
Lower secondary	1.283***	1.266***	1.058***	1.284***
Upper Secondary	1.784***	1.618***	1.221***	1.668***
Technical	1.519***	1.212***	1.564***	1.251***
University	2.436***	1.966***	2.359***	2.680***
Unknown education	0.630***	0.949***	0.699**	0.951***
Literate	0.634***	0.556***	0.614***	0.320***
Unknown education	0.315***	0.309***	-0.331	-0.025
Student	-1.204***	-1.722***	-0.896***	-1.281***
15-24 years	0.884***	0.481***	1.243***	0.584***
35-44 years	1.071***	0.333***	1.398***	0.433***
45-54 years	0.842***	0.131***	1.045***	0.349***
55+ years	-0.073*	-0.592***	0.227*	-0.497***
Disability	-0.395***	-0.423***	-0.347	-0.607***
1 household member	0.080*	0.508***	0.221	0.388***
3+ household members	-0.117***	-0.023	-0.052	-0.217**
1 child (<6 years)	-0.058***	-0.021	0.115**	0.113*
2+ children (<6 years)	-0.194***	-0.128***	-0.02	-0.009
Divorced	0.610***	0.433***	0.864***	0.838***
Widowed	0.248***	0.286***	0.519***	0.758***
Non-working partner	-0.102***	1.253***	0.323***	1.761***
Working partner	-0.213***	0.789***	0.017	0.927***
Other married	-0.274***	0.923***	-0.126	0.924***
Intercept	-3.476***	-2.447***	-3.788***	-1.999***
N	491,423	564,232	37,489	43,704
Pesudo-R2	27.9	26.5	29.9	32.6

Employment in the non subsistence sector, regressions by gender

Increasing with:

- urbanization,
- younger cohorts (esp. women),
- married with non-working partner (esp. men)
- divorced/widower (women)

Decomposition of the gender gap in non-subsistence employment

	IOF 2014/15		
Differential	16.34***		
	Explained	Unexplained	
All	1.96***	14.37***	
Geographic	0.10	-2.58***	
Education	3.73***	-1.01	Higher education of men
Student	-0.51***	-0.63***	
Age	-0.35***	-5.25***	
Disability	-0.02	-0.06	
Household composition	-0.03	-1.48	
Marital status	-0.96***	6.76***	Lower employment rates of married women
Intercept		18.61***	

Decomposition of the gender gap in non-subsistence employment rates

	Census				IOF			
	1997		2007		2008/09		2014/15	
Differential	16.37***		17.88***		13.78***		16.34***	
	Expl.	Unexpl.	Expl.	Unexpl.	Expl.	Unexpl.	Expl.	Unexpl.
All	2.19***	14.18***	2.49***	15.39***	1.95***	11.83***	1.96***	14.37***
Geographic	0.19***	2.35***	0.29***	0.60*	0.06	1.26	0.10	-2.58***
Education	2.53***	-0.35***	3.25***	-0.24	3.63***	-1.04	3.73***	-1.01
Student	-0.61***	-0.20***	-0.71***	-1.06***	-0.43***	-0.84***	-0.51***	-0.63***
Age	-0.01	-2.19***	0.03***	-3.94***	-0.06	-1.33	-0.35***	-5.25***
Disability	-0.01***	-0.02	-0.02***	-0.01	-0.01	0.02	-0.02	-0.06
Hh composition	0.04***	1.11***	0.03***	1.40***	0.00	1.10	-0.03	-1.48
Marital status	0.05*	6.22***	-0.37***	7.79***	-1.23***	2.49*	-0.96***	6.76***
Intercept		7.26***		10.85***		10.16***		18.61***

Decomposition of the gender gap in employment rates

	Census 2007	
Differential	17.88***	
	Explained	Unexplained
All	2.71***	15.17***
Geographic	0.22***	0.14
Education	1.60***	0.54**
Student	-0.63***	-1.02***
Language	1.84***	-1.57***
Age	0.03***	-4.21***
Disability	-0.02***	-0.01
Race	0.00***	0.02***
Religion	-0.03***	0.56***
Household composition	0.02***	1.62***
Marital status	-0.33***	8.09***
Immigration	0.03***	0.22***
Intercept		10.80***

Smaller proportion of women who speaks Portuguese

Decomposition of the gender gap in non-subsistence employment rates (Ch. Ef. evaluated with men's coefficients)

	2014/15	
Differential	16.34***	
	Explained	Unexplained
All	2.67***	13.66***
Geographic	-0.44*	-2.05***
Education	6.82***	-0.44
Student	-1.54***	-0.37***
Age	-0.37***	-4.92***
Disability	-0.08***	-0.04
Household composition	-0.15***	-1.31
Marital status	-1.57***	5.92***
Intercept		16.86***

Higher effect of education,
lower of conditional employment of married workers

Concluding remarks (1/2)

- **Men have benefited more** from the expansion of the non-subsistence sector
 - Higher **human capital** (attained education, literacy, and Portuguese).
 - Diff. **conditional employment probabilities of married** men/women.
- U hypothesis: women will outperform men in education, lower fertility rates, more white-collar jobs → decline in the gap
 - Long process and economic context/initial conditions matter.
 - SSA: **Large inequalities** among individuals, population groups and geographical areas; weak and urban-biased welfare state (Odusola et al., 2017).
 - Even in most developed economies women tend to lag behind men in the quantity and quality of jobs.

Concluding remarks (2/2)

- **Increasing women's participation in economic life** among those crucial policy packages that are both growth-friendly and that reduce inequality (OECD, 2015).
 - The others being:
 - employment promotion and good-quality jobs,
 - skills and education,
 - a tax-and-transfer system for efficient redistribution.
- There is plenty of room to enhance women's access to better jobs by improving their education and facilitating the employment of married women → more inclusive growth path in line with the SDGs.