

## Antenatal care services in Benin and Tanzania 2021/2022: an equity analysis study

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### SUPPLEMENTAL FILES

**Supplemental Table 1: Slope and relative indices of inequality by education and wealth: Benin and Tanzania**

Indicator	Benin		Tanzania	
	SII	RII	SII	RII
<b>Education</b>				
<b>Gestation age 1<sup>st</sup> ANC</b>	-.63(.12) ***	.827(.031) ***	-.69(.13) ***	.872(.023) ***
<b>Total ANC visits</b>	.84(.20) ***	1.272(.073) ***	.78(.13) ***	1.267(.052) ***
<b>Quality of ANC</b>				
Urinalysis	.56(.40)	1.521(.437) ***	.21(.05) ***	1.452(.137) ***
BP monitoring	.00(.01)	1.00(.013)	.12(.04) ***	1.209(.074) ***
Blood sample	.02(.02)	1.025(.025) *	.04(.02) *	1.048(.025) ***
IPTp doses	.29(.09) ***	1.136(.048) ***	.59(.17) ***	1.294(.101) ***
Received ITN	.08(.04) *	1.128(.080) ***	.07(.03) **	1.086(.036) ***
<b>Waiting time</b>	-13.68(7.46)	.859(.071) ***	-30.85(9.44) ***	.729(.070) ***
<b>Time away from home</b>	-19.14(7.06) **	.911(.031) ***	-48.61(10.51) ***	.823(.035) ***
<b>Birthweight</b>	21.92(67.93)	1.008(.0243)	-18.53(55.19)	.994(.017)
<b>Wealth</b>				
<b>Gestation age 1<sup>st</sup> ANC</b>	-.78(.12) ***	.789(.028) ***	-.57(.12) ***	.892(.021) ***
<b>Total ANC visits</b>	1.44(.18) ***	1.516(.080) ***	.67(.13) ***	1.225(.048) ***
<b>Quality of ANC</b>				
Urinalysis	-.01(.02)	.992(.016)	.21(.06) ***	1.453(.160) ***
BP monitoring	.01(.02)	1.01(.023)	.13(.05) **	1.228(.091) ***
Blood sample	.04(.02) *	1.048(.025) **	.02(.02)	1.02(.019) *
IPTp doses	.34(.08) ***	1.164(.039) ***	.53(.19) ***	1.258(.108) ***
Received ITN	-.04(.06)	.944(.083)	.02(.03)	1.028(.034) ***
<b>Waiting time</b>	6.85(7.00)	1.079(.083)	-27.49(8.00) ***	.754(.063) ***
<b>Time away from home</b>	.32(11.39)	1.002(.055)	-47.24(12.39) ***	.827(.042) ***
<b>Birthweight</b>	58.23(84.65)	1.021(.031) ***	94.29(54.39)	1.029(.017) **

\* $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$ . SII = Slope index of inequality, RII = Relative index of inequality

**Supplemental Table 2: Concentration indices by wealth and education – Benin and Tanzania.**

Standard errors in parenthesis.

Indicator	Benin				Tanzania			
	Wealth		Education		Wealth		Education	
	CI	Int.	CI	Int.	CI	Int.	CI	Int.
<b>Gestation age 1<sup>st</sup> ANC</b>	-.030(.005) ***	-2.2%	-.020(.005) ***	-1.5%	-.023(.005) ***	-1.7%	-.019(.005) ***	-1.4%
<b>Total ANC visits</b>	.069(.007) ***	5.2%	.036(.007) ***	2.7%	.032(.005) ***	2.4%	.028(.005) ***	2.1%
<b>Quality of ANC</b>								
Urinalysis	-.002(.003)	-.1%	.002(.003)	.1%	.049(.008) ***	3.6%	.038(.008) ***	2.9%
BP Check	.003(.002)	.2%	.000(.002)	.0%	.025(.007) ***	1.9%	.019(.007) ***	1.4%
Blood sample	.006(.004)	.5%	.003(.003)	.3%	.004(.003)	.3%	.005(.002) *	.4%
IPTp doses	.018(.037)	1.4%	-.048(.038)	-.0%	.026(.008) ***	1.9%	.026(.008) ***	1.9%
Received ITN	-.009(.007)	-.6%	.017(.007) **	1.3%	.006(.005)	.5%	.009(.005)	.0%
<b>Waiting time</b>	.013(.008)	.0%	-.023(.008)	-1.7%	-.043(.010) ***	-3.2%	-.038(.010) ***	-2.9%
<b>Time away from home</b>	.003(.005)	.2%	-.012(.005) ***	-.9%	-.035(.006) ***	-2.6%	-.023(.007) ***	-1.7%
<b>Birthweight</b>	.004(.004)	.3%	-.000(.004)	-.0%	.003(.003)	.3%	-.000(.003)	-.0%

\* $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$ . CI – Kakwani's concentration index. Int. – Interpretation (Kakwani index \* 75 to convert it into percentage)

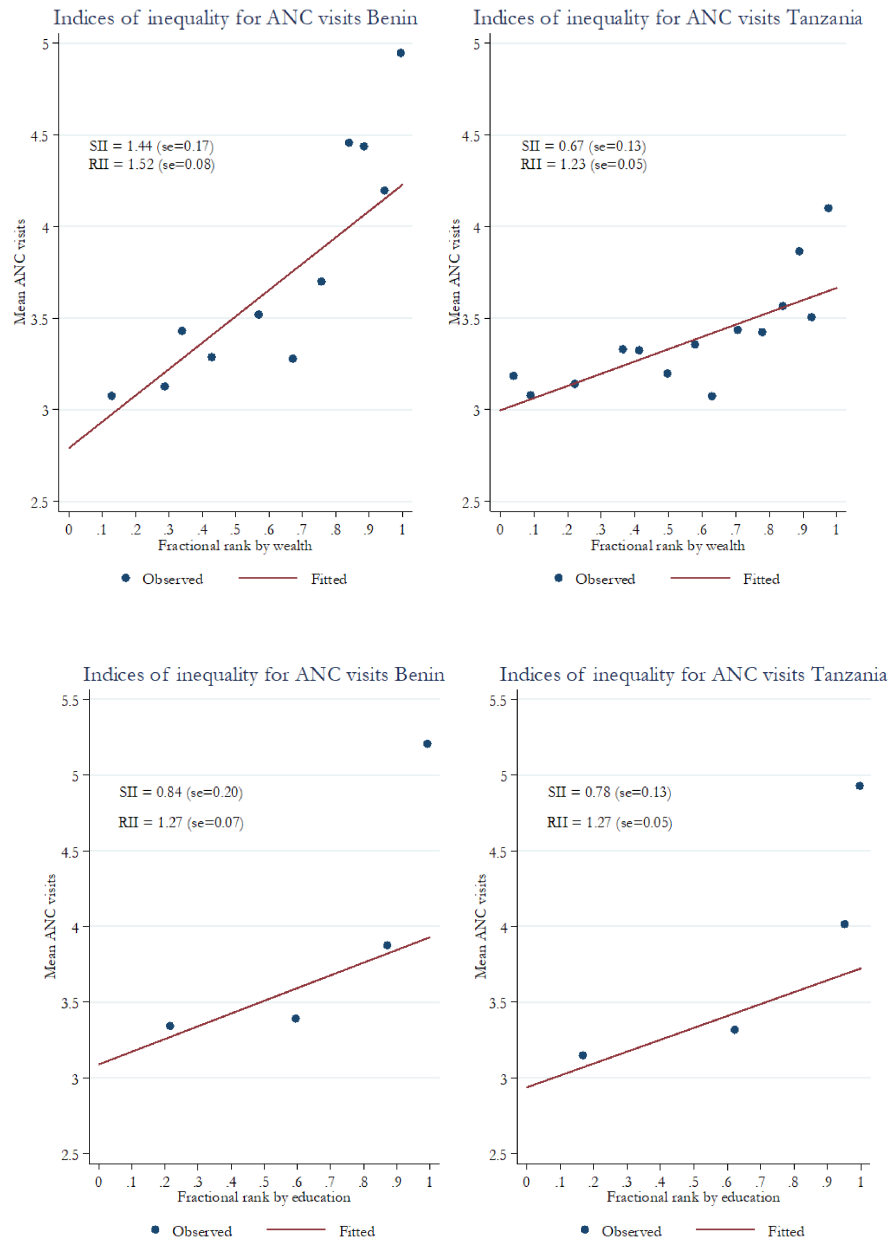
**Supplemental Table 3: Decomposed concentration index: Benin and Tanzania**

	Benin			Tanzania		
	Elasticity	Concentration index	Contribution	Elasticity	Concentration index	Contribution
Wealth	.167	.107	.276	.009	.107	.044
Married	.090	.001	.002	.052	.001	.003
Spousal support	.179	.020	.056	.097	.022	.085
Education	.059	.202	.185	.085	.209	.749
Age	1.743	-.020	-.453	.564	-.020	-.411
Age squared	-.894	-.043	.405	-.282	-.042	.358
Household members	.004	-.032	-.002	-.018	-.025	.023
ITN ownership	.012	.023	.004	.021	.022	.021
Distance	.039	-.026	-.014	.008	-.020	-.008
Total births	-.111	-.108	.164	-.049	-.089	.201
Under-5	-.149	-.030	.068	-.065	-.026	.082
Facility fixed effects			.013			.285

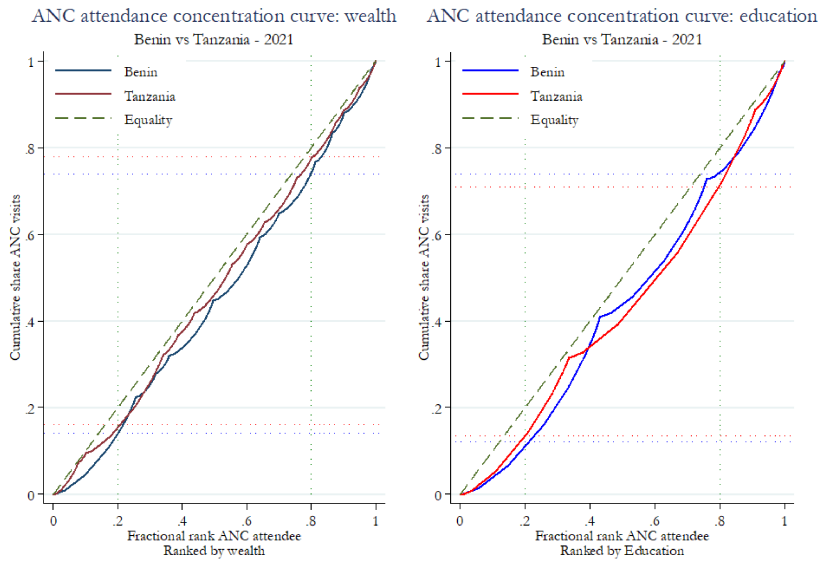
**Supplemental Table 4: Oaxaca decomposition by bivariate poverty status**

	Benin		Tanzania	
	Coefficient	95% CI	Coefficient	95% CI
<b>Differential</b>				
Prediction poor	3.281***	[3.188, 3.373]	3.262***	[3.191, 3.332]
Prediction nonpoor	4.102***	[3.927, 4.278]	3.646***	[3.522, 3.769]
Difference	-.822***	[-1.02, -.623]	-.384***	[-.526, -.242]
<b>Decomposition</b>				
Endowments	-.092***	[-.161, -.024]	-.131***	[-.193, -.068]
Coefficients	-.681***	[-.896, -.465]	-.181**	[-.341, .020]
Interactions	-.049	[-.167, .069]	-.072	[-.175, .030]

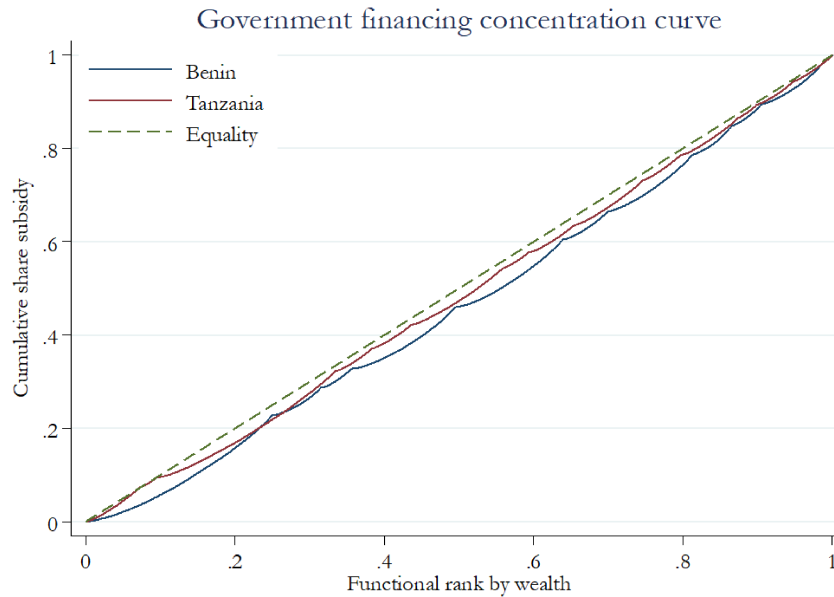
\*\*  $p < .01$ , \*\*\*  $p < .001$ .

**Figure S1: Slope and relative indices of inequality for total ANC visits: Benin and Tanzania**

These show an absolute difference (SII) and a proportional difference (RII) in inequality in total ANC contacts by wealth and education in both countries.

**Figure S2: Concentration curves for total ANC visits by education and wealth: Benin and Tanzania.**

The concentration index measures the degree and magnitude of the distribution of a health variable e.g., ANC contacts across different SES groups. In the example of Tanzania, the concentration index is interpreted as follows: a reallocation of 2.4% of ANC visits from the upper half to the lower half of the income distribution would lead to the achievement of perfect equality. Note that the perfect equality is not the same as attainment of the minimal recommended number of visits.<sup>19</sup>

**Figure S3. Government financing concentration curve**

The figure shows that the benefit incidence of government financing is pro-rich across the entire wealth distribution in both countries. While the Tanzania curve lies above the Benin curve (more equitable), the curves intersect at a few points, indicating that this difference is not statistically significant.