

Africa's Poverty Reduction in the Global Context: Implications of Growth and Inequality

By

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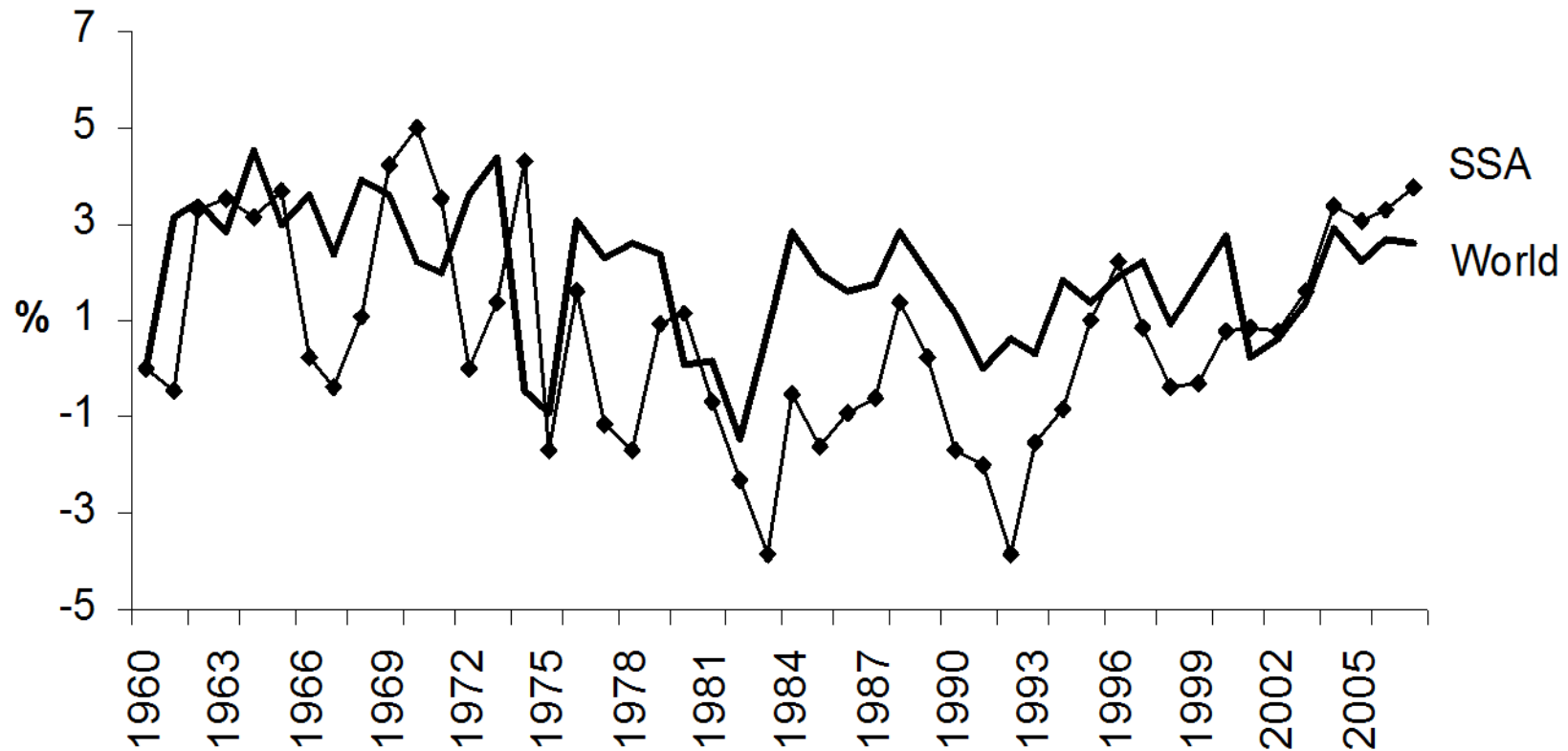
Introduction

- **On average**, growth most powerful engine for development, such as poverty reduction [Ask Dollar and Kraay (2002, *JEG*); also see Fosu (2004, *AJES*; 2002, *ODS*) for evidence on human development (HD)], BUT...
- There is a large variance in its importance relative to income distribution (and the level of income) [for African evidence see, e.g., Fosu (2009, *JDS*)]
- Importance of income and inequality in recent poverty reduction record, by country = ? [Background paper: **Fosu (2010): ‘Growth, Inequality and Poverty Reduction in Developing Countries: Recent Global Evidence’.**]

The Growth Record: SSA vs. the World

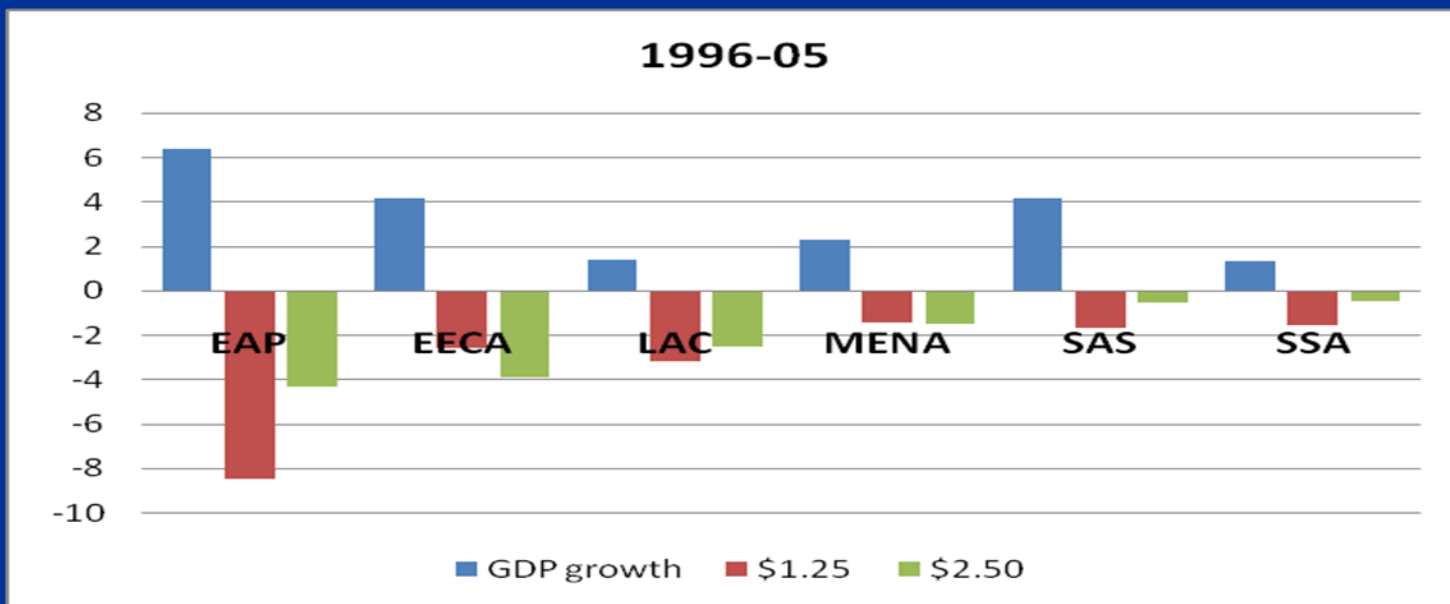
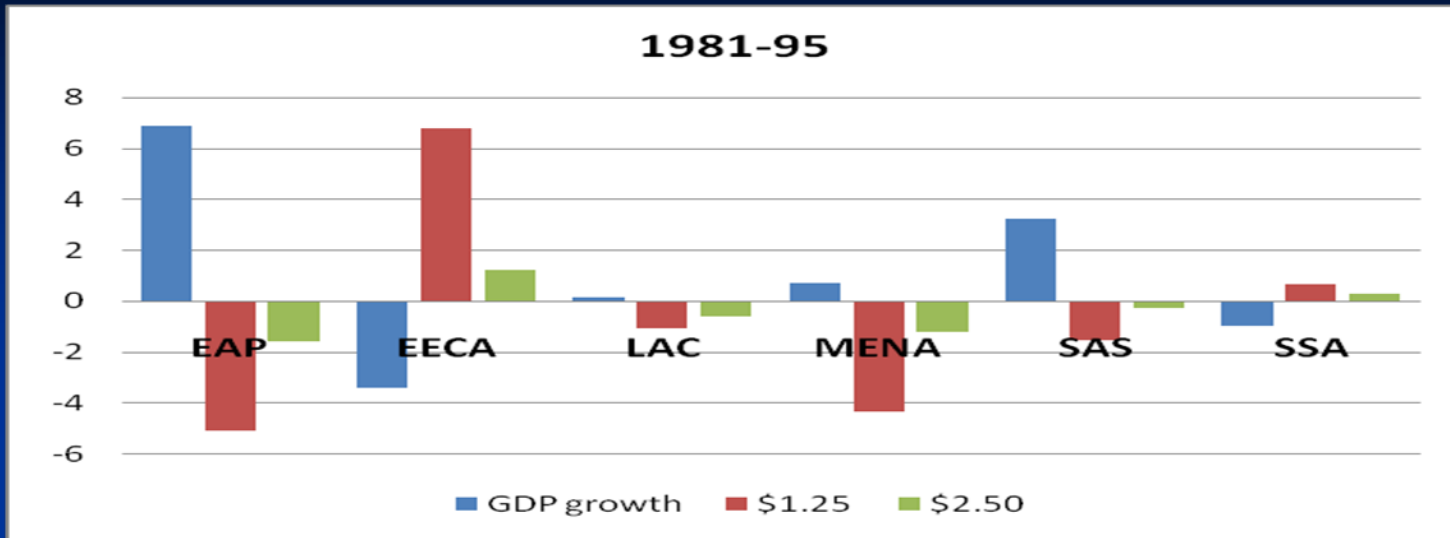
(Data source: World Bank, *WDI Online 2009*)

GDP per capita growth, 1961-2007



P. C. GDP growth versus poverty reduction by region

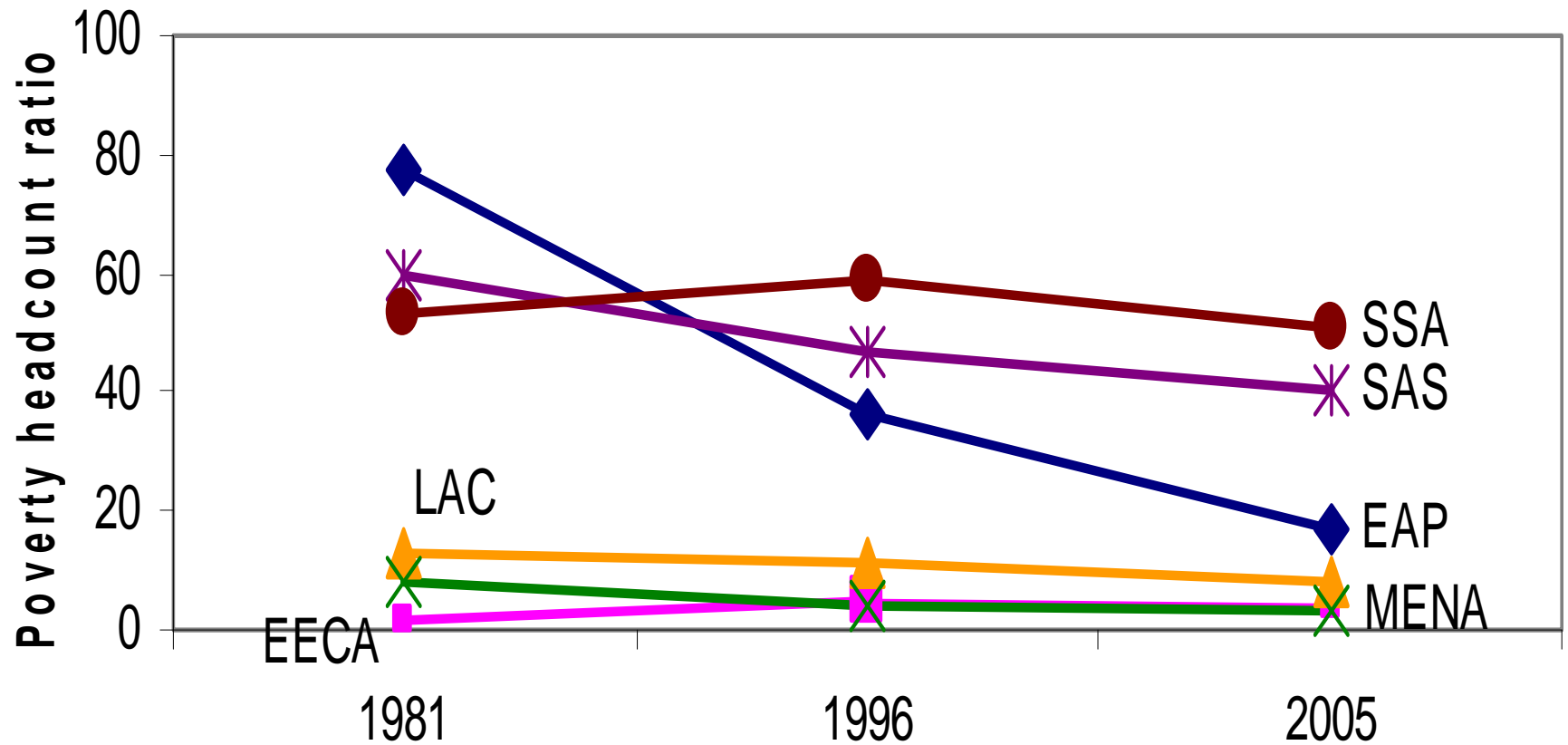
[Source: Fosu (2010)]



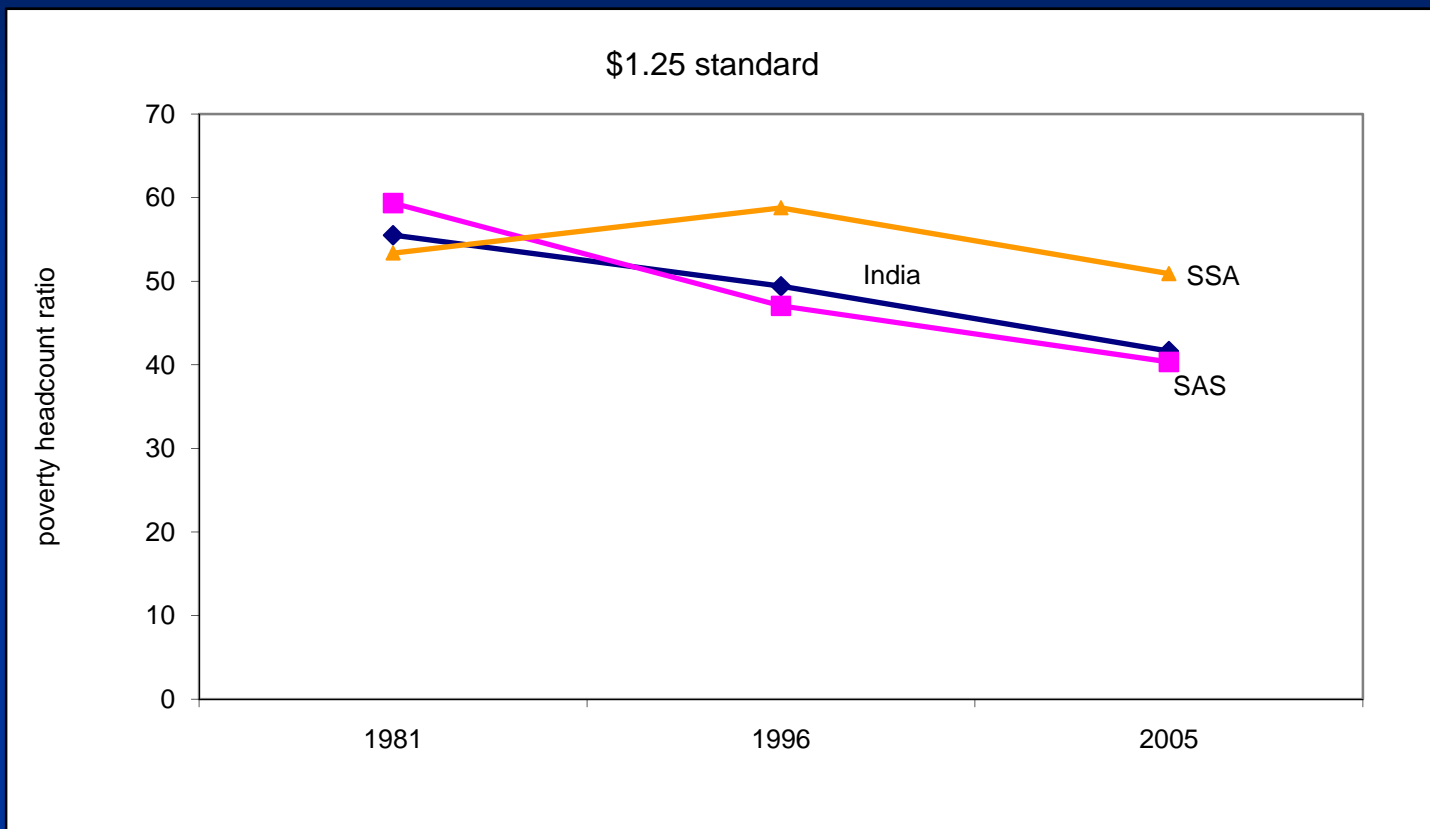
Trends in poverty (headcount ratio) by region, \$1.25: 1981-2005

[Source: Fosu (2010)]

\$1.25 standard



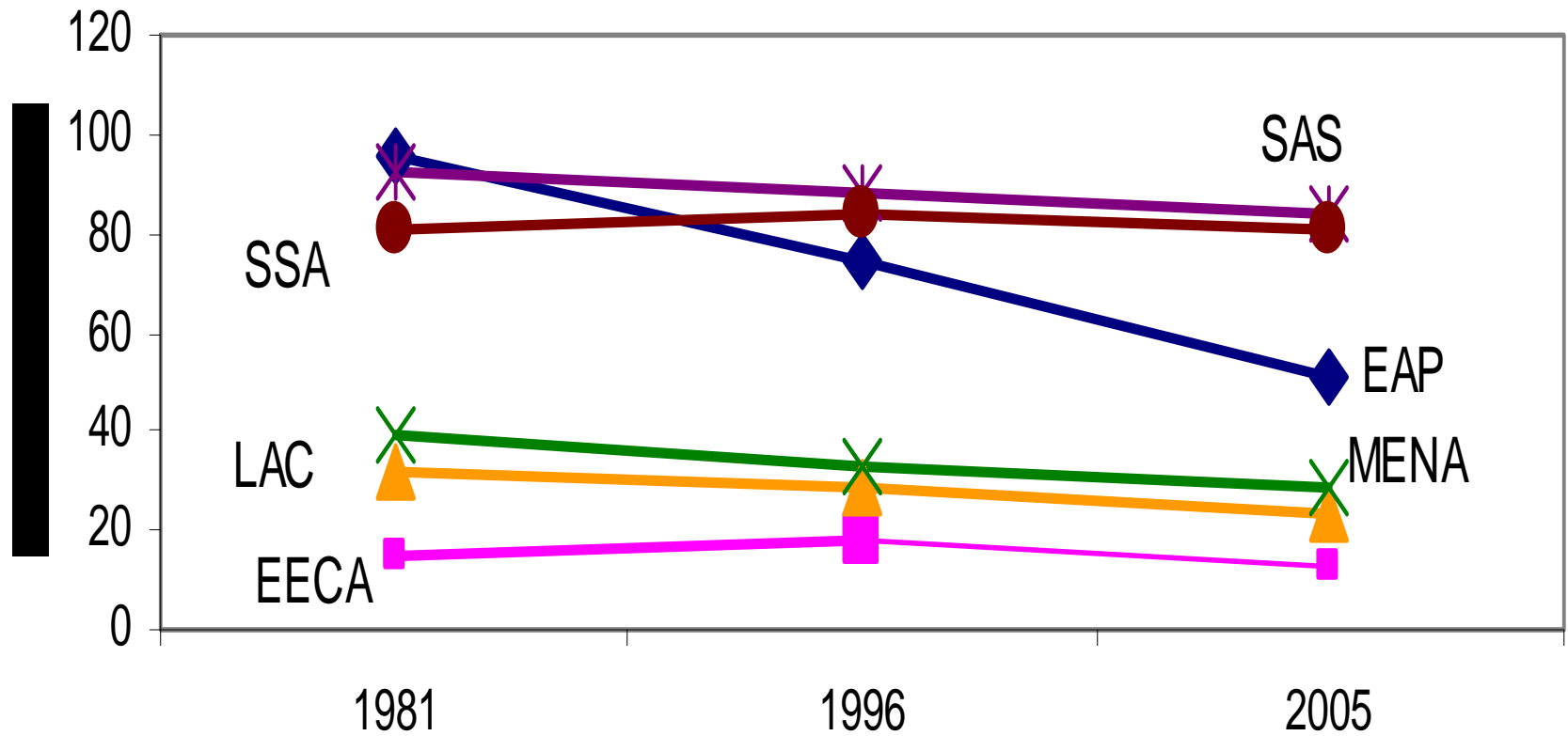
Trends in poverty (headcount ratio), \$1.25: SSA vs. SAS & India, 1981-2005 [Source: Fosu (2010)]



Trends in poverty (headcount ratio) by region, \$2.50: 1981-2005

[Source: Fosu (2010)]

\$2.50 standard



Trends in poverty (headcount ratio), \$2.50: SSA vs. SAS & India, 1981-2005 [Source: Fosu (2010)]



Progress on Poverty by Country, early-mid-1990s to present [Source: Fosu (2010)]

Decile	Poverty growth \$1.25 (min-max)	Poverty growth \$2.50 (min-max)	Decile	Poverty growth \$1.25 (min-max)	Poverty growth \$2.50 (min-max)
1.	Azerbaijan	Azerbaijan	6.	Burkina Faso	Cambodia
	Estonia	Latvia		CAR	CAR
	Jamaica	Mexico		Egypt	Côte d'Ivoire
	Latvia	Poland		Lao PDR	India-Urb.
	Poland	Russian Fed.		Nepal	Mali
	Russian Fed.	Tunisia		Panama	Peru
	Tunisia	Ukraine		Sri Lanka	Swaziland
	Ukraine	Venezuela		Uganda	Uganda
	2.	Belarus		Brazil	7.
Costa Rica		Chile	Dominican Rep.	Ethiopia	
Malaysia		China-Urb.	India-Rur.	India-Rur.	
Mexico		Costa Rica	Lesotho	Kazakhstan	
Romania		Ecuador	Mauritania	Lao PDR	
Thailand		Estonia	Mozambique	Morocco	
Uruguay-Urb.		Jordan	Niger	Mozambique	
Venezuela		Romania	Philippines	Niger	
3.	Armenia	Cameroon	8.	Bangladesh	Bangladesh
	Cameroon	Egypt		Burundi	Burkina Faso
	Chile	El Salvador		Guinea-Bissau	Burundi
	China-Urb.	Honduras		India-Urb.	Iran
	Ecuador	Indonesia-Urb.		Madagascar	Madagascar
	Indonesia-Urb.	Jamaica		Morocco	Nigeria
	Jordan	Nicaragua		Nigeria	Tanzania
	Pakistan	Thailand		Peru	Zambia
4.	Brazil	China-Rur.	9.	Colombia	Albania
	China-Rur.	Ghana		Côte d'Ivoire	Armenia
	Indonesia-Rur.	Kenya		Iran	Colombia
	Kazakhstan	Mauritania		Kyrgyz Rep.	Guinea
	Moldova	Pakistan		Mongolia	Guinea-Bissau
	Nicaragua	Paraguay		Tanzania	Lesotho
	Paraguay	Sri Lanka		Turkey	Mongolia
	Vietnam	Vietnam		Zambia	South Africa
5.	El Salvador	Indonesia-Rur.	10.	Albania	Argentina-Urb.
	Ethiopia	Malaysia		Argentina-Urb.	Belarus
	Ghana	Moldova		Bolivia	Bolivia
	Honduras	Nepal		Djibouti	Djibouti
	Kenya	Panama		Georgia	Georgia
	Mali	Philippines		Guinea	Kyrgyz Rep.
	Senegal	Senegal		South Africa	Uruguay-Urb.
	Swaziland	Turkey		Yemen	Yemen

'Poverty transformation efficiency', by country [Source: Fosu (2010)]

Country	Efficiency Vector	Country	Efficiency Vector
Albania	(2, 8, 10, 9)	Kyrgyz Rep.	(5, 10, 9, 10)
Argentina-Urb.	(9, 9, 10, 10)	Lao PDR	(3, 6, 6, 7)
Armenia	(1, 10, 3, 9)	Latvia	(1, 1, 1, 1)
Azerbaijan	(1, 2, 1, 1)	Lesotho	(5, 10, 7, 9)
Bangladesh	(4, 8, 8, 8)	Madagascar	(9, 5, 8, 8)
Belarus	(2, 3, 2, 3)	Malaysia	(4, 9, 2, 5)
Bolivia	(8, 7, 10, 10)	Mali	(4, 1, 5, 6)
Brazil	(8, 5, 4, 2)	Mauritania	(9, 5, 7, 4)
Burkina Faso	(4, 6, 6, 8)	Mexico	(8, 2, 2, 1)
Burundi	(10, 7, 8, 8)	Moldova	(4, 6, 4, 5)
Cambodia	(2, 5, 7, 6)	Mongolia	(3, 9, 9, 9)
Cameroon	(7, 1, 3, 3)	Morocco	(6, 8, 8, 7)
CAR	(10, 1, 6, 6)	Mozambique	(2, 4, 7, 7)
Chile	(3, 6, 3, 2)	Nepal	(7, 2, 6, 5)
China-Rur.	(1, 2, 4, 4)	Nicaragua	(5, 4, 4, 3)
China-Urb.	(1, 1, 3, 2)	Niger	(10, 4, 7, 7)
Colombia	(9, 7, 9, 9)	Nigeria	(7, 8, 8, 8)
Costa Rica	(6, 4, 2, 2)	Pakistan	(7, 3, 3, 4)
Côte d'Ivoire	(10, 4, 9, 6)	Panama	(6, 8, 6, 5)
Djibouti	(10, 10, 10, 10)	Paraguay	(10, 8, 4, 4)
Dominican Rep.	(3, 7, 7, 7)	Peru	(6, 5, 8, 6)

'Poverty transformation efficiency', by country - continued

Country	Efficiency Vector	Country	Efficiency Vector
Ecuador	(8 , 2, 3, 2)	Philippines	(6, 6, 7, 5)
Egypt	(5, 6, 6, 3)	Poland	(2, 1, 1, 1)
El Salvador	(8, 5, 5, 3)	Romania	(4, 1, 2, 2)
Estonia	(1, 3, 1, 2)	Russian Fed.	(3, 8, 1, 1)
Ethiopia	(5, 7, 5, 7)	Senegal	(7, 5, 5, 5)
Georgia	(1, 10, 10, 10)	South Africa	(8, 9, 10, 9)
Ghana	(6, 3, 5, 4)	Sri Lanka	(3, 5, 6, 4)
Guinea	(8, 10, 10, 9)	Swaziland	(9, 2, 5, 6)
Guinea-Bissau	(10, 9, 8, 9)	Tanzania	(5, 10, 9, 8)
Honduras	(7, 3, 5, 3)	Thailand	(5, 6, 2, 3)
India-Rur.	(2, 7, 7, 7)	Tunisia	(3, 4, 1, 1)
India-Urb.	(2, 7, 8, 6)	Turkey	(4, 7, 9, 5)
Indones-Rur.	(7, 4, 4, 5)	Uganda	(3, 4, 6, 6)
Indones-Urb.	(7, 3, 3, 3)	Ukraine	(5, 3, 1, 1)
Iran	(4, 9, 9, 8)	Uruguay-Urb.	(8, 9, 2, 10)
Jamaica	(9, 2, 1, 3)	Venezuela	(10, 2, 2, 1)
Jordan	(6, 6, 3, 2)	Vietnam	(1, 1, 4, 4)
Kazakhstan	(2, 8, 4, 7)	Yemen	(6, 10, 10, 10)
Kenya	(9, 3, 5, 4)	Zambia	(9, 9, 9, 8)

Models and Estimation [Source: Fosu (2010)]

- (1) $p = b_1 + b_2\gamma + b_3\gamma G^I + b_4\gamma(Z/Y) + b_5g + b_6gG^I + b_7g(Z/Y) + b_8G^I + b_9Z/Y$

- (2) $E_y = b_2 + b_3G^I + b_4Z/Y$

- (3) $E_g = b_5 + b_6G^I + b_7Z/Y$

For \$1.25 standard:

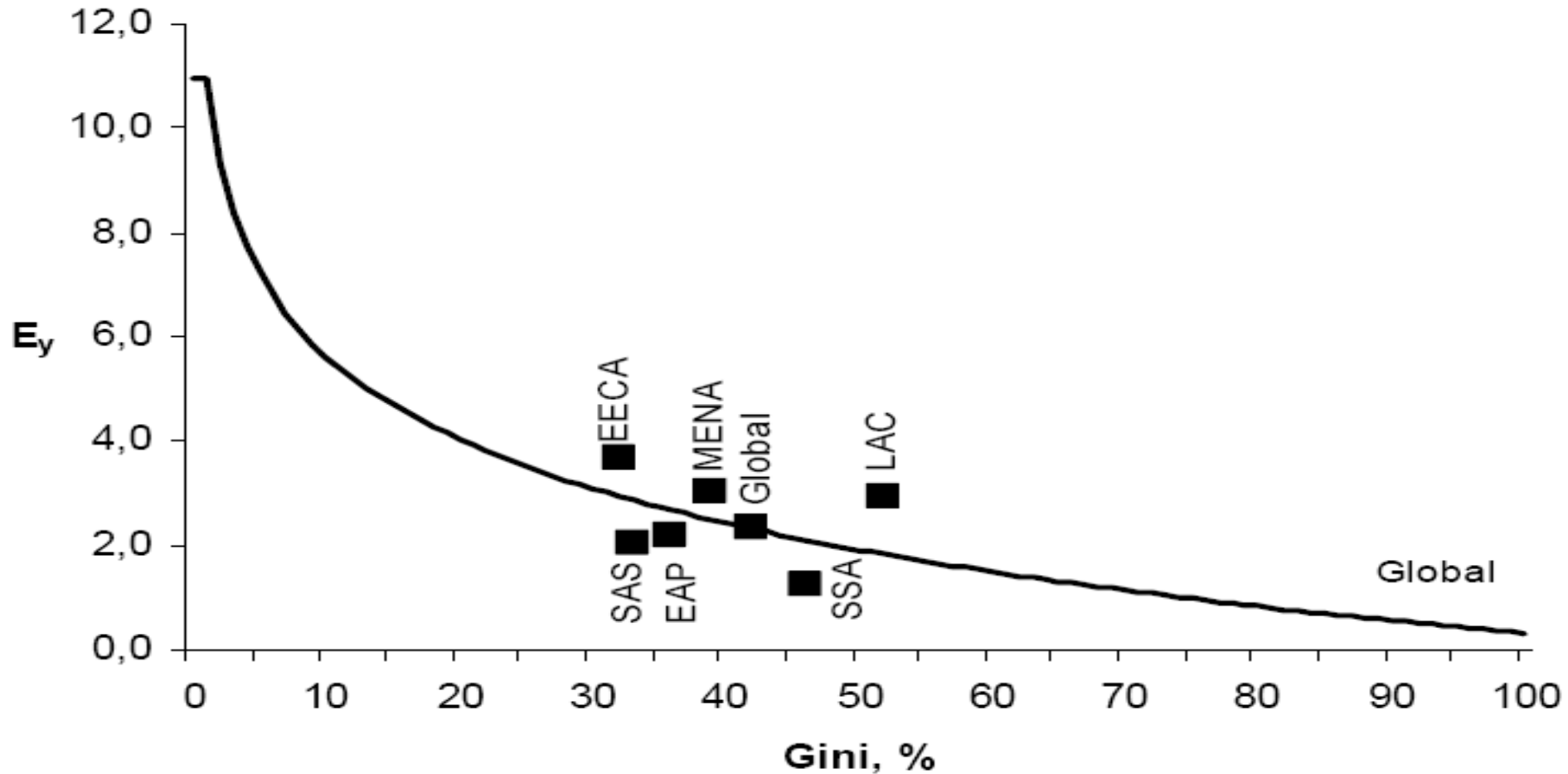
- (4) $E_y = -9.757 + 2.307 G^I + 1.333 Z/Y$

- (5) $E_g = 14.391 - 3.649 G^I - 2.754 Z/Y$

Income Elasticity of Poverty vs. Initial Inequality

[Source: Fosu (2010)]

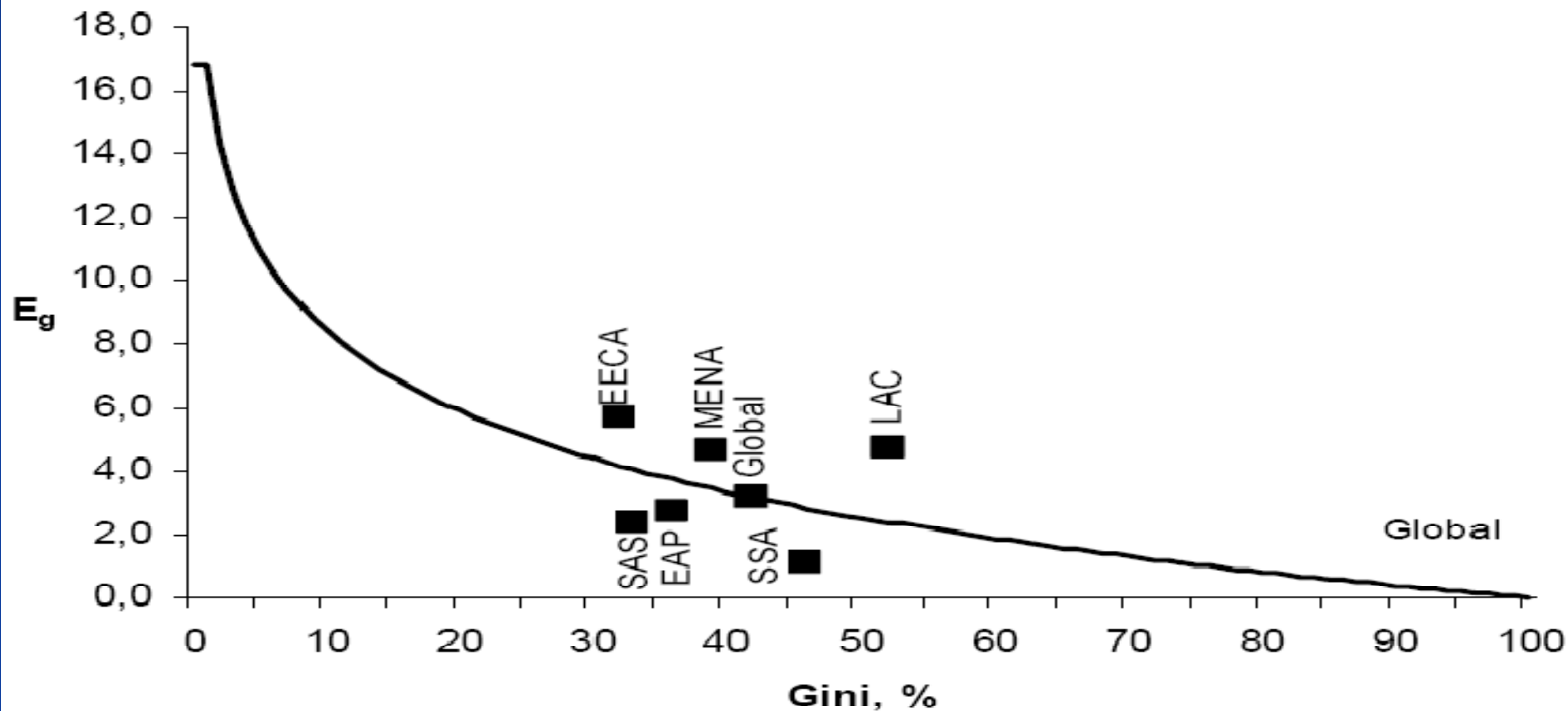
Income elasticity, E_y , \$1.25 Headcount



Inequality Elasticity of Poverty vs. Initial Inequality

[Source: Fosu (2010)]

Inequality elasticity, E_g , \$1.25 Headcount



Explaining poverty growth since mid-1990s, income(A) vs. inequality(B): Countries with poverty reduction, \$1.25 headcount [Source: Fosu(2010)]

Country	Region	Pov _g	A	B	A+B
			E _Y *dlnY	E _G *dlnG	Pred Pov _g
Armenia	EECA	-7.122	8.580	-13.363	-4.783
Azerbaijan	EECA	-62.506	-11.656	-27.118	-38.774
Belarus	EECA	-24.964	-17.208	16.707	-0.501
Brazil	LAC	-7.142	-5.505	-3.198	-8.704
Burkina Faso	SSA	-2.557	-1.220	-0.715	-1.936
Burundi	SSA	-0.252	-0.881	-0.007	-0.888
Cambodia	EAP	-1.890	-3.354	1.813	-1.541
Cameroon	SSA	-9.001	-8.362	-1.497	-9.859
CAR*	SSA	-2.823	1.454	6.023	7.476
Chile	LAC	-8.168	-5.124	-3.304	-8.428
China-Rur.	EAP	-7.103	-7.872	1.268	-6.603
China-Urb.	EAP	-17.681	-19.252	6.686	-12.566
Costa Rica	LAC	-12.160	-10.217	0.181	-10.036
Dominican Rep.	LAC	-1.827	-2.453	1.434	-1.020
Ecuador	LAC	-9.377	-12.016	1.402	-10.614
Egypt	MENA	-2.356	-4.829	3.228	-1.601
El Salvador	LAC	-3.469	-5.377	-2.338	-7.714
Estonia	EECA	-61.350	-14.269	13.219	-1.050
Ethiopia	SSA	-4.384	-1.848	-4.188	-6.035

Countries experiencing poverty reduction (\$1.25), continued

Ghana	SSA	-3.802	-5.636	1.463	-4.173
Guinea*	SSA	-0.722	0.722	2.081	2.803
Honduras	LAC	-3.677	-6.394	0.032	-6.362
India-Rur.	SAS	-1.634	-2.650	1.466	-1.184
India-Urb.	SAS	-1.091	-2.438	2.056	-0.382
Indonesia-Rur.	EAP	-7.399	-7.968	2.048	-5.920
Indonesia-Urb.	EAP	-7.779	-8.254	1.559	-6.694
Jamaica	LAC	-24.763	-14.958	7.789	-7.169
Jordan	MENA	-14.189	-4.137	-4.806	-8.943
Kazakhstan	EECA	-6.680	1.097	-3.014	-1.917
Kenya	SSA	-3.364	-6.101	2.645	-3.456
Lao PDR	EAP	-2.363	-3.390	1.597	-1.793
Latvia	EECA	-75.503	-23.416	10.401	-13.015
Lesotho*	SSA	-1.313	4.383	-3.391	0.992
Madagascar	SSA	-0.554	-1.505	0.057	-1.448
Malaysia	EAP	-14.984	9.512	-15.174	-5.661
Mali*	SSA	-4.292	-0.529	2.602	2.073
Mauritania	SSA	-2.012	-4.510	2.262	-2.248
Mexico	LAC	-23.738	-15.623	-0.456	-16.080
Moldova	EECA	-6.122	-4.710	1.146	-3.564
Mozambique	SSA	-1.422	-2.403	-0.158	-2.561
Nepal	SAS	-2.706	-6.678	3.336	-3.342

Countries experiencing poverty reduction (\$1.25), continued

Nicaragua	LAC	-6.005	-5.026	-1.609	-6.635
Niger	SSA	-1.555	-3.107	0.297	-2.809
Nigeria	SSA	-0.882	-0.047	-1.060	-1.107
Pakistan	SAS	-9.458	-9.174	2.646	-6.528
Panama	LAC	-2.717	-2.044	-1.239	-3.283
Paraguay	LAC	-5.639	1.079	-4.127	-3.048
Peru	LAC	-0.787	-6.203	3.548	-2.654
Philippines	EAP	-1.811	-2.972	0.608	-2.364
Poland	EECA	-29.323	-32.323	4.229	-28.094
Romania	EECA	-17.192	-22.965	5.992	-16.973
Russian Fed.	EECA	-34.218	-1.930	-13.718	-15.648
Senegal	SSA	-4.359	-3.032	-0.445	-3.477
Sri Lanka*	SAS	-2.242	-6.977	7.533	0.556
Swaziland*	SSA	-3.725	-0.808	2.582	1.774
Thailand	EAP	-19.411	-4.251	-1.229	-5.480
Tunisia	MENA	-18.653	-10.268	-1.927	-12.196
Uganda	SSA	-2.475	-3.995	1.533	-2.462
Ukraine	EECA	-32.890	-17.240	-15.845	-33.085
Uruguay-Urb.*	LAC	-35.553	3.075	3.982	7.057
Venezuela	LAC	-14.272	-13.057	-5.479	-18.536
Vietnam	EAP	-7.779	-8.194	0.607	-7.587
	Mean	-11.406	-6.072	-0.022	-6.094

Explaining poverty growth since mid-1990s, income(A) vs. inequality(B): Countries with **poverty increases**, \$1.25 headcount [Source: Fosu(2010)]

Country	Region	Pov _g	A	B	A + B
			E _Y *dlnY	E _G *dlnG	Pred Pov _g
Albania	EECA	16.077	-2.916	8.253	5.338
Argentina-Urb.	LAC	11.700	4.135	2.177	6.312
Bangladesh	SAS	0.184	0.257	-0.174	0.083
Bolivia	LAC	10.552	-3.176	10.742	7.566
Colombia*	LAC	1.676	-2.113	1.865	-0.248
Côte d'Ivoire	SSA	1.448	-7.903	13.516	5.613
Djibouti	MENA	22.929	26.000	6.973	32.973
Georgia	EECA	12.207	13.203	5.474	18.677
Guinea-Bissau	SSA	7.174	8.655	1.222	9.877
Iran*	MENA	0.190	5.142	-5.748	-0.606
Kyrgyz Rep.	EECA	1.442	20.209	-17.896	2.313
Mongolia	EAP	1.748	2.673	-0.189	2.484
Morocco	MENA	0.119	-0.705	1.205	0.500
South Africa	SSA	4.019	1.370	1.491	2.861
Tanzania	SSA	2.204	6.203	0.297	6.500
Turkey*	EECA	2.352	-4.349	1.976	-2.373
Yemen	EAP	10.409	15.401	-1.721	13.680
Zambia	SSA	0.439	0.633	0.064	0.696
	Mean	5.937	4.595	1.640	6.236

Country Simulation Illustrations [Source: Fosu(2010)]

Tanzania: Linkage between GDP and Income Matters

Scenario	Link between PC GDP and Income	Contrib. of Income to Pov. (\$1.25)
Current Situation	Weak: Income growth=-4.3%, despite PC GDP growth=2.6% (annually)	6.2% (annually) - Rising poverty
Simulation	Strong: Let income growth=2.6%	-3.7% (annually) – Falling poverty

Cote d'Ivoire: Rising Inequality Hurts

Scenario	Income Inequality	Poverty (\$1.25)
Current Situation	Rising by 4.0% annually	Rise by 1.4% (5.6% pred.) annually
Simulation	No rise	Fall by 7.9% annually

Ethiopia: Falling Inequality Helps

Scenario	Income Inequality	Poverty (\$1.25)
Current Situation	Falling by 2.9% annually	Fall by 4.4% (6.0% pred.) annually
Simulation	No fall	Fall by only 1.8% annually

Country Simulation Illustrations continued

Burkina Faso: Low Income is a Bane

BURKINA FASO	Income Inequality (Gini Coefficient)	GDP growth	Income	Income Elast.	Inequality Elast.	Poverty Headcount Ratio (\$1.25)
Scenarios						
Current Situation	- Initial: 0.51 - Falling 2.75% annually	1.5% annually	Lower Income (\$40 monthly)	-0.794	0.260	Fall by 2.6% annually
Simulation			<u>The same as Chile's</u>	-3.82	6.51	Fall by 23.6% annually
CHILE						
Current Situation	- Initial: 0.55 - Falling 0.57% annually	1.5% annually	Higher Income (\$387 monthly)	-3.419	5.779	Fall by 8.2% annually

Summary & Conclusion

- Changing trends in SSA's econ. growth and poverty record
- Growth has mattered; indeed, **on average**, growth has been the main driver of poverty reduction globally (as in Dollar & Kraay)...BUT
- There are major differences across ctrys. (as in Ravallion, 2001, *WD*)
- The relationship between GDP and income has mattered
- Initial inequality has mattered
- Initial income has mattered (low-income ctrys. need help!)
- Income growth has mattered
- Inequality changes have mattered
- SSA's record on poverty most recently is comparable to SAS's (and India's), despite the large difference in PC growth rates
- SSA's recent brisk march toward prosperity must continue: **Patience & Perseverance** are required!