

Poverty and Globalization: Is a Radical Rethinking Called For?

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Introduction

The first of the 2000 Millennium Development Goals (MDG) of the United Nations is the reduction by half of the proportion of people living under one US dollar a day by 2015. The other seven goals being aspects of poverty are highly correlated and complementary with the first and with each other so that if the first is achieved, the rest would also be within touching distance. The World Bank (2003) has estimated that the number of people living under one US dollar a day is about 896 million in 2004, down from about 1.054 billion in 2002, a reduction of around 70 million. The obstacles to achieving this first goal are as formidable as ever. The instances of success are more the exception than the rule. China represents a singular success, but may remain a singularity for a while. If global performance on the first of the MDG goals looks encouraging, it is largely because China's performance skews it towards the satisfactory. India's and Vietnam's recent rapid growth still has to get translated into dramatic drops in poverty incidence. The age-old policy question remains. By contrast, there is hardly any gain in Sub-Saharan Africa. Why this stark contrast? How does a country reduce poverty?

The classic debate, couched in terms of the economic pie, has always had two polar counsels: “grow the pie” versus “share the pie.” Both have empirical evidence bearing on their sails: (1) *ceteris paribus*, poverty incidence falls with a rise in average per capita income and (2) *ceteris paribus*, poverty incidence falls with lower income inequality (Asra et al. 2005; World Bank 2003). The harder question is that most policy levers available to governments that may raise average per capita income will also raise income inequality (Kanbur 2001; 2003). The issue of poverty reduction is no longer very straightforward. Are there levers that do both, i.e., raise income growth and lower income inequality?

One may further inquire about how per capita income growth affects income inequality. The current consensus is that it does not for contemporaneous observations (Dollar and Kraay 2002; Kanbur 2003; World Bank 2003). This claim, strongly supported by Kristine Forbes (2000), means that the Kuznets curve may not exist. Instances of a positive relationship in cross-country data cancel instances of a negative relationship. Barro (2007) appears to disagree. He claims that the Kuznetz curve is alive and well in low-income countries where growth at first benefits a minority due to, among others, financial market imperfections and threshold effects in educational investment. But as economic growth is sustained and deepened, the demand for the assets of the poor (largely labor service) rises and growth becomes more encompassing and equitable.

One can also ask the reverse question: Does income inequality hamstring income growth in subsequent periods? The human capital threshold argument is important here. First, endogenous growth models and subsequent tests show the importance of human capital investment. But human capital investment, like a physical capital investment, has some high fixed cost feature: the returns are zero unless the threshold is hurdled. Poorer households anticipating threshold shortfall will not invest; richer households that invest will reap rich returns. The human capital divide widens. Income inequality leads to greater proportion of poorer households. Thus, less human capital overall and less growth result from greater income inequality (Kanbur and Lustig 2000; Banerjee and Duflo 2003). Barro (2007) gives evidence that income inequality hampers economic growth in low-income countries.

The empirical data on the relation between growth and income inequality are at best ambiguous (Kanbur 2004). The evidence speaks with many voices to reflect the many pathways of causation and feedback. This paper will not attempt a resolution of this thorny conundrum. This inquiry is concerned rather with a policy lever that, while in theory affecting both income growth and income inequality, may also display residual effect on poverty outcomes. The interest here is on the classic policy lever “globalization” or “openness” (but not with financial integration) zeroing in on the poverty-openness nexus rather than on the traditional growth-openness nexus.

Since about a decade ago, prompted by the East Asian crisis (1998) and the Seattle/WTO debacle (1999), globalization has hugged the center stage of strident and sometimes violent debates on policy options (Kanbur 2001). At that time, the ascendant Dollar-Kraay syllogism (Dollar and Kraay 2001) may be stated as follows: globalization is good for growth; growth is good for poverty reduction; ergo, globalization is good for poverty reduction. Sen called this the pull-up effect. Panagariya (2004) still swears by this syllogism and makes a compelling case. The naysayers however focus on lopsided gain sharing, unequal trade, and the increasing power of multinational corporations leading to the empowerment of least developed country (LDC) elites and the exploitation of the masses.

Since then we have witnessed the debate on deep determinants of economic growth (Acemoglu, Johnson, and Robinson 2001; Easterly and Levine 2002; Rodrik, Subramanian, and Trebbi 2002), which somewhat downgraded the role of economic policy on economic outcomes. Indeed Easterly, perhaps in a fit of hyperbole, raised the mantra “policy does not matter,” presumably to highlight the favored emerging mantra: “institutions matter.” Institutional quality can no longer be ignored as controls in empirical work.

There is ample evidence that openness stimulates economic growth in LDCs (Dollar and Kraay 2002; Edwards 1998; Frankel and Romer 1999). As is common in economics, there are dissenting opinions, and Rodrik (1999b) saw rapid capital accumulation as the lynchpin. The pathways of causality and feedback are multiple so that theories tend to abound and disagreements are many, which means that only the data can finally point to a resolution.

We will revisit this issue but in a more direct way. Instead of the growth-poverty nexus, we focus on the poverty-openness nexus. Controlling for the effect of initial per capita income and initial income inequality and other control variables, does openness (our measure of globalization being the trade ratio: export plus import over gross domestic product) still display a robust positive effect on poverty outcomes? In particular, in controlling for institutional quality, as in the celebrated aid-effectiveness debate (Burnside and Dollar 2000; Easterly, Levine, and Roodman 2004; Dalgaard, Hansen, and Tarp 2003), it may be the cross effects and concavity that embed the impact of openness. In the process, we will revisit the widely accepted hypotheses of the effects of per capita income and income inequality. We will also inquire into the responsiveness of poverty outcomes to institutional or governance variables of interest to ourselves: regulatory quality, and voice and accountability. Our poverty outcome will be poverty incidence and poverty reduction.

The Data

The basic data set we use here was the same one used by Asra, Estrada, Kim and Quibria (2005) and generously shared with us by one of the authors (G. Estrada). The poverty panel data used by them and us was constructed originally by Hassan, Waheeduzzaman, and Rahman (2003) for 80 countries over the period 1960-1998. Following Asra et al. (2005), we exclude data for developed and transition countries. Naturally, for some countries, many more observations are available than for others. Only one end-of-the-period observation per five-year interval is used. Data availability for other variables dictated that the coverage period is only 1975-1995.

As dependent variables, we use either:

1. "Poverty" which is poverty incidence at end of each five-year period
2. "Poverty reduction" defined as poverty incidence at time (t) minus poverty incidence at time 5 (t-5).

The explanatory variable of concern to this paper is the policy variable "openness" and our control variables are: initial conditions: per capita GDP, population, Gini coefficient, poverty, infant mortality and life expectancy, all at the beginning of the period (t-5); macroeconomic policy: government expenditure and inflation (all

averaged over each five-year interval); institutional variables: voice and accountability, and regulatory quality.

Our empirical specifications are the following:

$$1. \text{ Poverty} = \alpha_1 + \alpha_2(\text{Initial Conditions}) + \alpha_3(\text{Macroeconomic Policy Variables}) + \alpha_4(\text{Institutional Variables}) + \alpha_5(\text{Openness}) + \alpha_6(\text{Interactions}) + \epsilon_t$$

The initial conditions here consist of per capita GDP, population, and Gini coefficient.

$$2. \text{ Poverty Reduction} = \beta_1 + \beta_2(\text{Initial Conditions}) + \beta_3(\text{Macroeconomic Policy Variables}) + \beta_4(\text{Institutional Variables}) + \beta_5(\text{Openness}) + \beta_6(\text{Interactions}) + \epsilon_t$$

The initial conditions here consist of poverty, population, infant mortality, life expectancy, and Gini coefficient.

Table 1 gives the definitions and sources of variables used (following Asra et al. 2005).

Empirical Results

Poverty Incidence

Table 2 gives the regression results for poverty incidence. Our base regression is given in Column 1. It is clear that increased Per Capita GDP reduces poverty incidence while increased Gini Coefficient (income inequality) raises poverty incidence. These results are as the received wisdom would have them. Population has, however, no effect on poverty incidence.

Among the Macroeconomic Variables, Government Expenditure as a percent of GDP is positive and significant for poverty incidence; Inflation is, however, not significant. Both the Governance variables are significant, but exhibit different signs: Regulatory Quality is negative and significant but Voice and Accountability is positive and significant for poverty incidence. The signs exhibited by the Governance variables are in agreement with the literature.

TABLE 1. Variable definition

Variable	Definition	Unit	Source
Poverty Reduction	Poverty change: Poverty(t-5)-Poverty(t) Poverty at ending period (t) Poverty at beginning period (t-5)		Hasan et al. (2003)
Poverty	Percentage of the population whose income falls below \$2 measured in purchasing-power parity dollars.	Percent	
Income per capita	Gross domestic product per capita beginning period, log	Real per capita GDP at 1996 US\$ Purchasing Power Parity	Penn World Tables
Population	Population at the beginning of the period, log		
Gini coefficient	A measure of distribution of income or expenditure, beginning period	Gini value	Hasan, Quibria, and Kim (2003)
Infant Mortality Rate	Infant mortality rate per 1,000 live births, beginning period	Number of infant mortality cases	
Life Expectancy	Life expectancy at birth, total	Year	World Bank
Openness to trade	Sum of imports and exports as share of GDP, average of each 5-year period	Percent	Penn World Tables
Government expenditures	Government expenditures as share of GDP, average of each 5-year period	Percent	
Inflation Rate	Percentage growth in consumer price indices (100 in 1996), average of each 5-year period, log	Percent	
Quality of governance			
<i>Regulatory Quality:</i> (2003)	Measures of the incidence of market-unfriendly policies such as price controls or inadequate bank supervision, as well as perceptions of the burdens imposed by excessive regulation in areas such as foreign trade and business development.		Kauffman et al.
<i>Voice and Accountability</i>	Measures accountability rates of public officials, including the presence or absence of public channels to denounce unaccountable behavior of public administrators.		

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TABLE 2. Poverty-Openness Regressions

Regression	1	2	3	4	5	6
Initial Conditions						
Per Capita GDP	-35.16214 (-25.53)	-34.48731 (-24.64)	-34.32376 (-23.97)	-34.59381 (-24.86)	-34.48752 (-24.55)	-30.92138 (-19.49)
Population	0.2480351 (0.47)	-0.49568 (-0.78)	-0.5173524 (-0.81)	-0.7686869 (-1.18)	-0.4685172 (-0.68)	0.0493064 (0.08)
Gini Coefficient	0.4382615 (4.16)	0.4172122 (3.99)	0.4273101 (4.02)	0.3495693 (3.13)	0.4179399 (3.97)	0.3350502 (3.25)
Macroeconomic Policy						
Government Expenditure	0.420911 (4.54)	0.4790966 (5.00)	0.4869139 (5.02)	0.4561736 (4.74)	0.4795572 (4.98)	0.5092521 (5.54)
Inflation	0.4437018 (0.76)	0.0384235 (0.06)	0.1096094 (0.18)	0.2275394 (0.37)	0.0477503 (0.08)	-0.0654551 (-0.11)
Quality of Governance						
Regulatory Quality	-10.49419 (-4.81)	-10.17581 (-4.71)	-12.20096 (-2.94)	-10.19683 (-4.75)	-10.21961 (-4.62)	-12.09853 (-3.09)
Voice and Accountability	6.656287 (4.32)	6.428373 (4.22)	6.410761 (4.19)	10.61281 (3.63)	6.449174 (4.18)	6.706742 (4.64)
Openness		-0.0679092 (-2.05)	-0.0734592 (-2.13)	-0.0628755 (-1.91)	-0.0585722 (-0.59)	-0.0879732 (-2.69)
Openness x Regulatory Quality			0.0341853 (0.57)			0.0631859 (1.11)
Openness x Voice & Accountability				-0.0800682 (-1.67)		
Openness ²					-0.0000575 (-0.10)	
Regional Dummy						
South Saharan Africa						9.369964 (4.11)
Constant	281.9079 (16.86)	293.3781 (16.82)	291.858 (16.50)	301.7725 (16.73)	292.5826 (15.22)	257.9006 (13.83)
Observations	141	141	141	141	141	141
R-squared	0.9142	0.9168	0.9170	0.9186	0.9168	0.9265

In Column 2, we now add Openness as regressor. In subsequent columns we sequentially add interaction terms and region dummies. It is clear that Openness is negative and significant through all these regressions.

It thus appears that even controlling for the powerful explanatory contributions of governance and institutional variables, Openness maintains its importance for lowering poverty incidence.

Poverty Reduction

Table 3 gives the regression results involving dependent variable Poverty Reduction. The base run is given by Column 1. Poverty, Per Capita GDP, Child Mortality, and Life Expectancy are all significant influences. Poverty Reduction rises with higher initial poverty incidence; rises with higher initial per capita income; rises with higher initial child mortality and shorter life expectancy, all of which are as intuition would have them. Of the Macroeconomic Policy variables, Government Expenditure again figures significantly and negatively. Among the Governance variables, Regulatory Quality is positive and significant while Voice and Accountability is negative and significant. Again the base run seems to validate received priors on the effects of these variables.

Adding Openness among the regressors (Column 2) shows it to be positive but only marginally significant. Column 3 now adds the interaction term Openness x Voice and Accountability, and Openness Squared. Both prove to be positive and significant. But, more interestingly, they also imbue the positiveness of Openness with strong significance! Adding a regional dummy (Sub-Saharan Africa) improves the significance of Openness.

Once more it appears that the positive influence of Openness on poverty reduction cannot be discounted even with the powerful contribution of the governance and institutional variables. It is of interest to note that the effect of Openness becomes very significant only when its interaction with Voice and Accountability and its possible concave feature (positive, but diminishing returns) are recognized in the regression. The positive and significant contribution of the interaction of Openness and Voice and Accountability is a highly interesting surprise.

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TABLE 3. Poverty Reduction-Openness Regressions

Regressions	1	2	3	4	5	6	7	8
Initial Conditions								
Poverty	0.5443704 (6.52)	0.5805237 (6.79)	0.5775952 (6.66)	0.5758577 (6.78)	0.586845 (6.86)	0.5851033 (6.95)	0.5886699 (7.16)	0.5931818 (7.23)
Per Capita GDP	16.92422 (5.16)	18.05077 (5.44)	18.01235 (5.40)	18.30486 (5.55)	18.34917 (5.52)	18.95778 (5.78)	18.34831 (5.73)	18.43812 (5.76)
Population	0.6467091 (1.26)	1.224261 (2.01)	1.220973 (2.00)	1.495106 (2.39)	1.584452 (2.31)	2.266874 (3.08)	1.510389 (1.73)	1.979938 (2.73)
Child Mortality	0.0969515 (2.43)	0.1251085 (2.92)	0.1249531 (2.91)	0.1141616 (2.65)	0.1441047 (3.14)	0.1433493 (3.17)	0.1058115 (2.13)	0.092525 (1.94)
Life Expectancy	0.5705564 (2.69)	0.6435006 (3.00)	0.6423423 (2.99)	0.5660485 (2.60)	0.7039808 (3.19)	0.6395357 (2.92)	0.3788573 (1.46)	0.2990197 (1.21)
Gini Coefficient	-0.1765656 (-1.74)	-0.1832809 (-1.82)	-0.1783604 (-1.73)	-0.1269333 (-1.20)	-0.1791423 (-1.78)	-0.0937705 (0.89)	-0.0425699 (-0.41)	-0.0455869 (-0.44)
Macroeconomic Policy								
Government Expenditure	-0.2977924 (-3.18)	-0.3525879 (-3.59)	-0.3484653 (-3.48)	-0.3284105 (-3.33)	-0.3549081 (-3.62)	-0.3215517 (-3.29)	-0.2938078 (-3.04)	-0.3095582 (-3.25)
Inflation	-0.9345758 (-1.78)	-0.6467578 (-1.18)	-0.6258278 (-1.12)	-0.8232346 (-1.49)	-0.5496005 (-0.99)	-0.7289391 (-1.32)	-0.4488819 (-0.81)	-0.5859631 (-1.09)
Quality of Governance								
Voice and Accountability	-4.609332 (-3.26)	-4.523533 (-3.22)	-4.514602 (-3.20)	-8.150596 (-3.17)	-4.271221 (3.01)	-9.351843 (-3.57)	-8.999446 (-3.38)	-9.725896 (-3.80)
Regulatory Quality	7.744901 (3.90)	7.92461 (4.02)	7.187028 (1.92)	-8.150596 (4.08)	7.605279 (3.82)	7.458048 (3.82)	5.441204 (2.48)	6.418294 (3.30)
Openness		0.0562355 (1.73)	0.0539951 (1.59)	0.0498985 (1.54)	0.1608134 (1.65)	0.235194 (2.32)	0.2065619 (1.92)	0.2477839 (2.50)
Openness x Regulatory Quality			0.0121958 (0.23)					
Openness x Voice & Accountability				0.0714594 (1.68)		0.1040713 (2.29)	0.101407 (2.22)	0.1117828 (2.52)
Openness ²					-0.0006066 (-1.13)	-0.0010916 (1.92)	-0.000998 (-1.72)	-0.0011634 (-2.10)
Regional Dummies								
East Asia and Pacific							2.471439 (0.97)	
South Saharan Africa							-6.088055 (-2.58)	-6.452425 (-2.77)
Constant	-188.7219 (-6.55)	-217.5159 (-6.58)	-217.2312 (-6.54)	-220.8959 (-6.71)	-234.841 (-6.45)	-253.6149 (-6.90)	-219.1611 (-5.82)	-222.5121 (-5.93)
Observations	140	140	140	140	140	140	140	140
R-squared	0.4094	0.4229	0.4232	0.4354	0.4287	0.4516	0.4871	0.4832

Since Voice and Accountability is by itself alone negative and significant, this interaction effect means that Democracy (proxied by Voice and Accountability) needs Openness to positively impact poverty reduction.

Observations

Despite the rather shrill rhetoric against globalization in the last ten years, and despite the recognition of institutional contribution to economic performance, the evidence, at least from the quantifiable if narrow compass of concerns, still does not demand a radical departure from the received belief that it (globalization) is good for poverty reduction.

The role played here by its interaction with an institutional variable suggests that Openness may deliver its best effect in tandem with other institutional reforms.

The Puzzle

Why do some countries seem to benefit from openness while others do not? Openness is just a window of opportunity. In order to take advantage of its potential, the economy in question must have a modicum of market-enabling institutions (respect for private property, enforcement of contracts, peace and order, political stability) which allow market players to display creativity and reward risk taking. When the economic environment favors predation and rent seeking, only carpetbaggers and fly-by-nighters will proliferate, and the economic outcome will be dismal.

Summary

The debate on the role of globalization on poverty appears to have revolved around the Dollar-Kraay syllogism. The empirical evidence thus concentrated on the effect of openness on per capita income growth and the effect of growth on poverty. In this paper we move directly to determining the effect of openness on poverty incidence and poverty reduction. We show that controlling for relevant and compelling other factors, especially the effects of institution and the

macroenvironment, openness remains a robust positive contributor to good poverty outcomes. For poverty reduction, the interaction between openness, and voice and accountability figures surprisingly prominently (positive and very significant) and indeed improves the significance of openness by itself. One way of interpreting this is that openness makes democracy viable for poverty reduction. Note that voice and accountability by itself is negative and significantly so for poverty reduction. The combination of openness and democracy bodes well for poverty reduction. If so, then India's poverty record will only improve.

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