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GLOBAL POVERTY REDUCTION:

THE LAST 20 YEARS AND THE NEXT 20 YEARS

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Executive Summary

Progress in poverty reduction under the MDGs

- At a global level, indicators for income poverty, gender and water in terms of reduction are 'on track' whereas nutrition, primary completion and child mortality are considered 'off-track' with maternal mortality being very 'off-track'.
- The incidence of income poverty at $1.25 (MDG 1a) has fallen from 43 percent in 1990 to 22 percent in 2008 and is projected to fall to 16 percent in 2015 (according to Chen and Ravallion, 2012; World Bank, 2012:3).
- However, if China is removed, the total number of people under $1.25 has barely changed since 1990 while the number of people under the $2 poverty line has slightly increased.

Changes in the nature of poverty and inequality

- Over time global poverty is increasingly becoming a matter of domestic inequality because the majority of the world's poor by income and multi-dimensional poverty measures now live in countries categorized by the World Bank as middle-income countries.
- It is important that the discussion of poverty in MICs does not distract from the reality that LICs typically have higher rates of poverty incidence. That said poverty rates in MICs remain surprisingly high given average income and income growth.
- This new 'geography of poverty' (the world's poor do not live in the world's poorest countries) raises questions about the usefulness of country classifications and about the types of economic growth that leads some countries to reduce the number of people in extreme poverty and other countries not to. Although the thresholds do not mean a sudden change in countries when a line is crossed in per capita income, substantially higher levels of average per capita income imply substantially more domestic resources available for poverty reduction and – most importantly for donors – the current aid system does treat countries differently if they are LICs or MICs.

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1. Introduction

This paper is a contribution to the post-2015 discussion on what may follow the Millennium Development Goals when they expire.

The paper does the following:

The paper does the following: (i) Looks backwards at trends in poverty reduction during the MDG period (1990 – present) and the impacts of the MDGs; (ii) Looks forward and makes projections for levels and patterns of poverty over the next 10-20 years and discusses emergent issues including the 'new geography of poverty'.

The paper is structured as follows: Section 2 looks backwards at poverty reduction under the MDGs. Section 3 looks at the changing nature of the poverty 'problem'. Section 4 looks forward at poverty reduction to 2030. Section 5 concludes.

2. Poverty reduction under the MDGs

2a. Progress in poverty reduction

A key question is whether poverty reduction is faster or slower in the MDG period (than in the time period before). Of course, it will not be clear if the MDGs were met in 2015 until data is available in 2017-2019 and for some goals we will never know due to contested data (maternal mortality for example) or the lack of baseline data for 1990 for a significant number of countries (Sumner and Melamed, 2010). Furthermore, there may be remaining question marks given the numerous revisions made to some MDG data over the last few years (see Leo and Thuotte, 2011).

Equally problematically, is that the extent of poverty reduction under the MDG regime depends significantly on the methodology used to assess. Take the international poverty lines such as $1.25 and $2 a day which are inherent in Target 1.a (see Deaton, 2011; Fischer, 2010; Pogge, 2012). Whereas a $US 2 a day international poverty line is conceptually stronger in the sense that it is the median average of poverty lines for all developing countries (Chen and Ravallion, 2008) and close to the poverty lines defined by poor people (see Narayan et al., 2009, p. 13), the lower threshold remains dominant in international policy debates and MDG-related discussion.

It is possible to say that the incidence of income poverty at $1.25 (or MDG 1a) has fallen from 43 per cent in 1990 to 22 per cent in 2008 and is projected to fall to 16 per cent in 2015 – In short that MDG has been met (Chen and Ravallion, 2012; World Bank, 2012: 3). However, this measure remains contested (see Pogge, 2012) and it is well documented that this goal of halving world poverty will be met largely due to growth in China (Bourguignon et al., 2008; Chen and Ravallion, 2012). Indeed, if China is removed from the world poverty data the total number of people under $1.25 has barely changed since 1990 and the number of people under the $2 poverty line has risen slightly.

Further, different interpretations can be reached across the various targets depending on the question posed in terms of level and form of assessment. At a global level, indicators for the seven key MDGs (income poverty, primary completion, gender equality in education, nutrition, child mortality, maternal mortality, and water) have all improved since 1990. Three of these seven MDGs are 'on-track' (income poverty, gender and water) in terms of the degree of reduction, three are 'off-track' but not too badly so (nutrition, primary school

completion and child mortality) and one is very 'off-track' (maternal mortality) (Kenny and Sumner, 2011). Further, there has been faster progress in the 2000-2008 period for income, primary completion, child and maternal mortality than in the 1990s. However, when one turns to country level, only half of countries are 'on-track' for the income, education, gender and water MDGs and a quarter to a third of countries are on-track for nutrition, child mortality and maternal mortality.

Fukuda-Parr and Greenstein (2010) argue that one should compare the rate of annual progress both before and after the introduction of the MDGs. Overall, across all developing countries, they find evidence of acceleration of poverty reduction is very limited: only income poverty reduction and water access were accelerated in more than half of all countries. However, acceleration in the least developed countries and Sub-Saharan Africa was better, with half or more countries accelerating on four or five of seven key MDGs. Leo and Barmeier (2010) have constructed the Center for Global Development's MDG Progress Index which assesses how far a country is above or below the trajectory to meet the MDGs, which gives slightly lower 'on track' ratings than the World Bank's and IMF's Global Monitoring Report.

Table 2.1 Global MDG Progress

MDG	Improvement Since 1990? (Kenny and Sumner, 2011)	Distance progressed to Goal (100% = Goal attained) (World Bank, 2011)	On Track? (Kenny and Sumner, 2011)	Faster Progress 2003-2008 compared to 1990-2001/2? (Fukuda-Parr and Greenstein, 2009)	Faster than Historical Patterns? (1970-2000 vs 2000-2009) (Kenny and Sumner, 2011)
Poverty	Y	80	Y	Y	
Undernourishment	Y	77	N	N	
Primary education	Y	90	N	Y	N
Gender equality in primary education	Y	96	Y	N	N
Child mortality	Y	69	N	Y	Y
Maternal mortality	Y	57	N	Y	Y
Drinking water	Y	88	Y	N	

Source: Kenny and Sumner (2011). Note: See original sources for methodology. Studies chosen here are considered to be "best available" estimates. Empty cells indicate insufficient data to make judgment.

Table 2.2 Country-Level MDG Progress (% of developing countries making progress on each target)

MDG	Making Progress (Leo and Barmeier, 2011)	On Track (Leo and Barmeier, 2011)	On Track (World Bank, 2011)	Faster Progress (Fukuda-Parr and Greenstein, 2009)	Outperforming Historical Pattern* (Kenny and Sumner, 2011)
Poverty	63	49	47	51	
Undernourishment	55	34	25		
Primary Education	75	46	55	35	68
Gender Equality **	61	55	89/82 **	46	56
Child Mortality	95	38	36	32	51
Maternal Mortality	83	19	30		33
Drinking Water	73	49	66	34	

Sources: Kenny and Sumner (2011). See also Leo and Thuotte (2011).

** Represents the proportion of developing countries for which the appropriate data is available.*
*** Gender equality for primary and secondary education, respectively. Note: See original sources for methodology. Studies chosen here are considered to be „best available" estimates. Empty cells indicate insufficient data to make judgment.*

Furthermore, the MDGs are reductions of half or three-quarters or two-third and so on in the incidence of poverty by various measures. Poverty trends ought also to be assessed by the actual incidence of poverty – meaning the percentage of the population and absolute number of poor people. Taking such an approach, a different picture emerges (see Table). For example, the number of poor people barely fell in South Asia between 1990 and 2008, although this should fall significantly by 2015 and the number of $1.25/day poor people in Sub-Saharan Africa increased by a third from under 300m in 1990 to 385m in 2008, with the 2015 projection even higher at close to 400 million. Only in East Asia were there significant reductions in poverty incidence between 1990 and 2008 were achieved in East Asia and the Pacific.

Table 2.3 Global poverty estimates, $1.25, 1990-2015

US$1.25 poverty line	Population poor (%)			People poor (millions)		
	1990	2008	2015	1990	2008	2015
East Asia and Pacific	56.2	14.3	7.7	926.4	284.4	159.3
China	60.2	13.1	-	683.2	173.0	-
Europe and Central Asia	1.9	0.5	0.3	8.9	2.2	1.4
Latin America and the Caribbean	12.2	6.5	5.5	53.4	36.8	33.6
Middle East and North Africa	5.8	2.7	2.7	13.0	8.6	9.7
South Asia	53.8	36.0	23.9	617.3	570.9	418.7
Sub-Saharan Africa	56.5	47.5	41.2	289.7	386.0	397.2
TOTAL	43.1	22.4	16.3	1908.6	1289.0	1019.9
TOTAL MINUS CHINA	37.2	25.2	-	1226.8	1116.0	-

Source: World Bank (2012, p. 3).

The latest World Bank (2012: 3) poverty projections are that there will be 1 billion extreme poor (at $1.25) in 2015. This is based on dynamic inequality modeled on a set of assumptions.

Progress on other MDGs and non-income poverty, notably nutrition, education and health according to the latest MDG report (UN, 2012) which is notably more optimistic in the data presented than the previous year (UN, 2011).

The data for the proportion of children under 5s who are underweight has decreased across all regions of the world since 1990. Despite achieving a reduction in this proportion, progress in Southern Asia and sub-Saharan has been slower.

Further, many regions of the developing world have now attained levels of primary education enrolment at between 90 per cent and 95 per cent. However, the average enrolment rate across developing regions remains slightly lower due in particular to sub-Saharan Africa.

Table 2.4 Non-income MDGs, 1990-2010 (% population)

	1990	2000	2010
Proportion of children under age 5 who are underweight (%)			
Developing regions	29	-	18
Southern Asia	51	-	32
Sub-Saharan Africa	29	-	22
South-Eastern Asia	31	-	17
Western Asia	15	-	5
Eastern Asia	15	-	3
Latin America & the Caribbean	8	-	3
Adjusted net enrolment ratio in primary education (%)			
Developing regions	-	82	90
Southern Asia	-	77	93
Sub-Saharan Africa	-	58	76
South-Eastern Asia	-	92	95
Western Asia	-	84	92
Eastern Asia	-	96	97
Latin America & the Caribbean	-	94	95
Under 5 mortality rate (Deaths per 1,000 live births)			
Developing regions	97	-	63
Southern Asia	117	-	66
Sub-Saharan Africa	174	-	121
South-Eastern Asia	71	-	32
Western Asia	67	-	32
Eastern Asia	48	-	18
Latin America & the Caribbean	54	-	23

Continuation of Table 2.4

	1990	2000	2010
Access to improved water source (%)			
Developing regions	70	-	86
Southern Asia	72	-	90
Sub-Saharan Africa	49	-	61
South-Eastern Asia	71	-	88
Western Asia	85	-	89
Eastern Asia	68	-	91
Latin America & the Caribbean	85	-	94
Access to improved sanitation (%)			
Developing regions	36	-	56
Southern Asia	24	-	41
Sub-Saharan Africa	26	-	30
South-Eastern Asia	46	-	69
Western Asia	80	-	85
Eastern Asia	27	-	66
Latin America & the Caribbean	68	-	80

Source: *UN (2012, pp. 13, 16, 26, 52, 54 respectively).*
Note: *Primary education 2000 based on data for 1999.*

One further issue, that has emerged is the question of disparities between the averages above and specific groups. For example, UNICEF (2010) has noted in a systematic presentation of the available data, there are considerable disparities across various if not all MDGs, particularly across urban-rural estimates and - as would be expected - considerable differences in outcomes between national averages and the poorest (the bottom 20% expenditure group). For example, a national average of 42 per cent of underweight children in South Asia sits in contrast to 56 per cent of the children underweight in the poorest quintile. The ratio between averages and the poorest is even greater by other MDGs.

Gender differences are more complicated as UNICEF (2011) argues in a systematic disaggregation of gender data. For example, in some cases gender disparities are worse for boys (outside Asia, under-five mortality is usually higher among boys than girls) or the same at early ages and worsening during adolescence (nutrition and health indicators are – in general – about the same at early ages – but adolescent girls are less likely to be literate than boys for example) or there are more complex interactions of gender and poverty (gender parity in education is much less likely in the poorest 20% group).

Table 2.5 Selected MDG and national averages vs. the women, rural population and the poorest

	National Average	Women	Rural	Poorest 20%
MDG 1 – Underweight prevalence in children under five (%), 2003–9				
Developing countries excl. China	23	24	28	40
Sub-Saharan Africa	22	21	25	29
South Asia	42	42	45	56
LDCs	28	27	30	34
China	6	7	8	n.a.
India	43	43	46	57
MDG 4 – Measles coverage %, 2008				
Developing countries excl. China	81	64	61	51
Sub-Saharan Africa	72	58	55	45
South Asia	74	59	58	44
LDCs	76	65	62	56
China	94	n.a.	n.a.	n.a.
India	70	56	54	40
MDG 5 – skilled attendant at delivery, 2003-9				
Developing countries excl. China	63	-	50	28
Sub-Saharan Africa	46	-	36	24
South Asia	42	-	33	17
LDCs	38	-	29	24
China	98	-	97	n.a
India	47	-	38	19

Source: UNICEF (2010, pp. 51-63).

This speaks to a wider 'equity' agenda that has emerged strongly at the UN and relates to contested trends on income inequality. In the top 20 countries where 90 per cent of the world's poor live (see Sumner 2012b).

The fact that most of the remaining world's poor – by income and multi-dimensional poverty – now live in middle-income countries (MICs), who have attained MIC status through a decade or more of sustained economic growth, raises questions about who is 'left behind'.

Interest in such questions of poverty disparities is (re)emerging in policy debates around the Millennium Development Goals (MDGs) and any post-2015 goals (see for discussion, Melamed 2012; UNDP 2010; UNICEF 2010; UN 2012; Vandemoortele and Delamonica 2010). Indeed, who the remaining poor are is an important question in itself for any successor framework to the MDGs.

Numerous publications of the Chronic Poverty Research Centre (see summary of ten years of research in Shepherd 2011) note that there are a number of individuals, households and social groups *more likely* to experience chronic poverty (meaning long-run poverty). Hulme*et al*. (2001 p.21) argue that these include not only gender dimensions at different life course stages but also those members of marginalised social groups, ethnicities and people living in remote rural areas.

The literature on longitudinal poverty analysis in developing countries is rapidly expanding (see recent edited volumes by Addison *et al*. (2009) and Baulch (2011) for example. Panel studies – with caveats – also point towards the importance of spatial and social characteristics and their association with those who *remain poor*.

For example, in their wide-ranging critical review of studies of 'poverty mobility' or movements in and out of poverty, Dercon and Shapiro (2007 p.30) note that many studies point towards the movement out of poverty being associated with household endowments of education and assets and community characteristics. They note:

> In the last few years, many more panel datasets have become available from developing countries. A number have been used for the analysis of poverty mobility and its correlates. Most research has found that household and community endowments, such as assets and infrastructure, matter for allowing people to move out of poverty, while shocks and risk make and keep people poor. Nevertheless, it is difficult to generalize on which factors matter most in different contexts.

Table 2.6 presents selected studies from their review of panel datasets.

In a similar vein, studies of the intergenerational transmission of poverty – albeit largely OECD country based – have also noted certain characteristics associated with the *intergenerational transmission of poverty* (as transmitted from adult to child) (see reviews of Bird 2007; Moore 2001; Smith and Moore 2006). For example, Bird's (2007) review of the empirical literature argues that there is an association in the literature between certain household characteristics such as access to productive assets, and education and skill acquisition, and extra-household influences such as class, caste and ethnicity and the intergenerational transmission of poverty.

All of the above points to the following (without any claims to be conclusive): (i) that there are substantially different poverty rates for different spatial and social groups; (ii) that over time there may be significant changes in the composition of poverty as some people move out of poverty (and others may fall into poverty) and (iii) that those who remain poor may be more likely to have certain spatial and social characteristics than those who exit poverty.

Table 2.6 Determinants of escaping or falling into poverty in selected countries (from panel datasets)

Country	Years	Factors significant for escaping poverty	Factors significant for entering into poverty
Bangladesh	1987–2000	Factors related to the HH asset base e.g. asset accumulation, multiple livelihood activities, income diversification, occupational shift to off-farm activities	Factors related to lifecycle changes (number of working members, high dependency ratio, abandonment by husband) and crises and shocks e.g. illness and natural disasters
India	1970–1981	Literacy, ownership of a house, increase in cultivated area and income from livestock, better infrastructure	-
Uganda	1980–2004	Income diversification, irrigation and land improvement	Illness and health-related expenses, social and customary expenses on marriage and funerals, high-interest private loans, crop disease, drought and irrigation failure
Kenya	1997–2005	Income diversification, formal sector employment, crop diversification, social factors	High dependency ratio, illness and heavy health care expenses, drought

Source: Drawn from review of Dercon and Shapiro (2007).

2b. The impact of the MDGs

The available evidence on the effects of the MDGs is summarised below.[2] In the quest for alliteration, albeit with an underlying logic of impacts at various 'moments' in the policy process - they have been categorised as follows: adoption (in policy); adaptation (to locally defined goals, indicators and targets); allocation (of resources); aberrations (and unintended distortions); and acceleration (of MDG progress in actual poverty reduction outcomes – see earlier discussion).

Table 2.7 Evidence on MDG impacts

Channel of impact		Key findings
Adoption	in global policy discourse, and in PRSPs and donors statements	Global – high impact; PRSPs – medium impact; Donor statements – medium impact.
Adaptation	to locally defined goals, indicators and targets	Good evidence of impact in some countries but mixed/unclear and needs more systematic research.
Allocation	(of resources) towards social spending by donors and governments	High impact on Overseas Development Aid (ODA) and sub-sector allocations to MDG related areas such as primary education and infectious diseases. Unclear impact on government social spending.
Aberrations	distortions and other forms that are expected	Unclear in general but evidence of poorest quintiles with considerably higher deprivations than average indicators and comparison of net primary and teacher ratios. For example, evidence in sub-Saharan Africa suggests net primary enrolment may have improved at the expense of education quality.
Acceleration	of poverty reduction post-2002	Globally – weak evidence of 'acceleration'; Least Developed Countries and SS Africa - acceleration stronger.

Sources: Bourguignon et al. (2008); Fukuda-Parr (2010); McKinley (2010); UNDP (2010); Vandemoortele and Delamonica(2010).

Recent analysis by Manning (2009 p.25-26) suggests that the influence of the MDGs on the international poverty discourse was "strong, and significantly stronger than previous attempts to use indicator sets to highlight issues". He cites as evidence the regular 'MDG Reports' and Global Monitoring Reports issued by both various multilateral agencies, the national and international work of UNDP, high-level events, the use of the MDGs in G8 Summit discourse and the use of MDG target data in agendas such as Education for All. At the country level, adoptive effects are more diffuse. In terms of Poverty Reduction Strategy Papers (PRSPs) and donor statements, Fukuda-Parr (2010 p.29) notes that "All but four of the 22 PRSPs reviewed emphatically state commitment to the MDGs as a principle" and most include key MDG priority areas. However, as her table shows below, some were more prominent than others. Multidimensional poverty (including income poverty, education and health) is often the stated central policy objective of most bilateral aid programs but "some objectives such as maternal mortality and child survival receive surprisingly limited emphasis" (Ibid.)

[2] This section partly draws upon Sumner and Tiwari (2011).

Table 2.8 Top Ten Most Commonly Selected MDG Priorities in 22 PRSPs and 20 donor programmes

MDG priority	Action plan outlined	Pillar or core objective	Targets defined
Most included among PRSP priorities			
Primary schooling – MDG 2	21	20	21
Health (general) – MDG4-6	20	19	20
Income poverty – MDG 1	18	15	21
Governance (rule of law, corruption)	18	11	3
Water & sanitation – MDG 7	18	6	21
Gender equality (general) – MDG 3	16	4	8
HIV/AIDS and other diseases – MDG 6	15	7	17
Employment (general) – MDG 1	14	9	7
Hunger – MDG 1	14	2	1
Social integration/vulnerable groups- MDG 6	13	6	0

Most included among donor priorities	Core priority	Important but not core priority
Environment – general	19	0
Human rights	17	0
Education – general	15	0
Governance	15	1
Peace and Security	15	4
Health – general	14	0
Democracy	14	0
Income poverty	13	1
HIV/AIDS and global diseases	12	1
Water and sanitation	10	1

Source: Fukuda-Parr (2010: 31).

At the country level, there is some evidence of local adaptation insofar as locally defined MDGS have been added in a number of countries – Afghanistan, Albania, Azerbaijan, Benin, Bhutan, Cambodia, Cook Islands, Kenya, Kosovo, Mongolia and Vietnam. Furthermore, a recent UNDP/Columbia University study of thirty countries revealed that 25 had adapted the MDG goals or indicators (see examples in Africa, Table). Yet evidence remains relatively thin in this area.

Table 2.9 MDG national ownership in selected sub-Saharan African countries

	Adaption of goals or targets	Adaption of indicators	National processes of localisation
Botswana	Y		Country's Vision 2016 and National Development Plan for 2009-2016 matches the MDGs.
Ethiopia		Y	National development plan, PASDEP (2005-2010) prioritises MDG achievements.
Ghana	Y	Y	The GPRS II (2006-09) explicitly focuses on the MDGs, which also have been given a separate section in the annual budget statement; civil society prepared MDG shadow report.
Malawi		Y	The Malawi Growth and Development Strategy (2006-2011) is a MDG-focused national plan; civil society is active in producing shadow MDG reports led by the Council of NGOs in Malawi.
Mozambique			MDGs incorporated into the second PARPA (national poverty reduction strategy).
Senegal	Y	Y	The President established a Special Presidential Adviser on the MDGs and appointed a national steering committee to coordinate the national response for MDG achievement.
Sierra Leone	Y		The 2nd Growth and Poverty Reduction Strategy (GPRS) focuses explicitly on the MDGs, with the Office of the President leading its implementation and oversight.
Tanzania	Y	Y	MDGs mainstreamed into Development Vision 2025 and medium term plan MKUKUTA, and for Zanzibar.
Togo		Y	Adopted a National Development Strategy based on the MDGs (2007).

Source: Extracted from UNDP (2010) based on National MDG Reports.

One benefactor from the MDGs has been ODA mobilisation, particularly to health and education). As Clemens, Kenny and Moss (2007 p.747) put it, "there can be little doubt that the MDGs helped galvanise the aid community and reverse the aid declines".

In terms of aid and government spending, Kenny and Sumner (2011, p.4) note on MDG impacts that:

> As can be seen, the 1990s were a period of stagnation in aid flows while the period since the Millennium Declaration has seen resurgence in growth of aid flows. Between 2000 and 2009, ODA climbed from $72 to $128 billion (Levels were no higher than in 1991 measured as a percentage of rich country GDP, however). Furthermore, aid flows shifted towards income groups and countries that faced some of the greatest challenges meeting the MDGs. As can be seen, the growth in global aid flows was focused on low income countries, with per capita allocations rising from $27 to $47 between 2000 and 2009. This reversed a dramatic decline in per capita flows to the poorest countries in the previous ten years (although it is likely to reflect in part the graduation to middle income status of some large countries with comparatively low per-capita aid receipts).

> ODA to countries in sub-Saharan Africa in particular also reversed a trend of decline from 1990-2000 to 2000-2010. Aid to the region increased from $12 billion to $42 billion 2000-2009 –more than tripling… The sectoral allocation of aid flows also suggests a greater focus on 'MDG priority areas.' Of course, aid is controlled by the same agencies that agreed the DAC targets, suggesting that it is possible the aid shift to social sectors might have occurred even absent the MDGs… … the total increase in aid flows was, interestingly, about the increase called for by MDG costing studies.

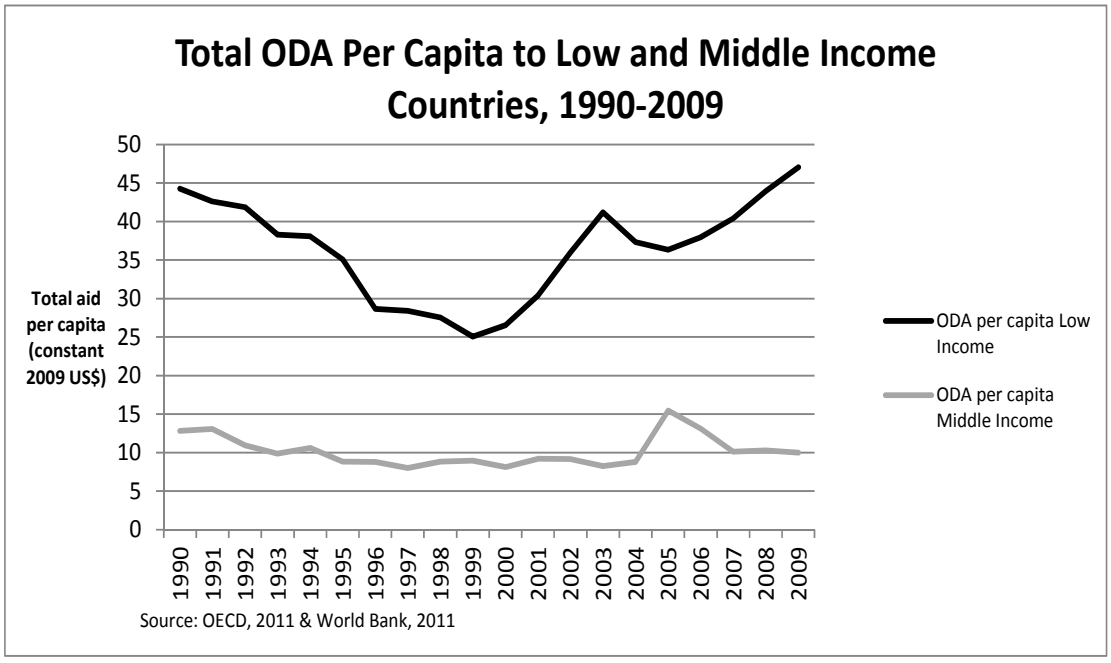
Also discussed is domestic spending on health and education in LICs and MICs:

> While it is hard to detect a trend, as GDP/capita grew in the vast majority of developing countries during the last decade, there will have been an increase in absolute per capita spending. The figures suggest that low income countries spend about 8% of their GDP on health and education. This equals about $41 per capita (at market rates). Compare this to aid funding of around $7.50 per capita for health and education in low income countries, it is clear that domestic financing decisions would dominate outcomes, all else equal (Kenny and Sumner, 2011 p.5).

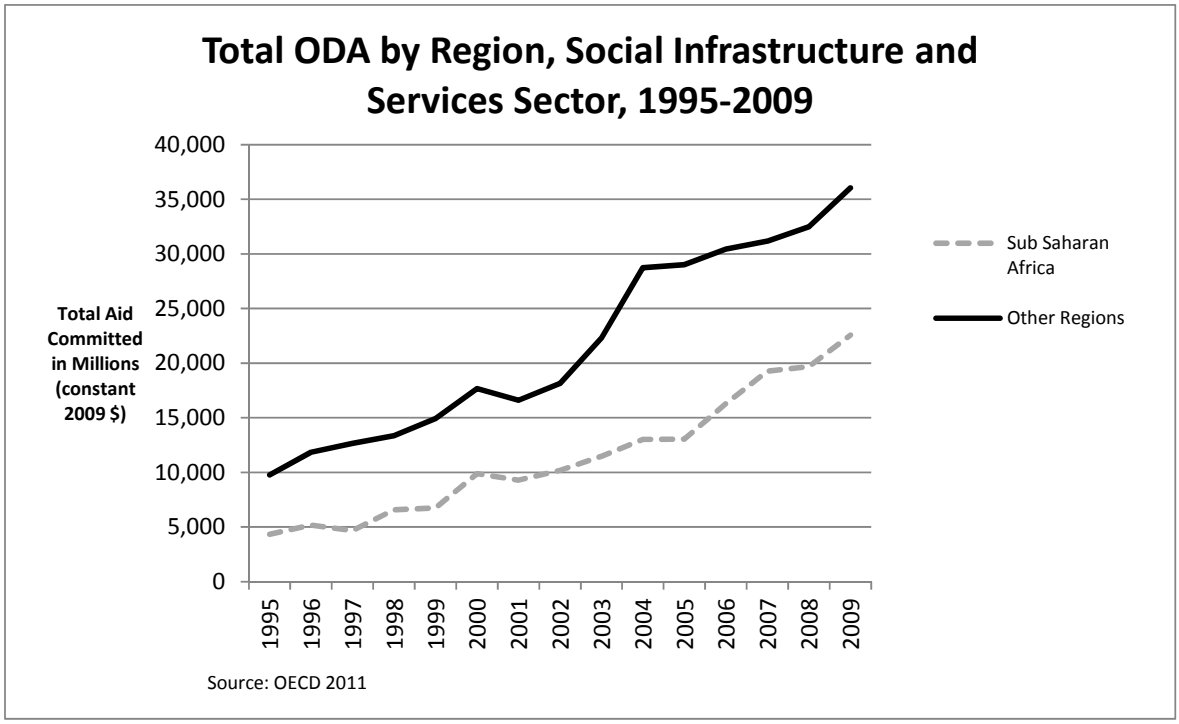
And an attempt is made to assess policy changes:

> We can consider measures of actual policy change as well as strategies to examine if the MDG period has been associated with improved policies in MDG priority areas. One measure is provided by the World Bank's Country Policy and Institutional Assessment (CPIA) process, which (inter alia) scores low-income countries on their development policies and the quality of their institutions, with scores from 0 (absent) to 6 (perfect). It does this against a consistent questionnaire instrument to reduce subjectivity in the scores… The scores suggest minor improvement in scores for East Asia and Eastern Europe, but the broader story is one of stagnation –with no region seeing an improvement greater than 0.2 on a 0 to 6 scale. The Social Inclusion index of the CPIA is designed to measure policy efforts towards gender equality, equity of public resource use, building human resources, social protection and labor and policies and institutions for environmental sustainability… [O]nce again, there is no evidence of strongly improved outcomes (Kenny and Sumner, 2011, p.7).

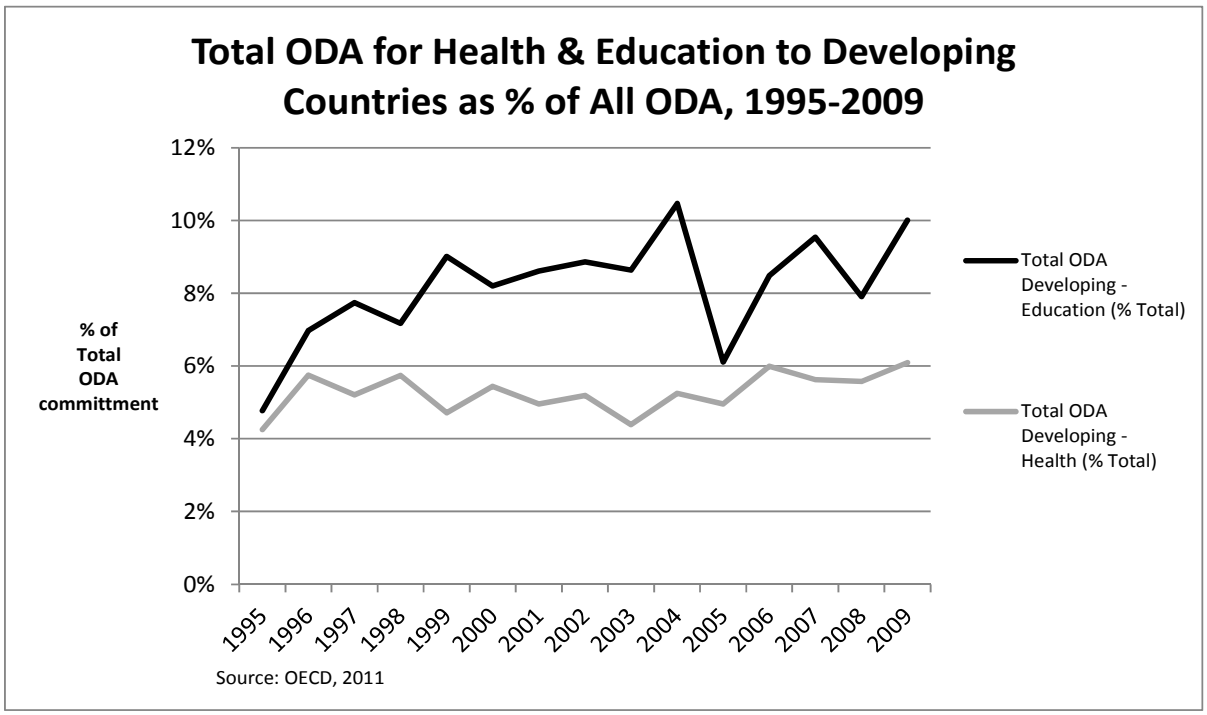
The graphs below from Kenny and Sumner (2012) present the data.



Kenny and Sumner (2012)



Kenny and Sumner (2012)



Kenny and Sumner (2012)

3. The new geography of global poverty

3a. The shift of world poverty to middle income countries

A major shift in global poverty has taken place over the last two decades: Much of world poverty has moved from low income to middle income countries in the sense that some of today's major MICs have graduated to this status. However, it is not that poor people have moved – rather the countries that many of the world's poor live in have got significantly better off in average income and 'graduated' to MIC status whilst often poverty has fallen as much as one might expect.

The majority of the world's poor, by income and multi-dimensional poverty measures, live in countries classified by the World Bank as middle-income countries (Alkire et al. 2011; Chandy and Gertz 2011; Glassman et al. 2011; Kanbur and Sumner 2011a, 2011b; Koch 2011; Sumner 2010, 2012a; 2012b). Such patterns matter beyond the thresholds of low-income countries and middle-income countries (LICs/MICs) set by the World Bank, because they reflect a pattern of rising average incomes and although the thresholds do not mean a sudden change in countries when a line is crossed in per capita income, substantially higher levels of average per capita income imply substantially more domestic resources available for poverty reduction.

In terms of robustness by data coverage; the new PovCal (2012) data covers 84 per cent of the population of LICs and 98 per cent of the population of MICs. There are very few countries missing data altogether.[3]

It is estimated that most of the world's poor in 2008 (by both $1.25 and $2 international poverty lines) lived in South Asia and Sub-Saharan Africa (see Chen and Ravallion; 2012). In contrast, in 1990 half of the world's poor lived in East Asia and the Pacific, mostly in China (see Chen and Ravallion, 2008).

Estimates for 2008 confirm earlier findings that the world's poor (by both $1.25 and $2 poverty lines) no longer live in Low Income Countries nor the Least Developed Countries groups (see Table).

In spite of the change in the global distribution of poverty, it is important of course to note that LICs (and LDCs) typically have higher rates of poverty incidence (see Table) and larger poverty gaps (see Sumner, 2012b; 2012c). Thus any discussion of poverty in MICs should not distract from poverty in LICs.

That said, some MICs do have surprisingly high poverty headcounts (and a higher than expected poverty gap) even at the higher average level of per capita income found in MICs. Across all MICs, the average (population weighted) incidence of poverty is almost one in five of the population at $1.25/day, and 40 per cent at $2/day. In the lower-middle income countries (LMICs), this rises to 30 per cent and 60 per cent respectively (see Sumner, 2012a).[4]

Further, there are almost a billion extreme ($1.25/day) poor people in MICs or a 'new bottom billion' as referred to in Sumner (2012). This is 'new' in the sense it is not the 'bottom billion' originally discussed by Collier (2007, p.3), which was identified as the total

[3] Most notably are: Afghanistan (29m population in 2008), Korea (23m population), Myanmar (49m population) and Uzbekistan (27m population). Argentina (total population 39m) is not included as it has only urban poverty data in PovCal (2012) (presumably due to its high urbanisation rate).

[4] For comparison, the LMIC group without India has poverty incidences of 25 per cent and 50 per cent at $1.25 and $2 respectively.

population of 58 countries that were "falling behind and often falling apart" (Collier, 2007 p.3). This was based on data from the late 1990s and the turn of the century.

Underlying this pattern is a slightly more surprising one when one considers also 'fragile States' and combinations of LICs or MICs and fragile states In short, the world's poor are increasingly concentrated in fragile LICs (18.4 per cent of world poverty) and stable MICs (60.4 per cent of the world'spoor). Only 7 per cent of world poverty (90 million poor people) live in 'traditional' developing countries – meaning low income and stable (e.g. Tanzania) (see Table).

Table 3.1 Proportion of global poverty, and poverty incidence in LICs and LDCs, $1.25 and $2, 2008

	$1.25 poverty line			$2 poverty line		
	Millions of people	% world's poor	Poverty incidence (% popn)	Millions of people	% world's poor	Poverty incidence (% popn)
Low Income Countries	316.7	25.7	48.5	486.3	20.6	74.4
Middle-income countries	917.1	74.3	19.5	1,871.1	79.4	39.7
LMICs	711.6	57.7	30.2	1,394.5	59.2	59.1
UMICs	205.5	16.7	8.7	476.6	20.2	20.3
China and India	599.0	48.6	24.3	1,219.5	51.7	53.8
Least Developed Countries	317.8	25.8	46.1	497.2	21.1	72.1
Total world poverty	1,233.8	100.0	22.8	2,357.5	100.0	43.6

Source: Sumner (2012c) processed from PovCal Net (2012).

The number of poor people living in 'Fragile States' depends both on the definition of 'fragile states' as well as the definition of poverty. The above estimates are based on the 'non-official' OECD (2012) list of 45 fragile states. The new PovCal (2012) data has high coverage of those 45 countries (see Table). Of those 45 countries 26 are low income and 18 are (lower) middle-income countries (and one country is not classified).

There are 400 million poor ($1.25) people living in those 45 'fragile States', who in total account for just under a third of world poverty. 45 per cent of the poor in those fragile States are living in countries classified as middle-income and 55 per cent in countries classified as low-income. 65 per cent live in Sub-Saharan Africa. It is evident that when considering the OECD (2012) 'non-official' fragile states list, is more than two-thirds of the poor from fragile States live in just five countries: Nigeria (100 million) Bangladesh (76 million), DRC (55 million), Pakistan (35 million) and Kenya (15.7 million). Similar patterns are even more pronounced if one uses the higher poverty measure of $2/day.

Table 3.2 Distribution of world poverty by low and middle income and fragile States combinations, 2008 ($1.25)

	LICs	MICs	Totals
% world poverty (%)			
Fragile States	18.4	13.9	32.3
Non-Fragile States	7.3	60.4	67.7
	25.7	74.3	100.0
Poor (millions)			
Fragile States	226.8	172.1	398.9
Non-Fragile States	89.9	745.0	834.9
	316.7	917.1	1,233.8

Source: Sumner (2012c) processed from PovCal (2012). Note: Fragile States = 45 countries in OECD (2012).

The number of poor in Fragile States has risen partially due to the revision of countries in the OECD (2012) list; most notably, the inclusion of populous Bangladesh in the group, which has a high poverty incidence but which was not in the 43 countries of the OECD (2010) 'Resource Flows to Fragile States' list.[5]

This earlier list was the product of combining three available lists of 'fragile States' at that time (Brookings, Carlton and the World Bank's) thus producing the broadest possible list of 43 fragile States.

As noted in Sumner (2010), only 17 of those 43 'fragile states' were common across the lists, and the differences in the countries listed mean the proportion of the world's poor in fragile States in 2007 ranged from 6 per cent to 25 per cent (see detailed critique of the 'fragile States' lists from Harttgen and Klasen, 2010). It is notable that the G7+ group of fragile states has less than 20 members which might suggest the donor practice of aggregating lists of fragile states to generate 'inclusive' groups actually conflates countries with quite different problems (conflict/post-conflict versus poor governance).

The Carlton and Brookings lists of 'fragile States' have not been updated since 2007 and 2008 respectively, and consequentially are less frequently cited.[6]

One further list that has come to prominence is the annually updated list of the Fund for Peace, called the Failed States Index. This list is always comprised of 60 countries, divided into three groups of twenty - 'critical' (bottom 20), 'in danger' (bottom 21-40), and 'borderline' (bottom 41-60).

[5] The following were added: Bangladesh, Burkina Faso, Georgia, Lebanon, Malawi, Palestinian Adm. Areas, Sri Lanka and Uzbekistan and the following were removed: Djibouti, Equatorial Guinea, The Gambia, Rwanda, Tonga, West Bank and Gaza. See Annex 1 Table A1 for full list of OECD (2012) fragile States.

[6] For Carlton and Brooking lists see respectively, see www4.carleton.ca/cifp/app/ffs_raniking.php and www.brookings.edu/reports/2008/02_weak_states_index.aspx.

The new PovCal (2012) dataset produces the following data: 259m $1.25 poor in the 'critical' group, 119m $1.25 poor in the "in danger" group, and 69m $1.25 poor in the 'borderline' group (totaling 378m without the 'borderline' group and 447m with the 'borderline group').

In short, 21 per cent of the world's poor live in the 20 'critical' countries, 11 per cent live 'in danger' and a further 6 per cent of the world's poor are in 'borderline' countries (in sum 38.4 per cent of the world's poor in those 60 countries).

Table 3.3 Distribution of poverty in OECD (2012) Fragile States (group of 45 countries), 2008

	Millions of people ($1.25)	% Fragile States poor ($1.25)
LICs	226.8	56.9
LMICs	172.1	43.1
Total in 45 Fragile States	398.9	100.0
Total in 5 countries (Nigeria, DRC, Bangladesh, Pakistan and Kenya)	281.2	70.5
Europe & Central Asia	1.4	0.3
Middle East & North Africa	4.6	1.1
Sub-Saharan Africa	263.0	65.9
East Asia & Pacific	3.2	0.8
South Asia	120.4	30.2
Latin America & Caribbean	6.3	1.6

Source: Sumner (2012c) processed from PovCal (2012). Note: Fragile States = 45 countries in OECD (2012).

The changes in global poverty distribution are a function of several factors. First, almost 30 countries became better off in average per capita terms (by exchange rate conversion), attaining 'middle-income' classification. As a consequence, the number of LICs fell from 63 in 2000 to 35 in 2010 (see Table). This could fall to just 16 LICs in 2030 if one applies IMF World Economic Outlook (2012) projections up to 2030 (see below and Sumner, 2012b; 2012c). Second, the world's poor are surprisingly concentrated: not only do 80 per cent of the world's extreme ($1.25/day) poor live in just 10 countries, which account for 980 million (another 'bottom billion') of the world's poor, but almost 90 per cent of the world's extreme poor live in just 20 countries.

Table 3.4 Number of LICs and MICs (GNI US$ per capita, Atlas)

World Bank Fiscal Year (data from calendar year)	FY02 (2000)	FY05 (2003)	FY10 (2008)	FY11 (2009)	FY12 (2010)
LICs	63	61	43	40	35
MICs	92	93	101	104	109

Source: World Bank (2011a).

Of these 'top 20' poor countries by numbers of poor people, only half of these countries are LICs and the remaining half are MICs, and almost all of these are MICs which have attained MIC status in the past decade.

The 28 'new MICs' ('new' in the sense of 'graduating' over the last decade) account for two-thirds of the world's poor when added to China, or half of the world's poor without China. Most notably, there are five large MICs (Pakistan, India, Nigeria, China, and Indonesia – henceforth 'PINCIs') which account for a substantial proportion of the world's poor, and indeed, most of the number who 'moved' from living in LICs to living in MICs (Kanbur and Sumner, 2011; Glennie, 2011). In short, many of those countries where the world's poor are concentrated are countries that became better off in average per capita income terms and graduated to LMIC status over the past decade.

In those countries becoming richer in average per capita terms and achieving MIC status, although the incidence of poverty (per cent of population poor) generally fell, the absolute numbers of poor people fell less than one might expect. The actual number of poor people ($1.25/day) barely fell (or even rose) in India, Nigeria and Angola. In China, Indonesia, Pakistan, Vietnam and Sudan, $1.25 poverty incidence did fall. However, when one considers $2 poverty, there are only substantial declines in the number of poor people in China and Vietnam, and to a lesser extent Indonesia.

Table 3.5 Top 10 poor countries (by number of $1.25/day poor people), 2008, country classifications and GDP per capita PPP (countries transitioning from LIC to MIC since 1990 are highlighted)

	% World $1.25 Poor	% World $2 Poor	Country classification (based on data for calendar year)		GDP pc/day (PPP, constant 2005 $)	
	2008	2008	1990	2009	1990	2009
1. India	34.5	35.0	LIC	LMIC	3.4	8.2
2. China	14.0	16.7	LIC	UMIC	3.0	17.0
3. Nigeria	8.1	5.4	LIC	LMIC	3.9	5.6
4. Bangladesh	6.0	5.3	LIC	LIC	2.0	3.9
5. DRC	4.5	2.6	LIC	LIC	1.7	0.8
6. Indonesia	4.2	5.2	LIC	LMIC	5.5	10.1
7. Pakistan *	2.3	5.2	LIC	LMIC	4.4	6.5

Contination of Table 3.5

	% World $1.25 Poor	% World $2 Poor	Country classification (based on data for calendar year)		GDP pc/day (PPP, constant 2005 $)	
	2008	2008	1990	2009	1990	2009
8. Tanzania	1.4	1.6	LIC	LIC	2.4	3.4
9. Philippines	1.3	1.6	LMIC	LMIC	7.0	9.2
10. Kenya	1.2	1.1	LIC	LIC	3.9	3.9
Top 10	79.2	79.5				
Top 20	86.6	89.1				
New MICs (28)	52.8	53.7				
New MICs + China	66.8	70.4				
PINCIs	63.7	66.6				

Source: *Sumner (2012c) processed from PovCal (2012) and WDI (2011).*
Note: ** = The poverty data listed in PovCal (2012) for these countries in 2008 appears lower than one might expect suggesting caution (see also discussion in Sumner, 2012b; 2012c) and for rates by national poverty lines see Gentilini and Sumner (2012). Top 11-20 = Vietnam, Uganda, Madagascar, Mozambique, Ethiopia, Brazil, Angola, Malawi, Nepal and Sudan*

Clearly, there is much more to investigate here in terms of explanatory factors. There are also some data that one might question. The poverty rates listed in PovCal for three countries (Pakistan, Sudan and Ethiopia) in 2008 appears to be below what might seem likely compared to national poverty lines (see for discussion, Gentilini and Sumner, 2012). One would want to look closely at population growth rates in the poorest expenditure groups, and what has happened in the channels whereby economic development could lead to poverty reduction (e.g. wage employment, real wages, self-employment and productivity in self employment, and the output elasticity of demand for labour). In doing so reconnecting poverty analysis to broader processes of economic development can occur (Harriss, 2007). Interestingly, for those new MICs with two data points there are some drastic changes away from agriculture value added as a proportion of GDP. For example, the proportion of agriculture value added as a percent of GDP drastically fell in Ghana, India, Laos, Lesotho, Vietnam and Yemen (see Table and discussion in Sumner, 2012b; 2012c).

Table 3.6 Poverty in the top 10 countries, 1990 vs. 2008 (countries transitioning from LIC to MIC since 1990 are highlighted)

	% population poor				Poor people (millions)			
	$1.25		$2		$1.25		$2	
	1990	2008	1990	2008	1990	2008	1990	2008
1. India	51.3	37.4	82.6	72.4	435.9	426.0	701.7	825.1
2. China	60.2	13.1	84.6	29.8	683.2	173.0	960.6	394.3
3. Nigeria	60.4	66.5	80.1	84.0	58.8	100.5	77.9	127.0
4. Bangladesh	68.4	46.6	91.8	78.4	79.1	74.6	106.2	125.5
5. DRC	56.3	86.2	77.5	94.5	20.8	55.4	28.7	60.7
6. Indonesia	54.3	22.6	84.6	54.4	96.3	51.5	150.0	123.6
7. Pakistan *	61.9	21.0	87.0	60.2	66.9	34.9	93.9	99.9
8. Tanzania	69.8	66.8	90.2	87.3	17.8	28.4	23.0	37.1
9. Philippines	29.7	19.4	54.9	42.2	18.5	17.5	34.2	38.1
10. Kenya	36.2	40.6	57.0	64.5	8.5	15.7	13.4	25.0
TOP 10					1,485.6	977.5	2,189.6	1,856.4
TOP 20					1,664.2	1,095.8	2,428.8	2,079.6

Source: *Sumner (2012c) processed from PovCal (2012).*
Note: ** = The poverty data listed in PovCal (2012) for these countries in 2008 appears lower than one might expect suggesting caution (see also discussion in Sumner, 2012b; 2012c) and for rates by national poverty lines see Gentilini and Sumner (2012).*

At a minimum, the fact that poverty persists at higher levels of average per capita income raises questions about the types of economic growth that lead some countries to reduce the number of people in extreme poverty and other countries not to.

4. Poverty reduction: the next 15-20 years

4a. Defining poor countries

If most of the world's poor live in (lower) MICs, one question that follows is: to what extent are these 'poor' countries and/or 'poor' countries in relation to what? Dudley Seers (1963) provided the seminal discussion of developed country characteristics, and their divergence from the characteristics of developing countries. On this basis he could justify calling the developed, or industrialised, countries 'a special case' of 'a few countries with highly unusual, not to say peculiar, characteristics' (p. 80). This is in contrast to developing countries, for whom,

[t]he typical case is a largely unindustrialised economy, the foreign trade of which consists essentially in selling primary products for manufactures. There are about 100 identifiable economies of this sort, covering the great majority of the world's population (p. 80).

LICs and LMICs can be compared with three other country groupings related to "poor" countries: the group of 45 fragile and conflict affected states (as listed in OECD, 2011b); the UN group of 48 Least Developed Countries and also the group of 45 countries that are in the poorest quartile of all countries by GDP PPP per capita.

In absolute terms, the group averages for LMICs suggest average per capita PPP income at almost five times the higher international poverty line of $2. In relative terms, the average for the LMIC group is considerably higher than the average income of the LIC group – which itself is barely above the higher international poverty line. Average per capita income in the LMIC group is typically three times the level of LICs and, notably, GDP per capita by PPP is approaching $10 per person/day (see Table below).

Overall, levels of extreme poverty as a percentage of population are lower in the LMIC group average compared to the LIC average (see Table below), though still surprisingly high in LMICs despite higher average per capita incomes as noted (see also discussion in Sumner 2012b). For comparison, data for Fragile and Conflict-Affected States (FCAS), for Least Developed Countries (LDCs) and for the poorest quartile of all countries by GDP per capita PPP (Q1) (see Tables).

This discussion is – evidently – overly focused on economic development. One could pursue further dimensions of development such as governance and sustainability amongst others (see for discussion Tezanoz Vasquez and Sumner, 2012).

Table 4.1 Estimates of average income per capita, 2009 (population weighted)

	World Bank classifications			Other classifications		
	LICs (35)	LMICs (56)	LMICs minus India	FCAS (45)	LDC (48)	Q1 GDP pc PPP (45)
GNI per capita/day (Atlas, current $)	1.3	3.9	4.6	2.7	5.8	2.7
GNI pc/day (PPP, current $)	3.1	9.1	9.3	5.1	3.8	4.0
GDP pc/day (PPP, 2005 constant $)	2.9	8.5	8.8	4.7	3.5	3.6
Poverty (% pop., $1.25, 2008)	48.5	30.2	23.4	40.3	46.4	48.1

Source: *Data processed from WDI (World Bank, 2011b) and PovcalNet (World Bank, 2012).*

Note: *Some indicators have weaker coverage for FCAS, LDCs and Q1 countries - see annex for data coverage. FCAS = 45 Fragile and Conflict Affected States of OECD (2011b); LDC = Least Developed Countries Group; Q1 GDP pc PPP = poorest quartile of countries by GDP per capita PPP.*

Table 4.2 Structural indicators, 2009 (population weighted)

	World Bank classifications			Other classifications		
	LICs (35)	LMICs (56)	LMICs minus India	FCAS (45)	LDC (48)	Q1 GDP pc PPP (45)
Net ODA as % of GNI *	12.6	1.0	1.8	7.1	11.1	9.6
Net ODA/Gross capital formation *	53.1	3.5	6.3	32.8	41.2	36.2
Total reserves in months of imports	4.5	8.0	6.3	3.8	3.4	4.1
GDP in agriculture (%)	30.8	17.3	16.8	20.2	26.6	23.0
Urbanisation (% population)	27.9	39.2	47.6	34.9	28.8	32.4
Gross domestic savings as % GDP	9.1	24.4	17.3	8.0	10.0	8.1
Agricultural raw materials as % exports *	9.7	1.9	2.6	3.8	4.4	4.6
Ores and metal as % exports *	7.4	5.9	5.5	2.0	5.4	4.3

Sources: *Data processed from WDI (World Bank, 2011b).*
Note: ** = A high degree of dispersion within country groupings suggests some caution is required in interpretation of these indicators. Some indicators have weaker coverage for FCAS, LDCs and Q1 countries - see annex for data coverage. FCAS = 45 Fragile and Conflict Affected States of OECD (2011b); LDC = Least Developed Countries Group; Q1 GDP pc PPP = poorest quartile of countries by GDP per capita PPP.*

If one considers the kind of structural indicators Seers identified in the Limitations of the Special Case, one again finds that LMICs are unequivocally better off than LICs (see Tables). Indeed, one might argue that LMICs are not 'poor' countries by the LMIC group averages, with an aid/GNI of 1 per cent GDP, and an aid/gross capital formation of just 3.5 per cent; compared to LICs with an aid/GNI of 12.6 per cent, and an aid/gross capital formation of 53.1 per cent. However, some caution is again required, as the degree of dispersion is significant in the country groups.

Indicators of GDP in agriculture, savings, export dependency on agriculture and urbanisation suggests that the LMIC group is, in general, qualitatively different to the LIC group. For example, GDP in agriculture is drastically lower in the LMIC group compared to the LIC group, and urbanisation much higher (almost 50 per cent when India is removed).

Overall, it is evident that LMICs have higher standards of living than LICs, and are far less aid dependent. The average, population weighted GNI per capita – by Atlas or PPP – in LMICs is three times that of LICs. However, it is worth remembering that the LMIC group average for GDP per capita PPP is still only 10 per cent of the per capita PPP income of OECD HICs, and in LICs just 3 per cent (see Table).

Table 4.3 Economic indicators as % OECD HICs, 2009 (population weighted)

	World Bank classifications			Other classifications			
	LICs (35)	LMICs (56)	LMICs minus India	FCAS (45)	LDC (48)	Q1 GDP pc PPP (45)	HICs
GNI per capita/day (Atlas, current $)	1.2	3.7	4.3	2.6	5.5	2.5	100.0
GNI pc/day (PPP, current $)	3.1	9.1	9.2	5.2	3.9	4.0	100.0
GDP pc/day (PPP, const. $)	3.2	9.5	9.8	5.3	4.0	4.1	100.0
Total reserves in months of imports	104.7	186.0	146.5	78.1	69.0	83.5	100.0
GDP in agriculture (%)	2,008.9	1,127.9	1,095.5	1,361.6	1,796.7	1,549.2	100.0
Urbanisation (% population)	36.2	50.9	61.8	45.2	37.3	42.0	100.0
Gross domestic savings as % GDP	50.8	136.3	96.6	43.1	53.7	43.6	100.0
Agricultural raw materials as % exports *	646.7	126.7	173.3	261.0	295.6	309.6	100.0
Ores and metal as % exports *	205.6	163.9	152.8	132.6	366.8	288.8	100.0

Sources: *Data processed from WDI (World Bank, 2011b).*
Note: ** = A high degree of dispersion within country groupings suggests some caution is required in interpretation of these indicators. Some indicators have weaker coverage for FCAS, LDCs and Q1 countries - see annex for data coverage. FCAS = 45 Fragile and Conflict Affected States of OECD (2011b); LDC = Least Developed Countries Group; Q1 GDP pc PPP = poorest quartile of countries by GDP per capita PPP.*

4b. The drastically falling costs of ending poverty

What if the cost of ending poverty was as little as 1-2% of countries GDP?

In short, one could consider whether countries are 'poor' relative to the capacity to end poverty (see discussion in Kanbur and Mukherjee 2007), expressed as the cost of ending poverty as percentage of GDP. This then estimates the 'transfer' necessary as a percentage of GDP from the non-poor to the poor to end poverty.

Using such an approach, absolutely and relatively poor countries might be estimated by a threshold – with absolute poor countries needing perhaps more than 2 per cent of GDP to

close the poverty gap, and relative poor countries requiring 1–2 per cent on the basis that the average for military spending is, respectively, 1.6 per cent and 2.2 per cent in the LIC and LMIC groupings (estimated from data in WDI, World Bank,2011b), where most of the world's poor live and military spending is a crude proxy for alternative uses of resources.

The tables below present data on the total poverty gap as a percentage of GDP. Data is presented in PPP constant 2005 international dollars to be comparable with later estimates on the poverty gap in 2020 and 2030.

Table 4.4 Estimates of the total poverty gap as % GDP (PPP$ constant 2005 international $) by $1.25 and $2 poverty line in 2008/9

	Total poverty gap as % GDP PPP		Distribution of world poverty (%)	
	$1.25	$2	$1.25	$2
LICs	8.4	25.4	25.7	20.6
LMICs	1.3	5.5	57.7	59.2
UMICs	0.2	0.6	16.7	20.2
	-	-		
East Asia and Pacific	0.3	1.5	21.5	26.1
Eastern Europe and Central Asia	0.0	0.0	0.2	0.4
Latin American and the Caribbean	0.2	0.4	2.9	2.9
Middle East and North Africa	0.0	0.4	0.7	1.9
South Asia	1.5	7.5	44.3	45.6
Sub-Saharan Africa	4.8	13.0	30.5	23.2

Source: *Data processed from PovcalNet (World Bank, 2012) and WDI (World Bank, 2011b).*

Note: *Data presented as PPP$, constant 2005 international $ rather than current US$ for comparison with 2020 and 2030 estimates (see below). Poverty gap as % GDP = PG%/100% x $1.25 per day x 365 x Population.*

In the LMICs, the group average for the cost of ending poverty is 1.3 per cent of GDP PPP for $1.25 poverty, but 5.5 per cent for $2 poverty (compared to 8.4 per cent and 25.4 per cent respectively for LICs).

Seventeen MICs have a total poverty gap of greater than 1 per cent of GDP (PPP$, constant 2005 international $), ranging up to 12.8 per cent in Zambia (See Table). When the data for the 20 countries with 90 per cent of world poverty are considered, many of the countries which have particularly high costs of ending $1.25 (and $2) poverty as a proportion of GDP are LICs, such as Bangladesh, the DRC, Tanzania, Kenya, Uganda, Mozambique and Malawi. That said, MICs like Nigeria, Angola and Nepal in that list of twenty countries also have high costs of ending poverty.

Table 4.5 Estimates for MICs with total poverty gap greater than 1% GDP, 2008/9, descending order, $1.25 poverty line (PPP$, constant 2005 international $)

Country	% GDP
Zambia	12.8
Nigeria	7.6
Lesotho	5.7
Timor-Leste	4.9
Papua New Guinea	3.6
Congo, Rep.	2.8
Ghana	2.7
Angola	2.6
Cote d'Ivoire	2.2
Lao PDR	2.1
Senegal	2.0
Swaziland	1.9
India	1.5
Honduras	1.5
Mauritania	1.4
Sao Tome and Principe	1.3
Sudan *	1.3

Source: *Data processed from WDI (World Bank, 2011b) and PovcalNet (World Bank, 2012). Note: Data presented as PPP$, constant 2005 international $ rather than current US$ for comparability with 2020 and 2030 estimates (see below). Poverty gap as % GDP = PG%/100% x $1.25 per day x 365 x Population.*

Note: ** = The poverty data listed in PovcalNet (World Bank, 2012) for Sudan in 2008 appears lower than one might expect suggesting caution (see also discussion in Sumner 2012b).*

One can go further and estimate 'bands' of the cost of ending $1.25 poverty and $2 poverty (see Table). This splits the world's $1.25 poor between countries that have a cost of ending poverty of more than 2 per cent of GDP, and countries that have a cost of ending $1.25 poverty of less than 2 per cent. However, when $2 poverty is considered, 80 per cent of the world's poor live in countries where the cost of ending $2 poverty would be more than 3 per cent of GDP.

If most of the world's poor lived in countries with the domestic financial capacity to end at least extreme poverty, extreme poverty would be a matter of national distribution and domestic political economy (for example, via the redistributive preferences of the middle classes and elites). This would imply the need for a fundamental reframing of global poverty as largely a matter of domestic distribution.

Table 4.6 Top 20 poor countries (by number of $1.25 poor people) with estimated cost of ending poverty as % GDP, 2008/9 (PPP$, constant 2005 international $)

	Cost of ending $1.25 poverty (% GDP) PPP, constant 2005 int'l $	Cost of ending $2 poverty (% GDP) PPP, constant 2005 int'l $
	2008/9	2008/9
India	1.5	7.1
China	0.3	1.3
Nigeria	7.6	18.4
Bangladesh	4.6	19.1
Congo, Dem. Rep.	79.4	165.5
Indonesia	0.6	3.5
Pakistan*	0.7	5.6
Tanzania	10.7	29.2
Philippines	0.6	3.1
Kenya	4.9	15.2
Vietnam	0.7	3.8
Uganda	6.5	21.6
Madagascar	15.5	38.7
Mozambique	14.8	40.4
Ethiopia*	1.6	13.8
Brazil	0.2	0.4
Angola	2.6	5.8
Malawi	18.1	49.7
Nepal	4.0	17.5
Sudan*	1.3	5.9

Source: *Data processed from WDI (World Bank, 2011b) and PovcalNet (World Bank, 2012).*

Note: ** = The poverty data listed in PovcalNet (World Bank, 2012) for these countries in 2008 appears lower than one might expect suggesting caution (see also discussion in Sumner, 2012b) and for rates by national poverty lines see Gentilini and Sumner (2012).*

4c. Rises in inequality where most of the world's poor live and the emerging insecure middle classes

A pertinent question to ask in light of the changes in global poverty towards middle-income countries is what is happening to inequality as average incomes rise? What has happened to inequality in the countries where global poverty is concentrated? How does inequality differ across countries at different levels of per capita income?

The Kuznets Curve is well known in Economics. Simon Kuznets (1955; 1963) argued, in his presidential address to the 1954 American Economic Association and in later articles, a relationship based on a 'hypothetical numerical exercise' of which Kuznets noted 5% was empirical information and 95% was speculation. Kuznets postulated an inverted U shape relationship between income and inequality. Kuznets predicted an increase in inequality in the early stages of development and a reduction in inequality in subsequent periods. This was formulated using the Lewis dual economy model.[7] Kuznets argued that agricultural economies (i.e. developing countries) are initially relatively equal societies with low average income. As the economy develops, the population migrates to non-agricultural sectors, where average incomes are higher, as is inequality. Thus initially, inequality worsens because of the higher proportion of national income in the industrial sector and the higher proportion of profits in national income. The early benefits of economic growth go to those with control over capital and better education. In time, as more of the population move out of the traditional, rural, agricultural sector to the modern, urban, industrial sector and real wages in industry begin to rise, income inequality decreases. What Kuznets implied on the inequality-to-growth linkage was that there is a trade off: inequality is a short-term price worth paying for long-term economic development and that growth would eventually lead mechanistically to poverty reduction through the 'trickle down' effect.

There has been a wide range of research pursuing these questions (see review in Sumner and Tiwari, 2009). The sum of which is as follows: Economic growth can impact on inequality through various channels including modification to the distribution of resources across sectors, relative prices, factor rewards and factor endowments. However, there are too many country specifics to make a generalization and the quality and availability of inequality data constrain the ability to make definitive statements.[8]

If one focuses on the share of GNI to the poorest (the poorest 20% or poorest 40%), the country group averages in LICs, LMICs and UMICs are thought provoking:

The pattern that emerges when one considers the data without India and without China is that the share of GNI to the poorest 20 percent or poorest 40 percent of the population declines as countries get better off and carries on declining.

The share of GNI to the poorest 20 percent or 40 percent of population is highest in LICs and lowest in UMICs if one considers the data without India in the LMICs and without China in the UMICs group (see table).

At the same time the share of GNI of the richest decile rises as one moves from the LICs to LMICs without India. The share of the rich then drastically rises as one moves from considering LMICs without India to the UMICs without China (see also later discussion).

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[7] Lewis, however, did not assume a rise in inequality to be inevitable.

[8] Deininger and Squire note (1998:279) the failure to find the Kuznets curve relationship overall does not mean it does not exist for individual countries: In 4 countries of their 49 country sample the Kuznets hypothesis was supported.

This and the 'capture' of about half of GNI in the middle deciles (decile 5-decile 9) in LICs, LMICs and UMICs corroborates Palma's (2011) 'homogeneous middles, heterogeneous tails' thesis (see below) that the middle classes always capture half of GNI and politics is about the contest between the rich and the poor for the rest.

Table 4.7 Estimates of inequality, 2008, nearest available data (population weighted)

	LICs	LMICs minus India	UMICs minus China	All LMICs	All UMICs
GNI to poorest 20% (%)	7.9	7.3	4.9	8.0	4.9
Poorest 4 deciles (D1–D4)	19.5	18.4	13.9	19.6	14.5
Middle 5 deciles (D9–D5)	51.1	51.2	49.8	51.1	51.8
Richest decile (D10)	29.4	30.4	36.3	29.3	33.7

Source: Data processed from PovcalNet (World Bank, 2012).

In the top 20 countries where 90 per cent of the world's poor live (see Sumner 2012b), only 15 of those 20 countries have two data points (see table). In those countries, the share of GNI to the poorest four deciles is, in general, static or declining when 1990 and 2008 are compared (using nearest available survey data).

However, five of the 15 countries are experiencing an increased share of GNI to the poorest 40 per cent by more than 2 percentage points (Pakistan, Kenya, Uganda, Ethiopia, Brazil and Nepal). In parallel, the share of the richest decile is static or rising in most countries, with more or less the same set of exceptions – Pakistan, Kenya, Ethiopia, Brazil and Nepal.

Palma (2011) noted that the share of GNI to those who are neither extremely poor (which he defines as the poorest four expenditure deciles), nor rich (defined as the richest expenditure decile), is surprisingly similar, at about 50 per cent of GNI, regardless of where (and when) one looks at the distribution data (see table).

In short, there is a remarkable capture of half of GNI by those deciles between the poor and the rich as defined by Palma and he suggests one read of this is that the contest for the remaining 50 per cent of GNI is a political and economic battle between the very rich and the very poor.

Table 4.8 Top 20 poor countries (by total number of $1.25 poor people) and inequality data, 1990 vs. 2008 (nearest available data)

	Richest decile (D10)		Middle 5 deciles (D5–D9)		Poorest 4 deciles (D1–D4)	
	1990	2008	1990	2008	1990	2008
India	27.0	28.3	51.6	50.9	21.4	20.9
China	25.3	32.0	54.5	53.2	20.2	14.8
Nigeria	31.5	38.2	55.7	49.1	12.8	12.7
Bangladesh	23.2	27.0	53.5	51.7	23.3	21.3

Continuation of Table 4.8

	Richest decile (D10)		Middle 5 deciles (D5–D9)		Poorest 4 deciles (D1–D4)	
	1990	2008	1990	2008	1990	2008
DRC	n/a	34.7	n/a	50.6	n/a	14.7
Indonesia	24.7	28.5	52.7	51.1	22.6	20.4
Pakistan	27.1	26.1	52.6	51.4	20.3	22.5
Tanzania	26.6	29.6	53.8	52.5	19.6	17.9
Philippines	34.7	33.6	50.1	51.0	15.2	15.4
Kenya	47.9	38.0	42.0	48.5	10.1	13.5
Vietnam	29.0	28.2	51.8	52.9	19.2	18.9
Uganda	33.7	36.1	52.1	48.4	14.2	15.5
Madagascar	36.9	34.7	48.7	50.4	14.4	14.9
Mozambique	n/a	36.7	n/a	48.6	n/a	14.7
Ethiopia	33.8	25.6	48.1	51.9	18.0	22.5
Brazil	48.4	42.9	44.2	47.1	7.5	10.0
Angola	n/a	44.7	n/a	47.6	n/a	7.7
Malawi	n/a	31.9	n/a	50.4	n/a	17.8
Nepal	29.1	26.5	51.3	53.1	19.6	20.4
Sudan	n/a	26.7	n/a	54.8	n/a	18.5

Source: Data processed from PovcalNet (World Bank, 2012). Note: All data are derived from consumption surveys, with exception of China and Brazil which are derived from income surveys.

Palma (2011) argued that, in light of the observation that the share of GNI of those people in deciles D5–D9 is generally half of national income, the 'middle classes' should be renamed the 'median classes':

Basically, it seems that a schoolteacher, a junior or mid-level civil servant, a young professional (other than economics graduates working in financial markets), a skilled worker, middle-manager or a taxi driver who owns his or her own car, all tend to earn the same income across the world — as long as their incomes are normalized by the income per capita of the respective country. (Palma 2011: 102)

It is worth remembering, as noted above, that the amount of redistribution required to end extreme ($1.25/day) poverty can be quite low in some middle-income countries. Ravallion (2010) has argued that most countries with an average per capita PPP income of over $4,000 would require very small additional taxation to end poverty.[9] Ravallion (2010) estimated the necessary marginal

[9] Palma (2011) notes that Brazil's BolsaFamilia, which distributes US$50/month to 11 million families, costs about 0.5 per cent of GDP (in 2005); and Soares et al. (2011) find that conditional cash transfers in Brazil, Mexico and Chile have cost less than 1 per cent of GDP.

tax rates (MTRs) on the 'rich' (those earning more than $13/day) in order to end poverty in each country. He argues that MTRs over 60 per cent would be prohibitive. Ravallion's data suggests that the MTRs necessary to end poverty are high in many of the 'new MICs' (in contrast, many 'old' MICs would require MTRs of under 10 per cent to end poverty). This is particularly due to large populations of poor relative to the number of 'rich' people in many new MICs.

Table 4.9 Estimates of share of GNI, expenditures and population, D5–D9, 1990 and 2008 (nearest available data, population weighted)

	GNI Average share (%)	
	1990	2008
D10 (richest 10%)		
All developing countries	27.6	31.0
LMICs (current group)	24.8	29.3
LMICs (current group) minus India	28.2	30.4
UMICs (current group)	28.2	33.7
UMICs (current group) minus China	35.0	36.3
New MICs	30.6	31.0
D5–D9 (middle 50%)		
All developing countries	51.9	50.8
LMICs (current group)	52.2	51.1
LMICs (current group) minus India	52.8	51.2
UMICs (current group)	53.3	51.8
UMICs (current group) minus China	50.5	49.8
New MICs	50.9	50.4
D1–D4 (poorest 40%)		
All developing countries	19.1	17.1
LMICs (current group)	20.3	19.6
LMICs (current group) minus India	19.0	18.4
UMICs (current group)	18.5	14.5
UMICs (current group) minus China	14.5	13.9
New MICs	18.5	18.6

Source: Data processed from PovcalNet (World Bank, 2012).

If the scope for domestic taxes is insufficient, access to aid may still be important in middle-income countries, for the near future at least. Further, Cardenas et al. (2011: 19) are skeptical of tax rises for the middle classes based on the attitudes expressed in the World Values Survey for Peru:

> the status quo in many Latin American countries is a very low level of income taxation for the middle classes. Given their attitudes and political say, it is very unlikely that the expansion of the middle class will result in greater levels of personal income taxation. This is the main difference in tax structures compared to the developed world.

OECD (2011a) discusses in some considerable detail middle class preferences for the amount of income redistribution via fiscal policy notably what middle class households gain and the quality of public services.10 Other factors that determine preferences to redistribution are noted from the literature, including: personal experiences of social mobility (Piketty 1995), national and regional cultural and social values (Alesina and Giuliano 2009), the extent of impacts of (higher) taxation on leisure consumption (Meltzer and Richards 1981), levels of university education (Daude and Melguizo 2010; Torgler 2005), and attitudes to prevailing levels of meritocracy (Alesina and Angeletos 2005). It is also noted that support for redistribution is undermined by low institutional capacity in tax administration, the quality of state services, and pessimistic views over social mobility (Gaviria 2007; Torgler 2005).

In short, the capacity to redistribute and the preferences of the non-poor for redistributive policies may become increasingly important for poverty reduction in middle-income countries. However, if there is little support amongst the more secure middle classes for paying more taxes, such policies will be constrained by political economy factors. This will be made worse if the lower 'middle millions' are only just above extreme poverty.

The number of 'non-poor' people in the world (here meaning those above $2/day) has risen significantly since 1990, as a proportion of the population and in absolute numbers. There has been a particularly notable expansion between $2–$4/day and $4–$10/day. Across all developing countries the proportion of people in the $2–$10 group has risen from about a quarter to almost a half. When the data is analysed without China the rise is less pronounced but still significant. The rises are particularly noticeable in the new MIC group, but visible in the data across both LMIC and UMIC groups.

[10] In particular OECD (2011a) addresses what role the middle classes in Latin America play in shaping fiscal policy and redistribution, and the impact of fiscal policies on the middle classes. It notes (pp23, 147) that: 'what middle-sector [middle class] people pay in taxes is close to what they receive in the form of social spending. The middle (decile) in Chile pays on average taxes equivalent to 18.3 per cent of its disposable income, while receiving benefits of 20.6 per cent. Similarly, in Mexico taxes amount to 13.2 per cent of disposable income and benefits are equal to 23.8 per cent. In sum, the net effect of fiscal policy for middle-sector families, while marginally positive, is not large, and they benefit most from in-kind services such as education and health care… [However], if these services are of low quality, the middle sector is more likely to consider itself a loser in the fiscal bargain and less willing to contribute to financing of the public sector.'

Table 4.10 Estimates of population (% population) by region and expenditure groups, 1990 and 2008

	Less than $2		$2–$4		$4–$10	
	1990	2008	1990	2008	1990	2008
LMICs (current group)	73.3	59.1	18.3	27.2	6.7	11.0
UMICs (current group)	58.4	20.3	18.5	26.4	16.0	35.6
China	84.6	29.8	13.4	32.2	1.9	31.0
India	82.6	72.4	14.5	22.2	2.6	4.8
New MICs	78.5	64.9	15.3	25.0	4.8	8.1
LICs (current group)	82.8	74.4	14.1	19.8	2.9	5.1
All developing countries	67.1	43.9	17.2	25.9	10.9	21.1
All developing countries minus China	60.2	48.6	18.7	23.9	14.4	17.9

Source: Data processed from PovcalNet (World Bank, 2012).
Note: Data is population weighted.

Between 1990 and 2008 the actual numbers of people in the $2–$4 range have risen from 700m to 1.4bn, and in the $4–$10 range from 400m to 1.1bn, across developing countries between. The rises are less pronounced without China but still entail a near doubling in the number of people in both the $2–$4/day and $4–$10/day group; so that there are now around 2 billion people under $2/day globally excluding China, 1bn in the $2–$4 range, and 720m in the $4–$10 range. The rise in numbers of people is, as noted above, particularly noticeable in the new MIC group but also crosses both LMIC and UMIC groups.

As countries get richer in per capita income, on average individual taxes as a proportion of GDP rise (see Table). As people's expenditures rise above $2/day their consumption patterns change, resulting in an increasing exposure to indirect and sales taxes, and perhaps formal (and informal) payments for business licenses (although possibly not income taxes if they are in the informal sector).[11] This has the potential to change perceptions of the relationship between the state and the individual potentially making the $4-$10 group of 'inbetweeners' (inbetween poverty and secure middle class lifestyles) politically significant.

Recent empirical evidence for this is provided by Devarajan et al. (2011 p.15), who identify that there is a positive relationship, significant at 1 per cent, between the level of tax revenue and the extent of voice and accountability in a country (using Kaufmann governance indicators for voice and accountability); but that there is a threshold at 49 per cent of GDP after which, with excessively high levels of taxation, the relationship is inverted. As the authors note (p.15), 'Since the tax-to-GDP ratio in most developing countries is below this level, one can assume that most of them are situated on the rising part of the relationship where increases in the level of taxation are associated with more accountability.' Interestingly, Devarajan et al. (2011 p.13) also note that governance and education have a strong association even after controlling for various variables.

[11] IMF (2011: 25) estimates average VAT rates at end 2010 as 16 per cent in LICs, 13 per cent in LMICs and 15 per cent in UMICs.

The table below shows that, as average income rises, total tax as a proportion of GDP rises; as does individual income tax, corporate tax and tax on goods and services. And at the same time as average income rises, aid is becoming less and less significant as a proportion of GNI in new MICs. There is thus a shift from external funding in the form of aid towards non-aid and domestic sources from taxation; hypothetically, this implies a shift in accountability from state-to-donors to state-to-domestic tax payers (and/or natural resource incomes) (see Brautigam et al. 2008; Moore 2007).

Table 4.11 Tax indicators in LICs, LMICs, UMICs, HICs, 2009 or most recent year

	LICs (N = 37)	LMIC (N = 48)	UMIC (N = 41)	HIC OECD (N = 30)
Total government taxes as % GDP				
Mean	13.0	17.7	20.7	35.4
Standard deviation	5.5	7.9	8.2	7.3
Individual income tax as % GDP				
Mean	1.6	1.9	2.3	9.7
Standard deviation	1.4	1.4	1.8	4.9
Corporate income tax as % GDP				
Mean	2.2	2.9	3.4	3.1
Standard deviation	2.2	2.5	2.8	1.8
Taxes on goods and services as % GDP				
Mean	5.0	6.1	7.1	11.2
Standard deviation	3.0	3.1	4.0	3.1

Source: Processed from IMF (2011: 53, 54).

4d. Where will the remaining poor live?

One position to take is that there is little need to worry about the poor in MICs because growth will end poverty in the near future. How reasonable is this argument? Conceptually, the poor in middle-income countries could be disconnected from a country's growth due to spatial inequality or remoteness. The poor may also be relatively voiceless in domestic governance structures and potentially discriminated against in public services and public spending allocations regionally. And intra-country migration may be hindered or constrained by cost and administrative regulations.

One way to explore the question is to estimate poverty in the future by different scenarios in order to assess if poverty in MICs will be easily addressed by growth in those countries which are currently LMICs. This can be done by drawing upon an approach taken by Moss and Leo

(2011) and Santos and Sumner (2012, forthcoming) and Karver et al. (2012, forthcoming) which involves generating three different growth scenarios as follows:

- An optimistic scenario assumes that for 2009–2020 and 2009–2030 average incomes will rise at the average annual growth rate of the Gross Domestic Product PPP pc data in the IMF's World Economic Outlook (WEO) (2012) for the period 2009–2016 (2011-2016 data are projections).
- A moderate growth scenario assumes that from 2009 average incomes will grow at an average annual growth rate of the Gross Domestic Product (PPP) per capita for the period 2009–2016, minus 1 per cent on the basis that this is the average error historically observed in IMF growth estimates/projections (as per empirical analysis of Aldenhoff 2007).
- A pessimistic growth scenario assumes that from 2009 average incomes will grow at half of the average annual growth rate of the Gross Domestic Product (PPP) per capita for the period 2009–2016.

These growth scenarios then generate, for each country, GDP PPP and GNI per capita forecasts for 2020 and 2030. The former, GDP pc PPP can be used to estimate poverty in 2020 and 2030 though the assumption of static inequality must be made, and the latter, GNI pc can be used to estimate country classifications in 2020 and 2030.

By taking the poverty and distribution survey data from PovcalNet (World Bank, 2012), and the 2020 and 2030 population estimates from the UN (medium variant), we can estimate the number of poor people in 2020 and 2030 in each country as well as the poverty gap as a proportion of GDP (PPP$ constant 2005 international $).

Two essential caveats must be noted: First, such projections are an inherently imprecise exercise that merely illustrates possible future scenarios (See also discussion in Kanbur and Sumner, 2011; Karver et al. 2012, forthcoming and Kenny and Williams, 2001). Second, the approach likely over-states poverty reduction in fast growing economies such as lower MICs because it assumes static inequality in countries that are rapidly growing (which the discussion earlier suggest this is questionable and inequality can move both ways).

Even so, the data suggests that the remaining $1.25 and $2 poverty in those countries that are currently MICs will remain half of all world poverty in 2020 and 2030 (see table).

And given that some countries that are currently LICs will move into the LMIC category this suggests the structure of world poverty will remain split between LICs and MICs (see Table). Geographically, the data suggests poverty will be increasingly focused in Sub-Saharan Africa.

As GDP rises the cost of ending poverty as a proportion of domestic GDP will (likely) fall, and poverty will become increasingly about national distribution, with the potential exception of some countries in sub-Saharan Africa.

Table 4.12 Estimates of the global distribution of poverty in 2020 and 2030 (moderate growth scenario; e = estimate)

	Global distribution of $1.25 poverty (% world poverty)			Global distribution of $2 poverty (% world poverty)		
	2008/9	2020e	2030e	2008/9	2020e	2030e
Low income (current group)	25.7	50.3	52.0	20.6	39.7	46.5
Lower middle income (current group)	57.7	44.0	42.9	59.2	54.6	47.5
Upper middle income (current group)	16.7	5.7	5.2	20.2	5.7	6.0
[Estimated remaining LICs]	-	46.7	44.9	-	33.8	35.7
East Asia and Pacific	21.5	3.8	0.8	26.1	7.9	4.0
Eastern Europe and Central Asia	0.2	0.2	0.1	0.4	0.4	0.2
Latin America and the Caribbean	2.9	6.8	7.3	2.9	5.3	6.3
Middle East and North Africa	0.7	1.9	3.1	1.9	2.9	4.0
South Asia	44.3	13.2	4.6	45.6	31.9	16.5
Sub-Saharan Africa	30.5	74.2	84.0	23.2	51.6	68.9

Sources: Data estimates derived by using method of Karver et al. (2012, forthcoming) and processed from PovcalNet (World Bank, 2012) and WEO (IMF, 2012), based on static inequality. Note: For method see text.

The projections for 2020 and 2030 show that the number of LICs in 2020 could be in the range of 24 to 30, and in 2030 from 16 to 28 compared to the current 35 LICs.

For ease of discussion here, and because of its consistency with the IMF's historic overestimation of growth prospects, the moderate scenario is used here in the text and the discussion largely focuses on $2 poverty, as by 2030 the international poverty line will presumably be adjusted closer to $2. Further, $2 is the median poverty line for all developing countries (Chen and Ravallion 2008; 2012). Data for $1.25 poverty is also presented for comparison.

Table 4.13 Remaining LICs in 2020 and 2030 by three growth scenarios

	2020			2030		
Scenario	Pessimistic	Moderate	Optimistic	Pessimistic	Moderate	Optimistic
Number of LICs	30	27	24	28	20	16

Source: Author's estimates based on data from WDI (World Bank, 2011b) and WEO (IMF, 2012).
Note: For method see text. See Appendix 4 for full list of countries by each scenario.

Taking the moderate growth scenario, in 2020, poverty will be largely split as follows: 60 per cent in countries that are currently MICs (in 2010), and 40 per cent in countries which are currently LICs in 2010. In 2030, global poverty will be split more evenly between countries that are currently LICs and countries that are currently MICs.

This suggests that even if inequality does not rise, poverty will remain an issue for MICs and of course as noted a number of the countries that are currently LICs will be MICs by then too.

It also suggests the cost to end poverty will be minimal for those countries that are currently LMICs and UMICs as a percentage of GDP (see table).

Although the cost in those countries that are currently LICs of ending $2 poverty would be 15 per cent of GDP in 2020, this falls to under 10 per cent of GDP in 2030.

This suggests for a small number of countries (20 LICs in this moderate scenario) external support for poverty reduction will remain absolutely essential. However, in those countries that are currently LMICs the cost of ending $2 poverty will be just 1.2 per cent of GDP in 2020 and 0.6 per cent in 2030 and negligible in those countries that are currently UMICs.

Table 4.14 Estimates of the global poverty gap as % GDP, PPP$ constant 2005 international $) by $1.25 and $2 poverty line in 2008/9, 2020 and 2030 (moderate growth scenario; e = estimate)

	$1.25 poverty gap as % GDP			$2 poverty gap as % GDP		
	2008/9	2020e	2030e	2008/9	2020e	2030e
Low income (current group)	8.4	4.6	3.0	25.4	14.9	9.7
Lower middle income (current group)	1.3	0.3	0.2	5.5	1.2	0.6
Upper middle income (current group)	0.2	0.0	0.0	0.6	0.1	0.0
[Estimated remaining LICs]	-	7.0	7.3	-	21.1	22.2
East Asia and Pacific	0.3	0.0	0.0	1.5	0.1	0.0
Eastern Europe and Central Asia	0.0	0.0	0.0	0.0	0.0	0.0
Latin America and the Caribbean	0.2	0.1	0.1	0.4	0.3	0.3
Middle East and North Africa	0.0	0.0	0.1	0.4	0.3	0.3
South Asia	1.5	0.1	0.0	7.5	0.8	0.2
Sub-Saharan Africa	4.8	3.5	2.6	13.0	10.3	8.0

Sources: Data estimates derived by using method of Karver et al. (2012, forthcoming) and processed from PovcalNet (2012) and WEO (IMF, 2012), based on static inequality.
Note: For method see text.

To reiterate, one should remember the caveats noted above - that this endeavour of making projections for income/expenditure poverty is an inherently imprecise exercise that merely illustrates possible future scenarios.

In sum, in 1990, approximately 90 per cent of the world's poor people (by both $1.25 and $2 international poverty lines) lived in low-income countries, where the average PPP per capita income was barely above the higher international poverty line – and thus addressing 'global poverty' was framed largely around international redistribution via aid.In 2008, 70–80 per cent of the world's poor people (respectively, by the $1.25 and $2 international poverty lines) lived in middle-income countries. In the LMIC group, the average PPP per capita income for the group was approximately five times the higher international poverty line. This raises the question of whether 'global poverty' requires reframing as a national distribution issue in a world of fewer and fewer aid dependent countries, either now or at some point in the foreseeable future.

Absolute income thresholds for country classification mean income growth will always imply a transition of the poor from LICs to MICs unless poverty falls drastically in absolute numbers during the transition. Does it then follow that poverty becomes a domestic issue related to national inequality? It depends on the country and the growth experience. It is likely that different countries are experiencing different trajectories – based on the evolution of population growth, income growth, inequality and the poverty gap. One might suggest that there are two stylised groups of country evident if one considers a matrix of 2 x 2 with 'equitable growth' (here defined as the incomes of the poor rising in line with average income) and the 'poverty gap' as the key variables.

Group 1 countries are those with healthy and relatively equitable growth, and a low poverty gap as a percentage of GDP. In this group, the costs of poverty reduction are within domestic financial capacity.

Group 2 countries are those with more unequal growth and larger poverty gaps; which may attain MIC status in terms of mean income but do not yet have the domestic financial fiscal means to address poverty despite higher average incomes. For Group 1, the issue is one of domestic redistribution.

Group 1 may be largely concentrated in parts of Latin America and East Asia. Group 2 may be largely concentrated in India and sub-Saharan Africa. Looking ahead to 2020 and 2030, as average incomes rise, more and more of the world's poor will live in Group 1 countries, and poverty will increasingly become a matter of national inequality.

This might imply that a fundamental reframing of global poverty is approaching; 'traditional aid' (meaning resource transfer) is of limited relevance, and the core variable to explain global poverty is increasingly national distribution and thus national political economy.

4e. Complex issues - climate, urbanization and fragile states

Climate Change

Trying to make estimates on poverty impacts of climate is fraught. One approach is to look at if the world's poor live in countries vulnerable to and/or resilient to the impacts of climate change (extreme weather, sea level changes and agriculture productivity changes). For example, the IPCC (2007) noted 80 percent of the 300 million people who live within 5 meters of sea level are in developing countries. The extensive Wheeler (2011) outlines

climate risks and coping ability by countries. The top 20 countries most at risk of extreme weather in 2015 are a number with considerable poverty levels including MICs and LICs.

It is worth noting most of the world's poor live in ten countries who are almost all listed here: China, India, Vietnam, Bangladesh, Ethiopia and Philippines. The countries listed above as most at risk account for 800 million of the world's poor, although, of course, not all those in India and China and other countries are at risk. Of the top 20 most vulnerable countries to climate change, a total of 11 are MICs, 4 are LICs and the remaining are members of the OECD. Of the MICs, both India and Indonesia are projected to experience dramatic increases in the size of the population vulnerable to sea level rises. With respective increases of 80% and 60% the two countries are likely to house a combined total of over 58 million of the most vulnerable people by 2050. A further 6 million people in China will also be exposed to sea level rises to make the total in that country 22 million. Nigeria, the Philippines and Egypt will also see the size of their vulnerable populations more than double between 2008 and 2050. Of the LICs, the size of Bangladesh's vulnerable population is, unsurprisingly set to grow to around 27 million people – more than double the 2008 size and the second largest vulnerable population within the countries listed.

Although extreme weather and sea level risks are dominant in MICs and Asia, the projected agriculture productivity losses, 2008-2050 for Africa are though the most striking (see table). In the period between 2008 and 2050, areas of Africa and Asia are forecast to lose between 10% and 20% in agricultural productivity on average. Areas in Central Africa and the Southern and Northern extremes of the continent are each expected to experience significant losses of at least 18% while East Africa is likely to be affected less severely. Agriculture in these areas is likely to suffer similar productivity losses to parts of Asia and the Middle East – in the region of 10-14 per cent.

Table 4.15 Most vulnerable developing countries to sea level rises and vulnerable populations, 2008 vs. 2050

	Vulnerable population (millions)	
	2008	2050
MICs		
India	20.6	37.2
China	16.2	22.3
Indonesia	13.0	20.9
Philippines	6.5	13.6
Nigeria	4.3	9.7
Vietnam	5.7	9.5
Egypt	2.1	6.3
Brazil	2.6	4.5
Turkey	2.6	3.9
Malaysia	1.9	3.5
Thailand	1.8	2.6

Continuation of Table 4.15

	Vulnerable population (millions)	
	2008	2050
LICs		
Bangladesh	13.2	27.0
Myanmar	2.8	4.6
Korea Rep	4.8	5.3
Mozambique	1.2	2.8

Source: Wheeler (2011).
Note: Remaining top 20 vulnerable countries were OECD countries.

Table 4.16 Forecast agricultural productivity losses by region

Region	Median forecast agricultural productivity loss, 2008-2050
Central Africa	19.8
Southern Africa	19.0
North Africa	18.0
Sahelian Africa	17.0
Coastal West Africa	16.4
East Africa	10.3
Middle East	13.5
Southeast Asia	11.7
Southern Asia	10.5

Source: Wheeler (2011).

A more optimistic approach is the review of Skoufias*et al.* (2011), who argue the impacts of climate change on poverty will be outweighed by economic growth. In sum, Skoufias*et al.* (2011) argue that poverty estimates of climate change are too pessimistic because they ignore the effect of aggregate growth on poverty. They do, however note that the impact of climate change will fall more heavily on the poor than the rich due to higher food prices and given urbanisation trends will lead to more households being net food consumers this too will impact on the (urban) poor more.

Urbanisation

The earlier discussion of the remaining poor argued that by education, health and nutrition poverty much poverty remains rural in nature. However, a growing proportion of poverty over time is accounted for by urban poverty.

High rates of overall population growth, together with significant rural–urban migration, have contributed to rapid urbanisation and related unplanned expansion of low-income settlements on the outskirts of many large cities, or slums. Although the increasing urbanisation of all regions is unequivocal, asking if global poverty is becoming more urban is complex. Although discussions of urban and rural poverty are often viewed as different people in reality the delineation of 'urban' and 'rural' are essentially a continuum rather than a 'rigid dichotomy' due to people migrating back and forth, peri-urban settlements and various flows such as remittance flows from urban impacting on rural poverty.

With greater reliance on the monetised economy, urban populations are reliant on integration into informal employment markets to earn cash income to meet their ongoing consumption needs. Urban households are vulnerable to changes in market prices and, in a highly competitive labour market, can suffer significant loss of livelihood.

There are two options to assess urban poverty trends: if one applies the same poverty measure to both urban and rural poverty such as the $1.25 (2005 PPP) this produces an estimate of less than a third of world poverty (28% of world poverty or 300m) of the world's poor in 2008 were urban (IFAD, 2010) (somewhat similar to the remaining poor estimates discussed earlier). However, in LAC, MENA and Eastern Asia, respectively three-quarters, two-thirds and a half of the total $1.25 poor are urban (IFAD, 2010).

Alternatively, one can assess urban poverty relative to the urban non-poor. If one makes the assumption slum dwellers are the urban poor, a third of the urban dwellers are slum dwellers (defined as those urban dwellers who lack improved water, or improved sanitation or live in a house more than 3 people per room or lack durable housing) and although this is declining in incidence it is rising in absolute numbers.

The proportion is highest in sub-Saharan Africa where two-thirds of urban dwellers are slum dwellers. The current MDG Target 7d seeks to achieve significant improvement in the lives of at least 100 million of the 830m slum dwellers, by 2020 which may make the inclusion of urban poverty in a post-2015 framework more complicated. Taking the $1.25 poverty line over the last twenty years the urban percentage of total poverty is growing but at different rates in different regions.

Table 4.17 Estimates of urban poverty as % total and millions, 1988-2008 by US$1.25 poverty line

	1988	1998	2008
% total poor who are urban			
Asia	17.4	13.5	27.5
Eastern Asia	13.2	16.0	45.7
South Asia	20.6	13.5	19.3
South Eastern Asia	23.4	5.8	25.5
Sub-Saharan Africa	28.2	23.4	25.0
Latin America	42.4	48.1	73.5
Middle East and North Africa	1.0	38.7	59.9
Developing world	19.5	17.1	28.4

Continuation of Table 4.17

	1988	1998	2008
Millions of urban poor people			
Asia	244.4	166.4	260.6
Eastern Asia	80.0	69.5	98.5
South Asia	121.4	82.7	120.3
South Eastern Asia	46.7	10.1	26.7
Sub-Saharan Africa	67.6	81.9	102.0
Latin America	24.3	25.9	30.5
Middle East and North Africa	0.1	6.3	9.0
Developing world	333.6	280.9	400.6

Data processed from rural poverty data presented in IFAD (2011).

The alternative of simply taking the residents of slums as the urban poor produces something on its way to being an urban bottom billion (830m in 2010 and increasing in numbers though falling as a percentage of urban population).

Since 1990, the proportion of the urban population living in slums has been decreasing steadily in all regions of the world, with the highest rates of reduction occurring in the period between 2000 and 2005. In the 5 years following 2005, only Eastern Asia managed to accelerate the reduction in the proportion of slum populations, while in LAC and SE Asia, the rate of the decrease slowed significantly. Overall reductions in the incidence of slum dwellings between 1990 and 2010 have been most significant in Asia with an average shrinking in the size of slum populations of more than a third to bring the overall proportion under 35% of the total urban population. In sub-Saharan Africa, despite a nearly 30% reduction in the size of urban slum populations, over 3 in 5 urban dwellers are still living in slums, nearly double the proportion found in any other developing region. Despite the fall in the proportion of the urban population living in slums, the absolute numbers have risen since 1990 in every region of the developing world. In sub-Saharan Africa, the number of people living in slums has nearly doubled over the period 1990-2010.

Table 4.18 Urban population living in slums

	1990	2000	2010 (est.)
% urban population			
Developing regions	46.1	39.3	32.7
SS Africa	70.0	65.0	61.7
LAC	33.7	29.2	23.5
Eastern Asia	43.7	37.4	28.2
Southern Asia	57.2	45.8	35.0
SE Asia	49.5	39.6	31.0

Continuation of Table 4.18

	1990	2000	2010 (est.)
Millions of people (thousands)			
Developing regions	656,739	766,762	827,690
SS Africa	102,588	144,683	199,540
LAC	105,740	115,192	110,763
Eastern Asia	159,754	192,265	189,621
Southern Asia	180,449	194,009	190,748
SE Asia	69,029	81,942	88,912

Source: UNHABITAT (2010).

Fragility

In 2007 Paul Collier published one of the most widely cited books in international development – *the Bottom Billion: Why the Poorest Countries are Failing and What Can be Done About It.* Collier wrote of almost a billion people who live in 58 countries that were 'falling apart' or 'falling behind'. This was based on data from 'around the turn of the century' and the countries were listed in the appendix of Collier's 2009 book *War, Guns and Votes*. However, Collier noted:

> The countries of the Bottom Billion are defined as low-income countries that were caught in one or other of four development traps... This list was measured on data for around the millennium. I was reluctant to publish it for fear of typecasting: the traps are not iron laws, and a few of these countries may already have broken free (Collier, 2009, p. 239).

Collier (2007) outlined the four development 'traps' that afflict those 58 poor countries: a conflict trap (notably civil war); a natural resource trap - abundance of which makes 'democracy malfunction' (p. 42); a landlocked-with-bad-neighbours trap, in the sense of poor markets - 'If you are coastal, you serve the world; if you are landlocked, you serve your neighbours' (p. 57); and a bad governance-in-a-small-country trap.

Collier argued that the focus should be on poor countries not poor people; growth not poverty reduction, and certainly not inequality. In fact, Collier argues that development policy has been distracted by poverty and inequality from a key focus on raising incomes for societies as a whole. He argued that policymakers should worry about growth first and have faith that, generally, poverty reduction will follow. Further, the North can be decisive in supporting the 'heroes' or 'good guys', but change must be internally driven.

Collier argued that globalisation is not going to solve these problems if left to itself, but that the bottom billion countries need to diversify into manufacturing trade. This will not happen by removing OECD trade barriers, or through fair trade. The key is temporary protection from successful exporters in Asia in certain sectors such as textiles. Aid is a holding operation. Military intervention is useful. International laws and charters which shape behaviour and support 'heroes' are important in areas of managing natural-resource revenues; for democracy; for budget transparency; for post-conflict situations; and for investment. In

sum, for Collier, the key is more instruments and a focus on fewer countries. What matters is growth (more attention), governance (international charters and laws), and globalisation (trade protectionism under certain conditions).

Even as the book was published in 2007/8, the world was already rapidly changing. Many of the 58 countries listed by Collier were making progress. Over the decade since 2000, 28 countries progressed from low income to middle income status. Moreover, by 2008, almost half of the bottom billion countries - 27 of the 58 countries in Collier's list - had attained average PPP per capita incomes of around US$1500 PPP, or triple the daily extreme poverty line of US$1.25 per capita (meaning an annual average income of $456 PPP per capita).

Since this and other work, the focus of donors on fragile states has taken a considerable amount of attention and led in part perhaps to the establishment the G7+ group of fragile states themselves (not least because the various fragile states lists are different).

However, increasingly many fragile states are not low income but middle income, leading the Economist to coin the acronym – MIFFS – middle income failed and fragile states.Of those 45 countries in the non-official OECD fragile states list, 26 are low income and 18 are (lower) middle-income countries (and one country is not classified). This includes such countries as Pakistan, Yemen, Nigeria, Iraq, Ivory Coast, Sudan and perhaps now Libya, Egypt and Tunisia. Whereas the most fragile of fragile states are arguably largely a threat to their own inhabitants, transnational risks are more associated with better-off fragile states. This latter point raises the question of is there a new kind of fragile state and if so what are the implications for international support to fragile states. These may well then be a need for a new focus for stability and peace related to fragile MICs not LICs.

5. Conclusions

Updated estimates of global poverty show that the majority of the world's poor live in MICs. Half of the world's poor live in India and China (mainly in India);a quarter of the world's poor live in populous lower middle-income countries (LMICs) such as Pakistan, Nigeria and Indonesia and a quarter (or less) of the world's poor live in the remaining LICs.

Most of the world's poor live in South Asia and sub-Saharan Africa. In contrast, in 1990, half of the world's poor lived in East Asia and the Pacific, mostly in China. The proportion of the world's $1.25 poor in China fell to an estimated 14 per cent in 2008, while India's proportion of world poverty rose to 35 per cent, and sub-Saharan Africa's to 31 per cent.

The new estimates for global poverty in 2008 suggest that even more of the world's poor, by both $1.25 and $2 international poverty lines, live in middle-income countries. Similar patterns are evident by multi-dimensional poverty, malnutrition and ill-health (Sumner, 2010).

The proportion of the world's $1.25 and $2 poor accounted for by MICs is respectively 74 per cent and 79 per cent.

Indeed, closer analysis suggests a 'double bottom billion' of poor people in MICs – this means a 'bottom billion' living on under $1.25/day and a further billion poor people living on between $1.25 and $2/day per capita. This compares with about 300 million poor people living on under $1.25 and a further 200 million living on between $1.25 and $2/day in LICs.

Poverty projections suggest the remaining $1.25 and $2 poverty in those countries that are currently MICs will still equate to about half of all world poverty in 2020 and in 2030.

Furthermore, given that some countries that are currently LICs will move into the MIC category by 2020 or by 2030, this suggests the structure of world poverty will remain split between LICs and MICs for some time yet. It is also possible that only one-third of the world's poor will be in the remaining 20 or so LICs in 2030 (on the moderate growth scenario). And if inequality does rise these projections may understate the proportion of world poverty in MICs in 2020 and 2030.

The good news is that as countries get richer the cost of poverty as a proportion of GDP should fall. In fact the cost to end poverty as a percentage of GDP in the foreseeable future will be minimal for those countries that are already MICs (see Figure 2). In those countries that are currently LMICs the average cost of ending $1.25 poverty is estimated to be in the range of 0.2–0.6 per cent of GDP in 2020 and at a similar level to end $2 poverty by 2030. However, the estimated cost of ending $1.25 poverty in those countries that are currently LICs may remain high even in 2020 and 2030. This suggests that for a relatively small number of countries (20 or so on the moderate growth scenario), external support for poverty reduction will remain absolutely essential. However, the cost of ending poverty in those countries that are currently upper MICs is already negligible. One take on this is that global poverty is increasingly becoming about a matter of domestic inequality, and thus governance and taxation rather than a matter of aid.

Such patterns matter beyond the thresholds for LICs and MICs set by the World Bank because they reflect a pattern of rising average incomes. Although the thresholds do not mean a sudden change in countries when a line is crossed in per capita income, substantially higher levels of average per capita income imply increased domestic resources available for poverty reduction. Further, the changing distribution of global poverty away from the poorest countries, suggests a 'poverty paradox' – that most of the world's extreme poor do not live in the world's poorest countries.

One interpretation of this shift in the geography of global poverty is that extreme poverty is gradually changing from a question of poor people in absolute poor countries to questions about domestic inequality. This implies a reframing of the global poverty 'problem' that policy seeks to address so that the responses to poverty are increasingly recognised as related to national inequality in terms of geography, class and ethnicity and who pays tax and who benefits from public spending and the opportunities arising from economic growth.

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Annex I: Poverty Indicators – The state of the art

There is a wide range of initiatives that are seeking to revisit or rethink indicators of poverty, progress and development. Evidence of this is most visible in the three international initiatives in particular. First, there has been the in-depth report of the Sarkozy Commission (Stiglitzet al., 2009), chaired by Joseph Stiglitz, AmartyaSen and Jean-Paul Fitoussi (see below). Second, there has been the major review of 20 years of the Human Development Report that informed the UNDP Human Development Report 2010 and introduced the new Multi-dimensional Poverty Index and related new indices on equity-adjusted human development drawing upon the work of the Oxford Poverty and Human Development Initiative (OPHI) who have also developed research on indicators for decent employment, agency and empowerment, physical safety, the ability to go about without shame, and psychological and subjective wellbeing (see for discussion Alkire and Santos, 2010).

Relatedly, there is new interest in notions of 'Human Wellbeing' and poor people's own indicators and seeking to combine together material, relational and subjective aspects (see for discussion, McGregor and Sumner, 2010). Indeed, although wellbeing in its broadest sense has a long intellectual history, the concept has been particularly hotly debated over the last ten years or so, if the amount of published books and articles is any measure (for overviews see Gough and McGregor, 2007; McGillivray and Clarke, 2006).

Finally, there is the OECD-convened Measuring the Progress of Societies Project, now renamed the OECD Better Life Initiative (OECD, 2012), which amongst others, has discussed broader definitions of progress, such as intra-generational and sustainability issues and has an indicators compendium (OECD, 2011).

The Sarkozy Commission is the most significant attempt to look, in-depth at measuring progress (Stiglitzet al., 2009: 10, 14-15). It concluded that that there is a need,

> [T]o shift emphasis… to measuring people's wellbeing… …objective and subjective dimensions of well-being are both important… …the following key dimensions that should be taken into account….(a) Material living standards (income, consumption and wealth); (b) Health; (c) Education; (d) Personal activities including work (e) Political voice and governance; (f) Social connections and relationships; (g) Environment (present and future conditions); and (h) Insecurity, of an economic as well as a physical nature.

The commission was inspired by three different streams of conceptual thinking on wellbeing: subjective wellbeing (individuals are the best judges of their own condition); capabilities (a freedom to choose amongst different functionings); fair allocations (weighting the various non-monetary dimensions of quality of life beyond the goods and services that are traded in markets) in a way that respects people's preferences) (Ibid: 42). The report distinguishes between current and future wellbeing' and 'sustainability': "Current well-being has to do with both economic resources, such as income, and with non-economic aspects of peoples' life (what they do and what they can do, how they feel, and the natural environment they live in). Whether these levels of well-being can be sustained over time depends on whether stocks of capital that matter for our lives (natural, physical, human, social) are passed on to future generations." (Ibid: 11). The commission recognised that wellbeing is multi-dimensional and recommended an number of dimensions to be taken into consideration (see text box 1 below) and OPHI had developed indicators and survey modules on some of the below: employment (Lugo, 2009); empowerment/agency (Ibrahim and Alkire, 2009); physical safety (Diprose, 2011); ability to go without shame (Zavaleta, 2011) and subjective wellbeing (Samman, 2009).

The HDR 2010 (UNDP, 2010) also included the Multi-dimensional Poverty Index (MPI) and the new inequality adjusted HDI. The MPI is a measure of 10 aspects of poverty across the three dimensions of the HDI (living standards, health and education). It thus produces one poverty headcount for 2000-2008 for 104 countries in which the data are available (DHS, MICS and World health Survey). To be multi-dimensionally poor, households must be deprived in at least 6 standard of living indicators or in 3 standard of living indicators and one health or education indicator (Alkireet al, 2011). The main limitations are due to data constraints the index includes outputs and inputs indicators; stock and flow indicators; and doesn't reflect well known intra-household inequalities (see Alkire and Santos, 2010 and Ravallion, 2010). The new inequality adjusted-HDI (IHDI) seeks to capture losses in human development due to inequalities in health, education and income. UNDP (2010) estimated the I-HDI for 139 countries and thus inequalities in health (via life expectancy), education (via years of schooling by household income) and income (via the gini). Each dimension's average value is discounted according to its level of inequality so as inequality rises the IHDI falls. Under perfect equality the HDI and the IHDI are equal. The lower the IHDI (and the greater the difference between it and the HDI), the greater the inequality. As UNDP (2010: 72, 86) notes as an example, 'inequality is almost three times greater in Namibia than in Kyrgyzstan, countries that both have an HDI of 0.6… Losses in the three dimensions vary across countries, ranging from 1 percent in education (Czech Republic) to 68 percent in income (Namibia), and tend to be largest in low HDI countries.

In reality what we actually do currently measure is more limited and any MDG 2.0 framework would need to be based on existing data to provide a baseline for any targets. Those aspects listed by the Sarkozy commission could be grouped into indicators related to material aspects of poverty; relational aspects; and subjective aspects of poverty (see table) and aligned with available indicators from the exhaustive dataset in the Human Development Report.

Human wellbeing: Areas of study, determinants, indicators and examples of existing datasets

	Material wellbeing – 'needs met' and 'practical welfare and standards of living'	Relational wellbeing – 'ability to act meaningfully' and 'personal and social relations'	Subjective wellbeing – 'life satisfaction' and 'values, perceptions and experience'
Area of study	The objectively observable outcomes that people are able to achieve.	The extent to which people are able to engage with others in order to achieve their particular needs/goals.	The meanings that people give to the goals they achieve and the processes in which they engage.
Key determinants	Income, wealth and assets. Employment and livelihood activities. Education and skills. Physical health and (dis)ability. Access to services and amenities. Environmental quality.	Relations of love and care. Networks of support and obligation. Relations with the state: law, politics, welfare. Social, political and cultural identities and inequalities. Violence, conflict and (in)security. Scope for personal and collective action and influence.	Understandings of the sacred and the moral order. Self-concept and personality. Hopes, fears and aspirations. Sense of meaning/ meaninglessness. Levels of (dis)satisfaction. Trust and confidence.
Indicators	Needs satisfaction indicators. Material asset indicators.	Human agency indicators. Multi-dimensional resource indicators.	Quality of life indicators.
Examples of existing datasets (cross country, in UNDP Human Development Report, 2010)	*Human Development Index and Multidimensional Poverty Index* *Decent Work*: employment to population ratio; formal employment; vulnerable employment; employed people living on less than $1.25 a day; unemployment rate by level of education; child labour; mandatory paid maternity leave. *Achievements in Education*: adult literacy rate; population with at least secondary education. *Access to Education*: primary enrolment ratio; secondary enrolment ratio; tertiary enrolment ratio. *Efficiency of Primary Education*: dropout rate; repetition rate. *Quality of Primary Education*: pupil-teacher ratio; primary school teachers trained to teach. *Health Resources*: expenditure on health; physicians; hospital beds. *Risk Factors*: infants lacking immunisation (DTP and measles); HIV prevalence (youth and adult). *Mortality*: infant; under-five; adult (male and female); age-standardised death rates from non-communicable diseases.	*Gender Inequality Index* *Political Freedom*: democracy. *Civil Liberties*: human rights violations; press freedom; journalists imprisoned. *Accountability*: corruption victims; democratic decentralisation; political engagement. *Human Security:* conventional arms transfers. *Civil War*: fatalities; intensity. *Limitations to Freedom from Fear*: refugees by country of origin; internally displaced persons; homicide rate; robbery rate; assault victims.	*Overall life satisfaction*: negative experience index. *Satisfaction with Personal Dimensions of Well-Being*: job; personal health; standard of living; community; affordable housing; healthcare quality; education system; air quality; water quality. *Elements of Happiness*: purposeful life; treated with respect; social support network; perception of safety.

Sources: Synthesised from Copestake (2008); McGregor (2007); McGregor and Sumner (2010); UNDP (2010); White (2008; 2010)

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