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The MDGs: Multidimensionality and Interconnection¹

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Executive Summary

1. **Interconnectedness and Coherence: A Missing Lens**
2. **Missing Dimensions: Jobs, Safety, Agency**
3. **Growth that meets the MDGs**
4. **Multidimensional Measures**
5. **Process and Sustainability**
6. **High Impact Causal Pathways**
7. **Conclusion and Policy recommendations**

Executive Summary

The current context for advancing development is difficult. The global financial crisis and the impacts of climate change have added new layers of complexity to poverty reduction, in addition to the challenges of failed states, poor governance, and of service delivery. Yet poverty reduction is no less urgent for the men, women, and children whose lives are battered daily by preventable threats. To accelerate progress towards the Millennium Development Goals (MDGs) in this environment requires key strategic adjustments to provide the biggest return to investments *in terms of* achieving the Goals. In addition to having a ‘low carbon recovery’, we need a ‘pro-MDG’ recovery. What would this look like?

In addition to a ‘low carbon’ recovery, we need a ‘pro-MDG’ recovery.

This paper has had one clear aim. It is to revive the recognition that the MDGs are interconnected. Simple, powerful tools from that sight can propel existing work to meet the MDGs forward. This background paper identifies five concrete policy areas and sets of interventions that should be considered.

First, support for the eight Millennium Development Goals remains strong, and general awareness continues to grow. **To address the MDGs more effectively requires additional data in four dimensions** – jobs, empowerment, physical safety, and dignity – plus continuing efforts to improve governance. Some of these dimensions have heightened visibility in the current financial crisis, and all may be of direct value. Section 1 describes the potential value-added for the MDGs by considering these missing dimensions. It also explores a possible further dimension, namely psychological and subjective well-being and happiness.

Second, growth has become re-emphasized alongside the MDGs as a clear goal for developing economies. Yet not all countries with strong growth have done well on the MDGs. Indeed a prominent European synthesis of recent research finds ‘little or no correlation’ between growth and the non-income MDGs (Bourguignon et al. 2008). The Commission on Growth and Development (CGD), like most research, did not consider which pathways to growth also accelerate progress in the MDGs. The strong conclusion is that growth policies developed in isolation from the MDGs may not further them – rather, we need to design **growth policies to advance multiple objectives**. We propose a follow up to the CGD that does this.

Third, the MDGs were advanced as a set of goals because they are each important directly, not merely for their instrumental impact on a third variable. **Recently, new multidimensional measures have been**

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developed that allow policymakers to see at a glance all the dimensions of poverty a poor person or family experiences. Such measures are tremendously useful for targeting social protection interventions, for analysing regional and ethnic variations in the components of poverty, and for supplementing the income poverty lines. They can also be extended to monitor other interventions such as improvements in the quality of education, governance, child poverty, or health clinic services. Indeed Bhutan's Gross National Happiness Index released November 2008 employs this method. We explain these methodologies, provide examples of their use, and commend their application more widely.

Fourth, the MDGs are framed as targets to be met for the first time in history. Yet the clear intention is that these gains are not only to be met in 2015; the gains are to be sustained over time. This requires that **social protection systems fundamentally and consistently build upon existing local initiatives, and be structured for accountability and subsidiarity** – allowing the greatest responsibility to the lowest level capable of fulfilling it. Here we explore three concrete considerations of sustainability: First, household survey processes need to be supplemented by *rapid data gathering techniques*, which produce robust data that can be analyzed locally as well as nationally. Furthermore, in a historical context in which pandemics, financial volatility, and natural disasters caused by climate change are impending, it is of even greater importance to implement policies and social protection programmes that can not only support people from individual-level threats, but also sustain gains to the MDGs should system-wide shocks occur.

Fifth and finally, because the MDGs are interconnected, an investment or advance in one has a ripple effect on others over time. This section identifies the various interconnections. Thus, just as we can undertake growth diagnostics to seek out the 'binding constraints' for growth, so too in a time of financial crisis and restricted funding, we need to do similar causal analyses for the MDGs, to identify **high impact pathways by which investments in one strategic area have the biggest impact on several MDGs over time.** In this way funds are used most effectively. We argue here for both a case study approach and also for research investment to consolidate existing methodologies (and where necessary improve them), and focus them intensively on the MDGs.

Specific policy recommendations:

2. Missing Dimensions: Jobs, Safety, Agency, Dignity

Some instrumentally powerful tools to advance the MDGs are not necessarily MDGs themselves. We call these missing dimensions. Improvements to missing dimensions such as the quality and remuneration of informal work, physical security, agency and empowerment, and to freedom from shame and humiliation, could in some cases powerfully advance the MDGs.

1. Test the existing preliminary modules on missing dimensions sufficiently to verify their accuracy. Once these modules are more developed then work to integrate them into household and the major international surveys.
2. Include 'missing dimensions' modules in relevant surveys that monitor or evaluate MDG-related projects or programmes.
3. Create awareness and support for national statistical offices to implement the missing dimensions modules.
4. Analyse interconnections between the MDGs and each of the missing dimensions across contexts to identify the key bottleneck for progress on the MDGs. If missing dimensions are present, bottlenecks might include a lack of jobs, violence, disempowerment, or humiliation.
5. Develop statistical methods to incorporate subjective data into public policy analysis, which takes into account the problems of 'adaptive preferences' among the poor and uneducated.

6. Explore through dialogues and engagement at the national level how the missing dimensions provide a vital focus for a revitalization of the MDGs

3. Growth that meets the MDGs

1. In addition to a 'low carbon' recovery, we need a 'pro-MDG' recovery. To achieve this growth policies need to be more coherent with the MDGs. They should be designed so that they will simultaneously advance non-income MDGs.
2. Synergistic growth and MDG policies should be implemented in particular countries and impacts should be rigorously evaluated and compared.
3. More generally, the success of growth policies should be evaluated in part with reference to the objectives growth is presumed to advance – especially the MDGs.
4. Policies to advance both income growth and the non-income MDGs simultaneously should be explored, in order that countries may deliberately exploit this synergy.
5. It would be prove extremely timely and relevant to appoint a Commission or research group to identify and evaluate case studies of countries that had attained high sustained MDG outcomes with the same degree of acuity, lack of ideology, steadfast attention to detail, and clarity as the Commission on Growth and Development, and determine which policy ingredients led to sustained achievements in the MDGs.
6. In the current global economic context, it could also be timely to produce a set of case studies of countries that achieved high MDG outcomes but did *not* have strong growth rates, to identify commonalities between them and lessons for times of economic downturn.

4. Multidimensional Measures

1. Recognizing the practicality of new multidimensional measures that make it possible, adopt a multidimensional framework to monitor analyze and evaluate poverty reduction and the MDGs
2. Use multidimensional techniques to quickly identify and target the poorest recipients for social protection programmes.
3. Implement multidimensional poverty measures comprised of key MDG indicators which are available from the same survey instruments (e.g. DHS).
4. Supplement national income poverty measures with a multidimensional poverty measure.
5. Count people, not only countries, by including data on the number of *people* who are deprived in each indicator, as well as the proportion of a country's population.
6. Test and use multidimensional measures in other programmatic areas such as education, health, gender, corruption, human rights, and well-being as relevant.
7. Test the robustness of key measurement assumptions such as the weights applied to dimensions, to ensure that high profile comparisons are robust to minor changes in measurement assumptions.

5. Process and Sustainability

1. Continue to improve national data collection for MDG indicators, and their analysis
2. Develop new timely mechanisms to gather relevant data for social protection. These will vary by context, but might include locally gathered data (such as CBMS) where corruption is relatively low and stability and capacity are strong. Alternatively mechanisms are needed in failed states.
3. Identify channels by which donors can effectively and appropriately support nationally developed social protection mechanisms such as NREGA, without undermining the ownership and national support that is essential to these interventions. This could be, for example, by supporting rigorous monitoring and evaluation efforts.

4. Document concrete mechanisms by which well-performing social protection mechanisms have engaged civil society – for example through the legal frameworks, finance, communication, and information sharing.
5. To reflect inequality, standard measures economic growth (the arithmetic mean) should be supplemented with reports of the distribution sensitive means.
6. Inequality-adjusted multidimensional measures should be constructed and comparisons across time analysed to see the relative contribution of rising or falling inequality to MDG attainments.

6. High Impact Causal Pathways

1. As in Section 3, we propose the development of careful, thoroughly case studies of countries that draw on the kinds of analysis undertaken by the Commission on Growth and Development and identify ex post high impact strategic paths that countries had used, and the policy ingredients that had been in play in successful MDG countries. This would sensitize policy analysts to the kinds of interconnections that others have exploited. It would also inform the design of planning and evaluation tools to support such causal pathways.
2. As studies of the nature proposed here are not widely available at this time, we propose a significant focused research project that generated user friendly tools of analysis. These tools would identify high impact causal pathways that build on the ‘ripple effects’ of one MDG on another. The research project would develop stronger methodologies to construct *production functions* for key groups of MDG indicators or other development goals.

1. Interconnectedness and Policy Coherence: A Missing Lens

The UN *Roadmap towards the Implementation of the MDGs*, published 6 September 2001, recognizes the interconnectedness of the MDGs, and advocates an integrated approach to them:

Given that all the issues around poverty are interconnected and demand crosscutting solutions, such measures as the ‘School meals’ and ‘Take home rations’ programmes can have multiple benefits that extend beyond nutritional assistance. Education provides the skills that can lift families out of extreme poverty and preserve community health. In particular, when society facilitates girls’ empowerment through education, the eventual impact on them and their families’ daily lives is unequalled (page 3).

This paper focuses practically on delivering the MDGs. In particular, it explores how to advance the MDGs more strategically by recognizing the interconnections between them. For example:

- A particular need, identified almost universally, is for **more and better data on the MDGs and other strategic dimensions**. In some contexts, involving local communities and governments in the collection, analysis, and publicity of this data can decrease costs and greatly increase the availability of statistics on the MDGs.
- **Addressing violence**, both conflict and crime-related, is a necessary complement to meeting the MDGs. Such violence is prevalent in failed states, which are well-known areas of MDG-failure, but is also a burden on the poor more generally.
- In a time of recession, particularly strong attention is required to the **quality, quantity, and remuneration of jobs**, and particularly to self-employed workers, women workers, and family workers.
- In many contexts, meeting the MDGs could be accelerated by building on **nationally-generated social protection programmes**, and so engaging people’s own initiative to decrease costs, increase accountability, provide incentives for better governance, and sustain results.
- A surprising but consistent research finding is that **growth is not sufficient to advance the non-income MDGs**. In order for growth to advance the MDGs, policies must explicitly address both side by side.
- Many people are deprived of multiple MDGs at the same time. Such people and communities are, in some ways, the poorest of the poor. **New, user-friendly multidimensional measures** enable these people to be *identified and targeted* for social protection schemes and other inputs. They can also *measure changes* in multidimensional poverty over time, thus supplementing income measures. And they can illustrate *how the components of poverty vary* across regions, ethnic groups, or urban and rural areas.
- New techniques also **allow at-a-glance measures to monitor** programmes that are being rolled out, such as those to increase the quality of education or health clinics or governance
- **Multidimensional analyses** of the MDGs enable the identification of higher impact causal pathways. These identify high impact investments that advance several MDGs at the same time. For example in some contexts school meals improve school attendance, gender parity, and child nutrition hence learning outcomes, increase parental involvement in schools, and even break down social barriers.

All of the examples given above have one thing in common: they attend carefully to interconnections among the MDGs and other processes or strategic dimensions. The need to capitalize on such interconnections in order to accelerate progress to the MDGs is widely acknowledged. For example a group of European researchers led by Francois Bourguignon wrote, ‘Within a policy coherence framework, achieving the MDGs

requires consistency between the general development strategy and the MDGs implementation strategy'.² In these difficult times, an increase of policy coherence, alongside a consistent and informed determination to engage communities as agents of change, is required.

2. Missing Dimensions: MDGs plus Jobs, Safety, Empowerment, & Dignity

Existing data are a critical resource for results-based policy. The corollary is that missing data make quantitative analyses impossible. Governments and international agencies base their policies and programmes on accepted goals and available data. If no relevant data exist for a dimension, then that dimension risks being left out of consideration when building policies and programme alternatives.

In addition to extending country coverage, work to strengthen MDG data should introduce brief strategic modules on informal work, safety, empowerment and dignity into household surveys.

Yet there is a trade off between parsimony and completeness of data.

To study the interconnections between variables it is necessary to obtain data from the same survey. But it is not feasible to extend household survey instruments significantly. Not only are the costs prohibitive, but respondents simply do not complete excessively long schedules. Hence parsimony is required. At the same time, if key variables previously omitted are included, the analysis will be more accurate, and the formulated interventions, more effective.

At present, data on the MDGs themselves are weak, and in need of urgent strengthening. This section argues that in addition to extending country coverage, work to strengthen MDG data should introduce brief strategic modules on informal work, safety, empowerment and dignity into the household surveys that provide MDG data. Our research has found that there are missing dimensions that urgently need to be addressed. Because of the clear interconnections between these dimensions and existing MDG goals, addressing them will have a major impact on the MDGs.

The data for the MDGs are drawn from four internationally comparable surveys, plus national multi-topic household surveys. The international surveys are Living Standards Measurement Study (LSMS), Core Welfare Indicators Questionnaire (CWIQ), Multiple Indicator Cluster Survey (MICS) and Demographic and Health Survey (DHS). The dimensions we propose are systematically missing from existing survey data and from search engines of other household surveys.³

- The dimension **violence** is nearly invisible. Only one search engine – ICPSR – identifies data on ‘conflict, aggression, violence, wars’. There are two modules on domestic violence – in DHS and in MICS – which are tremendously important. However other kinds of criminal and conflict-related violence are systematically absent.
- While formal employment is fairly well covered in some surveys, topics of **informal employment or quality of work** (e.g. safety at work, security of work, living wage) are not treated explicitly, nor is it possible through search engines to call up information on these topics.
- **Empowerment** is systematically absent. It is not a search term, nor a regular or optional module in any of the surveys. The closest related categories are small subsets of the term: the DHS includes questions on women’s decision-making within the household in different domains. This is constructive (although the questions may be improved),⁴ but excludes women’s empowerment in the state, market, and wider society, as well as the empowerment of men with respect to state, market, and

² Bourguignon et al. p 28

³ In what follows we consider, in addition to the 4 surveys, search terms drawn from the search engines listed in Appendix 4.

⁴ Cite the working paper 20 of DHS on women’s empowerment by Sunita Kishore et al.

society. The ICPSR looks at elites and leadership, as well as mass political behaviour and attitudes, which are, again, a subset of empowerment.

- In terms of **discrimination and humiliation**, the LSMS has an optional module on social capital; others either do not include any aspect of relationships, or else focus on intra-family relationships.
- In terms of assessments of **psychological and subjective well-being**, the LSMS contains an optional module, on subjective assessments. Demographic data on ethnicity and language are regularly collected, which enable some disaggregation of certain cultural groups, but richer data are missing.

In sum, it is not possible, using the current MDG data-sources, to obtain data for the same household on, and thus to analyse interconnections between, the MDGs and violence, informal work and quality of work, empowerment, stigma and discrimination, or psychological and subjective well-being. Direct investment in MDG surveys that expand existing data and also include modules on these topics are required to facilitate more accurate policy. Why might we wish to do so?

Introduction to each dimension

To address the MDGs effectively requires conscious investments. But sometimes an investment in an different area can have a high impact on the MDGs. A familiar example is that one of the most effective family planning investments is an investment in female education. Throughout this paper, we will mention missing dimensions that interact with the MDGs. In many contexts, attention to these dimensions will accelerate progress towards the MDGs. This section begins by introducing these dimensions.

Three clear ‘missing dimensions’ are: **work, safety from violence, and agency and empowerment**. In addition we describe two additional areas. The first outlines data that would detect serious incidents of **discrimination and humiliation** – which can be a precursor to violence and a barrier to service delivery. The second introduces measures of **psychological and subjective well-being**, which are receiving increased attention as ingredients in an overall measure of well-being, mentioning the potential strengths and concerns in using these variables to inform public policy.

Work⁵

Having decent work is valued both for its own sake as well as for the income that it brings to the worker and household. Yet good jobs are under particular threat due to the recession and rising unemployment in many countries, and the reduction of worker benefits and protections in some areas. At least five countries have identified ‘decent work’ either as a ninth MDG, or as a high priority target to be pursued in tandem with the MDGs, and many voices have called for greater attention to work.⁶ And out of 19 composite indices of poverty and well-being, 14 included work-related indicators (Appendix 3). Informal work is more predominate among women than men, so these data are important to understand women’s work outside the home.

The 2005 revised list of MDGs included one additional target and four indicators related to work.

Recognising the centrality of good quality jobs to poverty reduction, the 2005 revised list of MDGs included an additional target and four indicators related to work. These are found in Appendix 1. The target is to ‘Achieve full and productive employment and decent work for all, including women and young people’. The indicators are: growth rate of GDP per person employed, Employment-to-population ratio, Proportion of employed people living below \$1 (PPP) per day, and Proportion of own-account and contributing family workers in total employment. Thus although the target lacks a time-specific outcome, in principle jobs are

⁵ {Lugo 2007 #4618}

⁶ Chen, Vanek and Heintz, 2006. ‘Informality, Gender and Poverty: A Global Picture.’ EPW. 27 May, p. 2131-2139

already part of the MDGs. Their inclusion represents a wide-spread consensus regarding the pivotal role of jobs in poverty reduction. Because the 2005 targets are less widely known and certainly less widely implemented than the original eight Goals, and because support for work is of particular importance during economic downturns, we include it in our list of strategic dimensions.

A key policy to advance this MDG is to improve the data and analysis on self-employed and family workers. In practice, the 'lens' of interconnection requires data on all relevant variables to be gathered for the same household or person – which usually means that the questions must appear in the same survey. Resources such as the *Living Standards Measurement Survey* gather extensive employment data from wage workers (as well as data on consumption, education, and other areas – see Appendix 2). Yet as Box 1 suggests, informal and unorganized workers constitute the majority of the labour force in some areas. Gathering sufficient information on the kind, quality, and remuneration of self-employed jobs in the LSMS is essential to developing strong policies that support poor workers, and particularly women.

Box 1. The contribution of self-employed and family workers to the labour market in developing countries

The failure to interrogate self-employed and family workers in developing countries as to the labour protections they do or do not enjoy blurs our understanding of vulnerability and of informal employment more generally.

Data shows that the share of self-employed and family workers in the labour market is high in developing countries; that it is a key component of informal employment; and, that self-employment is a persisting feature of these labour markets.

Nearly one-third of non-agricultural workers globally are self-employed: 53 percent in sub-Saharan Africa; 44 percent in Latin America; 34 percent in Asia; and 28 percent in Middle East/North Africa (ILO 2002). Adding those self-employed in agriculture and family workers into the picture increases these shares further. To take one example, the Tanzanian 1990/91 labour survey suggested that 74 percent of the labour force were self-employed, 14 percent were unpaid family workers and only 12 percent were wage employees (Rahu 2006, p. 22).

However standard questions on employment protections do not cover self-employed workers. In the Tanzanian case, data would cover only the 12 percent who were wage employees. Moreover, in the excluded groups of workers, women are more highly represented than men, particularly in sub-Saharan Africa. Furthermore, self-employment is growing. Between 1980 and 2000, self-employment increased from about one-quarter to one-third of the non-agricultural workforce world wide – and it has increased or persisted in all parts of the developing world except East Asia (ILO 2002).

Source:

ILO (2002), *Women and men in the informal economy: A statistical picture*. Geneva: ILO

Rahu, Dhushyanth (2006), *Informal enterprises and workers: Labor market issues and options*. Available at:

<http://info.worldbank.org/etools/docs/library/230306/RajuAfternoonI.pdf> (accessed 27 March 2009)

Other policies to advance jobs and simultaneously address the MDGs include:

- Gathering sufficient data on self-employed/informal sector workers and working conditions
- Job creation, food-for-work programmes, and other safety nets for unemployed workers
- Improving the remuneration of the poorest workers
- Improving working conditions, legal protections, and addressing work-place hazards
- Creating growth through investments in rural and labour intensive sectors
- Improving the conditions and remuneration of women's work
- Increasing women's labour force participation

Safety from Violence⁷

A second key dimension is safety from violence. Safety from violence – be it violence from gangs, organized crime or petty thieves, violence from the police or from conflict, or domestic violence – is clearly valued for its own sake. Yet in addition to the direct human costs of lethal and non-lethal violence, the indirect human costs of violence and the threat of violence (e.g. lack of service delivery in conflict affected areas or high crime areas) are very significant. When women and men feel vulnerable to the threat of violence this also affects other behaviour. For example women's mobility is likely to be constricted where possible in situations where violence is common. In recognition of its importance, 19 countries stressed security from violence in their PRSP or other planning document. Two countries developed a 9th MDG around security, and at least 17 more place violence as a pillar of their national strategy alongside meeting the MDGs.

Lethal violence, the most extreme expression of violence, is relatively rare. The WHO *Global Burden of Disease: 2004 Update* (2008) study estimates that 58.8 million people died in the year 2004, and reports the cause of death according to disease factors as well as accidents, injuries, war, and violence. In 2004, they reported a total of 183,000 deaths due to war and conflict, and 599,000 deaths from violence such as homicide or murder. Clearly data on violence are of poor quality, so these figures have a high degree of uncertainty, but still the direct cost of violence on human survival is smaller than deaths from HIV/AIDS (2 million), tuberculosis (1.5 million) or diarrheal diseases (2.2 million). Suicide and self-inflicted injuries, which are not addressed in this paper, have the highest toll of violence-related deaths, and in 2004 took 1.6 million lives.

Hence in terms of sheer numbers, poor health towers above battle deaths or homicides as a cause of death. Yet the affects of violence extend well beyond its lethal toll, and include physical assault, rape and maiming from criminal violence and conflict; violence to person and violence to property; violence as disrupting public services and destroying physical and social infrastructure, as causing trauma and permanent injury. It is not well documented as we shall see. Furthermore, the burden of such violence rests disproportionately on the poor. One of the surprises of the *Voices of the Poor* study, which surveyed 60,000 poor people in 60 countries, was the fact that poor people around the world, in widely disparate countries, identified violence as a central aspect of their experience of poverty.

Violence is clearly interlinked with the MDGs on multiple levels, and this linkage has been widely recognized in analyses and policy. Fragile and failed states, and countries in conflict, are disproportionately failing in progress on the MDGs, and a great deal of additional assistance and attention is being directed towards them.⁸ For the cost of violence is not only its direct mortality but also its indirect effects on the health, education, and living conditions of people – through loss of loved ones, brutalization, injuries and disabilities, disruption of infrastructure and service delivery systems, economic costs, and economic and political stability. Yet concerns about violence are not confined to fragile and failed states, as the *Voices of the Poor* findings show. Hence we prefer to consider interactions between violence and MDG attainments in different settings.

⁷ {Diprose 2007 #4620}

⁸ *Global Monitoring Report 2007*, Collier 2007 *The Bottom Billion*.

Addressing violence – not only in failed states but also in particular regions of well-functioning states – is strategic to meeting the MDGs. Further, new research on violence and poverty, including DFID-funded research,⁹ has identified a number of feasible policy responses. Clearly training police forces over a decade, or demobilizing soldiers, or controlling small arms trade, requires different institutional engagements than advancing child nutrition. But a number of investments can be made quite easily, such as attempting to improve citizens' satisfaction with how their calls to emergency services have been addressed.

Our understanding of the interconnection between violence and the MDGs is surprisingly constrained. One of the constraints, mentioned below, is a complete absence of data on incidents of violence a person has experienced that can be linked with that household or person's experiences of poverty and disaggregated by key variables such as age and gender. A module does exist on the vital issue of domestic violence, but must be implemented far more regularly by countries. Another constraint is the institutional 'gap' between agencies that work in conflict areas and expect to address issues of violence, and those who support long-term development strategies, who traditionally have not addressed this topic.¹⁰

Agency & Empowerment¹¹

Gender empowerment is very much a part of the MDGs, and also appears in the Gender Empowerment Measure of the UNDP. Many have called for this gender empowerment goal to be extended to gender parity in other areas. Women's empowerment is of fundamental importance, and should be a cross cutting issue in all areas, including empowerment initiatives that are not limited to women.

The need to cultivate people's agency is particularly relevant to the MDGs. In Amartya Sen's approach, men and women alike are seen not only as 'passive recipients of cunning development programmes' that aim to improve their lives, but as active agents. Sen defines agency as 'what a person is free to do and achieve in pursuit of whatever goals or values he or she regards as important'.¹² Put simply, an agent is 'someone who acts and brings about change'.¹³ Empowerment, at least in part, entails an increase in people's agency. It is a trend variable, like economic growth.¹⁴

When people act as agents they are empowered to participate in and indeed drive development processes; they can shape their own destinies; they discover their strength. Empowerment is important for its own sake, and can also be an effective way to engage many communities and people as agents of their own development. But

Strikingly, on the international stage, empowerment is invisible. It is not an MDG. It is not adequately measured in any internationally comparable surveys. No nation rises in any United Nations index for 'empowering' poorer groups. Yet empowerment is vital to sustained poverty reduction. Improved measures of agency and empowerment are available. Data should be gathered – and used.

In terms of sheer numbers, poor health towers above battle deaths or homicides as a cause of death. Yet the burden of violence rests disproportionately on the poor

⁹ CRISE, the Centre for Research in Inequality, Human Security, and Ethnicity at Oxford. See Stewart 2008, and also the work of the Centre for the Study of African Economies (CSAE).

¹⁰ *Human Security Now* 2004.

¹¹ Ibrahim Alkire Paper in Oxford Development Studies Dec 2007, also Alkire 2008 Agency; Concepts & Measures.

¹² Sen 1985b p. 206. For other descriptions of agency see: p. 206. For other descriptions of agency see: Drèze and Sen 1989, Drèze and Sen 2002, Sen 1982, Sen 1985a, Sen 1987, Sen 1988a, Sen 1988b, Sen 1989, Sen 1992, Sen 1993, Sen 1994, Sen 1999a, Sen 1999c, Sen 2002, Sen 2005

¹³ Sen 1999b: 19

¹⁴ Ibrahim and Alkire identify 33 definitions of empowerment, each of which emphasises somewhat distinct features. Some authors argue that empowerment includes an increase in agency *plus* an increase on opportunities such as access to services (which the MDGs, for example, require). Agency and opportunity are both fundamentally important. As the increase of agency is driven by different policies, and is not visible in the MDGs, we focus directly on it.

it is not only important as an outcome: it is *also* instrumentally important. This has been recognized from the start. The *Roadmap to Implementation of the MDGs* (2001) argued that ‘People-centred initiatives are crucial’ (p. 3) and advised work on governance, institution-building, and infrastructure as means to supplement, not replace, people’s own initiatives.

Many studies such as the *Moving Out of Poverty* Narayan and Petesch 2007 research, have shown that people who actually escape from absolute poverty and MDG deficiencies are those who act as agents, as entrepreneurs, as innovators and early adopters. When men and women who had been poor but had subsequently moved out of poverty were asked to identify the reason for their success, nearly 74% cited *their own initiative* as the most important reason, rather than government programmes, NGOs, luck, assets, and so on. While these other supports surely were a part of the solution in many cases, poor people’s own initiative is a determining, and at times overlooked, direct resource to meet the MDGs. It is important to understand this initiative, and also how it varies among women and men, by ethnic group, age, and other variables.

In some contexts, increased voice and agency can be important assets for advancing the collective goals of communities, including poor communities. This is of course particularly true of women’s empowerment, because of women’s propensity to use additional power for the good of the household or group. Bourguignon et al. write the following regarding participatory development approaches: ‘The idea is that when people exercise their voice to reveal their preferences or communicate their knowledge of the local environment, it not only helps improve efficiency, but also provides an opportunity for the weaker sections of the population to defend their interests and prevent the implementation of unjust or unfair projects.’¹⁵ They also point out, as do many others, that this approach will not be effective in all contexts. ‘More voice given to poor people at the local level may be counter-productive in the presence of potential capture by the elite.’¹⁶

Multidimensional Poverty & Well-Being: Findings from 19 composite measures at a glance (Appendix 3)

- o 17 out of 19 multidimensional measures have indicators for **life, health, and reproduction**
- o 14 out of 19 have indicators for **work and leisure**
- o 11 out of 19 have indicators for **relationships**
- o 10 out of 19 have indicators for **education, knowledge, and skills**
- o 8 out of 19 have indicators for **authentic self-direction, security, environment, & governance**
- o 7 out of 19 have indicators for **political life**
- o 6 out of 19 have indicators for **culture and/or religion**
- o 4 out of 19 have indicators for **inner peace and self expression.**

When a number of citizens take up goals related to the MDGs, collective actions and sustained social movements can complement formal state efforts, providing additional resources of information, creating and sustaining political will, rewarding progress and chastising ill-conceived policies. While collective action by non-poor groups and organisations is not universally present or effective, where possible, it may merit cultivation. Drèze and Sen’s *Hunger and Public Action* concludes: ‘It is, as we have tried to argue and illustrate, essential to see the public not merely as ‘the patient’ whose well-being commands attention, but also as ‘the agent’ whose actions can transform society.’¹⁷

¹⁵ 2008:29

¹⁶ 2008: 33

¹⁷ Drèze and Sen 1989; p. 206; for a fuller description see Alkire 2007

Strikingly, on the international stage, empowerment is invisible. It is not an MDG, although many have called for it.¹⁸ It is not adequately measured in any internationally comparable surveys. No nation rises in any United Nations index for ‘empowering’ poorer groups. Yet empowerment is vital to sustained poverty reduction. Improved measures of agency and empowerment are available, and should be used.

Box 2. Moving out of Poverty Study: Highlights on empowerment

A strong breeze can break branches. A whirlpool in the ocean waters can sink boats. But a strong willpower can give you courage, and even if your destination is a thousand miles away, you can be successful.
Amit, young man, Uttar Pradesh, India

The *Moving Out of Poverty* study¹⁹ involved life narratives from 60,000 poor and formerly poor women, men, and youths based in 15 countries of Africa, South Asia, East Asia, and Latin America.²⁰ In each site, the study engaged people who had been poor but moved out of poverty (movers), those who have stayed poor (chronic), those who were not poor, but have fallen into poverty (fallers), and those who have never been poor. Based on quantitative and qualitative studies, volume two of the study (April 2009) synthesized seven key findings from the study:

1. **Poor people are not trapped in a culture of poverty**
2. **Poverty is condition, not a characteristic**
3. **Power ‘within’ can help a person move up**
4. **Equal opportunity remains a dream**
5. **Responsive local democracies can help reduce poverty**
6. **Collection action helps poor people cope but not get ahead**
7. **Poverty reduction should be guided by lessons from poor people:**
 - 7a. all actions should seek to *expand the scope for people in poverty to utilize their agency...*
 - 7b. actions should seek to *transform markets so that poor people can access and participate in them fairly*
 - 7c. *well-functioning local democracies can help people move out of poverty.*

Some of the findings are quite striking and are likely to influence future interventions to reduce poverty. First is the centrality of personal initiative, agency, and empowerment among the ‘movers’. Household surveys enquired how people who had been poor had moved out of poverty. The replies are striking: None said lottery or luck; less than 1% reported illegal activities or NGO assistance, only 1.6% reported increased community prosperity, 3.4% cited government programmes, 4.7% cited asset accumulation, and 5.5% cited hard work. However 77.5% linked the journey out of poverty to their **own individual initiative** rather than to an external institution or actor. Their initiatives included agriculture, finding jobs, investing in a business, adding new sources of income, and migrating. *Moving Out of Poverty* concludes that far greater attention needs to be paid to empowerment and to supporting people’s agency and empowerment – individual and collective.

Discrimination and Stigma

Many recent initiatives have focused on social relationships, and used titles such as social exclusion or social cohesion. We propose, as a core area of concern, a narrow slice of these, relating to discrimination and humiliation. Sen wrote, ‘The helpfulness of the social exclusion approach does not lie, I would argue, in its conceptual newness, but in its practical influence in forcefully emphasizing – and focusing attention on – the role of relational features in deprivation’.²¹ Relationships are important, particularly for women, and 14 out of 19 composite poverty and well-being measures include some form of indicator on them (Appendix 3). In practice, analysis of social relationships has used measures of group-based inequality in income, health, educational outcomes, and other attainments to document discrimination (Klasen 2000). To supplement inequality measures we suggest measuring discrimination, indignity, and humiliation.

¹⁸ Bourguignon et al. 2008, p. 33

¹⁹ www.worldbank.org/movingoutofpoverty

²⁰ Malawi, Morocco, Senegal, Tanzania, Uganda, Afghanistan Bangladesh, India, Sri Lanka, Cambodia, Indonesia, Philippines, Thailand, Colombia, and Mexico.

²¹ Sen 2000, p. 8 taken from Zavaleta 2007

Such experiences are identified by poor people as constituents of poverty. The *Voices of the Poor* study conducted in 60 countries, for example, found that humiliation, and fear of the stigma of poverty is a recurring theme across the world.²² The sense of humiliation can result in increasing isolation as people are 'able to participate less and less in the social ceremonies and traditions that once brought people together and helped to create and maintain the social bonds between people' (Narayan et al. 2000, p. 70), further corroding social relations in society. The cause and impacts of humiliation probably differ for men and women.

Humiliation creates inefficiencies. Attaining the MDGs at all often depends upon social protection and services that are, at least in part, publicly funded. If these services are either not delivered to certain population groups because of discrimination, there is a direct failure. If social services and social protection packages are delivered in a way that stigmatizes or humiliates recipients, this creates a disincentive to access public services, and a lower uptake, resulting in lower MDG outcomes. For example, the USAID-funded Futures Group and the POLICY project find that a failure of service providers to address discrimination and stigma lead to significant shortcomings in the ability of those services to prevent and fight HIV/AIDS: 'HIV-related stigma and discrimination (S&D) has accompanied the AIDS epidemic from the start. Fear of and actual experience with stigma and discrimination reduce an individual's willingness to practice prevention, seek HIV testing, disclose his or her HIV status to others, ask for (or give) care and support, and begin and adhere to treatment.'²³

In addition, incidents of group-based inequality, together with discrimination and stigma, may be an early warning sign for conflict. At the same time addressing such incidents is one clear part of an effective conflict prevention strategy.²⁴ It is commonly argued that one of the main causes of the Second World War is related to the humiliation the German population suffered as consequence of the peace treaty that formally ended the First World War.²⁵ Thus understanding a narrow range of social dynamics can enable policy makers to diagnose dangerous social tensions and respond quickly.

Psychological and Subjective Well-being

Subjective assessments of well-being are eye-catching, and are increasing in visibility. Their relevance to France's national measure will be argued by the Sarkozy commission's sub-group on Quality of Life.²⁶ UK academics such as Richard Layard, and groups such as the New Economics Foundation (nef) advocate the use of subjective well-being data as policy goals. The finding that increases in income do not increase happiness except at very low income levels is of particular interest in high income countries, but its intrigue is spreading. The World Bank has developed a module of 'subjective assessments' and used this in 17 countries.²⁷ Samman writes, 'The appeal of happiness as an indicator is manifold: it is uni-dimensional, easy to capture and emotionally appealing'.²⁸

²² Narayan et al. 2000a, 2000b

²³ Nyblade L and K MacQuarrie. *Can we measure HIV / AIDS-related stigma and discrimination? Current knowledge about quantifying stigma in developing countries*. Washington, DC, Futures Group, POLICY Project, 2006 Jan

²⁴ Collier 2007, Stewart 2008.

²⁵ Linder, E. G. 2007. 'In times of globalization and human rights: does humiliation become the most disruptive force,' *Journal of Human Dignity and Humiliation Studies*. March.

²⁶ <http://www.stiglitz-sen-fitoussi.fr/en/index.htm> This sub-group is chaired by Alan Krueger and reports to the co-chairs of the Commission, Joe Stiglitz and Amartya Sen. The Commission's formal title is the Commission On the Measurement of Economic Performance and Social Progress (CMEPSP).

²⁷ Albania, Armenia, Bosnia-Herzegovina, Brazil, Bulgaria, Ecuador, Guatemala, India, Jamaica, Kazakhstan, Kyrgyzstan, Malawi, Serbia, South Africa, Tajikistan, Tanzania, Timor-Leste.

²⁸ Samman 2007:460

It is not entirely clear whether the evolving and politically appealing research on subjective assessments will strengthen or undermine commitment to the MDGs. This seems quite an important issue to engage. Competition or synergies with happiness-based approaches will certainly affect the MDGs in the next few years.²⁹ One possibility is that happiness will ‘crowd-out’ the MDGs, and thus be a threat to a fragile political commitment, displacing a focus on abject poverty with a focus on subjective states that have popular appeal in political rhetoric, but do not require far-reaching policy (or may even lead to misguided policy – if they emphasise the discontented rather than the most deprived). Alternatively, research on subjective experience could deepen the work on MDGs in several ways. First, subjective data provide an important resource for understanding micro-level behaviour (which is not always driven by objective conditions as much as by perceptions of these conditions). Second, research could clarify how to address adaptive preferences in quantitative analysis, which would heighten the relevance of subjective data for policy. Third, social and cultural dimensions and subjective states might be considered overall goals alongside the MDGs, so that poverty reduction activities do not undermine cultural and spiritual values. There seems to be some demand for this. For example Vietnam added to the MDGs a goal to ‘develop cultural information and improve the spiritual life of people’. Bhutan, Cooke Islands, and Mozambique also added targets and priorities related to culture; Bolivia’s articulated aim at present in its national development plan is *para vivir bien* – a goal that encompasses subjective and cultural features alongside objective indicators (Appendix 5).

Our suggested focus on ‘psychological and subjective’ well-being is wider than current happiness measures, because it encompasses psychological aspects, which appear to be more cognitive (more deep seated and reflective of a longer term state) rather than affective (fleeting and mood-dependent). Such measures, we argue, would encompass at least some cultural values. Psychological well-being includes assessments of competence, relatedness, autonomy, and meaning. Subjective well-being includes assessments of the prevalence of fleeting feelings of happiness, as well as more reflective judgements of one’s satisfaction both with life as a whole, and with certain domains of life.

In short, given the political momentum of happiness, and its potential value for advancing the MDGs, it seems important to engage the issues directly. Samman writes:

This emphasis on happiness has also been critiqued on many fronts – chief among them for its fleeting nature, possible conflict with other values, potential undermining of democracy and implicit acceptance of adaptive preferences. At the same time, it is hard to dispute that psychological and subjective states of wellbeing have intrinsic and instrumental value. ... Moreover, they stand to contribute a richer perspective to our understanding of human experience and values, and particularly the importance of their non-material components.³⁰

Some Conclusions

This section has argued that brief strategic modules on informal work, safety, empowerment and dignity should be introduced into household surveys. Each of these dimensions is intrinsically important and instrumentally potent to advancing other core poverty goals. Using data on these dimensions to generate analyses will give rise to more accurate and informed policies to address the MDGs. Modules in these areas have been developed and initially tested. It is essential to test these modules sufficiently to verify their accuracy. Once these modules are more developed they need to be integrated into household and the major international surveys. This would have a significant impact on our ability to advance the MDGs.

Action points from this section include:

²⁹ Kingdon and Knight 2006, Bruni & Comim 2008, Diener 2009

³⁰ 2007: 460

1. Test the existing preliminary modules on missing dimensions sufficiently to verify their accuracy. Once these modules are more developed then work to integrate them into household and the major international surveys.
2. Include 'missing dimensions' modules in relevant surveys that monitor or evaluate MDG-related projects or programmes.
3. Create awareness and support for national statistical offices to implement the missing dimensions modules.
4. Analyse interconnections between the MDGs and each of the missing dimensions across contexts to identify the key bottleneck for progress on the MDGs. If missing dimensions are present, bottlenecks might include a lack of jobs, violence, disempowerment, or humiliation.
5. Develop statistical methods to incorporate subjective data into public policy analysis, which takes into account the problems of 'adaptive preferences' among the poor and uneducated.
1. Explore through dialogues and engagement at the national level how the missing dimensions provide a vital focus for a revitalization of the MDGs.

Box 3. Links between ‘Strategic’ Dimensions and each of the 34 countries surveyed

Appendix 4 presents a detailed and new analysis of the demands for policy and analysis on the missing dimensions plus governance that have arisen from 34 countries in their PRSPs, MDG Reports, and planning documents. This box synthesises the results.

1. Afghanistan (**governance** and **security** are listed as **pillars**)
2. Albania (**additional MDG** on **governance**)
3. Argentina (**additional MDG** on **decent work**)
4. Azerbaijan (**additional MDG** on **good governance**)
5. Benin (sound **governance** listed as a **priority**)
6. Bhutan (**good governance** and promoting **cultural** heritage listed as an **objectives**; **peace** listed as an main **principle**)
7. Bolivia (reviewed, but not have anything of relevance for areas of concentration)
8. Bosnia and Herzegovina (**governance** and **work** (not used decent work as the term, but related objectives) listed as important part of **national strategy**)
9. Bulgaria (additional **workforce** indicator in MDG 1)
10. Burkina Faso (**good governance** and **work** (not used decent work as the term, but related objectives) listed as a **pillar**; **security** (fighting insecurity, national police forced expansion, creation of peace, etc) mentioned as part of **national strategy**)
11. Cambodia (**governance**, and specifically democratic governance, is a **basic principle**; **additional MDG** on **security** issues (de-mining))
12. Cook Islands (**additional MDG** on improvement of **governance**; **culture** and heritage considered **priorities**)
13. Ethiopia (**governance** and empowerment listed as part of **development goals**; **peace** and stability part of the **national strategy**)
14. The Gambia (**governance** listed as a **pillar**; ‘enhance governance systems’; **peace** and stability part of the **national strategy**)
15. Ghana (**good governance** listed as an **objective**; **security** and public safety part of **national strategy**)
16. Indonesia (**security** (safe and peaceful Indonesia) listed as a **main agenda**)
17. Kosovo (**additional MDG** on **good governance**; **additional MDG** indicators on **security** under governance MDG)
18. Laos (**governance** mentioned as important part of **national strategy**; enhancing peace and integration, national **security** and stability is a main **objective**)
19. Madagascar (responsible **governance** listed as a **commitment**)
20. Malawi (**governance** listed as a **theme**; **security** (safety and crime free) listed as important aspects of **national strategy**)
21. Mauritania (improvement of **governance** seen as a **strategic theme**)
22. Mongolia (**additional MDG** on democratic **governance**)
23. Mozambique (**governance** listed as a **pillar**; **cultural** diversity and creative activity listed as part of **national strategy**; **peace**, political and social stability are **objectives**)
24. Nicaragua (**governance** part of **national strategy**)
25. Nieu (not of relevance on the areas of focus, but has additional MDG on sustainable population development)
26. Philippines (peace and **security** issues seen as **priority** action areas)
27. Rwanda (**governance** part of **national strategy**; **security** listed as an **objective**)
28. Senegal (**good governance** listed as a **pillar**; human **security** is a **strategic vision**)
29. Tajikistan (efficient **governance** listed as main **element** of **national strategy**; improvement of **security** is an important element of **national strategy**)
30. Tanzania (**good governance** part of the **vision** and mentioned in strategy; **security** part of **national strategy**)
31. Uganda (**governance** and **security**, conflict resolution and disaster management listed as a **pillars**)
32. Vietnam (**additional MDG** on improving **governance**; **additional MDG** on **culture** and spiritual life)
33. Yemen (**good governance** listed as a **pillar**)
34. Zambia (**good governance** described as **theme/strategic focus**; **decent work** part of **vision/goal**; **peace** is an **objective**)

3. Growth that meets the MDGs

Growth matters greatly – but ‘growth of what?’³¹ Is it growth of average income, growth of incomes of the poor – or is it also the rate of growth in attainments of the non-income MDGs? Our view is that it is all of the above.

Growth AND MDGs: We need to have all crucial goals on the table, in view, at the same time

‘The correlation between GDP per capita growth and non-income MDGs is practically zero...’

Bourguignon et al. 2009

One target of the first MDG refers to growth in poor incomes – it aims to reduce the proportion of people living under \$1 a day. Growth is linked to income poverty reduction, but the strength of these linkages varies in important ways. For example, Ghana and Uganda had similar rates of per capita GDP growth of 2.5%. Yet, while income poverty decreased 4.6% in Ghana 1999-2006, it increased 3.8% in Uganda 2000-03.³² An increasing literature on the benefits of growth to the poor, sometimes called pro-poor

growth, has explored the links between income growth, income poverty, and income distribution from several angles and clarified which policies create a more progressive distribution of the economic benefits of growth.³³

The MDGs embody, powerfully, a concern for an array of other outcomes, and that these outcomes must likewise receive accurate and emphatic policy attention. Of course it would all be easy if economic growth led directly, automatically, inevitably to improvements in the other MDGs. This raises an important question: to what extent growth itself automatically leads to better outcomes in non-income MDGs.

A significant report by senior European researchers led by Francois Bourguignon articulated the following stylized fact on the MDGs: ‘Most countries in all regions are off-track on most MDGs (or data is missing to assess progress). *This also includes countries that have experienced the best growth performance.*’³⁴

In terms of links between growth and the other MDGs, the researchers found very ‘little or no correlation’ between ‘between any combinations of pairs of MDGs’. Looking more closely at growth, they concluded that ‘The correlation between GDP per capita growth and non-income MDGs is practically zero...’³⁵ They wrote that, ‘whilst these results do not invalidate the argument that growth is necessary to achieve the MDGs, for instance by generating needed budget resources, they suggest that growth alone is not enough’.

For example, India has grown strongly for over 15 years since liberalization in 1991. But liberalization was not accompanied by comparable investments in social infrastructure. India is also home to more malnourished people than all of Sub-Saharan Africa (230.5 million, as compared with 212 million in Sub-Saharan Africa, according to the *State of Food Insecurity* 2008). Furthermore, growth has not reduced these figures much. In 1998-99, seven years after liberalization, 47% of children under 3 years of age were malnourished; in 2005-06, this figure had been reduced scarcely 1%, to 46% (NFHS data, written up in the FOCUS report 2006). Similarly, in 1998-99, 58% of children under three had not received complete vaccinations; by 2005-06, that number had barely

India is home to more malnourished people than Sub-Saharan Africa. Despite its growth, India’s progress in reducing malnutrition has been stalled since 1995-97.

³¹ Ravallion 2001 p. 1804 – although our use of the phrase is different than the one suggested there. See the discussion in Foster and Szekely 2008.

³² Bouguignon et al. 2008

³³ See Ravallion ‘Pro-poor growth: A primer’, Besley and Cord 2007 *Delivering on the Promise of Pro-Poor growth*. Palgrave Macmillan and the World Bank.

³⁴ Bourguignon et al. 2008 page 6, drawing on The 2008 *Global Monitoring Report* (World Bank 2008) and the *Millennium Development Goals Report 2008* (United Nations 2008),

³⁵ Page 9

decreased: 56% were still not fully vaccinated. Some outcomes increased during high growth: the percentage of children suffering from anaemia increased from 74% to 79% (FOCUS 2006).

One final illustration: consider three countries that have had high and sustained growth (for over 25 years), as identified by the recent Commission on Growth and Development (CGD – See Box 4). In Botswana, one growth success, 30% of people remain malnourished; 24% are HIV positive, and life expectancy has fallen from 64 to 50 years. What is disconcerting is that these facts were not mentioned in the Growth report's assessment of Botswana's success. In Indonesia, another long term growth success story, 24.4% of children under 5 years of age are malnourished and severe malnutrition has risen since 1989.³⁶ While child malnutrition has declined significantly from 37.5% in 1989 the levels are still high. More worrying, severe malnutrition rates in children under 5 *increased* from 6.3% of all children in 1989 to 11.6% in 1995 (which was during the high

growth years of 1966-1997), and in 2005 severe child malnutrition was 8%. Thus a higher proportion (and number) of children were severely malnourished in 2005 than 1989.³⁷ In Oman, after 25 years of high growth, women earn less than 20% the income of men and no women were able to gain parliamentary seats in the 2007 renewals in Oman.³⁸ The CGD report would have created even more information to guide development policy had they included the advances in non-income MDGs in their analysis of high growth countries.

Success in economic growth should be evaluated in part with reference to the objectives growth is presumed to advance – especially the MDGs.

To summarize, because economic growth is not sufficient to advance non-income MDGs, other direct policy interventions are required. If, as the CGD argues, growth is a *means* to various ends, then 'success' in growth must be evaluated with reference to MDG achievements and other ends growth aims to advance. We need to have all the relevant variables on the table, in view, at the same time.

The lack of association between growth and the MDGs is a startling finding, and requires further and vigorous exploration.³⁹ The CGD report itself provides an interesting model upon which to build. The same kind of rigour employed there to identify the policies used in demonstrated 'success' countries, could be used to explore the growth policies and the policies in and across other dimensions that were used countries that experienced sharp reductions in non-income MDGs. These studies would complement the very large literature on economic growth, work synergistically with it and build off of it in order to create a much understanding of what would advance the MDGs alongside growth.

The policies that advance income growth and the non-income MDGs differ but they also overlap. More attention needs to be paid to this overlap.

Because high growth has not automatically ushered in strong gains for the MDGs, even when that growth is strong and sustained, growth policies must be designed from the start to advance both the growth of income and MDG outcomes *together*. Policymakers need not choose; they can have several variables in view in making policy. The assumption that economic growth will inevitably lead to strong growth in other MDGs is, very unfortunately, wrong. On the other hand, many countries *have* done both. It is their policies that we need to emulate.

³⁶ WDR 2009

³⁷ <http://www.undp.or.id/pubs/docs/MDG%20Report%202007.pdf> (Accessed 27 March 2009)

³⁸ United Nations (2008) The Millennium Development Goals Report. New York: United Nations, p. 18

http://mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress2008/MDG_Report_2008_En.pdf (Accessed 28 March 2009)

³⁹ Naturally this should build on existing literature. For example Ranis, Stewart and Ramirez (2000), and Bourguignon et al. (2008) describe various causal chains by which economic growth addresses core human priorities such as the MDGs – for example, by creating jobs for poor persons, empowering women within the household, contributing revenue for social investment, social protection and redistribution.

Finally, much past discussion has been conducted under the expectation that growth is possible, as often it has been. However, such expectations may need adjustment during worldwide economic decline. Is it right to focus solely on economic growth during recessions? In some countries, at a human level, outcomes may not have deteriorated significantly. In other countries, citizens may be sharply impacted. These distinctions are important to understand. Where are the countries that are succeeding in human development despite economic decline? What are they doing right? And how do we learn from them? These are crucial questions for policy, and are a clear gap in our understanding.

There are clearly identified potential interconnections between growth and MDGs. However in comparison with the volume, precision and depth of understanding we have regarding growth, these lessons appear rudimentary. A great deal is at stake. We therefore underscore the conclusion of Bourguignon et al. that the MDGs ‘need to be part of a more coherent policy that integrates these goals within a framework that supports growth with equity and well-designed sectoral policies’.⁴⁰

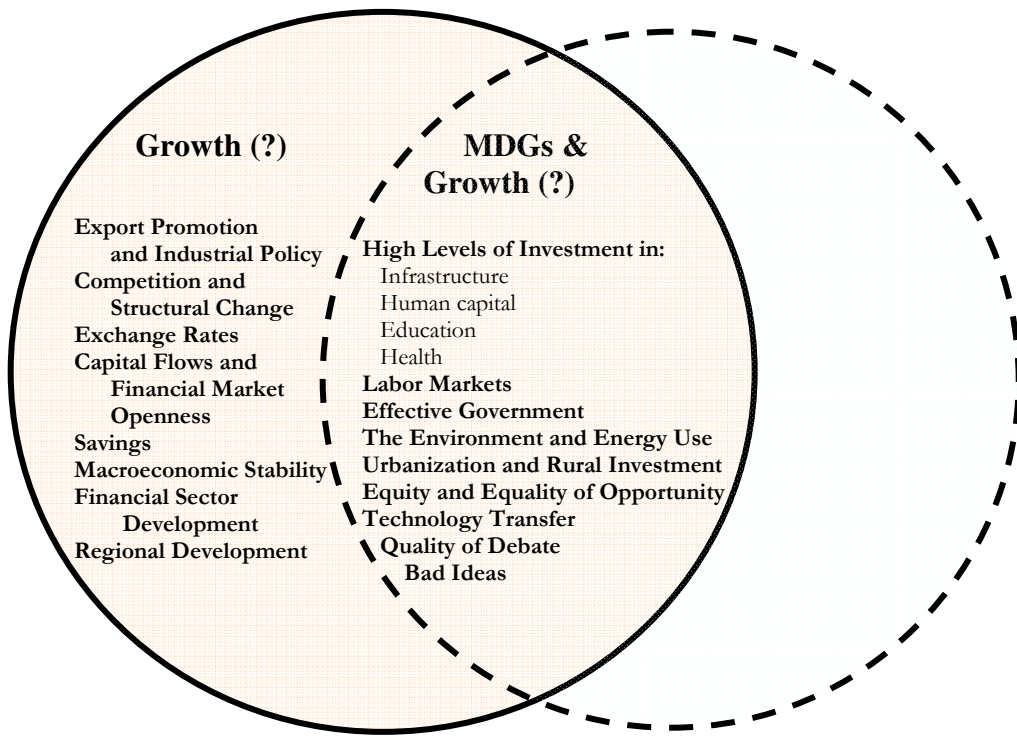
Some Conclusions

1. In addition to a ‘low carbon’ recovery, we need a ‘pro-MDG’ recovery. To achieve this growth policies need to be more coherent with the MDGs. They should be designed so that they will simultaneously advance non-income MDGs.
2. Synergistic growth and MDG policies should be implemented in particular countries and impacts should be rigorously evaluated and compared.
3. More generally, the success of growth policies should be evaluated in part with reference to the objectives growth is presumed to advance – especially the MDGs.
4. Policies to advance both income growth and the non-income MDGs simultaneously should be explored, in order that countries may deliberately exploit this synergy.
5. It would be prove extremely timely and relevant to appoint a Commission or research group to identify and evaluate case studies of countries that had attained high sustained MDG outcomes with the same degree of acuity, lack of ideology, steadfast attention to detail, and clarity as the Commission on Growth and Development, and determine which policy ingredients led to sustained achievements in the MDGs.
6. In the current global economic context, it could also be timely to produce a set of case studies of countries that achieved high MDG outcomes but did *not* have strong growth rates, to identify commonalities between them and lessons for times of economic downturn.

⁴⁰ Page 35

Figure 1

The Commission on Growth and Development identified various policy ingredients (and challenges) of high sustained growth. Each of these is listed below. What is clear is that some ingredient – such as those depicted in the intersection of the overlapping circles – probably contribute to both high growth outcomes and to the non-income MDG attainments. The policies required for high sustained income growth and for meeting the MDGs differ but they also overlap, and more attention needs to be paid to this overlap.



Box 4. Growth: An experimental diagnostic approach, and the need for a follow-up on the MDGs

A 2005 World Bank publication *Economic Growth in the 1990s: Learning from a Decade of Reform*, observed that growth performance had been uneven across developing countries, but lower than anticipated overall. It acknowledged that, 'Bank growth projections, as well as growth projections by other forecasters, tend to be systematically over-optimistic'. Further, it acknowledged that the unevenness of growth could not be explained entirely by countries' adherence to advised policy reforms – macroeconomic stability, trade liberalization, privatization, deregulation, financial liberalization and better public sector governance. Key South and East Asian countries had achieved high sustained growth yet implemented a very different set of policies. Although policy makers in the 1980s and 1990s had thought the right set of growth policies were clear, empirically growth proved to be, to use Easterly's phrase, 'elusive'.

The 19-person Commission on Growth and Development (CGD), chaired by Michael Spence, was set up to examine countries that achieved high and sustained growth, to establish 'its causes, consequences, and internal dynamics'.⁴¹ It identified policy ingredients for growth, but advocated an 'experimental approach'.

Growth is a means

The opening page of the 2008 CGD *Report* describes the relationship between growth and development as follows:

'Growth is not an end in itself. But it makes it possible to achieve other important objectives of individuals and societies. It can spare people *en masse* from poverty and drudgery. ... It also creates the resources to support health care, education, and the other Millennium Development Goals to which the world has committed itself. In short, we take the view that growth is a necessary, if not sufficient, condition for broader development, enlarging the scope for individuals to be productive and creative.'⁴²

Thus growth is viewed as a means to other development outcomes such as the MDGs, and viewed as a necessary if not sufficient condition for broader development. To complete the analysis, it could be helpful to focus on the outcomes of direct interest, and identify intermediate outcomes – such as growth – that may point to

An experimental approach

The Commission studied 13 countries which has achieved a growth rate of over 7% for 25 years, and found considerable diversity in effective growth strategies. So their first message was the need to replace any search for a single model with proactive pragmatism in each context. 'Orthodoxies apply only so far... If there were just one valid growth doctrine, we are confident we would have found it.'⁴³

Instead of advocating a new growth doctrine, the CGD identified a set of policy ingredients for high growth (listed in Figure 1). Their advice was that, in adapting and applying these, governments should 'pursue an experimental approach to the implementation of economic policy'. The principle is expressed well by Deng Xiaoping's oft-quoted dictum to 'cross the river by feeling for the stones'. Governments should sometimes proceed step by step, paying close attention to each small experiment and avoiding sudden inflexible shifts in policy where the potential risks outweigh the benefits. This will limit the potential damage of any policy misstep, making it easier for the government and the economy to right itself.

Overlooked: why does growth only sometimes advance the MDGs?

The CGD report might be considered the first phase of an ongoing project. The time has come to undertake the next step, which is to build upon the report by exploring more carefully the linkages between growth and improvements in the MDGs or related goals. The CGD report argues that the MDGs form a key motivation for growth. Yet after the opening page, the MDGs are never again mentioned; rather the report asserts that growth spares people from all forms of poverty (the following sentence reads: 'Nothing else ever has'). That assertion has been fundamentally challenged by newer work. It will be prove extremely timely and relevant to appoint a Commission or research group to examine with the same degree of acuity, lack of ideology, steadfast attention to detail, and clarity, which policy ingredients would lead to sustained achievements and high growth rates in the MDG achievements.

⁴¹ Spence 2008:1

⁴² Spence 2008:1

⁴³ Spence 2008:4

4. Multidimensional Measures

The MDGs represent a classic ‘multidimensional’ phenomenon. Each of the goals are arguably of direct and intrinsic importance to people, and MDG failures directly contribute to human suffering. Although the MDGs are interconnected, and hence have an instrumental role in advancing other ends, they are not advocated primarily as valuable means to growth. They are, fundamentally, a set of discrete and independent goals. This section argues that new techniques developed precisely for multidimensional phenomenon should be used to advance the MDGs, as existing techniques could propel forward our ability to respond. This section has three parts. In the initial section, we present multidimensional poverty measures; next we mention a crucial problem with counting countries rather than people. Finally, we present a robustness test for multidimensional measures which has been applied to the HDI country comparisons.

Interest in multidimensional approaches to poverty and well-being has risen sharply, as the following examples suggest:

- Of the 38 composite measures surveyed in Appendix 3, 28 have been developed since 2000. This is in line with Bandura’s (2006) finding that over 50% of composite indicators surveyed had been developed within the past five years.
- The unprecedented level of attention that the OECD’s project on *Measuring the Progress of Societies* achieved from many stakeholders, ranging from international institutions to think tanks to academic bodies to governments and NGOs, testifies to the broad appeal of wider-than-economic representations of human progress.⁴⁴
- Interest in institutionalising broader measures of poverty and well-being spans developed and developing countries, as evidenced by these examples:
 - the Government of Mexico by law is moving to a multidimensional measure of poverty
 - India’s planning commission is exploring the development of an index of multiple deprivation⁴⁵
 - South Africa and Great Britain each implement indices of multiple deprivation,
 - the Sarkozy Commission On the Measurement of Economic Performance and Social Progress (CMEPSP) will make recommendations on Quality of Life measures⁴⁶
 - the United Nations Development Programme 2010 report *Re-thinking Human Development* may address multidimensional measurement
- The academic literature shows a proliferation of empirical techniques and applications that seek to measure and analyse multidimensional poverty and inequality.

A significant ‘new frontier’ of research addresses multidimensional poverty. However the newly developed tools have not, to date, been recruited to support the MDG agenda. Although the original motivation for the MDGs highlighted their interconnectedness, at present the MDG reporting structure does not explore connections among the dimensions. Rather, reports provide the headcount or percentage of people in a country who are deprived in each indicator separately.

The headcounts themselves are very informative, and it would be potentially constructive to use them to compute an overall ‘mean of means’ index of MDG attainments.⁴⁷ For example using our methodology, if we

⁴⁴ http://www.oecd.org/pages/0,3417,en_40033426_40033828_1_1_1_1_1,00.html

⁴⁵ 19 August 2008, *The Hindu*. See Alkire and Sarwar 2008.

⁴⁶ <http://www.stiglitz-sen-fitoussi.fr/en/index.htm> This sub-group is chaired by Alan Krueger and reports to the co-chairs of the Commission, Joe Stiglitz and Amartya Sen.

considered all those who suffer *any* deprivation to be poor, then we could generate a rudimentary but informative counting measure, simply by taking the mean of the vector of headcounts of deprivations in each of the dimensions. Such an approach would have the benefit of being fully decomposable by dimension. However such a measure would be blind to the distribution of deprivations among the poor.

At the very least, it is important to look at the overlap between different MDGs. Consider eight people and eight dimensions. In each dimension, 12.5% of the population are poor. It could be that each of the persons were deprived in one dimension each. Alternatively, one person might be deprived in all eight deprivations while seven people suffer zero deprivations. The MDG dimension-specific headcount ratio vector – and a mean of means measure based on such a vector – would be the same in either case. It would be helpful to have a measure that would differentiate between the two – at least partially. This would enable us to identify the persons who were deprived in the greatest range or number of dimensions.

Example: Poverty headcounts represent the percentage of people who are poor. This is the mean of the column vector for a dimension d in which each person is represented by a row. If 1 indicates a poor person, and 0 represents the non-poor, then the headcount is simply the mean of the vertical vector d . As we see below, in each column, exactly one person is poor, so the headcount for each dimension is 12.5%. However reading across the rows, we say that in matrix A, each person is deprived in one dimension, whereas in matrix B, the top person is deprived in all dimensions, and no other person is deprived in any. The MDG headcounts are identical in both situations.

$$\mu_d \begin{matrix} \mathbf{A} \\ \begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 \end{bmatrix} \end{matrix} = \mu_d \begin{matrix} \mathbf{B} \\ \begin{bmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix} \end{matrix} = (12.5\%, 12.5\%, 12.5\%, 12.5\%, 12.5\%, 12.5\%, 12.5\%, 12.5\%)$$

Present MDG measures provide dimension by dimension headcounts for two very good reasons. First, MDG data are not all drawn from the same survey, thus it is only possible to look at certain clusters of deprivations together. Second, when the MDGs were launched many of the multidimensional measures that did reflect the breadth of poverty or overlap between dimensions required cardinal data.

This section proposes the adoption of multidimensional methodologies to measure a range of MDG attainments.⁴⁸ A new set of simple measurement tools, one of which is described below, have been developed that build on the ‘counting’ approach used widely in policy, and add powerful features such as decomposability.

⁴⁷ The main difficulties in creating a ‘multidimensional’ index for the first 7 MDGs (e.g. the M_0 measure using the union form of intersection) are: a) different indicators are available for different countries, and gaps in data would reduce country coverage or make the measure difficult to interpret; b) the headcounts refer to different groups (children, adults, households, forests), and would need to be converted into the same base population through some set of assumptions; and c) mechanisms would need to be agreed for aggregating indicators within each dimension (we would presume dimensions to be equally weighted). If defensible assumptions were made (or if a range of assumptions were used and robustness checks applied) it would be very simple to calculate a mean-of-means index, which would give an at-a-glance comparison of achievements across MDGs and could be fully decomposed. The real value of such a measure would be its ability to show progress over time.

⁴⁸ In particular, the chosen dimensions would need to be chosen normatively and would also need to originate from the same survey instrument.

The impetus to developing such a multidimensional framework has a range of diverse sources, which gives it a distinctive strength and stability. Amartya Sen, Robert Fogel, and other leading social scientists have provided a normative account of the need for multidimensional approaches. At the same time, empirical research has clarified the reach and limitations of income-based measures. In practical terms, relevant microdata sources have expanded greatly, and better computer infrastructure enables better multidimensional analyses. In terms of policy, the MDGs have drawn attention to interconnected aspects of human suffering and achievement.

Most composite measures such as the Human Poverty Index (HPI) use data aggregated first across people, and subsequently across domains. Building on a long history of ‘counting’ measures used by NGOs and in policy (Atkinson 2003), OPHI has developed multidimensional measures that include the *breadth* of deprivations (See Box 5). The advantage of the new multidimensional poverty measures is that:

- they are **flexible** and can be adapted to different contexts, with different units of analysis (household, school, individual, country)
- the **choice of dimensions** can be done locally, to promote ownership and reflect local contexts, or fixed at some level, to enable comparisons across contexts, countries, and time.
- the **choice of indicator**, and the aggregation of indicators within dimensions, is flexible
- the measures can be constructed with **binary, ordinal, categorical, qualitative, or cardinal data**
- the **weights** for indicators and dimensions can be varied
- the **poverty cutoffs** can be varied.
- **robustness tests** can be applied to test how sensitive the results are to small changes
- **The identification of ‘who is poor’ is transparent** and can be communicated easily at a popular level. As the number of dimensions goes up, like a magnifying glass, the measure focuses more acutely on the poorest of the poor.

Box 5. OPHI’s Multidimensional Poverty Measure (see Alkire & Foster 2007)

Many new multidimensional poverty measures are being developed, and are likely to emerge in the next few years. Alkire and Foster (2007) have developed a new set of measures that are simple, flexible for different contexts, easy to use, and academically robust. They construct three new measures that build on the headcount, or percentage of persons who are multidimensionally poor:

Adjusted Headcount $M_0 = HA$ – the headcount times A , the average *breadth* of dimensions poor people suffer (weighted) – in how many areas are they deprived?

Adjusted Poverty Gap $M_1 = HAG$ – this also considers the *depth* of deprivation in each dimension for which cardinal data are available.

Adjusted Squared Poverty Gap $M_2 = HAS$ – this also reflects the *inequality* among the poor. It prioritizes the poorest of the poor.

Most countries currently use income based poverty measures. In order to institutionalize attention to the MDGs (and thus to sustain political attention to the MDGs) over time, it could be useful to develop measures that complement income poverty measures (or combine with these) and reflect the multidimensional poverty of a population.

Effective multidimensional poverty measures have immediate practical applications. They can be used:

to replace, or supplement, or combine with the *official measures of income poverty* that are reported each year, and so to provide an annual summary measure of all relevant goals at a time. This would redefine who is poor and directly affect government services to reduce poverty.

to *monitor the level and composition of poverty, and the reduction of poverty, over time*. The measure not only provides a change in aggregate, but can also be broken down by dimension to identify the dimensions in which deprivations have been reduced the most. This would lead to better understanding of what policies work and what practical applications need to be modified.

to *evaluate the impact of programmes*. A multidimensional measure can provide a summary of trend information for the selected dimensions across different project areas – and again the summary measure can be decomposed easily. This would lead to better evaluation data of programme results.

to *target the poorest more effectively*. The new multidimensional measures are very well designed for targeting social protection schemes to families that suffer multiple deprivations.⁴⁹ This is accomplished by identifying the families that are multiply deprived. Given that data are often of poor quality, these methods can be more accurate than existing methods, and in addition the decomposition of the measure provides useful information for policy.

to *identify poverty traps and chronic poverty*. That is, to identify persons, households, or groups that have specific patterns of deprivation, or specific kinds of vulnerability, whether for targeting or other purposes. This is interrelated to an approach developed specifically for chronic poverty (Foster 2008). Similar measurement techniques are used in a positive sense to identify ‘early adopters’ or incidents of ‘positive deviance’. Multidimensional measures can pinpoint those who experience multiple deprivations for many periods.

to *compare the composition of poverty* in different districts or for different ethnic groups, regions, and kinds of household, or for men and women if the data permit. It may be that one particular group is particularly deprived – for example an indigenous group, or women. This can be identified by decomposing the poverty measure and comparing groups.

Box 6 presents one or more examples of each of these uses.

The same general approach to measurement can be fruitfully applied in other contexts. Applications to date of OPHI’s multidimensional measurement methods have used individual or household level data and constructed multidimensional poverty measures. More recently the methodology is being applied to different units of analysis and with respect to different focal areas:⁵⁰



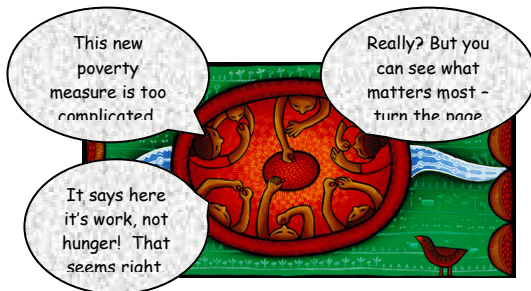
- Quality of Education** – comparing schools’ outcomes
- Governance** – comparing nations’ performance
- Child Poverty** – to strengthen existing measures
- Fair Trade** – to monitor cooperatives’ performance
- Targeting** – to direct social protection interventions most effectively
- Gender** – to better represent the differential burdens of poor women.
- Gross National Happiness** – Bhutan’s 2009 GNH Index employs our methodology to measure well-being.

⁴⁹ Alkire and Seth 2009, Azevado and Robles 2008.

⁵⁰ Multidimensional measures for targeting, child poverty, quality of education, governance, fair trade, and gender will be discussed in OPHI’s research workshop 1-2 June 2009.

Taken as a whole effective poverty measures identify more accurately who the poor are; better data brings in view hidden but instrumentally potent variables. This shift in definition will increase the efficiency of funds spent on poverty alleviation because the policies will be better targeted, and the constituent elements of poverty will be understood directly.

These measures are increasingly attractive to developing as well as developed countries – the OECD Measuring the Progress of Societies and Sarkozy Commission have both considered such measures; Mexico and Bhutan have adopted them; India is developing one, as is Bolivia. So there is a concrete policy demand for multidimensional poverty measures, which is at present detached from the MDG agenda – but needn't be.



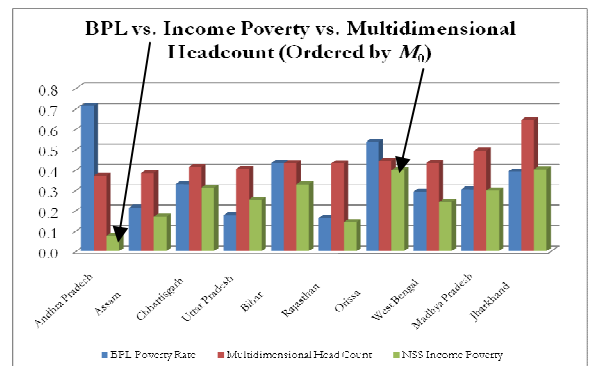
Some of the richer measures require data from the same survey instrument. This brings us back to the question of data availability, which was addressed in our earlier section on Missing Dimensions. Thus the measurement issue is intertwined with the issue of indicators and surveys, and with the institutions that gather these data. This is a clear challenge. But the challenges are not insuperable: it is feasible to include a number of indicators in one instrument.⁵¹

Box 6 Examples of Multidimensional Poverty Measures

This box presents a battery of examples of how the measures might be used, drawing on recent applications

To replace, or supplement, or combine with the official measures of income poverty

Example: The chart below reports the proportion of poor persons in 10 states according to income, social protection participation, and multidimensional poverty. It is evident from the figure that Andhra Pradesh, one of the least poor Indian states in terms of income poverty, does not perform well in terms of multiple deprivations. For a state such as Orissa, however, both the income poverty measure and the multidimensional poverty measure identify roughly the same proportion of poor.



⁵¹ OPHI's website has some examples of multitopic households with good quality data on MDGs plus strategic dimensions. The data search locations identified in Appendix 2 list other sources.

To compare the composition of poverty in different districts or for different ethnic/geographic groups and kinds of household, or for men and women if the data permit.

Example: the inset from Bhutan compares two districts. Gasa fell 11 places when ranked by multidimensional poverty rather than by income poverty; Lhuntse rose 8 places. We can see that most deprivation in Gasa is driven by shortfalls in electricity, drinking water, and overcrowding. In contrast, in Lhuntse the relative contribution of income poverty is high relative to shortfalls in other dimensions.

Table 1. Bhutan: comparison of 2 districts

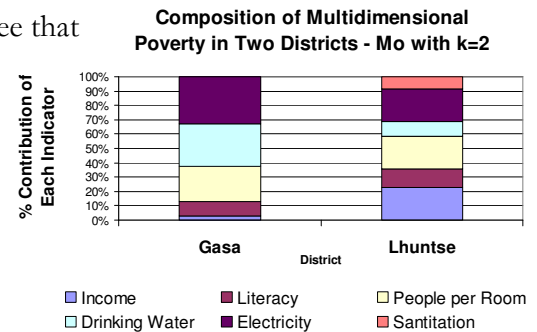
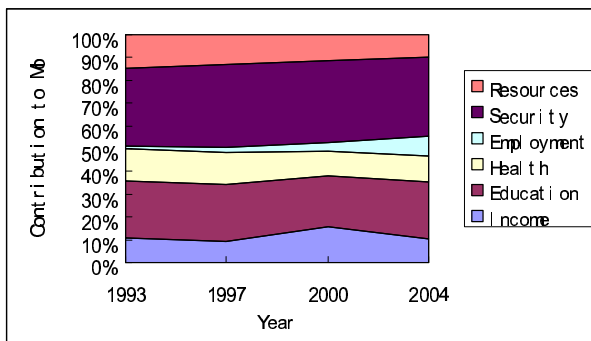


Table 2. MD poverty across time in China



To monitor the level and composition of poverty, and the reduction of poverty, over time.

Example: the chart shows the decomposition of multidimensional poverty across four periods in China. As you can see, the relative contribution of unemployment is rising, while health and resource deprivations are decreasing.

To target the poorest more effectively. For example, *Oportunidades* in Mexico found OPHI's measure was better able to target the poorest 5% and 10% than their existing measure based on factor analysis (Azevedo and Robles 2008). Alkire and Seth (2008) proposed and implemented, using NFHS data, an alternative method for identifying recipients of social protection in India. They propose that this be used to identify those who are BPL or below the poverty line.

To compare countries. The poverty rates using multidimensional poverty and income poverty often differ significantly. For example, in an OPHI study, Battistón et al. (2009) finds that income poverty in several Latin American countries including Argentina and Mexico increased 1992-2006. However, the story was different when the poverty rate was measured in terms of multidimensional poverty. Argentina's poverty rate remained unchanged between this time period since the country succeeded in improving in the other dimensions of well, whereas Mexico failed to do so and the conclusion was the same as income poverty.

In an OPHI study of fourteen African countries, Batana (2008) finds that the ranking of the 14 countries based on the income poverty and multidimensional poverty are strikingly different. For example, Kenya ranks tenth poorest out of 14 in terms of income poverty but ranks first (least poor) in terms of multidimensional poverty. On the contrary, Benin's rank falls substantially from second best in terms of income poverty to ninth in terms of multidimensional poverty. The reason behind this surprising incidence is that Benin fails to perform as well as Kenya in other dimensions such as assets, nutrition and women's empowerment.

To identify multidimensional poverty traps. That is, to identify persons, households, or groups that have specific patterns of deprivation, or specific kinds of vulnerability, whether for targeting or other purposes. Similar measurement techniques are used in a positive sense to identify 'early adopters' or incidents of 'positive deviance'.

Example: A first step is to look at the distribution of deprivations among people.

The table below presents 10 equally weighted dimensions. In the second column, we see the number of people who are deprived in exactly that number of deprivations. For example 14.48% of the sample are deprived in exactly two 2 dimensions. On the right we see the 'cumulative' percentage, which is the headcount of poor people. For example, 97% of the population are deprived in at least one of the ten dimensions, but scarcely 0.1% are deprived in all ten of them.

Analysis can now scrutinize the *composition* of poverty among people who are deprived in various numbers of dimensions, to determine what combinations are regular, hence may be interconnected.

The examples in this box demonstrate that multidimensional poverty measures, aggregated first across domains and then across people, do indeed provide distinctive information and interesting policy insights. To construct measures at the individual or household level requires microdata, and requires relevant data to be drawn from the same surveys. Thus the second section on 'missing dimensions' is important because more and better data on those dimensions would enable a more integrated analysis.

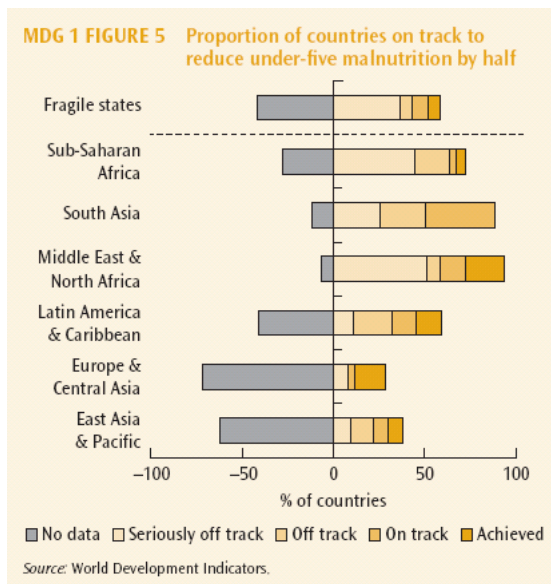
Table 3. Comparison, 5 of 14 African countries in terms of multidimensional poverty & income

Countries	Rank of Countries by Multidimensional Poverty	Rank of Countries by Income Poverty	Difference in Ranks
Kenya	1	10	-9
Ghana	2	1	1
Cameroon	3	8	
Tanzania	4	5	-1
Malawi	5	13	-8
Uganda	6	6	0
Nigeria	7	4	3
Madagascar	8	14	-6
Benin	9	2	7
Senegal	10	3	7
Guinea	11	7	4
Mali	12	12	0
Burkina	13	9	4
Niger	14	11	3

Number of Dimensions	Percentage in category	Headcount of Poor
1	9.99%	96.91%
2	14.48%	86.92%
3	17.31%	72.44%
4	17.64%	55.13%
5	16.32%	37.49%
6	11.74%	21.17%
7	6.40%	9.43%
8	2.42%	3.03%
9	0.54%	0.61%
10	0.07%	0.07%

Who are we counting, countries or people?

This brief section makes one further observation regarding the MDGs. MDG reports count countries rather than people. The MDG reporting mechanisms report the headcount of poor in each dimension for each country. They do not present any information on the actual *number of people* who are deprived. Furthermore, analyses are conducted at the country level. Reporting the MDGs entirely in terms of countries deeply underemphasises poor people in large countries. India has 3000 times as many people as Maldives, but each contribute equally as one South Asian country. In effect, this means that each Indian citizen is weighted $1/3000^{\text{th}}$ as much as a citizen of Maldives. Yet in a human rights based approach and many other ethical approaches, every human life is to be given equal weight. This problem of the MDG reporting system is pervasive, affecting all *Global Monitoring Reports* for example, and summary tables on progress to achieving the MDGs. Because the base populations and years of different indicators vary (children, adults, all), the numbers of poor should be reported. In analysing poverty, do we seek to count ‘one country one vote’ or ‘one person one vote’? Our answer to this question matters greatly.



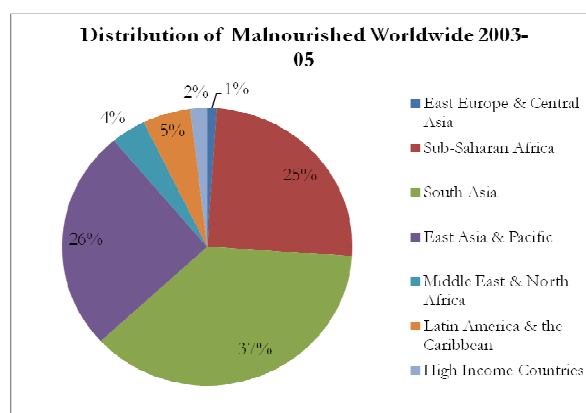
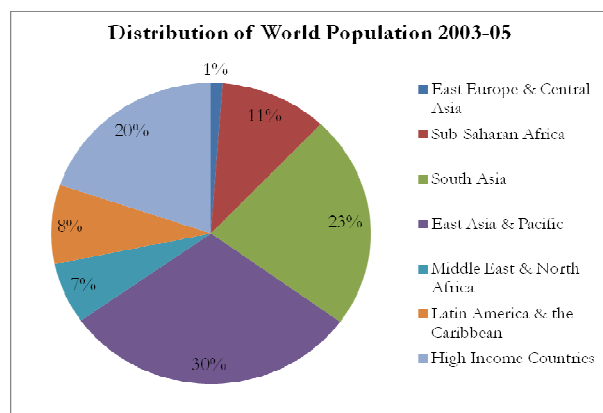
Standard MDG reporting mechanisms at present show progress towards the MDGs according to regions, where every country in the region contributes equally to that region’s score. For example, the graphic below from the 2009 *Global Monitoring Report* (p. 204) reports progress on the second part of the first MDG, which addresses under-five malnutrition. However in this graphic South Asia includes India and the Maldives, two countries of vastly different sizes, with India having 3000 times more people than the Maldives. Equating their contribution to being ‘on track’ to attain the MDGs has the effect of treating the citizens of different countries as of inverse importance to their relative populations.

Furthermore, graphics tend to represent each region as equal in size, yet regions themselves also differ in terms of population, so the same distortion occurs in terms of the regions: Sub-

Saharan Africa, the Middle East and North Africa, and Europe and Central Asia are all less populous than the other regions, hence their relative importance appears to be expanded, and that of East and South Asia, diminished.

According to the MDG1 Figure printed above, malnutrition seems most acute in the region of the Middle East and North Africa, followed by Sub-Saharan Africa. Below we provide, alongside the MDG table, the chart of population by region, and the chart of malnutrition by region. As we shall see, these graphics dramatically alter our perception of where malnutrition problems are most acute.

The chart ‘distribution of world population 2003-2005 shows that East Asia and the Pacific have nearly thrice the population of Sub-Saharan Africa, and South Asia more than twice the number of people.



The malnutrition graphics above on the right show transparently that South Asia is home to the most malnourished people in the world, followed by East Asia and Sub-Saharan Africa, and that these regions together account for 88% of world hunger. The Middle East and North Africa, in contrast, account for 4%. Thus our understanding of the situation is radically altered if we count people rather than countries.⁵² Such differences would be evident throughout the analysis of the MDG data.

How Robust are Multidimensional Comparisons?

One of the main problems with composite indicators is that we don't know how robust the resulting comparisons are. One of the aims of OPHI's research is to construct user friendly tests that will enable users of composite indices to gauge 'how robust is your measure'.

The past decade has seen a surge of multidimensional or composite indicators constructed by combining different dimensions such as education, health, etc into a summary measure. Countries or regions are frequently ranked according to their performance on these indices – such as the Human Development Index (HDI), or the other indices identified in Appendix 3, and *these rankings are often of high national priority*. It is a matter of pride for countries to be on the top of the lists. It may also be of material importance in developing countries, where *donors may judge country performance based on these composite indices*.

Multidimensional indices are constructed by taking a weighted average of dimension-specific indicators. The choice of weights is very important since different weight may change the existing country rankings. If indices are to be reliable they must therefore be **robust**.

Definitions: We define a comparison between a pair of countries or societies to be *completely robust* if the direction of comparison is never altered when weights are changed. It is *partially* robust if the ranking holds over a set of some, but not all, possible weights. The comparison is *ambiguous* if it is reversed when different weights are chosen.

Example: Consider the 2006 HDI values in the table above. In the HDI, each of the three indicators is weighted equally. In the top rows, reported in *HDR 2006*, the differences in human development between

Weights	Country	HDI	Country	HDI
(1/3, 1/3, 1/3)	Ireland	0.956	Australia	0.957
	Canada	0.950	Sweden	0.951
(1/2, 1/4, 1/4)	Ireland	0.937	Australia	0.949
	Canada	0.942	Sweden	0.944

⁵² If we were to compare country decompositions rather than regional ones, we would get a very different graphic than the one presented above from the 2009 *Global Monitoring Report*.

each pair of countries (Ireland/Canada) (Australia Sweden) are the same. Thus, one might conclude that Ireland is better than Canada by the same margin as Australia is better than Sweden.

But consider a different weighting scheme that sets a weight of $\frac{1}{2}$ on any one HDI dimension and $\frac{1}{4}$ each on the other two dimensions. In this situation, Canada and Ireland **reverse** their ranks (so the comparison is ambiguous). Australia still performs better than Sweden, so is at least partially robust. In fact, it can be shown that Australia is *always* better than Sweden no matter what weighting scheme is used. Thus, the comparison between Australia and Sweden is *completely robust*.

Policy message: *The simple ranking of regions is not enough - it is important to check the robustness of each comparison.*

A new tool – Recently, in an ongoing project with OPHI, Foster, McGillivray, and Seth (2008) developed a simple tool to rate the robustness of any pairwise comparison on a percentage scale, with 100% indicating a fully robust comparison. The study applies this robustness test to several indices. Preliminary results using the 2004 HDI cross-country ranking found that **almost 70% of all possible HDI comparisons are fully robust** – meaning that they would not be reversed at any nonnegative weights that sum up to unity. If weights vary only between 0.25 and 0.5 for each dimension, the study finds that **92% of all comparisons are robust**. In sum, the majority of HDI comparisons are quite robust; most rankings would not be affected by small changes in the relative weights of the three dimensions.

Conclusion

Since 2000 when the MDGs were launched, new techniques to address multidimensional poverty have expanded sharply. However they have not been recruited to support the MDGs as much as they might be. This is due in part to the fact that MDG reports tend to scrutinize progress ‘dimension by dimension’. Also, they use country aggregates. Finally, the implicit focus is on countries rather than people as the fundamental unit of analysis. This chapter has identified a number of ways in which user friendly yet rigorous multidimensional measures could be used to strengthen and sharpen existing work, and restore the focus on the individual person as the fundamental unit of analysis. Some of these include:

- Implement multidimensional poverty measures comprised of key MDG indicators which are available from the same survey instruments (e.g. DHS).
- Supplement national income poverty measures with a multidimensional poverty measure.
- Use multidimensional techniques to quickly identify and target the poorest recipients for social protection programmes.
- Count people, not only countries, by including data on the number of *people* who are deprived in each indicator, as well as the proportion of a country’s population.
- Test the robustness of key measurement assumptions such as the weights applied to dimensions, to ensure that high profile comparisons are robust to minor changes in measurement assumptions.

5. Process and Sustainability

The concept of a ‘target’ draws on a sports analogy. If the target is a bulls-eye tacked onto a tree, the objective is to hit the target and if possible hit the bulls-eye. There may be several opportunities to do so, but after the session, whether or not anyone has hit the target, one departs for another activity.

In that sense, no part of the MDGs are ‘targets’. For the underlying objective is not to achieve them only once. It is to sustain their achievement – to create societies in which the MDG targets (and other objectives of each society) are ‘met’ and continue to be met through history. The goal is that MDG achievements endure even as agents continue to address climate change, and that achievements are sustained even through periods of crisis and volatility.

The explicit recognition of a need to use the momentum of the 2000-2015 campaign to create *durable* change, and to sustain MDGs achievements in the long term, would shift the policies that are used to advance the MDGs in three ways.

More timely collection of MDG data collection for local as well as international analyses

This section argues that we need to improve MDG data collection mechanisms. Particularly in times of crisis, national household surveys may be too infrequent, expensive, and slow to provide policymakers with the data required to respond adequately to an unfolding situation – and they may not provide any support for local agents who lead decentralized responses. Quicker, lighter, methods of data collection must be developed. Appropriate methods will vary greatly by context, but nonetheless should be explored.

Data gathering and analysis At present, data on the MDGs are weak or missing in some countries. Why? In part, data are viewed as a luxury item encouraged by donors and international agencies to feed the reporting industry. Also, much analysis occurs only at the national level or among academics. That incentive structure is fragile and dependent upon external forces.

If local and provincial or state agencies required the data to plan their work, if civil society groups demanded the data as a basis on which to evaluate the progress of political leaders, if as Bourguignon et al. propose, development assistance moved to ‘Results-based aid’ and was not disbursed in the absence of evidence,⁵³ if national statistics offices call for such data, in short if multiple interest groups require the data in order to advance their own purposes, then data collection would be strengthened.

Clearly alternative methods of data gathering, or of matching surveys are required, in order to ensure that data are relevant to lower levels of government. In some countries or areas, local groups might engage in data collection.

Below we provide a case study of the Community Based Monitoring System in the Philippines, which will gather census level MDG data for the entire country by 2010, using local enumerators from each community, a standard core of questions plus some locally specific questions, funded by local governments. The data are fed into a standardized data reporting software, and presented visually in graphics and maps, and actively used by local government and civil society groups. It has been used in over ten additional countries, and provides one model for timely data collection

Many, among the poorest and most vulnerable countries, do not report any data on most MDGs. When it is available, data are often plagued with comparability problems, and MDG indicators often come with considerable time lags. Improving data gathering and its quality in all countries should be a central focus of the second half of the MDG time frame and beyond. Reliable data and indicators are essential, not only to enable the international development community to follow progress on MDGs, but also for individual countries to effectively manage their development strategies.
Bourguignon et al. 2008 page 6

⁵³ Results-based aid is described thus: donors ‘would link disbursements to progress achieved towards targets agreed ex ante. Such a system clearly provides strong incentives for recipient governments to get as close as possible to pre-set targets.’

*Community Based Monitoring System (CBMS) in the Philippines: A Case Study*⁵⁴⁵⁵

The Community-Based Monitoring System (CBMS) was piloted in the early 1990s, and has been developed, improved, and now is being scaled up. CBMS complements global efforts to fight poverty with a bottom-up process to provide better statistics for evidence-based policymaking, empower communities, and improve the effectiveness of local institutions, and promote accountability and transparency in resource allocation.

Process: The CBMS collects census data using a short survey with 14 dimensions, plus additional indicators tailored to local conditions. The data are loaded into a simple software system, tabulated, inserted into local maps, communicated to local community groups and local government, and used to inform national policy. CBMS is used in the Philippines for poverty diagnosis and monitoring, local planning and budgeting, programme targeting and impact assessment, and in localizing the millennium development goals (MDGs).⁵⁶

Policy: CBMS provides policymakers and programme implementers with a good information base for tracking the impacts of macroeconomic reforms and various policy shocks on 14 aspects of peoples' lives, including health, education, peace and security. The CBMS was initiated to respond to the lack of timely disaggregated data at the local level, which can be locally analysed and can also inform national policy. Such data are required to measure the extent of poverty, to allow analyses as to the causes of poverty, formulate policies and programs, identify eligible beneficiaries, and assess the impact of policies and programs.

CBMS complements global efforts to meet the MDGs with a bottom-up process to provide better statistics for evidence-based policymaking, empower communities, improve the effectiveness of local institutions, and promote accountability and transparency in resource allocation.

Institutional Strengthening: The CBMS builds and strengthens the capacity of planners and programme implementers at the national and local levels for a more improved and transparent system of resource allocation and governance. A major objective of the CBMS is to encourage and enable policy makers to reduce poverty. The CBMS process achieves corollary benefits: it builds the capacities of local government units, increases gender equity, and provides an early warning system.

CBMS and the MDGs in the Philippines. The Philippine Development Forum (PDF) of MDGs and Social Progress envision 100% Local Government Unit coverage of CBMS by 2010. The PDF Working Group on MDGs, co-chaired by the Department of Social Welfare and Development (DSWD) as lead convenor and the United Nations as co-lead convenor, serves as a forum for government and development partners to engage in dialogue and agree on common issues for collaboration in achieving the MDGs. The working group has recognized the importance of the CBMS a critical tool for planning, budgeting and evaluation, and as a tool to track the MDGs at the community level. They have recommended that the pace of institutionalizing the CBMS methodology be accelerated to reach 100% coverage by 2010.

⁵⁴ This box has been condensed from materials provided by Celia Reyes.

⁵⁵ CBMS in the Philippines is currently being implemented with technical assistance from the PEP-CBMS Network, funded by the Government of Canada through the International Development Research Centre (IDRC) and the Canadian International Development Agency (CIDA). Details about the CBMS Network may be obtained from the web-site at www.pep-net.org or e-mail reyesc@dls-csb.edu.ph or cbms.network@gmail.com

⁵⁶ Other countries in CBMS include among others, Nepal, Vietnam, Senegal, Burkina Faso, Sri Lanka and India.

CBMS and the MDGs

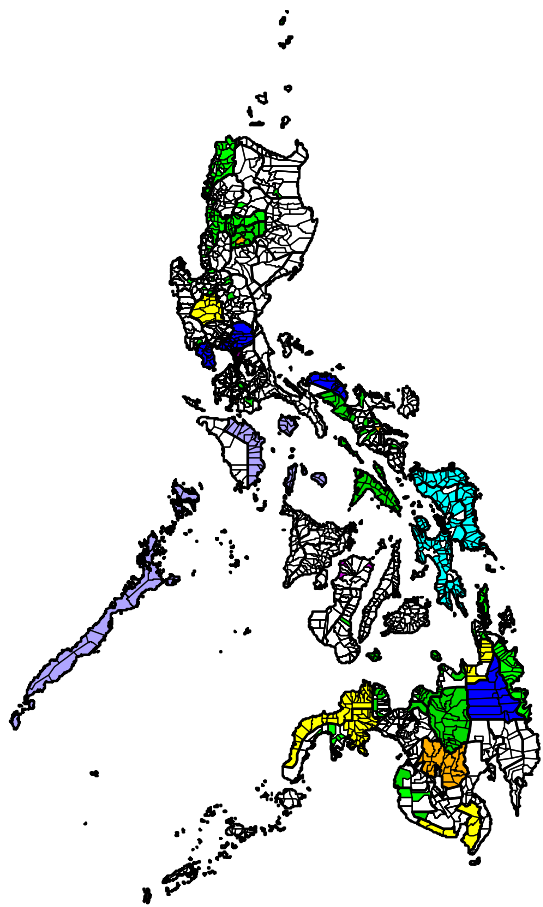
The census data gathered from CBMS can:

- build local government capacity to advance the MDGs
- inform poverty profiles and diagnostics
- create poverty maps
- localize MDG achievements and shortfalls
- facilitate decision-making by clear understanding of the local components of poverty
- aid design, targeting, and impact monitoring of MDG-related interventions
- enrich existing databases with local census data that can be disaggregated across sexes, age-groups, income-class, and type of employment.

To summarize, the main features of the CBMS are as follows:

- **CBMS is an organized way of collecting household level information** at the local level. However, CBMS is more than just a data collection system. It seeks to integrate the use of data in local level planning and programme implementation, and to promote evidence-based decision-making.
- Implementation of **CBMS supports decentralization and strengthens local governance** by providing local government with timely specific analysis to improve decision-making. By engaging local government, it builds capacities of staff to develop policies and programs that meet the needs of the people.
- **CBMS uses bottom-up processes to advance the MDGs.** Monitoring progress towards the MDGs is imperative – but given the strong role that responsive local government plays in poverty outcomes, it is imperative to incentivize, recognize and reward good *local* government action. CBMS can be used in selected areas to monitor pockets of acute poverty which require concerted specific action. When spatial disparities in MDG attainments are large, this can be an efficient method of meeting the MDGs, and complements occasional national surveys.
- **CBMS engages local government, yet promotes community-participation.** Every situation is different, so the CBMS must be tailored to the context of local government. But where possible, CBMS taps existing local government personnel as monitors, delivers analyses to them, yet also communicates the analyses to the local community and catalyzes constructive interactions between the community and local government.

As of 20 March 2009, CBMS is being implemented in 53 provinces – 25 of which are implementing it province-wide. This covers 554 municipalities and 43 cities covering 14,284 barangays/villages. Data have been collected for over a million respondents.



With Technical Assistance from:

- DILG-BLGD and CBMS Team with support from WB-ASEM
- DILG-BLGD and CBMS Team with support from UNFPA
- DILG-BLGD, DILG Regional offices and CBMS Team
- Eastern Visayas CBMS TWG and CBMS Team
- Bicol CBMS TWG and CBMS Team
- MIMAROPA CBMS TWG and CBMS Team
- NAPC and CBMS Team with support from UNDP
- Dawn Foundation and CBMS Team
- Social Watch Philippines and CBMS Team
- SRTC, SUCs and CBMS Team
- Kagabay and CBMS Team
- CBMS Team

Map of CBMS coverage as of 20 March 2009

CBMS collects data in 53 provinces, 27 of which is province-wide, 554 municipalities, and 43 cities covering 14,284 barangays.

Empowerment: a missing aspect of governance, a vital force for social protection.

In the long term, incentives for good governance with respect to the MDGs (whatever these are called in country) will come mainly from the citizenry and their local groups, supported by the media, academics, social movements, engaged private sector institutions, interest groups, trade unions, other levels of government, other political parties, philanthropists, and elite champions. These groups overlap and any one person may pertain to several of these groups. But they provide vital supports for service delivery and social protection. Successful social protection programmes such as Progresá and Oportunidades in Mexico, or the Grameen Bank, or BRAC in Bangladesh, and probably the newer NREGA in India, have arisen from groups within the country and have deliberately engaged the leadership and energies of civil society to monitor, advance, and sustain their work.

In the analysis of many community organisers, there are two forms of power: the power of money and resources, and the power of people who organise to drive an agenda. This second form of power was evident in the campaign leading up to the election of President Obama in the USA, and there are many more such prominent examples in different countries and regions.⁵⁷

Successful social protection programmes such as Progresá and Oportunidades in Mexico, or the Grameen Bank, or BRAC in Bangladesh, or the newer NREGA in India, have arisen from groups within the country and have deliberately engaged the leadership and energies of civil society.

The key feature of sustained social movements is that they include various processes. These processes sustain social movements in the long term. One key ingredients is *incentives* - incentives for political leaders to support certain goals, incentives for citizens to participate, incentives for government servants and all actors. A second key ingredient is *information* – access to information, a ‘right’ to information from the government, and a free and active media. A third key ingredient is some process of *accountability* which gives citizens the authority enforce change, such as a legal protections, or grievance procedures.

Investments in empowerment are possible even in failed states. Collier (2007) argues that countries that have just emerged from civil war generally are not good recipients of aid. However, donors could, in the post conflict period, ‘signal clearly what would need to change before they give aid (for example, freedom of the media and empowerment of parliament to scrutinise public expenditures).’⁵⁸ Other areas of concern are a right to information, and a right to association.

A relevant question, therefore, is how the MDGs can engage diverse allies from civil society and other sectors to localize the agenda and to sustain the systemic changes required. Clearly the appropriate interventions will depend upon the level of political development, and the democratic structure of the country. From the donor perspective, a key area may be to identify, for each of the main investment areas – social protection, data gathering, infrastructure, etc. – key ways in which each of these investments can be structured to engage other local agents. The investments include ‘participatory’ engagement, such as used in the Community Driven Development (CDD) donor projects. But they are distinguished by having a further component, in which the local actors are linked to the media, to social movements, and to other interest groups who operate at the state or national level. Below are two examples of social protection from India, and one example from the Philippines of data-gathering.

Two examples of how ‘empowerment’ can support large scale social protection schemes are found in India. The **mid-day cooked meals scheme**, and the **National Rural Employment Guarantee Scheme** in India are no panacea and still require improvement, but they do include most relevant ingredients. The Mid-day cooked Meals Scheme (MDM) is the world’s largest school lunch programme. Based on an interim Supreme Court Order in 2001, every child has a right to obtain a cooked mid-day meal at school. This was intended to provide an incentive for girls’ attendance at primary school, as well as to improve the nutritional and learning outcomes of school-aged children. In a stable democracy, but with a bureaucracy known for corruption and inefficiency, the Supreme Court Order could have come to nothing. However the Order was structured, and advanced by citizen groups, so as to engage many actors as agents (parents, teachers, teachers unions, the media, researchers, political champions, the planning commission, activist groups and a sustained ‘right to food campaign’), thus to be self-reinforcing in different areas of the country in which the different groups had greater or lesser respective abilities and inclination to act.

⁵⁷ E.g. the work of the millennium campaign in many countries.

⁵⁸ Bourguignon et al. 2008 p 22

The **National Rural Employment Guarantee Act (NREGA)** is another example. In August 2005, the Indian parliament (the *Lok Sabha*) passed a radical anti-poverty law. Unlike almost any other government in the world today, the Government of India offered employment to all its rural citizens on public works programmes. The National Rural Employment Guarantee Act (NREGA) has now become part of the legal framework for social protection in India, and will become the largest social protection programme in the world. NREGA is permanent. It cannot be stopped – except by another act of parliament. In a country containing more poor people than any other, NREGA’s advocates (including rights-based activists, and many politicians, commentators, and academics) argue that the new law will reduce rural poverty by providing work, building assets and natural resources, and energising village governments and democracy. Its detractors fear that guaranteeing employment will increase the burden on public finances, increase corruption, and crowd out private investment, all without reducing poverty and supporting economic growth.

The National Rural Employment Guarantee Act (NREGA), promised every household 100 days of paid labour every year within 15 days of demanding it, or else they will receive unemployment insurance from the state. Like the right to food campaign, NREGA was designed to engage the agency of multiple groups: of workers, as they seek work but also report failures and successes, of village governments who decide what local investments are to be made with the working hours and materials, of government workers who keep the records (‘muster rolls’) of workers and oversee the programme, of state governments, which have to pay unemployment insurance out of state budgets, as an incentive to deliver work, of the central government, which must answer to the advocacy groups, the media, and of citizens, both grassroots groups and public figures. The *right to information* has played a pivotal role in this movement, because it has enabled citizens to demand to see the ‘muster roles’ kept by the government, thus to detect and report incidents of corruption and leakage of funds.⁵⁹

Both of the above examples raise issues for donors. True, donors have successfully supported open menu community-driven development (CDD) programmes that engage local participation and leadership. Yet CDD projects do not build up coordinated social processes. Finding appropriate points of support for social protection programmes that are nationally developed, led and sustained, is vital. A clear point in which to start might be support for rigorous monitoring and evaluation. The investment in Progresia in rigorous evaluation enabled clear documentation of the strengths and weaknesses of the programme, and hence improvements of it.

Evaluate the vulnerability of social protection mechanisms to systemic shocks.

Many groups are calling for better measures of vulnerability, in order that they can identify the populations that are in the risk of falling into poverty, and prevent this. This section argues that systemic institutional assessments should accompany or occasionally replace the use of individual-level vulnerability measures.

Existing work on vulnerability tends to employ backward looking information (ideally panel data from past periods, like chronic poverty measures) in order to construct predictive estimates of future poverty. This is useful when the shocks to which people are vulnerable can be predicted with some accuracy, and when these shocks are idiosyncratic in that they affect different persons within the population differently. In such situations, analyses of vulnerability help to separate out permanent and temporary causes of poverty (Dercon 2001, 2004,⁶⁰ Narayan and Petesch 2008).

⁵⁹ See Alkire and Mehtta, NREGA and RTF: case studies for human development, 2009.

⁶⁰ Dercon, Stefan (ed.) (2004), *Insurance against Poverty*, Oxford University Press

Systemic shocks – which might be climatic crises and associated natural disasters, pandemics, financial crises, or conflicts – require a different methodology for assessing vulnerability for two reasons. First, it is not possible to predict with certainty when or whether these shocks will occur, and second, if they do occur it is not possible to predict who within a population would be affected (Kanbur 2009⁶¹). Existing vulnerability measures are not designed to predict people’s vulnerability to systemic shocks. Yet given the recent series of systemic shocks, these are arguably of increasing interest.

Kanbur suggests that assessments of vulnerability to systemic shocks should be conducted by undertaking an overall assessment of the social protection structures taken together. ‘[W]e have to look at the collection of mechanisms as a system, and ask whether as a collectivity they provide protection to the poor against a range of crises.’⁶² The methodology for undertaking such assessments might combine institution-specific assessments of each of the social protection systems – including public sector agencies and also private sector or voluntary groups – with quantitative assessments about their ability to be scaled up and scaled down rapidly. This note also has an interesting section on the implications for donors wishing to support social protection, which includes a novel element of developing ‘a pre-qualified line of assistance for social protection which kicks in automatically when certain crisis triggers are breached’ (Kanbur 2009, p 3).

Implement measures of inequality in different spaces

The MDGs discuss attainments, not inequality either among the poor or among the entire distribution. It could be useful to do so. This can be done powerfully using very simple tools. To take a first example, mean income growth rates might be identical in two countries, which would lead to an assumption that they were doing the same. However arithmetic means – the ones we commonly use – are insensitive to inequality among the distribution. Using survey data, it is possible to compute instead distribution-sensitive means which do reflect the extent to which growth is enjoyed by the poorer part of the distribution. Computing these means⁶³ will provide information on growth and the inequality or equality of growth together. For example, consider the graphic below of Mexico and Costa Rica. Both have the same arithmetic mean – which is here pictured at the point ‘1’ where the curves cross. So in terms of our normal growth measure we would regard them to be identical. However what we can see is that when we move down to 0 and (-1) (the geometric and harmonic means), Costa Rica is *always* above Mexico. This means that in Costa Rica, the poorer part of the distribution is *always* growing even faster than the better off. The converse is true in Mexico. Foster and Szekely 2008 show that if we simply compare a distribution sensitive mean of distributions rather than the arithmetic mean, we will be able to grasp the general relationship between growth and inequality accurately. Indeed in the pictured situation, we will find that that inequality is lower in Costa Rica according to *all* the associated generalized entropy and Atkinson indices of inequality.

⁶¹ <http://www.growthcommission.org/storage/cgdev/documents/kanbur.pdf> accessed 8 May 2009

⁶² <http://www.kanbur.aem.cornell.edu/papers/SystemicCrisesAndTheSocialProtectionSystem.pdf> page 2. accessed 8 May 2009

⁶³ Figure is taken from Foster and Szekely 2008 page 1151.

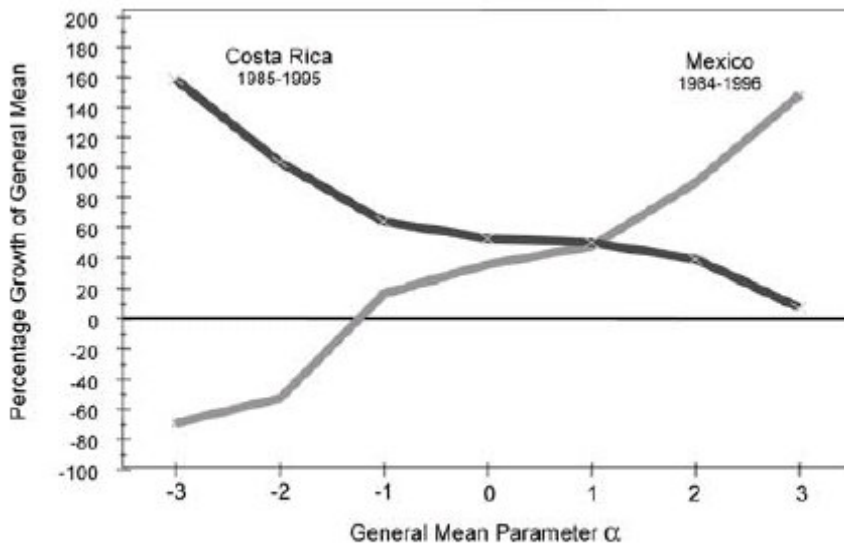


FIGURE 2

GROWTH IN THE INCOME STANDARDS OF COSTA RICA AND MEXICO

Building on this insight, it is also desirable to consider inequality of attainments in other MDG indicators. To some extent multidimensional measurement itself can provide a first step towards this. For example, in Indonesia, during strong growth the headcount of child malnutrition under 5 reduced, but severe malnutrition increased. A measure, such as the AF measure proposed in section 4, that reflected the inequality in achievements among the poor, would provide incentives for policy makers to address the poorest poor first, because doing so would reduce national poverty measures the most.

In addition, we may wish to incorporate inequality in attainments across the MDGs explicitly into our measures insofar as data allow. Box 7, below, describes one method for integrating inequality considerations into multidimensional measures. Just as in the case of income, we calculate distribution sensitive means for well-being indicators, and combine these – perhaps again using a distribution sensitive means. Comparisons of such distribution-sensitive multidimensional measures over time will reflect changes in achievements as well as in inequality. The relative contribution of these changes is, of course, also vital to understand.

Box 7. Measuring the Distribution of Multidimensional Outcomes: James Foster, Luis Felipe Lopez-Calva and Miguel Szekely

To incorporate distribution sensitivity, or inequality into the existing multidimensional measures, Foster, Lopez-Calva and Szekely (2005) propose a family of indices that *are sensitive to the distribution of human development*. To illustrate the technique, they develop a new class of human development indices (HDI) that includes both the traditional HDI.

1. Policy findings: The Mexican case

An empirical application of this new measure using the year 2000 Mexican Population Census data showed how the new measures can be applied to analyze the distribution of human development at the national level and for individual states.

The application illustrates that introducing inequality into the measurement of human development changes the human development ranking of Mexican states. A large number of re-rankings occur among states. Among the three individual dimensions of development (Education, Health and Income), income seems to be the most sensitive to inequality. The 'loss' in human development due to inequality can reach 26% at the national level. Thus, if the *distribution sensitive* HDI were implemented, reducing inequality would have a direct effect on Mexico's HDI itself.

Thus analyzing the state-wise and nation-wide distributional sensitivity of human development could provide incentives for policymakers to address inequalities within each dimension of human development.

2. Why should the new measure be used?

The Human Development Index (HDI) improved upon per-capita Gross Domestic Product as an indicator of development by incorporating information on health and education. However, the HDI, like GDP, fails to take into account the unequal distribution of development benefits among the population. Subsequent work by Anand and Sen (1993) and Hicks (1997) led to a useful distribution sensitive measure of human development, but at the cost of a key property of the HDI that ensures consistency between regional and aggregate analyses. Foster, Lopez-Calva and Szekely present a new parametric class of human development indices that includes the original HDI as well as a family of distribution sensitive indices that satisfy all the basic properties for an index of human development.

3. Benefits of the new measure:

1. This measure is sensitive to inequality in all the component outcome variables.
2. The new measure gives countries with unequal development lower ranking than countries with more balanced achievements in the three dimensions, while the average dimensional achievements are the same for both countries.
3. The new class of indices is *path independent*; there is no need for a particular choice of sequencing. The property of *path independence* is especially important under the circumstances when the data for different dimensions are available at different disaggregated levels. For example, education data may be available at the individual level, income data may be available at the household level, health data may be available at the municipality level etc.

4. How it is calculated

Foster Lopez-Calva and Szekely (FLS) propose an inequality adjusted multidimensional well-being measure that satisfies a number of desirable principles, and is easy to compute. In this example, the measure uses the same dimensions as the HDI. There are two steps to calculate it from individual or household level data.

First, the study applies the general mean of the distribution of each of the HDI variables. For a vector of dimensional achievements, $x = (x_1, \dots, x_m)$, the general mean can be defined as

$$\mu_{\beta}(x) = \left(\frac{1}{m} \sum_{i=1}^m x_i^{\beta} \right)^{\frac{1}{\beta}}.$$

Note that the general mean is just the simple arithmetic mean for $\beta = 1$, simple geometric mean for $\beta = 0$, and simple harmonic mean for $\beta = -1$, respectively. As the value of β falls, more emphasis is put on the lower end of the distribution. Thus, β is the inequality aversion parameter and measures a policy maker's degree of dislike for the existing inequality. Further lower the value of β than 1, more the policy maker dislike inequality. Recall the HDI just uses 'average' – the arithmetic mean – for each dimension. The distribution sensitive HDI, on the other hand, uses some value of $\beta < 1$ (usually we choose either $\beta = 0$, the geometric mean or $\beta = (-1)$, the harmonic mean).

Second, to aggregate these indicators in an index of human development, whereas the traditional HDI uses the average or arithmetic mean of the three dimensional indicators, FLS take the *general mean* of the three, using the same value of β as before. If more than one value of β is reported we obtain a *family* of human development indices. Whereas the HDI is a mean of means, the inequality adjusted HDI is a 'general mean of general means'.

$$HDI_{\beta} = \mu_{\beta}[\mu_{\beta}(h), \mu_{\beta}(e), \mu_{\beta}(y)] \text{ for } \beta \leq 1$$

When $\beta < 1$, this index not only penalizes inequalities in the distribution of a certain outcome across the population (in the first step), but it also penalizes uneven developments *across* dimensions.

Conclusion

Earlier sections of this paper argued that we need to gather information on ‘missing dimensions’ that will strengthen our ability to address the MDGs, that we need to scrutinize anew the ways that growth could advance non-income MDGs, and what additional policies do, and that we need to use newly developed multidimensional poverty measures to provide a ‘snapshot’ of attainments in certain MDGs. This section in a sense focuses on three quite practical points that fill three gaps in the above analysis. First, we argued that both for the MDGs and for missing data, it may be necessary in some contexts to strengthen data collection that is timely and that provides information to local actors, such as CBMS. This is particularly important when circumstances are changing rapidly on the ground. Second, we argued that a density of local actors and methods of engagement may be required to develop and sustain social protection systems, and that there is a clear need for better evaluation and documentation of cases that work. Third, many have argued that concerns for inequality should be integrated into efforts to achieve the MDGs; we presented therefore an intuitive distribution sensitive measure of growth – both in income and in multidimensional space – that clearly depicts how the poorer part of the population fare.

Some concrete suggestions for action include:

1. Continue to improve national data collection for MDG indicators, and their analysis
2. Develop new timely mechanisms to gather relevant data for social protection. These will vary by context, but might include locally gathered data (such as CBMS) where corruption is relatively low and stability and capacity are strong. Alternatively mechanisms are needed in failed states.
3. Identify channels by which donors can effectively and appropriately support nationally developed social protection mechanisms such as NREGA, without undermining the ownership and national support that is essential to these interventions. This could be, for example, by supporting rigorous monitoring and evaluation efforts.
4. Document concrete mechanisms by which well-performing social protection mechanisms have engaged civil society – for example through the legal frameworks, finance, communication, and information sharing.
5. To reflect inequality, standard measures economic growth (the arithmetic mean) should be supplemented with reports of the distribution sensitive means.
6. Inequality-adjusted multidimensional measures should be constructed and comparisons across time analysed to see the relative contribution of rising or falling inequality to MDG attainments.

6. High Impact Causal Pathways

Given that the MDGs and growth are complex, interconnected phenomena, and that achievements vary greatly by region, population group, and urban/rural areas, a natural question is: what policies have the most high impact effect on *several* development goals? This paper has consistently drawn attention to the interconnectedness of the goals which motivated their adoption. Yet often governments pursue narrowly sectoral policies. We observe that this is partly because the tools required for empirical analysis are not widely used and in some cases require improvement.

This section proposes that the next phase of the MDGs, as well as future development programming implement econometric tools that specifically elucidate **interconnections** between the development goals, as well as maximal **sequences** of investment to meet the MDGs and related goals most efficiently.

Causal analysis is needed to complement multidimensional measures. Multidimensional poverty measures, for example, give a snapshot of *who is poor* in a given group, and of *how they are poor* – that is, the kinds of deprivations that most affect that particular group.

This idea of strategic investment – an investment that is predicted to have additional knock-on impacts – was already put forward in the development theory of Hirschman (1961), who proposed to identify the industries with greater backwards and forward linkages. One kind of analysis that is required, thus, is a production function for *all* the development goals (or related subgroups of them). The production function maps from a set of inputs to the set of respective outputs, and can be used to investigate what set of investments will yield the highest and most sustained outcomes.

In the context of key development goals, an obvious next question to assess is which particular sequence of interventions would maximally affect the particular constellation of deprivations that are most prevalent in that particular context. This question is not straightforward for four reasons, each of which relate to different *instrumental* impacts of variables on one another:⁶⁴

- 1) **Some MDG indicators are means to other MDGs.** Put differently, some MDGs indicators, in addition to being goals in and of themselves, are also instrumentally effective in advancing other MDGs. If malaria was reduced, this would be an achievement in and of itself. At the same time, it would immediately release the energies of the persons who would have been ill with, or perished because of, malaria. Having more awareness of their own health, they might avoid other infectious disease; being more able to work they might attain higher incomes and better nutritional outcomes. Hence the reduction of malaria would itself be an input or be ‘instrumental’ to reducing other related MDGs. This is a tremendously positive feature of the MDGs. It also makes analyses of MDGs more complex, because an intervention to reduce malaria will also (perhaps with a lag) affect other MDGs in the ways described above.
- 2) **Interventions affect multiple MDGs.** Many interventions aim to support multiple outcomes. For example, the mid-day cooked meal scheme described above was directly intended to improve child’s nutritional incomes. Indirectly, it also provided an incentive for girls to attend school. And, because it involved the community in holding teachers accountable, it may have improved the learning outcomes of children. However it is unlikely that all of these effects occurred evenly in all communities – and in addition other unforeseen impacts may have occurred in other areas. This again adds a layer of complexity to the analysis.
- 3) **Interventions affect processes that affect other MDGs.** Furthermore, other more general purpose interventions – for example capacity building interventions, or those that ‘empower women’ – may in turn affect the MDGs quite significantly. It is even possible that the impact of such an indirect intervention on a given MDG may be more significant through than it would have been via a direct intervention. Perhaps supporting a women’s channel on a

⁶⁴ In *Development as Freedom* Sen identifies five ‘**instrumental freedoms**’ that, he claims, ‘tend to contribute to the general capability of a person to live more freely.’ They are:

- (1) *political freedoms*, e.g. democracy, the freedom to scrutinize and criticize authorities, to enjoy a free press and multi-party elections.
- (2) *economic facilities*, e.g. people’s opportunity to have and use economic resources or entitlements.
- (3) *social opportunities*, e.g. people’s ability to have health care, to be educated, and to live in a society where others likewise enjoy these goods.
- (4) *transparency guarantees*, e.g. the ability to trust others and to know that the information one receives is clear and honestly disclosed.
- (5) *protective security*, e.g. social protections for vulnerable people that prevent abject deprivation

community radio station would lead to a greater pace of reduction in child mortality than the same investment in ORT salts and health education. But rigorous comparisons between the impacts of direct and indirect interventions are a challenge.

- 4) **The relationships identified above develop over time.** Finally, in most cases, the salient ‘connections’ between variables – whether they are the ripple effects of an improvement in one MDG indicator on others, or the secondary effects of interventions on other MDG indicators, or the affect of indirect interventions – develop over time and may have various lags which could be quite extensive (as in the case of girls’ education affecting their own children’s health and school attendance).

If these interconnections exist and are important, it would be essential that evaluation methodologies and policy analysis should include them. There are some clear, but no insuperable challenges to doing so, related for example to controlling for endogeneity, representing uncertainty and ambiguity, defining categories of variables (stock and flow, input outcome), using data that are not cardinal. Many tools are present, in various disciplines, to address these problems. But they have not been brought together or applied to the MDGs. This is one area in which a significant focused research project that linked together multidimensional poverty measures with methodologies for multidimensional analysis could likely have quite a significant impact in a short time period.

Alongside this, and building on the call for a follow-up to study to the Commission on Growth and Development that developed case studies of MDG success countries (Section 3), it would be tremendously useful to identify ex post high impact strategic paths that countries had used, and the policy ingredients that had been in play in successful MDG countries. This would sensitize policy analysts to the kinds of interconnections that others have exploited. It would also inform the design of planning and evaluation tools to support such causal pathways.

In the medium term, it would be useful to develop a multidimensional model for policy planning purposes. This would consider the effects that investment in one sector, region, or sequence of actions should have on a set of outcome variables. This might require a multidimensional CGE model such as the MAMS model, but it might also take a different form.⁶⁵

Some Conclusions

1. As in Section 3, we propose the development of careful, thoroughly case studies of countries that draw on the kinds of analysis undertaken by the Commission on Growth and Development and identify ex post high impact strategic paths that countries had used, and the policy ingredients that had been in play in successful MDG countries. This would sensitize policy analysts to the kinds of interconnections that others have exploited. It would also inform the design of planning and evaluation tools to support such causal pathways.
2. As studies of the nature proposed here are not widely available at this time, we propose a significant focused research project that generated user friendly tools of analysis. These tools would identify high impact causal pathways that build on the ‘ripple effects’ of one MDG on another. The research

⁶⁵ In July 2007, our sister research centre in Pavia Italy gathered researchers for models including MAMS, MPIA, an Italian SIA model based on Sen’s approach, and others. As a follow-up we have identified eight different ‘schools’ of actual or potential multidimensional models. OPHI is beginning to coordinate a team that will a) explore and write up the relative strengths and weaknesses of each of these models. Subsequently some team might choose one or more models and build the multidimensional parts of those models related to the MDGs plus empowerment, violence, and perhaps a few subjective well-being indicators

project would develop stronger methodologies to construct *production functions* for key groups of MDG indicators or other development goals.

7. Conclusion and Policy recommendations

This paper has had one clear aim. It is to revive the recognition that the MDGs are interconnected. The MDGs are interconnected, and are also connected with a few other ‘missing dimensions’. We argue that these interconnections can be utilized to accelerate progress on the MDGs. To this end, we have shared a number of concrete and practical tools – most of which have arisen since the MDGs were announced in 2000 – which can aid in the process. Two tools are particularly powerful and easy-to-implement. The first are a set of survey modules on ‘missing dimensions’ of data for poverty analysis, that we argue should be integrated into standard poverty questionnaires. The second are a set of tools related to measures of multidimensional poverty, that enable more accurate targeting, and a better birds-eye view of progress. We have also identified significant and striking gaps in our understanding - such as how to strengthen the relationship between growth and non-income MDGs, and call for a set of policy-oriented case studies of high performing countries in this case, and for a research initiative specifically focused on high impact causal pathways in another instance. In each section, we close with some conclusions and policy implications which are collected below. We are well aware that the relevance of these suggestions will vary greatly by context, but they do provide the reader with a quick overview of some main points of this discussion. Since the MDGs were announced in 2000, a sheaf of new insights have emerged on related topics, motivated by the desire of many diverse groups to advance multiple goals simultaneously. If some of these techniques, and this motivation, are channelled into the ongoing task of meeting the MDGs by 2015 and sustaining attention to key goals beyond that time, the effects could be significant.

List of Recommendations from each Chapter

2. Missing Dimensions: Jobs, Safety, Agency, Dignity

Some instrumentally powerful tools to advance the MDGs are not necessarily MDGs themselves. We call these missing dimensions. Improvements to missing dimensions such as the quality and remuneration of informal work, physical security, agency and empowerment, and to freedom from shame and humiliation, could in some cases powerfully advance the MDGs.

6. Test the existing preliminary modules on missing dimensions sufficiently to verify their accuracy. Once these modules are more developed then work to integrate them into household and the major international surveys.
7. Include ‘missing dimensions’ modules in relevant surveys that monitor or evaluate MDG-related projects or programmes.
8. Create awareness and support for national statistical offices to implement the missing dimensions modules.
9. Analyse interconnections between the MDGs and each of the missing dimensions across contexts to identify the key bottleneck for progress on the MDGs. If missing dimensions are present, bottlenecks might include a lack of jobs, violence, disempowerment, or humiliation.
10. Develop statistical methods to incorporate subjective data into public policy analysis, which takes into account the problems of ‘adaptive preferences’ among the poor and uneducated.
11. Explore through dialogues and engagement at the national level how the missing dimensions provide a vital focus for a revitalization of the MDGs

3. Growth that meets the MDGs

7. In addition to a 'low carbon' recovery, we need a 'pro-MDG' recovery. To achieve this growth policies need to be more coherent with the MDGs. They should be designed so that they will simultaneously advance non-income MDGs.
8. Synergistic growth and MDG policies should be implemented in particular countries and impacts should be rigorously evaluated and compared.
9. More generally, the success of growth policies should be evaluated in part with reference to the objectives growth is presumed to advance – especially the MDGs.
10. Policies to advance both income growth and the non-income MDGs simultaneously should be explored, in order that countries may deliberately exploit this synergy.
11. It would be prove extremely timely and relevant to appoint a Commission or research group to identify and evaluate case studies of countries that had attained high sustained MDG outcomes with the same degree of acuity, lack of ideology, steadfast attention to detail, and clarity as the Commission on Growth and Development, and determine which policy ingredients led to sustained achievements in the MDGs.
12. In the current global economic context, it could also be timely to produce a set of case studies of countries that achieved high MDG outcomes but did *not* have strong growth rates, to identify commonalities between them and lessons for times of economic downturn.

4. Multidimensional Measures

8. Recognizing the practicality of new multidimensional measures that make it possible, adopt a multidimensional framework to monitor analyze and evaluate poverty reduction and the MDGs
9. Use multidimensional techniques to quickly identify and target the poorest recipients for social protection programmes.
10. Implement multidimensional poverty measures comprised of key MDG indicators which are available from the same survey instruments (e.g. DHS).
11. Supplement national income poverty measures with a multidimensional poverty measure.
12. Count people, not only countries, by including data on the number of *people* who are deprived in each indicator, as well as the proportion of a country's population.
13. Test and use multidimensional measures in other programmatic areas such as education, health, gender, corruption, human rights, and well-being as relevant.
14. Test the robustness of key measurement assumptions such as the weights applied to dimensions, to ensure that high profile comparisons are robust to minor changes in measurement assumptions.

5. Process and Sustainability

7. Continue to improve national data collection for MDG indicators, and their analysis
8. Develop new timely mechanisms to gather relevant data for social protection. These will vary by context, but might include locally gathered data (such as CBMS) where corruption is relatively low and stability and capacity are strong. Alternatively mechanisms are needed in failed states.
9. Identify channels by which donors can effectively and appropriately support nationally developed social protection mechanisms such as NREGA, without undermining the ownership and national support that is essential to these interventions. This could be, for example, by supporting rigorous monitoring and evaluation efforts.
10. Document concrete mechanisms by which well-performing social protection mechanisms have engaged civil society – for example through the legal frameworks, finance, communication, and information sharing.
11. To reflect inequality, standard measures economic growth (the arithmetic mean) should be supplemented with reports of the distribution sensitive means.

12. Inequality-adjusted multidimensional measures should be constructed and comparisons across time analysed to see the relative contribution of rising or falling inequality to MDG attainments.

6. High Impact Causal Pathways

3. As in Section 3, we propose the development of careful, thoroughly case studies of countries that draw on the kinds of analysis undertaken by the Commission on Growth and Development and identify ex post high impact strategic paths that countries had used, and the policy ingredients that had been in play in successful MDG countries. This would sensitize policy analysts to the kinds of interconnections that others have exploited. It would also inform the design of planning and evaluation tools to support such causal pathways.
4. As studies of the nature proposed here are not widely available at this time, we propose a significant focused research project that generated user friendly tools of analysis. These tools would identify high impact causal pathways that build on the 'ripple effects' of one MDG on another. The research project would develop stronger methodologies to construct *production functions* for key groups of MDG indicators or other development goals.

Bibliography

- Besley and Cord 2007 *Delivering on the Promise of Pro-Poor growth*. Palgrave Macmillan and the World Bank.
- Citizens' Initiative for the Rights of Children under Six (2006) Focus on Children under Six. New Delhi, Citizens' Initiative for the Rights of Children Under Six.
- Commission on Growth and Development (2008) The Growth Report: Strategies for Sustained Growth and Inclusive Development. Washington DC, World Bank.
- Drèze, J. & Sen, A. K. (1989) *Hunger and Public Action*, Oxford, Clarendon Press.
- Drèze, J. & Sen, A. K. (2002) *India, development and participation*, New Delhi, New York, Oxford University Press.
- FAO (2008) The State of Food Insecurity in the World. Rome, FAO.
- ILO (2002) Women and men in the informal economy: A statistical picture. Geneva, ILO.
- Narayan, D. & Petesch, P. (2007) Moving out of poverty: cross-disciplinary perspectives on mobility. Washington DC, World Bank.
- Rahu, D. (2006) Informal enterprises and workers: Labor market issues and options. Washington DC, World Bank.
- Ranis, G., Stewart, F. & Ramirez, A. (2000) Economic growth and human development. *World Development*, 28, 197-219.
- Sen, A. K. (1982) Rights and Agency. *Philosophy and Public Affairs*, 11.
- Sen, A. K. (1985a) *Commodities and Capabilities*, Amsterdam; New York, North-Holland; Elsevier Science Co.
- Sen, A. K. (1985b) Well-being, Agency and Freedom: The Dewey Lectures 1984. *The Journal of Philosophy*, 82, 169-221.
- Sen, A. K. (1987) The Standard of Living. In Hawthorn, G. (Ed.). Cambridge, Cambridge University Press.
- Sen, A. K. (1988a) The concept of development. In Chenery, H. & Srinivasan, T. N. (eds) Elsevier Science Publishers.
- Sen, A. K. (1988b) Freedom of Choice: Concept and Content. *European Economic Review*, 32, 269.
- Sen, A. K. (1989) Development as Capability Expansion. *Journal of Development Planning*, 19, 41-58.
- Sen, A. K. (1992) *Inequality Re-examined*, Oxford, Clarendon Press.
- Sen, A. K. (1993) Capability and Well-being. In Nussbaum, M. & Sen, A. (Eds) Oxford, Clarendon Press.
- Sen, A. K. (1994) Liberty and poverty: Political rights and economics. *Current*, 22.
- Sen, A. K. (1999a) Democracy as a Universal Value. *Journal of Democracy*, 10, 3.

- Sen, A. K. (1999b) *Development as Freedom*, New York, Knopf Press.
- Sen, A. K. (1999c) Economics and the value of freedom. *Civilization*, 6, 83.
- Sen, A. K. (2002) *Rationality and freedom*, Cambridge, Mass, Belknap Press.
- Sen, A. K. (2005) *The argumentative Indian : writings on Indian history, culture and identity*, London ; New York, Allen Lane.
- World Bank (2009) *World Development Report 2009: Reshaping Economic Geography*. New York, Oxford University Press.