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Millennium Development Goal of Halving Poverty in Asia and the Pacific Region: Progress, Prospects and Priorities

by

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Executive Summary

The Millennium Development Goals (MDGs) draw attention to several dimensions of deprivation that afflict large sections of the population in the developing world, and the imperative of reducing them substantially by 2015. Although these goals are inter-related, the most fundamental one is to halve the proportion of the dollar poor between 1990-2015. Achievement of this goal in Asia and the Pacific Region – especially in South Asia- is of considerable importance, as it accounted for 466 million of the 1.2 billion dollar poor in 1990.

Global extreme poverty is overwhelmingly rural. Even in 2025, when the majority of the world's population is projected to live in urban areas, most of the dollar poor will still be rural. So rural and agricultural development will have a vital role in poverty reduction. Accordingly, this paper reviews progress in attaining the MDG of poverty reduction, assesses prospects of achieving it by 2015, and identifies priorities in accelerating poverty reduction in Asia and the Pacific Region.

The main findings of the analysis carried out are the following:

- In East Asia, the actual growth rate exceeds that required to achieve the MDG of halving poverty, while in South Asia it falls short of the required rate. The need for growth acceleration in South Asia is thus greater.
- The required rates of agricultural growth are, however, higher than the actual in both East Asia and South Asia.
- Moderate growth in combination with reduction of income inequality will have a substantial poverty reduction impact at the sub-regional and country levels.
- Even modest improvements in selected indicators of institutional quality (e.g. voice and accountability) will have substantial effect on poverty through higher incomes. While historical and geographical factors shape institutional quality, human capital independently has a positive effect on it.

Some key elements of a pro-poor strategy of growth in a rapidly globalizing environment include a credible and sound macro policy regime; increase in agricultural productivity to sustain overall growth- especially in less- favoured areas with a heavy concentration of the poor; effective land rights for women; diversification of rural economies through non-farm opportunities; and easier access to markets, credit and other financial services of disadvantaged groups (e.g. tribals, women). On the other hand, transitional or incremental institutional reforms may pave the way for deeper and more extensive reforms over a longer period. So a rigid approach to institutional reforms may not be desirable. Distributive conflicts and coordination failures could be avoided through building up of public- private partnerships. Greater transparency and accountability in local institutions has the potential of triggering significant changes in policies and in their implementation

with more favourable outcomes for the poor.

So a reexamination of IFAD's strategic concerns in this Region, with a sharper focus on institutional quality improvements, is worthwhile. More careful attention must also be given to assessment of poverty impacts, taking into account the correspondence between locally appropriate indicators of poverty and the dollar- a- day criterion. Finally, given the frequency of ethnic conflicts and the devastation resulting from them and natural disasters, conflict prevention has assumed greater importance. It is therefore necessary to assess whether constitutional and other safeguards, devolution of power, preferential job policies, large scale vocational training and rural public works, and speedy relief efforts that mobilize local communities would help minimize the risks of ethnic and other conflicts.

Millennium Development Goal of Halving Poverty in Asia and the Pacific Region: Progress, Prospects and Priorities

1. Introduction

At the Millennium Summit in September, 2000, world leaders committed the global community to halve by 2015 the proportions of poor and hungry. They also pledged in the United Nations Millennium Declaration to achieve other Millennium Development Goals (MDGs) encompassing education, gender equality, and women's empowerment, health and communicable diseases such as aids and malaria, and environmental sustainability (IFAD, 2003). In brief, these goals aim for a broader and more inclusive process of human development (UN, 2003).

The MDGs are ambitious, as they represent clear and direct challenges both to individual countries and to the global community. Achievement of these goals in Asia and the Pacific Region –especially in South Asia- is of considerable importance because of the pervasiveness of different forms of deprivation. It accounted for 466 million (about 41.5 per cent) of the 1.2 billion poor in 1990[1]. Millions of poor people would be free of abject deprivation and able to lead lives of dignity. Fewer children would be stunted by hunger. Many more women would be able to broaden their spheres of participation and contribute more substantially to development activities at different levels. There would be greater protection from preventable diseases and better access to health care. All sections of society- government, the private sector and civil society- would work towards protecting and sustaining the natural environment (UN, 2003).

Although various MDGs are interrelated (e.g. reduction of poverty, and of infant and child mortality rates) and progress in achieving them must be assessed in a comprehensive way, for a focused and coherent treatment of the most fundamental goal, the present paper concentrates on the halving of the proportion of dollar poor.

Global extreme poverty is overwhelmingly rural. Some 900 million of the 1.2 billion dollar poor live in rural areas in developing countries and mainly depend on agriculture for their living in 1990. Even in 2025, when the majority of the world's population is projected to live in urban areas, 60 per cent of poverty will still be rural poverty, and most of the dollar poor will still be rural. So rural and agricultural development have a vital role in poverty reduction. A key element is to enable the rural poor to improve their productivity and

[1] World Bank (2004), and Thapa (2004).

increase their incomes. In the overall strategy, they must be viewed not as beneficiaries but as empowered agents of change (IFAD, 2003).

The objective of this paper is to review progress in attaining the MDG of poverty reduction, assess prospects of achieving it by 2015, and identify priorities in accelerating poverty reduction. On the basis of the analysis carried out for this paper, a case is made out for the primacy of institutional reforms. Specifically, even modest reforms are likely to have a substantial pay-off in terms of higher incomes and poverty reduction[2]. Towards the end, some issues/concerns are identified for further discussion from IFAD's perspective.

2. Progress in Achieving MDG in the 1990s

According to a recent assessment, between early and late 1990s, the head-count ratio fell from 34 to 24 per cent in Asia and the Pacific (UN, 2003). Although it left 768 million living on less than a dollar a day, it represented significant progress[3]. A number of the most successful, all of them in East or South East Asia, including China, Indonesia and Vietnam, have already achieved their targets. In South Asia, however, the progress has been much slower, except in India, where the 1990s saw a significant reduction.[4]

There have also been marked variations in the speed of poverty reduction over time. Poverty in Indonesia, for example, rose sharply during the financial crisis but fell subsequently.

During 1970-90, many countries achieved remarkably high rates of growth accompanied by steep reductions in poverty (e.g. China, Indonesia and Thailand).[5] In some countries, growth rates were modest; in others, they were high. But growth translated into poverty reduction primarily because it was sustained over two decades. Economic growth steadily expanded employment and increased productivity.

The experience of the 1990s was different because of the financial crisis in East Asia and transition problems in Central Asia. As a result, some countries such as Indonesia and Republic of Korea (hereafter Korea) recorded an increase in poverty. Nevertheless, the proportion of dollar poor in the region (excluding Central Asia) declined from 34 per cent in 1990 to 26 per cent in 1998, a reduction of over 147 million.

There were wide variations in growth rates across the regions. Only a few countries, mainly in East and South East Asia, achieved growth rates above 4 per cent and almost all

[2] For details, see Gaiha and Imai (2005).
[3] These estimates are based on the 1993 PPP adjusted estimates of proportions of populations living on less than a dollar a day. For a review of the methodology, see Gaiha (2003).
[4] This is debatable as the National Sample Survey data for 1993 and 1999 on which this assessment is based are not directly comparable, due to changes in the sample design for 1999. For a recent review questioning this assessment, see Sen and Himanshu (2004). With their adjustments, the reduction in poverty is barely 3 percentage points between 1993-99.
[5] For details, see UN (2003).

the “miracle” economies suffered a slowdown because of the financial crisis but managed to rebound to some extent.

3. Growth, Inequality and Poverty

Available evidence points to a strong link between growth and poverty reduction. The extent to which growth translates into poverty reduction, however, varies within this region. During the 1990s the highest poverty elasticities of growth were for the Philippines and Malaysia (-1.7 to -2.0), followed by Bangladesh, the Lao People’s Democratic Republic, India and Vietnam (-0.8 to -1.0), with much lower figures in China and Thailand (UN, 2003)[6].

During the 1990s, many countries recorded an increase in income inequality. Broadly, this reflected the shift from a rapidly equalizing period of rural and agricultural development to growth centred more on the urban areas and driven by export industries and services, while most workers continued to be dependent on agriculture.[7]

If slow growth is accompanied by greater inequality, as in some countries in Central Asia, South Asia and the Pacific, even a relatively small change in the latter can affect how much the poor will benefit from growth. Better poverty outcomes occur when significant growth is accompanied by a slight increase in inequality, as was the case in Bangladesh, China and India.

A third possibility is significant growth acceleration combined with a reduction in inequality. In that case, poverty reduction is likely to be high. This is, however, not observed in any of the growth spells recorded for Asia and the Pacific. The closest example is Vietnam, where land and market reforms in the late 1980s provided the basis for high growth with only a slight increase in inequality. An agriculture based strategy matched a similar success in China from 1978 to 1988. Thailand was yet another close example in the 1970s and 1980s.

For poverty reduction, some forms of inequality matter more than others. Important ones include inequality in the distribution of assets, especially land, human capital, financial capital, and in access to public assets such as rural infrastructure. The fast growing economies of East Asia and South East Asia had the advantage of low asset inequality compared with other Asian and Pacific economies- in some countries following land reforms along with a better spread of education. Broadly, a pro-poor agenda should include measures to moderate current income inequality while facilitating access to income

[6] In a recent contribution, Adams (2004) reports that, while economic growth reduces poverty in developing countries, the rate of poverty reduction depends on how economic growth is defined. When growth is measured by changes in survey mean income, the growth elasticity of poverty is higher than that obtained from growth measured by changes in GDP per capita.

[7] In fact, in some South Asian countries (e.g. India, Bangladesh and Pakistan) the gap between rural and urban poverty widened during the 1990s (Thapa, 2004).

generating assets and to promote employment opportunities for the poor.

4. Vulnerability, Chronic Poverty and Disadvantaged Groups

People living at or near the poverty line are frequently exposed to various shocks, related to crop, price, and illness. Poverty is not just a matter of deprivation but also of vulnerability to such shocks. This was illustrated dramatically during the recent Asian crisis. Some countries were affected more seriously than others, particularly Thailand and Indonesia, as they were exposed to the international financial markets and had heavy debts in dollars, yens and other currencies. The crisis did much less damage in South Asia, as these economies were less exposed to world markets and large agricultural sectors helped to insulate the poor. China, too, escaped because its currency was not convertible and, together with large foreign exchange reserves, effectively insulated the banking system. Other shocks that can trigger downward mobility of the vulnerable - sometimes into persistent poverty - include social instability, loss of markets, crop failures, droughts, floods and other natural disasters. Individual households can also be hit by the disability and illness of a male earner.

A broad typology of the vulnerable and persistently poor is given below.

(a) Minorities and Indigenous People

Indigenous minorities are also linguistic and religious minorities, and live in remote regions. In China, for example, members of more than 50 ethnic minority groups disproportionately live in poor, remote and mountainous regions. They are less than 9 per cent of the total population but about 40 per cent of those in absolute poverty. Comparison of the living standards of 53 ethnic minority groups in Vietnam to that of the Kinh majority also shows significant disparities and extreme discrimination. Extreme minorities make up 29 per cent of the poor but only 14 per cent of the population. Further, most people belonging to ethnic minorities remained trapped in poverty during a period of otherwise pro-poor growth: while the poverty headcount among the majority fell from 54 per cent to 31 per cent over the period 1992/93- 1997/98, it only dropped from 86 per cent to 75 per cent among minorities (CPRC, 2004).

Throughout South Asia, the links between chronic poverty and ascribed status are played out through the persistent, severe poverty and exclusion experienced by both tribal (indigenous) and low caste peoples. Both groups continue to face discrimination. In India, for example, Scheduled Tribes (STs) suffer highly limited and declining access to the natural resources, especially forests, upon which their livelihoods are based. Most Scheduled Caste (SC) families are functionally landless and work as agricultural labourers[8].

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[8] In India, survey data for 1993-1994 show that per capita incomes among SCs were lower than the state averages (24 per cent in Andhra Pradesh, and 41 per cent in Kerala). In the eastern state of Orissa, more than 24 per cent of the population consisted of STs, as compared to 9 per cent in the country as a whole. 92 per cent of the households belonging to a ST in rural southern Orissa were poor - twice the state poverty rate and three and a half times the national poverty rate (CPRC, 2004).

(b) Women and Girls in Chronic Poverty

Women and girls are most at risk of persistent poverty where gender-based discrimination is pervasive and often severe. Parental investment in children is strongly affected by localized norms of entitlement. In many parts of South Asia and China, girls in poor households are less likely than boys to receive adequate general care, education, nutrition and health care. The cycle of maternal and child malnutrition, morbidity and mortality tends to perpetuate poverty over generations: a vicious cycle of low investment in women and low investment in girls. Gender discrimination in access to health, nutrition, education and security exacerbates this process further.

Premature and preventable death due to various forms of deprivation is the most fundamental manifestation of chronic poverty. Millions of girls and women are simply missing from the world because of selective abortion, infanticide, overwork, ill health and neglect. Estimates of the total number of missing women vary from 60 to 113 million. 80 million of the preferred estimate of 101.3 million missing women (about 79 per cent) are Indian and Chinese women. There has been marked improvement in the sex ratio of Bangladesh and small overall improvement in the sex ratio in India. Worsening survival rates among infants and girls have partly offset improvements in survival among older women.[9] In China, the situation is deteriorating. Of the 100000 and 160000 orphans and abandoned children in 1999, 90 per cent were girls. Second and subsequent daughters are at high risk of abandonment or abortion, based on a combination of strong son preference and the one child policy, which allows rural households to have a second child if the first is a boy (CPRC, 2004).

(c) Ecological Characteristics of Spatial Poverty Traps

Over half of the world's rural poor live in areas of low agricultural potential. Half a billion people in developing countries live in arid regions with no access to irrigation systems; another 400 million are on lands with soil unsuitable for agriculture; 200 million live in mountainous and hilly regions; and more than 130 million are in fragile forest ecosystems. These regions are also highly vulnerable to climate fluctuations, pests, diseases and man made natural disasters, which make food supplies precarious (CPRC, 2004).

In Bangladesh, panel data for 1987-88 and 2000 show that 15 per cent of households that had descended into poverty had experienced a shock related to a natural disaster. Poverty rates are highest in extremely low lying areas that are flood prone, including *chars* (river islands that seasonally disappear), and in tribal areas where social and geographical disadvantages overlap[10].

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[9] Deaton and Dreze (2002), for example, show that improvements in income poverty went hand in hand with a decline in female-male ratio among children, from 945 girls per 1000 boys (in the 0-6 age group) in 1991 to 927 girls per 1000 boys in 2000.

[10] For details, see Sen (2003).

In semi-arid areas of rural Andhra Pradesh and Maharashtra (India), over one fifth of the population was poor in all 9 years between 1975-76 and 1983-84, while 60 per cent were poor in at least 5 of the 9 years. Further analysis of this dataset suggested that even relatively affluent households are highly vulnerable to long spells of poverty when severe crop shocks occur[11].

The available evidence for China suggests that chronic poverty is highest in rural areas and heavily concentrated in north- west, west and south - west areas, away from the rapidly growing coastal regions. Often such areas are remote from growth centres, of low agro-ecological potential, and have large ethnic minority populations (CPRC, 2004).

(d) Politics, Rights and Conflicts in Spatial Poverty Traps

Politically, concentrations of very poor people are associated with a less organized civil society, less responsive government, and limited NGO presence. Pockets of chronic poverty therefore exist where socio-political exclusion- often based on language, identity or gender-is pervasive.

Civil wars frequently occur in countries that have low human and economic development. Borderlands and other regions typified by weak state presence provide fertile ground for mobilization of militant groups and organized criminality. The powerlessness of the poorest makes them unlikely drivers of conflicts, but most likely to suffer their worst effects[12]. Conflict creates refugees and internally displaced people (IDPs)- now in their millions in developing countries. IDPs are a significant group of the chronically poor. In Sri Lanka, for example, the total number of IDPs (including those in welfare centres) is 650000, equal to roughly one third of the population currently living in conflict-affected areas. In one affected area alone, it is estimated that as many as 80 per cent of the current population are displaced, having arrived as part of a major influx of people from the adjoining conflict areas (CPRC, 2004).

5. Prospects of Achieving MDG

(a) Recent Reviews

Assessment of feasibility of the MDG of poverty reduction is far from straightforward, as it requires a careful analysis of growth prospects, changes in inequality and initial conditions.

[11] For details, see Gaiha and Deolalikar (1993), and Gaiha and Imai (2004).

[12] For an insightful analysis of how ethnic conflicts are triggered, see Bardhan (2005). Of considerable interest is the elaboration of the role of rumours, information cascades, and herd behaviour in communal riots.

Of the available assessments to date, a recent assessment for Asia and the Pacific region is particularly relevant (UN, 2003)[13]. While it has the advantage of country-specific projections in this region, the methodology used is simple.

Extrapolating a trend in the head-count ratio to 2015, an optimistic assessment is obtained. All the selected countries are expected to achieve the MDG goal.[14] However, given the population projections, an unacceptably high number will continue to live below dollar a day UN (2003).

These are of course estimates and the actual outcomes may be worse. Growth may, for example, suffer because of declining terms of trade, shocks to the global economy, financial instability or regional conflicts.

A pro-active stance of governments to stimulate growth, reduce inequality, protect the vulnerable, and a more inclusive process of development are imperative. Such a strategy will assume greater significance as poverty levels fall, as governments and others will need to tackle pockets of persistent and acute poverty.

(b) New Evidence

(b.1) Analytical Framework

First, a brief exposition of the analysis undertaken and simulations based on it are given below[15].

While earlier reviews offer insights into attainability of the MDG of poverty reduction, their perspectives and/or methodologies are not appealing. The study by Demery and Walton (1999), for example, relies on a somewhat rigid classification of policy stance into "good" and "bad" and neglects the role of agriculture; the UN (2003) study, on the other hand, relies on historical averages or trends in poverty reduction and their extrapolation. A more detailed analysis is thus necessary that takes into account the centrality of agriculture in overall growth, roles of institutions and openness/globalization in growth, and the effects of growth, inequality and institutions on poverty[16,17]. Of particular interest are the

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[13] Among others, an insightful assessment that analyses the trade-offs between growth and inequality in achieving the MDGs is in Demery and Walton (1999).

[14] For details, see UN (2003).

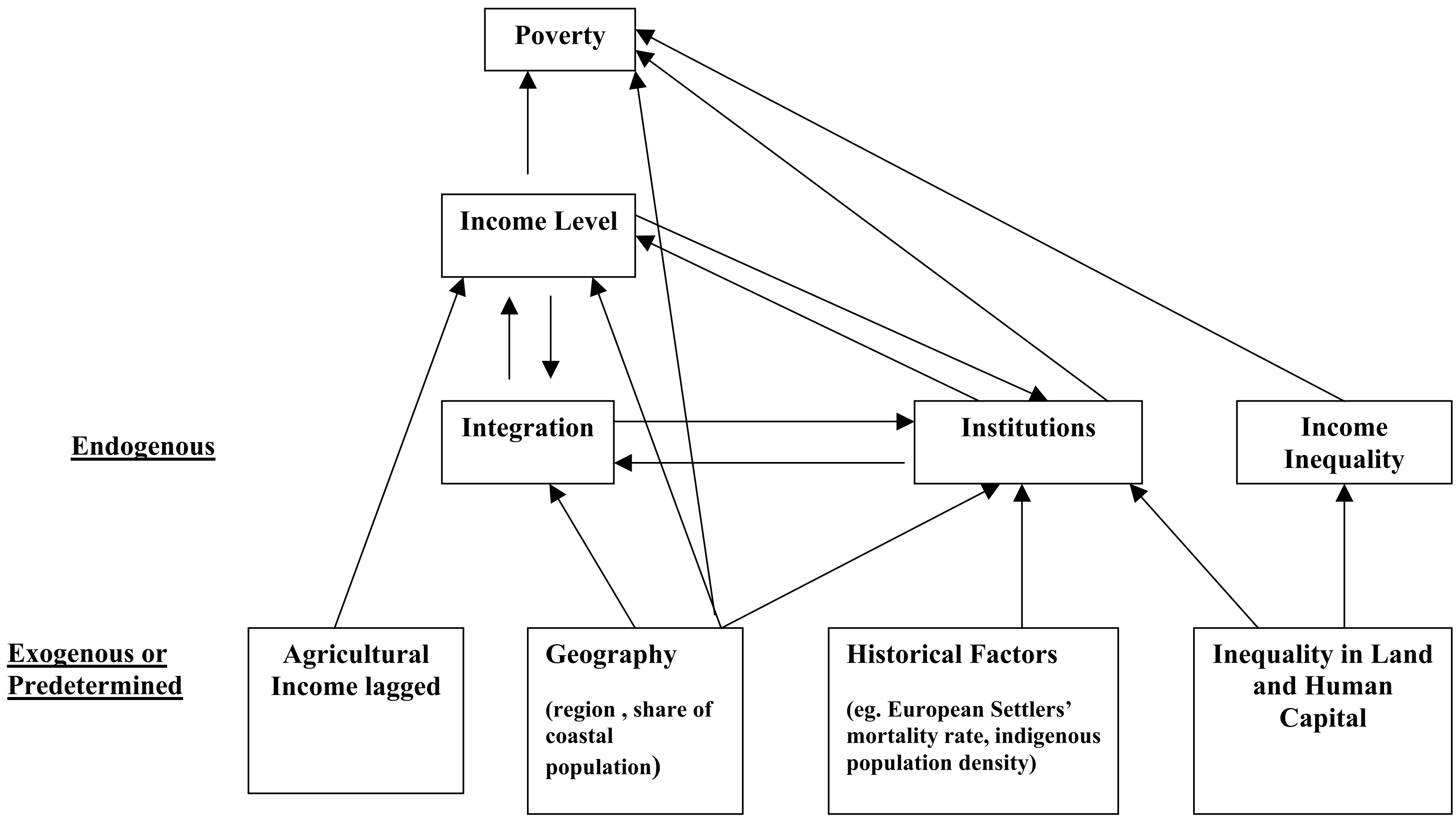
[15] For details, see Gaiha and Imai (2005).

[16] Following North (1981), institutions refer to a "set of rules, compliance procedures, and moral and ethical behavioural norms designed to constrain the behaviour of individuals in the interests of maximizing the wealth or utility of principals" (p.201-202). For a review of the role of institutions in rural poverty reduction along these lines, see IFAD (2004).

[17] In another recent assessment (Thirtle et al. (2003)), some of these concerns are addressed, with a focus on agricultural productivity. This is a rich and detailed analysis of the role of agriculture in mitigating poverty. But two limitations should not be overlooked. One is the absence of institutions as a key link between endowments and income. And the second is the lack of careful attention to the specification of a few relationships (e.g. the Gini coefficient of income distribution does not take into account inequality in physical and human capital). For an attempt to address these limitations in an appropriately specified econometric model, see Gaiha and Imai (2005).

interactions between growth and institutions (e.g. do institutions cause growth or vice versa), and whether globalization shapes institutions through better economic performance or whether globalization is itself shaped by institutions. As there is a vast literature with conflicting evidence, it is necessary to address these concerns and then assess the impact of growth, inequality and institutions on poverty in an integrated

Fig: 1: Determinants of Poverty



Adapted from: Rodrik et al. (2002), Hoff (2003), and Bardhan (2005).

framework[18]. We have also aggregated these indices into an overall institutional quality measure. All scores lie between -2.5 and 2.5, with higher scores corresponding to better scores.[19]

As such an analysis has not been carried out in the context of the MDG of poverty reduction, a brief exposition of the framework that helped specify a model for the present analysis is given below.

A schematic description of the integrated framework is given in Fig.1. The state-of-knowledge about these links distilled from the recent literature is reviewed in Gaiha and Imai (2005). Guided by this knowledge, a model is specified and estimated by cross-country data.

This model comprises three sets of relationships. First, we identify and assess the determinants of income inequality (e.g. land inequality), institutions (e.g. historical and geographical factors), of openness (e.g. institutions, geographical factors)[20]. In the second stage, we focus on the determinants of per capita income (e.g. lagged agricultural income per capita, openness, geographical factors, institutions). Finally, we analyse the determinants of the head –count index of dollar poor (e.g. income, income inequality, institutions, and geographical factors).

This model is estimated using a database compiled from FAO, World Bank, United Nations and various recent research studies[21].

Five institutional quality indicators are used. These include: voice and accountability, political stability and absence of violence, control of corruption, rule of law, and an aggregate index of institutional quality. Their salient features are described in Table 1.

Simulations are carried out to deepen our understanding of policy choices in attaining the MDG of poverty reduction. These include enhancing agricultural productivity and overall growth, reduction of income inequality and institutional improvements.

(b.2) Results

The detailed simulations results are given in Tables 2-5.

- The poverty elasticity with respect to GDP per capita ranges from -0.69 to -0.92, depending on the institutional quality variant. Corresponding to these, the required growth rates range from 3.01 to 4.02, as compared with the actual growth rate of 0.86 in the complete sample over the period 1985-98. In East Asia, the actual growth rate exceeds that required under different institutional variants, while in

[18] For a review, see Gaiha and Imai (2005).
[19] For details, see Kaufmann et al. (2003).
[20] Here we have drawn upon Acemoglu et al. (2001, 2002), Rigobon and Rodrik (2004), Rodrik et al. (2002) and Bardhan (2005).
[21] For details of European settlers' mortality rates and the Ginis of land distribution, see Table A.1.

South Asia the actual is lower than the required in *all* cases. The need for growth acceleration in South Asia is thus greater.

- The elasticities of the head-count ratio to agricultural income per capita, through its contribution to GDP per capita, makes a substantial contribution to poverty reduction. The required rates of agricultural growth are, however, markedly higher than the actual for the entire sample as well as for both East Asia and South Asia. This is not surprising given the low rates of agricultural growth (0.80 per cent per annum in South Asia, as against a required rate of growth of over 4 per cent).
- The elasticities of the head count ratio with respect to the income Gini are much higher than the corresponding income elasticities. On two alternative historic growth rates of per capita GDP, 1.76 per cent (over the period 1960-90) and 0.86 per cent per annum (over 1985-98), the required reductions in the income Gini range over a large range, from -7 per cent to -30 per cent.
- We have carried out additional simulations at the country level. On the assumption of the historic rate of growth of income continuing over the period 1998-2015, and an unchanged Gini, 4 out of the 7 countries selected viz. China, Korea, Thailand and India will achieve the MDG of poverty reduction. With 10 and 20 per cent reductions in the latter, the head-count ratios will be lower in most cases. In fact, with a 20 per cent reduction in the income Gini, Bangladesh will achieve the MDG.[22]
- Since institutional improvements evolve over time in complex ways, extensive experiments were carried out. Two observations are made here. One is that institutional quality impacts poverty through income and not directly. Also, after allowing for the variation in the index of openness due to institutional quality and geographical factors, openness ceases to have any effect on income**.** Some elaboration may be helpful at this point. (i) Most surveys report mixed evidence on trade-growth and poverty relationships[23]. (ii) The few studies that take into account the dependence of openness on institutions and country size confirm a weak causal effect of openness on income (notably Rodrik and his collaborators) and primacy of institutions[24]. Our results, based on three different measures of openness are consistent with this vie[25]. This is of course subject to further validation-specifically, because no account is taken of long-term capital movements[26].
- What is interesting to note from the simulations is that even modest improvements in institutional quality are associated with significantly positive effects on income and consequently on poverty. For example, with the voice and accountability

[22] As Sri Lanka is an "outlier" with the head-count index considerably lower than that predicted by its income, a cautious interpretation of country-specific results is necessary. For details, see Gaiha and Imai (2005).

[23] See, for example, Winter et al. (2004), and Bardhan (2005).

[24] In fact, a few studies report a negative effect of openness on income. For details, see Rodrik et al. (2002), and Rigobon and Rodrik (2004).

[25] These measures comprise an (instrumented) share of trade in GDP, Sachs-Warner and Frankel-Roemer indices. An important difference between our measure of openness and the Frankel-Roemer index is choice of instruments- in particular, use of several different institutional measures in instrumenting trade share in Gaiha and Imai (2005).

[26] For an elaboration of this point, see Bardhan (2005).

index assumed to take on the average value of this index among the top 30 performers, and the historic growth rate of agricultural income, the head-count index will have marked reductions in China, Bangladesh, India, Sri Lanka and Indonesia, relative to the base line (Vietnam is not considered as it is not included in the institutional data base). Both South Asia and East Asia record substantially lower head-count values in 2015, relative to the base line.

- While historical and geographical factors have shaped institutional evolution, an alternative formulation points to the importance of human capital in influencing institutional quality which in turn has a positive impact on income. Earlier work has emphasized the impact of education on agricultural productivity but the causal links need further investigation but the causal links need further investigation. More specifically, it is necessary to examine whether education impacts on productivity directly and/ or indirectly. If the evidence in Gaiha and Imai (2005) is anything to go by, the indirect link via institutions cannot be ruled out.[27]

An issue of considerable importance is whether the institutional quality measures used here are appropriate. Glaeser et al. (2004) are highly skeptical on the ground that they represent " ex post outcomes, highly correlated with economic development, rather than political constraints per se" (p.10). Some aberrations are cited (e.g. Singapore) to illustrate lack of a multi-party system but secure property rights. Using other indicators of constraints on executive authority (e.g. proportional representation, judicial independence, constitutional review), they argue that institutions do not matter in growth. In another important contribution, Bardhan (2005) points to an excessive preoccupation with institutions that safeguard secure property rights and neglect of those that prevent coordination failures. In particular, he emphasizes the important role of the state both as a catalyst and a coordinator in financial markets (e.g. the role of the state in East Asian development through subtle but decisive interventions in the capital market in promoting and channeling industrial investment, underwriting risks and guaranteeing loans and establishing public development banks). In his somewhat narrowly focused econometric analysis, the rule of law and weak political rights instrumented by measures of state antiquity designed to capture institutional residues of a long history of state structure and bureaucratic culture, even after the colonial interregnum, and ethno-linguistic fragmentation, are significant determinants of income. Both are persuasive but incomplete critiques. While Glaeser et al. (2004) assert the unimportance of institutions in growth on the basis of a few selected indicators, Bardhan's (2005) analysis does not go beyond identifying a few additional sources of exogenous variation in institutional quality. In any case, the primacy of institutions needs to be interpreted with care for the following reasons. One is the fuzziness of institutional quality that comes in the way of precise measurement. So all institutional measures (and not just the ones used in the present analysis) are likely to be problematic. A second reason is that, even if there is a uni-directional causal link i.e. from a set of

[27] At the same time, reverse causality cannot be ruled out. In particular, Glaeser et al. (2004) argue that human capital has a direct effect on income and a secondary effect on institutions. The latter in turn could feed back into higher income. Rigobon and Rodrik (2004), however, point out that the effect of income on institutions is relatively weak. Besides, opening up of the economy may unleash forces that challenge the authority of landlords, corrupt politicians and bureaucrats, and the currently subsidized rich and pave the way for greater transparency and accountability in public policies (Bardhan, 2005). But empirical evidence supporting this view is limited and patchy.

exogenous factors (historical, geographical, human capital) to institutional quality and from the latter to income, institutional quality is merely a link in this causal chain. This raises the concern about mechanisms that would trigger improvements in institutional quality. And in case the causality runs both ways (i.e. institutions and income influence each other or both are simultaneously determined) identification of trigger mechanisms becomes harder[28]. So, while we provide evidence on the importance of institutions in poverty reduction through higher incomes, the primacy of institutions rests on a link in a complex chain of causation.

6. Towards A Strategy of Pro-Poor Growth and Institution Building

What the preceding analysis points to is the important role of agricultural growth in the overall growth process and in reducing poverty. Agriculture is a major source of employment and foreign exchange earnings, and its linkages with other sectors generate further employment and income in the rest of the economy. Although its share of GDP has fallen over time (e.g. in South Asia- from 32.9 per cent in the 1980s to 27.68 per cent in the 1990s), it continues to account for a sizable share of employment (the share of agricultural employment declined from 62.57 per cent in the 1980s to 60.34 per cent in the 1990s)[29] However, as economies grow, non-farm activities will assume greater importance. From the perspective of equitable growth, the overall policy environment must induce greater participation in the development process of those usually left out of it, comprising the rural poor, women and other disadvantaged groups. Conditions must be created to enable them to have greater control over their own lives, improve their access to assets, markets and financial services, and participate in decision-making on issues that affect their well-being. Much of course depends on the institutional framework (i.e. the social, economic and political organizations, and the rules that govern their functioning) and the feasibility of improving its quality. Finally, vulnerability to natural and man made shocks of rural populations- especially located in mountainous and remote areas- is a major challenge that must be addressed as part of a broader effort to mitigate human insecurity. A distillation of recent experience is given below.

(a) Macro Policy Framework

A credible and sound macro policy regime is an important prerequisite of growth. From this perspective, a serious concern is the rapid growth of public debt in the second half of the 1990s in emerging Asian economies (including China, India, Indonesia, Korea, Malaysia, and the Philippines), from about 40 per cent of aggregate GDP in 1996 to about 65 per cent now.[30] Although some have reduced substantially foreign-currency debt, the domestic public debt has grown. This is linked to recapitalization of banks following the Asian crisis, and efforts to stimulate domestic demand instead of relying heavily on

[28] For a coherent critique of recent work on institutions along these lines, see Przeworski (2004).
[29] Computed from World Development Indicators and FAOSTAT. For details, see Gaiha and Imai (2005).
[30] This draws upon a speech delivered by D. Burton, Director of the Asia and Pacific Department, IMF, at the Reserve Bank of India, New Delhi (October 21, 2004).

volatile export markets. The borrowing has lifted growth but at a cost in the long-run. High debt levels keep borrowing costs high, discouraging private investment and limiting the flexibility of fiscal policy[31]. The latter is a particularly serious concern in India, as it reduces the social and infrastructure spending to sustain growth and eliminate poverty. What is, however, reassuring is that fiscal reforms can be implemented in a period of strong growth to lower fiscal vulnerability[32]. Tax reforms can both raise revenues and improve incentives to save, invest and work. On the other hand, judicious cuts in unproductive expenditure can release resources for public and private investment in a credible and stable macro policy regime.

A second important concern is *sequencing* of policy reforms. While generalizations are risky, a few tentative remarks can be made on the basis of recent evidence.[33]

- As new income earning opportunities are unleashed, it is imperative that the terms of trade do not move against the rural sector, and the poor are in a position to seize such opportunities. Indigenous populations living in remote and inaccessible areas are bypassed in terms of infrastructural support and awareness. Women are often excluded, as victims of discriminatory social and economic practices. There is thus a need for policies that facilitate effective linkages of the rural economy and different segments of the poor with markets.
- Price reforms should take precedence over removal of marketing regulations, and measures to promote a competitive sector must be initiated before dismantling the public sector.
- Gains from external trade liberalization are limited in the absence of prior domestic trade liberalization, and institutional support. Indeed, if the evidence in Gaiha and Imai (2005) is anything to go by, institutional quality improvements have greater priority.
- Different reforms must be packaged in such a way that the big losers are compensated in some ways. A social safety net, for example, may facilitate political support for reforms.
- In the transition period, it is imperative to have a consistent and stable policy environment in the sense of maintaining continuity of reforms, however slow.

(b) Sectoral Policy Concerns

Agriculture is a major source of employment and foreign exchange earnings, and its linkages with other sectors generate further employment and income in the rest of the economy. Despite a steady fall in its share of GDP, agriculture continues to be a major source of livelihood for a vast majority of the rural population.

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[31] Public debt, including borrowings by state governments, is 81 per cent of gross domestic product.

[32] Financial systems across Asia are sounder than in 1997, and there is greater transparency. A risk, howeve, is that a jump in inflation due to oil prices would raise interest rates, and reduce liquidity in bond markets.

[33] For details, see Bardhan (2002).

(b.1) Agricultural Productivity

Increases in agricultural productivity are important for reducing poverty. Specifically, research-led technological change has had an important role in transforming famine-plagued and food insecure Asian countries into food self-sufficient ones. Under certain conditions, agricultural productivity growth benefits both poor farmers and landless labourers by increasing both production and employment. It benefits the rural and urban poor through growth in the rural and urban non-farm economy. It may also reduce their vulnerability to shocks, through asset accumulation.

- A recent estimate shows that the number of dollar poor will reduce by 1.34 million in East Asia and 2.51 million in South Asia following a 1 per cent increase in yields. Yields vary with R&D, fertilizer and land quality index in the Asian sample.[34] Various technologies and techniques have recorded impressive achievements in a number of rural development initiatives (e.g. biological control of crop pests in Asia). These successes, however, are conditional on significant policy and institutional reforms that ensure equitable access to land, markets, and credit, education, extension, and infrastructure in rain-fed farming areas.
- Of particular interest are some findings related to less- favoured areas. An analysis with Indian data shows that there is hardly any trade-off between production and poverty reduction. Corroborative evidence from China shows that returns to agricultural research and development in the poorest (Western) region are 15 per cent above the country average. Besides, 140 people are brought out of poverty per 100 000 *yuan* of extra research investment, as against 30 nationally.
- A cautious approach is necessary with respect to biotechnology. More public sector research into transgenic food staples is needed to ensure that biotechnology reduces poverty. The potential of existing and indigenous technologies could be better exploited through easier access to water, extension and other support services[35].
- Forest dwellers, pastoralists and indigenous peoples living in marginal areas contribute greatly to the sustainable management of natural resources. Their knowledge of their environment helps preserve abundant and clear water supplies, biodiversity and carbon storage. Blending traditional knowledge systems with new and emerging technologies may boost productivity as well as enhance ecological sustainability [36]

[34] For details, see Thirtle et al. (2003), and Table A.2.
[35] For a comprehensive and balanced review of evidence, see FAO (2004).
[36] For a more detailed exposition, see IFAD (2001, 2002), and Rahman and Westley (2001).

(b.2) Reduction of Inequality

As emphasized earlier, the impact of growth on poverty depends on (initial) inequality in the distribution of endowments (both human and physical) and on the distribution of income generated by growth. If the inequality in endowments does not coexist with capital market imperfections, the resulting income distribution may be less unequal and more pro-poor[37]. In the absence of data on asset distribution over time, the focus is usually on whether income inequality has increased or decreased during a period of growth. There is agreement on an increase in income inequality in recent years, during which there was a marked shift towards globalization in the sense of openness to foreign trade and investment[38]. However, there is a sharp divergence of views on whether globalization had a major role in it[39].

A case for land redistribution rests on the presumption that small farms are often more productive than large farms because of their differential advantage in labour cost and the superiority of soil quality. If access to production inputs and to information and marketing networks can be improved, land redistribution may enhance productivity. Security of tenure, if properly implemented, provides incentives for long-term investments in land. However, in the absence of adequate enforcement of tenurial security, and effective ceilings on farm size, restrictions on tenancy can lead to the evictions of tenants (IFAD, 2002).

Even though political prospects for redistributive land reforms are not bright, additional considerations that favour them are: they may help to change the local political structure by giving more 'voice' to the poor; and encourage them to get more involved in local self-governing institutions and in common management of local public goods (Bardhan, 1996).

A recent study based on the Indian experience from 1955-1988 confirms a strong link between poverty reduction and two forms of land reform- tenancy reform and abolition of intermediaries. Also, land reforms benefit the landless by raising agricultural wages.[40] From a broader perspective, another study draws attention to the significant role of land reforms in reducing poverty in Kerala- an Indian state. An issue then is: what is special about Kerala. It is not growth, as Kerala's growth has been quite slow. Instead, what facilitated agrarian reforms were an informed, participatory and assertive electorate; and a competitive environment for political parties (Herring, 2002).

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[37] Srinivasan (2000) argues cogently that wealth inequality combined with capital market imperfections may be bad for growth too.

[38] Milanovic (2002) reports a sharp rise in world inequality over the period 1988-93 using both the Gini coefficient and ratio measures (i.e. richest decile/median, and poorest decile/median). Analysis of 1998 data suggests a slight drop in inequality in 1993-98, leaving a large rise over 1988-93. Another study (Dikhanov and Ward, 2003), using the WIDER data set, and a longer time period (1970-99) reports that the Gini increased from 0.668 to 0.683. For a similar finding in Asian economies, see UN (2003).

[39] For a review of the evidence, see Gaiha (2003) and Wade (2004).

[40] For details, see Besley and Burgess (2003).

IFAD's experiences in India and China further corroborate the importance of security of tenure- of ownership or user rights (IFAD, 2002). The IFAD-supported Orissa Tribal Development Project in India gave titles to land to tribal groups. Land occupied by tribals became transferable to women in the form of inheritable land titles in perpetuity. Such land titling led to major improvements in natural resource management. Comparisons between project areas where land titling had been granted and adjacent open access areas revealed marked differences in land quality.

Another priority is redistribution of ceiling surplus land to the landless. The objective is not so much the viability of small plots of land as of enabling the landless to participate in the growth process. As forced redistribution of land that occurred in China, Korea and Taiwan is unlikely in other Asian countries, market-assisted land transfers are proposed[41]. But these transfers are conditional upon clear and enforceable property rights to land, and easy access of the poor to credit. A major risk, however, is that such transfers may benefit the rural middle class more than the landless.

Box 1
Land Rights for Women

Effective and independent land rights for women are important on four broad counts: welfare, efficiency, equality and empowerment. And there are three major ways by which women can gain land: inheritance, state transfers, and the market.

Inheritance is the most important source, since in most countries (e.g. 86 per cent in India), arable land is privately owned. In South Asia (where inheritance laws vary both by region and religion), although women in most communities can legally inherit both from parents and husbands, their rights are not equal to men's, with Sri Lanka doing better than the rest of the region. Also, even to the extent women enjoy legal rights, there is a vast gap between law and practice. While macro-assessments are difficult, given a dearth of gender-disaggregated data on land ownership, small-scale surveys are indicative: in rural India, a 1991 study found that only 13 per cent of women whose fathers owned land inherited any as daughters, and only 51 per cent of those whose husbands owned land inherited as widows, due to underlying social and administrative obstacles.

Similarly, land transfers by governments, whether under land reform, irrigation, or poverty-alleviation schemes, are typically made to men. The recent practice of granting joint titles to both spouses is an improvement, but gives women little control over the land and its produce. Individual titles or titles to groups of women would be more effective.

Land via the market through lease or purchase is another option, but limited by women's lesser access to financial resources than men. There are, however, promising examples of groups of landless women using state-subsidized credit for leasing in or purchasing land in groups, and cultivating it jointly. There is a window of opportunity here for framing policies to enhance gender equality in land rights in the interests of both welfare and efficiency.

Source: Agarwal (2004)

[41] Market –assisted land reform relies on voluntary land transfers based on negotiation between buyers and sellers, where the government's role is limited to establishing the necessary framework and making available a land purchase grant or loan to eligible beneficiaries (Deininger, 1999).

Endowing women with land enhances their well-being as well as strengthens their ability to challenge social and political gender inequities[42].

(b.3) Non-Farm Activities

Non-farm sources of income are important for the poor because of the inadequacy of direct agricultural income in sustaining their livelihoods, given the small holdings and the

Box 2

Non Farm Activities and Rural Development in Bangladesh

Rural non-farm activities (RNF) have played an important role in boosting incomes and employment in rural areas in Bangladesh. A review of evidence over the period 1987 and 2000 offers useful insights·

In 2000, 52 per cent of the earning members of the households reported RNF activities as their primary occupation and another 10 per cent as secondary occupation. The corresponding estimates for 1987 were 34 and 15 per cent, respectively.

In 2000, a third of rural employment was generated in business enterprises and service sector activities. There was an increase of over 60 per cent in the proportion engaged in these activities over the period 1987-2000. The service sector activities are relatively full time activities while a substantial proportion of workers take up business activities as a part time occupation.

Largest expansion has taken place in rickshaws/cart pulling, and self-employed repair and maintenance (the proportion of rural workers employed in these services grew from 2.7 per cent to 8.3 per cent during 1987-2000). This was largely due to expansion of rural roads, shallow tubewells, power pumps and power tillers.

Trade and business enterprises accounted for 22 per cent of the rural non-farm employment and nearly 43 per cent of the income generated from the rural non-farm sector in 2000. Income from these activities grew at the highest rate.

The agricultural input and crop-output related enterprises comprised nearly one third of the total business enterprises, but accounted for only one sixth of the capital of these enterprises. This implies the small scale nature of the former, with an average capital employed of $900. Most of the capital was financed by personal savings. In fact, mobilization of agricultural surplus financed these enterprises.

The average productivity in non-farm activities rose from $1.43 per day in 1987 to $2.28 in 2000- an increase of 3.6 per cent per year. The productivity growth for the landless was lower (2.2 per cent per year) and highest for the landowning group (4.6 per cent per year).

Non-farm incomes contributed substantially to the growth of rural incomes over the period 1987 to 2000. However, rural income distribution became more unequal (the income Gini rose from 0.4 in 1987 to 0.45 in 2000), as rural non-agricultural incomes are more unequally distributed than agricultural incomes.

So, while poverty reduction was largely a result of a more broad-based growth in Bangladesh during the 1990s, the increase in income inequality moderated the poverty reduction

Source: Hussain (2004)

[42] For a persuasive argument on the lines summarized below, see Agarwal (1994).

seasonality of agricultural income and wages. Not only are non-farm activities a lucrative source of supplementary income and employment to the poor and, in particular, an independent income source to women, but they also benefit agriculture through strong inter-sectoral linkages. Indeed, as most rural non-farm activities involve little capital and more employment per unit of capital, they are well suited to the requirements of many poor households. And the latter derive a significant –albeit variable- proportion of their income from non-farm sources (e.g. 32 per cent in Bangladesh and 56 per cent in the Philippines). The share of non-farm employment in rural employment is also high among the poor, varying from 30 to 50 per cent.

Evidence from villages in northern Thailand (i.e. in Tambon Thung Sadok) unravels the risks and opportunities of globalization in rural areas[43]. The intersection of global processes with local realities offers useful insights. By embracing a diverse portfolio of activities, farm and non-farm, farmers have been able to secure higher incomes and living standards. In fact, households deeply involved in the global economy were able to cope better with the economic crisis.

Some features of the restructuring and integration of activities into a global network are noteworthy. One is that such activities are typically a small but growing component of the wide array of activities that households in this *tambon* typically pursue. The second is that the vertical integration of these activities-especially in fruit production- is mediated by local (and often quite small) business interests. In fact, there is a four-way relationship in which farmers, small business interests, agro-industry and the state are cast in roles that are negotiated and contested over time.

(b.4) Microfinance

Despite the expansion of banking services in rural areas, the majority of rural poor have failed to benefit from them. Following the success of the Grameen Bank in Bangladesh and other similar experiences, microfinance institutions (MFIs) tend to rely more on peer group monitoring and joint liability to overcome the screening, monitoring and enforcement problems frequently encountered by formal lending institutions. These programmes provide small loans to poor borrowers, mostly women organized into small groups, combined with accessible deposit facilities and much greater attention to risk management.

Although microfinance programmes have proliferated in recent years, their coverage remains limited. In 12 countries of Asia and the Pacific Region, for example, about 5.1 million households were covered, of which 4.5 million households were in Bangladesh. Assuming perfect targeting, this represents barely 2.5 per cent of the total poor households (IFAD, 2002)[44].

[43] For details, see Rigg and Nattapoolwat (2001).
[44] Note that these estimates exclude the beneficiaries of microcredit in India (We owe this clarification to Shyam Khadka).

Microfinance enables the poor to protect, diversify, and increase their sources of income, and to mitigate poverty and hunger. Small loans allow them to take advantage of a business opportunity, to cover a cash-flow gap. Savings accumulated through small amounts may help acquire additional assets, pay for health care, or send more children to school. Loans, savings and insurance may help stabilize incomes/consumption during contingencies (such as illness, accidents), seasonal slumps, or events such as floods or a death in the family. Several studies corroborate these benefits[45].

- In Indonesia, borrowers increased their incomes by 12.9 per cent, while members of the control group recorded a 3 per cent increase in their incomes. Another study of Bank Rakyat Indonesia's borrowers on Lombok island found that the average incomes of clients had risen by 112 per cent and that 90 per cent of these households had moved out of poverty.
- A study of SHARE clients in India reports significant improvements in the well-being of three fourths of clients who participated in the programme for longer periods and that half got out of poverty. The employment pattern of clients shifted from irregular, low-paid daily labour to diversified sources of earnings, increased employment of family members and greater dependence on small business.
- A detailed World Bank study of three largest microfinance programmes in Bangladesh – Grameen Bank, BRAC, and RD-12- found that female clients increased household expenditure by 18 *takas* out of every 100 *takas* borrowed, and that 5 per cent of the clients graduated out of poverty every year. What is more significant is that they were able to sustain these gains over time. Important externalities included higher wage rates. Increases in self-employment and subsequent withdrawals from wage employment resulted in a 21 per cent increase in wages in programme villages.
- An IFAD assessment confirmed that voluntary savings by self-help groups promoted by its microfinance programmes in Indonesia allowed them to maintain their consumption levels during the recent financial crisis.
- Appropriate programme design can lead to empowerment of women, resulting in women owning more assets, having a more active role in family decisions, and a broadening of sphere of activities. The Women's Empowerment Programme in Nepal, for example, found that 68 per cent of its members were responsible for decisions on property transactions, sending their daughters to school, negotiating their children's marriages, and planning the their family. TSPI in the Philippines reported that programme participation increased the percentage of women who were principal household fund managers, from 33 per cent to 51 per cent (relative to 31 per cent in the control group).
- Some concerns about unsatisfactory targeting, however, cannot be set aside.[46] In Bangladesh, for example, only 26 per cent of hard-core poor households and 45 per cent of absolute poor households belonged to a credit NGO. Lack of access to land and a homestead is a major factor in the exclusion of the poorest, as also stringent

[45] These findings draw upon Littlefield et al. (2003), IFAD (2002) and Gaiha (2001, 2002).

[46] The assessment in Littlefield et al. (2003) glosses over targeting failures and is overoptimistic about sustainability of credit to the poorest without appropriate changes in the design and implementation of microfinance programmes (e.g. greater flexibility in repayment schedules).

financial requirements imposed by MFIs (e.g. strict saving and repayment schedules, penalties delays)[47]. A related concern is sustainability of local institutions created by microfinance programmes for channeling loans and other financial products to target groups in highly stratified and unequal communities, following completion of programme/project funding.

- There is growing realization of the weak links between rural enterprises and markets hampering quick diversification of rural livelihoods. An important point is that credit or financial services alone have limited income enhancing potential. This is illustrated by the Rural Microenterprise Finance Project in the Philippines, launched in 1997. It was effective in creating employment opportunities and enhancing the incomes of the poorest, but failed to realize its full potential as there was no provision for non-financial services and market linkages. The newly formulated Rural Microenterprise Promotion Programme is designed to overcome this weakness (through entrepreneurship development, trade fairs, market information services, and microenterprise associations) (IFAD, 2004).

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Box 3
Empowerment of Women

As women are a particularly deprived subset of the Mewat population- in terms of literacy, property rights and autonomy-a major thrust of the MADP was to empower them, through modest but sustained economic betterment. Self-help groups (SHGs) were promoted to inculcate thrift, facilitate access to credit, promote self-employment and, above all, to overcome social and other barriers to participation in the community sphere. NGOs were assigned a key role in SHG formation and growth. A total of 492 SHGs were formed between 1998-2000, with a membership of 6703 women and savings of approximately Rs 3.43 million. Of this total, 331 SHGs had disbursed loans amounting to Rs 4.2 million.

While there is evidence of male domination in the use of loans and income disposal, there is also some evidence supporting the view that women were not mere conduits for obtaining loans. For example, repayment of loans was seen as a family obligation and, to the extent that the loans have allowed women to contribute to household income, some changes have occurred in the male-female equation *within* the household. More significant, however, is the transformation of women's role in the community sphere where SHG members have become more assertive about larger social concerns (e.g. prohibition). In short, there are unmistakable signs of improvement, despite social resistance.

Source: Gaiha (2001)

[47] A recent comparative analysis of microfinance in India and China emphasizes the enduring popularity of informal finance in these countries *despite* expansion of microfinance (Tsai, 2004). Apart from the failure of microfinance to meet the demand for grassroots credit, it is argued that formal and informal channels of credit are imperfect substitutes, as they serve segmented groups. Formal sector credit is in fact more expensive for the poorer segments. So reduction of transaction costs for the poorest is a major priority.

(c) Institutional Quality

Institutions are a fuzzy concept as they can be defined in terms of functions they perform (e.g. developing markets, regulating them, and legitimizing them) as well as hierarchically –meta institutions such as democracy and meso institutions such as the central bank. For the present purpose, examples of institutional quality at macro, sectoral and local levels are cited.

An important lesson of the East Asian crisis is that domestic institutions of conflict management can mitigate the severity of economic hardships as a result of an external shock.[48] It is arguable that Republic of Korea and Thailand were better able to make requisite policy adjustments than Indonesia, largely because of their democratic institutions, and practices of consultation and cooperation among social partners. Specifically, the following features facilitated a smoother adjustment: (i) transfer of power from a set of discredited politicians to a new set of leaders; (ii) democracy required participation, consultation, and bargaining and thus a more consensus-based policy adjustment; (iii) the institutionalized mechanisms of "voice" reduced the risk of riots, protests and other forms of disruptive action.[49]

A rigid view of institutional reforms- including the standard menu of secure property rights, independent judiciary, effective corporate governance- may, however, be too demanding in some contexts. A review of economic transformation in China suggests that transitional reforms work well. These reforms achieved two objectives simultaneously-they helped improve efficiency and were compatible with the interests of those in power. Examples cited are of town and village enterprises (TVEs), dual track liberalization in agriculture (fixed plan prices and flexible market prices) and fiscal federalism[50]. For example, under the dual track approach, over the period 1977-88, the state procurement of grains remained fixed, while total grain produced rose substantially because of the incentive of selling higher output at market prices. From the early 1990s, the planned track was phased out, and it reduced to 16 per cent of agricultural output. When the planned track was abolished, the potential losers were compensated. On the other hand, economic incentives had a major role in the dramatic expansion of TVEs. There was intense competition among the TVEs run by different local governments; the competition had teeth in the form of a hard budget constraint imposed on them, so that a failing TVE could not expect to be bailed out by the provincial or national government; and when the TVE generated a surplus, the local authority was allowed to keep most of it. But local government ownership was successful only during a phase of complementary changes elsewhere. TVEs were increasingly privatized in the late 1990s- following declining growth and profit rates, and greater legitimacy of the private sector. This suggests that

[48] For a cogently argued view, see Rodrik (1999).

[49] Bardhan (2005) makes a related point that, when wealth distribution is relatively egalitarian, as in large parts of East Asia (through land reforms, and widespread expansion of education and health services), consensus- building in favour of growth promoting and stabilization policies is easier. Hoff (2003), on the other hand, emphasizes that political and economic inequality shape institutional evolution in ways that constrain growth.

[50] For elaboration of these examples, see Qian (2003).

institutional innovations must adapt to a changing economic environment[51, 52]. The important lesson is that transitional institutions do not necessarily block further reforms and may in fact pave the way for more extensive and durable reforms**.**

That maintaining of reform momentum, and political and institutional continuity make a significant difference to growth and poverty reduction is illustrated by Vietnam's experience. The rapid growth during the 1990s was the result of a significant shift in economic policies- from those that reinforced a poverty trap (exchange rate overvaluation, hyperinflation, lack of incentives in the rural sector, severe limitations on the private sector)- to a different set that could support a higher level of economic activity. The policy experience is broken up into 5 periods in Table 6:

The devastation of the war and the rigidity of the regime had weakened the economy, and a severe economic crisis followed efforts at immediate socialism. Policies were relaxed in a piecemeal manner, but without any clear shift in policy direction. Nevertheless, even this modest relaxation of controls allowed some growth. However, this growth petered out, and in 1986, the Sixth Congress, while remaining committed to socialism, announced a new direction that allowed for a multisectoral approach (with a mix of public and private sectors). Implementation of these reforms was weak, and only an agricultural crisis in 1989 precipitated drastic reforms. This package of reforms, referred to as *Doi Moi*, was enormously successful, creating rapid growth until the effects of the East Asian crisis began to show in 1997[53]. These reforms were designed to sustain a much higher level of output *within* the same political and institutional regimes. Who the government is and what it intends to do or can do were generally not in dispute (Pritchett, 2003).

Box 4
Capture of Village *Panchayats* in India

A survey in Uttar Pradesh (an Indian state) on the implementation of the JRY and IRDP- two major anti-poverty programmes- by village *Panchayats* (an elected village council) confirms large-scale resource diversion, producing only minimal benefits to the poor. With a local power structure dominated by the upper castes (especially *Brahmins* and *Thakurs*) and the poor lacking awareness and organization, rent-seeking behavior was unchecked. Regardless of whether the *Panchayat* chairperson belonged to the upper or lower castes, there was little variation in the method and pattern of domination by locally powerful groups. Pessimism and a fear of violence discouraged any organized protest or resistance. Large segments of the rural population ironically continue to be at the mercy of a few powerful groups despite a drastic overhaul of the *Panchayats*. In this context, of particular significance is the initiative of an NGO, *Mazdoor Kisan Shakti Sangathan* (MKSS), in improving the accountability of local governments through sustained agitation for right-to-information in Rajasthan (an Indian state). While overcoming resistance will not be easy, the present UPA government reaffirmed its commitment to extend this right to the remaining states.

Source: Gaiha, Kaushik and Kulkarni (1998).

[51] The privatization accelerated after the constitutional amendment in 1998, which recognized the private sector as an important sector of the Chinese economy. So private ownership gained legitimacy. In addition, lack of managerial incentives became a major concern as the economy became more market-oriented. For elaboration of transitional institutional innovations, see Qian (2003).

[52] For a recent review of TVEs, see IFAD (2004).

[53] The growth process had a strong pro-poor bias as the proportionate increase in the incomes of the poorest 20 per cent were appreciably larger than those of the top 20 or 40 per cent (Balisacan et al. (2003)).

Examples of local institutions focus on incentives, accountability, and capture. While designing incentives for groups of officials and elected representatives is far from straightforward, some key elements may be identified. All too often the concern to make local governments and bodies accountable to higher authorities is exaggerated and unmatched by a corresponding concern for accountability to the local community. As a result, the capture of local governments by a few influential persons in a context of acute inequality of endowments is commonplace, with the poor often being the victims[54].

The importance of agency design and incentives is illustrated in a striking way by comparing the Indian and the Korean irrigation systems.

Box 5
Agency Design and Incentives: A Comparison of Indian and Korean Irrigation Systems

In India, the canal patroller is a full-time employee and is not allowed to farm more than a small amount of land. He is usually not posted in his native village. He is recruited by the Irrigation Department, which also pays his salary. He is not supposed to remain in one location for more than six years. The irrigation system is also subject to myriad checks and balances that are designed to check corruption but have the unintended effect of hampering its efficient functioning. Financial control and expenditure are rigidly separated. If, for example, a canal develops a breach, neither the foreman nor the assistant engineer may undertake repairs without the permission of the executive engineer. Under such an arrangement, it suits the assistant engineer to wait until the breach deteriorates and there is time to obtain a formal approval of funds for repairs. Standing apart from the end-users and restricted in responding better to villagers' needs, canal patrollers are confined to routine tasks. Their bureaucratic superiors meanwhile are more concerned with political pressures, since the risk of unwelcome transfers is a real one. Arbitrary or manipulative decisions imposed from above tend to favour farms belonging to large landowners and/or specific villages.

By contrast, the Korean system is managed by local associations with close links to the state as well as the communities. The president of an association is appointed by the Agriculture Ministry. Staff salaries and operational budgets of these associations are partly funded by the water charges collected by these associations. The professional staff is locally recruited, and the patrollers must themselves be end-users. A Korean patroller thus has stronger incentives to perform well—his own interest in obtaining water for irrigation, avoiding sanctions from his own community and preservation of his job. Not subject to transfers, he and his colleagues develop strong working relationships and exert peer pressure on one another.

Source: Wade (1997).

Analysis of cooperative behaviour in allocation of water amongst group members, investments in routine maintenance and in expansion of the productive capacity of wells in two villages in Andhra Pradesh (a south Indian state) yields useful insights.[55]

There are certain activities in which mechanisms of informal cooperation work well and others where they do not, even when the group size is small and members are family

[54] A case study of decentralization in central Kalimantan, Indonesia, revealed some features not very different from those sketched below: elite domination, lack of transparency at the village and district levels, and villagers sometimes resorting to 'community justice' initiatives to fulfil their livelihood needs (McCarthy, 2004).

[55] For details, see Agarwal (2000).

related. Since allocation of water and routine maintenance of group owned wells are of a repeated nature, require low contribution, entail low risks and close monitoring, these activities function best when left to the local people to manage themselves. But activities that require larger commitments and entail higher risks, such as investing in new wells, the probability of collective action is low. Farmers preferred to invest individually despite the benefits from pooling capital and risk sharing. Apart from a few exceptions, group investment in new wells has been widespread in areas where there was external agency involvement (e.g. government)[56].

Strengthening of social capital in terms of norms of equity, productivity and participation, and creating space for new roles to take root at the grassroots has a high payoff. Outsiders do not create social capital. They can introduce roles in communities that are then reinforced by rules, precedents and procedures which facilitate mutually beneficial collective action. This is illustrated by the Gal Oya scheme in south-eastern Sri Lanka, a system of farmer organizations established in the early 1980s, which greatly improved the efficiency and extension of irrigated rice production.

Box 6
Strengthening of Social Capital

Before the project, water stealing by siphoning or diversion was rampant in Gal Oya. Unless head enders were willing to change their behaviour by accommodating the interests and needs of tail enders, conflicts in water sharing and non-cooperation in cleaning, maintaining, and operating channels and physical control structures were unavoidable-especially because the Sinhalese settlers were in the upper reaches of the Left Bank, and the Tamils in the lower reaches.

In this project, the organizational roles and rules were created by the farmers themselves, assisted by project staff and institutional organizers. Shared value orientation encouraged the head end farmers to cooperate in ensuring that tail enders could grow a crop. This was all the more remarkable because of the ethnic divide between the head end and tail end farmers (Sinhalese and Tamils, respectively). The usefulness of the Gal Oya farmer organizations as social capital was demonstrated during the 1997 dry season. Limited volume of water was distributed so sparingly yet effectively that a better than normal crop was obtained.

Source: Uphoff and Wijayratna (2000)

Finally, frequency of civil wars, ethnic conflicts and organized criminality in countries with low human and economic development, and in borderlands and other regions typified by weak state presence adds to the powerlessness of the poorest. Some of the coping strategies that they are forced to adopt are sketched below.

[56] For a detailed review of the Gal Oya project, see Uphoff and Wijayratna (2000). On the broader issue of the role of agency in mobilizing social capital with illustrative evidence from villages in Rajasthan, see Krishna (2001).

Box 7
Coping Strategies in War-Affected North East of Sri Lanka

Some insights emerge from a comparison of livelihood strategies in four villages in the war-affected, multi-ethnic Trincomalee district in Sri Lanka. Two propositions are illustrated: first, livelihood strategies are deeply *contextual* and depend on the local geography of war; and, second, war can both be a threat and a *limited* opportunity.

Within the households, responsibilities and gender roles change and women are often forced to take a more active role in economic affairs- especially in Tamil communities. In Ithikulam, for example, many households use women and the elderly to bring agricultural produce to markets, passing through army checkpoints.

Instances of poor households undertaking risky livelihood activities are reported. In Vattam, fishermen sail into restricted areas, and, in Ithikulam, destitute families send children to the nearby jungle to collect firewood, to be sold.

A lucrative option for some Sinhalese men is home guard employment with a regular salary that exceeds their earnings from agriculture.

The risky environment and limited livelihood options also influence how households manage their investment and expenditure. In Kumurupitty, for example, households are extremely reluctant to invest in tangible assets or cultivation.

Source: Korf (2004)

While there are no easy answers, more careful attention must be given to conflict prevention through a more *inclusive* process of rural development. As argued earlier in this report, a major priority is to reallocate resources to build social infrastructure (e.g. roads, schools, health clinics), expand livelihood options in some of the most backward regions and strengthen local institutions of conflict management and norms of equity and participation. In a wide-ranging set of proposals, Bardhan (2005) draws attention to the potential of constitutional guarantees against fears of victimhood and subjugation, separation of powers among the executive, the legislature, and the judiciary, electoral reforms to give incentives to the formation of multiethnic coalitions and interethnic accommodation (e.g. a preferential system of voting as opposed to the first-past-the post rule in single member constituencies), devolution of power in a federal structure, preferential job policies, protection of tribal and indigenous people against encroachments on their traditional rights to land, forests, and mineral resources, a large scale programme of vocational training and public works for the unemployed youth, and cheap cost housing and other amenities in containing period eruptions of ethnic conflicts and violence. If the evidence presented in this report is anything to go by, even modest reforms along these lines may help mitigate the severity of deprivation in a large segment of the rural population in this region.

7. Issues for Discussion

Based on the above analysis, some of the policy concerns and issues deserve careful examination.

- As the development discourse has changed significantly and commitment to MDGs has grown, it may be worthwhile to review IFAD's strategic concerns. With rapid globalization of developing countries- especially in Asia and the Pacific Region- the primacy of institutions in a pro-poor strategy of growth must not be overlooked. A related concern is whether this shift calls for changes in IFAD's portfolio, with a sharper focus on institutional quality. Finally, greater clarity in linking/adapting locally appropriate poverty indicators to the dollar-a-day criterion for impact assessment has considerable operational value in the context of performance- based assistance.
- As new income earning opportunities are unleashed in a more globalised environment, it is imperative that the terms of trade do not move against agriculture and that the poor are in a position to seize such opportunities. There is thus a need for policies that facilitate effective linkages of the rural economy and different segments of the poor with the market. Articulation of policy options, focused on infrastructural support (e.g. roads, transportation), agricultural research, extension, deregulation, is a major priority.
- Sequencing of policy reforms (e.g. price reforms, deregulation, privatization) is another major concern. Specifically, how a more competitive environment for farm and non-farm activities can be initiated without severe hardships to disadvantaged groups (e.g. women, tribals, smallholders, labourers) – phasing out of subsidies on fertilizer, electricity, water, and easier access to markets and price information- calls for a careful scrutiny. A specific issue here is whether political resistance to such reforms can be overcome through social safety nets to mitigate the severity of hardships in the transitional phase.
- Although available evidence favours a larger share of public expenditure in less favoured areas with large concentrations of poor, cost-effectiveness of investments in roads, markets, electrification and irrigation and their production and poverty impacts are not well understood. This is a major policy concern, given the diversity of such areas in terms of population density, livelihood options and vulnerability to natural and other shocks.
- An issue in the context of diversification of rural economies through non-farm activities is whether conditions can be created for the most disadvantaged groups to benefit more from their expansion (through, for example, acquisition of new skills, easier access to credit and marketing networks, group ownership of assets).
- In the context of local institutional quality, modest goals may suffice. However, it is imperative to understand better the constraints arising from elite domination. Careful attention must therefore be given to strengthening voice and accountability mechanisms (through, for example, easier access to official records, strengthening of producer groups, and women's associations, expansion of livelihood options) and shared norms of fairness and reciprocity. Also, given the pervasiveness of coordination failures, how partnerships could be forged between public and private agencies is equally important (between, say, governments and markets, on the one hand, and between NGOs and markets, on the other).
- Given the frequency of ethnic conflicts and the devastation resulting from them and natural disasters, a better understanding of the feasibility of constitutional and other safeguards, devolution of power, preferential job policies, large scale vocational

training and rural public works, and speedy relief efforts that mobilize local communities is imperative.

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Table 1
Definitions and Sources of Institutional Data

Variable	Definition
Voice and accountability	Includes a number of indicators measuring various aspects of the political process, civil liberties and political rights. These indicators measure the extent to which citizens of a country are able to participate in the selection of governments. Also included here are indicators measuring the independence of the media, which serves an important role in monitoring those in authority and holding them accountable for their actions.
Political stability and absence of violence	Combines several indicators, which measure perceptions of the likelihood that the government in power will be destabilized or overthrown by unconstitutional and/or violent means. This index is designed to reflect the concern whether the quality of governance is compromised by the likelihood of wrenching changes in government, implying drastic policy changes and undermining of the ability of all citizens to peacefully select and replace those in power.
Control of corruption	Measures perceptions of corruption, defined as the exercise of public power for private gain. Different sources measure it differently, ranging from the frequency of ‘ additional payments to get things done’ to the effects of corruption on the business environment, to measuring ‘grand corruption’ in the political arena or in the tendency of elites to engage in state capture.
Rule of law	Includes several indicators, which measure the extent to which agents have confidence in and abide by the rules of society. These indicators are based on perceptions of the incidence of crime, effectiveness of the judiciary, and enforceability of contracts. Together, they reflect the success of a society in creating an environment in which fair and predictable rules form the basis for economic and social interactions, and the extent to which property rights are protected.

Source: Kaufmann et al. (2003).

Table 2 Elasticity of Poverty Head Count with respect to (1) GDP per capita, (2) Agricultural Income per capita, and (1) Income Gini and Required Rates of Growth Rates (/Reduction of Gini) in comparison with Actual Growth (Actual Income GINI)

Elasticity with respect to:		Elasticity of Poverty Head Count	Required Rate of Growth for Having Poverty by 2015	Actual Growth Rate		Disaggregation of Actual Growth: East Asia	South Asia	Middle east North africa	Sub Saharan Africa	Latin America
(1) GDP per capita	Besley-Burges Study	-0.76	3.60	1.70	(1960-90)					
	Based on Case C in Table 1-1	-0.92	**3.01**							
	Based on Case A in Table 1-3	-0.75	**3.70**							
	Based on Case B in Table 1-4	-0.86	**3.22**	0.86	(1985-98)	3.50	2.68	1.64	0.00	0.48
	Based on Case E in Table 1-5	-0.69	**4.02**							
	Based on Case B in Table 2-1	-0.81	**3.42**							
(2) Agricultural Income per capita	Based on Case C in Table 1-1	-0.51	5.48							
	Based on Case A in Table 1-3	-0.57	4.86							
	Based on Case B in Table 1-4	-0.62	4.48	0.36	(1985-98)	1.36	0.80	0.26	-0.01	0.46
	Based on Case E in Table 1-5	-0.35	7.88							
	Based on Case B in Table 2-1	-1.08	2.57							
		Elasticity of Poverty Head Count	Required Reduction of GINI for halving Poverty by 2015 with Actual Growth of; [0.86%]	[1.76%]		Gini Coefficient (Actual Figure in 1998): East Asia	South Asia	Middle east North africa	Sub Saharan Africa	Latin America
(3) Income GINI	Based on Case C in Table 1-1	1.47	-22.06	-11.37						
	Based on Case A in Table 1-3	0.91	-38.93	-24.06						
	Based on Case B in Table 1-4	3.59	-9.33	-5.15		38.80	34.74	35.87	46.47	49.44
	Based on Case E in Table 1-5	1.36	-26.85	-17.51						
	Based on Case B in Table 2-1	1	-34.36	-20.02						

Table 3 Simulation Results based on Different Assumptions of Institutional Development for Selected Countries and Area (%)

	Summary Statistics of Institutional Indicators								**Case C: Table 1-1 (for Voice & Accountability)**			
	Voice & Accountability		Aggregate Governance Index		Political Stability		Rule of Law		MDG Headcount	Baseline (historic growth)	:top 30 performers	:top 10 performers
	Value	Rank	Value	Rank	Value	Rank	Value	Rank		*Headcount*	*Headcount*	*Headcount*
China	-1.5	63	-0.4	42	0.3	16	-0.2	28	**17.0**	***6.1***	***1.1***	***0.5***
Korea	0.7	7	0.5	7	0.2	18	0.8	4	**1.0**	***0.2***	***0.3***	***0.1***
Bangladesh	-0.2	33	-0.4	43	-0.4	44	-0.7	52	**17.4**	21.2	***8.6***	***3.8***
India	0.3	19	0.0	21	-0.3	37	0.2	13	**23.3**	***14.7***	***10.3***	***4.5***
Sri Lanka	-0.3	39	-0.6	51	-1.8	60	-0.1	24	**1.9**	9.3	4.6	2.0
Indonesia	-1.3	59	-1.2	59	-1.5	58	-1.0	58	**10.3**	18.8	***0.6***	***0.3***
Thailand	0.1	22	0.2	11	0.3	15	0.4	11	**6.0**	***1.0***	***0.5***	***0.2***
South Asia (average)	-0.2	33	-0.4	41	-0.8	47	-0.3	34	**22.0**	24.9	***7.3***	***3.2***
East/ South East Asia (average)	-0.3	34	-0.1	25	0.2	19	0.0	26	**13.8**	***10.8***	***0.6***	***0.3***
Sub-Saharan Africa (average)	-0.4	39	-0.4	36	-0.3	33	-0.4	38	**23.8**	43.6	***12.3***	***9.2***
Middle East & North Africa (average)	-0.8	48	-0.4	32	-0.6	34	0.047	24	**1.2**	4.7	***0.4***	***0.2***
Latin America (average)	0.3	20	-0.1	27	-0.2	32	-0.2	31	**8.4**	11.4	***4.7***	***2.1***
Average	-0.18		-0.25		-0.24		-0.23		**15.3**	23.8	***6.8***	***4.4***
max	1.26		0.96		0.98		1.26					
min	-1.72		-1.40		-2.65		-1.30					
Average for Top 10 performers	0.86		0.56		0.71		0.76					
Average for Top 30 performers	0.44		0.15		0.36		0.25					
Number of Countries	64		63		63		64					

***1 Figures in bold italic shows the case where MDG is achieved.**

Table 3 Simulation Results based on Different Assumptions of Institutional Development for Selected Countries and Area (%) (Continued)

	Case A: Table 1-3 (for Aggregate Governance)				**Case B: Table 1-4 (for Political Stability)**			**Case E: Table 1-5 (for Rule of Law)**		
	MDG Headcount	Baseline (historic growth)	:top 30 performers	:top 10 performers	Baseline (historic growth)	:top 30 performers	:top 10 performers	Baseline (historic growth)	:top 30 performers	:top 10 performers
		Headcount	*Headcount*	*Headcount*	*Headcount*	*Headcount*	*Headcount*	*Headcount*	*Headcount*	*Headcount*
China	**17.0**	***10.2***	***7.8***	***6.5***	***8.5***	***8.4***	***7.4***	***3.8***	***2.8***	***1.4***
Korea	**1.0**	2.6	3.0	2.5	***0.4***	***0.4***	***0.3***	***0.3***	1.3	***0.6***
Bangladesh	**17.4**	19.8	***15.1***	***12.6***	6.1	***4.7***	***4.1***	27.1	***11.3***	***5.6***
India	**23.3**	***16.8***	***15.6***	***12.9***	***16.6***	***13.2***	***11.7***	***13.7***	***12.4***	***6.1***
Sri Lanka	**1.9**	10.0	15.7	13.1	14.8	7.3	*6.5*	10	9.9	4.9
Indonesia	**10.3**	11.7	***6.3***	***5.2***	*1.6*	*0.9*	*0.8*	6.5	2	1
Thailand	**6.0**	6.6	6.7	***5.5***	10.8	*10.7*	9.5	1.7	2.2	1.1
South Asia (average)	**22.0**	***20.4***	***15.8***	***13.1***	***12.5***	***8.8***	***7.8***	***20.4***	***11.1***	***5.5***
East/ South East Asia (average)	**13.8**	***8.4***	***7.3***	***6.0***	19.3	19.3	17.2	***5.7***	***2.3***	***1.1***
Sub-Saharan Africa (average)	**23.8**	41.2	32.4	28.1	50.4	48.4	47.9	40.7	***14.1***	***7***
Middle East & North Africa (average)	**1.2**	3.4	2.6	2.2	2.4	1.9	1.7	2.8	1.7	***0.8***
Latin America (average)	**8.4**	14.5	9.7	***8.0***	30.3	22.3	20.7	14.9	***5.8***	***2.9***
Average	**15.3**	23.2	17.7	***15.1***	32.4	28.8	27.7	22.1	***6.4***	***3.1***

***1 Figures in bold italic shows the case where MDG is achieved.**

Table 4 Simulation Results based on Different Assumptions of Income Distributions for Selected Countries and Area (%)

(Based on Case C in Table 1-1)

	MDG Headcount	**Income Gini in 1998**	**Baseline (historic growth) Headcount Without reduction of income Gini**	**With 10% Reduction of Income Gini**	**With 20% Reduction of Income Gini**
China	**17.0**	40.3	***6.1***	***5.2***	***4.4***
Korea	**1.0**	31.6	***0.2***	***0.2***	***0.1***
Bangladesh	**17.4**	33.6	21.2	18.2	***15.3***
India	**23.3**	37.8	***14.7***	***12.8***	***11.0***
SriLanka	**1.9**	34.4	9.3	8.0	6.7
Indonesia	**10.3**	31.7	18.8	16.4	14.1
Thailand	**6.0**	41.4	***1.0***	***0.9***	***0.7***
South Asia	**22.0**	38.8	24.9	***21.7***	***18.6***
East/ South East Asia	**13.8**	34.2	***10.8***	***9.4***	***8.1***
Sub-S Africa	**23.8**	35.9	40.3	37.5	34.8
Middle East & North Africa	**1.2**	46.5	4.7	4.1	3.5
Latin America	**8.4**	49.4	11.4	9.9	8.5
Total	**15.3**	44.5	22.0	20.0	18.1

***1 Figures in bold italic shows the case where MDG is achieved.**

Table 5Simulation Results based on Different Assumptions of Income Distributions for Selected Countries and Area (%)

(Based on Case C in Table 1-1)

	MDG Headcount	**Income Gini in 1998**	**Baseline (historic growth) Headcount Without reduction of income Gini**	**With 10% Reduction of Income Gini**	**With 20% Reduction of Income Gini**
China	**17.0**	40.3	***6.1***	***5.2***	***4.4***
Korea	**1.0**	31.6	***0.2***	***0.2***	***0.1***
Bangladesh	**17.4**	33.6	21.2	18.2	***15.3***
India	**23.3**	37.8	***14.7***	***12.8***	***11.0***
SriLanka	**1.9**	34.4	9.3	8.0	6.7
Indonesia	**10.3**	31.7	18.8	16.4	14.1
Thailand	**6.0**	41.4	***1.0***	***0.9***	***0.7***
South Asia	**22.0**	38.8	24.9	***21.7***	***18.6***
East/ South East Asia	**13.8**	34.2	***10.8***	***9.4***	***8.1***
Sub-S Africa	**23.8**	35.9	40.3	37.5	34.8
Middle East & North Africa	**1.2**	46.5	4.7	4.1	3.5
Latin America	**8.4**	49.4	11.4	9.9	8.5
Total	**15.3**	44.5	22.0	20.0	18.1

***1 Figures in bold italic shows the case where MDG is achieved.**

A.1 List of Countries used in the Estimation and the availability of the data of European Settler's Mortality Rate and of land distribution

Country Name	Country Code	Area	Data of European Settler's Mortality Rate (*= data exist)	Data on Gini of land distribution The data are available for the countries with figures
China	CHN	East Asia	.	.
Indonesia	IDN	East Asia	*	0.49
KoreaRep.	KOR	East Asia	.	0.33
LaoPDR	LAO	East Asia	.	.
Malaysia	MYS	East Asia	*	0.51
Mongolia	MNG	East Asia	.	.
Philippines	PHL	East Asia	.	0.48
Thailand	THA	East Asia	.	0.41
Albania	ALB	East Europe	.	.
Armenia	ARM	East Europe	.	.
Azerbaijan	AZE	East Europe	.	.
Belarus	BLR	East Europe	.	.
Bulgaria	BGR	East Europe	.	.
Croatia	HRV	East Europe	.	.
CzechRepublic	CZE	East Europe	.	.
Estonia	EST	East Europe	.	.
Georgia	GEO	East Europe	.	.
Hungary	HUN	East Europe	.	.
Kazakhstan	KAZ	East Europe	.	.
KyrgyzRepublic	KGZ	East Europe	.	.
Latvia	LVA	East Europe	.	.
Lithuania	LTU	East Europe	.	.
Moldova	MDA	East Europe	.	.
Poland	POL	East Europe	.	.
Romania	ROM	East Europe	.	.
RussianFederation	RUS	East Europe	.	.
SlovakRepublic	SVK	East Europe	.	.
Slovenia	SVN	East Europe	.	.
Turkey	TUR	East Europe	.	0.52
Turkmenistan	TKM	East Europe	.	.
Ukraine	UKR	East Europe	.	.
Uzbekistan	UZB	East Europe	.	.
Bolivia	BOL	Latin America	*	0.55
Brazil	BRA	Latin America	*	0.73
Chile	CHL	Latin America	*	0.64
Colombia	COL	Latin America	*	0.7
CostaRica	CRI	Latin America	*	0.67
DominicanRepublic	DOM	Latin America	*	0.7
Ecuador	ECU	Latin America	*	0.69
ElSalvador	SLV	Latin America	*	.
Guatemala	GTM	Latin America	*	.

Guyana	GUY	Latin America	*	0.6
Honduras	HND	Latin America	*	0.64
Jamaica	JAM	Latin America	*	0.68
Mexico	MEX	Latin America	*	0.58
Nicaragua	NIC	Latin America	*	.
Panama	PAN	Latin America	*	0.74
Paraguay	PRY	Latin America	*	0.77
Peru	PER	Latin America	*	0.61
StLucia	LCA	Latin America	.	.
TrinidadandTobago	TTO	Latin America	*	0.61
Uruguay	URY	Latin America	*	0.72
VenezuelaRB	VEN	Latin America	*	.
Algeria	DZA	Middle East & North Africa	*	.
EgyptArabRep.	EGY	Middle East & North Africa	*	0.35
Jordan	JOR	Middle East & North Africa	.	0.57
Morocco	MAR	Middle East & North Africa	*	0.47
Tunisia	TUN	Middle East & North Africa	*	0.58
YemenRep	YEM	Middle East & North Africa	.	.
Bangladesh	BGD	South Asia	*	0.5
India	IND	South Asia	*	0.55
Nepal	NPL	South Asia	.	0.59
Pakistan	PAK	South Asia	*	0.5
Lanka	LKA	South Asia	*	0.58
Botswana	BWA	Sub Saharan Africa	.	0.5
BurkinaFaso	BFA	Sub Saharan Africa	*	.
CentralAfricanRepublic	CAF	Sub Saharan Africa	*	.
CotedIvoire	CIV	Sub Saharan Africa	*	0.36
Ethiopia	ETH	Sub Saharan Africa	*	0.25
GambiaThe	GMB	Sub Saharan Africa	*	0.38
Ghana	GHA	Sub Saharan Africa	*	0.44
Kenya	KEN	Sub Saharan Africa	*	0.72
Lesotho	LSO	Sub Saharan Africa	.	0.47
Madagascar	MDG	Sub Saharan Africa	*	.
Mali	MLI	Sub Saharan Africa	*	.

Mauritania	MRT	Sub Saharan Africa	*	0.52
Mozambique	MOZ	Sub Saharan Africa	.	.
Namibia	NAM	Sub Saharan Africa	.	.
Niger	NER	Sub Saharan Africa	*	0.3
Nigeria	NGA	Sub Saharan Africa	*	0.37
Rwanda	RWA	Sub Saharan Africa	*	0.39
Senegal	SEN	Sub Saharan Africa	*	.
SierraLeone	SLE	Sub Saharan Africa	*	0.44
SouthAfrica	ZAF	Sub Saharan Africa	*	.
Tanzania	TZA	Sub Saharan Africa	*	.
Uganda	UGA	Sub Saharan Africa	*	0.59
Zambia	ZMB	Sub Saharan Africa	.	0.08
Zimbabwe	ZWE	Sub Saharan Africa	.	.

Table A.2

Yields, R&D and Returns (ROR) in Asian Countries

Country	R&D per ha (1995 $)	Value added per ha (1995 $)	% Δ Yield	ROR (%)
Bangladesh	3.03	719	2.41	8
China	0.88	220	5.17	29
India	1.01	455	3.63	38
Indonesia	2.07	660	3.84	29
Malaysia	14.90	1410	4.91	9
Nepal	0.88	384	3.15	31
Pakistan	1.00	447	5.06	44
Philippines	1.24	1440	2.69	50
Sri Lanka	4.68	1020	1.15	-1
Thailand	3.29	728	3.28	23

Source: Thirtle et al. (2003)