Poverty Eradication, Small Island States

Lessons from the Caribbean Experience

The paper demonstrates that long term poverty eradication requires adherence to a Golden Rule, funded primarily by internal financing though with significant partnering role for external financing

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Thesis on Poverty Reduction

The central point of this paper is that poverty eradication is successfully pursued through a mix of two distinguishable strategies:

1. Proactive public policy to redistribute income in favor of the poor and vulnerable.
2. Forward movement on the extended golden rule of resource development – the nexus of the following three variables: (i) innovation through development of domestic and imported capital per worker, (ii) resource development, and (iii) the marginal cost/profit ratio and relative price stabilization.

Investment guided by the Golden Rule of resource development is normally accompanied by change in the average level of income and change in the distribution of income. Where income distribution widens and poverty increases as a result, (1) would be required. Ultimately, a country must pay for poverty reduction, so (2) is the central component of the strategy. A carefully chosen mix of external and internal financing from national profits is necessary for success with (2) – consistent with the commitments for a shared international burden made under Goal 8 of the MDGs. Internal financing is conditioned by the initial size of the national capital stock, and this is perhaps where the small size trap might be found.

History as context – Slavery and strict indenture

The problems of poverty and the challenges of poverty reduction are rooted in certain persistent historical factors:

- Primary (land) resource dispossession, unresolved by modern market dynamics. This is a defining feature of Caribbean history.
- Its only counterpoint – the foundation of poverty reduction - was and still is the use of free will to mount feasible and profitable challenges that overturn the established order. Rational Caribbean economic behavior in that sense is not about maximizing subject to fixed resources, endowments, preferences and technologies. That is still true today. The founding technologies and institutions:
    - hostile to the majority, blocked access and seized the proceeds of participation on the initial foundations; rationality meant historically, and still means, rejecting existing resources, resource endowments, preferences and technologies.
    - established a need for the majority to innovate in order to break into the mainstream process of market-driven income growth - which makes the extended golden rule relevant.

The Golden Rule of Poverty Reduction says reduce poverty primarily by facilitating a dynamic resource development process that continues until the marginal product of innovation equals the going interest rate plus the ratio of the marginal cost of resource use to the rate of profit generated from use of the resource. This drive in this direction evolved as the core process unifying the evolution Caribbean markets to this day – and it explains much of the successes and failures of the islands in reducing poverty. Success or failure on this agenda also explains the capacity of the institutions of the Caribbean, especially government, to continually reinventing themselves appropriately bring poverty under control and keep it at bay.

Dynamics of Success/Failure

The historical record shows that domestic capital and basic resource innovation emerged as a mechanism for rejecting and changing the existing allocation of endowments. For example, locked out of land, the post-slave population exercised their free will, invented culture and other related material inputs, and switched from agriculture to service activity over a generation. Where the production functions of agriculture on land meant they would have inadequate capital or land to compete, they switched out completely and turned to service activity where the capital inputs were not as onerous and unfamiliar, because they invented much of those inputs themselves in the form of culture and many related forms of intellectual property. Where fixed preferences would have meant acceptance of Beethoven, and the rejection of themselves, their colour and their humanity, they challenged the sociology and changed hearts and minds by innovations that led those who first rejected to accept Reggae and the hairstyles of the Rastafarian. Bob Marley is the iconic figure; Island Records and Tuff Gong the epitome.

In Jamaica's Report on the MDGs for 2009, this was recognized vaguely, by crediting its successes in poverty reduction heavily to the rise of the 'informal sector'. But it is more appropriate to say that the successes are primarily a result of the operation of the *Golden Rule* of poverty reduction. A major benefit of innovation is that it enables an increase in the rate of use of the national resource base above that which is suggested by a discount rate alone. It is a powerful reason for the pursuit of innovation. When the discount rate is the interest rate, resource innovation becomes a powerful arbitrage opportunity that lowers the comparative attractiveness of destructive speculative financial market bubbles. So potential innovators do not simply bank their money; rather, they put it into innovative activity, to correlative interdependent activity, and to supportive activity. That is the record of the Jamaican copyright sector.

Poverty reduction follows because, alongside the transformation of the resource base is the transformation of the institutions of society, the preferences of households, and the export productivity of imports and labour. These in turn generate capacity to set prices and to transform the use of imports to serve and support innovation, breaking the historical norm of a specialist export sector that depends primarily on imported inputs and are vulnerable to exogenous input and price shocks. The innovations also generate niche markets and profits necessary to finance further innovation, all in a dynamic process. Exports grow, easing or removing the foreign exchange constraint. The evolving markets not only drive the transformation of tastes and preferences, of resources and resource use, but also the location of demand for the inputs alongside the social structure, and thereby fuel further intensification of competition. Towns grow relative rural areas, and rural areas are also transformed. *Externalities* (positive and negative) increase and the markets pick good innovations that solve old problems and create and solve new ones, destroy bad innovations, and stagnant firms along with that; and in the process generate the productivity, cost reductions, profits and debt capacity on which the successful who are thusly rewarded can change their social standing while renewing and upgrading their arsenal. The volume of saved profits and interests thereby grows, demanding even more investment and innovation to forestall a glut. On that basis, the innovators win the competition for access to the available labour and the available foreign exchange to continue the investment in innovation and technical change.

To meet that change in demand, alongside the change of jobs, more advanced and competency-oriented training of workers and more sophisticated and risky arrangements and instruments for the allocation of finance and credit would be required. Concomitantly, the role of the markets becomes more pervasive, and, as they expand, they dictate increasing allocations for their coordination and management if the cooperative institutions are to do their job in managing abuses, contentions and complaints. They also dictate increasing allocations aimed at ensuring that schools, universities, health care and other fundamental facets of the domestic capital institutions work increasingly well. So, they also transform the nature and role of government, including its democratic structure, not the least to prevent ruinous policies that would mishandle the increasingly complicated challenges of coordination and destroy the competitive dynamic and the drive to progress. This pressure to improved democratic arrangements is palpably visible all through the Caribbean today.

The Financing Trap of the Small State

The rate of progress on poverty reduction depends on whether financing of the redistributive aspects and of the drive under the Golden Rule is from internal or external sources.

1. Since countries must ultimately pay for poverty reduction, (2) is the central strategy. A careful mix of external and internal financing is necessary to success – consistent with the commitments for a share international burden made under Goal 8 of the MDGs.
    a. External financing – from ODA and FDI; or from external debt, whether private market or multilateral agencies.
    b. Internal financing is from profit – the national pool of operating surplus less interest commitments.
    c. Using a macroeconomic capital budgeting analysis with net present value criteria, it can be shown that, for any given initial condition, external financing has the distinct advantage over internal financing of enabling faster accumulation per worker if all revenues are retained with the economy. External financing also allows the economy to keep up with and adopt innovations in imported capital per worker.
        i. Usually, however, there is a significant drain of investment incomes for foreign direct investment and the interest on foreign borrowing. In that case, the larger scale of initial investment can be more than off-set by the factor incomes going abroad, leading to slower accumulation or even stagnation. In addition, external financing is not normally aligned to the sectors that innovate on domestic capital or resource development.
        ii. Further, it is subject to significant exogenous price shocks that raise the marginal cost of resource use relative to the profits generated.
    d. For these reasons, a distinct advantage normally goes to internal financing.
        i. Internal financing also has the distinct advantage that it is clearly aligned to the sectors that innovate in terms of rising domestic capital per worker and resource development.
        ii. The main potential disadvantage of internal financing is its likely small scale relative to the challenges of competition. Profits on initial capital may be small, making the transformation and poverty reduction rate steady but small relative to the scale of the problem. But here, there is no guarantee that external financing will be sufficiently large.

Case Studies

Let us look at two distinctive cases for which we have available time series – Jamaica and Belize.

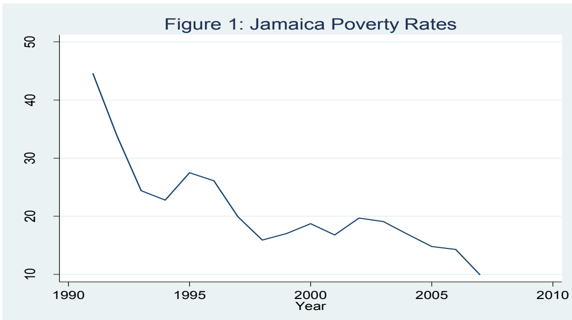
Jamaica

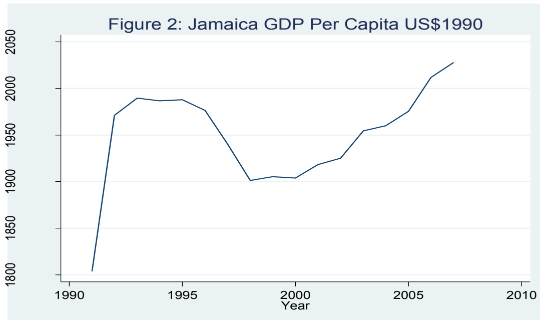
- Jamaica has achieved spectacular progress on innovation and resource development – from land to culture; from land to 'bauxite and 'minerals', all accompanied by the rise of the creative cum informal sector.
- Government has been very proactive on income redistribution and price stabilization.

The result has been dramatic progress on poverty reduction, despite slow growth and much stagnation overall as the traditional sectors have stagnated. Look at the collateral evidence:

- Figure 1 demonstrates that Jamaica achieved significant but irregular poverty reduction since 1990. The figure indicates that the poverty rate has a distinct global downward trend, from about 45% in 1991 to 10% in 2007.

- Figure 2 similarly displays the highly irregular but distinct, if weak, trend in the growth of GDP per capita.





So, under the MDGs, the official evaluation of relevant aspects of Jamaica's success was as follows:

1. **Eradicate Poverty & Hunger**
   - 1a. Halve, between 1990 & 2015, the proportion of people below the poverty line - **Achieved**
   - 1b. Halve, between 1990 & 2015, the proportion of people who suffer from hunger - **Achieved**

The proportion of food poor was reduced by two-thirds. The causal factors include reduction in inflation, growth of informal sector with explosion of creative sector and sports, increase in real wages and remittances.

2. **Achieve Universal Primary Education**
- 2a. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling – **Achieved**

Net enrolment was above 90% and gross enrolment almost 100%. The problem not access but quality of education and especially the under-performance of boys and significant attendance problems connected with poverty.

3. **Promote Gender Equality and Empower Women**
- 3a. Eliminate gender disparity in primary & secondary education, preferably by 2005, & to all levels of education no later than 2015 – **Lagging**

There is no gender disparity at primary level. Gender disparity begins at grade 6 in the primary completion rate and peaks at grade 9 of secondary levels as boys drop out. Males are under-represented at tertiary level by 2:1. Women are underrepresented in Parliament (13%) because of an underdeveloped democratic culture. Boys are underperforming in school, the unemployment rate among women is more than twice that of men.

What are the lessons and what has been the script of the last two years? Because of weak growth trends in the traditional specialist export sector and underinvestment in competency-based vocational education, government had to place heavy emphasis on redistributive measures by the state. The record shows that income distribution has generally been buoyant or improving. GINI fell from 0.4 in 1991 to 0.36 in 1996/7; and has been consistently managed on this principle; so when it increased to 0.381 in 2004 measures were taken to reduce it to 0.367 by 2008. However, as the Golden Rule dynamics weaken in the current period in the face of underinvestment in competency-based vocational education and skills to support the innovative sectors and underinvestment in development of democracy, the burden on redistribution is growing. But redistribution is also but becoming less and less affordable. Government budget deficits are stifling the social programs; Poverty now rising; this is the experience since 2007, during which period the poverty rate has been surging above 10%.

Belize

Belize has made no major progress on innovation and resource development – from land and timber; minor progress from land to oil. Its investment record features underinvestment in domestic capital and resource development, as manifested in slow progress on the major MDG of education improvement. Government has been inactive on income redistribution and price stabilization; and the record show a falling rate of national savings, rising dependence on external financing and an associated rapid increase of factor incomes going abroad, alongside an excessive debt burden and budget crisis. The result has been dramatic acceleration of poverty and an increase in inequality even if per capita incomes are rising. The record shows that from 2002- 2009, the poverty rate increased from 33% to 41%. Look at the collateral evidence as reported in the Belize MDG Report for 2010:

MDG1 - ERADICATE POVERTY AND HUNGER

- The poverty rate increased from 33% in 1995 to 41.3% in 2009 - not on track to achieve the target of 16.8% by 2015.
- The poverty gap increased from 11.1% in 2002 to 11.4% in 2009 - not on track to achieve the target of 5.5% by 2015.
- The indigence rate increased from 10.8% in 2002 to 15.8% in 2015 - not on track to achieve the target of 6.7% by 2015.

MDG2 - ACHIEVE UNIVERSAL PRIMARY EDUCATION

- The net enrolment rate fell from 90.3% in 1992 to 83.7% in 2009 - not on track to achieve the target of 100% by 2015.
- The proportion of students starting Grade 1 who reached the last grade of primary school increased from 87.2% in 2002 to 91.9% in 2009 - not on track to achieve the target of 100% by 2015.

MDG3 - PROMOTE GENDER EQUALITY AND EMPOWER WOMEN

- The ratio of girls to boys in primary school increased from 0.939 in 1995 to 1.01 in 2009, indicating that while the target for girls has been surpassed, there has been slippage with respect to boys. The ratio of girls to boys in secondary school increased from 1.105 in 1995 to 1.13 in 2009, also indicating that while the target for girls has been surpassed, there has been serious slippage with respect to boys. The ratio of girls to boys in tertiary school increased from 1.49 in 2002 to 1.73 in 2009, again indicating that while the target for girls has been surpassed, there are serious lags with respect to boys. Belize is not on track to achieve the target of parity by 2015.
- The share of women in non-agricultural wage employment increased from 38.7% in 1995 to 41.7% in 2007 - not on track to achieve the target of 50% by 2015.
- The percentage of women in the Lower House of the Belize fell from 3.45% of the seats in 1993 to zero in 2008 - not on track to achieve significant improvement by 2015.

- The literacy rate of 15-24 year-olds increased from 70.3% in 1992 to 94.7% in 2006, surpassing the literacy target of 90.6% for 2009 - on track to meet the target of 100% literacy among persons 15-24 years by 2015.

A Summary Model – A Little Algebra

Let k be capital per worker, x the resource pool per worker, y a measure living standards, for example $income\ per\ capita$, z_p the poverty line and H the headcount poverty rate. Also, let $G(x)$ be the rate of resource development, $c(x(k))$, the unit cost of resource use, g_{pop} be the rate of population growth, ODA, OF inflows of overseas development assistance and foreign exchange from foreign direct investment, and s the savings rate. Assume that there exists a well-defined probability density function f of income and a well-defined cumulative distribution function F such that the headcount poverty rate is given by:

1. $H_t = F_t(y, z_p)$

Caribbean history suggests that the model of poverty reduction is,

2. $\frac{dH}{dt} = (\hat{\varepsilon}\frac{H}{y})\frac{dy}{dt}$
3. $\frac{dy}{dt} = \left(\frac{1}{\frac{dx}{dy}}\right)\frac{dx}{dt} - g_{pop}$
4. $\frac{dx}{dt} = \phi\frac{dk}{dt}G'(x) - \varphi i + \frac{c'(x(k))G(x)}{p - c(x(k))}$ (This is the Golden Rule of Resource Development)
5. $\frac{dk}{dt} = sy + ODA + OF$

Postscript: Growth is good for the poor, but not any growth will do. The Caribbean experience shows that, apart from redistributive programs, what brings down poverty on a sustainable basis is growth via an extended *Golden Rule of resource development* through domestic capital development and expanded import capacity. Domestic capital innovation cuts costs and raises the rate of resource development, and empowers the economy and society in myriad ways, driving growth and poverty reduction.