

Opportunities and Challenges for the Inclusion of the 'Bottom Billion'

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1. Introduction

The period 2000-2008 was, in retrospect, a remarkable global boom during which developing countries converged rapidly on the OECD. Even the countries of the bottom billion took part in this growth, in contrast to the previous two decades during which they had stagnated. Approximating their performance by the official category of 'Least Developed Country' per capita income rose on average by an unprecedented 4 percent per year, and this was reflected in some of the fundamental indicators of wellbeing: infant mortality dropped by around 11 percent. Consistent with these improvements in outcomes, measures of governance also advanced: the average score on the widely-used International Country Risk Guide (ICRG) increased by nearly 4.5 points.

However, despite this absolute progress, the bottom billion continued to diverge from the rest of mankind. In other developing countries per capita income rose faster, by over 5 percent per year, so that the income differential between them and other developing countries widened. In absolute terms, per capita income in the bottom billion rose by just under \$100, whereas in other developing countries it rose by over \$600. In relative terms the differential widened from 5.1:1 to 5.4:1. Similarly, in other developing countries infant mortality dropped even more rapidly, by an astonishing 18 percent. Similarly, in terms of governance, on the ICRG measure while the bottom billion advanced absolutely, they did not succeed in closing the gap with other developing countries.

Indeed, since the Millennium the case for concentrating on international attention on the bottom billion has become stronger. China and India have demonstrated that their spectacular growth is robust. The Asian crisis which then beset some other major emerging market economies such as Indonesia proved to be temporary. Brazil finally began to achieve the promise it had long failed to harness. Meanwhile, the international community demonstrated repeatedly and embarrassingly that effective international cooperation on any objective is extremely difficult. We should learn from this to economize on the tasks that we place before it. Of course, there remain many poor people in India, China, Indonesia, Brazil and the other emerging market economies. Were we to be guided by the decomposition of the annual global poverty headcount international development effort would be widely (and hopelessly) dispersed.¹ Poverty needs to be seen in a dynamic context: the children of poor households in China have credible hope of a transformed life, whereas the children of similarly poor households in Chad do not. The case for international intervention also needs to be seen in the context of the scope for domestic strategies of poverty reduction. Middle-income societies have the option of reducing extreme absolute poverty through redistribution, and this choice is essentially a matter for each society itself to resolve. Low-income societies do not have this option: equitable redistribution would simply leave everyone poor, and so it is in these societies that international assistance is warranted, if only it can be effective.

This paper suggests an agenda for assisting the countries of the bottom billion. It focuses on new opportunities arising from recent changes in the world economy. The most important opportunity will be the surge in extraction of natural resources from their territories: the scale of the financial flows will be without historic precedent. However, this will pose huge challenges of economic governance. Section 2 suggests ways in which the international

¹ See Sumner, A.(2010)

community can help strengthen the governance of natural resource rents. A second opportunity is the consequence of the rapid rise of the middle-income developing economies as industrial powers. As skills and wages rise rapidly in these countries there may be 'room at the bottom' for some of the poorest countries to break in to global markets for labour-intensive manufactures such as garments. Section 3 suggests how OECD trade policies can facilitate this process. The crisis in the OECD has worsened prospects for conventional development assistance but opened prospects for more commercial forms of finance. Section 4 discusses how the bottom billion might access new forms of international finance.

2. The Challenge of Natural Resource Exploitation: International Support

The countries of the bottom billion have long been heavily dependent upon natural resource exports. This is both a problem and an opportunity. It is a problem because natural resource extraction does not directly employ many people and so has only limited direct transmission onto the incomes and wellbeing of ordinary citizens. Indeed, by appreciating the real exchange rate, resource extraction may foreclose opportunities for industrialization that would have stronger transmission mechanisms for poverty reduction. Further, revenues are volatile, making macroeconomic management difficult and increasing the need for social protection.

It is, however, increasingly an opportunity. High commodity prices increase the rents on resource extraction more than proportionately. In addition to this direct effect, high prices induce discovery. Until recently, there has been much less prospecting in the bottom billion than in the richer countries. As of the Millennium, beneath the typical square kilometre of the bottom billion only one quarter of the sub-soil assets had been found as in the typical square kilometre of the OECD (Collier, 2010). This is not because less is there, but because there has been less investment by resource extraction companies in search.

Primarily, the problems and opportunities call for distinctive domestic policies by the governments of the bottom billion. However, some actions of the international community can also be helpful.

International financing of geological information

The discovery of natural resources is often an expensive, technically difficult, and risky process. However, there are strong reasons for the government to commission the generation of good geological information which it then makes publicly available prior to selling the rights to prospecting. Without good prior public geological information two problems are likely: high private risks that heavily discount what prospectors are willing to pay; and 'asymmetric information' – the prospectors having much better information than the government as to what is likely to be found. For the government of a poor country spending on geological information is risky. A better approach is to finance it through multilateral aid. If a multilateral donor used aid for prospecting across many poor countries the likelihood of finding valuable resources would be very high. Donors have been reluctant to use aid for this purpose because it does not yield direct social benefits.

Guarding against corporate corruption

Governments are dependent upon individual officials and ministers to negotiate deals with resource extraction companies. Companies can gain immensely by bribing these individuals. This gives rise to an 'agency problem' for the societies of the bottom billion. While widely recognized, to date it has been addressed by a variety of *ad hoc* international initiatives. One such is the Extractive Industries Transparency Initiative, started in 2003 and now with over thirty signatories among the governments of resource-rich countries, indicating recognition of concern for the problem. It aims to counter corruption in contracts by requiring companies engaged in resource extraction to report all their payments, country-by-country, forcing illicit payments into the open. Another initiative has been the pan-OECD anti-bribery legislation which has made it a criminal offense for an OECD-based company to bribe government officials anywhere in the world in order to win a contract. One consequence of this OECD legislation has been the rapid emergence of a two-stage system of negotiations for the rights to resource extraction. In the first stage a company which is either too small to face scrutiny, or not OECD based, negotiates with government. In the second stage, this company on-sells the rights to a major OECD company that has the technology and finance to undertake

exploitation. A third and related international initiative has been to coordinate the laws relating to money laundering. A fourth initiative has been the Kimberley Process which has curtailed illegal international transactions in diamonds through certification of the source of origin. The Government of Nigeria has recently proposed that an equivalent system of certification be put into place to curtail the large-scale theft of crude oil from the Nigerian Delta. The latest initiative is the Lugar-Cardin Amendment, now enacted into US law, whereby all companies listed on the New York stock market engaged in resource extraction must report all payments made associated with contracts in considerable detail. Potentially, such legislation could so discourage the major companies from entering into prospecting contracts with the governments of the bottom billion that the only companies left as partners for governments would be cowboy operations.

Given the impediments to *ad hoc* international cooperative initiatives, this plethora of international responses is evidence of the need for a more systematic international approach. These initiatives could potentially be subsumed and made more effective by bringing corruption in resource extraction contracts under the clear remit of the WTO. For example, the anti-bribery legislation that the OECD now requires of its membership could be a requirement of WTO membership, as could compliance with the equivalent of the Lugar-Cardin amendment to the recent US financial reform act. The emergence of major resource extraction companies based outside the OECD has made the WTO the more appropriate institution for international cooperation on this matter. Countering corruption in international contracts faces an acute weakest link problem. While ever some companies are in jurisdictions where bribery is permitted these companies will tend to win the contracts. Knowing this, individual governments that are the homes of resource extraction companies will be reluctant to act in isolation.

In principle there is no reason why compliance by resource extraction companies with payments integrity could not be built into WTO rules of membership. After all, the only conduct which is being discouraged is recognized as criminal in virtually all jurisdictions. Hence, it is not a matter of adopting new standards, but simply of enforcing standards which are already incorporated into legal systems globally. One major advantage is that this would throw the burden of enforcement back onto the governments that were the homes of resource extraction companies, rather than on the countries in which they operate. A further advantage of using the WTO, is that it is an organization in which the bottom billion are represented, unlike the organizations which to date have been responsible for these initiatives, such as the OECD, and the US Congress

International Standards

Over the next decade the extraction of natural resources from LDCs is likely to expand both in value and in volume. It is a unique opportunity for LDCs, but the history of resource extraction is not encouraging: harnessing the opportunity requires a capacity to resist pressures of both corruption and populism. Neither the interests of the OECD countries, nor those of the emerging market economies, are the same as the interests of the LDCs. Nor are the available models of OECD 'best-practice' particularly appropriate for LDCs: they need norms and standards appropriate for their own circumstances. These are now provided by the *Extractive Industries Transparency Initiative* (EITI), and the *Natural Resource Charter*. The EITI is a multi-stakeholder international organization that focuses exclusively on the transparency of revenues. Currently around 30 governments are using it as a commitment technology. The *Natural Resource Charter* is an information guide on the decisions involved in harnessing natural resources for development. It sets out the entire decision chain involved in harnessing natural resources for development on a website (www.naturalresourcecharter.org) intended for governments, citizens and companies. Its 12 Precepts propose standards for resource extraction companies, the governments which are the home of such companies, and the governments of the countries in which resources are extracted.

3. The Challenge of Diversification: International Support

Trade preferences for LDCs continue to be part of the world trading system. Under the Generalised System of Preferences (GSP) LDCs have access to most OECD markets, and historical ties have been recognised in schemes such as the EU's Lome and Cotonou agreements. Recent years have seen several major extensions of preference schemes. The EU's Everything but Arms (EBA) scheme, initiated in 2001, gave duty free access to least developed countries (LDCs) in (almost) all products. The US introduced the African Growth and Opportunities Act (AGOA) in 2000, improving market access for eligible Sub-Saharan African (SSA) countries. The US also operates the Caribbean Basin Initiative and the Andean Trade Promotion Act.²

These schemes have two main elements. One is the trade preference – the granting of market access at reduced tariff rates and with less restrictive quotas, possibly going all the way to duty and quota free market access. The other is the constraints on participation. These define eligible countries and products, and also impose rules of origin (ROOs). There has frequently been a tension between these elements, with the constraints severely reducing the effectiveness of preferences as an instrument of economic development. These constraints are likely to be particularly important for manufactured products, and redesign of preferences is needed if they are to facilitate developing country participation in a globalised world trading system.

The benefits of trade preferences accrue through two mechanisms. The one usually emphasized is a transfer of rent to recipient (developing) countries. Instead of being received by the developed country importer as tariff revenue or quota rent, the preference margin is instead transferred to producers in exporting countries. The magnitude of the rent transfer has been calculated by various researchers. A recent study estimates an upper bound (preference margins times the value of trade) of only \$500m accruing to LDCs³. This is too small to be worth serious policy attention.

However, preferences can also generate benefits through a second mechanism: there may be a significant export supply response, creating employment in developing countries. This is the focus of the present paper. While the rent-transfer mechanism depends upon the existing quantity of exports, the supply response mechanism depends upon the potential of unrealized opportunities. For many poor countries this distinction between actual and potential exports approximates to that between agriculture and manufactures. For most, their current rents from trade preferences depend upon market access for their existing agricultural exports, whereas preferences in manufactures might enable them to break into markets that they have scarcely entered. Of course, rents for agricultural exports will also generate some quantity effect. However, the potential magnitude of the quantity effect is far greater in manufacturing exports.

One reason for the greater potential is liberation from diminishing returns to scale. Production of manufactures for the domestic market encounters diminishing returns due to the constraint of small market size. Traditional agricultural and resource-based exports encounter diminishing returns because of limited endowments of suitable land and hence declining resource base per worker. By contrast, employment in manufacturing exports can be expanded without running into diminishing returns to scale due to markets or endowments. The other reason for the greater potential is that manufacturing exports are subject to scale thresholds which can generate multiple stable equilibria. The scale thresholds arise because of well-documented external economies that advantage those firms that are located within a cluster of similar firms. Potentially viable export locations may be uncompetitive relative to established clusters and so never develop unless induced. Hence, not only may trade

² Both the EU and the US also have regional integration agreements extending preferences on a reciprocal basis, and the EU is moving towards replacing its Cotonou agreements with such Economic Partnership Agreements. Our focus is on unilateral rather than reciprocal preferences, although some of our policy messages will apply to both.

³ Hoekman, Martin and Primo Braga (2006) drawing on Low, Piermartini and Richter (2005). See also Olarreaga and Ozden (2005) for an application to preferences in the apparel sector.

preferences in manufactures generate a large supply response, they may switch a location to a new equilibrium and so have permanent effects even if only implemented temporarily.⁴

The importance of manufacturing and other modern sector exports to the wider process of economic growth is now supported by a good deal of evidence. The Asian experience is well documented, and a number of recent studies point to the role of exports in growth accelerations (Hausmann, Pritchett and Rodrik 2005). Jones and Olken (2006) identify growth accelerations, and show that these are associated with an average 13 percentage point increase in the share of trade in income (over a 5 year period) as well as an acceleration of the rate of transfer of labour into manufacturing. Pattillo et al (2005) point to the association between growth accelerations and trade growth in sub-Saharan Africa.

How can trade preferences be designed to maximise their effectiveness in stimulating a manufacturing supply response? Manufacturing supply response is not a simple matter of moving up a supply curve, but depends on a wide range of complementary inputs, some of which can be imported and some of which have to be developed domestically, often involving increasing returns to scale. Trade preferences can have a catalytic role, but will only perform this role if they are designed to allow import of complementary inputs, and to operate in countries with the skills and infrastructure to be near the threshold of global manufacturing competitiveness.

How modern manufacturing works

Modern sector production is not simply a matter of transforming primary factors into final output. It requires primary factors and many other complementary inputs, ranging from specialist skills and knowledge to component parts. These are frequently supplied by many different countries, with design, engineering, marketing and component production occurring in different places – a process known as fragmentation of production. Furthermore, productivity levels in these different activities are not exogenously fixed. They are shaped by learning and by complementarities with other activities.

Modern global manufacturing production is ‘fragmenting’ – a process known as unbundling or splitting the value chain (UNIDO, 2009). Different stages involved in producing a particular final good are now often performed in many different countries. Particular tasks may be outsourced (or off-shored) and can be undertaken in different places. This occurs in response to productivity or factor price differences, and may take place within a single multinational firm or through production networks of supplier firms. Fragmentation implies that comparative advantage now resides in quite narrowly defined tasks. For some products tasks may be undertaken in parallel and then assembled in a single place. For others a sequential production process still applies, under which each task adds value to a product that crosses borders at each stage. In this case the partially complete product is an essential input to the task to be performed at the next stage. The effect of tightly restrictive ROOs is to prohibit participation in production processes of this type. Tightly restrictive ROOs leave countries unable to use preferences to exploit a comparative advantage in a narrowly defined task; instead having to undertake a wide range of tasks domestically to meet ROO requirements, but this wide range of locally performed tasks, so of which are liable to be more costly than the world standard then makes the activity globally uncompetitive.

The fragmentation of global manufacturing is good news for the bottom billion because it enables them to break in one task at a time. However, the other major trend, clustering, is bad news. Clustering arises because increasing returns to scale are often external to the individual firm, meaning that firms in a particular location gain from the presence of other firms in related activities. One set of mechanisms creating these external returns to scale is technological externalities arising as firms learn from other firms, observing and borrowing best practise technique. The knowledge discovered need not be sophisticated technology – it might simply be discovery of the fact that it is possible to undertake a particular type of business profitably in a particular location. This has a demonstration effect which underlies

⁴ Computable general equilibrium studies of trade preferences include both rent and supply effects, but typically ignore the potential of scale thresholds. See for example Karingi et al (2007) for a recent example.

theories of social learning and which Hausmann and Rodrik (2003) have termed 'economic development as self-discovery'.

In addition to technological externalities there are a number of pecuniary externalities associated with provision of complementary inputs. As a cluster of firms grows so specialist input suppliers develop, markets for intermediate goods become thicker, transport and infrastructure support improves, and workers have a greater incentive to acquire skills.⁵ For example, consider a downstream industry that requires specialist inputs from upstream firms, or specialist skills from its workers. If there is only one firm in the downstream industry there will be no incentive for upstream suppliers or workers to invest in improving quality or acquiring skills, since they will be 'held-up' by the monopsony power of the downstream firm. Only once the downstream industry is large enough is there an incentive for its suppliers to upgrade and thereby raise the productivity of the combined operation. Research on cities suggests that, over a wide range of city sizes, each doubling of size raises productivity by 3-8%. The effects often operate over quite a small spatial range – within a city or travel-to-work area. The benefits may be shared among a number of sectors (as with improved transport or more regular shipping services) but are often quite sector or task specific.

An important consequence of spatially concentrated increasing returns is that comparative advantage is, in part, *acquired* rather than fundamental. A particular location may have no inherent advantage in a sector or task, but as a cluster starts to develop so costs fall, creating the comparative advantage.

Implications

Fragmentation and clustering imply that modern sector export growth is likely to be uneven. Activity may be concentrated in small spatial areas – cities will acquire particular specialisations. There will be threshold effects; establishing a new activity in the face of existing competition may be quite difficult, but once it gets established costs start to fall and growth can become extremely rapid.⁶ An extreme example of product and spatial concentration is the city of Qiaotou, producing 60% of the world's buttons. As for threshold effects, Bangladesh shipped its first consignment of garments to the US in 1978, had exports of \$600mn by 1990 and more than \$6bn by 2005, employing 2.5 million people.

What are the implications of these facts for those countries of the bottom billion wanting to break into manufacturing but having low levels of both hard and soft infrastructure? Successful participation in production networks and fragmented production processes requires a business environment that delivers security, contract enforcement, and protection from predation. It also requires a level of infrastructure that can support continuous production and reliable delivery. However, the fact of spatial concentration means that it is not necessary that high quality infrastructure be provided everywhere – it can be provided in selected areas or in special economic zones. This is positive for those countries that hope to break into manufacturing since it economises on these scarce inputs. Infrastructure (and institutions) can be targeted so that some areas work well, and this is more efficient than spreading infrastructure at a uniformly low level.

That modern global manufacturing enables countries to specialise on a narrow product or task range is also positive for new entrants. Instead of having to learn and acquire comparative advantage in all stages of a product's production, fragmentation makes it possible to progress incrementally, first learning narrow tasks – such as production of a particular type of garment using imported textiles and yarn. However, barriers to trade in intermediate goods are a critical obstacle to this. The barriers may arise because of domestic import restrictions, because of high trade costs due to geography and infrastructure, or because of rules of origin. They all have the effect of inhibiting participation in global production networks.

Coordination failures imply that getting started is hard: it is only once a threshold has been passed that increasing returns start to reduce costs. This calls for some sort of catalytic

⁵ See Duranton and Puga (2005) for a survey of the micro-economic mechanisms underlying clustering.

⁶ For further development of these ideas see Burgess and Venables (2004) and Puga and Venables (2006).

action to overcome initial obstacles and get to the threshold level. This in turn has implications for trade and industrial policy in general, and trade preferences in particular.

Past discussion of industrialization strategies for new entrants has generally focused upon the trade policies of their own governments. Changes in their trade policies would indeed be a necessary part of catalytic action, but not in the form most commonly envisaged. For a firm to succeed in exporting a new manufacturing 'task' it would need to be able to import without restriction all the complementary upstream tasks. Hence, the catalytic trade policy is to remove tariffs on manufactured inputs. For example, in West Africa, ECOWAS imposes a uniform 10% tariff on all such inputs. While 10% may appear modest, suppose that in the absence of trade impediments an Africa-based firm would choose to import inputs constituting half of the value of its output, so that the tariff raises its total costs by 5%. Now consider what this implies for what the firm can afford to pay as labour costs. Even in labour-intensive manufacturing, labour costs typically only constitute around 16% of total cost. Hence, to keep its total costs constant in the face of the tariff on inputs, the firm would need an offsetting reduction in its labour costs to 11%. Thus, to compete with firms based in a location that was identical other than that it did not impose tariffs on inputs the firm would need to pay wages that were around one third lower. Of course, Africa's problem arises precisely because its locations are *not* currently identical to those of Asia – they have higher costs due to the lack of clusters. Tariffs on inputs intensify the problem rather than resolve it.

Should an astute government adopt a tariff structure with zero tariffs on inputs but positive tariffs on final goods? There are several reasons why such a strategy would also fail. First, the country's niche in the long chain of manufacturing 'tasks' that eventually generate a final product is unlikely to be precisely the final 'task'. For any task prior to this the protection would be useless. And products which are 'final' to one industry are 'inputs' to another industry. As the above examples demonstrate, modern manufacturing niches are so specialized that the domestic market for them in the typical poor country is too small to be a significant inducement to relocation. How important is the prospect of a price premium in the Tanzanian market for buttons in determining whether firms selling on the global market should relocate their production from Qiaotou? Even in the unlikely event that such protection would be significant, the political difficulties for the Tanzanian government of imposing high tariffs on buttons alongside free trade in all the myriad inputs that button producers want to use would surely be overwhelming.

An alternative style of industrial policy would be to subsidize the costs of production rather than protect the domestic market. But such policies have a poor track record. As a claim on government expenditure it would have to compete with manifestly pressing social needs. Further, the most conventional form of subsidy, tax incentives for investment, subsidizes capital and this can be at the expense of employment. Untargeted production subsidies would be expensive because existing production for the domestic market would qualify, but targeting requires information that is typically not available to government, and a degree of discretion that risks eliding into corruption.⁷ Perhaps the most effective way of targeting a subsidy towards exporting firms is to provide good quality infrastructure for geographically-defined export zones, but since Asian governments already do this, it may be merely a necessary but not a sufficient condition for inducing relocation.

Unlike these forms of industrial policy, trade preferences in OECD markets are not under the control of the bottom billion; like aid, they are an instrument of development policies under the control of OECD governments. However, they have some major advantages over the policies that are available to the governments of poor countries to provide the (temporary) advantage needed to get cluster formation. First, they are relatively immune from recipient country political economy problems, since they are set by foreign, not domestic government. Thus, there is no way in which their level can be escalated in support of failing firms. Second, since trade preferences support exports, they offer a performance-based incentive – firms benefit only if they export. Firms therefore face the discipline – on quality as well as on price – imposed by international competition. Rodrik (2004) argues that this discipline was an important positive factor underlying the success of export oriented strategies, as compared to import substitution. Finally, they are fiscally costless to the governments of the bottom billion

⁷ See Rodrik (2004) for discussion of these issues.

and virtually costless to OECD governments and so compete with neither government spending on social needs nor aid.

Is there any evidence that trade preferences have had a positive effect on modern sector production? Before answering this question we need to be clear about what effects we expect. Preferences will be valuable if countries are able to participate in fragmentation and production networks. This is facilitated by liberal ROOs and by geographical proximity, as well as by standard determinants of comparative advantage. Even if these circumstances are met, their effects might be concentrated in a few sectors, regions, or countries, and only set in above some threshold.

Mauritius is the only African country to have decisively penetrated global markets in manufacturing, in the process transforming itself from an impoverished sugar island to Africa's highest income economy. Famously, this performance defied the forecast of Nobel Laureate James Meade that the country was condemned to poverty. Subramanian and Roy (2003) investigate the reasons for the take-off. They find that export manufacturing success was the foremost proximate reason for economic success. In turn, the success in manufacturing was triggered by two coincident strategies. The Mauritian government granted duty-free inputs for manufactured exports and Subramanian and Roy find this to have been quantitatively important. However, they find that the OECD decision to grant Mauritius trade preferences in garments through the multi-fibre agreement (MFA) was even more important. Crucially, the MFA gave Mauritius privileged access to OECD markets relative to established Asian producers. The MFA ended in 2004 but Mauritius is now well-established in OECD markets and has gradually shifted to more complex manufacturing 'tasks'. The temporary preference scheme was thus critical in permanently transforming the Mauritian economy.

The African Growth and Opportunities Act (AGOA) which gives trade preferences to African countries in the US market offers duty free access for a wide range of products. AGOA is not restricted to LDCs, and is currently available to 38 African countries, including Kenya, Nigeria and South Africa⁸. AGOA ROOs are strict (varying across products, but generally with inputs having to come from the US or other AGOA countries). However, they were relaxed for apparel under the 'special rule' clause. This allows eligible countries to use fabric imported from third countries in their apparel exports to the US so that the ROO is just a 'single transformation requirement' (i.e., that the transformation from fabric to garment is undertaken in the eligible country). This special rule is temporary and has been renewed under a series of waivers. The special rule now applies to 25 African countries (including Kenya and Nigeria, but not South Africa). Study of the effects of AGOA is particularly informative, as it can be compared with the EU's trade preferences under the Cotonou agreement and EBA. These are in many respects similar, but (a) have more restrictive ROOs for apparel, and (b) a somewhat different country coverage, only LDCs being eligible. Collier and Venables (2007) show that AGOA has been highly successful in expanding African apparel exports to the USA, whereas EBA has failed to do the same for African exports to the EU. They attribute this predominantly to the more liberal ROOs for apparel provided by the 'special rule' of AGOA than are available under EBA. In other words, trade preferences, even if temporary, can be effective in helping new entrants to break into global manufacturing. However, they need to be combined with generous ROOs and limited to countries that have not already broken into global markets.

For the bottom billion to diversify their exports into manufacturing may require a catalyst to create clusters of activity and lift them to threshold productivity levels. Forty years of African domestic protectionism has failed to induce such clusters. However, the evidence suggests that – given the right conditions – it is possible for African countries to accelerate their modern sector export growth. Designing policy to promote such growth requires recognition of a number of features of modern global trade; fragmentation, increasing returns, and the consequent lumpiness of development. Domestic policy and international policy are complements. Domestic policy needs to ensure a good business environment and infrastructure, but this can be spatially concentrated. International policy needs to redesign trading arrangements with rules of origin that do not penalise narrow specialisation. Two of the past initiatives in trade preferences for African manufactures, the MFA and AGOA, have both demonstrated their effectiveness. However, at the time when the MFA was launched few

⁸ For details of eligibility see http://www.agoa.gov/eligibility/country_eligibility.html.

African governments had adopted the complementary policies needed for success, and the MFA has now ended. The key feature that made AGOA effective, the apparel special waiver, has now been renewed, but AGOA applies only to the US market and to selected African countries.

The experience of trade preferences has demonstrated that as devices for transferring income ('rents') to poor countries they are not largely ineffective. For this purpose they are simply not worth prioritizing as an objective. However, the experience has also demonstrated that as devices for pump-priming the entry of a country into global manufacturing, in particular the manufacture of apparel, they can be useful. For them to work three conditions need to hold.

First, the rules of origin need to be sufficiently generous that specialization in one or two tasks in the production of a product is eligible. However, rules of origin should not be so generous that the only activity that takes place is relabeling of products manufactured elsewhere. The AGOA rules of origin appear to be about right.

Second, the governments of the bottom billion need to complement privileged market access by encouraging the formation of a cluster of firms in an Export Processing Zone. Although EPZs have been the standard approach for breaking into manufacturing used in Asia, in several poor countries they have a very mixed record. An EPZ is only likely to work if it provides an efficient location for production: an EPZ which is badly located and inadequately serviced cannot be made to work just by granting tax concessions. Tax concessions are much less important than genuine reductions in the costs of production. The most effective form of inducement is to select a good location at a well-functioning port. Firms should then be clustered in this location: attempts to spread manufacturing thinly around the country on considerations of equity are likely to doom the attempt to failure. Once a good port location has been selected, costs of production can be reduced through the provision of adequate physical infrastructure, and efficient administration of services such as customs and regulation. To increase the confidence of firms in this provision it may be helpful to commit to certain standards of service, such as the maximum time taken for customs clearance. The necessary infrastructure may well be a good use of aid, and this would encourage practical policy coherence on the part of OECD governments – their trade policies would be aligned with their aid policies.

Third, unfortunately, privileged market access can only work to pump-prime new entrants to manufacturing if all established producers are excluded. As in the UNIDO proposal of 2009, the remit of the scheme has to be confined to Least-Developed-in-Manufacturing Countries (UNIDO, 2009). This is because if even one established producer is included in the scheme their initial cost advantage from having an already-formed cluster of producers will make new entrants uncompetitive: international firms will take advantage of the privileged access by expanding production in the established cluster. While most established manufacturing clusters are in emerging-market economies, a few are in LDCs, such as the apparel cluster in Bangladesh. Unfortunately, it is essential that such producers not be included in the coverage of the scheme.

Subject to these three conditions the appropriate market for privileged access is as near to being global as is politically possible. The minimum reasonable scheme for privileged market access is for all Least-Developed-in-Manufacturing Countries to be included in a common, OECD-wide scheme. A common scheme would be more effective than piecemeal different schemes with individual OECD countries: it would be easier for firms to understand and use, and politically more robust. Since the objective is to pump-prime the formation of clusters, it is not necessary for the scheme to be permanent. A temporary scheme might be easier to negotiate, being more acceptable both to the USA and to countries not covered (such as Bangladesh), and less liable to opposition in the WTO (where AGOA already has a waiver). A common OECD-wide scheme would involve harmonizing the American scheme AGOA, with the EU schemes, EBA and EPAs. This is a timely moment to request the EU to rethink its trade preferences: the European trade schemes are manifestly in a degree of disarray and there is a new European Commission not necessarily so committed to past arrangements.

Ideally a preference scheme for the bottom billion should include preferential access to the emerging-market economies. Collectively, the EMEs are now a large and fast-growing market and so it would be advantageous for the bottom billion to gain access to them. Politically, it is

important to accelerate the process whereby EMEs reconceptualise themselves from being fellow-victims alongside the bottom billion of an international system in which they were powerless, to recognize their new status as significant players who should share the responsibility for assisting the bottom billion. For the EMEs, the most appropriate form of assistance for the bottom billion is their trade policies. Their markets are far more protected from the products of the bottom billion than those of the OECD, while liberalizing them selectively towards the bottom billion would not involve significant fiscal costs.

4. The Challenge of Declining Aid: International Support

Until recently, the only financing for government permitted to the bottom billion was ODA. The prospects for aggregate ODA are not encouraging: unprecedented fiscal pressures in OECD countries are reducing aid budgets. There is a need both to sharpen the focus of ODA onto the bottom billion, and to look to alternatives.

Sharpening the focus of ODA

Given that the prospects for total aid are discouraging, a sensible strategy for the governments of the bottom billion is to focus attention on its allocation. While the ostensible rationale for aid is to address poverty, most aid goes to other developing countries. Indeed large aid flows are going to middle-income countries that are already growing rapidly. If aid were focused on the bottom billion it would permit a major expansion in the aid flow to them without requiring any increase in OECD aid budgets. As the category of 'emerging market economy' expands, it is important that these countries cease to be aid recipients so that aid can be concentrated on those countries that really need it. In making the case for reallocating aid, three rationales for providing aid to middle-income countries must be countered.

One rationale, seldom admitted by OECD governments, is that the emerging market economies are important markets for OECD products and so aid is useful in maintaining good relations with their governments. This is, of course, an abuse of aid. Were other, more legitimate-sounding concerns of OECD governments properly addressed, this illegitimate rationale could be exposed and faced down. While recognizing that it is a motive for aid, it is therefore important to attend to any rationales for providing aid to middle-income countries that appear superficially to be more legitimate. There are two such reasons why OECD donors do not allocate more of their aid to the bottom billion.

One rationale for OECD aid to middle-income countries is that even middle-income countries have many poor people in them. This argument is spurious because a middle-income country is in a position to address such poverty from its own national income. If the government of a middle-income country chooses not to redistribute national income it should not expect other societies to address the poverty of its people with their own income. In contrast, in the bottom billion, poverty cannot be solved through redistribution: there is not enough national income to redistribute.

The second, and more potent, rationale is that aid is better-used in middle-income countries because policies and institutions are better than in LDCs. The quality of policies and institutions is measured annually by the World Bank and published in its highly influential Country Policy and Institutional Assessment (CPIA). The CPIA formally determines the aid allocations of the World Bank and influences the allocations of many other donors. It is time that this approach to aid allocation was challenged. By linking the volume of aid to a country to its CPIA, The bottom billion almost inevitably end up with smaller aid allocations than middle-income countries. In particular, they get little of the fully discretionary funding that they need, such as is provided by Budget Support. In the donor perception there is a tension between the need for aid and the ability of governments to use it. This then faces donors with an impossible choice: provide aid to needy environments where it will be badly used, or provide it to environments where it will be better used but where it is not really needed.

While donors feel that this is the choice with which they are faced, most major donors will tend to favour aid to middle-income countries. This is because their fiduciary responsibility to their own tax payers leads them to be fearful of contexts in which aid can be shown to have been used badly. Looming fiscal pressures in OECD countries can only intensify such concerns and threaten to undermine provision of Budget Support.

One remedy is an independent assessment of the capacity of governments to spend aid honestly and effectively, such as is necessary for a donor to be confident that Budget Support will be properly used. The most appropriate agency would probably be the IMF which already undertakes PFAs. However, currently the PFAs do not include an overall assessment as to whether a system is fit for Budget Support. *Were the IMF to certify systems as fit for Budget Support it would enormously strengthen the case for donors to provide it.* Indeed, it might even give the US Congress the evidence it claims is lacking to justify American provision of Budget Support. Evidently, many of the bottom billion are currently not at a level of government capacity that would warrant certification. Hence, it would be important to combine a certification process with transitional arrangements, including support for capacity-building followed by re-assessment, for those countries currently below the standard.

Another remedy is for donors and governments to devise routes by which aid can still be received by public agencies even if donors are unwilling to provide Budget Support directly into the budget. While from the perspective of government this may be inferior to Budget Support, it is evidently better than the government not receiving the aid at all. At present, the main alternative modalities to Budget Support are project aid, the provision of aid directly to local governments (as with World Bank aid to Ethiopia), and the complete by-pass of government through direct donor funding of NGOs. None of these are satisfactory. In particular, the NGO by-pass undermines the capacity and authority of government. An alternative is the *Public Service Agency (PSA)*, (Collier, 2008). A PSA is a government body which finances, but does not directly provide, public services such as health and education. It contracts with NGOs, local communities, or local governments (according to what the government considers appropriate). As with an independent central bank, the government sets the rules and guidelines by which the PSA allocates the money received from donors. The PSA then finances the service providers (such as NGOs) on terms which it sets, and monitors their performance. Donors have representation in the management and oversight of the PSA (although the government retains overall control). However, since a core function of the PSA is to monitor the performance of the service providers, donors receive a continuous flow of information as to the cost-effectiveness of their aid. This gives then the confidence to provide enhanced funding. PSAs need not be temporary arrangements. In many contexts they may well turn out to be more cost-effective ways of providing public services than the conventional OECD model of direct government provision inherited by the governments of the bottom billion at independence, which has often proved to be ill-suited for local conditions.

Rethinking Debt Sustainability

IMF Programs explicitly require governments of the bottom billion not to borrow commercially. However, this condition is now being rethought. This will open up options for financing. The model used by the IMF in its debt sustainability analysis implicitly assumed that public investment was completely unproductive. This followed from the lack of a link in the model from public investment to subsequent growth of the economy. Hence, by assumption, borrowing to finance extra public investment necessarily reduced the sustainability of debt: liabilities were incurred without any corresponding increase in productive assets.

These assumptions were clearly unreasonable. In an important new working paper, *Public Capital and Growth*, (Arslanalp et al., IMF WP 10/175), the Fiscal Affairs Department of the IMF analyzes the relationship between public investment and growth, both in developing countries and in the OECD (where emerging debt crises raise the same issues that LDCs have grappled with for decades). The paper finds that public capital is productive, but subject to diminishing returns. Beyond a certain level of the public capital stock further investment is unproductive and indeed can have net negative effects once the disincentive effects of the taxes needed to pay for it are taken into account.

Given the low level of public investment in the bottom billion in recent decades, many of them are likely to be within the range at which, on the IMF analysis, public investment is productive. As the paper notes, this has important implications for rethinking debt sustainability. Whereas in the old framework, borrowing for public investment necessarily worsened debt sustainability, once it is accepted that public investment can be productive, the effect of borrowing to finance it becomes contingent on what particular investments are being increased.

The critical issues become the rate of return on particular public investments, and whether sufficient of these returns can be captured through the tax system to enable the government to service the debt. While warranting some borrowing for public investment, the new perspective is not a licence to spend on whatever public capital is thought desirable. In particular, even though investments in the social sectors, such as hospitals, may raise wellbeing, they may not sufficiently raise taxable income to be self-financing. Indeed, on the contrary, they may indirectly increase claims on public expenditure, most evidently through the recurrent costs necessary to operate the new capital. Borrowing for economic infrastructure is therefore the main candidate for expansion financed by borrowing.

What is needed to guard against debt becoming unsustainable is to base investment decisions on unbiased estimates of the likely economic returns on marginal public investments. Both technically and politically this is difficult. Technically, the best that economics can offer is cost-benefit analysis, but this tends to be biased against large projects.

The new analysis is timely because the world is awash with liquidity. The rate of interest is at a historically low level, and the OECD countries are no longer seen automatically as safe havens. Further, as a result of the Jubilee campaign of debt forgiveness, most countries of the bottom billion have very low levels of debt. Hence, there has seldom been a more propitious time for them to increase the stock of public capital by borrowing commercially. Nevertheless, lending to the bottom billion is perceived as being high-risk. It is therefore sensible to consider whether innovations in borrowing instruments can reduce the perceived risk of default.

Reducing the cost of commercial borrowing

One approach might be for the World Bank to create an IBRD-like club of borrowers designed for low-income countries with reasonable economic governance. When IBRD was created it was designed for countries that are not so different from where such low-income countries are today. Over the years, the IBRD club has, in effect, collectively moved up, in the process its members have become less risky and so are now able individually to borrow commercially: the IBRD club is less necessary other than at times of financial crisis. The rationale for a club would be the same as that for the formation of IBRD – by reducing perceived risk, it reduces the cost of borrowing. IBRD carries a guarantee from OECD countries which has never been called. Unlike IDA it has therefore come at no fiscal cost. In the present environment of fiscal tightness in the OECD this is important. For example, it explains why at the March 2009 meeting of the G20, vast new resources were found for the IMF while only negligible new money was found for the World Bank. Hence, a substantial expansion of financing for the bottom billion is more likely if it can use strategies which do not make explicit fiscal calls on the OECD.

A second approach, which might well be combined with the above, is for the rate of return on the bonds issued by the bottom billion to be linked to some aspect related to their ability to repay. That is, *it is better for objective risks to be shared explicitly rather than left lurking as an offstage risk of default*. One performance measure is the rate of growth of GDP. This is a further advantage of a collective borrowing instrument such as an IBRD-like club, since the rate of interest on the bonds issued could be linked to the average growth rate of the LDC club. This would virtually eliminate the ‘moral hazard’ which would be associated with each individual government linking the rate of interest to the rate of growth of its own economy.

Another possible link is to the prices of commodity exports and imports. Potentially, the risks of commodity exporters can now be hedged. However, it would be unwise for governments directly to engage in such transactions. Even the international banks have periodically proved incapable of adequately supervising their employees engaged in these transactions and have found themselves inadvertently exposed to massive losses. It is therefore preferable to have these risk transactions managed by a third party with expertise but no commercial interest, such as the World Bank. The Bank would undertake hedging operations on behalf of governments aimed at reducing the volatility of the revenues generated by rapid changes in the prices of commodity exports. While it is not realistic to aim at stabilizing such revenues, it should be possible to slow the rates of change, softening periods of declining revenues by accepting a slower pace of price increase at times of rapid increases in world prices.

While hedging can be costly, the World Bank is in a position to do some of it purely through internal matched transactions which would effectively be cost-free. For example, it could match portfolios of loans to oil exporters with loans to oil-importing low-income countries. When oil prices were rising, debt service on the loans of oil-importers would be reduced, and those of oil exporters corresponding increased, and vice-versa when oil prices were falling.

A final link between returns and performance is to move the focus from the national level to the project level. Public-private partnerships provide security to investors by earmarking specified public assets collateral, while sharing the risk by linking debt service to certain verifiable aspects of the performance of the project. The recent Greek fiscal crisis has demonstrated how public-private partnerships can be abused. If the state merely shifts existing public assets into 'partnerships', it undermines the collateral for general public debt, increasing the risk of default. The legitimate rationales for public-private partnerships are either to finance new capital, or to bring in superior management. In the former case the new capital can indeed be used as collateral without undermining the collateral for existing debt. In the latter case, the right structure is either a management contract in which the private firm receives a specified return for improvements in performance while the state retains full ownership of the capital, or an outright sale of public assets (privatization) rather than a partnership.

Increasing Absorptive Capacity for Investment

While the IMF analysis on the returns on public capital is encouraging, it also finds that in developing countries public investment can become unproductive at surprisingly low levels of the public capital stock. This is support for the conventional IMF concern about constraints upon 'absorptive capacity'. If borrowing to finance public investment is to be viable on any scale it is therefore essential to break this capacity constraint. Three approaches are complementary in raising the capacity to absorb public investment.

One approach is for government itself to improve its capacity to select and implement investments efficiently. As part of this it may be useful to establish an independent public institution for the scrutiny of proposed public investment projects. While cost-benefit analysis is technically the best way of selecting projects, it may require more capacity than many of the bottom billion can reasonably muster, and it does not address issues of implementation. An alternative or supplement to cost-benefit analysis is to learn from the success of countries that two decades ago were themselves poor but which, through rapid growth, have transformed themselves. The government could decide to follow the scale and sequence of public investment projects that had been done by a country that two decades ago was similar but which has grown rapidly. For example, such a peer-matching exercise may reveal that heavy investment in rural areas is less important than investment in urban infrastructure: after two decades of rapid growth, cities are where the population and the economy are predominantly located.

The second approach is to adopt policies that are conducive to private investment. Public and private investments are complementary, implying that the return on public investment depends in part upon the level of private investment. There are already various international ratings of investment policies which can be helpful to governments in guiding policy reform. For example, Rwanda has recently risen dramatically in these ratings.

The third approach is to focus on policies which reduce the cost of capital goods, both structures and equipment. Both types of capital good tend to be more expensive in low-income countries than in other countries, so that an expenditure on investment buys less capital. Bringing down the cost of structures is a matter of targeting construction costs. These can be excessive for many different reasons: legal impediments on the acquisition of urban land, bottlenecks in the supply of cement, and shortages of skilled labour. Each of these problems can be addressed by appropriate policies. Bringing down the cost of equipment depends upon trade policy because in the bottom billion, equipment is imported. If the market in imported equipment is merely national it will inevitably be small. Small markets are unlikely to support enough importers to be competitive. Instead, they will be characterized by cartels and prices set above world levels (Collier and Venables, 2010). A good way around this problem is to encourage markets in equipment to be organized regionally rather than nationally, and this in turn depends upon the removal of trade barriers within the region.

Collectively, these three approaches to increasing absorptive capacity are an agenda for 'investing-in-investing'.

5. Conclusion

The post-boom global economy looks to have some important differences with the half-century since the bottom billion gained Independence. As other developing countries rapidly converge on a crisis-ridden OECD, the countries of the bottom billion are becoming increasingly distinctive. The OECD economies are in crisis and so aid is set to decline relative to the GDP of the bottom billion: new types of international finance will need to be developed. However, the most important source of finance is likely to be the money generated by resource extraction. Because other developing countries are growing rapidly commodity prices and likely to remain high, and this will make the management of natural resources by the governments of the bottom billion critical. If governments can invest this money competently within their own economies, some of them stand a chance of diversifying into light industry. The international community can enhance this opportunity by granting privileged market access to the manufactured products of the bottom billion.

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