

THE LEAST DEVELOPED COUNTRIES REPORT 2014

Growth with structural transformation: A post-2015 development agenda

CHAPTER 6

A POST-2015 AGENDA FOR LDCs: POLICIES FOR STRUCTURAL TRANSFORMATION



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A. Introduction

A key lesson from the four success cases discussed is the pragmatic approach they adopted in seeking effective solutions to particular challenges posed by their particular circumstances.

Despite relatively rapid economic growth since around 2000, reflecting strong increases in commodity prices and in official development assistance (ODA), the majority of the least developed countries (LDCs) are off track on most of the Millennium Development Goals (MDGs). This reflects, in part, their failure to achieve the kind of structural transformation that has characterized successful adjustment experiences in other developing countries (ODCs), such as those considered in chapter 5 of this Report. The planned sustainable development goals (SDGs) accompanying the post-2015 development agenda will constitute an even more ambitious undertaking in a more challenging economic environment. This lends still greater urgency to the need for structural transformation in the LDCs.

The post-2015 development agenda implies not only a shift in global policy goals, but equally important changes in the economic environment for development.

This chapter does not attempt to propose a universal blueprint for a comprehensive set of policies for structural transformation to achieve and sustain the SDGs. Given their great diversity, each LDC will need to chart its own development course suited to its particular characteristics and circumstances. Rather, the chapter seeks to identify approaches to tackling the challenges facing all LDCs, and the types of policy instruments which may be useful for this purpose. A key lesson from the four success cases discussed in chapter 5 is the pragmatic approach they adopted in seeking effective solutions to particular challenges posed by their particular circumstances.

The chapter begins with a discussion of the likely implications of the planned SDGs for development in LDCs and for their development strategies in the 2015–2030 period (section B). The subsequent sections (C to E) consider domestic policy options in three broad areas which are the main requirements for structural transformation:

- Resource mobilization for public and private investment, and recurrent public expenditure;
- Industrial and sectoral policies to channel the resources into sectors and activities that promote economic transformation; and
- Macroeconomic policies which foster economic transformation rather than impeding it.

While it cannot be assumed that all the changes implied by the SDGs will occur, at least some movement in this direction must be anticipated.

The analysis of domestic policies is complemented by a discussion of other measures to improve the external environment for the development of LDCs. Those measures will be essential for helping LDCs achieve the economic transformation necessary for them to meet the planned SDGs in a “post-2015 world” (discussed in the final section).

B. A “post-2015 world”?

The post-2015 development agenda implies not only a shift in global policy goals, but equally important changes in the economic environment for development. Meeting the SDGs would make the world in 2030 a very different place and moving towards that different world would present a very different environment for development. Anticipating this “post-2015 world”, and adapting development strategies to it, will be a critical aspect of efforts to achieve the SDGs. While it cannot be assumed that all the changes implied by the SDGs will occur, at least some movement in this direction must be anticipated: seeking to achieve an objective without taking account of the likely effects of doing so

is ultimately self-defeating. Some of the implications for LDCs that could be anticipated in a post-2015 development agenda are discussed below.

Accelerated progress towards poverty eradication will require much faster growth in the incomes of the poorest in most LDCs (discussed in chapter 3, section C, of this Report). Together with very high initial levels of poverty, this implies a considerable acceleration of demand growth for those goods which will be consumed in greater quantities by poor households as their incomes rise, notably staple foods such as cereals, higher-value foods (e.g. meat, fish, fruit and vegetables) and basic household goods.

Universal primary and secondary education and improved health would increase both the productive potential of labour and low- and medium-level human capital over time. More immediately, increased secondary enrolment would significantly reduce the labour force in most LDCs, particularly in family farming.

Achieving the post-2015 world would also have major implications for public finances. Considerable financial costs would be entailed in the provision of universal health services, universal free primary and secondary education, and water, sanitation and modern energy supply; in the development of transport and communications infrastructure; in adaptation to climate change; and in ensuring affordable housing, basic services and the elimination of slum-like conditions. Improving the seriously deficient physical infrastructure in most LDCs would also entail considerable capital costs.

Financial constraints in most LDCs, except in a few fuel exporters, suggests that such costs would have to be met largely through ODA, implying a need for much greater aid flows throughout the 2015–2030 period. This could help spur a substantial increase in domestic demand. Equally, additional recurrent costs (e.g. for teachers' and health workers' salaries) would imply a substantial increase in current public spending, requiring a commensurate increase in public sector revenues.

As discussed in box 3 (chapter 3), global efforts to mitigate climate change could have significant effects on international markets for some key exports, notably long-distance tourism and horticultural products, as well as limiting the adoption of development paths involving the exploitation of fossil fuels. This is a major source of uncertainty, as the nature and scale of these effects will depend on globally adopted approaches to reducing carbon emissions. Together with increased domestic demand due to higher ODA and rapid poverty reduction, such uncertainty in key export markets suggests that there would be some shift in the balance of advantage from strongly export-led development strategies towards a greater balance between domestic and external demand.

C. Resource mobilization

In addition to the investments required to achieve the SDGs themselves, further investments, both private and public, will be necessary to achieve the structural transformation needed to ensure that those goals are sustained. Incomes will need to be raised, particularly among the poorest, and matched by higher productivity. This will require a shift of employment from less to more productive and dynamic activities, as well as technological upgrading within sectors, both of which can be achieved only through productive investment. Without investment, the composition of output and employment will not change, productivity will not grow, and there will be no economic transformation.

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Fostering the development of a financial sector oriented towards financing productive investment is critical.

The constraint on development arises from limited credit and/or lack of profitable investment opportunities.

The nature of the savings-investment nexus in LDCs implies the need for a proactive role on the part of governments to create investment opportunities through industrial policies.

Structural transformation cannot rely entirely on FDI; it requires the emergence of an indigenous modern sector.

The balance of advantage between foreign and domestic investment varies widely between sectors and activities, and according to local economic circumstances.

1. THE CHALLENGE OF MOBILIZING PRIVATE DOMESTIC INVESTMENT

The primary source of productive investment in most other developing countries (ODCs), as in developed countries, is retained profits, while bank financing provides most of the remainder (UNCTAD, 2008, chap. 4). In LDCs, however, owing to their small domestic corporate sector, the profits available for reinvestment are limited, which makes bank credit much more important.

Most LDCs have underdeveloped financial sectors, and therefore low levels of bank lending, which is often oriented towards consumption, housing and the public sector rather than to productive investment. In most African LDCs, between 70 per cent and 90 per cent of small and medium-sized enterprises (SMEs) lack access to formal financial institutions (Africa Progress Panel, 2014). Thus, fostering the development of a financial sector oriented towards financing productive investment is critical.

While domestic savings are generally small in LDCs, the constraint on development arises less from low savings than from low investment, reflecting limited credit and/or lack of profitable investment opportunities. Equally, the level of deposits is generally not the main constraint on bank lending; rather, credit is kept at artificially low levels relative to deposits by a combination of high reserve requirements, weaknesses in regulatory regimes, a preference for lending to the public sector, weak information systems and/or limited skills in risk assessment and management (Freedman and Click, 2006). For example, in sub-Saharan Africa (where two thirds of LDCs are located), while financial sector development has followed growth, the ability of banks to extend credit has not followed suit (Demetriades and James, 2011).

Risk is a key factor. High lending risks necessitate high reserve requirements and also discourage lending for domestic private investment. In sub-Saharan Africa, the domestic private sector accounts for only 30 per cent of banking assets, compared with 60–70 per cent in other regions (Honohan and Beck, 2007). Without opportunities for productive investment which offer an adequate rate of return at acceptably low levels of risk, efforts to increase savings will do little to spur growth, particularly where deposits are not the main constraint on credit.

Thus, rather than waiting passively for the financial sector to finance investment, the nature of the savings-investment nexus in LDCs implies the need for a proactive role on the part of governments to create investment opportunities through industrial policies (Rodrik and Subramanian, 2009).

2. HARNESSING FOREIGN DIRECT INVESTMENT FOR STRUCTURAL TRANSFORMATION

Foreign direct investment (FDI) can be an important complement to domestic investment as part of a wider development strategy. Indeed, it has been central to the development of export-oriented manufacturing in some LDCs, particularly in Asia, as well as to the development of extractive industries in mineral- and fuel-exporting LDCs. However, structural transformation cannot rely entirely on FDI and foreign-owned enclaves; it requires the emergence of an indigenous modern sector.

The balance of advantage between foreign and domestic investment varies widely between sectors and activities, and according to local economic

circumstances. FDI can offer greater access to productive technologies and export markets, but it may have fewer forward and backward linkages with the local economy and/or be more capital-intensive. Local reinvestment of profits may be more limited, and profit remittances by transnational corporations can constitute a potentially substantial foreign exchange outflow.

FDI is most beneficial where it offers access to foreign markets or to strategically important technologies which would not otherwise be available. However, technology transfer depends on technological spillovers to locally-owned companies; and such spillovers require a dynamic domestic industrial sector that is able to absorb and utilize such technologies. While there have been few studies on intra-industry productivity spillovers in LDCs, the evidence in ODCs is “weak, at best”. Spillovers depend on educational attainment, research and development (R&D) expenditures and the quality of infrastructure (Wooster and Diebel, 2010), which are generally weaker in LDCs.

Even without technology transfer to local companies, however, FDI may improve the availability and/or quality of capital and intermediate goods, or reduce their cost. It may also play an important role as a component of particular development strategies such as the development of natural-resource-based productive clusters.

Technology choices by foreign investors tend to reflect the relative availability of factors of production in the source countries (Acemoglu, 2001). South-South FDI in manufacturing may thus be more beneficial than North-South FDI, to the extent that it uses more labour-intensive production technologies. In China, for example, while foreign-owned companies are at the technology frontier in (relatively capital-intensive) high-technology sectors, it is indigenous companies which are in this position in (less capital-intensive) low- and medium-technology sectors (Fu and Gong, 2011). In addition, FDI from the South may be more conducive to technology transfer owing to its narrower technology gap with LDCs (Kokko, 1994; Chuang and Hsu, 2004).

Harnessing FDI for economic transformation requires a strategic approach, proactive policies and selectivity, as the nature of foreign investment and its relationship with domestic investment are as important as the amount. Efforts to attract FDI should be based on a careful assessment of which activities offer the greatest potential for forward and backward linkages and technology transfer, and/or contribute most to increasing the productivity of domestic industry (e.g. in business services). The costs of any incentives offered to attract FDI should also be weighed carefully against the development benefits of the investment targeted, taking into account the likelihood of success and the opportunity costs.

3. TAPPING THE DIASPORA

Migrants’ remittances are an important source of foreign exchange in many LDCs, and could be further enhanced by measures to reduce transfer costs.¹ However, as they are private transfers between households, used largely for consumption, their direct potential to finance the additional fixed investment needed for structural transformation is limited.

Beyond remittances, however, there may be significant unexploited potential for investment by the diaspora, in infrastructure, public goods and productive sectors, particularly where the “brain drain” has created substantial and relatively affluent diaspora communities (UNCTAD, 2012).

While more limited in scale than conventional FDI, direct investment by the diaspora may have important advantages for development. Diaspora

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investors can provide greater access to foreign technologies and markets than local investors, and they are more familiar with local conditions, have greater connectedness with the local economy, and are more likely to reinvest profits locally than conventional FDI. Diaspora investors may also be more motivated than transnational companies to encourage, rather than impede, technology transfer, and they may be more inclined and better placed to adapt it to local conditions (Wei and Balasubramanyam, 2006; Boly et al., 2014; Guha and Ray, 2002; USAID, 2009).

Serious consideration should thus be given in the post-2015 agenda to developing mechanisms to encourage productive investment by the diaspora, directly (through individual investment projects)² and/or indirectly (e.g. through the establishment of managed funds or issuance of diaspora bonds by development banks).

In most LDCs, strengthening tax collection capacity is a priority, both for national policy and for ODA and technical support.

4. MOBILIZING PUBLIC REVENUES

Public revenues in most LDCs account for 10–20 per cent of gross domestic product (GDP),³ around half the level in most ODCs (20–35 per cent). This reflects their lower income levels, smaller tax bases and often limited collection capacity. Strengthening and diversifying public revenues is thus a high priority, as it would help governments finance at least part of the recurrent costs of meeting the planned SDGs, and of the investments they require. Where revenues can be increased sufficiently to allow some domestic financing of public investment, this could reduce aid dependence, increase autonomy and flexibility in making investment decisions, and reduce limitations arising from tied aid.

Measures which may be beneficial in this regard include increased taxation on higher incomes and on higher value urban properties; introducing consumption taxes on luxury goods and excise duties on alcohol, tobacco products and vehicles; reducing value added tax (VAT) exemptions on non-essential items; reducing tax holidays and exemptions for corporations and expatriates; and introducing taxes on financial transactions, where the financial sector is relatively developed (UNCTAD, 2009; 2013). Where appropriate, as part of a broader development strategy, raising import tariffs (within the limits of existing trade agreements) could also provide additional revenues, and drawing informal enterprises into the formal economy could help to broaden the tax base over the long term (see sections D3c and D3e of this chapter).

For fuel and mineral exporters, resource rents could contribute significantly to financing for both public and private investments.

In most LDCs, strengthening tax collection capacity is a priority, both for national policy and for ODA and technical support. Devoting part of ODA to this purpose in the coming years could help to ensure that ODA reduces financial dependence rather than increasing it (UNCTAD, 2010; ECOSOC, 2014).

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For fuel and mineral exporters, resource rents could contribute significantly to financing for both public and private investments. Where public revenues generated by extractive industries are limited under existing contracts, there is a case for increased taxation or the renegotiation of those contracts. The additional resources could be used both to fund public sector infrastructure projects (African Union, 2009) and to finance private investment which contributes to structural transformation, for example through development banks.

5. MAXIMIZING THE DEVELOPMENT IMPACT OF ODA

Even with higher revenues, most LDCs would require a substantial increase in ODA to finance the infrastructural investments needed to meet the planned SDGs.⁴ There may be a role for FDI in financing some elements of commercially

oriented infrastructure development in LDCs, such as port facilities (UNCTAD, 2014b). Elsewhere, however, the potential is weaker in a context of very limited purchasing power and high perceived risks. This applies particularly to investments more directly related to the SDGs, which offer limited potential for commercial returns (e.g. extension of health services and education), which require primarily small-scale village-level investments (e.g. rural electrification, water supply and sanitation), or where potential financial returns are low (e.g. affordable housing, slum upgrading and rural feeder roads).

As noted in section B of this chapter, increased ODA would present an important opportunity to boost demand. This effect could be strengthened by using labour-intensive methods and local procurement, particularly in transport infrastructure, construction, water and sanitation, waste management, flood protection, irrigation and drainage, repairs and maintenance, land reclamation and afforestation (UNCTAD, 2013, chap. 5). Labour-intensive methods can increase employment creation by a factor of between two and five, and may also reduce costs significantly (Devereux and Solomon, 2006).

The potential role of ODA in fostering rural economic diversification and the importance of sequencing in this context are discussed in section D5 below.

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D. Industrial policy and economic diversification

Economic transformation requires not merely increasing the resources available for investment, but also ensuring enough of the “right” kinds of investment, using the “right” technologies in the “right” sectors to achieve the following:

- Diversification, by developing new industries and activities, and increasing value addition in existing industries and activities;
- Deepening, by creating forward and backward linkages with existing industries; and
- Upgrading of products and processes.

These are the objectives of industrial policy (Lauridsen, 2010).

While practical objections have in the past been raised to industrial policy (e.g. problems in “picking winners”, limited capacity and the risk of rent-seeking behaviour), the 2007 financial crisis, in particular, has led to a major shift in attitudes. As noted by Stiglitz et al. (2013:2), “Today, the relevance and pertinence of industrial policies are acknowledged by mainstream economists and political leaders from all sides of the ideological spectrum”.

The objectives of industrial policy are diversification, deepening and upgrading.

1. INDUSTRIAL POLICY: WHY AND HOW?

a. Structural transformation and the need for industrial policy

Successful development in LDCs requires breaking out, not of one vicious circle, but of several interconnected vicious circles simultaneously. Serious imperfections in credit, labour and product markets are compounded by the vicious circle of human and economic development highlighted in chapter 3 of this Report. Small and volatile markets discourage investment, and the lack of investment keeps markets small and volatile. Poverty triggers social tensions, conflict and insecurity, which exacerbate poverty. Inadequate infrastructure limits development, which limits the resources available for investment in

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infrastructure. And limited administrative capacity is both a product and a cause of low public revenues.

LDCs do have the capacity to build developmental States.

Thus, development requires simultaneous improvements in several areas, including education, financial and legal institutions, infrastructure, business services and productive sectors. However, each of these depends on prior improvements in all the others, giving rise to a serious coordination problem (Lin and Chang, 2009). Since no private actor has the incentive or the capacity to resolve this coordination problem, it requires effective action by a developmental State. Contrary to common perceptions, LDCs do have the capacity to build developmental States (UNCTAD, 2009: chap. 1).

There is a role for “vertical” interventions aimed at encouraging new, particularly promising economic activities as well as “horizontal” industrial policies.

Economic diversification requires experimental investments by entrepreneurs, in order to discover which new products and production processes are commercially viable in a particular setting. Such experimentation has enormous economy-wide benefits: when successful, it establishes new economic activities, while failures provide invaluable information to other investors. However, the incentives to individual investors do not reflect these benefits. If an investment fails, the investor loses everything; if it succeeds, it may be profitable only until others imitate the innovation. Hence “the deck is stacked against entrepreneurs who contemplate diversifying into non-traditional areas” (Rodrik, 2008: 4-5). This compounds the uncertainty inherent in innovation, further discouraging both entrepreneurs and lenders (Hausmann and Rodrik, 2003).

This indicates a role for “vertical” interventions as well as “horizontal” industrial policies — that is, for interventions aimed at encouraging new, particularly promising economic activities which are of particular importance to development, but are discouraged by skewed incentives, as well as for policies aimed at correcting market-wide imperfections (e.g. support to business start-ups in general), as done in the countries discussed in chapter 5 of this Report.

b. Principles of industrial policy

Industrial policy in LDCs should direct resources towards traditional sectors as well as modern sectors.

Effective industrial policy requires an appropriate governance framework, particularly to avoid rent-seeking behaviour. Three basic principles proposed by Rodrik (2008a) can provide a useful basis for such policies in LDCs:

- “Embeddedness”, or “embedded autonomy” (Evans, 1995), allowing strategic collaboration between public and private sectors without allowing capture by particular interests;
- A combination of “carrots” and “sticks”: dropping losers as well as picking winners; and
- Accountability to the general public, to ensure that policies operate in the public interest.

The need to increase employment implies focusing not only on growth but also on job creation.

The scope of industrial policy is also important. Particularly in the post-2015 context, industrial policy in LDCs should not be confined to directing resources towards modern sectors. Since a substantial proportion of the workforce will inevitably remain in traditional sectors such as agriculture, increased productivity in these sectors will also be critical to poverty reduction.

Equally, as highlighted in *The Least Developed Countries Report 2013*, the need to increase employment implies focusing not only on growth but also on job creation. Investments which create few or no jobs (e.g. investments in labour-saving technologies and in extractive sectors) will do little to help structural transformation unless the profits generated are directed towards increasing the demand for labour-intensive products through tax policies and other incentives (UNCTAD, 2013, chap. 5).

Industrial policy should also not focus exclusively on following a country's comparative advantage. Structural transformation entails an accumulation of capabilities in new industries, which means also *anticipating and influencing changes* in comparative advantage (Lin and Chang, 2009).

This suggests a dual strategy, with two parallel objectives. The first is to exploit more effectively those sectors which are in line with current comparative advantage, while progressively upgrading technologies in those sectors. The second is to encourage the development of sectors and activities which are somewhat ahead of the country's current comparative advantage, while accelerating the evolution of comparative advantage towards sectors and activities more conducive to development. This can be done, for example, through human resource development, R&D, infrastructure investment and attracting FDI in complementary activities (UNCTAD, 2012). This dual strategy was a common feature of the development strategies of the countries discussed in the previous chapter.

2. TARGETING: "PICKING POSSIBLES"

Like innovative investment (discussed in section D1a above), industrial policy is essentially experimental in nature: it is less about picking winners than picking possible winners and dropping losers, while maximizing learning from their failures. This requires a forward-looking approach, taking account of prospective changes in the domestic and international economic environments and in the country's comparative advantage.

a. Developing forward and backward linkages

One route to structural transformation is to begin from existing productive capacity and FDI, through:

- Backward linkages, producing goods and services used by producers;
- Forward linkages, adding value to existing products; and
- Horizontal linkages, e.g. subcontracting production, and the creation by former employees of new enterprises in similar activities, making use of their knowledge and experience.

A particular option for LDCs with large mineral and/or agricultural sectors is to develop production clusters around natural-resource sectors,⁵ as in the Chilean mining sector. This entails developing an interconnected network of firms by promoting backward and forward linkages from existing primary production; that is, production of equipment and inputs, processing of outputs and developing activities which use them as inputs (Ramos, 1998). Wider benefits may also be possible through lateral migration of technologies to other sectors, where there is sufficient absorptive capacity (Lorentzen and Pogue, 2009).

Three priorities in promoting natural-resource-based production clusters (as noted by Pietrobelli and Rabellotti, 2004) are:

- Creating the conditions for early entry of SMEs into the sector;
- Public-private collaboration in research, with SME involvement; and
- Dissemination of research findings to SMEs.

FDI can play a valuable role in the development of upstream and downstream subsectors which depend on access to imported technologies (e.g. production of machinery for the extractive sector, or of some metal products).

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... and encourage the development of sectors and activities which are somewhat ahead of the country's current comparative advantage.

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b. Post-2015 possibles

The “post-2015 world” itself will generate new economic opportunities. While varying between countries, potential target activities might include the following:

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Post-2015 possibles include: exploiting opportunities generated by ODA; responding to increases in demand resulting from poverty reduction; and production/provision of capital and intermediate goods.

Development banks have been a common feature among development success stories.

- Exploiting opportunities generated by ODA, such as,
 - Construction and related activities (e.g. masonry, metal-working and carpentry), production of construction materials, contracting, civil engineering, electrical and water/sanitary engineering, furnishings (e.g. for schools and medical facilities);
 - Consultancies and think tanks, for example, in fields such as project design, appraisal and impact assessment.
- Responding to increases in demand resulting from poverty reduction, such as,
 - Agricultural upgrading and diversification towards higher value crops (section D5 of this chapter);
 - Agricultural processing, including grinding/milling/shredding, preserving (drying, smoking, canning, bottling) and packaging;
 - Production of other basic consumer goods, including clothing and tailoring, household goods, furnishings, and residential construction, repairs and improvements.
- Production/provision of capital and intermediate goods, such as,
 - Tools and equipment for the above sectors (e.g. agricultural implements, tools for wood- and metal-working, machines for grinding and ovens);
 - Agricultural inputs such as fertilizers, pesticides and seeds;
 - Renting out agricultural machinery and vehicles;
 - Transportation services and logistics;
 - Technology-related services (e.g. mobile telephony, mobile phone apps and Internet services);
 - Business services.

While some of these activities involve relatively low technology and/or are likely to foster primarily small and micro enterprises, such enterprises can constitute the seeds from which larger companies may grow and upgrade their technologies.

3. INSTITUTIONS AND POLICY INSTRUMENTS

a. Role of development banks

They require capacity strengthening and strict rules of accountability to ensure that benefits accrue to the economy as a whole.

Development banks have been a common feature among development success stories, including those discussed in the previous chapter of this Report. While they exist in many LDCs, they are often dysfunctional, or have limited development impact. Together with some past adverse experiences of rent-seeking and financial inefficiency in ODCs, this has given rise to a generalized reputational problem. Such problems are not inevitable, but a deliberate effort is necessary to avoid them. This requires capacity strengthening and strict rules of accountability to ensure that financial activities are not skewed by non-economic considerations, and that benefits accrue to the economy as a whole.

If improved along these lines, development banks could play an important role in structural transformation in LDCs. By promoting investments in

productive sectors, they can generate externalities in the form of new economic opportunities, employment, higher incomes and public resources. Even where they promote investments which prove unviable, the information this provides is an important externality.

As in the case of investments in infrastructure, such externalities are a good reason for public sector support. This justifies a lower financial rate of return for development banks than for private lenders. Equally, their optimal strategy is not to minimize mistakes, but rather to minimize the cost of mistakes should they occur, while maximizing learning from them by elaborating and disseminating the lessons of unsuccessful investments. Nonetheless, it is important to ensure that the wider economic benefits (of successful and unsuccessful projects) outweigh the costs over the long term. Assessments of the net benefits should take account of effects on growth, employment, tax revenues and information externalities, as well as the financial results of development banks themselves (UNCTAD, 2008, chap. 4).

Given the resource and institutional constraints in LDCs, the effectiveness of development banks could be enhanced by maximizing synergies with private financing, for example through co-financing with private lenders, or the provision of partial guarantees for commercial loans. Such approaches can simultaneously reduce risks to private lenders and reorient bank lending towards projects that contribute to economic transformation, while helping to ensure that the projects supported are commercially viable, by leaving part of the project risk with private lenders.

b. Fiscal incentives

A wide range of fiscal incentives is available to governments as tools of industrial policy in support of economic transformation, and can play an important role where the financial means are available to support them. On the taxation side, these include exemptions from particular taxes (e.g. duties on imports of capital or intermediate goods), tax holidays, deferred taxation, partial or complete tax rebates, preferential tax rates for particular sectors or activities, phasing in taxes for new market entrants, allowing losses to be set against subsequent profits, and allowing accelerated depreciation rates on some or all fixed assets. Subsidies may also be offered, for example on agricultural inputs or interest rates. The four countries discussed in chapter 5 of this Report made use of all these instruments at different times.

Through selective application, such incentives could be used to promote investments in particular sectors or activities, which could be defined either broadly (e.g. all exports, except for a specified list of traditional exports) or more specifically. It may also be useful to differentiate among firms by size, or between established companies and start-ups. Cost-effectiveness may be increased by phasing out incentives as new industries mature, based on predetermined criteria, as in the case of tax rebates for non-traditional export producers in Chile. Differential fiscal incentives may also be useful to direct FDI towards (or away from) particular activities or geographical areas, as under Viet Nam's 2005 Investment Law.

As well as sectoral targeting, fiscal incentives should consider the particular behaviours that need to be encouraged (or discouraged) within each targeted sector or activity. For example, interest subsidies or accelerated depreciation may be used to encourage investment, or subsidies for inputs (e.g. in agriculture) to encourage their use. Tax holidays, phasing in taxes over a specified period, and allowing initial losses to be set against subsequent profits may be particularly useful for encouraging the establishment of new businesses.

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c. Trade policies and export promotion

Identifying market opportunities for non-traditional exports and promoting them in potential markets offer substantial benefits at relatively modest financial cost. This can be done either through a particular agency (such as the Mauritius Export Development Investment Authority) or through a branch of the ministry of foreign affairs (as in Chile), to take advantage of the presence of overseas missions in potential markets. Given the limited geographical coverage of individual LDCs' diplomatic representation, regional cooperation could significantly enhance the benefits of the latter approach.

There is a need for a strategic approach to export opportunities arising from trade preferences, viewing them not as a basis for a long-term strategy, but rather as a stepping stone.

While trade preferences can provide important export opportunities, these may prove temporary, even where such preferences are not explicitly time-limited. The benefits may decline over time through preference erosion, and preferences tied to LDC status will be lost when countries graduate. The importance of this issue is highlighted by the case of Mauritius: when the Multi-Fibre Arrangement was phased out, the share of textiles and garments in total value added fell dramatically, from a peak of 12.9 per cent in 1999 to 5.8 per cent in 2012. With no compensating increase in other manufacturing sectors, the share of manufacturing in total value added fell from 24 per cent to 17 per cent — the level of 1983.⁶

This demonstrates the need for a strategic approach to export opportunities arising from trade preferences, viewing them not as a basis for a long-term strategy, but rather as a stepping stone. The rents they provide should be used strategically to maximize their long-term development impact by fostering technology transfer and supporting a transition to activities less dependent on trade preferences, for example by product upgrading.

EPZs can provide a means of combining export promotion with import substitution and may contribute to employment creation...

Import policies can also play an important role in economic transformation, as highlighted by the case of Mauritius (chapter 5 of this Report). Except for agricultural products, most LDCs have tariffs substantially below bound rates under World Trade Organization (WTO) agreements, leaving substantial discretion to increase them (although customs unions present a more binding constraint for some). Article XVIII of the 1994 General Agreement on Tariffs and Trade (GATT) explicitly recognizes LDCs' entitlement to use tariffs selectively as a means of infant industry protection "in order to implement programmes and policies of economic development designed to raise the general standard of living of their people". Such measures may be useful for establishing, developing and rejuvenating particular industries.⁷

d. Export processing zones

Export processing zones (EPZs) are at best a second-best option, in that they provide benefits only to a subset of enterprises. However, they are increasingly widespread throughout the developing world, reflecting the priority given to attracting export-oriented FDI. They can provide a means of combining export promotion with import substitution, as in Mauritius;⁸ and they may contribute to employment creation, although only in smaller LDCs is this likely to be substantial relative to the total workforce.

... but the development benefits of FDI in EPZs depend critically on backward linkages.

As for FDI more generally, wider development benefits depend critically on backward linkages, not only to increase the share of export earnings retained in the domestic economy, but also to allow technology transfer. Producers in EPZs often use almost entirely imported inputs, and these foreign exchange costs largely offset export revenues. Hence, net EPZ exports are often only 10–20 per cent of their gross exports, reflecting limited domestic sourcing of inputs. In Bangladesh, for instance, only 3–6 per cent of EPZ inputs were domestically sourced in 1995–1996 (Bhattacharya, 1998: 44, tables 5.4 and 5.5).

Moreover, the perception that fiscal and other incentives are necessary to attract such FDI has given rise to a competitive process leading to increasingly generous fiscal incentives. EPZs may thus generate only limited tax revenues to offset the substantial initial costs which their infrastructure upgrading often entails. Moreover, as noted by Engman, et al. (2007:5), “Investment in infrastructure and generous tax incentives have not necessarily led to an increase in FDI [in EPZs]. Even where FDI has been forthcoming, value added has often been low, and backward linkages and technology transfers quite limited”.

EPZs are most likely to be beneficial where they are linked to the domestic economy rather than operating as enclaves, and when they are oriented towards the use of domestically produced inputs. Even in this context, however, consideration of whether to establish an EPZ should be based on a comprehensive cost-benefit analysis, with a realistic appraisal of the infrastructural investment required and its financial cost, the amount and nature of FDI likely to be attracted, and the development benefits relative to alternative development-related uses of the funds required. In view of the considerable uncertainties involved, initial costs should be kept to a minimum.

Incentives and other policies towards EPZs should be limited and time-bound, and should be kept under review and modified as necessary in light of the evolving needs and circumstances of the national economy and investors. Relaxation of, or exemption from, labour and other regulatory standards in EPZs has been found to be detrimental. More important than either of these is the need to provide a competitive international business environment (Engman et al., 2007).

e. Formalization and enterprise upgrading: Size matters

A key aspect of the transformation process is a progressive reduction in the scale of the informal sector relative to the formal economy. The informal sector accounts for between 40 and 82 per cent of non-agricultural employment in LDCs (UNCTAD, 2013: 76). Much of this comprises “default” activities: very low-productivity and low-income activities (e.g. petty trading, artisanal mining, rubbish-picking) in which people engage as a necessity, in the absence of social support mechanisms. As formal employment opportunities and/or social protection increase, labour will be drawn away from such occupations, allowing this part of the informal sector to decline over the course of development.

However, alongside such “survivors”, the informal sector also includes a wide range of microentrepreneurs, who are more positively motivated by economic opportunities but face constraints to, or are discouraged from, becoming part of the formal economy (Bacchetta et al., 2009; Cling et al., 2010; Grimm et al., 2012). Some such enterprises may have considerable growth potential once relieved of the disadvantages of being outside the formal sector (e.g. lack of access to credit), resulting in potentially significant economic benefits.⁹ Removing such constraints is an important step towards scaling up enterprises to fill the “missing middle” — the absence of medium-sized firms large enough to benefit from substantial economies of scale — characteristic of most LDCs (UNCTAD, 2006, chap. 6).

Approaches to formalization are necessarily country-specific, reflecting variations in the nature of the informal sector and the motivations for remaining in it. However, the process would be facilitated by focusing on the more dynamic informal enterprises which are the most constrained by their informal status, as they stand to benefit most from formalization. Their incentive to formalize would be further strengthened by increasing the availability of bank credit for productive investment.

EPZs are most likely to be beneficial where they are linked to the domestic economy rather than operating as enclaves.

EPZs do not necessarily increase FDI, value added is often low and technology transfer limited.

Incentives and other policies towards EPZs should be limited and time-bound.

As well as low-productivity activities, the informal sector includes a wide range of microentrepreneurs who are more positively motivated by economic opportunities.

Formalization would be facilitated by focusing on the more dynamic informal enterprises which are the most constrained by their informal status.

Options for promoting formalization include making support to new and informal enterprises conditional on formalization, reducing costs and simplifying processes.

R&D activities may benefit productivity as much by increasing firms' capacities to absorb transferred technologies as through their direct effects on innovation.

LDCs need to promote technological research and innovation oriented towards structural transformation and diversification according to their particular circumstances.

Options for supporting human resource development in technology include orienting funding for tertiary education towards science and technology, and providing scholarships.

Such enterprises can best be encouraged to enter the formal sector by tipping the balance of costs and benefits in favour of formalization. Options include making support to new and informal enterprises conditional on formalization within a specified period, and reducing the costs and simplifying the process of formalization. Where tax avoidance is an important motivation, consideration could also be given to offering a tax holiday for newly registered firms. If informal enterprises are already not paying taxes, revenue losses during the tax holiday will be limited, while fiscal gains when it ends may be substantial. All these measures would also strengthen the incentives for the creation of new firms in the formal sector.

4. TECHNOLOGY

a. Technology transfer and indigenous R&D

To invest in increasing productivity or in new sectors, firms need the opportunity and the capacity to use technologies and adapt them to local conditions and their particular needs. Thus technology policies are critical, as is the availability of the necessary human capital.

While FDI can be a source of technology transfer, harnessing its benefits depends on the capacity of indigenous firms to absorb imported technologies and use them effectively, which requires an adequate level of indigenous technological capacity. This suggests an important role for indigenous R&D, both by firms and in universities and research institutions, as a source of technological progress (Fu et al., 2011). R&D activities may benefit productivity as much by increasing firms' capacities to absorb transferred technologies as through their direct effects on innovation (Kinoshita, 2000).

While the development of technologies better tailored to local conditions could, in principle, be promoted by in-country R&D by foreign-owned companies, this is likely to be limited in LDCs, and is not an effective substitute for indigenous R&D.¹⁰ Beyond production technologies, R&D in other areas may also be able to play a role in developing new commercial activities in LDCs, for example in commercializing medicinal herbs, either as dietary supplements or, where appropriate, as pharmaceuticals.

There is thus a need for LDCs actively to promote technological research and innovation oriented towards structural transformation and diversification according to their particular circumstances, and to invest in the human resources required. Direct public funding can play an important role, particularly if focused on R&D with potentially important economic benefits that would not otherwise take place, and it may be particularly useful in promoting collaborative research between private firms and public research bodies, as in Chile.

Options for supporting human resource development in technology include, for example, orienting funding for tertiary education towards science and technology, providing incentives such as scholarships or differential fees for students in relevant disciplines, adapting curricula or developing course components focused on innovation in relevant university courses, and establishing intermediate technology innovation units in universities, with links to community and small business organizations.

b. Information and communication technologies

Access to information and communication technologies (ICTs) varies very widely among LDCs. For instance, mobile telephone subscriptions per 100

people ranged between 25 and 75 in most LDCs in 2013, with 5.6 in Eritrea and 134 in Cambodia. The ratio has increased extremely rapidly over the past decade in all LDCs, in most cases by a factor of between 10 and 100. Access to the Internet is both lower and has increased more slowly, with typically between 2 and 20 users per 100 people in 2013, increasing by a factor of between 3 and 40 since 2003 in most cases.¹¹

Since developments in ICTs and their greater use could contribute to structural transformation, they cannot be ignored by LDCs. Where mobile phone coverage is relatively high, there are potentially significant benefits for development, for example through financial inclusion, agricultural extension and technology adoption, and access to market information (Aker and Mbiti, 2010). Recent research suggests that mobile telephone penetration may have some positive effect on growth in low-income African countries,¹² and there is the potential for substantial benefits from internet access when usage reaches a critical mass (Chavula, 2013). Internet access may be particularly important in providing a wealth of information on production methods, especially in relatively small-scale, low- and medium-technology activities, supporting both the upgrading of existing production and diversification into new activities.

The case of mobile phone apps demonstrates the potential to increase the development benefits of ICTs through adaptation to local circumstances. This adaptation process could also contribute to economic transformation. For example, locally developed apps in ODCs such as Kenya have provided valuable business opportunities for a new generation of entrepreneurs, with the potential to create a new and dynamic business sector. Vertical interventions may thus be appropriate to foster the development of such activities in LDCs.

In the long term, global electronic communications may also create potential opportunities for services exports. Possibilities which might merit investigation include, for example, the potential for outsourcing a growing range of high-value services, creative and cultural exports (e.g. music and video) via Internet downloading, transforming a “brain drain” into a system of global distance-working, or exploring the potential for “virtual” tourism. Where 3D printing can be used to produce spare parts for capital equipment, this could offer a means of averting the disruption to production resulting from delays in acquiring them and the high costs of express delivery.

For landlocked countries and the more remote island LDCs, uncertainties about the potential effects on transportation costs of international measures to tackle climate change suggest a particular need to exploit to the full any opportunities arising from the emerging “weightless economy”. Rwanda and Chad, for example, are already investing in G4 Internet connectivity.

Where mobile phone coverage is relatively high, it can facilitate financial inclusion, agricultural extension and technology adoption, and access to market information.

Internet access can provide a wealth of information on production methods, especially in relatively small-scale, low- and medium-technology activities.

Landlocked countries and the more remote island LDCs need to exploit to the full any opportunities arising from the emerging “weightless economy”.

5. RURAL DEVELOPMENT

a. Upgrading agriculture

Since the majority of the population in most LDCs lives in rural areas, rural development is critical both for structural transformation and for poverty eradication. Agricultural upgrading is an important dimension of such development. However, generalization across countries is particularly problematic, as there are large differences, both between and within countries, for example in agro-ecological conditions, cropping patterns, land tenure systems and ownership patterns. Thus the recommendation of the InterAcademy Council (2004:xviii) for “numerous ‘rainbow evolutions’... rather than a single Green Revolution” in sub-Saharan Africa seems equally applicable to LDCs.

Rural development is critical both for structural transformation and for poverty eradication.

In addition to providing adequate funding for R&D in agriculture and ensuring access to inputs, LDCs need to restore and strengthen agricultural extension services.

Nonetheless, some common factors may be identified. Above all, chapter 4 of this Report highlights the critical role of increasing agricultural productivity in structural transformation. Since yields vary widely within many LDCs, a first step is to level up productivity to current best-practice levels: yields on demonstration plots can be two to five times the local average (Africa Progress Panel, 2014: 59). Additional improvements can be achieved by advancing the technological frontier through the further development of practices and technologies in line with (changing) local circumstances and climatic and soil conditions. Incomes can also be increased by shifting towards higher value crops, supplemented by small livestock farming, to respond to changes in demand associated with poverty reduction.

Investment in irrigation, drainage, transport and energy could also substantially increase agricultural productivity.

In addition to providing adequate funding for R&D in agriculture and ensuring access to inputs, this highlights the need for LDCs to restore, strengthen and improve agricultural extension services. This depends in large measure on a proactive public sector role (IEG, 2007: 59–62). Regional cooperation can also play a key role, both by increasing yields towards regional best-practice levels (Nin-Pratt et al., 2009) and by strengthening agricultural R&D (as exemplified by the International Rice Research Institute in South-East Asia).

In many LDCs, investment in irrigation, drainage, transport and energy could also substantially increase productivity. As surplus labour is shed from agriculture, the potential for mechanization of agricultural production may also ultimately increase. Since ownership of larger equipment is unlikely to be viable (or affordable) for individual small farmers, this may require fostering local rental markets or collective ownership through cooperatives.

Poverty reduction allows both increased agricultural productivity and diversification into non-staple crops.

b. Complementarity of agriculture and non-farm rural incomes

Raising agricultural productivity increases output while displacing labour. In most LDCs, small and slow-growing markets mean that rapidly increasing agricultural output would reduce prices, offsetting the benefits to producers (Ellis, 2009). Thus higher demand for food, as well as labour, is essential for increasing farm incomes.

Poverty reduction is a very effective means of achieving this, disproportionately increasing demand for both staple and higher value foods, thus allowing both increased agricultural productivity and diversification into non-staple crops. However, if this increase in demand were to occur without an increase in agricultural production, food prices would increase, giving rise to strong inflationary pressure and thus reducing competitiveness.

Agricultural upgrading and the generation of non-farm employment and incomes through rural economic diversification are critically interdependent.

Thus, increasing incomes without improved agricultural productivity generates inflation and/or increases imports; but increasing agricultural productivity without increasing incomes in other sectors limits the benefits to agricultural producers (Diao et al., 2007). Ideally, therefore, agricultural productivity and non-agricultural incomes should rise in parallel, so that demand growth balances supply growth.

Increasing demand for food and labour is generally seen as arising from urban industrialization and rural-urban migration. However, the very large proportion of the population in rural areas and relatively rapid population growth in most LDCs, coupled with limits to the sustainable rate of urbanization, suggest that this alone will be insufficient to eradicate poverty by 2030.¹³ Since cities cannot absorb all the labour displaced from agriculture, it will be necessary to increase non-agricultural incomes in rural areas.

Thus, agricultural upgrading and the generation of non-farm employment and incomes through rural economic diversification are critically interdependent

in LDCs (chart 36).¹⁴ Recent cross-country evidence confirms that growth is more inclusive and reduces poverty more rapidly when based on movement of labour from agriculture to rural off-farm employment and to smaller towns than when it is based on agglomeration in large cities (Christiaensen and Todo, 2014).

As well as limiting the social and environmental impacts of urbanization by absorbing surplus agricultural labour locally, rural economic diversification can provide resources for agricultural investment and increased input use by allowing farm households to generate off-farm incomes. Development of local food processing and packaging industries and transport services, in particular, can also support agricultural upgrading by increasing access to urban and export markets.

Thus, the diversification of rural economies to develop non-farm income-earning activities should be a high priority in structural transformation in LDCs, particularly in the post-2015 context. For this reason, this Report proposes the establishment of an international support measure to promote non-agricultural entrepreneurship among women in rural areas in LDCs (Epilogue of this Report).

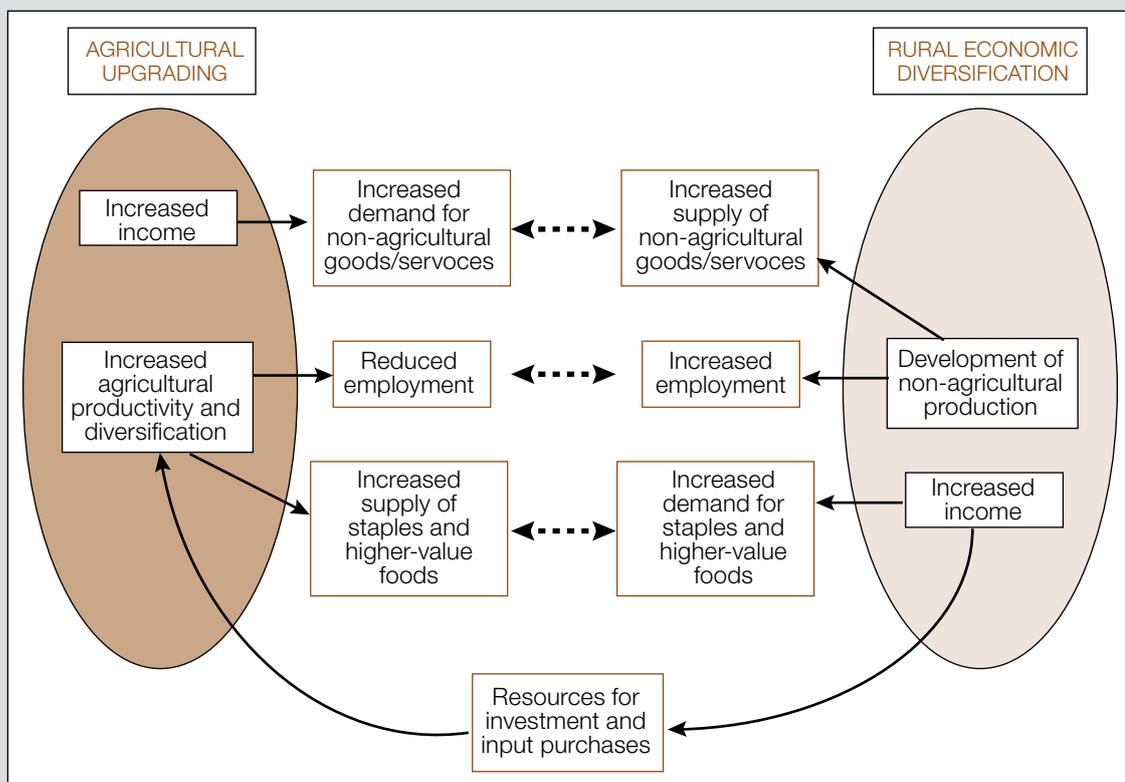
c. Electrification as a driver of rural economic diversification

Rural electrification is by no means the only area in which rural areas are disadvantaged. However, it is an essential component, and a particularly important driver, of rural economic diversification, and its potential is greatly increased by renewable energy technologies (box 5 below).

As well as limiting the social and environmental impacts of urbanization, rural economic diversification can provide resources for agricultural investment and increased input use.

Rural electrification is a particularly important driver of rural economic diversification.

Chart 36. Complementarity of agricultural upgrading and rural economic diversification



Source: UNCTAD secretariat.

The development impact of infrastructural investment in rural areas can be increased by using labour-intensive methods and local procurement to increase income generation.

This will not happen automatically, relying on market forces alone. Indeed, it has been observed that initial improvements in the performance of utilities following privatization in developing countries have not been sustained, and have been followed by significant declines in investment and increased indebtedness (Cook and Uchida, 2008). Neither have privatized utilities or public-private partnerships developed rural electrification on the anticipated scale, while small-scale local providers have filled the gap only to a very limited extent (Cook, 2011).

China's success in increasing access to electricity from 61 per cent in the late 1970s to more than 99 per cent by 2010, which helped to drive rapid growth of rural industry and employment, offers important lessons.¹⁵ In contrast with most other developing countries, China adopted an experimental, bottom-up approach, centred on local resources but with active support from the central Government. Local pilot projects were conducted, and then extended to other rural areas, incorporating the lessons learned. Rather than extending the existing grid, village- or community-level grids were established, upgraded and connected to regional networks. This highlights the importance of combining strong government commitment and support, particularly in finance and design, with active local participation and capacity-building, and learning from experimentation (Bhattacharyya and Ohiare, 2012).

d. Sequencing investment in rural infrastructure

Rural infrastructure development in LDCs should begin with investment in sectors which most increase productive potential, but which have a limited effect on local aggregate demand.

The infrastructural investment needed for human development and economic transformation in rural areas of LDCs is considerable, and much greater than in urban areas. It encompasses construction of schools and health facilities, water and electricity provision, increased and improved transport infrastructure and often irrigation and/or drainage. By using labour-intensive methods and local procurement to increase income generation, such investment can help to kick-start rural development by creating the demand necessary to provide incentives for investment in the development of non-farm enterprises and agricultural upgrading.

Feeder roads to local market towns are particularly important, and can contribute significantly to consumption growth and poverty reduction (Dercon and Hoddinott, 2005; Dercon et al., 2009). There may be some initial benefits to fledgling non-farm enterprises from the "natural protection" arising from poor transport links. However, as such enterprises grow, and they seek to expand to wider (urban and export) markets, limited transport connections will become disadvantageous as market fragmentation will limit the potential for economies of scale.

In a second phase, local economies could respond effectively to the increased demand arising from investment with a greater employment effect.

The sequencing of infrastructural investment is thus important. If demand is increased before the establishment of essential conditions for investment in increased productive capacity, the primary effect will be to boost imports and/or inflation. This suggests that rural infrastructure development in LDCs should begin with investment in sectors which most increase productive potential, but which have a limited effect on local aggregate demand (e.g. electrification and ICTs). This would create fertile ground for a second phase, in which local economies could respond effectively to the increased demand arising from investment with a greater employment effect (e.g. transport infrastructure, especially if the required works use labour-intensive techniques). Ideally, the ability of farms and non-farm enterprises to compete and exploit economies of scale would grow in parallel with the scope of the market.

Box 5. Rural electrification

Limited access to electricity is a major obstacle to rural development in many LDCs. In Asian LDCs, overall access to electricity ranges from 30 per cent of the population to 78 per cent. In all but two LDCs in the Africa plus Haiti group for which data are available, the range is between 7 per cent and 32 per cent.^a Access in rural areas is generally much lower. Even in Bhutan, where electricity is a major export, much of the rural population lacks access to electricity (Dorji et al., 2012). And where power is available, outages are often a serious problem, disrupting production or imposing additional costs for the purchase and operation of generators (Reinikka and Svensson, 2002; Adenikinju, 2005). In some African LDCs,^b power outages may occur on more than 120 days per year (Ramachandran, 2008).

Many of the obstacles to rural electrification arise directly or indirectly from remoteness, low population density and poverty. Large distances from the existing grid increase the cost of connection to it. Geographical dispersion of the population and low per capita demand increase the area that needs to be covered by a power station of a given scale. Hence, either economies of scale are lost, or electricity must be transmitted over much longer distances, entailing much greater transmission losses, investment and maintenance costs. The resulting high costs, with very limited purchasing power, render conventional centralized power generation unviable.

These considerations apply much less to renewable energy technologies, which have much smaller economies of scale. While they struggle to compete in urban settings and in developed countries, they are much more competitive in remote, sparsely inhabited and under-resourced rural areas. Solar power, micro-hydro and wind turbines can be used at the community level, or even at the household/firm level, and provide a substantially lower cost option than grid connection in many rural contexts (Szabó et al., 2011; Deichmann et al., 2011; Chakrabarti and Chakrabarti, 2002; Nguyen, 2007).

While diesel generators can play a similar role, their recurrent costs (for fuel) are very high. Although they are currently cost-competitive in rural areas in some LDCs, this is often due to fuel subsidies (Szabó et al., 2011). Moreover, while fossil fuel costs are likely to rise further as a result of efforts to tackle climate change, renewable energy equipment can be expected to become cheaper over time owing to technological advances, learning effects and economies of scale, tipping the balance progressively further towards renewables (Deichmann et al., 2011).

Electrification has the potential to serve as an engine of rural development and economic transformation. As with infrastructure more generally, electricity is particularly important for growth at lower income levels (Romp and De Haan, 2007). Manufacturing firms in low-income countries in sub-Saharan Africa, for example, are particularly affected by poor provision of electricity (Escribano et al., 2009). Improved access to it could substantially increase the scope for rural non-agricultural enterprises, and the potential for investments in equipment to increase labour productivity. It also supports agricultural mechanization by allowing the provision of essential services, such as welding, and allows farmers to refrigerate perishable produce (Kirubi et al., 2009), thereby reducing post-harvest losses and raising farmers' incomes by averting the need to sell soon after the harvest, when prices are at their lowest.^c

Rural electrification can also play a direct role across the whole spectrum of the planned SDGs. It is a critical factor in fuel switching, allowing households to move from highly polluting and carbon-inefficient traditional fuels such as fuelwood, charcoal and dung, which often cause serious health problems through indoor air pollution, particularly for women and children (Heltberg, 2004; Lewis and Pattanayak, 2012). It improves education by allowing pupils to study later in the evening (Gustavsson, 2007; Jacobson, 2007), improves the operation of health facilities, and removes a major obstacle to recruiting and retaining health professionals and teachers in rural areas (IEG, 2008). Electric pumps can help widen access to clean water (Kirubi et al., 2009); and, together with the greater potential for mechanical processing of foods (IEG, 2008), this can greatly reduce the burden of domestic work performed by women and girls.

a While data are available for all the Asian LDCs except Bhutan, they are not available for any of the island LDCs, or for around half of the African LDCs. The two LDCs in the Africa plus Haiti group with greater access are Angola (38 per cent) and Senegal (56 per cent).

b For example, the Democratic Republic of the Congo, the Gambia, Guinea, Uganda, Rwanda and the United Republic of Tanzania.

c In Ethiopia, rural electrification has allowed an increase of nearly 50 per cent in working hours, increasing value-added per worker by more than 40 per cent (Ayele et al., 2009). Among low-income ODCs, evidence from Zimbabwe indicates strong effects on the number and scope of SMEs and machinery use, increasing employment by 270 per cent (Mapako and Prasad, 2007), while off-grid rural electrification in Kenya has been observed to increase productivity by 100–200 per cent, simultaneously lowering output prices and increasing producers' incomes by 20–80 per cent (Kirubi et al., 2009).

E. Macroeconomic policies

The structural transformation necessary for LDCs to achieve the SDGs sustainably requires macroeconomic policies which promote investment, technological change and demand growth.

The structural transformation necessary for LDCs to achieve the SDGs sustainably requires macroeconomic policies which promote both investment – which spurs technological change in the production sphere – and demand growth to provide opportunities for profitable productive investment and to allow labour productivity growth along with increasing employment. This suggests that the overall macroeconomic policy stance in LDCs should be relatively expansionary. While due consideration should be given to financial sustainability and price stability, it is important to avoid being unnecessarily restrictive in this regard.

A monetary policy regime that focuses exclusively on limiting inflation is unlikely to be optimal in terms of real economy outcomes.

A monetary policy regime that focuses exclusively on limiting inflation is unlikely to be optimal in terms of real economy outcomes (e.g. growth, investment, employment and poverty alleviation), particularly if the inflation target is set too low. The experience of the four countries considered in chapter 5 of this Report suggests that a moderate rate of inflation is not incompatible with rapid economic transformation, particularly in its earlier stages: consumer price inflation in China, for example, averaged 13 per cent per year between 1987 and 1995, while the average rate in Viet Nam since 2003 has been 10 per cent.

Monetary policy should not unduly restrict the availability of credit for productive investment oriented towards structural transformation.

It is important that monetary policy should not unduly restrict the availability of credit for productive investment oriented towards structural transformation, and particularly for innovative producers starting up or seeking to expand their production. By reorienting credit (e.g. through regulatory measures and development banks) from consumption and residential construction towards productive investment, its effect on demand can be reduced and that on supply increased, limiting, if not neutralizing, any inflationary effect.

Public expenditure constraints can be eased by increasing and diversifying public revenue sources.

Public expenditure constraints can be further eased by increasing and diversifying public revenue sources, as discussed in section C4 of this chapter. To maintain financial sustainability, the public sector deficit as a share of GDP should not, over the long term, exceed: (i) the economic growth rate; or (ii) public investment with a rate of return greater than the interest rate.

In commodity-dependent LDCs, resource rents can perform a countercyclical role.

Uncertainties associated with volatile demand growth are another potential threat to investment. Deficit targets should therefore allow flexibility for countercyclical policies in economic downturns, particularly in countries heavily dependent on commodity exports. Some tax and expenditure policies – for example progressive taxation, welfare and social protection policies – can serve as automatic stabilizers.

In commodity-dependent LDCs, resource rents can also perform a countercyclical role, by accumulating resources in stabilization funds when prices are high and depleting them when prices are low – an approach adopted by Chile following the 2007 financial crisis (UNCTAD, 2010). However, this depends on stabilization funds being initiated when prices are relatively high. Where income from extractive industries is geographically skewed, resource rents can also provide a means of redistributing the benefits more equitably.

As noted above, limited public revenues and large infrastructural investment requirements in LDCs imply the need for substantially greater ODA; and its development impact can be increased by using labour-intensive construction methods. The resulting net inflow of foreign exchange could be used for increased imports of capital goods.

While the rise in aggregate demand associated with this approach is sometimes seen as causing inflationary pressures,¹⁶ and thus reducing

competitiveness (IMF, 2005), such concerns are likely to be misplaced in the context of LDCs pursuing structural transformation in the post-2015 context, for three reasons. First, such exchange rate effects are temporary rather than permanent, as the increase in imports associated with higher ODA is merely delayed, not avoided. As aggregate demand rises, so does the demand for imports of consumer goods, and for capital goods and intermediate goods used in their production, which neutralizes the adverse exchange rate effect over time. The effect of a progressive increase in ODA would be more limited, though stretched over a longer period; and the process would be reversed once ODA began to decline, as may be expected once the infrastructural investment required to meet the SDGs nears completion.

Second, any potential inflationary effect would be reduced to the extent that domestic supply increased to meet the additional demand. Thus, any potential inflationary effect could be minimized by directing increased ODA (and economic policies) towards expanding domestic productive capacity and productivity to match the rise in demand. Equally, any potential effects on competitiveness would be offset, and could even be reversed, by rising productivity in tradable sectors.

Third, competitiveness effects largely arise from exchange rate changes relative to competitors. Since the SDGs imply substantially increased ODA flows, not only to all LDCs but also to most other low-income (and some lower-middle-income) countries, any exchange rate appreciation in one LDC would be at least partly offset by similar effects among its competitors.

F. International policies and the international development architecture

The planned SDGs represent an extraordinarily and admirably ambitious programme on the part of the global community, and they will be particularly challenging for the LDCs. Achieving them will require considerable efforts by LDC governments, but also commensurate efforts by the international community. Such efforts need to include not only greater ODA, but also changes across the whole system of global economic governance to produce an environment that will foster structural transformation in LDCs, rather than impeding it. As *The Least Developed Countries Report 2010* argued, “for achieving accelerated development and poverty reduction in LDCs, there is need not only for improved international support mechanisms (ISMs) which are specifically targeted at the LDCs but also for a new international development architecture (NIDA) for the LDCs”(UNCTAD, 2010: I). This is more important than ever in the context of the SDGs.

1. ODA: QUANTITY AND QUALITY

As noted above, there will have to be considerable public investment if LDCs are to achieve the SDGs and economic transformation. A first step towards filling the funding gap would be for donors to fulfil their long-standing commitments to provide ODA to LDCs equivalent to 0.15–0.20 per cent of their gross national income (GNI). This would approximately double total ODA to LDCs. Restoring the share of economic infrastructure and non-agricultural productive sectors in ODA to their 2000 level would more than double the proportion of ODA to these sectors, implying an increase in the order of 300 per cent in the amounts available for these purposes (chapter 2 of this Report). Meeting the 0.15–0.20

Achieving the SDGs will require considerable efforts by LDC governments, but also commensurate efforts by the international community.

Achieving the SDGs will require changes across the whole system of global economic governance to produce an environment that will foster structural transformation in LDCs.

Were donors to fulfil their long-standing commitments to provide ODA to LDCs equivalent to 0.15–0.20 per cent of their GNI, this would approximately double total ODA to LDCs.

Restoring the share of economic infrastructure and non-agricultural productive sectors in ODA to their 2000 level would more than double the proportion of ODA to these sectors.

per cent target would allow absolute amounts allocated to other sectors to increase simultaneously.

The target for ODA to LDCs could, in principle, be met without additional budgetary costs by increasing LDCs' share in total disbursements.

The immediate prospects for ODA are uncertain, as current budgetary pressures continue to limit increases in ODA from traditional donors. However, the post-2015 agenda and the SDGs should further increase political pressure on donors to fulfil their long-standing commitments on ODA, even if these are not formally included as SDG targets. Neither are budgetary constraints an insuperable obstacle. The United Kingdom, for example, met the target of providing 0.7 per cent of its GNI as ODA for the first time in 2013, despite being in the midst of a rigorous austerity programme. The target for ODA to LDCs could, in principle, be met without additional budgetary costs by increasing LDCs' share in total disbursements.

A progressive build-up of ODA to the target level over several years may be more beneficial, allowing absorption and productive capacities in LDCs to increase.

Financial cooperation from dynamic developing countries could also help to fill the gap. As discussed earlier (section C of chapter 2 of this Report), such support to LDCs has grown rapidly in recent years, albeit from a low base. If such growth continues, it could make a modest contribution to filling the shortfall in ODA from traditional donors.

A progressive build-up of ODA to the target level over several years may in any case be more beneficial, allowing absorption and productive capacities in LDCs to increase. As discussed above, sequencing is also important, with significant benefits to rural diversification from focusing ODA initially on sectors which impact more on productive capacities than on demand, and later on sectors which increase demand more than productive capacities. Strengthening tax administration and collection capabilities is also an early priority.

ODA needs to follow and support national development strategies, rather than national strategies being driven by ODA or donor priorities.

This highlights the need for ODA to follow and support national development strategies, rather than national strategies being driven by ODA or donor priorities. This has been a clearly stated commitment by donor countries since the 2005 Paris Declaration on Aid Effectiveness, in which donors committed to “respect partner country leadership and help strengthen their capacity to exercise it”, and to “base their overall support — country strategies, policy dialogues and development co-operation programmes — on partners' national development strategies” (OECD, 2005, paras 14 and 15).

Improved donor coordination and greater stability and predictability of ODA disbursements would greatly improve the environment for development.

While this principle has been restated in subsequent agreements on aid effectiveness (OECD, 2008, para 12; OECD, 2011, para 11a), progress has been very limited. There is no indicator within the aid effectiveness framework to assess the alignment of ODA with national development strategies, and evidence of any improvement is very limited and largely based on self-reporting by donors (OECD, 2012). Even by the much weaker criterion of the proportion of funding provided through modalities associated with country results frameworks, performance by donors has varied considerably, bilateral donors performing particularly weakly; and project support rarely even uses recipient countries' budget and planning systems.¹⁷ National accountability structures and procurement processes are particularly underused (Global Partnership for Effective Development Co-operation, 2014: 37–40; 45–49).

Among other donor commitments on aid effectiveness, improved donor coordination within the framework of national strategies and greater stability and predictability of ODA disbursements would greatly improve the environment for development. Streamlining aid to limit administrative burdens on recipient countries with limited capacity could contribute significantly to policymaking and administration in other areas, by freeing up scarce human resources. Further untying of aid would also be highly beneficial, not only reducing costs (by widening choice and increasing competition among suppliers), but also increasing the potential for local, regional and triangular procurement.

Even if donors feel unable to fulfil their long-standing commitments on the amounts of ODA due to fiscal constraints, this should be reflected in accelerated progress towards fulfilling their commitments on aid effectiveness.

2. INTERNATIONAL FINANCE

As noted in chapter 2 of this Report, one LDC remains in debt distress and ten others are at high risk of debt distress. For these countries, a definitive solution to their debt problems is an urgent priority. For other LDCs, it is essential to avoid falling into debt distress in the future.

More generally, there is a need for a more effective system to prevent debt and financial crises and for a more development-friendly response to such crises when they occur. As discussed in the previous section, if sufficient ODA is not forthcoming to meet LDCs' considerable needs for infrastructural investment to meet the planned SDGs, constraints on their mobilization of public revenues may lead to increased external borrowing, with the risk of renewed debt crises. This could derail the SDG process entirely, as demonstrated by the serious impact of debt problems and associated adjustment programmes on economic and human development throughout the 1980s and 1990s, most notably in African LDCs. Reform of the international financial system to avoid a repetition of this experience is thus a high priority.

Compensatory financing for economic shocks, on concessional terms for LDCs, could also play an important role in reducing harmful volatility in commodity-dependent LDCs. While fuel and mineral exporters may be able to achieve a similar goal through stabilization funds using resource rents, the potential is more limited for countries that depend on exports of agricultural goods, and where shocks arise from price increases for major imports such as food and fuels.

A strengthening of the global governance of taxation could contribute significantly to increasing the ability of LDCs (and other countries) to generate public revenues. As the *Trade and Development Report 2014* (UNCTAD, 2014a: 192-193) observes,

the lack of fiscal space and the constraints on expanding it in many low-income countries are among the most serious obstacles to escaping the underdevelopment trap. This general need for maintaining or expanding fiscal space faces particular challenges in the increasingly globalized economy.... The international tax architecture has failed so far to properly adapt to this reality.

The International Monetary Fund (IMF, 2013: vii) has taken a similar view:

Recognition that the international tax framework is broken is long overdue. Though the amount is hard to quantify, significant revenue can also be gained from reforming it. This is particularly important for developing countries, given their greater reliance on corporate taxation, with revenue from this taxation often coming from a handful of multinationals.

Some efforts are under way at the international level to tackle financial secrecy regimes and the erosion of the corporate tax base through transfer price manipulation by transnational corporations to shift their profits into lower tax jurisdictions (OECD, 2013). However, the main forum for such efforts is the OECD rather than a global institution. It is therefore important to ensure that LDCs' interests are taken fully into account to ensure that they benefit from any changes (ECOSOC, 2014).

Any shortfall from ODA targets should be matched by accelerated progress on aid effectiveness.

There is a need for a more effective system to prevent debt and financial crises and for a more development-friendly response to such crises when they occur.

Compensatory financing for economic shocks, on concessional terms, could also play an important role in reducing harmful volatility in commodity-dependent LDCs.

A strengthening of the global governance of taxation could contribute significantly to increasing the ability of LDCs to generate public revenues.

Measures to promote investments by diaspora could have an effect on structural transformation disproportionate to their potential scale.

The potential advantages of investments by LDC diasporas (as discussed in section C3 of this chapter) suggest that measures to promote such investments could have an effect on structural transformation disproportionate to their potential scale. Such measures include, for example, the Investing in Diaspora Knowledge scheme proposed in *The Least Developed Countries Report 2012*, and matching funding from ODA and national governments for diaspora investments in infrastructure and public goods (UNCTAD, 2012: 145, box 14; 147–150).

3. INTERNATIONAL TRADE

Structural transformation is critically dependent on international trade rules, particularly to facilitate the development of new economic activities and non-traditional exports.

Structural transformation is critically dependent on international trade rules, particularly to facilitate the development of new economic activities and non-traditional exports. The LDCs' agenda with respect to WTO issues is set out in the Dar-es-Salaam Declaration of LDC Trade Ministers (WTO, 2009). Priorities include providing support for effective utilization of duty-free and quota-free (DFQF) access to developed-country markets, and an appropriate relaxation of rules of origin to allow LDCs to exploit DFQF access more fully and effectively. DFQF access could also usefully be extended to LDC exports by other developing countries that are in a position to do so.

Increased technical assistance and capacity-building are also a priority, for example for strengthening LDCs' capacities to conform to trading partners' standards.

In practice, further erosion of trade preferences seems inevitable as trade liberalization progresses globally. Such effects should be taken fully into account in the design of future multilateral trade agreements affecting products of export interest to LDCs, such as tropical agricultural produce and garments. Increased technical assistance and capacity-building are also a priority, for example for strengthening LDCs' capacities to conform to standards set by major markets in relation to sanitary and phytosanitary measures and technical barriers to trade, and ensuring that such measures are not used as hidden trade restrictions.

It is important to ensure that additional resources are provided to support EIF-related projects at the domestic level in order to make the EIF an effective tool for export promotion and structural transformation.

Greater and more predictable support to LDCs in the form of Aid for Trade is also needed within and beyond the Enhanced Integrated Framework (EIF). After a slow start, the EIF is beginning to have a meaningful impact in assisting LDCs to mainstream trade in their development strategies and to build their productive capacities. It is important to ensure that additional resources are provided to support EIF-related projects at the domestic level in order to make the EIF an effective tool for export promotion and structural transformation.

LDC obligations in any future WTO agreements should be tailored to their needs for achieving the planned SDGs sustainably through structural transformation.

Like other ODA, Aid for Trade should be firmly based on the principle of country ownership. It should also support export diversification by facilitating, inter alia, the development of supply-side capacity, technological upgrading and trade-related infrastructure with a view to directly supporting the development of LDCs' productive capacities.

Successful economic transformation also depends on making special and differential treatment more effective, beyond merely allowing longer implementation periods to LDCs for obligations under WTO agreements. LDC obligations in any future WTO agreements should be tailored to their particular circumstances and their needs for achieving the planned SDGs sustainably through structural transformation. There should also be an unequivocal commitment to allowing LDCs the maximum flexibility available under existing and any future WTO agreements. In addition, the WTO accession process for LDCs should be accelerated and facilitated, and should not include conditions that extend beyond the obligations of existing LDC members.

In the field of technology, developed countries should expeditiously fulfil their obligation to promote technology transfer to LDCs, as provided under Article

66.2 of the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). Full and expeditious implementation of the Development Agenda of the World Intellectual Property Organization could also help LDCs to derive greater benefit from their intellectual property. Such steps would bring the global intellectual property regime closer to the objective of the TRIPS Agreement (stated in its Article 7), to ensure that intellectual property rights “contribute to... the transfer and dissemination of technology... in a manner conducive to social and economic welfare”.

Finally, the international trade architecture is increasingly complicated by the web of bilateral and regional trade and investment agreements which has become increasingly complex in recent years. Many of those agreements impose obligations on LDCs which go far beyond their multilateral commitments (UNCTAD, 2014a). A strong case can be made for a comprehensive review of existing agreements to which LDCs are parties, within the framework of the post-2015 agenda. Such a review should identify any obligations which may constrain effective policies directed towards achievement of the SDGs, or the structural transformation this requires, with a view to modifying such provisions as necessary.

4. TACKLING CLIMATE CHANGE EFFECTIVELY AND EQUITABLY

Effective global action for climate change mitigation is urgently needed. Nowhere is this more important than in the LDCs, in light of their particular exposure and vulnerability to the impacts of global warming and the limited resources available to them for adaptation (IPCC, 2014). As discussed in chapter 3 of this Report (box 3), this will require a major reduction in global carbon emissions; and the means of achieving this reduction may have important implications for the international economic environment for LDCs.

While development strategies should reflect the need to reduce global carbon emissions, it is generally recognized that LDCs’ emissions should not be limited in such a way as to impede their development. This will be essential if LDCs are to achieve the planned SDGs.

Beyond this, it is important to take account of the potential secondary effects of global climate policies on LDCs’ development prospects as a result of their impacts on key global markets such as fossil fuels, air travel (affecting tourism) and air freight (affecting some horticultural exports), and on fuel costs for surface transportation (particularly affecting landlocked countries and those located furthest from major markets).

Some impacts in these areas seem inevitable if any global climate change mitigation regime is to be effective. However, to the extent possible, international measures should be designed in such a way as to minimize adverse impacts on LDCs. Any impacts that may be unavoidable should be carefully evaluated and taken into account in development strategies, and compensation provided that is additional to ODA and to support for climate change adaptation. It would be appropriate for such support to focus on providing the resources needed for diversification of the economy away from the sectors affected. This should include funds for productive domestic investment, and encompass changes in trade regimes to facilitate the development of new exports from the affected countries as well as financial support.

Developed countries should expeditiously fulfil their obligation to promote technology transfer to LDCs.

A strong case can be made for a comprehensive review of existing bilateral and regional trade and investment agreements to which LDCs are parties, within the framework of the post-2015 agenda.

It is important to take account of the potential secondary effects of global climate policies on LDCs’ development prospects as a result of their impacts on air travel, air freight and fuel costs for surface transportation.

International measures should be designed in such a way as to minimize adverse climate change impacts on LDCs.

Such impacts should be compensated with changes to trade regimes favour new exports, as well as financially.

Notes

- 1 The average cost of sending remittances to LDCs is 11.1 per cent, compared with 7.3 per cent to ODCs, or more than 50 per cent higher. (UNCTAD secretariat calculations based on data from the World Bank, *Remittance Prices Worldwide* database, accessed September 2014).
- 2 See section F2 of this chapter.
- 3 The exceptions are Equatorial Guinea, Angola, Kiribati and Lesotho.
- 4 While resource rents in Angola and Equatorial Guinea have been sufficient to avoid aid dependence, very few, if any, other LDCs are likely to be able to replicate this in the near future.
- 5 This is a medium-term goal of the African Union's Africa Mining Vision (African Union, 2009).
- 6 Based on data from the World Bank, *World Development Indicators* database (accessed September 2014).
- 7 As well as the establishment of new industries, Article XVIII also encompasses "the establishment of a new branch of production in an existing industry", "the substantial transformation of an existing industry", "the substantial expansion of an existing industry supplying a relatively small proportion of the domestic demand" and "the reconstruction of an industry destroyed or substantially damaged as a result of hostilities or natural disasters" (WTO, 2012, Notes to Article XVIII, paras 1-2, note 3).
- 8 While the EPZ in Mauritius contributed to narrowing gender differentials in employment and wages over time, this would appear to depend on conditions which are unlikely to be replicated in most LDCs: relatively full employment of male workers; an EPZ of a sufficient scale relative to the overall economy to absorb enough of the available female labour force to drive up their wages substantially; and competitiveness strong enough not to be eroded by such wage increases.
- 9 A recent field experiment in Sri Lanka, for example, found that formalization had very little effect on the profits of most informal enterprises, but extremely large positive effects on a handful of firms, demonstrating their potential for dynamic growth (Mel et al., 2013).
- 10 Even in China, R&D by foreign-owned firms has had a significantly *negative* effect on technical change in local companies, reflecting competition for limited specialised human resources and limited linkages between foreign and local firms (Fu and Gong, 2011).
- 11 Based on data from World Bank, *World Development Indicators* database (accessed September 2014).
- 12 All but four of the countries included in the low-income category in this study are LDCs.
- 13 Even in China, the rural population has fallen only from 81 per cent to 47 per cent in the past 34 years.
- 14 The role of non-farm rural employment in LDCs is discussed in UNCTAD (2013: 63-67).
- 15 Combined with rapid growth in total industrial value added, the rise in the share of the rural economy in China's industrial output from 9 per cent to 36 per between 1978 and 1993 implies a 17-fold increase in rural industrial output in just 15 years.
- 16 Inflationary pressures can, in principle, be sterilized by selling bonds domestically (where domestic financial markets are sufficiently developed); but even where bond markets exist, this risks crowding out private investment, by encouraging investors to buy government bonds rather than investing in productive capacity.
- 17 Across developing countries as a whole, only 49 per cent of donor funding went through national public financial management and procurement systems in 2013. There was no improvement between 2010 and 2013; the proportion fell in the majority of countries where data were available for both years; and there has been little correlation between use of national systems and their quality, or between changes in use and changes in quality.

References

- Acemoglu D (2001). Directed technical change. NBER Working Paper No. 8287, National Bureau of Economic Research, Cambridge, MA.
- Adenikinju A (2005). Analysis of the cost of infrastructure failures in a developing economy: The case of the electricity sector in Nigeria. AERC Research Paper No. 148, African Economic Research Consortium, Nairobi.
- Africa Progress Panel (2014). *Africa Progress Report 2014: Grain, Fish, Money – Financing Africa’s Green and Blue Revolutions*. Available at: <http://africaprogresspanel.org/publications/policy-papers/2014-africa-progress-report/> (accessed 29 August 2014).
- African Union (2009). Africa mining vision. Addis Ababa.
- Aker JC and Mbiti IM (2010). Mobile phones and economic development in Africa. *Journal of Economic Perspectives*, 24(3): 207–232.
- Ayele G, Chamberlin J, Moorman L, Wamisho K and Zhang X (2009). Infrastructure and cluster development: A case study of handloom weavers in Ethiopia. Discussion Paper No. ESSP2 001, International Food Policy Research Institute (IFPRI), Washington DC, and Ethiopian Development Research Institute, Addis Ababa.
- Bacchetta M, Ernst E and Bustamente JP (2009). Globalization and informal jobs in developing countries. A joint study of the International Labour Office and the secretariat of the World Trade Organization, Geneva.
- Bhattacharyya SC and Ohiare S (2012). The Chinese electricity access model for rural electrification: Approach, experience and lessons for others. *Energy Policy*, 49, Special section on Fuel Poverty Comes of Age: Commemorating 21 Years of Research and Policy: 676–687.
- Bhattacharya D (1998). Export processing zones in Bangladesh: Economic impact and social issues. Multinational Enterprises Programme Working Papers No. 80, International Labour Office, Geneva.
- Boly A, Coniglio ND, Prota F and Seric A (2014). Diaspora investments and firm export performance in selected sub-Saharan African countries. *World Development*, 59(C): 422–433.
- Chakrabarti S and Chakrabarti S (2002). Rural electrification programme with solar energy in remote region – a case study in an island. *Energy Policy*, 30(1): 33–42.
- Chavula HK (2013). Telecommunications development and economic growth in Africa. *Information Technology for Development*, 19(1): 5–23.
- Christiaensen L and Todo Y (2014). Poverty reduction during the rural–urban transformation: The role of the missing middle. *World Development, Economic Transformation in Africa*, 6: 343–358.
- Chuang Y-C and Hsu P-F (2004). FDI, trade, and spillover efficiency: Evidence from China’s manufacturing sector. *Applied Economics*, 36(10): 1103–1115.
- Cling J-P, Razafindrakoto M and Roubaud F (2010). The informal economy in Viet Nam. A study for the Labour Market Project, International Labour Office, Geneva.
- Cook P (2011). Infrastructure, rural electrification and development. *Energy for Sustainable Development*, Special issue on Off-Grid Electrification in Developing Countries, 15(3): 304–313.
- Cook P and Uchida Y (2008). The performance of privatised enterprises in developing countries. *Journal of Development Studies*, 44(9): 1342–1353.
- de Mel S, McKenzie D and Woodruff C (2013). The demand for, and consequences of, formalization among informal firms in Sri Lanka. *American Economic Journal: Applied Economics*, 5(2): 122–150.
- Deichmann U, Meisner C, Murray S and Wheeler D (2011). The economics of renewable energy expansion in rural sub-Saharan Africa. *Energy Policy*, 39(1): 215–227.
- Demetriades PO and James GA (2011). Finance and growth in Africa: The broken link. *Economics Letters*, 113(3): 263–265.
- Dercon S, Gilligan DO, Hoddinott J and Woldehanna T (2009). The impact of agricultural extension and roads on poverty and consumption growth in fifteen Ethiopian villages. *American Journal of Agricultural Economics*, 91(4): 1007–1021.
- Dercon S and Hoddinott J (2005). Livelihoods, growth, and links to market towns in 15 Ethiopian villages. FCND Discussion Paper No. 194, IFPRI, Washington, DC.
- Devereux S and Solomon C (2006). Employment creation programmes: The international experience. Issues in Employment and Poverty Discussion Paper No. 24, International Labour Office, Geneva.

- Diao X, Dorosh P and Rahman SM (2007). Market opportunities for African agriculture: A general equilibrium examination of demand-side constraints on agricultural growth in East and Southern Africa. Research Report No. 154, IFPRI, Washington, DC.
- Dorji T, Urmee T and Jennings P (2012). Options for off-grid electrification in the Kingdom of Bhutan. *Renewable Energy*, 4: 551–558.
- ECOSOC (2014). World Economic and Social Survey, 2014: Reducing Inequality for Sustainable Development – Overview. No. E/2014/50. New York, NY, Economic and Social Council, United Nations.
- Ellis F (2009). Strategic dimensions of rural poverty reduction in sub-Saharan Africa. In: Harris-White B and Heyer J, eds. *The Comparative Political Economy of Development: Africa and South Asia*. Abingdon, Oxon, and New York, NY, Routledge: 47–63.
- Engman M, Onodera O and Pinali E (2007). Export processing zones. OECD Trade Policy Papers, OECD, Paris.
- Escribano Á, Guasch JL and Pena J (2009). Assessing the impact of infrastructure quality on firm productivity in Africa: Cross-country comparisons based on investment climate surveys from 1999 to 2005. Working paper 9-86, University Carlos III, Madrid.
- Evans PB (1995). *Embedded Autonomy: States and Industrial Transformation*. Princeton, NJ, Princeton University Press.
- Freedman PL and Click RW (2006). Banks that don't lend? Unlocking credit to spur growth in developing countries. *Development Policy Review*, 24(3): 279–302.
- Fu X and Gong Y (2011). Indigenous and foreign innovation efforts and drivers of technological upgrading: Evidence from China. *World Development*, 39(7): 1213–1225.
- Fu X, Pietrobelli C and Soete L (2011). The role of foreign technology and indigenous innovation in the emerging economies: Technological change and catching-up. *World Development*, 39(7), Special section on Foreign Technology and Indigenous Innovation in the Emerging Economies: 1204–1212.
- Global Partnership for Effective Development Co-operation (2014). Making development co-operation more effective: 2014 progress report. Paris, OECD.
- Grimm M, Knorringa P and Lay J (2012). Constrained gazelles: High potentials in West Africa's informal economy. *World Development*, 40(7): 1352–1368.
- Guha A and Ray A (2002). Expatriate vs. multinational investment: A comparative analysis of their roles in Chinese and Indian development. Paper presented at the conference on WTO, China and the Asian Economies, Beijing, 9-10 November.
- Gustavsson M (2007). Educational benefits from solar technology: Access to solar electric services and changes in children's study routines, experiences from Eastern province Zambia. *Energy Policy*, 35(2): 1292–1299.
- Hausmann R and Rodrik D (2003). Economic development as self-discovery. *Journal of Development Economics*, 14th Inter-American Seminar on Economics, 72(2): 603–633.
- Heltberg R (2004). Fuel switching: evidence from eight developing countries. *Energy Economics*, 26(5): 869–887.
- Honohan P and Beck T (2007). *Making Finance Work for Africa*. Washington, DC, World Bank Publications.
- IEG (2007). World Bank assistance to agriculture in sub-Saharan Africa: An IEG Review. Washington, DC, Independent Evaluation Group, World Bank.
- IEG (2008). The welfare impact of rural electrification: A reassessment of the costs and benefits. An IEG impact evaluation. Washington, DC, World Bank.
- IMF (2005). The macroeconomics of managing increased aid inflows: Experiences of low-income countries and policy implications. Washington, DC.
- IMF (2013). Fiscal monitor: Taxing times. World Economic and Financial Surveys. Washington, DC.
- InterAcademy Council (2004). Realizing the promise and potential of African agriculture. Amsterdam, InterAcademy Council.
- IPCC (2014). Summary for policymakers. In: *Climate Change 2014, Mitigation of Climate Change*. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer O, Pichs-Madruga R, Sokona Y, Farahani E, Kadner S, Seyboth K, Adler A, Baum I, Brunner S, Eickemeier P, Kriemann B, Savolainen J, Schlömer S, von Stechow C, Zwickel T and Minx d JC, eds.]. Cambridge and New York, Cambridge University Press.
- Jacobson A (2007). Connective power: Solar electrification and social change in Kenya. *World Development*, 35(1): 144–162.
- Kinoshita Y (2000). R&D and technology spillovers via FDI: Innovation and absorptive capacity. SSRN Scholarly Paper No. ID 258194, Social Science Research Network, Rochester, NY.

- Kirubi C, Jacobson A, Kammen DM and Mills A (2009). Community-based electric micro-grids can contribute to rural development: Evidence from Kenya. *World Development*, 37(7): 1208–1221.
- Kokko A (1994). Technology, market characteristics, and spillovers. *Journal of Development Economics*, 43(2): 279–293.
- Lauridsen LS (2010). Strategic industrial policy and latecomer development: The what, the why and the how. *Forum for Development Studies*, 37(1): 7–32.
- Lewis JJ and Pattanayak SK (2012). Who adopts improved fuels and cookstoves? A systematic review. *Environmental Health Perspectives*, 120(5): 637–645.
- Lin J and Chang H-J (2009). Should industrial policy in developing countries conform to comparative advantage or defy it? A debate between Justin Lin and Ha-Joon Chang. *Development Policy Review*, 27(5): 483–502.
- Lorentzen J and Pogue TE (2009). Knowledge intensification in resource-based developing economies: From technological learning to lateral migration. IERI Working Paper, Institute for Economic Research on Innovation, Pretoria.
- Mapako M and Prasad G (2007). Rural electrification in Zimbabwe reduces poverty by targeting income-generating activities. Proceedings of the Fifteenth Conference on Domestic Use of Energy, Cape Town, 11-12 April.
- Nguyen KQ (2007). Alternatives to grid extension for rural electrification: Decentralized renewable energy technologies in Vietnam. *Energy Policy*, 35(4): 2579–2589.
- Nin-Pratt A, Johnson M, Magalhaes E, Diao X, You L, Chamberlin J and Magalhaes E (2009). Priorities for realizing the potential to increase agricultural productivity and growth in Western and Central Africa. IFPRI Discussion Paper No. 00876, IFPRI, Washington, DC.
- OECD (2005). Paris Declaration on Aid Effectiveness: Ownership, Harmonisation, Alignment, Results and Mutual Accountability. Paris.
- OECD (2008). Accra Agenda for Action. Paris.
- OECD (2011). Busan partnership for effective development co-operation. Fourth High Level Forum on Aid Effectiveness. Busan, Republic of Korea.
- OECD (2012). *Aid Effectiveness 2011*. Paris.
- OECD (2013). Action plan on base erosion and profit shifting. Paris.
- Pietrobelli C and Rabellotti R (2004). Upgrading in clusters and value chains in Latin America: The role of policies. Washington, DC, Inter-American Development Bank.
- Ramachandran V (2008). Power and roads for Africa. Washington, DC, Center for Global Development.
- Ramos (1998). A development strategy founded on natural resource-based production clusters. *CEPAL Review*. 66, 105–127.
- Reinikka R and Svensson J (2002). Coping with poor public capital. *Journal of Development Economics*, 69(1): 51–69.
- Rodrik D (2008). Normalizing industrial policy. Working Paper No. 3, Growth Commission, Washington, DC.
- Rodrik D and Subramanian A (2009). Why did financial globalization disappoint? *IMF Staff Papers*, 56(1): 112–138.
- Romp W and De Haan J (2007). Public capital and economic growth: A critical survey. *Perspektiven der Wirtschaftspolitik*, 8(S1): 6–52.
- Stiglitz JE, Lin JY and Monga C (2013). The rejuvenation of industrial policy. SSRN Scholarly Paper No. ID 2333944, Social Science Research Network, Rochester, NY.
- Szabó S, Bódis K, Huld T and Moner-Girona M (2011). Energy solutions in rural Africa: Mapping electrification costs of distributed solar and diesel generation versus grid extension. *Environmental Research Letters*, 6(3), 034002.
- UNCTAD (2006). *The Least Developed Countries Report 2006: Developing Productive Capacities*. New York and Geneva, United Nations.
- UNCTAD (2008). *Trade and Development Report, 2008: Commodity Prices, Capital Flows and the Financing of Investment*. New York and Geneva, United Nations.
- UNCTAD (2009). *The Least Developed Countries Report 2009: The State and Development Governance*. New York and Geneva, United Nations.
- UNCTAD (2010). *The Least Developed Countries Report, 2010: Towards a New International Development Architecture for LDCs*. New York and Geneva, United Nations.
- UNCTAD (2012). *The Least Developed Countries Report, 2012: Harnessing Remittances and Diaspora Knowledge to Build Productive Capacities*. New York and Geneva, United Nations.
- UNCTAD (2013). *The Least Developed Countries Report, 2013: Growth with Employment for Inclusive and Sustainable Development*. New York and Geneva, United Nations.

- UNCTAD (2014a). *Trade and Development Report, 2014: Global Governance and Policy Space for Development*. New York and Geneva, United Nations.
- UNCTAD (2014b). *World Investment Report 2014: Investing in the SDGs - An Action Plan*. New York and Geneva, United Nations.
- USAID (2009). *Diaspora direct investment (DDI): The untapped resource for development*. Washington, DC, United States Agency for International Development.
- Wei Y and Balasubramanyam VN (2006). Diaspora and development. *The World Economy*, 29(11): 1599–1609.
- Wooster RB and Diebel DS (2010). Productivity spillovers from foreign direct investment in developing countries: A meta-regression analysis. *Review of Development Economics*, 14(s1): 640–655.
- WTO (2009). *Dar es Salaam Declaration*. No. WT/MIN/(09)/2. LDC Ministerial Meeting, World Trade Organization. Geneva.
- WTO (2012). *WTO Analytical Index: Guide to WTO Law and Practice*. Cambridge, Cambridge University Press.