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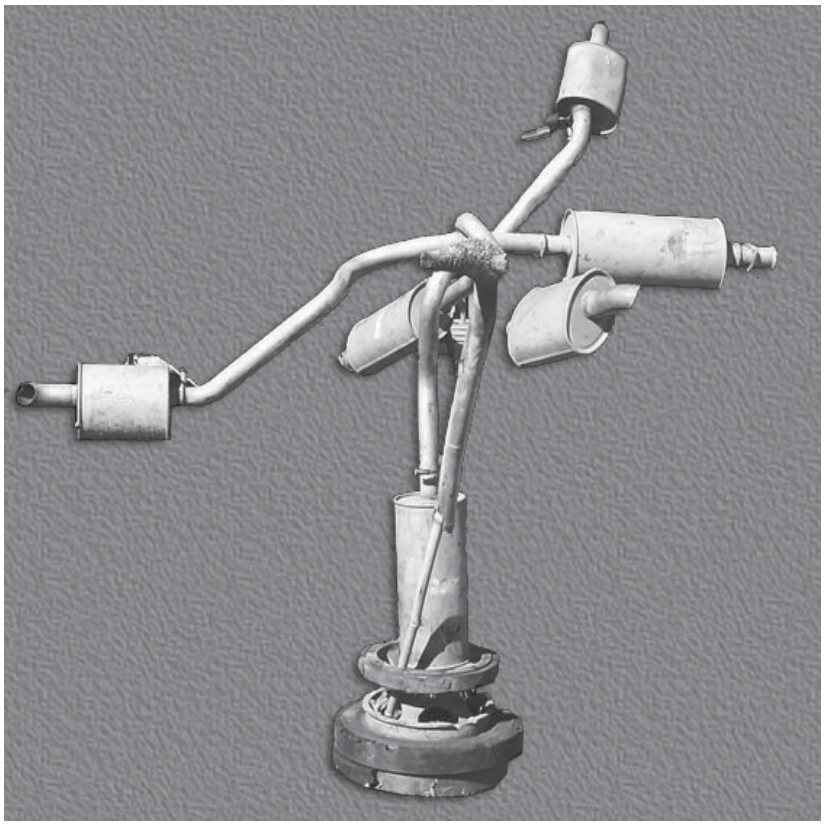
Part Two

Developing Productive Capacities



Chapter 1

What are Productive Capacities? How do They Develop? Why do They Matter?

A. Introduction

In most LDCs absolute poverty is all-pervasive. The majority of the population is living at or below income levels which are barely sufficient to meet their basic needs. UNCTAD estimates suggest that at the end of the 1990s about 50 per cent of the population living in the LDCs were living on less than a dollar a day, and that if the trends of the 1990s persist, the number of people living on less than a dollar a day in those countries can be expected to increase from 334 million in 2000 to 471 million in 2010 (UNCTAD, 2004). In theory, it would be possible to go a long way to eradicating this extreme poverty by redirecting present international aid to the LDCs into direct cash transfers provided to the population living on less than a dollar a day. But such international welfarism, even if it were feasible, is not a sustainable solution. People need to be able to make their own way in the world through their work and creativity, and to define their horizon of individual freedom through their own activity. For this to occur, productive employment opportunities must expand in the LDCs.

The population of working age within the LDCs is growing very rapidly. Between 2000 and 2010 it will increase by almost 30 per cent (UNCTAD, 2004). These people could try to seek work in other countries. Indeed, this is becoming an increasingly important source of livelihood for more and more LDC citizens. However, other countries are often reluctant to admit workers who are unskilled. Without some kind of change in the regime governing international migration and without the faster expansion of productive employment in the LDCs, the majority of new entrants into the labour force are thus faced with the stark choice between poverty at home and social exclusion abroad as illegal international migrants.

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The only way to reduce poverty in the LDCs without resort to international welfarism or international migration is through the development of the productive capacities of the LDCs and the concomitant expansion of productive employment opportunities within them. The importance of developing productive capacities for economic growth and poverty reduction is evident in the development experience of developing countries which have managed to achieve sustained and substantial poverty reduction over the last 30 years. The hallmark of their policies is that they have consciously sought to promote economic growth and have done so through deliberate policies which have aimed at developing domestic productive capacities. This has involved efforts to promote investment, innovation and structural transformation (see UNCTAD, 1994, 1996, 2003; World Bank, 2005a: 80–92). Increased agricultural productivity, accelerated industrialization and building up of international competitiveness in tradable sectors have all been basic objectives which have been pursued in a step-by-step way focusing on real economy targets. This has not been undertaken as an end in itself, but with a view to improving the living standards of the population, to reducing mass poverty and, in the end, to

ensuring political stability and enhancing the effective sovereignty of the nation State.

The importance of developing productive capacities for economic growth and poverty reduction is also increasingly being recognized in international policy:

- The Brussels Programme of Action for the LDCs identifies the development of productive capacities as one of the seven major commitments and the key to ensuring that LDCs benefit from globalization rather than suffer further socio-economic marginalization (United Nations, 2001).
- UNIDO, working with NEPAD, has initiated the African Productive Capacity Initiative as the centrepiece of its approach to strengthening the productive base of African economies (UNIDO, 2003).
- In its important report *Economic Growth in the 1990s: Lessons from a Decade of Reform*, the World Bank has argued that the growth impact of reforms in the 1990s was smaller than expected because "the policy focus of the 1990s enabled better use of productive capacity but did not provide sufficient incentives for expanding capacity" and that in going forward more emphasis needs to be placed on the incentives needed to expand productive capacity and on the forces underlying economic growth (World Bank, 2005a: 10).
- ECLAC has placed productive development at the centre of its policy proposals for achieving accelerated economic growth with equity, publishing *Productive Development in Open Economies* in 2004 as the latest in a series of important reports on the subject, which began with *Changing Production Patterns with Social Equity* (1990).
- UNIDO (2005) has emphasized the importance of building technological capabilities for catching up and for sustained poverty reduction.

The Brussels Programme of Action for the LDCs identifies the development of productive capacities as one of the seven major commitments and the key to ensuring that LDCs benefit from globalization rather than suffer further socio-economic marginalization.

This Report is in a similar vein. It builds on earlier work by UNCTAD on the development dynamics of the few developing countries, mostly East Asian, which have successfully started, sustained and accelerated development (referred to above), as well as on the empirical findings and arguments of the last two LDC Reports. These two Reports analysed the nature and dynamics of poverty in LDCs (UNCTAD, 2002), and argued that the underdevelopment of productive capacities is the missing link between the expanding international trade which many LDCs have achieved in recent years and the sustained poverty reduction which remains elusive in most of them (UNCTAD, 2004). The present Report seeks to take this analysis forward in three ways:

- It describes the current status of productive capacities in LDCs and analyses how they are developing (chapters 2, 3 and 4).
- It discusses three basic constraints on the development of productive capacities in the LDCs — physical infrastructure (chapter 5), institutions (chapter 6) and the stimulus of demand (chapter 7).
- It sets out some general policy implications (chapter 8).

This analysis is intended to provide a better substantive basis for the design of international and national policies to promote economic growth and poverty reduction within the LDCs. It should also support the achievement of a key commitment of the Brussels Programme of Action for the LDCs during the decade 2001–2010, namely to develop productive capacities.

The present chapter sets out the basic conceptual framework for the Report and discusses why the subject is important for policymakers. It specifies the way in which the notion of productive capacities is defined in this Report (section B) and also the analytical framework which is used to understand how productive capacities develop (section C). Section D examines the value added for policymakers of a focus on productive capacities, both for promoting economic growth and ensuring that growth is poverty-reducing. The last section summarizes the key points of the chapter.

B. What are productive capacities?

Although the term "productive capacities" is increasingly used in international development policy circles, there is no accepted definition of what it is.

Although the term "productive capacities" is increasingly used in international development policy circles, there is no accepted definition of what it is (see box 4).[1] This Report adopts a broad definition of productive capacities, congruent with the approach to productive capacities within the Programme of Action for the Least Developed Countries (United Nations, 2001). This focuses on both structural and supply-side constraints, and encompasses physical infrastructure, technology, enterprise development and energy, as well as specific sectoral challenges in relation to agriculture and agro-industries, manufacturing and mining, rural development and food security, and sustainable tourism. The broad approach avoids the trap of fixing on certain types of ingredients of the production process (for example, machinery and equipment, physical infrastructure, human resource development, technological capabilities) as magic bullets for economic growth and poverty reduction. It also avoids predetermining which types of economic activities (such as exports or manufacturing) should be the focal concern of policy attention in developing productive capacities. Priorities will vary according to country circumstances and the sequence of development processes.

This Report defines productive capacities as the productive resources, entrepreneurial capabilities and production linkages which together determine the capacity of a country to produce goods and services and enable it to grow and develop.

To avoid the dangers of a partial definition, this Report defines productive capacities as *the productive resources, entrepreneurial capabilities and production linkages which together determine the capacity of a country to produce goods and services and enable it to grow and develop*.

Within market economies, production is mainly affected through capable entrepreneurs mobilizing productive resources and intermediate inputs to produce outputs which can profitably meet present and expected future demand. At any given moment, the potential output of an economy is the maximum aggregate supply of goods and services that can be achieved if all productive resources and entrepreneurial capabilities are utilized efficiently and to the fullest degree. When productive capacities are underemployed or are being inefficiently utilized, it is possible for an increase in output to occur through resource reallocation or inducing a higher rate of utilization of existing resources and capabilities. However, sustained economic growth requires the expansion and development, as well as fuller utilization, of productive capacities. The potential (full-capacity) growth rate of an economy over time is defined by the growth and development of productive capacities. But this growth rate will not be achieved unless productive capacities are not only created but also used. This depends on demand-side factors, and for tradable goods and services it requires that production takes place in a competitive manner.

The three basic elements of productive capacities as defined in this Report are productive resources, entrepreneurial capabilities, and production linkages (see chart 8).

Box 4. Alternative definitions of capacities and capabilities in relation to production, trade and development

In everyday language, the terms "capacity" and "capability" are often used interchangeably to refer to the ability to do something. In international policy discussions, these words have been linked to various phenomena, including production capabilities, supply capabilities, technological capabilities, industrial capabilities, social capabilities, productive capacities, productive capacity (in the singular), production capacity, trade capacity and supply capacity. This semantic proliferation reflects the fact that different analysts are focusing on different aspects of the problem of productive capacities. Some equate the development of productive capacities with the development of export supply capacities, others with the development of manufacturing industries. For some, productive capacity is a question of the maximum output of the physical plant, equipment and buildings which constitute a factory, or the capacity of physical infrastructure facilities on which production depends, whilst for others the focus of capacity-building is training and human resource development. Others again identify the development of productive capacities with the development of technological capabilities – the ability of enterprises to master, adapt and improve on existing technologies, as well as to design new products and processes. Yet others equate the development of productive capacities with investing in people through improvements in health, education and nutrition.

The definitions set out below, mostly taken from official documents, are intended to illustrate profusion of terminology and the range of uses of terminology related to the notion of productive capacities. They encompass some definitions which are trade-centric (that is, they equate productive capacities with export supply capacities) – for example, WTO; some which are industry-focused – for example, UNIDO; some which are focused on human capacities – for example, the Commission for Africa Report; UNDP; some which mix trade and production (NEPAD African Productive Capacity Initiative; EU/ACP Partnership Agreements); and some which are broad-based (UNLDC III POA). This Report uses a broad definition which is set out in the main text.

UNLDC III POA: "The capacity of LDCs to accelerate growth and sustainable development is impeded by various structural and supply-side constraints. Among these constraints are low productivity; insufficient financial resources; inadequate physical and social infrastructure; lack of skilled human resources; degradation of the environment; weak institutional capacities, including trade support services, in both public and private sectors; low technological capacity; lack of an enabling environment to support entrepreneurship and promote public and private partnership; and lack of access of the poor, particularly women, to productive resources and services.…A paramount objective of the actions by LDCs and their development partners should be to continue to strengthen productive capacities by overcoming structural constraints" (United Nations, 2001: 31).

NEPAD Africa Productive Capacity Initiative: "We define productive capacity as the ability, first, to produce goods that meet the quality requirements of present markets and second to upgrade in order to tap future markets. Rising productive capacity will ensure a sustainable participation in the new global production system based on production networks…Productive capacity is a function of six factors…the skill levels of workers, infrastructure, the availability of intermediate inputs, available technology, actual patterns of joint action and benchmarking practice. Other issues influence these six factors and, if dealt with positively, can enhance productive capacity" (UNIDO, 2003: 4).

UNIDO Industrial Development Report 2004: "The key to raising productivity to competitive levels lies in improving industrial capabilities. But what are industrial capabilities? They are not production capacities in the sense of physical plant, equipment and buildings; it is relatively easy to acquire or build capacity, at least if financial resources are available. Capability — the ability to operate capacity competitively — requires something more: the tacit, knowledge, skills and experience related to specific technologies that are collected by enterprises and cannot be imported or bought in. The process involves creating new skills, partly by formal education, but usually, more importantly, by training and experience of new technologies. It requires obtaining technical information, assimilating it and improving it. It entails institutional rather than individual capital, with new managerial and organizational methods, new ways of storing and disseminating information and of managing internal hierarchies. It also needs interaction between enterprises — firms do not learn on their own — and between enterprises and support institutions. Finally it requires the factor markets that provide skills, technology, finance, export marketing and infrastructure to respond to the new needs of enterprises" (UNIDO, 2004: box 1).

EU/ACP Economic Partnership Agreements: In this context, supply-side constraints have been defined as "serious constraints faced by local enterprises in producing goods competitively as a result of the developing nature of the economies of which they form a part…Effectively addressing these supply-side constraints is a fundamental challenge in promoting the structural transformation of ACP economies, so that investment is promoted, more value is added locally and more jobs and income earning opportunities are created to enable people to work their way out of poverty" (European Research Office, p.1, 2004).

WTO: "Supply-side constraints refer to impediments to the development of capacity to produce goods and services competitively and to the ability to get them to markets at a reasonable cost. Such a broad definition covers a wide scope

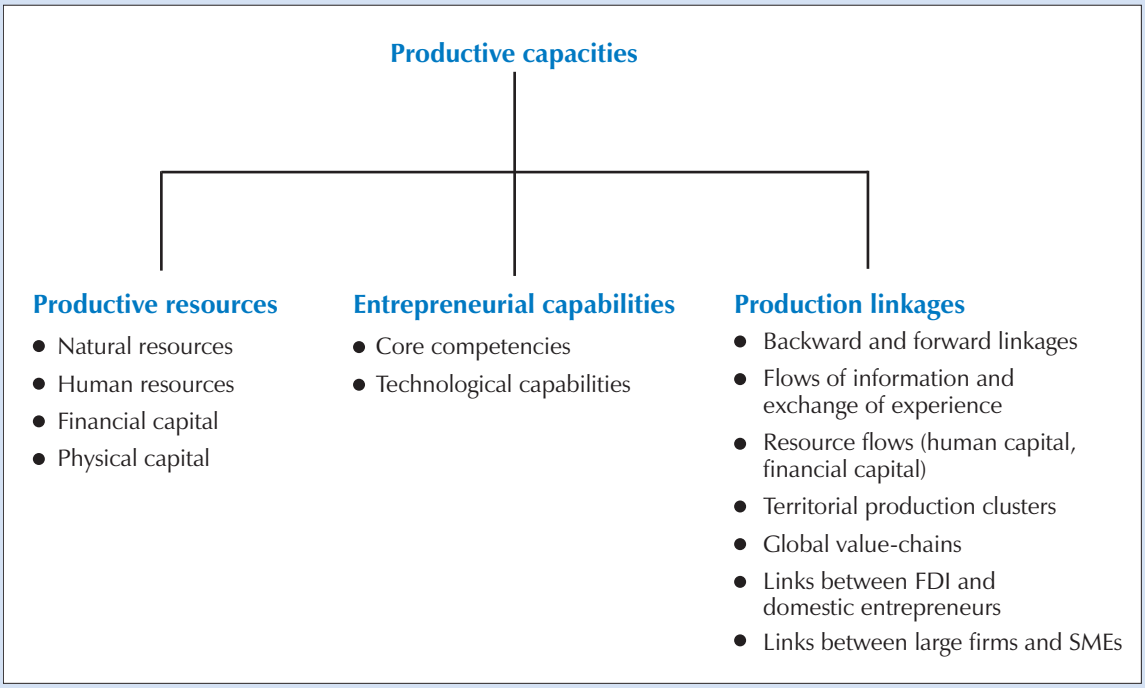
Box 4 (contd.)

of issues impeding the LDCs' participation in international trade. The issues range from physical infrastructure, customs, trade support services and human and institutional capacity to technological requirements, the provision of public utilities and macroeconomic frameworks…What is common among the above-mentioned supply-side issues, although different in nature, is that they raise the transaction costs for businessmen [sic] in LDCs to engage in trade. This cost comes in addition to the market barriers imposed on their products at the borders, such as tariffs, thereby reducing competitiveness in export markets… Supply-side constraints are often mentioned together with the lack of or need for export diversification. Dependence on a few commodities is a typical feature of LDCs' export profile and is closely associated with their weak supply-side capacities. Overcoming supply-side weakness is a precondition for developing and diversifying a sustainable export portfolio." (WTO, 2004: 1–3).

Commission for Africa 2005: Capacity is "The ability of individuals, organisations and societies to perform functions, solve problems and set and achieve their own objectives. In a development context, 'capacity development' refers to investment in people, institutions, and practices that will, together, enable that country to achieve its development objectives" (Commission for Africa, 2005: 389).

Fukuda-Parr et al., 2002 (UNDP): "Capacity development" is understood in this context as a process of human resource development, "a process by which individuals, groups, institutions and societies increase their abilities to (1) perform core functions, solve problems and define and achieve objectives; and (2) understand and deal with their development needs in a broad context and in a sustainable manner" (Fukuda-Parr et al., 2002).

CHART 8. THE THREE BASIC ELEMENTS OF PRODUCTIVE CAPACITIES



Productive resources are factors of production. They include the following:

- Natural resources, including quantity and quality of agricultural land, water resources, energy resources, mineral deposits, forestry and fishery resources, biodiversity and landscape quality;
- Human resources — the quantity and quality of labour, including the level of education, health, nutrition and skills;
- Financial capital resources — the availability and cost of financial capital to finance production, investment and innovation;

- Physical capital resources — the stock of tools, machinery and equipment available to producers, as well as the physical infrastructure which provides a range of services to producers, including transportation, power, telecommunications, water supply and sanitation, and irrigation.

The mix of factors that are used in production vary from one economic activity to another. Some of the factors of production are mobile between countries, whilst others are not.

Entrepreneurial capabilities are the skills, knowledge and information which enterprises have, firstly, to mobilize productive resources in order to transform inputs into outputs which can competitively meet present and future demand, and, secondly, to invest, to innovate, to upgrade products and their quality, and even to create markets. Capabilities, as defined in this Report, refer to an attribute of economic agents. Within the literature, entrepreneurial capabilities are sometimes defined as "firm capabilities". But this term is not appropriate within the LDC context because many enterprises are household-based and not constituted as separate legal entities independently from the household members that own and manage them.

Entrepreneurial capabilities are the skills, knowledge and information which enterprises have, firstly, to mobilize productive resources in order to transform inputs into outputs and, secondly, to invest, to innovate, to upgrade products and their quality, and even to create markets.

Entrepreneurial capabilities are a matter of knowing what to do and how to do it to produce and compete. They encompass the following:

- Core competences, which are the routine knowledge, skills and information to operate established facilities or use existing agricultural land, including production management, quality control, repair and maintenance of physical capital, and marketing;
- Technological capabilities (or dynamic capabilities), which refer to the ability to build and reconfigure competences to increase productivity, competitiveness and profitability, and to address a changing external environment in terms of supply and demand conditions. Technological capabilities have been specified in various ways (e.g. Dahlman and Westphal, 1983; Dahlman, Ross-Larsen and Pack, 1986; Amsden, 2001; Lall, 1992, 2004). A useful list, originally drawn up in UNCTAD, identifies five major kinds of technological capabilities, namely:

(a) Investment capabilities — knowledge and skills used to identify and execute projects to expand physical facilities;

(b) Incremental innovation capabilities — knowledge and skills used to continuously improve and adapt products and processes through incremental innovation, adaptive engineering and organizational adjustments;

(c) Strategic marketing capabilities — knowledge and skills to develop new markets and improve the enterprise's competitive advantage;

(d) Linkage capabilities — knowledge and skills associated with the transfer of technology within the enterprise, from one enterprise to another and between the enterprise and the domestic science and technology institutions;

(e) Radical innovation capabilities — knowledge and skill required for the creation of new technology — that is, major changes in the design and core features of products and production processes (Ernst, Ganiatos and Mytelka, 1998: 17–23).

Technological capabilities are particularly important as they are the basis for the creativity, flexibility and dynamism of an economy.

Success in the mobilization of productive resources and the exercise of entrepreneurial capabilities cannot be divorced from the wider production systems within which economic agents are embedded. Thus the third element of the productive capacities of a country is the *production linkages* between enterprises and between different types of economic activity.

Production linkages take different forms, including the following:

- Flows of goods and services, which may take the form of backward and forward linkages (which for a particular enterprise or activity refer to links with suppliers and links with buyers respectively);
- Flows of information and knowledge between enterprises, which occur through interactions with customers and suppliers as well as collaborative relations between geographically clustered enterprises;
- Flows of productive resources amongst enterprises, which may include short-term credit relations associated with sales and purchases, as well as movement of skilled workers.

Production linkages include linkages between enterprises of different sizes and linkages amongst enterprises of similar sizes (e.g. amongst SMEs), and can take the form of outsourcing and subcontracting relations. In open economies, production linkages for tradable goods can be international in their scope, with domestic enterprises linked to global value-chains (Gereffi, 1999; UNIDO, 2002: chapter 6; Kaplinsky, Morris and Readman, 2002). They also encompass linkages between foreign-owned and domestically-owned enterprises located within the country. Production linkages may also be territorially clustered. Such production clusters can be defined as "a sectoral and/or geographical concentration of enterprises engaged in the same or closely related activities with substantial and cumulative external economies of agglomeration and specialization (through the presence of producers, suppliers, specialized labour and sector specific related services) and capable of taking joint action to seek collective efficiency" (Ramos, 1998: 108).

The various production complementarities to which all kinds of production linkages give rise mean that the competitiveness of particular activities and individual enterprises depends not only on the productive resources and entrepreneurial capabilities within those activities and enterprises but also on the competitiveness of the production system as a whole.

Production linkages have been identified as being particularly important within manufacturing industries (Hirschman, 1958; Chenery, Robinson and Syrquin, 1986). However, linkages are also important for the agricultural sector, where commercial production depends on links between farmers and input suppliers and output buyers, where the availability of infrastructure services affects production and transaction costs, and where the linkages between agriculture and non-agricultural activities are critically important during the process of economic development (Fei and Ranis, 1997). The various production complementarities to which all kinds of production linkages give rise mean that the competitiveness of particular activities and individual enterprises depends not only on the productive resources and entrepreneurial capabilities within those activities and enterprises but also on the competitiveness of the production system as a whole (Porter, 1990).

Productive capacities are not always generic — rather, they are often activity-specific.

Productive resources, entrepreneurial capabilities and production linkages together determine not only the overall capacity of a country to produce goods and services, but also what goods and services a country can produce. The reason for this is that productive capacities are not always generic — rather, they are often activity-specific.

Finance capital is malleable and can be allocated to different uses and activities. But once it is transformed into physical capital, in the form of a factory with physical plant, machinery and equipment producing particular goods, it is

difficult to use that stock of capital to produce something else. A textile factory cannot be used to produce cement, and cocoa trees cannot be used to grow coffee.[2] Human capital accumulated in one domain also cannot always be applied in another domain. There are of course some levels of skill, such as literacy and numeracy, which are generic. But without training, a farm worker who is skilled in producing maize will not be able to produce shirts. Even physical infrastructure cannot be regarded as a wholly economy-wide facility. A rural road built in one locality will serve the farmers in that locality and not others.

Technological learning is also activity-specific, with different technologies requiring a different breadth of skills and knowledge. Some need a narrow range of specialization and others a broad one. Technological capabilities acquired in one activity may be applied in related and linked activities, but they are not always easily transferable. Production linkages are also to some extent activity-specific, related to the technical characteristics of products and production processes.

C. How do productive capacities develop?

For policymakers, what productive capacities are *matters less than what they can* become.

The productive capacities of a country constitute a potentiality for production and economic growth. As noted earlier, at any given moment, they set a ceiling to how much an economy can produce. But more important than this static potential is the dynamic potential which arises from the fact that productive resources, entrepreneurial capabilities and production linkages are not simply given but are created and transformed over time. As this occurs, the potential output of an economy increases, thus making economic growth possible.

Of course, countries do have different natural factor endowments. But natural resources have no economic value until this is perceived and realized through the application of capital and knowledge. What constitutes natural resource abundance or natural resource scarcity can be transformed by technology. Capital and knowledge accumulate through economic activity, and labour is educated, trained and developed through production experience. For policymakers, what productive capacities *are* matters less than what they can *become*.

How productive capacities develop can be conceptualized in various ways. This Report draws eclectically on the analytical insights of various theories of economic growth which are concerned with the long-term development of productive capacities (see box 5). These theories suggest that:

- The core processes through which productive capacities develop are capital accumulation, technological progress and structural change.
- The sustained development of productive capacities occurs through a process of cumulative causation in which the development of productive capacities and the growth of demand mutually reinforce each other.
- The development and utilization of productive capacities within a country are strongly influenced by the degree and form of its integration into the global economy as well as national and international institutions.

This conceptualization is illustrated schematically in chart 9.

Box 5. Analytical foundations of the Report

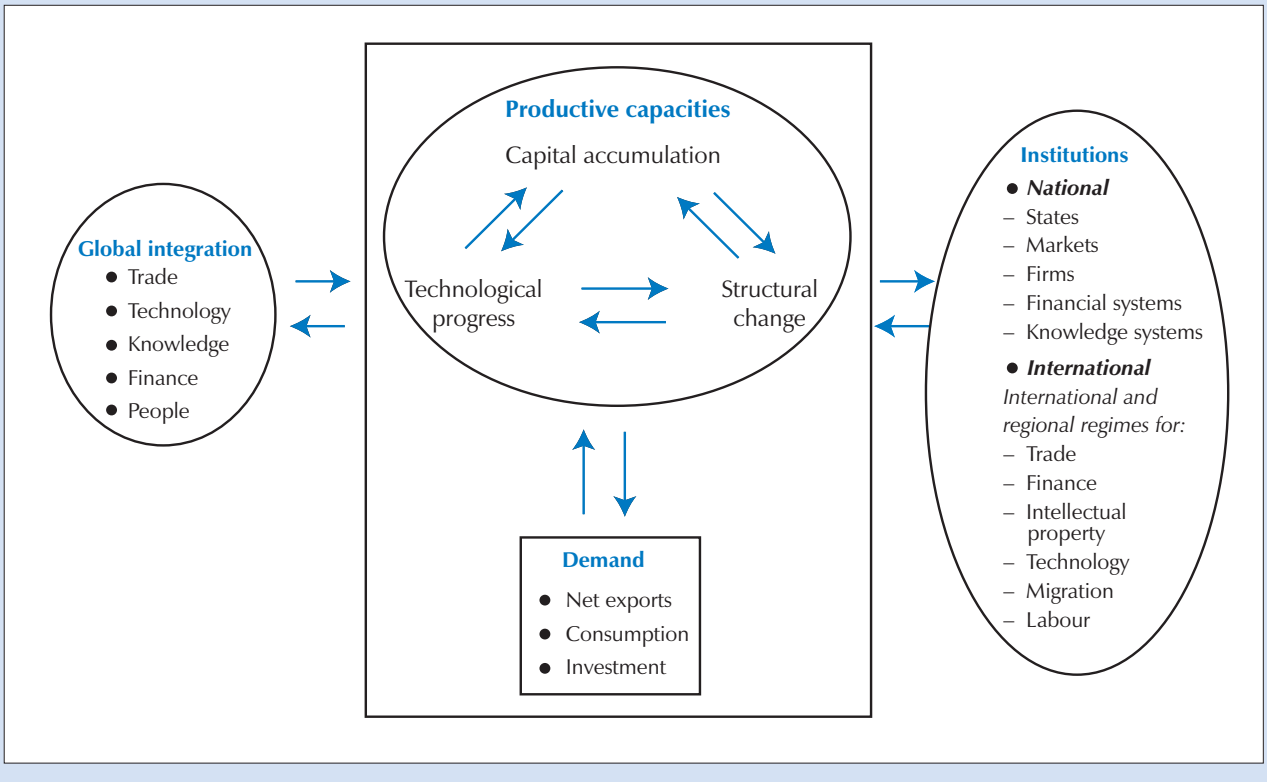
This Report draws eclectically on the analytical insights of the following bodies of knowledge:

- The work of the first generation of development economists in the 1950s and 1960s, most notably the Lewis model of economic growth with unlimited supplies of labour (Lewis, 1954) and Albert Hirschmann (1958) on linkages. Ros (2000) provides an important formal elaboration of this work as well as a synthesis with some insights deriving from neoclassical and endogenous growth theory.
- The analyses of Kalecki (1969) and Kaldor (1967, 1981), which emphasize the importance of aggregate and intersectoral demand for economic growth, and also post-Keynesian growth models which identify the balance-of-payments constraint as a key determinant of growth rate differences between countries (see McCombie and Thirlwall, 2004).
- Various structuralist analyses of economic growth, including empirical descriptions of recurrent patterns of economic growth and structural change (Chenery, Robinson and Syrquin, 1986), the work of Latin American structuralists of the 1950s on ways in which integration into the global economy affected national development and the work of the Latin American neo-structuralists of the 1990s who have updated these ideas to take account of the policy failures which led to the collapse in the 1980s and subsequent economic reform and the weak response to economic reforms (Sunkel, 1993; Ocampo, 2005).
- Analyses based on an evolutionary approach to economic growth, which, following Schumpeter's insights, emphasize the importance of entrepreneurship and technological capabilities for economic growth — see, in particular, Nelson and Winter (1974, 1982) and much empirical analysis deriving from that approach.

These bodies of knowledge are generally neglected within current development policy analysis.[1] However, they offer a particularly fruitful terrain for analysing the development of productive capacities and also the relationship between productive capacities, economic growth and poverty reduction. Their value is also being enhanced at the present moment as analysts are seeking to synthesize the macroeconomic insights of post-Keynesian growth analysis with the microeconomic insights on technological capability-building of neo-Schumpeterian and evolutionary economics (see Llerena and Lorentz, 2004a, 2004b), and also to apply this new synthesis to understand the specific policy problems of developing countries (see Ocampo, 2005; Cimoli, 2005; Cimoli, Primi and Pugno, 2005). This work has not yet, however, been applied to illuminate development policy issues within the LDCs. This Report seeks to do so.

[1] Exceptions to this generalization are the following: (i) UNIDO's analyses of industrial development (see, in particular, UNIDO, 2005); (ii) the series of reports by ECLAC since 1990 which examine the problem of promoting productive development with social equity in open economies (see ECLAC, 2004); and (iii) UNCTAD's analyses of the policies underlying East Asian development success, notably through the animation of an investment–profits–export nexus (see UNCTAD, 1994, 1996).

Chart 9. How productive capacities develop



1. The core processes

Productive capacities develop within a country through three closely interrelated processes: capital accumulation, technological progress and structural change. Each of these processes is related to the three basic elements of productive capacities identified in section B. Capital accumulation is related to changes in the supply of productive resources. Technological progress is related to the development of technological capabilities. Structural change is related to changes in the types and density of the production linkages within an economy.

Productive capacities develop within a country through three closely interrelated processes: capital accumulation, technological progress and structural change.

Capital accumulation is the process of increasing capital stocks of various kinds through investment. This involves physical capital formation, which increases stocks of plant, machinery and equipment used by firms and farms as well as supporting economic and social infrastructure facilities; human capital formation, which depends in particular on public expenditure on health and education; and the sustainable use of renewable and non-renewable environmental assets to maintain natural capital or to ensure that the expansion of produced capital is faster than the depletion of natural capital. Investment in human development, as inscribed in the targets for human well-being within the Millennium Development Goals and advocated by the UN Millennium Project (2005), is an important part of developing productive capacities. But the process of developing productive resources cannot be limited to this activity.

Technological progress is the process of introducing new goods and services, new or improved methods, equipment or skills to produce goods and services, and new and improved forms of organizing production through innovation. Innovation is the application of knowledge in production. It requires technological capabilities, which can be defined as the knowledge, experience and skills needed to introduce new products, new production processes and forms of organizing production, or to improve old ones. The development of technological capabilities can be described as a process of technological learning.

Investment in human development is an important part of developing productive capacities.

Structural change is the change in the inter- and intrasectoral composition of production, the pattern of inter- and intrasectoral linkages and the pattern of linkages amongst enterprises. There are strong empirical regularities between the increase in the potential output of an economy and changes in its production structure. This was recognized by Adam Smith, who wrote about the importance of an increasing division of labour for the wealth of nations. But increasing output per worker within an economy has historically been associated with a decline in the proportion of the labour employed in agriculture and a rise in the proportion employed in industry, particularly manufacturing, and services, together with a shift within broad sectors towards activities which use more capital and skills. There has also been a general tendency for the production linkages within a country to become denser and more "roundabout" as a higher proportion of output is sold to other producers rather than final users (Chenery, Robinson and Syrquin, 1986).

Capital accumulation, technological progress and structural change are all closely interrelated. New technologies are often embodied in machinery and equipment, and thus much innovation requires fixed capital investment (physical capital formation). Human capital formation is also necessary in order to improve the skills base, which is an essential foundation for technological learning. The potential profits associated with innovation are also a major incentive for investment, and the realization of such profits is an important

source to finance further investment and innovation. Investment and innovation are also the proximate causes of structural change, a process of creative destruction in which some activities and sectors develop whilst others are destroyed.

Structural change also affects the potential for further investment and innovation. One reason for this is that not all activities have the same potential to create and develop productive capacities through investment and innovation. In short, there are dynamic products, leading sectors or "high quality" activities which are active determinants of growth momentum or, as it is put colloquially, "engines of growth". Another (related) reason is that production complementarities amongst activities, sectors and enterprises can set in train dynamic production linkage effects. These are stimuli to investment and innovation in particular sectors and enterprises which emanate from investment and innovation in other sectors and enterprises.

Dynamic activities (engines of growth) have been identified on various criteria (see, for example, Reinert, 1995). These include (i) demand characteristics, in particular whether there is a high income elasticity of demand for products; (ii) competitive environment, in particular whether markets are imperfectly competitive (and therefore can yield high profits) or perfectly competitive; and (iii) potential for technological progress and the development of a dynamic investment–profits nexus. But an important basic feature which differentiates more dynamic from less dynamic activities is whether they are subject to increasing returns or diminishing returns (Reinert, 2004). In diminishing returns activities, as labour is added to a fixed factor (such as land in the case of agriculture), the added output of each additional worker falls. In increasing returns activities, labour productivity and per capita income rise as output and employment expands, whilst in diminishing returns activities they fall. Mechanisms through which increasing returns occur include: economies of scale or scope, in which unit costs decrease with increases in the scale of production; learning-by-doing, in which productivity increases according to cumulative production experience; productivity growth based on an increasing division of labour and specialization; and strong dynamic linkage effects.

The fact that economic activities are not all alike in their potential for further development of productive capacities and that there are dynamic inducement effects associated with production linkages has the important corollary that production structure is not simply a passive outcome of the growth process, but rather an active determinant of growth potential.

Dynamic production linkage effects occur through demand-side relationships and supply-side relationships. On the demand side, the multiplier effects of export growth depend very much on domestic production linkages. They are very small if the export sector operates as an enclave and also if there are high propensities to import. The supply-side effects of production complementarities work through a range of mechanisms, including the positive externalities that different economic agents generate among themselves through cost reductions made possible by economies of scale in production or lower transport and transaction costs (economies of agglomeration), or through the induced provision of more specialized inputs or services (economies of specialization), or through the externalities generated by the sharing of knowledge and the development of human capital that can move among firms (technological or knowledge spillovers) (Ocampo, 2005: 18).

The fact that economic activities are not all alike in their potential for further development of productive capacities and that there are dynamic inducement effects associated with production linkages has the important corollary that production structure is not simply a passive outcome of the growth process, but rather an active determinant of growth potential. This is why structural transformation, which itself reflects the past path of development of productive capacities within an economy, is so important for the future potential

development of productive capacities. However, the existence of qualitative difference amongst activities creates difficult policy challenges for Governments. In essence, the dilemma they must address is how to promote structural transformation and thus harness the potential positive growth effects of dynamic activities without falling into the multiple traps of "picking winners".

2. Cumulative causation, demand and the development of productive capacities

Capital accumulation, technological progress and structural change are cumulative processes in which investment, innovation and the production structure at one point in time create the conditions for further investment, innovation and structural change. Within capitalist forms of production, business profits are the major incentive for investment, and at the same time profits are an important source for financing investment as well as an outcome of investment. Capital accumulation accelerates if there is a strong investment–profits nexus in which businesses constantly reinvest in order to increase profits and investment. Technological learning is similarly cumulative and path-dependent, with earlier knowledge, skills and experience providing the basis for the emergence of new capabilities. But these processes will not occur automatically by themselves or continue in some mechanical fashion for ever. The sustained development of productive capacities occurs when there is a virtuous process of cumulative causation in which the development of productive capacities and the growth of demand mutually reinforce each other (Myrdal, 1957; Kaldor, 1967, 1981; Hirschman, 1958).

The sustained development of productive capacities occurs when there is a virtuous process of cumulative causation in which the development of productive capacities and the growth of demand mutually reinforce each other.

The importance of demand in the development of productive capacities reflects the fact that productive capacities create only a potentiality for production and growth. At any point in time, existing productive capacities set a ceiling to actual output. But the existence of that ceiling does not mean that existing productive capacities will be fully utilized. Whether the potential inherent in any given set of productive capacities is realized or not depends on demand-side factors. This is an obvious point which can be easily conceptualized once it is realized that there is a difference between the creation of new productive capacities and their utilization, and that decisions to create productive capacities through investment and innovation are based on profit expectations and hence demand expectations. But it requires rejection of the mainstream assumptions that savings automatically creates investment, that productive resources are invariably fully employed and that demand adjusts passively to accommodate supply (see León-Ledesma and Thirlwall, 2002).

Introducing demand into the picture does not mean that there are no supply constraints. In fact, as indicated earlier, at any point in time supply constraints set a ceiling to actual output. But both the level of utilization of productive capacities and their development over time must also take account of demand constraints and the growth of demand.

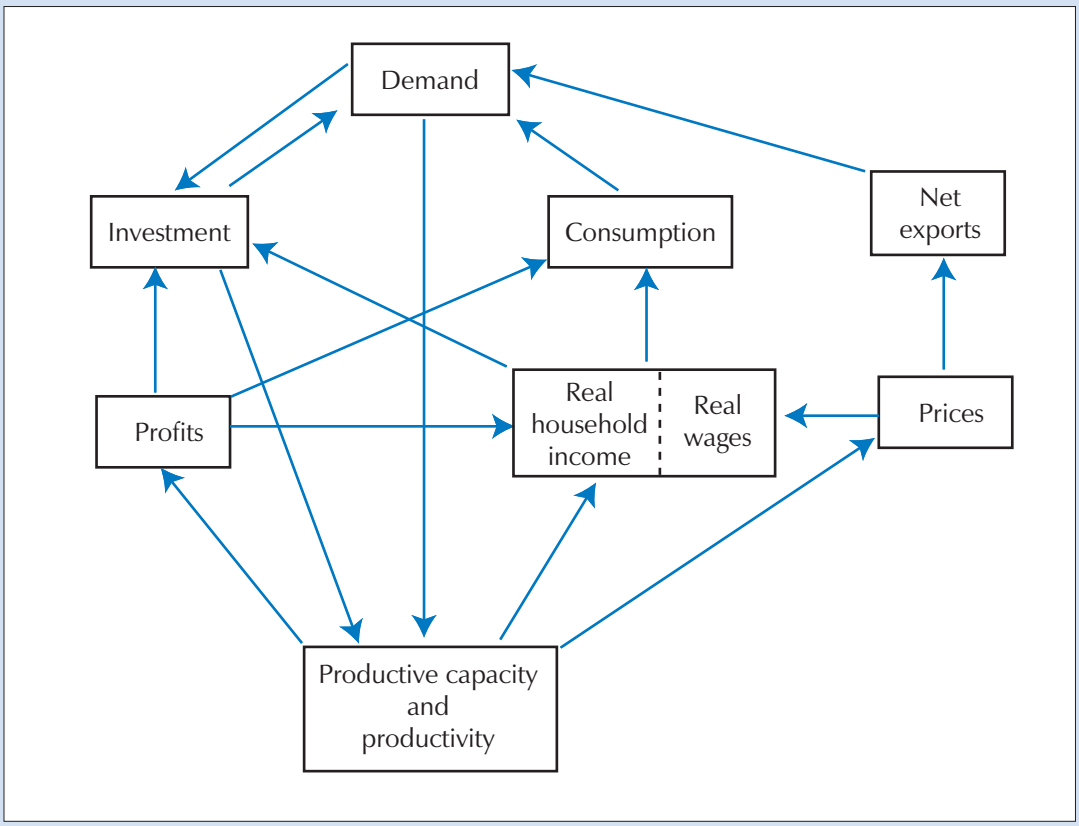
Demand growth originates from three sources: domestic consumption, domestic investment and net exports (i.e. exports minus imports). Exports are a particularly important component of demand for two reasons. Firstly, whereas both consumption demand and investment demand depend on national income, export demand is autonomously determined. Secondly, both consumption demand and investment demand have an import component and without export earnings, domestic demand will have to be constrained to ensure balance-of-payments equilibrium (Thirlwall, 2002: 53). Within poor countries,

exports are even more important as the underdevelopment of their production structures means that they have to import most intermediate inputs and capital goods. But the importance of exports does not mean that domestic sources of demand can be neglected in a growth process. Michael Porter, in his business-focused analysis of international competitiveness, identifies *home demand* conditions as one of the four basic determinants of international competitiveness in particular industries (Porter, 1990: 86–100). Classic work identifying recurrent patterns of economic development also has found that in small countries at early stages of development, domestic demand growth is typically the source of over 75 per cent of economic growth (Chenery, Robinson and Syrquin, 1986).

Exports are a particularly important component of demand, but the importance of exports does not mean that domestic sources of demand can be neglected in a growth process.

The way in which the development of productive capacities and the growth of demand can be linked in a virtuous circle of cumulative causation is shown in simplified form in chart 10. In that chart, increased productive capacities are associated with an increase in average productivity. Growth of productivity has three basic causal links to growth of demand. Firstly, it can increase competitiveness and thus net exports. Secondly, it can increase profits, which stimulate investment — the second component of demand — which in itself can lead to further increases in productivity. Thirdly, it increases real wages and also real incomes within household enterprises (both smallholder farms and urban informal-sector enterprises). This increases consumption, which may also be supplemented by use of profits for consumption, although this will reduce the intensity of the link between profits and investment. A further possible causal link (which is left out of the chart) is through the increased fiscal space which

CHART 10. LINKS BETWEEN THE DEVELOPMENT OF PRODUCTIVE CAPACITIES AND GROWTH OF DEMAND



Source: Based on Castellacci (2001).

Governments can achieve through the expansion of the productive base and productivity. This enables increased public investment, which can be important for crowding in private investment, as well as increased government consumption expenditure, which can also help to improve the living standards of the population and further encourage the growth of consumption.

Whilst the growth of productivity stimulates the growth of demand, the growth of demand, in turn, stimulates the development of productive capacities and productivity growth. This occurs most simply through the full utilization of productive capacities and the incentives for investment and innovation which growing demand creates. But in addition to this there are possibilities for various increasing returns to scale as market demand expands, as well as the dynamic production linkage effects discussed earlier.

Capital accumulation, technological progress and structural change within a country, as well as the relationship between the development of productive capacities and the growth of demand, are all strongly influenced by the relationship of the country with the rest of the world.

Sustaining a positive process of cumulative causation between the development of productive capacities and the growth of demand creates difficult dilemmas. Within more advanced economies, the central issue has been the division of value added between profits, which animate investment demand, and wages, which animate private consumption. Within poor developing economies which have an industrial sector but where the major part of the population is still engaged in agriculture, the central issue has been the problem of mobilizing savings from the agricultural sector without undermining incentives for expanded agricultural production and without squeezing the domestic demand for industrial output, which must, of necessity, come primarily from agricultural household incomes.

3. The importance of global integration

Capital accumulation, technological progress and structural change within a country, as well as the relationship between the development of productive capacities and the growth of demand, are all strongly influenced by the relationship of the country with the rest of the world. This external relationship has become increasingly important over the last thirty years as a result of globalization and liberalization. Globalization has involved "an increasing flow of goods and resources across national borders and the emergence of a complementary set of organizational structures to manage the expanding network of international activity and transactions" (UNCTAD, 1997: 70). With a view to becoming part of this process and also in order to take advantage of it, Governments have at the same time undertaken increasing trade and capital account liberalization. This has opened their national economies more fully to the influence of external factors.

The increasing integration of developing national economies into the global economy has brought both new opportunities, in particular, enhanced access to markets, knowledge, technology and capital.

The increasing integration of developing national economies into the global economy has brought both new opportunities and new risks. On the positive side, there are various ways in which global integration can support the development of productive capacities through capital accumulation, technological progress and structural change. These include, in particular, enhanced access to markets, knowledge, technology and capital. But on the negative side, globalization has been associated with increasing instability, exclusion and inequality.

Focusing on the positive side, exporting to international markets is, as already noted, an important component of the growth of demand. At the initial stages of development, when there is mass poverty and the domestic market is limited, exporting enables natural resources and labour resources, hitherto underutilized

owing to domestic demand constraints, to be productively mobilized. With a progressive upgrading of export composition towards more knowledge-, skill- and capital-intensive products, together with strong domestic production linkages effects associated with export activities, exporting can also accelerate a process of structural change which increases the overall productivity of an economy. There is the possibility of a virtuous circle in which fast export growth leads to fast output growth; fast output growth leads to fast productivity growth (through the increasing returns mechanisms discussed earlier); and fast productivity growth leads to increased competitiveness.

Enhanced access to knowledge and modern technologies already being used in other countries can also enable latecomer economies to achieve significant productivity increases without having to reinvent continually. This is particularly important for very poor countries because the potential for technological progress is actually greatest in the countries which are furthest behind the technological frontier. Exporting can facilitate the acquisition of modern technologies through links with buyers and also because a major channel for technology transfer to developing countries, particularly the poorest ones, is through imports of machinery and equipment. Foreign direct investment can also serve as an important channel of technology acquisition under the right circumstances.

Enhanced access to foreign capital can also boost capital accumulation. This is particularly important in very poor countries which are trapped in a vicious circle in which low levels of domestic investment are associated with low productivity and low domestic savings. In these circumstances, access to foreign savings can play a catalytic role in starting a virtuous circle of economic growth and domestic resource mobilization. Once this has been started, foreign capital can also permit a faster rate of growth of private consumption and poverty reduction without the degree of belt-tightening which would be necessary if the national economy was closed and thus economic growth was thus wholly financed out of domestic savings. Foreign direct investment can be a particularly important source of foreign capital as it comes bundled with important entrepreneurial capabilities.

Although the opportunities provided by globalization and liberalization are sizable and significant, it has become increasingly clear since the mid-1990s that there are also significant risks associated with these processes.

Although the opportunities provided by globalization and liberalization are sizable and significant, it has become increasingly clear since the mid-1990s that there are also significant risks associated with these processes.

In this regard, financial globalization has been associated with the increasing instability of economic growth in a number of countries as a result of the intense boom-and-bust cycles associated with surges of short-term capital inflows followed by surges of short-term capital outflows (UNCTAD, 2003: figure 4.2). In these cases, the associated volatility in exchange rates and macroeconomic instability have seriously reduced domestic capital accumulation and also led Governments to keep increasing volumes of resources tied up in foreign exchange reserves designed to prevent speculation. However, the poorest countries have not experienced the kind of hot surges and sudden withdrawals that have characterized emerging market economies in Latin America and East Asia. For them the problem has been their effective exclusion from international capital markets and the concomitant need to rely heavily on official resource inflows as a source of foreign savings.

Globalization has also been a very uneven process in which very poor countries, in particular, have experienced marginalization (World Bank, 2002; Sachs, 2000; Ghose, 2003). With the globalization of competition, the

minimum requirements in terms of capital resources, sophisticated technology and human skills for competing in more open and sophisticated markets have risen for some products. Even in basic commodity markets, buyers within commodity chains have upgraded their volume, reliability and quality criteria for purchasing, and these more stringent market requirements have called for ever larger investments to enter or stay in markets (Gibbon, 2001). The globalization of production systems, in which different stages of the production process are located in different countries, has also been associated with different countries playing different roles in a hierarchical production system which is split into different activities with different levels of technological sophistication and different potentials for dynamic learning through technology spillovers. Countries may thus get locked in to a particular level of technological sophistication, depending on their position in the hierarchical production network (Henderson, 1989).

Globalization has also been a very uneven process in which very poor countries, in particular, have experienced marginalization.

It has also been shown that the uneven nature of globalization processes has been associated with increasing inter-country inequality, as well as a widening gap between the richest and poorest countries (Svedberg, 2004; Milanovic, 2005). Exclusion from global markets, technology and capital has also not been total but rather associated with partial incorporation. Within many countries, there has been an increasing momentum towards a dualistic production structure in which productivity improves in a few enterprises and activities which are effectively linked to the rest of the world, but these enterprises and activities have few links with the domestic economy (Cimoli, Primi and Pugno, 2005). This is a particular problem within very poor countries, where export sectors, for example in large-scale commercial farms, mines, tourism and labour-intensive manufacturing located within an export-processing zone, function as economic enclaves (UNCTAD, 2004). As inequality increases within countries and economic opportunities are insufficient to meet the needs of the educated population, there has been an increasing brain drain, which further diminishes the human capacity to take advantage of the manifold opportunities which globalization could bring.

Within many countries, there has been an increasing momentum towards a dualistic production structure in which productivity improves in a few enterprises and activities which are effectively linked to the rest of the world, but these enterprises and activities have few links with the domestic economy.

4. The importance of institutions

The balance between the opportunities and the risks that globalization brings in relation to the development of productive capacities depends to a large extent on the policies which a country adopts to manage the integration of the national economy with the global economy, as well as the nature of national and international institutions. The term "institutions" will be understood here to refer, using a distinction made by Douglas North (1990), to both the institutional environment (the set of political, social and legal ground rules that establish the basis for production, exchange and distribution – for example, systems of property rights) and institutional arrangements (regular relationships amongst economic agents which govern the way in which they cooperate and compete). The latter can be formalized through the establishment of organizations (such as firms) or entail looser relationships governed by informal rules and recurrent relationships.

The national institutions which matter for the development of productive capacities are various. They encompass, for example, the social values which govern attitudes towards capital accumulation and technological progress that are embodied in diverse cultures, as well as the household and wider gender

institutions which govern how the social relations of production are integrated with the social relations of reproduction. But within this Report the focus will be upon economic institutions, in particular the following:

- Markets — the degree of development or underdevelopment of product and factor markets, as well as their degree of competitiveness;
- States — which (i) govern the background rules for market exchange, provide the physical infrastructure and other public goods, including macroeconomic stability, required for a modern market economy; (ii) support the development of entrepreneurial capabilities and also coordination mechanisms required to ensure joint commitment amongst linked economic agents and activities, and (iii) affect the availability and cost of various productive resources, including finance capital, human capital and natural resources;
- Firms — which are the basic locus of investment and innovation and necessary institutions to realize the creative potential of the market;
- Non-market coordinating mechanisms (such as business associations) associated with production linkages, including between economic agents or activities whose production is already interlinked or can be potentially interlinked;
- Financial systems — which are critical for realizing potentially profitable investment opportunities and processes of capital accumulation;
- Knowledge systems — the set of institutions which enable or constrain processes of technological learning and the development of capabilities which underlie innovation.

For rapid capital accumulation and technological progress the nature of the relationship between the entrepreneurial class and the State is very important. But this is a question of the nature of the private sector as much as it is of the nature of good governance.

For rapid capital accumulation and technological progress the nature of the relationship between the entrepreneurial class and the State is very important. But this is a question of the nature of the private sector as much as it is of the nature of good governance. In very poor countries in particular, the problem is that markets are underdeveloped and there are very few firms. In this situation the policy challenge is not to get the Government out of the way on the assumption that a capitalist market economy is already in existence and that the problem is to make it work better by removing excessive government regulation. The policy challenge is to create markets.[3]

With globalization and liberalization, international institutions also matter. Critically important are the international regimes governing private capital flows and aid, technology transfer and intellectual property rights, and international migration, both globally and regionally.

With globalization and liberalization, international institutions also matter for capital accumulation, technological progress and structural changes within countries. Critically important are the international regimes governing private capital flows and aid, technology transfer and intellectual property rights, and international migration, both globally and regionally. The nature of these international regimes has an important role to play in enhancing the opportunities provided by globalization and reducing its risks. They are generally characterized by asymmetries which constrain and enable different countries to a different extent. These asymmetries are a result of the relative power of different States to ensure that the interests of the economic groups which they represent are reflected within them. Improving both national and international institutions is an important policy pressure point to promote the development of productive capacities within LDCs.

D. The value added for policymakers of a focus on productive capacities

There are two general reasons why the focus on productive capacities is important for policymakers:

- Firstly, it provides a better understanding of how to promote economic growth — how to start it, to sustain it and to accelerate it.
- Secondly, it provides a better understanding of the links between economic growth and poverty reduction, why some forms of economic growth are more poverty-reducing than others, and thus how to ensure that economic growth supports the objective of poverty reduction.

1. Productive capacities and economic growth

The focus on productive capacities provides a better understanding of economic growth because the expansion, development and utilization of productive capacities are at the heart of processes of economic growth. This is implicitly recognized by both neoclassical and endogenous growth theories which analyse growth using an aggregate production function which expresses the relationship between aggregate output on the one hand and stocks of factor inputs (productive resources in our terminology) and their productivity on the other hand. However, these bodies of knowledge generally do not use the notion of "productive capacities". The term "productive capacities" is explicitly used, rather, within various theories of economic growth which are currently neglected in development policy analysis. These theories are those already introduced above, which in this Report provide the basis for understanding how productive capacities develop (see box 5). They go beyond the identification of the relative importance of supply-side ingredients of economic growth and seek to get behind the abstract aggregates of the neoclassical growth models — capital (K), labour (L) and total factor productivity. By focusing on the reality of production they lead to a different understanding of growth processes from that provided by the mainstream models, which can help policymakers, particularly in poor countries, gain a better view of how to start, sustain and accelerate economic growth.

The recognition that supply-side constraints are a matter of both supply conditions and demand conditions can lead to much improved policy.

One important insight which can be derived from these theories is that both supply-side and demand-side factors are important in the analysis of economic growth. This makes it possible to explain what animates capital accumulation, innovation and structural change. The recognition that "supply-side constraints" are a matter of both supply conditions and demand conditions can lead to much improved policy. Within very poor countries which are highly aid-dependent, it shifts attention from promoting an illusory supply-side aid fix (for example, to remedy deficient infrastructure) to considering how relaxing supply-side constraints can be part of a process of reinforcing domestic processes of economic growth founded on the interaction between the development of productive capacities and the growth of demand.

A second key insight for policymakers that can be derived from these theories is that productive capacities are not wholly generic but rather also activity-specific and enterprise-specific. From this perspective, the growing economy is not seen as an "inflating balloon" (as Ocampo, 2005, has vividly put it) in which increasing supplies of factors of production and a steady flow of technological progress smoothly increase aggregate GDP. Rather than being an outcome of economy-wide processes, economic growth is understood as being

affected by the sectoral composition of the economy, as well as by the interactions between macro-processes, structural dynamics and the exercise of entrepreneurship at the micro-level.

A third important insight is that growing economies do not necessarily follow a steady-state growth rate in which productive resources are always fully utilized and there is full employment. Rather, the possibility of underutilization of resources and a gap between the potential (full-capacity) growth rate and the actual growth rate are recognized. This leads to a more complete analysis of growth processes which includes the role of demand as well as supply, as indicated above. Moreover, it facilitates analysis of the links between growth and poverty in all situations where underemployment of labour are central causes of poverty. Within most developing countries, and particularly in the least developed countries, this issue is the heart of the matter.

The development of productive capacities is an evolutionary process in which certain prerequisites have to be in place before other developments can take place.

Fourthly, a further insight from these growth theories is that the development of productive capacities is a cumulative, step-by-step process in which what is possible at any given moment depends on the past path and current state of development. This idea (which some economists call "path dependence") is intuitively quite obvious, but it is quite different from the assumption that the economy is always in, or rapidly moving towards, equilibrium. The step-by-step view of the growth process is important for the policymaker because it implies that sequencing issues are central to development strategies and the development of productive capacities is an evolutionary process in which certain prerequisites have to be in place before other developments can take place.

2. Productive capacities and poverty reduction

The focus on productive capacities provides a better understanding of poverty reduction firstly because economic growth is a necessary condition for the reduction of poverty. But the focus on productive capacities can also provide a better understanding of the extent to which economic growth is poverty-reducing. For many developing countries the extent to which improved economic growth performance is failing to lead to improved human well-being for poorer citizens has become a major concern. It is this concern which has led to the propagation of the notion of "pro-poor growth" as an important policy objective (World Bank, 2005b). But what pro-poor growth means is highly contested and how to achieve it remain elusive (see box 6). A focus on productive capacities can illuminate this issue.

For many developing countries the extent to which improved economic growth performance is failing to lead to improved human well-being for poorer citizens has become a major concern.

Chart 11 is a schematic representation of the key links between economic growth, productive capacities and poverty reduction. On the left-hand side of the chart, there is the virtuous circle between the development of productive capacities and economic growth. On the one hand, economic growth provides a demand-side stimulus for the development and fuller utilization of productive capacities. On the other hand, the development of productive capacities releases supply-side constraints, thus enabling faster growth. But on the right-hand side of the chart, there are further feedback loops between the development and utilization of productive capacities on the one hand, and poverty reduction on the other hand, and vice versa.

The development of productive capacities can lead to poverty reduction through three major mechanisms. Firstly, it enables the progressive absorption of the unemployed and underemployed into expanding economic activities with higher productivity (Islam, 2004). As productivity increases, earnings can also

Box 6. Productive capacities, pro-poor growth and inclusive development

The notion of pro-poor growth has become pivotally important within the design of poverty reduction strategies. It promises a way of getting beyond the limits of a microeconomic approach to poverty analysis divorced from the macroeconomic setting on the one hand and an over-simplistic view that growth is always and invariably good for the poor on the other hand.

The microeconomic approach to poverty analysis adopts the household as the basic unit of analysis, divides the population into poor and non-poor on the basis of a chosen income or consumption poverty line, and then focuses on the characteristics which distinguish the poor from the non-poor. These correlates of poverty (which may include such factors as food production as the major occupation, illiteracy, living in a female-headed household and living in a remote location) can then be seen as causes of poverty and as factors which policy must seek to address. But the problem is that such micro-analysis is divorced from the broader macroeconomic context. The efficacy of policies based on such observed relationships depends on whether or not relationships in aggregate are the same as those observed at the individual level.

Linking such poverty diagnoses to the macro-context is a difficult task and thus analyses of the causes of poverty have turned to the other end of the problem by focusing on the links between economic growth and poverty reduction. However, the bold assertion that "economic growth is good for the poor" has not proved to be robust. The notion of pro-poor growth recognizes that economic growth is a necessary but not sufficient condition for poverty reduction and seeks to identify the conditions and policies under which economic growth is more poverty-reducing or less poverty-reducing.

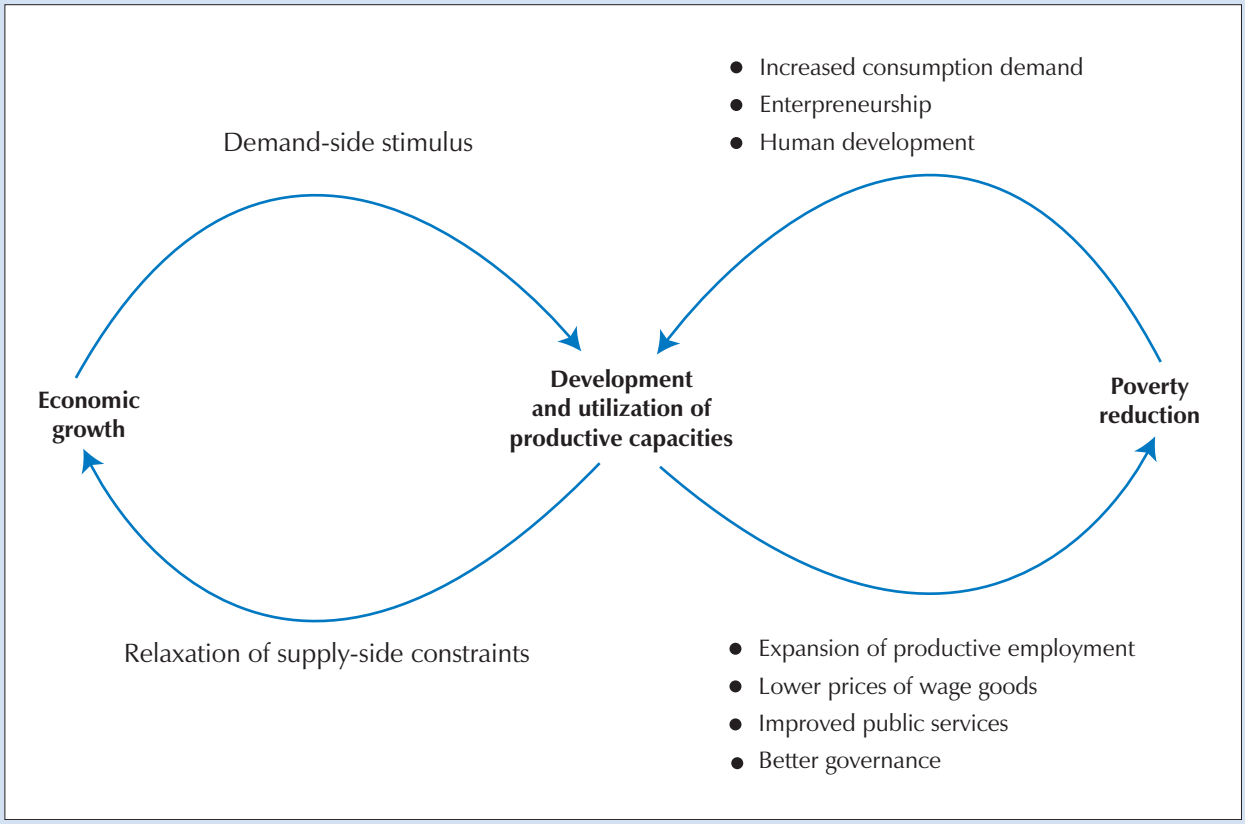
There is, however, no agreement on what pro-poor growth actually is (see Kraay, 2005; Ravallion, 2004; World Bank, 2005b). Some argue that any economic growth which reduces poverty is pro-poor growth. Others suggest that economic growth is pro-poor if the income share of the poor increases. In this formulation, pro-poor growth is a particular type of inequality-reducing growth. Others suggest that economic growth is pro-poor if the rate of income growth of the poor accelerates. This can occur with increasing inequality (and falling income shares of the poor) if the income growth of the poor accelerates more slowly than the income growth of the non-poor.

A common feature of these three definitions of pro-poor growth is that they are founded on a statistical approach to poverty analysis which is based on the statistical relationships between economic growth, income inequality and poverty. From a statistical point of view, the strength of the impact of economic growth on poverty reduction can certainly be "explained" in terms of the arithmetic relationships between rising average incomes and changes in income distribution (Bourguignon, 2003). But empirical work on pro-poor growth shows that to get behind these statistical relationships it is necessary to consider the dynamics of production structures, the nature of technological choices, the level of utilization of productive resources, in particular unemployment and underemployment of labour, and patterns of productive growth and access to productive assets (World Bank, 2005b). In short, the growth–poverty relationship is endogenous to the growth process and depends on the way in which productive capacities expand, develop and are utilized.

It is possible to get a different view of the relationship between economic growth and poverty reduction by shifting from a statistical approach to poverty analysis to what Graham Pyatt has called a "structuralist approach to poverty analysis" (Pyatt, 2001). Such an approach, as elaborated by Pyatt, is founded on the view that household living standards are primarily based on the generation and sustainability of jobs and livelihoods. The starting point for poverty analysis should thus be an analysis of how people make a living, which in turn depends on the structure of the economy and its relationships with the rest of the world (for an extended discussion see UNCTAD, 2002: box 16, p. 192). Islam (2004) has also argued that pro-poor growth should be seen as a process in which economic growth, development of productive capacities and expansion of productive employment opportunities reinforce each other in a cumulative virtuous circle.

The present Report adopts a structuralist approach to poverty analysis (in Pyatt's sense) and argues that the development and utilization of productive capacities are at the heart of processes of poverty reduction. This is what pro-poor growth should be about. But given the ambiguities surrounding that term, this Report, like earlier LDC Reports, prefers to speak of "inclusive development" to describe an economic growth process which is broad-based and socially inclusive.

CHART 11. THE RELATIONSHIP BETWEEN ECONOMIC GROWTH, PRODUCTIVE CAPACITIES AND POVERTY REDUCTION



rise, although in conditions where there is surplus labour the key effect will occur through the expansion of employment opportunities rather than rising real wage rates. The extent to which the development and fuller utilization of productive capacities will lead to poverty reduction depends on the employment potential of this change, in terms of the number of new employment opportunities and the increase in labour productivity, as well as the extent to which the poor are able to integrate into the growth process by getting access to the new jobs and livelihoods. Secondly, the development of productive capacities can lead to the lowering of the prices of wage goods, particularly food prices, and the reduction in instability in those prices. This is an important mechanism for raising real incomes and poverty reduction. Thirdly, the strengthening of the productive base of an economy can enable increased government revenue. This allows improved public services and also better governance, both of which further support poverty reduction.

Developing productive capacities is essential for increasing the fiscal space which is essential for improving governance.

The link between productive capacities and good governance is important as good governance is essential for wealth creation, poverty reduction and political stability. There are certainly instances of inadequate governance which arise from rapacious leadership in very poor countries. But as well as bad volition, lack of financial resources and lack of capacity, which are partly due to lack of financial resources, are key sources of inadequate governance (UN Millennium Project, 2005). How is it possible, for example, to have financial accountability when government cannot attract competent accountants owing to low salaries? Good governance requires a competent and adequately paid civil service, judiciary and police force; adequate communication and information technology; equipment and training for a reliable police force; and modern technological capabilities for customs authorities to secure borders. In countries with weak productive capacities and a low GDP per capita, governance is likely

to be constantly underfunded and it will be difficult to provide the services expected of a modern State in a globalizing world. Developing productive capacities is essential for increasing the fiscal space which is essential for improving governance.

Through these mechanisms the development of productive capacities supports poverty reduction. But as chart 11 shows, poverty reduction in turn supports the development and utilization of productive capacities. Firstly, higher incomes and earnings allow poor people to spend more on education, health, nutrition and skills formation (Islam, 2004). Secondly, poverty reduction increases consumption demand and thus acts as a stimulus to the full utilization and further development of productive capacities. This effect of poverty reduction is not so relevant within economies where poverty is a phenomenon which affects a minority of the population. But where there is mass poverty, rising real incomes of the poor is a major channel of expansion of aggregate demand. As the chart shows, this depends on employment expansion with rising productivity. Thirdly, poverty reduction acts to promote productive entrepreneurship.

This feedback loop exists because people living at a bare subsistence minimum cannot take entrepreneurial risks because it is a matter of life and death for them. Instead they have to focus on low-risk activities which are at the same time low-return activities. These may involve, for example, avoiding price fluctuations in markets by sticking to a certain level of subsistence food production or reducing risk by getting involved in multiple, low-productivity livelihoods without specializing. All-pervasive and life-threatening insecurity also adversely affects entrepreneurship as it leads to short-termism and can reinforce the predatory behaviour which is associated with unproductive entrepreneurship.

The virtuous circle between the development of productive capacities and poverty reduction can reinforce the virtuous circle between the development of productive capacities and economic growth.

Thus the virtuous circle between the development of productive capacities and poverty reduction can reinforce the virtuous circle between the development of productive capacities and economic growth. It must be stressed that this is not likely to be a straightforward, uninterrupted or conflict-free process. There can be, for example, a trade-off between employment expansion and productivity growth. For example, it would be possible to build an irrigation ditch with crude tools employing many people working at low labour productivity with very low remuneration or with machines working at high labour productivity. For any given rate of economic growth, the higher the rate of labour productivity growth, the lower the rate of growth of employment. Moreover, there is a trade-off between increases in consumer demand and increase in household savings. But the chart identifies the major channels through which the development and utilization of productive capacities support a process of pro-poor growth and inclusive development.

Ideally, policymakers should seek to start, sustain and accelerate a cumulative process in which the development of productive capacities, based on investment, innovation and structural change, and the growth of demand mutually reinforce each other. Inclusive development (or pro-poor growth) will be achieved if this is done in such a way that productive employment expands, prices of wage goods fall and fiscal space is expanded. Poverty reduction will in turn reinforce the development of productive capacities through its impact on human development, entrepreneurship and consumption demand. This will in turn reinforce economic growth.

F. Conclusions

This chapter has four basic messages.

Firstly, although the term "productive capacities" is increasingly used in development policy discussions, there is no accepted definition of what it is. Rather, there is a profusion of overlapping concepts. This Report adopts a broad approach to defining productive capacities. This does not limit it to certain types of ingredients of production (for example, physical infrastructure or human resources) or to certain types of economic activity (such as exports or manufactures). Productive capacities are defined as the productive resources, entrepreneurial capabilities and production linkages which together determine the capacity of a country to produce goods and services and enable it to grow and develop.

Secondly, as with the definition of the term, there is no accepted approach to analysing how productive capacities develop. This Report adopts an eclectic analytical framework based on the insights of various theories of economic growth which are currently neglected within development policy. These theories emphasize the importance for economic growth of technological capabilities, entrepreneurship and the dynamics of production structures, and they also view economic growth as a cumulative process based on the interaction between supply-side and demand-side factors.

Thirdly, drawing on these theories, this Report suggests that:

- The core processes through which productive capacities develop are capital accumulation, technological progress and structural change;
- The sustained development of productive capacities occurs through a process of cumulative causation in which the development of productive capacities and the growth of demand mutually reinforce each other;
- The development and utilization of productive capacities within a country are strongly influenced by the degree and form of its integration into the global economy as well as by national and international institutions.

Fourthly, by focusing on the promotion of economic growth through the development and full utilization of productive capacities, policymakers in LDCs can design more effective poverty reduction strategies and their development partners can provide more effective international support for LDCs. The focus on productive capacities will not only help policymakers to start, sustain and accelerate economic growth, but also ensure that economic growth is more poverty-reducing.

This requires a better understanding of the current status of productive capacities within the LDCs, of how they are developing (or not) and of key constraints on the development of productive capacities. The main body of this Report undertakes this analysis, whilst the final chapter draws some general policy implications for the LDCs and their development partners.

By focusing on the promotion of economic growth through the development and full utilization of productive capacities, policymakers in LDCs can design more effective poverty reduction strategies and their development partners can provide more effective international support for LDCs.

Notes

1. King and Palmer (2005) provide an extended discussion of the use of the term "capacity" in international cooperation.
2. This has important implications for the role of investment in achieving effective structural adjustment. See Griffin (2005).
3. This is at the heart of the analysis of economic reforms in the 1990s by Japanese economists — see notably Ishikawa (1998) and Ohno (1998), as well as their alternative paradigm, the Economic Systems Approach, which seeks to promote, in a unified way, the development of productive capacities (human resources, equipment, technology), the enhancement of organizations and institutions, and structural change (composition of output and allocation of resources) (Yanagihara, 1997: 11).

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