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UNCTAD's contribution to the implementation of the Istanbul Programme of Action for the Least Developed Countries: second progress report

UNCTAD's contribution to the implementation of the Istanbul Programme of Action for the Least Developed Countries: measuring and benchmarking productive capacities in the least developed countries

Report by the UNCTAD secretariat

Executive summary

The fifty-ninth session of the Trade and Development Board discussed the report* by the secretariat detailing the contribution of UNCTAD to the implementation of the Programme of Action for the Least Developed Countries (LDCs) for the Decade 2011–2020. The Board subsequently adopted agreed conclusions** welcoming the efforts of the secretariat in implementing the relevant commitments and actions of the Programme of Action.

In continuing efforts to implement the relevant sections of the Programme of Action, the secretariat has been working on productive capacity indicators because member States adopted a broad set of objectives on productive capacities (priority area A in the Programme of Action) and agreed to mainstream productive capacities into national development policies and strategies of LDCs (para. 46 of the Programme of Action). Such efforts require, among other things, specific indicators and benchmarks to measure where LDCs currently stand in building their domestic productive capacities. To that end, UNCTAD has been requested to develop quantifiable indicators with a view to providing “an operational methodology and policy guidance on how to mainstream productive

* The report is contained in document TD/B/59/3.

** The agreed conclusions are contained in document TD/B/59/SC.I/L2.

capacities into national development policies and strategies in LDCs” (para. 65 (e) of the Doha Mandate).

Therefore, the present report has been prepared in response to the above-mentioned request of member States with the aim of introducing the ongoing work of the secretariat on measuring and benchmarking productive capacities in LDCs. The report identifies domestic gaps and limitations, while indicating where LDCs currently stand in building their productive capacities with respect to agreed targets, benchmarks and specific indicators. It also provides policy conclusions and recommendations for action by LDCs and their development partners with a view to effectively addressing the challenges facing LDCs in accelerating the structural transformation of their economies.

Introduction

1. UNCTAD has been providing a conceptual and analytical underpinning to the need for building productive capacities, including in the context of its annual *Least Developed Countries Report* series. This has led to a wider recognition of the importance of placing productive capacities at the centre of national and international policies and strategies in LDCs to put them on the path of sustained economic growth and development, ensure decent standards of living for their population and enable them to take advantage of global trade and investment opportunities. Under the Istanbul Programme of Action, building productive capacities of LDCs became priority area A among the eight key areas identified for action by LDCs and their development partners. The Programme of Action describes the handicaps facing LDCs in building productive capacities as “binding supply constraints, which will ultimately translate into weak exports, limited productive employment and social development prospects” (para. 44).

2. Along with the quest for rigorous analysis on productive capacities and structural transformation, member States also agreed on the need for productive capacities to be mainstreamed into national development policies and strategies of LDCs (para. 46 of the Programme of Action). To do so, it is necessary to assess where LDCs currently stand in building their productive capacities on the basis of specific benchmarks and indicators against which such capacities can be assessed. As part of its contribution to the implementation of the Programme of Action on mainstreaming productive capacities in national policies and strategies and in accordance with paragraph 65 (e) of the Doha Mandate, the UNCTAD secretariat is making continued efforts to develop “quantifiable indicators and related variables to measure economy-wide productive capacities” with a view to providing an “operational methodology and policy guidelines on how to mainstream productive capacities in national development policies and strategies in LDCs”.

3. Developing or identifying quantifiable indicators on productive capacities in LDCs is a monumental task because of the well-known data constraints in these countries and the diverse areas that issues relating to productive capacities cut across. When data are available on some of the indicators, the definition used for the collection and measurement of such data may diverge from the ideal definition required for measuring productive capacities. For instance, a decision to build a road or power station may be based on political parameters involving more value judgements than economic feasibility studies. Further, political decisions, which may have been based on the perceived national strategic interest, may not provide numerical values and dimension to establish with precise indicators on the work undertaken. It is equally difficult to ascertain the direction of impact on economic parameters such as gross domestic product (GDP), employment or an overall economy-wide productivity resulting from a newly built road or power station. In addition, some data

related to the impact of a particular project or intervention may be unavailable from secondary sources or may be difficult to collect from primary sources. That is, different sources of data relating to the same indicator may be incompatible with each other or may be difficult to use in combination, making the task of measuring productive capacities more complex and arduous. At times it may be necessary to use both quantitative and qualitative evaluation techniques in measuring productive capacities – which also creates additional problems regarding the comparability of performance indicators.

4. However, despite the challenges related to data availability, data source variability, validity and methodological issues, the critical importance of developing indicators and benchmarks on productive capacities for decision-making is incontestable for several reasons. First, indicators and benchmarks are critically important to evaluate outcomes of policies and strategies, identify results and analyse successful experiences and best practices. Second, indicators and benchmarks are key to understanding a given direction – where one is and where one wants to go before deciding on what route to take. It is also useful to measure and benchmark the level of productive capacities in order to review how far a given country has come and why. Third, indicators and the monitoring process help evaluate where past policy choices may have gone right or wrong and, consequently, point to policies, processes and actions that need to be remedied or embraced. Lastly, another potential benefit to be derived from measuring and benchmarking on the basis of specific indicators is the insights that can be discerned from cross-country comparisons. Quantitatively assessing productive capacity levels past, present and (aspired) future for several countries can provide valuable lessons learned and best – as well as worst – practices.

5. Most of the data used in the present analysis stem from the World Bank's World Development Indicators database.¹ In addition, several sources were used on specific issues: data on merchandise export concentration and value added in the manufacturing sector are derived from UNCTADstat,² whereas energy data come from the International Energy Agency³ and from the database on the Sustainable Energy for All initiative, or SE4All, hosted by the World Bank and launched by the United Nations Secretary-General in 2011.⁴ Furthermore, data on official development assistance (ODA) are from the Creditor Reporting System Aid Activity database provided by the Organization for Economic Cooperation and Development (OECD)⁵ and data on women's entrepreneurship are from Aguierre et al. (2012).⁶ Furthermore, a comprehensive collection of data on indicators associated with the goals and targets listed in the Programme of Action is available on the website of the United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States.⁷ The one-stop shop has three spreadsheet files with data on 120 indicators relevant to the eight priority areas of action, including productive capacities. In addition, the website has a useful metadata sheet, which contains "[i]nformation on the variables and indicators to monitor, follow up and review" with respect to the Programme of Action. In the present exercise and with a view to minimizing data limitations, the targets contained in the Programme are used as benchmarks or as rough indicators in terms of what exactly needs to be accomplished.

¹ <http://data.worldbank.org/data-catalog/world-development-indicators>.

² <http://unctadstat.unctad.org>.

³ Some data are publicly available at <http://www.iea.org/stats/>.

⁴ <http://www.iea.org/stats/> and <http://data.worldbank.org/data-catalog/sustainable-energy-for-all>.

⁵ <http://stats.oecd.org/Index.aspx?datasetcode=CRS1>.

⁶ OECD, Measuring women entrepreneurship, in *Entrepreneurship at a Glance 2012* (OECD Publishing, 2012).

⁷ The webpage "Indicators and statistics for Least Developed Countries" is located at <http://www.unohrrls.org/en/ldc/962/>.

6. This paper is a synthesis of a broader study being conducted by UNCTAD entitled “Benchmarking Productive Capacities in LDCs” – the first such attempt since the Fourth United Nations Conference on the Least Developed Countries held in Istanbul in May 2011. The advance copy of the comprehensive study will be made available for member States as a conference room paper. Charts and figures comparing both the performance of LDCs within the group and with that of other developing countries are not included in the present note but are widely available in the main study. The study itself is not a conclusive one and should be viewed as an initial step towards identifying the right indicators and benchmarks on productive capacities, a most challenging task. The study, to be published as part of the recurrent publications of the secretariat, is expected to assist policymakers in placing productive capacities at the heart of their respective domestic trade and development policies and strategies.

I. Productive capacities and the Istanbul Programme of Action

7. A large part of the Programme of Action is devoted to the priority areas for action to which LDCs and their international development partners have pledged their commitment. There are eight priority areas in all, with productive capacities being the first one listed. The other seven are agriculture, food security and rural development; trade; commodities; human and social development; multiple crises and other emerging challenges; mobilizing financial resources for development and capacity-building; and good governance at all levels.

8. The Programme of Action does not provide an explicit definition of productive capacities, but its division into eight priority areas makes it clear which are the main issues subsumed under productive capacities and which are not. Let us start with the section that deals with productive capacities and which consists of two main parts: an introductory part that is more generic and a second part that is more specific.⁸ The first part lists the main goals and targets that may be pursued in building productive capacities:

- (a) Increase significantly the value addition in natural resource-based industries paying special attention to employment generation;
- (b) Diversify local productive and export capability with a focus on dynamic value added sectors in agriculture, manufacturing and services;
- (c) Significantly increase access to telecommunication services and strive to provide 100 per cent access to the Internet by 2020;
- (d) Strive to increase total primary energy supply per capita to the same level as other developing countries;
- (e) Substantially expand the share of electricity generation through renewable energy sources by 2020;
- (f) Enhance capacities in energy production, trade and distribution with the aim of ensuring access to energy for all by 2030;
- (g) Ensure that LDCs achieve a significant increase in combined rail and paved road mileage and sea and air networks by 2020.

9. Among other actions, the first part of the Programme of Action calls on LDCs and their development partners to mainstream a productive capacity development agenda, strengthen domestic financial institutions, foster economic activity and support

⁸ Productive capacities are covered in paras. 44–55 of the Programme of Action.

diversification and value addition efforts. It also contains more specific actions, such as strengthening programmes to promote the agroprocessing industries and supporting efforts to develop a sustainable tourism sector. All in all, there are 11 actions in this part: 6 by LDCs and 5 by development partners. The second part consists of actions along four themes: infrastructure, energy, science, technology and innovation, and private-sector development. The two former themes fall primarily into building productive resources according to the classification provided in *The Least Developed Countries Report 2006: Developing Productive Capacities*.⁹ Science, technology and innovation and private-sector development, meanwhile, are more concerned with developing entrepreneurial capabilities and, especially with respect to the latter, promoting production linkages.

10. Infrastructure refers to physical infrastructure, such as electricity, transport, and information and communications technology (ICT). It totals 10 actions (6 by LDCs and 4 by development partners). The theme on energy is concerned with production levels and, arguably most of all, access to affordable, reliable and renewable energy. It lists seven actions (four by LDCs and three by development partners). The emphasis of developing science, technology and innovation is on establishing and strengthening institutions as well as promoting cooperation and collaboration among the pertinent actors involved in innovation of science and technology. The theme encompasses 10 actions in all (1 joint action, 6 by LDCs and 3 by development partners). Private-sector development includes the promotion of small- and medium-sized enterprises and how to overcome structural constraints that limit private-sector growth. It features six actions in total (four by LDCs and two by development partners).

11. With regard to the other priority areas of the Programme of Action, it is instructive to reflect on some of the issues covered that are reckoned as not falling directly under productive capacities. One such area is human and social development, which includes issues related to education, health, gender equality and social protection. As far as human capacities are concerned, therefore, this suggests that productive capacities in the Programme of Action are primarily about concerns more at a macro level and is less focused on matters at the individual level. Another area is mobilizing financial resources for development and capacity-building. Thus, goals, targets and actions that involve the boosting of financial capital resources are predominantly subsumed under this category rather than under productive capacities. The Programme of Action also singles out agriculture, food security and rural development, and trade and commodities as three priority areas for action – areas that all contains some goals, targets and measures that pertain to the development of productive capacities. However, the present assessment and efforts to measure and benchmark indicators exclusively focus on the physical and financing aspects of productive capacities – soft and hard – without indulging into the spheres of human and social development.

II. Productive capacities in least developed countries: where do they stand in relation to the key indicators contained in the Programme of Action?

12. The goals and targets in the area of productive capacities that LDCs and the international community have committed themselves to pursue in accordance with the objective “to enable half the number of LDCs to meet the criteria for graduation by 2020” were outlined in the previous chapter of this paper. An important exercise to facilitate strategic policymaking in developing productive capacities is to assess the current state of

⁹ UNCTAD, United Nations publication, Sales No. E.06.II.D.9 (New York and Geneva, 2006).

LDCs' productive capacities compared with the declared objectives and other relevant benchmarks.¹⁰ Therefore, this section sets out to provide such an assessment and benchmarks against the goals, targets and actions that are contained in the Programme of Action on productive capacities. Thus, the four main themes of priority area A are covered in this section. It also includes analyses on any structural transformation of LDC economies for a more generic assessment of their productive capacities and on financing and investing in productive capacities in order to review what efforts have been made to develop them. In particular, this section covers the following facets of productive capacities in the order presented:

- (a) Structural transformation;
- (b) Infrastructure (electricity, transport, ICT);
- (c) Energy, science, technology and innovation;
- (d) Private-sector development;
- (e) Financing and investing in productive capacities (gross fixed capital formation, ODA).

13. In all the subsections, the analysis is based on the latest data available on a range of indicators. Attempts are made to compare how LDCs are progressing with respect to one another as well as against certain benchmarks and seek to identify causes of the varied performances. When relevant, the analysis highlights worst and best practices in developing productive capacities. Some indicators also feature what-if analyses that show what progress would be needed to attain specified targets or particular benchmarks.

14. It is important to note that the Programme of Action used some general comparators and benchmarks without numerical values, namely "other developing countries", including the three countries that have, to date, graduated from the LDC category – Botswana, Cape Verde and the Maldives. The preferred benchmark is in most cases developing countries that are not LDCs because the average level of productive capacities of such a large and diverse group provides LDCs with a yardstick by which their progress can be measured and to which they can aspire. For certain indicators, the benchmark also refers to the middle-income economy group as defined by the World Bank, which serves as a proxy for non-LDC developing countries. The proxy is by no means ideal, though, since 17 LDCs are classified as middle-income economies and 5 of the 36 low-income countries are not LDCs.¹¹ When possible, the LDCs that fall into the middle-income category have been excluded from that group in calculating the benchmark. The productive capacities of the three former LDCs are of interest by virtue of the countries' previous LDC status of which Botswana is frequently the point of reference because of data availability.

15. A section-by-section analysis of the state of productive capacities in LDCs shows severe limitations and inadequacy. This appears to be a primary cause and reflection of excessive fragility inherent in their economies and their resulting vulnerabilities to external shocks, which undermine efforts to attain sustained and equitable growth and development in these countries. Weak productive capacities are also causes and consequences of weak production linkages, lack of diversification and value addition in their economies. An

¹⁰ For detailed information on specific performance-related indicators of an individual country or group of countries and the relevant charts and graphs used in comparison, see the background study mentioned in para. 6 of this paper.

¹¹ The number of LDC economies that fall into the various categories is as follows: 31 in the low-income group, 15 in the lower-middle-income group, 2 in the upper-middle-income group and 1 (Equatorial Guinea) in the high-income group.

assessment of structural transformation – defined to include qualitative targets on increased value addition, diversification of local productive and export capacities in agriculture, manufacture and services – portrays gloomy realities of the economies of LDCs. The merchandise export concentration index¹² of 48 LDCs¹³ in 2011 ranged from 0.14 (Nepal) to 0.97 (Angola). A more worrying trend is that the diversification of LDC economies has narrowed over the years judged from data on the evolution of the merchandise export concentration index since 1995 for LDCs as a group when the index value virtually doubled between 1995 and 2011 – from 0.22 to 0.43. In the case of the African LDCs, the concentration index surged from 0.25 in 1995 to 0.58 in 2011. This corroborates the growing concern that LDC economies are less diversified and that such a sheer lack of diversification can hold back the building of productive capacities and as a result, hamper development that is sustainable in the long run.¹⁴

16. A further measure or indicator of structural economic transformation is the increasing share of value added by the manufacturing sector of LDCs as a share of GDP. This indicator paints a mixed picture of how the role of manufactures changed in LDCs between 2002 and 2011. Whereas value added in the manufacturing sector as a share of GDP decreased in 29 LDCs over the past decade, it rose in 19. Overall, the average share of manufacturing value added for all LDCs contracted by 0.7 percentage points and was primarily due to falling shares of the sector in African LDCs and in island LDCs (-0.9 and -1.8 percentage points, respectively). The group comprising Asian LDCs, meanwhile, saw its average share of manufacturing value added widen by 0.9 percentage points during the same period. When compared with the average share of other developing countries that are not LDCs, 26 of the LDCs experienced a more positive change between 2002 and 2011 than other developing countries in the comparison group, whose share narrowed by 0.8 percentage points. A similar picture emerges when comparing median values: the median change in LDCs was -0.6 percentage points, while the median change in other developing countries was -1.0 percentage points. Thus, although value added in the manufacturing sector contracted in most LDCs during the past decade, the majority of LDCs had higher increases or lower decreases than the average and median developing country. However, it is important to note that the share of manufacturing value added to GDP is still low in LDCs. In 2011, only 10 LDCs had a share that was higher than the average 12 per cent of other developing countries. It is clear, therefore, that many LDCs are starting from a low base and that their manufactures output needs to expand significantly faster than that of other developing countries if they seek to emulate the value added shares exhibited in the latter group.

17. With regard to physical infrastructure – roads and railways – which is one of the pillars of productive capacities, the indicators used to measure conditions in LDCs are as follows: road density per million people, proportion of paved roads, annual average growth rates of paved roads, density of rail networks and the rate of annual average growth in rail tracks (wagons). In terms of total roads networks, the lowest density in LDCs is 354 kilometres (km) per million people, the median density is 2,147 km per million people and the highest density is 11,089 km per million people. Seven of the 41 LDCs with available data have densities that are higher than the average 3,446 km per million people found in 58 developing countries that are not LDCs. By way of comparison, Botswana has

¹² The Herfindahl-Hirschman index gives an indication of the extent to merchandise export concentration yielding values between 0 and 1 (the higher the value, the higher the degree of concentration).

¹³ South Sudan is the missing LDC.

¹⁴ Naturally, the potential drawbacks of overly limited diversification go beyond any negative impact on productive capacities, for example, a high exposure to external shocks.

an estimated density of 13,754 km per million people. With regard to the proportion of roads in LDCs that are paved in comparison with other developing countries, the percentage of paved roads in LDCs ranges from a low of 2 per cent to a high of 77 per cent. The average is 22 per cent and the median is 19 per cent. The average of paved roads in 50 other developing countries stands at 56 per cent. Only three LDCs have a higher proportion than this; unsurprisingly, they include Comoros and Sao Tome and Principe, the LDCs with the smallest surface area. The third LDC with a higher proportion of paved roads than other developing countries is Bhutan.

18. The data on rail networks in LDCs give an impression similar to that of road networks – at least in quantitative terms¹⁵ – and show a density of rail lines comparable to that of other developing countries. The lowest density among the LDCs is 9 km per million people, the median is 61 km per million people and the average, 77 km per million people. The highest density by far is found in Djibouti, which has an estimated density of 966 km per million people. The average density of the middle-income countries is 102 km per million people, but the median is substantially higher at 144 km per million people. Botswana, to give the comparison of a former LDC, has a density of 437 km of rail lines per million people, slightly higher than the density in South Africa (436 km per million people) and not much lower than the density in the European Union (464 km per million people). As for rail tracks, the rate of annual average growth that would be needed for LDCs to match the density found in other developing countries ranges from a low of 0.7 per cent per annum (Senegal) to a high of 30.3 per cent per annum (Uganda). Five of the 16 LDCs have already achieved the benchmark of 101.5 km per million people. Although data reveal that LDCs have made little progress in extending their railways in the past decade, it seems plausible that about half of the 16 LDCs with available data could have a density to match the current average of developing countries that are not LDCs by 2020.

19. Another important indicator of productive capacities and structural economic transformation contained in the Programme of Action relates to information and ICTs. The three key indicators used in the assessment are as follows:

- (a) Internet users per 100 people;
- (b) Mobile cellular subscriptions per 100 people;
- (c) Fixed telephones lines (landline networks) per 100 people.

20. Overall, the proportion of mobile phone subscriptions per 100 people is considerably higher than that of Internet users or telephone lines. Whereas the lowest level is zero or close to zero for all indicators, the highest levels are much greater for mobile phones: 96 subscriptions per 100 people, as opposed to 30 Internet users per 100 people and 19 telephone lines per 100 people in LDCs as a whole. With respect to telephone lines, only two LDCs have more than 10 landline networks per 100 people, although the spread of mobile phones has lessened the importance of fixed telephone lines. This pattern is also similar to other developing countries that are not LDCs.

21. In addition to ICTs, it is equally important to examine the state of science, technology and innovation in LDCs, although the Programme of Action does not contain any specific goals or targets relating to that area. A separate subsection therein is devoted to actions by LDCs and their development partners that should be undertaken in science, technology and innovation, including undertaking a joint gap and capacity analysis by 2013 with the following aims:

¹⁵ There are no readily available data on the quality of either road or rail networks in LDCs.

- (a) Creating a technology bank and science, technology and information supporting mechanism;
- (b) Mainstreaming science and technology into national development and sectoral policies;
- (c) Ensuring that government spending prioritizes science, technology and innovation;
- (d) Setting up and strengthening institutions.¹⁶

22. These tasks entail the use of at least two sets of proxy indicators (expenditure as a share of GDP on research and development (R&D) and the proportion of researchers and technicians in R&D). Concerning the first indicator, the lowest share among LDCs is 0.02 per cent (the Gambia), the highest, 0.47 per cent (Democratic Republic of the Congo) and the median, 0.21 per cent. The unweighted average share of GDP that goes to R&D in other developing countries stands at 0.43 per cent; two LDCs (Democratic Republic of the Congo and United Republic of Tanzania) have shares higher than this. The median share in other developing countries, meanwhile, is 0.29 per cent. In addition to the Democratic Republic of the Congo and the United Republic of Tanzania, three more LDCs (Senegal, Uganda and Zambia) have shares higher than this. In comparison, R&D spending in Botswana was 0.52 per cent of GDP in 2005.

23. Energy – a crucial element in efforts to build productive capacities – features prominently in the Programme of Action, with no less than three goals and targets in the section on productive capacities. The agreed objectives are as follows:

- (a) To boost total primary energy supply per capita;
- (b) To increase the share of electricity generation through renewable energy sources;
- (c) To ensure access to energy for all by enhancing capacities in energy production, trade and distribution.¹⁷

24. Thus far, only two LDCs, Bhutan and Equatorial Guinea, have total primary energy supply per capita above the average of other developing countries (1.83 tons of oil equivalent (toe) per capita and 4.68 toe per capita, respectively). Whereas the high total primary energy supply per capita in Equatorial Guinea is primarily due to a surge in natural gas production, the level in Bhutan can, in part, be attributed to its hydropower potential and the arrangements with neighbouring India to develop it.¹⁸ The lowest total primary energy supply per capita among LDCs, meanwhile, is 0.07 toe per capita (Afghanistan) and the median, 0.34 toe per capita. The average of other developing countries stands at 1.35 toe per capita.

25. With regard to the share of renewable electricity in total electricity output, many LDCs have very high shares of renewables, owing to the heavy contribution of traditional biomass to the total final energy consumption.¹⁹ No less than seven LDCs have shares of 100 per cent with a further three LDCs with shares above 90 per cent. Moreover, the

¹⁶ Para. 52 of the Programme of Action.

¹⁷ Para. 45(d)–(f) of the Programme of Action.

¹⁸ IRENA Renewable Energy Country Profiles. For hydropower in Bhutan, see Jeremy Berkoff, Hydropower in Bhutan and Nepal: why the difference? *World Economics*, 4(3):121–142, 2003.

¹⁹ World Bank, *Doing Business 2013: Smarter Regulations for Small and Medium-Size Enterprises* (Washington, D.C., International Bank for Reconstruction and Development/The World Bank, 2013), pp. 209–210.

majority of LDCs with available data have shares that are higher than the unweighted average share of other developing countries at 37 per cent. By contrast, the average share of renewable electricity for LDCs is 53 per cent. Another important qualitative goal contained in the Programme of Action relates to a commitment to ensure “access to energy for all by 2030”,²⁰ which is in line with one of the three objectives²¹ of the Sustainable Energy for All initiative. The share of the population in LDCs that have access to non-solid fuels ranges from 5 per cent (16 countries) to 87 per cent (Djibouti), with a median value of 9 per cent. The unweighted averages for LDCs are 31 per cent with respect to access to electricity and 20 per cent for access to non-solid fuels. Clearly, access to energy in LDCs is considerably behind other developing countries, where the unweighted average for access to electricity and access to non-solid fuels are 85 per cent and 73 per cent, respectively. As would be expected, access to energy is higher in urban areas than in rural areas. Access to electricity in urban areas in the median LDC is 57 per cent, whereas it stands at a mere 9 per cent in rural areas. The gap for non-solid fuels is smaller, but nonetheless substantial: 21 per cent in urban areas in the median LDC as opposed to 5 per cent in rural areas.

26. The Programme of Action considers private-sector development to be an important component of building productive capacities in LDCs, although there are no specific goals or targets attached to it. It also includes several actions to be undertaken by LDCs and their development partners, including efforts to promote an enabling environment for private-sector development, making efforts to promote access to financial services and promoting women’s entrepreneurship. Specific indicators used as proxy in the assessment of private-sector development in LDCs are ease of doing business, logistics performance, structural policies and involvement of women in professional life based on the rankings in the World Bank’s Ease of Doing Business Index. For LDCs, the indices range from 52 (Rwanda) to 185 (Central African Republic), which is the lowest ranking in the world. Generally, the positions of LDCs are skewed towards the bottom of the rankings. No less than 15 of the 20 countries with the least business-friendly regulations are LDCs. The average rank of the LDCs is 146, while the median is 153. By comparison, the average rank of other developing countries is 97, and the median rank is 99. Encouragingly, several LDCs have made considerable headway in the past decade. The most familiar success story is Rwanda, which has undertaken several significant reforms in 2000s to further private-sector development. It even put in place a Doing Business unit to lead the reform work.²² Other LDCs that have pushed ahead with reforms and climbed the rankings include Burundi, Sierra Leone and the Solomon Islands.

27. Linked to the assessment of doing business in LDCs is the World Bank’s Country Policy and Institutional Assessment (CPIA), consisting of 16 different indicators in four clusters. However, in the present exercise only three indicators in structural policies clusters were used: the business regulatory environment, the structure of the financial sector and the policy framework related to trade in goods and services. In addition, CPIA includes other indicators, especially those measuring the extent to which private-sector development is facilitated, such as enacting and enforcing the protection of property rights. The data on entrepreneurial support for women are taken from the Third Billion Index developed by Booz & Co. There is a positive relationship between LDCs’ Ease of Doing Business rankings and their CPIA ratings or scores, where a better ranking is associated with higher scores. Unfortunately, as with the Ease of Doing Business rankings, LDCs are among the

²⁰ Para. 45(f) of the Programme of Action.

²¹ The other two objectives are “to double the global rate of improvement in energy efficiency and to double the share of renewable energy in the global energy mix” (See footnote 21, p. 10, and <http://www.sustainableenergyforall.org/>).

²² See footnote 21, pp. 37–41.

lowest rated on key indicators of CPIA scores. For instance, with regard to an indicator associated with entrepreneurial support for women, 8 LDCs were ranked in the bottom 10 and no LDC ranked higher than 98 out of the 128 countries compared. Unequal inheritance laws in several LDCs are specific examples responsible for the generally weak support the LDCs provide for women entrepreneurs and hence low CPIA ratings on domestic business environment.

28. Financing and investing remain the key thrust of efforts aimed at building productive capacities in LDCs where an assessment was made on the basis of three indicators: ODA flows, gross fixed capital formation²³ and government spending on education, which is among the important indicators of productive capacities. Overall, ODA flows to LDCs expanded in all main sectors, although the overall growth can primarily be attributed to aid in social infrastructure and services. This includes education, health, population and reproductive health, water supply and sanitation, and government and civil society. Flows of ODA to economic infrastructure and services, the sector most directly related to productive capacities, more than doubled in constant terms in the past decade – from \$2.9 billion in 2002 to \$6.0 billion in 2011. However, its share of total aid flows remained fairly constant during the period, often at 11–12 per cent. Within the productive sectors, transport and storage is the area that receives the largest share of flows by far within the sector in LDCs; in each year of the 2002–2011 period it accounted for more than half of the aid going to the sector. Regarding further sectoral and subsectoral decomposition of ODA flows, the energy share has increased the most in the past decade among the subsectors and currently makes up about one quarter of aid flows to economic infrastructure and services. The share of flows to business and other services has also expanded, whereas aid flows to both communications and banking and financial services have dwindled in relative terms.

29. With regard to gross fixed capital formation, a core process of building productive capacities, comparison was made for 21 LDCs for which data are available for the period 2002–2011. The indicators used are share of gross fixed capital formation in GDP and the annual average growth rate of gross fixed capital formation that are compared with the unweighted average of other developing countries. It shows that nine LDCs had shares and growth rates that were higher than other developing countries and that both components were comparatively lower in four LDCs. This suggests that LDCs as a group do not lag behind other developing countries in either the level or growth rate of gross fixed capital formation, although LDCs should preferably have markedly higher percentages in order to be able to catch up with the overall levels of productive capacities in other developing countries. The Programme of Action for the Least Developed Countries for the Decade 2001–2010, also known as the Brussels Programme of Action, includes the objective that LDCs should reach an investment-to-GDP ratio of 25 per cent per annum.²⁴ Although this goal is not specified in the Istanbul Programme of Action, it may nonetheless serve as a benchmark to which LDCs should strive. Encouragingly, several LDCs have made headway towards the 25 per cent goal: whereas only 5 out of 34 LDCs had investment-to-GDP ratios above 25 per cent in the early 2000s, 11 had attained such high shares in the years around 2010. All the same, some two thirds of the LDCs with available data had ratios below the objective of the Brussels Programme of Action.

²³ This refers to an increase in physical assets (investment minus disposals) within the measurement period. It can be disaggregated into three main components: gross public capital formation, gross fixed domestic private capital formation and foreign direct investment. For further details, see *The Least Developed Countries Report 2006*, pp. 97–100.

²⁴ Para. 6 of the Brussels Programme of Action.

30. An indication of LDCs' efforts to invest in the development of human skills is how much government expenditure goes to education. A comparison of government expenditure was made for the 35 LDCs for which data are available against the unweighted average of other developing countries. Encouragingly, many LDCs allot more public spending to education than other developing countries. In fact, LDCs have a higher unweighted average (18 per cent) and median (17 per cent) than the group of other developing countries (unweighted average = 15 per cent, median = 14 per cent). Looking at the LDCs that have data on spending on education over several years gives the impression that the share has increased in about two thirds of the countries during a period of at least five years. Such a substantial increase may be due to the high importance that LDCs attach to education, including in the context of Millennium Development Goals and the Istanbul Programme of Action. Therefore, it is important that such a positive trend be maintained in the future – but not at the expense of reduced allocations to productive sectors of the economy.

III. Policy implications and the way forward

31. Measuring productive capacities is an arduous task, not only because of the many areas to be assessed and measured, but also because of the paucity of data in many areas linked to productive capacities. Sometimes, even if data are readily available, they can be either incomplete or lack a precise definition. In other areas where data are available, these are not validated and may thus not be reliable or justifiable for use as indicators. Despite the challenges, it is crucial to use indicators to measure performances and to understand the state of productive capacities in LDCs. This is because indicators are key in measuring outcomes of policies, comparing results and indicating future courses of action. In this exercise, the targets contained in the Programme of Action are used as benchmarks or as rough indicators in terms of what exactly needs to be accomplished. However, agreed targets – even if they will be met or achieved in the long run – can be considered useful benchmarks only if they are measureable or realistic. Ambitious targets are difficult to measure and can also overstretch available capacities and financial means, while at the same time diverting the attention of policymakers from focusing more on achievable or less ambitious targets.

32. Over the last couple of decades, several LDCs have made important strides in some areas of building productive capacities. For instance, many have substantially increased public spending on education, which is an important investment in developing human skills and capacities. Many have also improved their investment–GDP ratio as an indication of increased attention attached to fixed gross capital formation in LDCs. A few LDCs also improved the share of their GDP that is allocated to R&D, although most of them have a long way to go in increasing it. On energy, while a large proportion of energy in LDCs stems from sustainable energy sources – traditional biomass – they are considerably behind other developing countries in access to energy. Further, access to energy in median LDCs is much higher in urban areas than in rural areas, standing at 57 per cent and 9 per cent, respectively.

33. The biggest challenges for LDCs relate to areas where they lag far behind other developing countries: physical infrastructure, export diversification and value addition, ICTs and an overall business environment (doing business). For instance, the data reveal that LDCs have made little progress in extending their road networks (very few LDCs have paved roads per million people on a comparative scale with other developing countries). The railway situation in LDCs does not differ much from the that of their road network, although, based on the data, it appears plausible that about half of the 16 LDCs for which data are available could have a density to match the current average of developing countries that are not LDCs by 2020. With regard to ICTs, although the trend in mobile telephone

subscription is encouraging in some LDCs, access to the Internet and fixed telephone lines still remains problematic (see paragraph 20).

34. It is crucial for LDCs and their development partners to address existing domestic gaps and limitations identified in the present note and the accompanying study, which is made available in the form of a conference room paper. Particular attention should be paid to specific areas where the countries are individually or collectively lagging behind the rest of the developing countries. For instance, export concentration is highest in LDCs. Therefore, the case for diversification, including value addition, remains persuasive because of their continued overdependence on high-volume-low value added exports and the resulting volatility of primary product prices and the uncertainties about long-run price trends. It is essential that LDC exporters of minerals and petroleum products invest the gains from commodities in building productive capacities of their respective economies.

35. There is considerable room for LDCs for continuing improvements in their policy area by deepening reforms across the board. This is indicated by the low scores and rankings of LDCs in various indices. In this regard, setting up national committees to study specific issues and provide detailed policy recommendations is one approach that has brought some success. These issues may be cross-cutting (ease of doing business or women's entrepreneurship, for example) or sectoral (access to energy, paving roads). It is important that the scope and objectives of a committee be clearly defined from the outset and that policymakers and the international community have a definite intention of taking the outcome of its work seriously. The insight that undertaking reforms is a continuous process should also steer policymaking. Thus, a big reform push – albeit welcome – is not sufficient in any circumstance and should be followed up with further amendments and fine tuning. LDCs should constantly strive to improve their domestic economic environment for the growth and development of the private sector. They are encouraged to take effective policy measures to improve the participation of women entrepreneurs, including through improved property rights systems and inheritance laws. Previous UNCTAD studies on LDCs argue that the most important condition for boosting exports and attracting foreign direct investment is improvement of the domestic business climate, including the governmental provision of public goods and effective protection and enforcement of property rights.

36. Investment – domestic and foreign direct investment – is by definition an integral part of building productive capacities. It is clear that a surge in investment is needed for LDCs to come close to attaining the goals and targets of the Istanbul Programme of Action. Making concerted and sustained efforts to enhance domestic resource mobilization is paramount. In this context, domestic resource mobilization should be understood in a broad sense, encompassing the financial sector, tax collection, remittances and the prevention of capital flight.²⁵ The growing interest in sub-Saharan bonds is a positive trend that shows how LDCs are developing their capital markets. That is, for LDCs, mobilizing domestic resources by stimulating private savings and improving the tax collection system as well as harnessing their natural resources are critical for building their productive capacities for development and poverty reduction. At the regional level, it is important to enhance the role of regional development banks in financing productive sectors of LDCs, to deepen regional economic integration and to harness South–South cooperation for the development of LDCs.

²⁵ For a practical overview, see UNCTAD, *Enhancing the Role of Domestic Financial Resources in Africa's Development: A Policy Handbook*, UNCTAD/ALDC/Africa/2009/1 (New York and Geneva, United Nations, 2009).

37. Development and trading partners of LDCs have important roles to play in building LDCs' productive capacities. For example, ODA plays a key role in financing the development of productive capacities, and the Istanbul Programme of Action reiterates the commitment made in the Brussels Programme of Action that donor countries will implement actions to reach their respective aid target.²⁶ The most ambitious target is for donor countries to provide 0.20 per cent of their gross national income as ODA to LDCs. In 2011, the aggregate share of 27 donor countries stood at 0.08 per cent: 5 donor countries had shares above 0.20 per cent, 1 country had a share in the range of 0.15–0.20 per cent, 3 countries had shares in the range of 0.10–0.15 per cent and the remainder had shares below 0.10 per cent. If the donor community would make a push to lift the current aggregate share of 0.08 per cent to the target of 0.20 per cent, it would entail an increase in ODA per capita in donor countries from \$34 to \$89. Whether donor countries raise their respective shares or not, it is imperative that LDCs and their development partners improve aid effectiveness in line with the Paris Declaration on Aid Effectiveness, the Accra Agenda for Action and the Busan Partnership for Effective Development Cooperation.

38. Resources from the Aid for Trade Initiative should provide a non-debt creating form of investment and should be made more predictable, linked to purposes that will contribute directly to building supply capacities of LDCs, including building trade-related infrastructure. Since a significant number of LDCs (28 out of 49) are commodity exporters, it is critical for them to join commodity-based value chains regionally and globally. This will broaden their prospects for diversification, value addition and retention with direct impact on employment creation and poverty reduction. It will also increase their economic resilience to external shocks, thereby making income more stable and predictable. Therefore, Aid for Trade should include special initiatives or windows on commodity diversification with a view to enabling LDCs to join regional and global commodity-based value chains. A special window such as this can facilitate technological advances and improve production efficiency while boosting labour productivity and incomes. Aid for Trade should also include a provision for trade-related technical assistance to build institutional capacities to formulate locally owned trade policies and strategies, effectively participate in trade negotiations and implement trade agreements. The Enhanced Integrated Framework for Trade-related Technical Assistance to LDCs, an important vehicle to strengthen institutional capacities of LDCs, should be further strengthened.

39. Further areas that require effective action by LDCs and their development partners relate to improving the quantity and quality of data, including by building national statistical capacities of LDCs. With the support of the international community, LDCs should also

²⁶ "(a) Donor countries will implement the following actions that they committed to at the Third United Nations Conference on the Least Developed Countries as soon as possible:

- (i) Donor countries providing more than 0.20 per cent of their gross national product as ODA to least developed countries: continue to do so and maximize their efforts to further increase ODA to least developed countries;
- (ii) Other donor countries which have met the 0.15 per cent target: undertake to reach 0.20 per cent expeditiously;
- (iii) All other donor countries which have committed themselves to the 0.15 per cent target: reaffirm their commitment and undertake either to achieve the target by 2015 or to make their best efforts to accelerate their endeavours to reach the target;
- (iv) During the period of the Programme of Action, the other donor countries: exercise individual best efforts to increase ODA to least developed countries with the effect that collectively their assistance to least developed countries will significantly increase;
- (v) Donor countries should review their ODA commitments in 2015 and consider further enhancing the resources for least developed countries; (...)" (para. 116.2)

strive to set up or develop their own indicators, benchmarks and monitoring mechanisms compatible with the Istanbul Programme of Action in order to measure changes in their productive capacities. These indicators should inform further improvements in the implementation of policies and actions, including donors' performances in recipient countries to continuously enhance their productive capacities.

40. Success in achieving the goals and targets of the Programme of Action related to productive capacities depends on several factors, including those highlighted in the present note as policy implications and recommendations. Importantly, building domestic productive capacities should be put at the centre of LDCs' respective development policies and strategies. These countries must therefore take steps to enhance their national capacity to formulate policies and translate the agreed priorities and commitments into actions, including by mainstreaming the Programme of Action into their respective domestic policies and strategies. This includes efforts to build national institutional and policymaking capacities and to rebalance the role of the State and the market.
