3 Salient Characteristics of Least-Developed Countries

3.1 Criteria for Addition to and Graduation from the List of LDCs

According to UNCTAD (2006: iii), the list of LDCs is reviewed every three years by the Economic and Social Council (ECOSOC) of the United Nations in the light of recommendations by the Committee for Development Policy (CDP). The latest review, in 2006, used three criteria:

- A low-income criterion based on a three-year (2002-2004) average of $750 for additions to the list and $900 for graduation from the list;
- A 'human assets' criterion based on a Human Assets Index, which is itself a composite of indicators of nutrition (percentage of population undernourished), health (child mortality rate), school enrolment (gross secondary school enrolment rate) and literacy (adult literacy rate); and
- An 'economic vulnerability' criterion involving the Economic Vulnerability Index, which is a composite of indicators of natural shocks (index of instability of agricultural production and share of population displaced by natural disasters), trade shocks (index of instability of export of goods and services), exposure to shocks (share of agriculture, forestry and fisheries in GDP, merchandise export concentration index), economic smallness (population in logarithms) and economic remoteness (index of remoteness).

For all three criteria, different thresholds are used for addition to, and graduation from, the list of LDCs. A country will qualify to be added to the list if it meets the three criteria and does not have a population greater than 75 million.[1] A country will qualify for graduation from LDC status

1. The 75 million limit on population applies only to new additions to the list of LDCs. For Bangladesh, which had a population of 156 million in 2006, the limit is not applicable since it was on the very first list of LDCs.

if it has met the graduation thresholds under at least two of the criteria in at least two consecutive reviews of the list. After a recommendation to graduate has been made by the CDC and endorsed by the ECOSOC and the General Assembly, a graduating country will be granted a three-year grace period before graduation takes place. Thus, a minimum of nine years has to elapse before a country actually graduates from the first review at which it met the graduation thresholds in at least two of the criteria.

3.2 Implications of the Criteria

The developing countries identified as least developed, 49 in all as of June 2008, have low income as measured by its gross national income (GNI) per capita, weak human assets and a high degree of economic vulnerability. All these, at least as they are defined in the three criteria, are based almost wholly (with the exception of remoteness) on outcomes. The observed income of any country is the joint outcome of its exogenous natural resource endowments (e.g., land, minerals, climate) and endogenous resources, such as physical and human capital, technology, institutions and policies. Institutions and policies influence innovation, including the creation and adoption of technology, as well as the efficiency of the allocation of resources and their productivity. This being the case, whether a country has a low income, primarily as a result of poor exogenous resources or primarily because its institutions and policies are not conducive to accumulation of endogenous resources and their productive use, or both, would matter in mapping out feasible options to raise their status as LDC, for example. Similarly, the indicators of shocks that enter into the economic vulnerability index are also shocks to outcomes, such as, for example, agricultural production, rather than the weather or crop disease or other shocks that could result in variations in production, if not mitigated. Thus, one country's agricultural production could be more unstable than another's in spite of both undertaking mitigation strategies, because either policy-makers in one have different attitudes towards risk as compared to the other or the underlying weather and other shocks are more severe in the case of the former. It is also possible that the differences in the degree of instability of production between the countries arises from one country not adopting mitigation strategies as needed compared to others, even though both countries faced underlying shocks of the same severity. Thus,

the use of outcomes-based criteria in determining a country's LDC status confounds exogenous factors that are outside a country's control (e.g., weather shocks) and those that are within its control (e.g., whether or not to adopt mitigating strategies), and does not allow for possible differences in the preferences of policy-makers.[2] Given required data that are reliable and unbiased (which often is not the case), were it simple to distinguish the operation of exogenous from endogenous factors, this problem would not be serious. However, it is not. The required methodology for such distinction is complex, and the results often not robust.

The confounding of exogenous and endogenous factors and the difficulty of robustly distinguishing between them from available data presents a serious dilemma for the rest of the world (ROW) in their formulation of policies to help LDCs. Suppose it were the case, say, in a country that is currently in LDC status, that sustaining a modest standard of living is virtually impossible given its exogenous resources, even with the most productive use of technology, foreign trade and investment because, for example, it is a small, vulnerable and remote island country. Then the only two options for the ROW are either a permanent income transfer to the island's residents or to allow them to move permanently out of the island to a better location. By contrast, were it to be the case that a country, currently in LDC status, with the possibility (though impossible to ascertain with certainty) that its position is mostly of its own doing, the ROW faces the difficult decision whether to mount a programme to help that LDC and, if it is mounted, how to design it with some conditionalities to ensure that the country undertakes domestic reforms so that any resources transferred as part of the programme are effectively used for the purposes intended. As is well known from experience with conditionalities in other contexts (e.g., in IMF structural adjustment programmes), unless appropriately designed in terms their scale, scope and intrusiveness into

2. Briguglio and Kisanga (2004) in their introductory chapter refer to the paper of Briguglio (1995) that made the distinction conceptually between inherent and self-inflicted vulnerability, which is close to the distinction between exogenous and endogenous factors. Briguglio categorises countries into four groups: countries that are (i) not economically vulnerable relatively speaking; (ii) vulnerable, but have adopted policies to cope with or withstand their vulnerability; (iii) not vulnerable, but have adopted policies which adversely affected their resilience leading to self-inflicted vulnerability; and (iv) vulnerable and have adopted policies that exacerbated their vulnerability. Briguglio uses his conceptual categorisation to construct his economic vulnerability index. The author would argue that, while the conceptual distinctions are clear, empirically implementing them is much more difficult.

domestic sovereignty, conditionalities could be counterproductive. It is not surprising that all developing countries, including LDCs, prefer programmes such as their special and differential treatment (SDT) in the World Trade Organization, that are unconditional one-way concessions for which they do not have to reciprocate in any way. This book comes back below to the issue of whether SDT that is by definition non-reciprocal, is in the interest of developing countries.

Small size of a country, and its being an island, are two exogenous factors that in theory are deemed suboptimal for growth and development for several reasons (Read, 2001): their small domestic market, limited domestic resource base and for both reasons their inability to exploit scale economies, if any; and the narrow structure of domestic output, exports and export markets arising from remoteness. The suboptimality is seen even after allowing for potential advantages of being small, such as size-induced openness to trade and internal social cohesion.

According to Read (2001: 18) several early studies asserted that "the economic disadvantages facing small states are so great that they are not viable as independent states" (just as the hypothetical LDC discussed earlier, with so poor exogenous resources as to preclude the sustainability of even a modest level of living). Their non-viability leaves few policy options other than being absorbed by a larger state or into a federation. However, this theoretical presumption of suboptimality is not borne out by empirical evidence. Read (2001) points out not only that many small states have achieved sustained economic growth and relatively high levels of per capita incomes, but also that disproportionately fewer small states (those with a population of less than 3 million) are found in the World Bank's lowest-income category. Even after normalising for the level of development, several studies find country size to be statistically insignificant in explaining growth, while specific tests on the effects of size on economic growth have failed to find any systematic adverse impact of small size on growth.

Small states and autonomous regions in Europe seem to have outperformed other comparable regions in the European Union. Read (2001: 99) is careful to note that most of the empirical studies "suffer from significant methodological shortcomings and small data samples,

compounded by the lack of comprehensive, harmonised data sets." He adds, however, that "nevertheless, more studies using stratified sample data and more extensive, although non-harmonised data sets still find no systematic negative relationship." Read's (2001: 19) conclusion is balanced and apt: "…many small states have in fact been relatively successful in securing sustained economic growth and increasing per capita incomes, while many larger states, notably other LDC/LDCs, have performed relatively poorly. This suggests that additional economic factors play a critical role in relative growth performance, in particular the design and effectiveness of policies to foster economic growth."

3.3 Classical Theory of Comparative Advantage and Small and Vulnerable States

The relevance of the classical theory of comparative advantage as a determinant of trade openness and patterns of trade for small and vulnerable states has needlessly become contentious because of a profound misunderstanding of the theory. One example is enough to illustrate this misunderstanding. Grynberg (2006, Ch.1) argues that "the theory of comparative advantage if it is to be general in nature, it must apply to all cases… Indeed the smallest, most disadvantaged and remote of the micro-states of the Central and Western Pacific, e.g. Tuvalu, Kiribati and Niue, constitute a fascinating test of Ricardian trade theory, for they provide examples of states which do not consistently trade in either goods or services and maintain existing consumption levels from migration, remittances and aid…Those who are wedded to Ricardian theory of trade…would explain the observations from the remote islands of the South Pacific as merely a case of high transaction costs stemming from transport and the absence of economies of scale. At least two of these countries have in the past had a comparative advantage in the production of copra, but now do not trade as prices are too low to compensate for the disadvantages of scale, isolation and dispersed pockets of production… What this chapter attempts to do is to explain trade patterns not within the Ricardian tradition, but within the tradition of economic theory of rents and quasi-rents."

Grynberg (2006, Ch.1) has completely misunderstood the Ricardian theory of comparative advantage and its application to international trade.

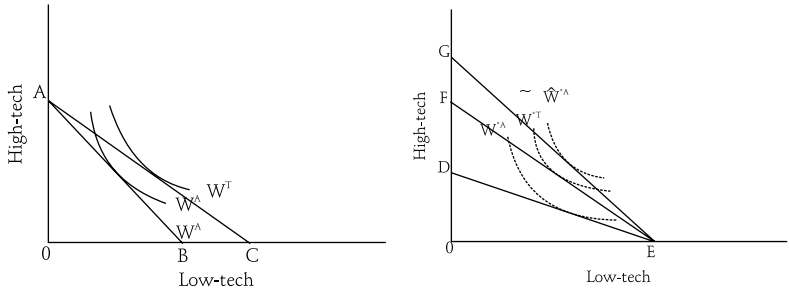
Comparative advantage in the theory, as originally put forward by David Ricardo in the 19th century, refers to comparative labour productivity advantage in the sense that the commodities in Ricardo's theory (just two) can be ranked in order of the relative (in one country relative to the other in the two-country world of Ricardo) labour productivity in their production, assuming labour productivity is independent of the scale of production, i.e., constant returns to scale prevails. The next step of the theory is to note that a potential exists for mutually-beneficial trade between the two countries, based on the pattern of comparative productivity advantage. However, whether that potential would be realised or not would depend on transportation and other transactions costs. As long as these costs are not so high that both countries find it welfare maximising to remain autarkic, some mutually-beneficial trade among countries will take place in a subset of commodities (in a general multi-commodity, many-country model) in a pattern corresponding to productivity advantage, while the remaining commodities will not be internationally traded. The distribution of gains from trade between the trading partners cannot be determined from comparative advantage alone—all that can be concluded is that in the post-trade equilibrium, no voluntarily trading nation will be worse off compared to its situation in the autarky equilibrium, given that domestic lump sum redistribution (or alternatively, a complete set of commodity and factor taxes) is feasible and used. For a rigorous modern exposition of the multi-commodity, one-factor, two-country Ricardian theory, see Dornbusch *et al.* (1977). For a rigorous exposition of gains from trade in a multi-commodity, multi-factor, many-country, general equilibrium model, see the chapter on gains from trade in Dixit and Norman (1980) and also Grandmont and McFadden (1972).

It is also well known that that the pattern of comparative productivity advantage can shift over time, for example, due to technical change in any country. Samuelson (2004) has recently drawn attention to this fact: suppose India and the US trade two goods, high-tech and low-tech. Initially the US has a comparative advantage in high-tech, exports it to India and imports low-tech, in which it has a comparative disadvantage, from India. Suppose, say, Indians learn to produce high-tech better so that their initial relative productivity disadvantage disappears, and the productivity of Indian labour in high-tech relative to low-tech equals that of the US. With

relative productivities being the same, there is no more potential for any gain from trade. Thus, with the technical improvement in India, the US loses the initial gain it had from trade with India as compared to autarky and returns to its autarky welfare level. On the other hand, India's welfare increases, with the earlier gain from trade with the US being more than replaced by the gain from the improvement in labour productivity in high-tech. See Figure 3.1 for an illustration.

Figure 3.1

Gains from Trade over Time: An Illustration

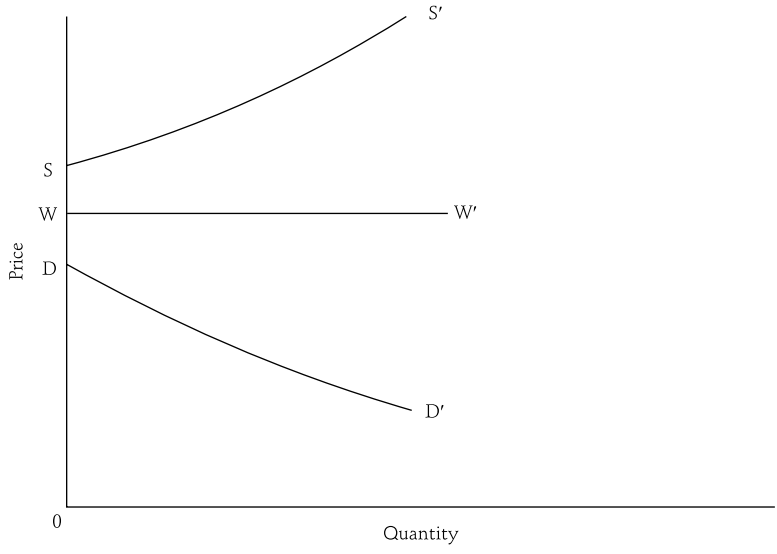


Legend:

USA			India	
OB/OA	Autarky relative price of high-tech	<	OE/OD	Autarky relative price of high-tech before Indians learn to produce high-tech better
OC/OA	Relative price of high-tech after trade with India before Indians learn to produce high-tech better	=	OE/OF	Relative price of high-tech after trade with US
OB/OA	Autarky relative price of high-tech	=	OE/OG	Autarky relative price of high-tech after Indians learn to produce high-tech better
W^A:	Autarky welfare		W^{*A}:	Autarky welfare before Indians learn to produce high-tech better
W^T:	Welfare after trade with India before Indians learn to produce high-tech better		W^{*T}:	Welfare after trade with US
	$W^T > W^A$		$\hat{W}^{*A}$:	Autarky welfare after Indians learn to produce high-tech better
				$\hat{W}^{*A} > W^{*T} > W^{*A}$

Figure 3.2

Domestic Demand, Supply and World Prices: An Illustration



Legend:

DD′: Demand curve

SS′: Supply (marginal cost) curve

OD: Maximum demand price

OS: Minimum supply price

OW: World price

OD < OW < OS: Market fails to come into existence

Grynberg's description of the trade of the Pacific Islands and the disappearance of copra from the export basket not only does not contradict Ricardian theory, but in fact is fully consistent with it. Even if the transportation and transactions costs that are barriers to trade remained unchanged over time, a fall in the world prices could eliminate some of their earlier exports. Incidentally, Grynberg does not note that in trade theory factor movements are substitutes for trade in commodities. As such, the islands depending on migration and remittances rather than commodity trade, once again is consistent with classical trade theory.[3]

3. Grynberg's attempt to explain trade patterns "within the tradition of economic theory of rents and quasi-rents", starts from his observation (p.12) that "the inherent structural characteristics of smallness, isolation and physical dispersion, and poor human resource development… render otherwise competitive industries, structurally uncompetitive". Presumably this means that

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A somewhat misleading distinction is between comparative and competitive advantage. The latter, or to be precise competitive disadvantage, is the cost-disadvantage discussed by Grynberg of SIDS, SVS, LDCs or more generally developing countries in some of their exports. Grynberg, and to a considerable extent the literature on LDCs as well as policy-makers, assume that offsetting the cost-disadvantage through trade preferences for such countries or allowing them to provide trade subsidies if their revenues enable them to do so, would necessarily be appropriate. This need not be the case in general. First, if the cost disadvantage is permanent, offsetting it permanently through trade preferences or subsidies would be justified only if there are enough other social benefits from the participation in trade of countries experiencing such disadvantage. On the other hand, if there are enough social benefits to production that is being encouraged by the offset, then the offset will have to be in the form of production subsidies, and not trade preferences or subsidies. In either case, there have to be sufficient net positive externalities and other social benefits either from participation in trade or from production to justify policy intervention by the country itself or by the ROW. If there are none, then the only argument for policy intervention has to be the perceived social cost, either to the country itself or to the ROW, of allowing the population of the country to emigrate permanently.

Policy intervention to offset a presumed temporary cost disadvantage can be rationalised on less stringent grounds. The age-old infant industry

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domestic supply price (marginal cost) of output exceeds the demand price (See Figure 3.2 for an illustration) at home or in world markets. Clearly, unless the excess of domestic supply price over demand price is met somehow, "costs would not be covered, but, more significantly, capital and entrepreneurship could not be induced to enter the market. Thus what would normally be deemed to be rent in other larger and less advantaged economies is, in the context of such remote high-cost countries an *offset payment for the inherent disadvantage of location*", (Grynberg, p.12, emphasis added). To deem the offset a rent, i.e., payment to a factor, in excess of its opportunity cost seems inappropriate—it is not an excess of payment to a factor over its opportunity cost, but a compensation for the shortfall of the payment from the market that a factor owner would receive were he or she to supply it to the market, compared to its opportunity cost. In other words, offset merely ensures that factors are paid their opportunity costs. Grynberg calls *de jure* rents on an ongoing basis, such as from trade preferences, tax concession and sovereignty (significant for the smallest micro-states) as rents, and those on a temporary basis or on the expectation of monopoly as quasi-rents, an example, of which is a boom in some sector that temporarily raises its price over cost. As far as the author can see, calling a "rent" the compensation of the cost excess for inducing production, does not make it a theory of trade based on rents, analogous to Ricardian theory of comparative advantage. It only means, that the observed trade pattern, given that a necessary condition for trade is production, will correspond to those of the potentially many high-cost commodities for which compensation is being paid.

argument for trade protection was in fact rationalised by the argument that for various reasons (scale economies, high domestic cost of capital, 'learning-by-doing', etc.), an infant industry (that is, one at initial stages of operation at low levels of output) would have high costs which will go down enough to make it competitive in world markets as the industry matures. Not offsetting initial high costs would preclude the industry from getting established at all, even though it would be a competitive industry in the long run. Although this argument has been traditionally used to justify trade preference and protection, it is in fact an argument not for trade policy interventions, but for interventions at the source of high-initial costs. For example, if initial high costs are due to the work force not being sufficiently trained in the production process and by learning-by-doing, they would become more experienced with the production process so that costs go down (as in the famous model of Arrow) with cumulative output. In this case, an output subsidy, and not a trade subsidy, would be the appropriate intervention. On the other hand, if it is the high cost of domestic factors such as capital or skilled labour, a cost that is expected to go down once domestic capital markets develop and human capital accumulates, then the appropriate policy intervention would be a capital-use subsidy or skilled labour-use subsidy. In any case, since the social benefits from the industry becoming competitive accrue in the future, while the social costs of the subsidy are incurred in the present, unless the social discount rate is sufficiently low, subsidisation would not be socially optimal.

In concluding this section, the author briefly recapitulates its main points: First, policy debate on LDCs seems to confound the exogenous factors, which are outside a country's control, and the endogenous factors, which it can control, in determining its LDC status. Second, this confusion, compounded by the problem of robustly distinguishing between them from available data, presents a serious dilemma for the rest of the world in its formulation of policies to help LDCs. Third, the literature on small and vulnerable countries points to a tension between theoretical studies that point to the suboptimality of small size for sustained growth and development, because the structural disadvantages of small size and remoteness outweigh their advantages, and empirical studies, which do not in fact find any strong evidence for disadvantages of small size. This

suggests that countries are able to more than offset any disadvantages of their small size by suitably designing and effectively implementing policies that foster growth. Fourth, reminiscent of the early development literature that argued that the institutions and problems of developing countries are vastly different from those of the developed ones, and that the same economic theory cannot be used for analysing both, there are arguments that claim that trade patterns of SIDS cannot be explained by conventional trade theory based on comparative advantage. These arguments appear to be just as invalid as those of the early development literature. Fifth and last, that the tendency to focus on trade preferences (the book returns to the limited effectiveness of the Generalised System of Preferences in Section 6.2) and trade protection as the preferred means for offsetting permanent or temporary cost disadvantages of SIDS in particular or LDCs more generally, seems unwarranted.