



Growth of Teledensity in Least Developed Countries: Need for a Mitigated Euphoria

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While having the lowest number of main telephone lines for every 100 inhabitants (teledensity) over the last decade, the Least Developed Countries (LDCs), have the highest average pre-tax operator profitability in the world. Many LDCs have already opened their terminal equipment markets to competition and some have also done this with data and value-added services. LDCs are greatly behind other regions of the world in terms of their levels of teledensity. This paper combines research from academic and major international organizational literature to examine and synthesize the current understanding of teledensity development in LDCs. The obstacles to growth of teledensity are discussed, and the importance and opportunities for growth of teledensity to solve priority problems and to realize sustainable development in LDCs are examined. Specifically, the framework and findings suggest that various policy, economical, financial, managerial, organizational, technological, political and geographical factors are important determinants for growth of teledensity in LDCs. While it is time for a mitigated euphoria vis-à-vis the poor state of teledensity in these countries, this study suggests a variety of strategies to advance teledensity in LDCs.

INTRODUCTION

Teledensity is used to refer to the number of main telephone lines for every 100 inhabitants. Teledensity is also used to refer to the level of a country's telecommunications infrastructure (Saunders et al., 1994; Gille, 1986). **Least Developed Countries (LDCs)** are defined as low-income countries that are suffering from long-term constraints against growth, in particular, low levels of human resource development and severe structural weaknesses: economic, social, and political (Austin, 1990). These countries are particularly ill-equipped to develop their domestic economies that are vulnerable to external shocks and natural disasters.

Table 1 contains the list of 48 LDCs, as currently defined by the United Nations General Assembly, that was used for this study. The list was most recently updated in December 1998 with the "graduation" of Botswana and the addition to the list of two new countries, Angola and Eritrea. Of the 48 LDCs, 30 are in Africa, 13 in Asia and the Pacific, 4 in the Arab Region and 1 in the Americas. There were 25 LDCs in the original group in 1971, indicating that the number has virtually doubled in 20 years. The criteria used by the United Nations General Assem-

bly for inclusion in the list of LDCs are discussed below.

Criteria for Inclusion

Old Criteria for Inclusion

The original set of criteria for constructing a list of countries classified as LDCs was adopted in 1971. This includes:

- Per capita income per year less than US \$200. This figure has been revised periodically, and stood at US \$600 in 1998.
- Share of industrial production in the Gross National Product (GNP) under 10 percent.
- Adult literacy rate less than 20 percent.

New Criteria for Inclusion

New criteria for determining LDCs was established in 1994:

- Population less than 75 million.
- Per capita Gross Domestic Product (GDP) less than US \$700 (average 1990-92).

Table 1: The 48 Least Developed Countries as recognized by the UN General Assembly

Countries	Africa	Americas, Asia & Pacific	Arab States	Year of Entry
Afghanistan		X		1971
Angola	X			1998
Bangladesh		X		1975
Benin	X			1971
Bhutan		X		1971
Burkina Faso	X			1971
Burundi	X			1971
Cambodia		X		1991
Cape Verde	X			1977
Central African Republic	X			1975
Chad	X			1971
Comoros	X			1977
Djibouti			X	1982
Equatorial Guinea	X			1982
Eritrea	X			1998
Ethiopia	X			1971
Gambia	X			1975
Guinea	X			1971
Guinea Bissau	X			1981
Haiti	X			1971
Kiribati		X		1986
Lao (PDR)		X		1971
Lesotho	X			1971
Liberia	X			1990
Madagascar	X			1991
Malawi	X			1971
Maldives		X		1971
Mali	X			1971
Mauritania			X	1986
Mozambique	X			1988
Myanmar		X		1987
Nepal		X		1971
Niger	X			1971
Rwanda	X			1971
São Tomé & Príncipe	X			1982
Sierra Leone	X			1982
Solomon Islands		X		1991
Somalia			X	1971
Sudan			X	1971
Tanzania	X			1971
Togo	X			1982
Tuvalu		X		1986
Uganda	X			1971
Vanuatu		X		1985
Western Samoa		X		1971
Yemen			X	1971
Zaire	X			1991
Zambia	X			1991
Total	48	29	13	5

Source: United Nations General Assembly, December 1998

- Augmented physical quality of life index (APQLI) less than 47.¹
- Economic diversification index (EDI) less than 26.²

Premise of this Study

In a study carried out by the International Telecommunications Union (ITU World Telecommunication Indicators, 1995), LDCs were represented to be among the least developed

in terms of the state of their telecommunication networks and limited range of services offered. The study shows evidence that LDCs are falling farther behind other developing countries in the race to construct modern telecommunication networks. For example, as far back as 1984, among commonwealth countries, Singapore (a developing country) generated the fourth highest telecommunications traffic after the UK, Australia, and Canada (developed countries), as opposed to LDCs

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