Boosting the Social Development of the Majority Through the Creation of a Wireless Knowledge Society

Danilo Piaggesi
Framericas, USA

INTRODUCTION

The rapid advances and pervasive diffusion of information and communication technology (ICT), combined with the growth of the wireless Internet, has led to deep transformations in economic, social and institutional structures. ICT applications affect the performance of businesses and the efficiency of markets, foster the empowerment of citizens and communities as well as their access to knowledge, and contribute to strengthening and redefining governance processes at all institutional levels. Nevertheless, as all major and wide-ranging technological advances, the deployment of ICT is at the same time creating enormous opportunities and posing daunting challenges to the Majority in the emerging economies (EE).

According to C.K. Prahalad (2005) in his book, *The Fortune at the Bottom the Pyramid*, "The distribution of wealth and the capacity to generate incomes in the world can be captured in the form of an economic pyramid. At the top of the pyramid are the wealthy, with numerous opportunities for generating high levels of income. More than 4 billion live at the Base of the Pyramid (BOP), on less than $2 per day. Those are the Majority."

This paper presents some of the successful sustainable ICT practices aiming at boosting the social development of the Majority contributing to the creation of a wireless and inclusive Knowledge Society. It also offers a road map for the international financial institutions, particularly the Multilateral Development Banks (MDBs), aiming at supporting ICT for development programs benefitting EE.

BACKGROUND

The United Nations Millennium Declaration (United Nations, n.d.) noted that efforts to make internet access available to all and to harness the power of ICT could contribute toward the achievement of the Millennium Development Goals (MDGs), thereby creating "digital opportunities" in development. The ongoing debate on the new set of UN Sustainable Development Goals (SDGs) reignites the interest for the ICT in a contest of emerging knowledge economies and societies.

The ICT can facilitate the participation of lower income populations, the majority at the base of the pyramid, according to the definition given in (Prahalad, 2005) in the development process by directly tackling relevant aspects, which precisely hinder their integration into social and economic development. Such aspects concern:

- Limited knowledge and literacy which impairs access to skills and jobs (education);
- Poor health and sanitary conditions limiting employability and risk-taking attitudes (health);
- Scarcity of economic opportunities (economy);
- Limited involvement in civic life and in the democratic processes, as well as uneasy access to public services (government).

The following successful sustainable practices, show how ICT can help reducing the risks of exclusion related to the aspects cited above, thus contributing to the integration of lower income

populations into social and economic development. Based on the lesson learned from the practices, we draw some conclusions and offer some recommendations. These recommendations are the basis for forward-looking scenarios that can be realized through the deployment of ICT towards the attainment of an inclusive economic growth process for all, meeting social development and poverty reduction objectives, as expressed in the United Nations Millennium Declaration.

SUSTAINABLE PRACTICES IN ICT FOR SOCIAL DEVELOPMENT AND POVERTY REDUCTION

ICT in Human Capital Development

Inequalities in access to education—especially high-quality education that prepares young people for employment opportunities in an inclusive knowledge society and to become active citizens in complex, market-driven, democratic societies—are a critical barrier to reducing poverty and increasing economic growth. Near-universal access to the Internet via low-cost networks enables teacher training, enhances student access to traditional teaching materials via Internet distribution, and allows the introduction and use of new and advanced multi-media resources and learning tools. The young generation takes readily to computers and such resources, and there is

evidence that classroom access to ICT tools can improve learning and help motivate students to stay in school.

Best practices for ICT-enhanced classroom education have been slow to emerge, in part because of the high cost of providing computers, appropriate curricula and adequate teacher training. Nevertheless, there are a number of concrete examples that show the effectiveness of widespread, small-scale experimentation and pilot projects which, coupled with careful evaluation, provide best practice ICT applications for formal and informal education (see Table 1)

ICT in Health and Social Services

The improvement in the delivery of health care services in geographically remote and rural areas is one of the most promising and clearly demonstrated applications of ICT in social development. Evidence suggests that improved health outcomes have been achieved through various applications of ICT solutions. In particular, ICT is being used in many developing countries and communities to facilitate: (a) remote consultation, diagnosis and treatment through the use of digital cameras to download images onto a computer and transfer them to doctors in nearby towns; (b) collaboration and information exchange among physicians; (c) ICT-based medical research through the use a network of satellites and ground stations to submit data for clinical trials; (d) medical training through

Table 1. Committee to democratize information and communication technology in Brazil

The *Comitê para Democratização da Informática* (CDI), a nongovernmental, nonprofit organization fosters the social inclusion of less-privileged social groups with ICT as a tool to encourage education and active citizenship. It works to create opportunities for young people to free themselves from poverty and social exclusion through the implementation of community Computer Science and Citizenship Schools (EICs). The CDI views computer literacy as a vehicle for creating employment opportunities and promoting civic participation, formal education, literacy, concern for the ecology, health, human rights, and nonviolence. The CDI also uses ICT to benefit low-income communities and institutions by assisting individuals with special needs (including the physically and mentally disabled, the visually impaired, homeless children, prisoners, and indigenous populations). CDI invests in the community's capacity to organize its own educational programs. Since its inception in Rio de Janeiro in 1995, CDI has provided support to 130 communities in the establishment of autonomous and financially self-sustaining EICs. In order to promote digital inclusion, CDI entered into partnerships with national and international philanthropic organizations, companies, government agencies and individual donors. There are currently 965 EICs using the methodology and model developed by CDI. In a recent evaluation, carried out by an external consulting group, 86 percent of the students stated that CDI schools had a positive impact on their lives (such as going back to regular schools, making new friends and staying away from drugs). The experience has been replicated throughout the world and, today, CDIs operate in Argentina, Chile, Colombia, Guatemala, Honduras, Mexico and Uruguay as well as in Angola, Japan and South Africa.

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