

Monitoring the DIGITAL DIVIDE

“Creating digital opportunities is not something that happens after addressing the ‘core’ development challenges; it is a key component of addressing those challenges in the 21st century”.
 (G8, Creating Opportunities for All: Meeting the Challenge, 2001).

THE CONTEXT

The role of ICTs in development has generated enormous interest in the Digital Divide, which now occupies a prominent place in the agendas of national and international organizations. This elevated level of activity has come with the realization of the importance of adequate measurement. There is a need for an instrument to quantify the Digital Divide and monitor comparative performances across countries and over time.

THE OBJECTIVE

This Orbicom-CIDA project aims to make a contribution by developing a framework and a methodological approach whose empirical application will make it possible to quantify the Digital Divide and:

- compare across countries at a given point in time
- compare within countries over time.

The project is guided by the following *terms of reference* :

- Place emphasis on developing countries;
- Rely on an approach that yields policy-relevant results;
- Be broader in scope than pure connectivity measures.

THE NEW APPROACH

Rather than relying on ad-hoc indicators, a framework is developed based on strong theoretical underpinnings. It arrives at the degree of a country's "ICT-ization", or *infostate*, as the combination of infodensity and info-use. *Infodensity* refers to the ICT capital and labour stocks and their role in the productive capacity of the economy. It includes ICT networks,

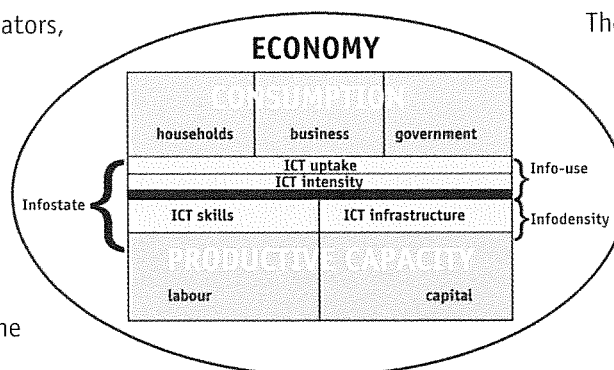
machinery and equipment, as well as ICT skills, indispensable for the functioning of information, knowledge-oriented societies. *Info-use* refers to the uptake of various ICTs by households, businesses and governments and the intensity of their actual use. Then *the Digital Divide is defined as the difference between countries' infostates*. Since infostates are dynamic, unbounded and ever-evolving, the relative nature of the Digital Divide is explicitly recognized. Any progress made by developing countries can be measured and, at the same time, it can be compared against the progress made by developed countries.

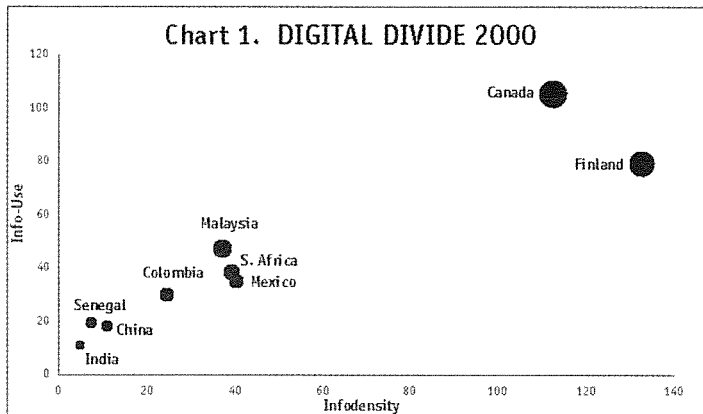
AN EMPIRICAL APPLICATION

The model that results from the framework was then tested with a sample of nine countries for the 1995-2000 period. Existing data from known sources were collected and indicators were compiled for each thematic component. The intent of this pilot application is to demonstrate the analytical insights that the model can offer, the questions it can answer, as well as to assess the plausibility of the results that it yields. They prove revealing:

How big is the Digital Divide?

The magnitude of the gap between developed and developing countries is enormous. Developed countries (Canada and Finland in our sample) are in a league of their own. However, interesting sub-clusters are formed among the less-developed countries, indicative of different stages of development.





How is the Digital Divide evolving?

Infodensity and info-use are rising in all countries, mostly due to ICT networks and uptake associated with the newer technologies - the Internet and mobile phones. Growth is generally higher for those at the low end, but differs across countries and specific technologies. The Digital Divide is closing, but at a very slow pace. Without further action, it could persist for generations.

(Canada 1999=100)	Infodensity		Info-use		Infostate	
	1995	2000	1995	2000	1995	2000
Canada	61,4	112,4	64,9	107,8	63,1	110,1
China	2,6	11,0	4,1	11,5	3,3	11,3
Colombia	8,0	24,7	10,3	21,4	9,1	23,0
Finland	89,1	132,8	58,7	75,5	72,3	100,1
India	1,1	4,9	2,7	5,1	1,7	5,0
Malaysia	15,2	37,2	16,5	35,0	15,9	36,1
Mexico	10,7	40,2	10,5	23,0	10,6	30,4
Senegal	1,0	7,4	3,4	8,3	1,8	7,8
South Africa	19,7	39,2	13,1	24,6	16,1	31,1

The model permits intra-country analyses and cross-country comparisons at various levels of detail. Relative strengths, weaknesses and progress can be identified for ICT networks, skills, uptake and intensity, as well as the level of individual indicators.

GENESIS OF THE PROJECT

For Orbicom, monitoring the digital divide was a preoccupation first expressed by members of its network from the South. This initiative was conceived and presented

to Orbicom’s Executive Committee at the Mexico meeting convened by UNESCO in July 2000, by Mr. Chin Saik Yoon, Chair of Orbicom’s Research Committee, and Editor from Penang, Malaysia.

At the time, Orbicom’s Executive Committee agreed on a plan of action, which was subsequently approved by the general membership and which focuses on information and communication technologies (ICTs) for development. The Orbicom-CIDA Digital Divide Index Project (DDI), now called “Monitoring the Digital Divide”, is one of several projects of the Orbicom network; they address access, impact and trust aspects of ICTs.

Sponsored by CIDA, Phase I of the DDI project has now been completed under the direction of **Dr. George Sciadas**, author of this report and Scientific Director for the project. Organizations and individuals, a total of 24, from several regions of the world, took part in the consultative process which designed the terms of reference for the current phase and identified areas of focus for the second phase.

PHASE II

With increased interest and participation, the model can be improved and the scope of the project expanded. It can seamlessly incorporate analyses of internal country divides, as well as linkages to outside intelligence that can turn it into a performance-monitoring tool.

In the process of the exercise, severe informational gaps were identified, particularly for ICT skills. The report echoes calls for a concerted international effort to address them.

The full report is available by Orbicom at : <http://www.orbicom.uqam.ca>

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