



INDICATORS AND MEASUREMENT: POLICY IMPERATIVES AND THE WAY FORWARD

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SITUATION ANALYSIS

- Governments are launching ambitious ICT infrastructure initiatives, radically changing their communications policy frameworks and situating ICT at the heart of their development programmes and strategy.
- Many developing countries, businesses and citizens' groups are touting ICT as a means to transcend structural and historical weaknesses of developing nations in the economic, political, and social spheres. They argue that ICTs offer the developing world the opportunity to 'leapfrog' several stages of their development and join the industrialized nations in the information age.

IMPACT ON HUMAN DEVELOPMENT

- ICT as a sector of economic activity
- ICT as an enabler for enhancing human productivity
 1. Breaking barriers to human knowledge
 2. Breaking barriers to participation
 3. Breaking barriers to economic opportunity

IMPACT ON HUMAN DEVELOPMENT

- **ICT as a sector of economic activity**

An obvious impact of ICT is its contribution as an industry for the overall economic growth of a nation. The ICT sector and industry have witnessed unprecedented growth in the past decade. Global spending on information and communications technology was expected to grow from US\$2.1 trillion in 1999 to US\$3 trillion in by 2003.

IMPACT ON HUMAN DEVELOPMENT

- **ICT as an enabler for enhancing human productivity**
 - used as control technology, leading to innovations in products and processes in the manufacturing sectors and resource extraction industries.
 - ICTs have become indispensable ingredients in all forms and processes of economic activity
 - directly expand choices through increased access to information and knowledge in 3 ways:

IMPACT ON HUMAN DEVELOPMENT

Breaking barriers to human knowledge

- becoming key delivery mechanisms for sections of the population that did not have access to educational infrastructure and content.
- actively used in promoting life-long learning and continued education, reintegrating unemployed people into the workforce through re-education and retooling of skills.

IMPACT ON HUMAN DEVELOPMENT

Breaking barriers to participation

Internet and ICT based news and information groups have contributed to the creation of a far more vibrant public sphere. In many parts of Asia, where the mass media have been and continue to be strictly controlled by governments, the Internet has offered a new medium of political mobilization and participation.

IMPACT ON HUMAN DEVELOPMENT

Breaking barriers to economic opportunity

- ICT sector requires less initial investment than the more traditional sectors of industrial activity, it lowers the barriers to entry into the economy for people who could never break into the industrial sector.
- ICT provides new and unprecedented opportunities to people who have proficiency in handling ICT tools and have an idea or service to sell.

STATISTICAL OVERVIEW

Planners, policy makers and researchers hold highly polarised and equivocal views on the diffusion of Information and Communication Technology (ICT), its role in promoting objectives such as poverty alleviation, universal education, reduction in mortality and health hazards, and sustainable development, and in bridging the digital as well as socio-economic divides in the world.

CASE STUDY

Regional Human Development Report on Promoting ICT for Human Development in Asia: Realising the Millennium Development Goals ... is jointly prepared by the UNDP-Asia Pacific Development Information Programme (APDIP) and the Asia-Pacific Regional Human Development Reports Initiative, Human Development Resource Centre.

...attempts to go beyond the hype surrounding the potential and promise of ICT for developing countries

RATIONALE

- No such comparative study has been undertaken that seeks to concretely assess progress of ICT for development efforts in the Asia region.
- By focusing on the lens of human development - try to concretely link what is still traditionally advocated as technology issue with the organization's most recognized and primary core business focus - promoting human development and eradicating poverty.

MILLENNIUM DEVELOPMENT GOALS

Framework to identify the objectives of human development as set by the UN and its member states.

- Eradicate extreme poverty and hunger;
- Achieve universal primary education;
- Promote gender equality and empower women;
- Reduce child mortality;
- Improve maternal health;
- Combat HIV/AIDS, malaria and other diseases;
- Ensure environmental sustainability
- Develop a global partnership for development.

METHODOLOGY

- Research across 9 countries in Asia -- China, India, Indonesia, Malaysia, Mongolia, Pakistan, Sri Lanka, Thailand, and Vietnam - based on a mix of their Technology Achievement Index, including leaders, potential leaders, dynamic adopters and marginalized countries.
- To operationalise a conceptual framework and methodology to assess role and impact of ICTs on human development, it would be of critical significance to establish clear targets and goals of human development as measuring success and failure - systematic study using MDGs as a benchmark.

SCOPE

- Review and assess progress in drafting and implementing national e-policies and -strategies for reducing poverty and enhancing human development.
- In addition researchers also considered other factors, such as the proportion of cell phone subscribers, Internet users and personal computer owners, along with the charges for Internet and phone service, Internet access in schools, the proportion of women professional technical workers, and competition among service providers, etc.

SCOPE (cont.)

Exploration of potential and promise of ICT

- Mapping status of ICT use and diffusion in Asia
- Case studies and best practices of ICT application
- Identification of challenges of ICT application
- Selection of ICT indicators relevant for human dev.
- Construction of a composite aggregate index that ranks the nine countries on their ICT use for achieving human development goals.

RESEARCH APPROACH

3 Levels of analysis and outputs:

- a) Country Studies
- b) Regional Report
- c) Qualitative Index/ Indicators

RESEARCH APPROACH

3 Levels of analysis and outputs:

a) Country Studies (Specific)

9 country studies commissioned to national experts in the field of ICT and human development, to conduct detailed country-specific assessment of national ICT infrastructure, policies, governance mechanisms, priority areas of ICT use, private initiatives, and institutional frameworks programmes for promoting ICT access and training.

RESEARCH APPROACH

3 Levels of analysis and outputs:

b) Regional Report (Thematic)

Overall Research Coordinator drew from 9 country studies to systematically explore linkages:

assess status of ICT use and diffusion in Asia; document varied case studies and best practices of ICT application; identify challenges of ICT application; analyse the limitations of ICT in furthering human development; draw lessons from multi-country experiences to identify policy directions.

RESEARCH APPROACH

3 Levels of analysis and outputs:

c) Qualitative Index/ Indicators

A parallel quantitative study to complement the rich qualitative research was carried out to:

- select ICT indicators relevant for human development
- examine interdependency between indicators of ICT and human development
- construct of a composite aggregate Index that ranks the nine countries on their use ICT use for achieving human development goals.

QUANTITATIVE APPROACH

Selected indicators were used to construct a set of **thematic component indices** covering five distinct dimensions of ICT availability and use -- i) skill-independent ICTs ii) skill dependent ICTs iii) efficiency and speed iv) social sector targeting and v) vulnerable group targeting. The component indices were then **aggregated** into a **composite aggregate ICTforHD index**, capturing ICT-MDG relationships.

SAMPLE RESULTS

Malaysia is highest on the report's ranking of ICT use for human development (known as the ICTforHD Index), well ahead of China and Thailand. The rankings of the next countries — India, Mongolia, Pakistan and Sri Lanka — vary depending on the statistical method used, while Indonesia ranks third from last and Viet Nam last.

SAMPLE RESULTS

India ranked high in targeting vulnerable groups for its high proportion of female professional and technical workers, public Internet access, laws on ICT use and competition among service providers. China, second overall, ranked sixth in this area.

INDICATORS

Policy input requires both tangible and intangible measurements – it's a continuous *cyclic* process:

a)Tangible – Connectivity; % of local relevant content; costs; infrastructure; technology, etc.

b)Intangible – Capacity; skills; purpose; usability; sustainability; management; socio-economic structure.

ISSUES

1. What: Primary questions have to centre on definition, methodology, collection, analysis, evaluation, accuracy, comparability, standards, and sufficiency.
2. Who: Role and Tasks
3. How: Design, implement, analyse, disseminate
4. Why: Purpose and objective
 - Policy / up streaming – cyclic process
 - Dissemination – input and development

CONCLUSION

The study concludes that while availability or supply-side indicators of ICT are undoubtedly important from the human development perspective, more information needs to be gathered on access, types of applications, characteristics of users, content, etc.

Thus the demand side needs to be brought in much more strongly to capture the spread of technology across social and economic classes, regions, sexes, etc. Data on ICT availability and use across rural-urban, male-female and other categories could help in quantifying digital divides.

CONCLUSION

- Clearly indicate that with regards to specific areas of human development, strategic deployment of ICTs can help in advancing human development by alleviating poverty, enhancing education and improving healthcare.
- However, a simple and technologically deterministic vision of ICTs and their impact on human development must be avoided.

BENEFITS

The Index could be a very useful tool for policy makers to help them focus more sharply on those specific dimensions of ICT for human development where there are weaknesses - data includes indicators on the extent that countries target some social sectors and rural groups, which is a significant contribution to monitoring the digital divide.



THANK YOU

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