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Information Revolution, Digital Divide and Development Paradox: A Global Framework for ICT Policy Formulation

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Digital Divide

The information revolution has brought with it a digital divide phenomenon as a central problem of the contemporary world. However, this is not an independent phenomenon, but an integral part of the structure of inequality at all levels: international, regional, national, and local. Digital divide tends to reproduce the basic elements of the structure of inequality along the lines of traditional patterns of socio-economic stratification.

Policy makers in the world community are facing enormous challenges emanating from the uneven distribution of telecommunications infrastructure between countries, and between urban and rural areas. Despite the global consensus on the dramatic developmental potential of the information and communication technologies, emerging technological hubs in urban centers of some countries in Europe, Asia, and Latin America (with few experimental exceptions in rural areas) exacerbate the existing peripheralization of vast territories of the world and their population. Most of Africa, Latin America, vast landlocked parts of Asia, significant areas of the former Soviet Union, and Eastern Europe are technologically excluded.

The pattern of technological diffusion is parallel to other forms of capital flow and marked by uneven global economic integration and development indicators. Therefore, people living in peripheralized regions are trapped in a vicious circle and face severe constraints for development. The lack of infrastructure, energy grids, international bandwidth, and the high costs of access and equipments are the main constraints to providing international communication technology to the rural masses, and even to some urban centers. In addition to this basic lack of physical infrastructure, the limited human and institutional capacity, outdated or weak regulatory frameworks are common to most parts of the peripherilized territories. Furthermore, rural economic sectors, and small and medium scale industries have not been properly connected to the national and regional chains of production and services, and thereby into the global economic system. The informal sector in the developing economies has been largely deserted. Sound backward & forward linkages are totally non-existent.

A Global Framework for ICT Policy Formulation

The International Research Foundation for Development would like to advocate a comprehensive global framework for ICT policy formulation and implementation. This framework contains a vision of sustainable development and peace. These two components should be treated in an integral manner. One cannot be achieved without the other. The fundamental principle in this vision is to strive for a global information society based on an egalitarian foundation. Thirdly, the main objective is to create and use ICT to bridge the global disparity in its entirety. To this effect, IRFD suggests the following components to be discussed and translated into the WSIS declaration and aftermath implementation programs around the world.

Provision of Infrastructure

A regional and country specific infrastructural development approach has to be designed. This approach should include projects aimed at constructing the minimum level of main roads and access roads. Provide primary health care centers, and basic sanitation infrastructure. Provide adequate numbers of primary and secondary schools with minimum ICT facilities. Provide electricity grids for rural areas in the developing world and the least developed countries. Provide alternative energy sources such as solar and biogas. Establish a global broadband satellite infrastructure as outlined by the International Telecommunications Satellite Organization

Public Access Centers and Cyber Communities

The empowerment of people living in rural and urban centers in the spatial hierarchy creating public access points and community connectivity-telecenters and cyber parks should be high priorities in national strategies. The following steps should be taken:

A national governmental informational strategy has to be designed to negotiate the private sector's co-sponsorship to support Program of Public Computer Sites. Priority should be given to remote rural townships where public roads and transportation systems are insufficient or totally absent. Public Computer Sites of these rural townships should be an extension to public schools and public government agencies such as municipalities, cooperatives, peasants' organizations, and public health centers. Furthermore, these far communities should be better linked through television to the outside world.

Public educators or teachers should be trained to help disseminate the basic computational skills and expertise. ICT should be applied for distance education to educate paraprofessionals in all sectors such as health, agriculture, environment, and industry. Student centered educational delivery systems should be introduced linking main universities to regional open universities and cyber communities. Design software programs on specific educational topics for populations with low literacy levels.

Establish a vertical and horizontal communication grid

It is necessary to connect major cities, regional cities, urban centers, and rural towns through vertical and horizontal communication grids to deliver effective and efficient services and provide citizens with wider public access through national and global network systems. Transform Congested Cities into Cyber Cities and connect them to the vertical and horizontal network centers. This provides a framework for techno-global transformation, which will increase global consciousness originating from the grass roots. This is an indispensable necessity to empower the grass roots to mitigate the unilateral process of metropolitan linkages, which mainly serve the interests of multinational corporations. This is somewhat a remote objective, nevertheless it can be and must be achieved to break the cycle of perpetuation of the gulf between core and periphery and to

allow fairer distribution of capital, particularly the transfer of technology. This horizontal and egalitarian global consciousness is necessary to challenge the growing paradox of the information society, which reflects in the process of digital divide in the unfolding rift of social spatial spectrum.

Establish an Integrated Development Framework

The digital divide could jeopardize all efforts by governments all around the globe to establish an efficient and effective e-Government environment. Therefore, governments should take a coordinated effort of an awareness building of the importance of user acceptance of new ICT technologies. Imparting technological skills in the areas of governmental service and participatory activities must be embedded in this coordinated effort. This will enhance the citizenry involvement and participation in the e-governance.

Formulate innovative ICT policies and a national strategy of implementation. Apply ICT as an integral component of a comprehensive sect in oral planning. Establish an environment that is conducive for the creation and diffusion of information technology. Reform regulatory national policies to facilitate the transfer of technology. The legal, institutional and logistical framework has to be created, well organized and coordinated in order to guarantee the growth and development of information infrastructure in the developing world and in transitional economies.

Use ICT to develop healthy triangular partnership between Governments, Private Sector, and Civil Society.

Innovative public-private-civil society partnership is necessary to install regional broadband satellite infrastructure, participate in the physical network construction and service provision. This innovative triangular institutional structure should go beyond the national boundaries to inform each other of problems, constraints, and best practices.

Transfer of Technology and Intellectual Property Rights

Ensure efficient access to technology with affordable prices and preferential terms for the less developed countries. This would facilitate the containment of infringement and allow for the protection of Intellectual Property Rights. The WIPO Performances and Phonograms Treaty (WPPI) should be supported.

Promote inter-cultural dialogue and cultural hybridization using ICT

There are two tendencies in ICT application with regard to the cultural domain and development: Culture has a pivotal role in development efforts thus an appropriate blending is necessary. However, on one hand, there is a tendency of hegemonic

domination in cultural hybridization. On the other hand, there is an opposing trend to hegemonic domination, which will result in the resurgence of the cultural and religious fundamentalism. A two prong approach is necessary to avoid these dialectic tendencies: i) take measures to prevent inter-cultural, inter-caste, inter-religion, inter-ethnic, and inter-racial animosity and rivalries; ii) create an environment of healthy diversity and productive hybridization which will reach a high point of human creativity and equality in every segment of the world. This two-prong approach needs very comprehensive ICT educational programs to build equality consciousness to overcome destructive identity politics. This new form of knowledge should be ingrained in all segments of population.

Specific steps should be taken at the global level to set the premise for this high point of human diversity and productive hybridization. 1) The United Nations should take steps to implement cross cultural programs specifically designed to ensure the proper understanding of feelings, thoughts, and tones in communications across cultures; 2) the UN should plan a world conference along the lines of cultural traps: understanding the meaning beneath the utterance at which scholars and leaders can discuss how to best avoid cross-cultural pitfalls. These are important steps towards a codification of tacit knowledge, which would produce explicit information upon which productive negotiations will take place.

Create Gender Oriented ICT Policy

A gender oriented ICT policy framework must include measures to eliminate institutionalized gender inequalities, and provide rapid access to resources, education, skills, and markets. ICT policy must rest on the understanding that technology must be adapted to fit the needs of both rural and urban poor women in order to have an impact on their economic status and improve their living conditions. Rural agricultural women and urban informal sector women should have technological skills and access to their respective stock of information (agricultural and market information), and health and educational information on a constant basis. This information access must be built by taking into account their daily community interaction network. Application of ICT to the existing community interaction network will enhance their social capital base utilizing the various opportunities offered by the information society.

Human Rights in an Information Age

In the age of information society the world must have common knowledge and a shared vision about human rights. The International Research Foundation for Development would like to emphasize the need for formulating this shared vision transcending local content. Nevertheless, on one hand, the world must rise above the fundamentalism and cultural revival, which undermine human equality and dignity. On the other hand, hegemonic domination in the name of 'international human rights', and its patronage package, manipulation and oppression of people in peripheral territories must be wiped

out. This dialectic tension must be resolved through the WSIS process and take steps to create a novel common knowledge and vision for the global information society.

This new human rights knowledge must include all the issues pertaining to racial, ethnic, sexism, and ageism. Specific necessities and rights of women, youth, children, disabled, migrants, internally displaced people have to be seriously addressed and necessary steps must be taken.

Collective efforts must be taken to raise global awareness to eliminate increasing unrest and discrimination against internal and trans-territorial migrants in some parts of Europe, Africa and the Middle East. The protection of these internally displaced people commands a global mandate, which must perforce evolve into legally binding treaties and policies regarding treatment, evacuation, if necessary to designate safe havens and eventual repatriation of IDPs. Unless and until a global response results in change, the poorer countries of this world will continue to endure the most of asylum seekers and refugees as nations haemorrhage their finest resources while the world sits idly by.

Create Healthy Economic Climate for IT Industry

The IT industry, as one of the major building blocks of the new economy, requires a healthy, more stable international financial environment in order to maximize its potential to improve the productivity and living standards of people in all countries. It is necessary to take steps to mitigate current negative financial economic climates, which is dominated by stock market volatility, accounting corruption, terrorism, and trade barriers etc.

Apply ICT to increase the productivity efficiency of small and medium scale industries.

Promote linkages between SME and FDI thereby integrating them into the global production process. Provide e-finance for SME. Increase awareness and equipped medium and small scale exporting firms to harness the potential of e-commerce, and to create efficiencies and productivity gains. Improve communication about the e-commerce potential-extract benefit from new e-commerce technologies through workshops, conferences, and specialized trade journals. Provide assistance to make correct assessments of the benefits and risks of investments in B2B e-commerce and their impacts and returns. Create an environment for better understanding the implications of sharing sensitive business process-related information and valuable knowledge in supply chain management. Furthermore, they need practical training on digital format; integrating logistics operations, financial administration and production information; and managing a network of customers and suppliers.

Use ICT to promote economic growth in the developing world. Business networks, such as the African Virtual Business Association Network, should be established and

expanded to help medium and small scale businesses to strengthen their management systems, improve and diversify their member services, develop their advocacy skills, and enhance their knowledge on transparency and operational aspects of democratic and market based systems.

It is necessary to pay attention to empirical assessments of ICT's impact on enterprise return and export performance, and on labor productivity. In most of the developing countries, on the one hand, ICT capital does not seem to play a vital role, as it has not been reached to a required level of threshold. On the other hand, ICT capital alone does not lead to economic performance of SMEs and the informal sector economy of the developing world. The complementary or prerequisite capital such as infrastructure, functioning of the banking system, support system for quality improvement and standardization, and transportation are crucial for export performance. Therefore, a proper combination of ICT and complementary capital is imperative to link SMEs and informal sector into the mainstream economy.

Promote comparative inter and intra-country policy research and Institutionalize ICT and R&D Collaboration

Mobilize academic personnel, policy makers, planners, and practitioners to assess and analyze the impact of ICT on the developing world and economies in transitions. In other words, study the process and inner dynamics of 'information society.' Policy research should be done within an integrated scientific framework, which encompasses economic, social, cultural, and political fabrics of these countries. This scientific approach should bridge theory and practice to shed light on practical development considerations and peace making.

Promote International cooperation

International cooperation cannot be achieved without introducing a holistic approach. ICT can play a vital role in setting a solid premise for an innovative approach. As stated earlier, a true bottom up global consciousness can be instilled through dense networks across regions. The strength of this global consciousness eventually should challenge the deep-seated mistrust at various political layers of the world. There are several steps towards setting an agenda for global public policy. The first step is to define a set of principles that should guide the transition towards a global information society. The second step is to mobilize a global force to democratize the existing international institutional (economic and political) structure. Third step is to transform/replace undemocratic regimes through the local and national forces. Conventional international geo politics and hegemonic global and regional dominations are the dangerous forces that challenge true international cooperation. The alliances based on narrow geo politics and power games have to be challenged through ICT applications. ICT should not be solely in the hands of the privileged segments of the world. Unless and until the world bridges

the digital divide and challenges the undemocratic international and regional power structures, in addition to the even development and peace will not be achieved.

Regions with political instability should be given high priority in global policy agenda. In this regard, IRFD would like to draw attention to the Beirut Declaration on Western Asia (WSIS/PC-2/DOC/8-E, 2003). A global community must take serious effort to prevent unilateral imposition of severe sanctions and/or embargo on importation of technological goods and knowledge. Also take necessary steps to make sure this technology is being used to improve the economy, health, education, and e-governance. These steps through ICT application must lead to empowered grass-root bases to enhance the democratic foundation around the world. Therefore, the WSIS process must strive for a true global 'information society', which transcends a new form of knowledge leading to sustainable development and peace.

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