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### ICT Global Era Potential Benefits and Risks

ICTs refer to the various technologies that enhance the creation, storage, processing, communication and dissemination of information. ICTs also refer to the different infrastructures used in these processes, their applications and the numerous services these infrastructures render. We identify the following technologies as the elements of ICTs:

- Media of Communication (e.g radio, television)
- Information machine (e.g Computers)
- Telecommunications technologies and equipment (Satellites, fibre optic cables, phones, Facsimile machines)

Telecommunications infrastructures have become the driving forces of ICTs; they have the capability to link all various ICT elements together.

The unit 'ICT Tools' will introduce you to the basic terminology and terms used in computing. The aim is not to make you an expert in the field of computing, but to allow you to feel comfortable with the technology and to participate fully and confidently in decision-making processes. To that end, the unit covers hardware, software, selection of resources, identification of appropriate usage for equipment and methods of getting best value when selecting computer resources.

ICTs refer to **BNIR** with perspective of Global era.



#### Benefits ::

ICT has the potential to be a major driving force behind economic growth through two paths: first, by generating new economic activity, notably through the production of ICT goods and services; and second, through its potentially strong restructuring impact on existing economic activities. Thus, ICT may affect economic activities in a variety of ways: improving the quality of existing services; creating new services; raising labour productivity; increasing capital intensity; enhancing economies of scale; and creating new economic structures. The attendant increase in labour productivity enhances international competitiveness in both goods and services. In manufacturing, and also in agriculture to some extent, many processes have already become automated, whether by computer-aided design, by the management of resources and stocks, or through modes of production using flexible manufacturing systems.

ICT is also paving the way to greater ease of movement of technical and financial services and is instrumental in driving the rapid globalization process. From the ICT revolution, a new kind of economy emerges: the information-based economy, in which information—along with capital and labour—is a critical resource for the creation of income and wealth and for the enhancement of competitiveness.

ICT has already manifested a significant impact on the political and social dimensions of development, specifically by enhancing participation in decision-making processes at the corporate, local and national levels. Also in developing countries, ICT can be a powerful tool for empowering individuals, promoting their initiatives, decentralizing management and exposing the diversity of views and interests in respect of the political, social and economic issues facing their communities.

A few developing countries are successfully taking advantage of the opportunities ICT offers and have made significant improvements in their economies, and many more are beginning to derive some of the potential benefits. For most of the developing world, however, ICT remains just a promise and, ICT seems, a distant one at best. There is little evidence from past experience of national and international development policies, strategies and programmes to suggest that much will change for large segments of the world's poorest people.

The preconditions for taking advantage of new knowledge and technologies at the country level, for access to ICT, for technologies and transfer of ICT knowledge at the international and national levels and, more fundamentally, for access to education and health, remain weak for most of the world's poor and for the least developed countries generally. Thus, the realization of the promise of the ICT revolution requires much effort by Governments, international agencies, non-governmental organizations and the private sector.

While those who have access to ICT may forge ahead, the rapid globalization process also opens up opportunities for increased concentration of market power from which, inevitably, the economically advanced countries would reap a disproportionate share of profits. At present, the production and use of ICT are highly concentrated in the developed countries, which account for more than 90 per cent of the global market.

### **Needs ::**

In order for the benefit of ICT to permeate and transform conditions of competitiveness and wealth, the technologies and infrastructure must be accessible and the population must include trained and attuned cadres of workers and specialists, who are able to avail themselves of the opportunities presented by the ICT revolution. This calls for both national and international policies, as well as funds and other resources, to install and maintain the necessary telecommunication facilities and other infrastructure.

Even with the availability of the necessary infrastructure, the exploitation of ICT to productive advantage depends on a number of other factors, including adequate levels of education and income and supportive policies. ICT takes a certain minimum level of literacy and numeracy in a significant proportion of the population to create conditions for the assimilation, adaptation and application of relevant knowledge to production and social life in a manner that makes a difference and can be sustained. Under such circumstances, the potential inherent in ICT development and application to ensure economic development and assist social integration will not be realized.

Even benefited from ICT are concerned with the ICT impact on the volume and pattern of employment. While production of new goods and services generates new employment, these jobs typically require skilled— to a large extent, highly skilled—labour.

### **Impact ::**

The full impact of the ICT revolution on poverty—the central problem of developing countries—remains uncertain: experience so far, as well as most projections for the future, clearly shows that there are very real prospects of widening gaps in income, wealth and welfare within and among countries, and of new and escalating challenges of economic, social and political governance at national and international levels.

There are also growing concerns about the future of “the information economy” and of “the information society”. These include risks and costs of information “overload” resulting from the vastly increased flows of information; questions of accessibility, intellectual property protection, fair competition, content regulation, and cultural preservation.

There are also concerns that the power of ICT, which has so much potential for social good, can also be harnessed for selfish, dangerous or even destructive ends. This raises legal and ethical questions at the national, regional and international levels, including the right to know, to collect information, to acquire or withhold information, to control its release, to profit from information, to protect or to destroy or expunge ICT and to correct or alter information, as well as to distribute and disseminate ICT.

**Risks ::**

In countries, that have entered the information age, concerns about the negative impact of ICT are growing. Such concerns include the possible health effects of exposure to computer screens and video terminals, and to no ionizing radiation from cellular telephones and antennas of telecommunications distribution systems. There is also growing concern about the management of hazardous waste generated in manufacturing ICT hardware, and regarding the management of solid waste. Other fears include the loss of social competence and growing isolation of the individual.

Furthermore, with ICT, whole categories of jobs in a wide range of industries can disappear. This is particularly true for unskilled workers, as well as for those who cannot be retrained to match the requirements of the new types of employment opportunities that evolve.

ICT revolution is just about to take hold, moreover, a new wave of "brain drain" may emerge with large numbers of ICT-skilled labour migrating to economically more advanced countries in search of better opportunities and higher earnings. This may have serious repercussions on the capacities of such developing countries to integrate their own wider production system into the information-based global economy.

Furthermore, if the economic promises of ICT ever became a reality throughout the developing world, the scale effect of the increase in global economic activity could have a serious detrimental impact on the environment worldwide. This possibility does not call for restricting economic growth or indeed for slowing globalization and the progress of the ICT revolution itself, but rather for conscious precautionary environmental policies.

**SWOT ::**

The framework comprises five themes:

- Technology : web + social media + mobile + cloud
- Environment : customers, suppliers, commune, authorities, infrastructure
- Knowledge & skills: training, education, access to, needs
- Business : operations & functions
- Organizational forms : clusters, networks, and communities

**CONCLUSION:**

Information and communication technologies (ICT) allows users to participate in a world in which work and other activities are increasingly transformed by access to varied and developing technologies. ICT tools can be used to find, explore, analyze, exchange and present information responsibly and accurately. ICT can also be used to give users quick access to ideas and experiences from a wide range of people, communities and cultures.

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