Information Habitat: Where Information Lives

Non-Governmental Organization in Special Consultative Status with ECOSOC

Financing for Development and Transition to a Knowledge-Based Economy

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Transition to a Knowledge-Based Economy

There is a critical need and opportunity for the Financing for Development (FfD) process to address an over-riding systemic issue relating to development, namely the ongoing transition to a global knowledge-based economy and financing for development that supports equitable participation in the new economy within and between countries.

A Critical Opportunity for the FfD Process

An appreciation of the transition to a knowledge-based global economy goes to the heart of the FfD's mandate to "... address national, international and systemic issues relating to financing for development in a holistic manner in the context of globalization and interdependence".

Magnitude of the Transition

The magnitude of this transition dwarfs almost other aspects of the development landscape, and is widely recognized as a primary driving force behind the process of globalization. The transition does not just involve the adoption of a new generation of technology, but is a transition to a new economic framework - a knowledge-based economy - whose nature and characteristics are profoundly different from those of the traditional material economy.

Framework for a Knowledge-Based Economy

The framework can either be one that consolidates and intensifies the economic and social divisions between and within nations or it can provide the foundations for equitable participation in a new economy, an economy in which knowledge, intellect, and the establishment of effective and accessible information infrastructure are becoming the keys to development.

Nature and Role of the Internet and World Wide Web

An effective understanding of the nature and role of the Internet and the World Wide Web is central in clarifying the nature and scope of the transition to a knowledge-based economy. The remarkable extent of the impact of the World Wide Web was recognized in the front page story in the Business section of yesterday's New York Times - seven years from its first article on the World Wide Web. The phenomenon of the Internet is increasingly being recognized as fully consistent with the hypothesis that the Internet is emerging as the brain of a super-intelligent - and conscious - sentient being, in essence a proof of the premise of the Gaia hypothesis that the Earth - Gaia was the Greek name for the Earth goddess - is a sentient being with a demonstrated ability to respond intelligently to disturbances to its chemical, biological and thermal equilibrium. From this perspective, this global brain can be understood as enabling a profound transition to a new Millennium grounded in protocols that uphold an equilibrium based on sustainability, justice and peace.

ECOSOC Priorities and the Knowledge-based Economy

The significance of the transition to a global knowledge-based economy has been clearly recognized by ECOSOC in its priority theme for this year's High Level segment: "Development and international cooperation: the role of information and communications technology in a knowledge-based global economy", in the related Ministerial Declaration and in the establishment of a high-level Information and Communication Technologies Advisory Group led by former Cost Rican President. José María Figueres.

UNDP, Development and Information Technologies

UNDP Administrator Mark Malloch Brown has made clear the importance that UNDP attributes to the new economy as a central component of development initiatives - for example in a recent call for "bold new partnerships to harness the power of Information and Communication Technology (ICT) to bridge the digital divide and provide new opportunities for the world's poor" in an October 2000 speech at the Digital Dividends Conference in Seattle.

Economics of Information

In examining the strategic significance of the knowledge-based economy, it is important to appreciate that this economy is truly a new economy, and that the underlying economics of information and of knowledge are radically different from the economics that have prevailed throughout previous human history.

Properties of Information

Central to the new economics are the fundamental properties of information and networks, including the fact that information has zero mass, zero physical size and can travel at the speed of light, and that modern information technology is progressively allowing unprecedented common access to a holistic perspective on virtually any situation - local, national or global.

Wealth Creation and the New Economy

Recent fluctuations in the stock markets notwithstanding, over recent years, the level of capital formation and wealth creation attributable to the new economy has continued to grow at a rapid rate, exceeding the levels in the traditional areas of the economy. There is every reason to expect this trend to continue as the Internet and related technologies continue to transform more and more aspects of economic activity. Meanwhile, the rate of adoption of Internet technology continues to accelerate - at a pace that far exceeds the rate of growth of negative indicators of development - e.g. population growth and measures of environmental degradation and destruction.

Marginal Costs

These properties of information mean that information- and knowledge-based goods are essentially free of material constraints, and have a marginal cost that is virtually zero - among other things, posing a theoretical challenge to a central tenet of micro-economic theory, namely that in equilibrium, the cost of a good should equal its marginal cost of production.

Market Enhancements

The new economy has not only been giving birth to a new set of knowledge-based products, it has been transforming the nature of the marketplace itself - for the first time in history, raising the possibility of establishing "perfect markets" - where all parties have access to all relevant information concerning price and availability of goods. By focusing attention on the nature and characteristics of the newly evolving market, including the key issue of access to markets, the FfD process can be in a position to address financing for development in a manner that affects its underlying dynamics.

Full Cost Accounting and Sustainable Development

In respect of the mandate of the FfD process to address in a holistic manner financing of the implementation of the global conference agreements, a crucial aspect of the new economy - not yet widely recognized - is its capacity to correct the historic failure of markets to incorporate the social and environmental costs of goods and services, through the integration of full cost accounting into e-commerce protocols. Such a correction would go to the heart of reconciling the conflict between economic activity and the environment that was central to the agenda of the Earth Summit.

Wireless Connectivity

The ability for developing countries to make significant advances in the new economy is already very evident - for example in the ASEAN region. Rapid developments in wireless telephony and wireless Internet access are making it technically possible for Member States in developing countries to bypass the limitations of inadequate or outdated telephone systems and move rapidly into the knowledge-based economy through the construction and installation of wireless communication networks.

The Changing Face of Banking

The Internet is also dramatically changing the face of banking; the technical capacity of virtually instantaneous direct transfer of funds - with minimal transaction costs - via the Internet is effectively allowing the creation of virtual banks. Likewise, developments in the field of smart cards and of payment exchange processes that make use of wireless hand-held devices

Enhanced Opportunities for Micro-Financing

There has been wide recognition of the value of micro-credit as a mechanism for in support of the establishment of very small scale businesses - often with focus on women-owned businesses. It is now technically feasible to dramatically expand the development of micro financing institutions - e.g. allowing a group of ten people in a developing country to each put up $100 that could be used to finance twenty micro-loans of $50 in a developing country with minimal overhead costs.

Local Exchange Trading Systems

The use of the Internet is adding momentum to the use and development of local exchange trading systems that use virtual currencies - often measured in units such as "time dollars" - that allow for a substantial increase in trading and exchange of goods and services in communities that have very limited access to conventional currencies. Even though these alternative trading systems - most of which are very small compared to trade that are based on formal currencies - are not reflected in conventional measures of economic activity, they can make a significant contribution to real wealth and can play a strategically significant role in fostering economic development in local economies.

Banks of Knowledge

The transition to a knowledge-based economy in which knowledge becomes a central component of wealth points to the value of establishing banks of knowledge as mechanisms that can make a significant contribution to development. Knowledge banks can serve a dual function - both as depositories for publicly accessible knowledge that can play a key role in supporting knowledge-based development and as a mechanism for trade that uses knowledge-based currencies as a medium for exchange.

Debt-for-Knowledge Exchange

The importance of knowledge as a primary resource in the new economy suggests it may be valuable for the FfD process to investigate the feasibility of debt-for knowledge exchange, in which debt cancellation could be accompanied by agreements by which governments allocate resources that would otherwise have been used for debt repayment to capacity building in the knowledge-based economy.

Internet Domains

Also of great significance is that in the new economy, the Internet domain is the seat of property. The domain also serves as a marketplace - a marketplace that is housed within a global "grand bazaar" and accessible to customers throughout the world. Once legal and regulatory barriers to market access are removed, the domain-based marketplace is able to find and/or create its own niche - whether large or small - in the overall global market.

Domain Registration Policies

The country code top-level domains are a key resource for developing countries. and support for the establishment of effective, equitable and accessible domain registration for businesses, communities and non-governmental organizations can play an important role for developing countries as they make the transition into the knowledge-based economy. In this respect, a good case can be made for examining alternatives to the prevailing pricing policies for domain registration, for example substituting registration fees based on gross revenues from the domain for the nominal flat fee that has been the prevailing basis for domain registration.

Domain-Hosting Capacity

The ability to make effective use of Internet domains, however, depends to a significant extent on the availability of domain-hosting services that make available services such as web hosting, electronic "post offices", e-commerce capability and online fora to support dialogue and decision-making. In this respect, partnership-based arrangements - public and/or private - can offer valuable bridging solutions under which developing country-based domains can be hosted in developing countries on an interim basis, during transitional periods in which developing countries establish national domain-hosting capacities. Such arrangements would however, call for the establishment of clear guidelines that respect national sovereignty of national top-level domains.

Tuvalu, .tv domains and National Sovereignty

The case of Tuvalu provides an important illustrative case in this regard, and is one that deserves much closer scrutiny by the international community and by the FfD process. Tuvalu's top-level domain - .tv - could well become home for the most valuable domains anywhere, especially with the continuing advances that are being made in the delivery of television broadcasting through the Internet.

However, Tuvalu has ceded control over the .tv domains in exchange for a guaranteed $4,000,000 per year and a minority stake in a California-based corporation that has been granted exclusive rights to register .tv domains - currently charging as much as $100,000 per year for registration of selected domain names. While on the surface, this may appear to be a generous arrangement for Tuvalu, it represents not only a small fraction of a value that has the potential to finance a comprehensive approach to combat the trend to global warming that threatens the very existence of much of Tuvalu - as well as of many other small island states - but also represents a dangerous precedent for loss of national sovereignty.

Tools for Business Administration

Information and communication technologies offer owners and managers of business enterprises a powerful set of tools for a whole range of tasks related to managing a business - from accounting, order-processing, inventory management, analysis of market trends and opportunities. By supporting policies and programmes that make these tools available in developing countries, the Financing for Development process can help businesses in developing countries to be able to compete on a more equal basis than is presently the case, and to strengthen their capacity to gain experience and expertise in a vital area of economic development. One valuable step in this direction would be to support the development of low-cost integrated packages that businesses in developing countries could use as templates for business management and development.

Public Administration

The significance of information and communication technologies is not limited to economic activities; an appropriate set of tools could also be of great value for governments, including local government authorities, to strengthen their ability to monitor and manage many aspects of public administration, from management and maintenance of land ownership records, monitoring local development and local environmental conditions, planning urban infrastructure, managing local public markets, etc.

The use of information and communication technology in support of government administration offers significant time- and cost-savings compared to traditional practices in the provision of government services, as evidenced by the experience of Estonia, a pioneer in this field, while also provides support for greater transparency and accountability in government.

Geographic Information Systems

One of the most powerful software tools that is available to local, provincial and national governments is the use of geographic information systems; these systems allow for the compilation of a very broad range of measures of economic, social, demographic and environmental resources and conditions, and that allow the presentation of the information in map-based formats that are far more comprehensible and versatile than conventional statistical formats. As with many of the other information and communication tools, the development of geographic information systems is very amenable to partnership-based approaches between developed and developing countries, especially involving the participation of academic institutions.

Public Health and Education

Substantial benefits can similarly also be made accessible to developing countries in the areas of public health and education. From a capacity-building perspective, these two areas are arguably the most important ingredients for providing the basis for sustained and sustainable development.

Access to Information and Public Participation in Decision-Making
In addition to its significance in the areas of business and public administration, the knowledge economy is making possible important new opportunities for access to vital information, public participation in decision-making and access to justice and the law. A prime example in this regard is the experience of the use of information and communication technology in support of NGO participation in the global conferences of the 1990s and in challenging global trade and investment agreements that threaten to undermine the agreements of the global conferences.

FfD-Forum.net

In support of enabling continued dialogue on the role of the knowledge-based economy - as well as of all the issues on the agenda of the FfD process, and in keeping with the decision of the General Assembly on the FfD process that: "... the Preparatory Committee ... should consider innovative ways and mechanisms to facilitate the active involvement of all relevant stakeholders in both the preparatory process and the high-level intergovernmental event" (A/RES/54/196, para 6) Information Habitat has registered the Internet domain FfD-Forum.net and invites the FfD Secretariat, Bureau, Preparatory Committee and all interested stakeholders to explore its use and development as an innovative partnership-based framework to support broad-based dialogue and participation in the FfD process.

For more than ten years, Information Habitat has been pioneering the use of information and communication technology in support of broad-based participation in the series of United Nations global conferences of the 1990s - from the 1992 Earth Summit through the 1996 Habitat II Conference - and in the follow up to the agreements reached at these conferences. From its beginning, the work of Information Habitat has been guided by a holistic approach based on a commitment to engage in a process of healing the Earth and healing our selves. This has led to the progressive development of information ecology as an embryonic holistic life science intended to facilitate a profound Millennial transition to sustainability, justice and peace.

Robert Pollard, Founder and Information Ecologist of Information Habitat, received his undergraduate training in Mathematics and Economics at Cambridge University, and his graduate degree in Social Relations at The Johns Hopkins University where his focus was on research design, data analysis, methodology, personality, small group dynamics and mathematical models of behaviour. Since 1981, his primary focus has been on developing and promoting the use of microcomputer technology in support of broad-based access to information and public participation in decision-making - at local, national and international levels.

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