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UNRISD Research and Policy Brief 2

Social Development and the "Information Revolution"

Lessons from research in Senegal

UNRISD United Nations Research Institute for Social Development

The Issue in Context

There is widespread talk of an "information revolution". For many, this has gone beyond the idea of radical change in technological processes, to the notion of the "information society" or, even, of new historical cycles. At the same time, glaring differences in the use of information and communication technology (ICT) between industrialized and developing countries have led to talk of a "digital divide". This concept implies that relative lack of access to ICT is itself a strategic disadvantage that can—and should—be tackled distinctly from the multitude of other development challenges. Whether an information revolution is taking place; if and how it is distinct from other processes of change, such as globalization; and its implications for public policy are all subjects of passionate debate.

If an information revolution is indeed under way, it will be evidenced by profound changes in social and economic relations. In order to examine the evidence in a specific setting, UNRISD formed a multidisciplinary team in Senegal to research the impact of ICT on multiple aspects of life there. The findings of this research improve our understanding of ICT-driven change in one society, and reveal the potential social implications of policy choices that may be relevant for other countries.

Senegal was chosen for a number of reasons. On one hand, it is a low-income country, struggling to emerge from deep economic crisis. Open urban unemployment stands at approximately 29 per cent. One third of the population is poor or very poor. There has been substantial external migration over recent decades. On the other hand, it has invested heavily in one of the most advanced telecommunications and information infrastructures in sub-Saharan Africa. It has policies aimed at promoting mass access to telephone and Internet technologies. Changes in government control over the media in recent years have created important new openings for independent radio and television. What does this mean for development? What role can ICT play—and what role is it in fact playing—in improving the climate for economic growth, social welfare and democracy?

Research Findings

Several studies commissioned by UNRISD focused on the main sectors of Senegalese society—government, media and business, and services such as health and education. Key findings of these studies are listed on the following page.

The UNRISD Research

Momar-Coumba Diop of the Institut Fondamental d'Afrique Noire Cheikh Anta Diop (Dakar) co-ordinated the research, for which UNRISD received funding from the Netherlands Minister for Development Co-operation. The first step was to commission Olivier Sagna to carry out an extensive overview of the historic and current uses of ICT in Senegal. This provided detailed input for subsequent project planning.

A seminar was held in Dakar in January 2000 involving a cross-section of interested parties—academics, representatives from local ICT businesses, independent media companies, NGOs (including OSIRIS, the Observatoire sur les systèmes d'information, les réseaux et les inforoutes au Sénégal) and UNRISD. This meeting discussed the research agenda and decided to use a multidisciplinary team of local researchers, including staff from NGOs and independent media, as well as locally based academics. Ten more studies were commissioned and two small grants were made to assist graduate students working on related themes. A contract was also agreed with a national independent daily newspaper, *Sud Quotidien*, to produce a series of eight, four-page supplements on ICT in Senegal, including reports on the research.

The researchers debated their work at an UNRISD conference held in Dakar in July 2001, opened by Abdoulaye Baldé, General Secretary of the Office of the Presidency. The UNRISD Conference News (*Les technologies de l'information et de la communication développement social au Sénégal*) subsequently published was widely distributed in Senegal and served to stimulate further local debate. Following the conference, a number of papers were revised and published (see Further Reading, below); many have also been translated into English and are available at www.unrisd.org.

The Research Process

UNRISD work in Senegal, as localized research, emphasized an approach that…

- was iterative—willing and able to alter its content and direction in response to consultation with stakeholders;
- was participatory—involving a range of interested parties from different sectors to establish the agenda and to identify the researchers, and then building on this participation to foster interest among a wider group in the research results;
- built capacity—through supporting the work of local researchers and working to make that knowledge available to decision makers at the national level;
- invested in information products, presenting the research results in appropriate formats for different audiences: Web-based documentation, working papers, a newsletter, an edited volume, and newspaper coverage.

This approach differed from the type of externally prescribed research that is often carried out, and that…

- risks alienating the research from the people and processes it is ultimately intended to serve (beneficiaries of development);
- risks damaging the quality or appropriateness of the research by limiting the range of knowledge and conceptual approaches brought to it (by ignoring the sources of knowledge closest to the subject);
- misses an opportunity to build local knowledge and capacity, which could be a sustainable resource for local policy initiatives as well as future development intervention.

- Despite heavy investment in telecommunication infrastructure by Sonatel (the former telecommunication monopoly), the introduction and use of ICT in these major sectors has proved to be problematic under both state and private ownership. There appears to be some positive relationship between high investment in ICT and related infrastructure and the health of the national economy, but this finding is subject to significant qualification as to its interpretation or sustainability. There is scope for arguing that similar investment in other areas might have produced better overall returns.

- The government itself is not a vanguard user of computers, having relatively few overall and even fewer networked or linked to the Internet.

- ICT use in health and education is being actively explored but is still, in terms of national impact, very limited. Problems with electricity supply and the cost of connection to the Internet have not been overcome, and a model for financial sustainability is still lacking.

- Businesses, especially larger ones, use computers, including networked computers, extensively, but primarily for internal data management. Very few are incorporated into extended ICT-based supply chains or are trading extensively on the Web. A culture of information control and a fear of viruses and hacking, strengthened by expensive and unreliable technical support, militates against more widespread use of the Internet.

- The newly independent media companies may be considered pioneers of modern communication—in their dissemination of uncensored information, their introduction of interactive techniques with their listeners and viewers, and their use of mobile phones. However, they make little use of Internet-connected computers in their daily operations.

Several other studies looked at a broad range of social settings and collected statistics on the public use of ICT. The picture they reveal of Senegalese society as a whole is encouraging.

- There has been an explosion of telephone use, and to a lesser extent Internet use, occasioned by the creation of some 10,000 telecentres using fixed lines and by the rapid growth of mobile telephony.

- Strong interest in the use of and interaction with independent media is reported, with positive implications for the development of local languages—notably Wolof—and of transparency, accountability and democracy in the country.

- The Mouride brotherhood has taken up the Internet as a strategic tool. It is using its local political influence to negotiate a modern, commercially viable telecommunication infrastructure in the town of Touba, and is making this a launching pad for increased social and economic interaction among members of the Mouride brotherhood worldwide.

- The Senegalese diaspora is a major investor in and user of ICT, including video and sound. Such use has significant economic and social implications, both for emigrant communities and their villages of origin. These include the speed and form of financial remittances, the identification of trading

opportunities, the quality of social ties maintained with and by emigrants, and the changing social status of their relatives who are charged with looking after the mobile phone—a key means of communication—and managing the multiple communications it enables.

- ICT, including the widespread use of mobile phones, is affecting the informal economy. Improved communication has greatly improved people's capacity to deliver a wide range of services. The growing relationships between some micro-enterprises—those based on the repair of computers or their use in telecentres, for example—and banks, electricity and phone suppliers may be pushing such businesses toward greater integration with the formal economy.

These findings do not suggest that grassroots use of ICT is problem-free, but rather that it sometimes takes unexpected forms and directions. Many constraints and barriers exist, and not all the new social and economic relations created are necessarily less exploitative than those they replace. The findings do, however, present a vibrant picture of great innovation, of people adapting new tools to their needs and welcoming the potential for change. They also raise some central questions in the context of debates on the information revolution, the information society, and ICT and development.

Policy Implications

Where, in terms of development policy and practice, are effort and resources best expended? Most global discourse on the information society and the digital divide concentrates on bringing the main organizations in public, private and social sectors into the ambit of the global information practices promoted and used in transnational business and intergovernmental processes. The notion of "e-readiness" exemplifies this, laying out the requirements necessary for entry into this global club. Yet such requirements are now utterly unobtainable for most developing countries.

UNRISD research indicates that the "big players" in Senegal, despite being relatively well resourced and aware of increasing use of ICT in the world around them, are not—for reasons of environment, organizational culture, cost and locally available support—capable of providing the impetus that will transform Senegalese economy and society, or their relative position in the world economy. If that capacity exists in the country, it currently lies with those sectors of society that were previously either economically marginalized or viewed as insignificant when considering "modern economic progress".

The policy choice that follows is between supporting the appropriation and adaptation of technology by individual members of such communities, recognizing the socialized nature of technology use in Africa, or seeking to overcome the structural constraints to profitable participation in global information practices. The former is likely to have a more immediate economic effect at the local level and offer a clearer link to the overriding development goal of reducing poverty.

What does this research indicate, more generally, about information revolution and "the" information society?

First, and crucially, the notion that there could or should be just one such society is misguided. There are certainly the makings of "an" information society in Senegal, as elsewhere, but its precise nature and which technologies it will most exploit will be firmly rooted in its specific history and current opportunities. Visions of a technologically based, uniform, global information society are of dubious theoretical benefit and lack empirical foundation.

Second, perhaps the information revolution has similar characteristics with previous revolutions in productive processes, in that new possibilities are created and exploited by largely autonomous and self-organizing forces often removed from the existing centres of control.

If this is the case, it follows that research intended to inform policy needs to be strongly focused on the dynamics of new practice on the ground in specific contexts, and their implications for the future. There has to be good understanding of these before it is possible to assess the continued relevance of existing institutions or research agendas to future development. These dynamics also need to be well understood before development funding is directed toward attempts to steer emerging trends in particular social or economic directions. Failure to do this can lead to public investment unwittingly building barriers and closing opportunities, rather than the contrary. What is certain is that approaches that start from existing agendas and then seek to apply them to poorly understood transformational processes are guaranteed to fail.

What about the digital divide?

The overall picture painted by the Senegal research illustrates practical barriers and constraints that must be overcome if Senegal is to reap maximum benefit from its investments in information-based change. Many of them will be surmounted, and the usage of ICT will undoubtedly continue to increase. The likelihood, however, of it growing at anything like the rate that will prevail in more developed countries, with better infrastructure, cheaper hardware and services, and much greater access to trained personnel, is remote in the extreme. The range of issues that would need to be tackled to avoid continued widening of the digital divide is as broad as the subject of development itself. As such, the research carried out in Senegal presents convincing evidence for the argument made in another UNRISD publication, *The Development Divide in a Digital Age*: ICT does not itself provide a panacea for the deep-seated challenges posed by underdevelopment.

Further Reading

Diop, Momar-Coumba (ed.). 2002. *Le Sénégal à l'heure de l'information: Technologies et société*. UNRISD and Karthala, Paris.

Hewitt de Alcántara, Cynthia. 2001. *The Development Divide in a Digital Age: An Issues Paper*. Programme on Technology, Business and Society, Paper No. 4. UNRISD, Geneva. http://www.unrisd.org/infotech/programme/alcantara.

Sagna, Olivier. 2001. *Les technologies de l'information et de la communication et le développement social au Sénégal: Un état des lieux*. Programme on Technology, Business and Society, Paper No. 1. UNRISD, Geneva. http://www.unrisd.org/infotech/senegal/sagna-fr.

Thierno Lo, Mame. 2001. *Enjeux et pratiques des nouvelles technologies de l'information et de la communication (NTIC) dans le secteur informal au Sénégal.* Thesis prepared for the Diplôme d'études approfondies in Sociology, Université Cheikh Anta Diop, Dakar.

The following studies have been translated into English and draft versions are available on the UNRISD Web site.

Barry, Philippe and Hamidou Diop. 2002. *The Impact of Internet on the Operations of Medium and Large Industrial Enterprises*. http://www.unrisd.org/infotech/senegal/barry-diop.

Coulibaly, Abdou Latif. 2002. *New Information and Communication Technologies and Professionals in the Media*. http://www.unrisd.org/infotech/senegal/coulibaly.

Daffé, Gaye and Mamadou Dansokho. 2002. *New Information and Communication Technologies: Challenges and Opportunities for the Senegalese Economy*. http://www.unrisd.org/infotech/senegal/daffe-dansokho.

Dia, Saidou. 2002. *Radio Broadcasting and New Information and Communication Technologies: Uses, Challenges and Prospects*. http://www.unrisd.org/infotech/senegal/dia.

Diop, Momar-Coumba. 2003. *Technologies, Power and Society: An Overview*. http://www.unrisd.org/infotech/senegal/diop.

Guèye, Cheikh. 2002. *The Challenge of NICTs and Their Role in Urban Change: The Case of Touba*. http://www.unrisd.org/infotech/senegal/gueye.

Paye, Moussa. 2002. *New Information Technologies and the Democratic Process*. http://www.unrisd.org/infotech/senegal/paye.

Sagna, Olivier. 2000. *Information and Communications Technologies and Social Development in Senegal: An Overview*. http://www.unrisd.org/infotech/senegal/sagna.

Tall, Serigne Mansour. 2002. *Senegalese Emigrés and New Information and Communication Technologies*. http://www.unrisd.org/infotech/senegal/tall.

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This Research and Policy Brief was prepared in March 2004 by Michael Powell, co-ordinator of the UNRISD project on Information Technology and Social Development. He can be contacted at UNRISD at 41 (0)22 9172430 or powell@unrisd.org. This publication was produced with the support of UNRISD core funds, for which the Institute thanks the governments of Denmark, Finland, Mexico, the Netherlands, Norway, Sweden, Switzerland and the United Kingdom.

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For more information on the Institute, contact Nicolas Bovay, Programme Information Officer, UNRISD, Palais des Nations, 1211 Geneva 10, Switzerland; phone 41 (0)22 9171143, fax 41 (0)22 9170650, bovay@unrisd.org, www.unrisd.org.

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