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POLICY
BRIEF

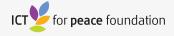# DIGITIZATION: CURSE OR BLESSING FOR THE BOTTOM BILLION?

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A DIGITIZATION: CURSE OR BLESSING FOR THE BOTTOM BILLION?

By Martin Dahinden[1]

All people are equally entitled to human rights. In the global North, the rights to freedom are paramount. For people in developing countries (and for very poor sections of the population everywhere), freedom alone is not sufficient for a life in dignity. Poverty eradication is equally important. This is especially true in the age of digital transformation. What are the opportunities and risks of the upcoming technological upheavals for the bottom billion, the poorest billion people on the planet?

Thirty years ago, when I worked in Africa, I was annoyed every day by telephone lines that didn't work. When more efficient lines were built, the wires disappeared after a short time because they were needed for something that seemed more useful to people. Just as malaria nets were often used not for protection against malaria, but for fishing. In Africa, it was difficult to get access to knowledge and even to find useful books. Those who did research on Africa were more likely to find helpful publications on Africa in Europe or the United States. Many had Rostow's famous Stages of Economic Development in mind and wondered if the continent would ever progress in line the development path laid out. Fortunately, people did not move along the preconceived path, but skipped many stages of development.

In retrospect, it is obvious that mobile telephony has brought significantly more development than most development projects. The technology has enabled people to become active and imaginative themselves and to change their everyday lives. More people now have access to mobile telephony than to clean drinking water or sanitation.

It's time to look at some of the rapidly changing areas.

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1   See also article by Martin Dahinden in Neue Zürcher Zeitung (NZZ) 8 July 2020 https://ict4peace.org/activities/amb-martin-dahinden-in-nzz-beyond-covid-connectivity-and-digitization-empowers-people-in-developing-countries/

RAPID CHANGE IN ALL AREAS OF LIFE

With the Internet, access to knowledge and information has reached a depth and speed that was unimaginable in the pre-digital world. A huge library can fit inside a smartphone. The upheavals are as fundamental as the printing of books during the Renaissance, when texts and thought itself were freed from the thick walls of monasteries and castles. Knowledge flows both ways on the Internet. On platforms like Wikipedia, people from the global South can help shape global knowledge with their own contributions. The prerequisite of course is access to the Internet.

Digital financial instruments are likewise revolutionary in the developing world. People for whom a bank account is inaccessible have tapped into cashless payment transactions with phone credits. Remittances from migrant workers to their families is one of the most effective supporters of development because the money is spent mainly in areas that are central to overcoming poverty, i.e., health and education. The sum of these remittances is six to seven times larger than the total amount of global development aid. For a long time, these remittances were very costly or insecure. Digital financial instruments have now reduced the cost by more than 90% for the benefit of the poorest people on earth.

Digital technologies create market transparency. Today, a fisherman knows what price his fish is selling for in the city. This changes his bargaining position and improves his income. The effect is transformative for the entire economy because value creation no longer seeps away in the many changes of hands and with middlemen. There is an incentive to create value, i.e., to catch fish instead of just passing fish around while skimming money.

Poor government services also come under pressure as transparency increases. The population begins to know their rights and entitlements, as many studies have shown. The World Bank's 2016 Word Development report cites a particularly striking case: when Nigeria introduced the e-ID, the public sector discovered to have 62,000 fictitious "ghost employees," with the state losing a $1 billion annually.

Skepticism about social media is widespread. For developing countries, however, social media platforms offer great potential for networking; they also have great power for political change. Social media makes it more difficult to keep silence on human rights abuses, and it facilitates mobilization to counter and prevent them.

Digital technologies are increasingly important for health care. Once, people in developing countries often had to walk hundreds of miles in search of drugs or treatment. At their destination, they often learned that the much-needed drug was no longer available. Today, medication tracking has become simple. Medical advice and information are available through e- and mobile medicine applications, for mothers with newborns for instance.

Education is paramount for overcoming poverty. The Covid-19 pandemic has vividly demonstrated the importance of access to the Internet so that students can follow lessons from home. According to a report by UNICEF and the International Telecommunication Union (ITU), two-thirds of school-age children worldwide do not have Internet access at home. The gap is particularly wide in developing countries, which is a setback for development.

THE SUSTAINABLE DEVELOPMENT GOALS

When the UN's 17 Sustainable Development Goals SDGs (Agenda 2030) were drawn up, issues of digitization played a subordinate role. Digitization is mentioned in Sustainable Development Goal 9, which is about infrastructure, industrialization, and innovation. Digitization is also mentioned in other parts of the 2030 Agenda, for example in education or the advancement of women. Access to ICT will be significantly increased by 2030, and universal and affordable Internet access should be available even for the least developed countries. While mobile telephony is already now widespread, Internet access remains a challenge. Infrastructure (broadband networks) is often lacking, and the charges are a significant barrier.

RISKS AND DANGERS FOR THE BOTTOM BILLION

At first glance, digitization appears to be a great blessing for the bottom billion once access (connectivity) is available to all. However, the rapid spread of ICT technologies

involves wide range of risks that are only beginning to be grasped. Vivid examples are cybersecurity, insufficient skills development, and the unregulated spread of surveillance technologies. Without proper handling, fundamental human rights can be violated, and efforts to combat and overcome poverty jeopardized. Often, human rights and individual freedoms must be enforced and protected against state power. In the age of digitalization, however, the state also has an important role to play in protecting individuals, their freedoms, and their opportunities for development.

In the context of development cooperation, cybersecurity is a neglected topic. This is short-sighted. Cybercrime and cyberconflict will increasingly affect developing countries and poor populations. The dependence on digital financial instruments includes important risks; without protection, poor people can become easy prey. The greatest risk is damage to critical infrastructure. Once the digital divide provided some protection to developing countries. As more installations use digital technology they are becoming more vulnerable. Cyberspace interlinks ICT infrastructure worldwide, distant countries and continents are now only a mouse click away. This also applies to malware and its collateral damage. Cybercrime and cyber operations can originate in developing countries or use their infrastructure and cause great damage in remote areas, including the global North. These risks can only be solved through cooperation with developing countries, which is in the interest of all. What is urgently needed is capacity building, support for legislation and regulatory measures, and the development of effective cybersecurity strategies.

Skills development is a major challenge. Digitization requires new technical and professional skills. The UN's Sustainable Development Goals explicitly point to this aspect. The think tank ICT4Peace has been conducting such capacity building programs for several years and recently launched the ICT4Peace Academy. The ICT4Peace Academy runs customized training in areas that are particularly important for developing countries such as today's challenges in information and communication technologies, cyber diplomacy, cyber peace building and cyber (human) security. The ICT4Peace Academy draws from an extensive network of expert practitioners, including diplomats, technologists, and civil society experts (https://academy. ict4peace.org). ICT4Peace launched an intiative at OECD/DAC to recognize the ODA eligibility of measures to strengthen cyber security in developing countries. However, it is only one side of the coin. Digitalization leads to automation and thus to the removal of repetitive work. This also means ruthless cut-throat competition for the remaining, less skilled jobs, many of which are in large numbers in developing

countries. The result can be greater poverty and hardship for the poorest populations if skills development does not occur in this area.

Digital surveillance technology enables unprecedented forms of control. Unpopular opinions can be identified more easily, and communication and freedom of expression can be suppressed with unprecedented effectiveness. Thus, as networks grow, so does the danger of a surveillance state that deprives individual freedoms and, in the longer term, impedes social and economic development.

These are just a few finger pointers to risks and dangers; there is no shortage of others: use of artificial intelligence, Fifth Generation (5G) mobile telephony, Internet of Things (IoT), 3D printing, the effects of quantum computing, etc. All these developments will also take place in developing countries and in the lives of the poorest population.

THE LACK OF ENGAGEMENT

Such issues unfortunately occupy little space in discussions of development cooperation, despite the existence of good foundations such as the 2016 World Bank report on the digital dividend and relevant research. This is puzzling and difficult to understand.

Development cooperation today is still often based on the idea that poverty reduction is most effective when missing government services are provided in areas such as healthcare and education. This is compensatory rather than disruptive and ill-suited to the technological upheavals ahead.

Martin Dahinden was the Swiss Ambassador to the United States from 2014-2019, before which he headed the Swiss Agency for Development and Cooperation. He is Vice-Chairman of the Foundation Board of the think tank ICT4Peace and of the Advisory Group of UNICEF, New York.

About ICT4Peace Foundation

ICT4Peace is a policy and action-oriented international Foundation. The purpose is to save lives and protect human dignity through Information and Communication Technology. Since 2003 ICT4Peace explores and champions the use of ICTs and new media for peaceful purposes, including for peacebuilding, crisis management and humanitarian operations. Since 2007 ICT4Peace promotes cybersecurity and a peaceful cyberspace through inter alia international negotiations with governments, international organisations, companies and non-state actors.

The ICT4Peace project was launched with the support of the Swiss Government in 2003 with the publication of a book by the UN ICT Task Force on the practice and theory of ICT in the conflict cycle and peace building in 2005 and the approval of para 36 of the Tunis Commitment of the UN World Summit on the Information Society (WSIS) in 2005.

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