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Technology, Infrastructure, and Their Regulatory Regimes in Reducing Inequalities

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Definitions

Infrastructure refers to buildings, networks, and other physical facilities that are used to deliver public services, in particular in transportation (roads, railways, airports, bridges), water and sanitation, energy supply, telecommunication, education, and health care.

Technology refers to the practical applications of scientific knowledge, in particular in industry. For instance, pharmaceuticals are practical application of medical knowledge while genetically modified seeds are applications of biological knowledge. At the same time, **technology transfer** refers to the process of moving technical knowledge, know-how, data, source code, etc. from one organization to the other, typically for the purpose of replicating or modifying the original material in a different environment.

Introduction

Achieving Sustainable Development Goals (SDGs) requires approximately 90 trillion USD of investments in infrastructure over the next decade (Bhattacharya et al. 2015). The estimated amount needed is likely to decrease due to the scientific and technological progress, which allows to deliver public goods and services at a scale, speed, quality, and cost not imaginable at the time of drafting the Agenda 2030 (ITU 2018a). At the same time, unequal pace of technology diffusion might further widen inequalities among countries and regions and, as such, negatively impact progress toward SDG 10. In this context, it is technology that will ultimately enable international community implementing Agenda 2030 as a whole. This has been also reflected in the language of the UN General Assembly resolution on SDGs (A/RES/70/1) – while the word "infrastructure" appears only 11 times, "innovation" has been mentioned 27 times and "technology" 53 times.

Interestingly, most studies focus on the role of infrastructure in attaining SDGs, in particular those related to economic growth, urban

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development, and environmental goals (Cumming et al. 2017). The importance of investments in infrastructure in drive for SDGs has recently been emphasized by the Chinese academicians, which might be interpreted as an attempt to promote the Belt and Road Initiative (Wang and Arslan 2019). The impact of technology on the implementation of Agenda 2030 is most often analyzed in the context of information and communications technologies (ICTs) and technology transfer (Wu et al. 2018). This corresponds to the construction of SDG 9 targets which focus on increasing access to ICTs (target 9.C) and enhancing technological capabilities of the developing countries (targets 9.5, 9.A and 9.B). Moreover, rapid datafication of economy and society have recently prompted research on the benefits and challenges of utilizing data-related technologies, in particular Artificial Intelligence, for sustainable development (Vinuesa et al. 2020).

For this reason, further analysis will be organized in three sections dedicated, respectively, to: (1) physical infrastructure; (2) ICTs infrastructure; and (3) technology transfer and diffusion, in particular in agricultural and pharmaceutical sectors. Each section aims to assess existing inequalities and to identify legal instruments that might potentially contribute to the improvements in certain sectors. Separate section is dedicated to the COVID-19 impact on infrastructural and technological projects as the global pandemic outbreak has already either delayed or cancelled major investments across the world. Although long-term consequences of COVID-19 on implementing Agenda 2030 are yet to be seen, existing evidence indicates that developing and least developed countries are particularly fragile due to their limited financial and organizational resources.

Physical Infrastructure

Among the Agenda 2030 goals, SDG 9 explicitly refers to the development of sustainable and resilient infrastructure that includes in particular transport (roads, railways, airports, bridges), water and energy supply, telecommunication infrastructure, and facilities for public services in education and healthcare. In addition, infrastructure influences, either directly or indirectly, realizing of 72% of the SDGs (Thacker et al. 2019). For instance, investments in transportation system might significantly reduce air pollution (SDG 11) while deployment of green energy infrastructure contributes to climate change mitigation (SDG 13). As infrastructure is a backbone of economic and societal development, investments in transport, health care, and education remain critical for reducing inequalities within and among countries (SDG 10).

According to recent estimates, low- and middle-income countries should invest ca. 4.5% of GDP per year in order to meet infrastructure-related goal under the Agenda 2030 (Rozenberg and Fay 2019). In the model presented by Rozenberg and Hay, the biggest challenges are to provide universal access to electricity (2.2% of GDP per year) and to develop railways and public transport (1.3% of GDP). Relatively small investments are required in irrigation infrastructure (0.13%). Although more than 50% of the global investment needs are attributed to Asian countries, the rapid economic growth and increased public expenditures on infrastructure are expected to bear most of this burden (Global Infrastructure Hub 2017). In fact, in countries such as China, India, Japan, or Indonesia current investments outpace the projected demands.

On the other side of the spectrum are Americas and Africa. In the Americas, bridging the investment gap depends primarily on the USA which accounted for 60% of regional infrastructure spending between 2007 and 2015 (Global Infrastructure Hub 2017). In 2017 public expenditures on water and transportation infrastructure fell to the lowest levels since 1980s (Katseff et al. 2020) and COVID-19 outbreak has drained the federal and state budgets. Economic slowdown in North America might negatively impact other countries in the region, in particular Mexico which is intertwined with the US economy.

In Africa, meeting infrastructure needs requires scaling up of investments throughout the continent, particularly in Sub-Saharan Africa. According to the 2020 Africa Infrastructure

Development Index, five out of ten most developed African countries are located at the Mediterranean Sea and further three are tourism-driven small islands (Africa Infrastructure Knowledge Program 2020). In recent years, China is main foreign financier of African infrastructure. In January 2015, the African Union and China signed a Memorandum of Understanding on cooperation in infrastructure construction that incorporated whole continent into the ambitious framework of Belt and Road Initiative. According to Deloitte, China has been funding more than 20% of infrastructural projects across Africa in 2019, in particular within the transport sector (Deloitte 2019). China's influence is particularly visible in Eastern Africa where 40% of projects ongoing in 2019 were constructed by the Chinese companies (down from 55% in the previous years). Among the flagship projects are the construction of Bagamoyo Port in Tanzania (estimated value: 10 billion USD) and East Africa railway linking Kenya with South Sudan (9.8 billion USD) (Deloitte 2019). Despite the significant financial resources invested across the continent, Chinese engagement has been a subject of criticism for cooperation with authoritarian regimes, environmental degradation, and neo-colonial attitude toward Africa. African Development Bank has recently highlighted that investments in infrastructure should be complemented with significant public expenditures on education as Africa needs to generate its own human and financial capital to reduce inequalities within and between countries (African Development Bank 2020). Stimulating local industry and innovation might also compensate for limited resources and infrastructural capacity in the context of rapid population growth across the continent.

Another important driver infrastructure investments, next to FDIs, are public-private partnerships (PPPs). According to OECD, PPPs are "long term contractual arrangements between the government and a private partner whereby the latter delivers and funds public services using a capital asset, sharing the associated risks" (OECD 2012). In 2015, PPPs accounted for approximately 15–20% of total infrastructure investments in low- and middle-income countries (Leigland 2018). The efficiency of this framework has been, however, questioned on numerous occasions. Some studies revealed that PPPs in certain sectors are nearly 25% more costly than traditional procurement (Blanc-Brude et al. 2006) while other demonstrated low profitability in most sectors, in particular transport, water and electricity supply (Estache and Philippe 2012). In addition, PPPs did not prove beneficial in terms of increasing infrastructure coverage and access (Trebilcock and Rosenstock 2015). Nevertheless, the evidence from upper middle-income countries, where most of the PPPs' projects are located, indicates their relative efficiency. According to a large-scale comparative study of 181 infrastructural projects implemented in Latin America, the increase of service quality after shifting to PPPs was unquestionable (Andrés et al. 2008).

Crowdfunding, which is based on small financial contributions from a large number of sources (typically users/consumers), can be another alternative financing instrument. It has been successfully implemented in the individual projects in the UK and France; however, its potential remains largely untested (Davis and Cartwright 2019). Advocates of crowdfunding highlight its positive impact on the participation of the local community as every individual could become a potential co-founder. For this reason, this form of infrastructure development might be considered as an enabler for several SDGs, in particular target 11.3 (enhancing capacity for participatory, integrated, and sustainable human settlement planning), target 16.7 (ensuring responsive, inclusive, participatory, and representative decision-making at all levels) as well as target 17.17 (promoting effective partnerships between public, private, and civil society actors).

ICTs Infrastructure

Development of information and communication technologies remains both an individual goal itself (SDG target 9.C) and a catalyzer for achieving other SDGs. Accessibility of ICTs infrastructure is a precondition for delivery of high-quality

education to all, in particular vulnerable and disadvantaged population living in rural areas, refugees, and others (SDG 4). Ensuring universal and affordable access to the Internet can be a major driver for economic growth (SDG 8) as well as enhancement for industry and science (SDG 9). For island nations of Pacific Islands digital transformation might be the most efficient way to improve availability of public services and meet some of the individual targets of SDG 16 (UN ESCAP 2018). Recognizing the importance of affordable and accessible broadband for sustainable development, ITU and UNESCO set up the Broadband Commission for Digital Development yet in 2010. The substantial, although untapped, potential of ICTs in drive for sustainable development has been widely acknowledged at the levels of measuring, monitoring, and implementing the Agenda 2030 (Kostoska and Kocarev 2019).

In this context, the challenge for implementing SDG 10 is unequal development of ICT infrastructure worldwide. While in developed countries the majority of the population enjoys access to the Internet (86.6%), that percentage is significantly lower in developing (47%) and the least developed countries (19.1%) (ITU 2019a). Pronounced differences are also observed between the regions – while in Europe, the Americas, and CIS more than 70% of individuals use Internet, in Asia-Pacific and Arab countries it is about 50%, and in Africa only 28%. Moreover, in some countries of Sub-Saharan Africa, Internet penetration rate is even lower (e.g., Sudan, Mali, Chad, Congo) (ITU 2019b).

Even greater disparities are observed in regards to the quality of infrastructure. In developed countries, one in three individuals have access to fixed-broadband Internet, while in developing countries it is 11%, and in the least developed countries (LDCs) only 1.6% (ITU 2019b). Moreover, in some regions limited, unreliable or costly access to electricity additionally hampers ICTs use (e.g., Africa, Pacific Islands). Although these inequalities are to a certain extent concealed by the diffuse of mobile Internet infrastructure, the quality and affordability of mobile broadband remain significantly limited. Existing evidence indicates that mobile Internet services rather complement than substitute fixed broadband network (Quaglione et al. 2020). A positive sign is that developing and LDCs are deploying the most advanced fiber-optic infrastructure, leap-frogging obsolete technologies such as cable and DSL networks (ITU 2018b). Suffice it to say that in 2016 the share of fiber-optic subscriptions in the developing countries was higher that of other fixed technologies while in the developed countries it was DSL that was the most commonly used (ITU 2018b). Nevertheless, developing countries are still facing other barriers in the development of Next Generation Networks, in particular lack of appropriate legal framework and governmental incentives, low urban population density, or relatively low purchasing power of consumers (Fourie and de Bijl 2017). In addition, one of the main drivers of investments in fiber-optic technology is market competition which is lacking in the developing countries and LDCs (Fourie and de Bijl 2017).

The poor ICT infrastructure greatly contributes to digital inequalities not only among but also within countries. Limited accessibility of ICTs privileges certain groups and reinforces existing social inequalities. For instance, despite Internet use is increasing globally, the digital gender gap is still growing (ITU 2019a). Although gender divide is mainly driven by women's limited access to digital education and sociocultural norms, poor ICTs infrastructure has a profound effect in rural areas of developing countries where disproportionately more women and girls are located (OECD 2018b). Due to scarce population and low purchasing power of consumers living in rural areas, investments in broadband Internet are less profitable than in urbanized regions (Philbeck 2017). The broadband divide disproportionately affects populations living in remote areas such as indigenous peoples of Pacific Islands where the cost of a monthly mobile Internet package varies between 12 and 70 USD, depending on the country's infrastructure (UN ESCAP 2018). Similar prepaid data packages in the European countries vary between 4 and 30 USD (European Commission 2018).

Reducing inequalities in connectivity requires significant investments in ICT infrastructure, in particular in developing countries and LDCs.

According to the forecast future needs to 2040, the development of new and maintenance of existing ICT infrastructure will require investments of about 8.9 trillion dollars worldwide (Global Infrastructure Hub 2017). The current pace of investments will not ensure universal access to ICT technologies in any region of the world (either fixed or mobile broadband). In 2040, Europe will be arguably in the best position, with an investment gap of about 46 billion USD. Africa, at the other end of the spectrum, will face an infrastructure gap of 538 billion USD by that time (Global Infrastructure Hub 2017).

Investments in physical ICT infrastructure should be complemented with skill-focused initiatives that prepare public-sector institutions, business, and society to participate in digital transformation (Kostoska and Kocarev 2019). Otherwise, technological change might lead to the growth of economic inequalities and social disparities. Global trends indicate that high demand for technologically skilled labor leads to increasing inequalities as measured by Gini Index as well as concentration of cutting-edge industries in few areas worldwide (Fine et al. 2019). This phenomenon affects also developed countries – for instance more than 90% of USA's tech innovation-sector growth between 2005 and 2017 was accumulated in Boston, San Francisco, San Jose, Seattle, and San Diego (Atkinson et al. 2019).

Achieving universal Internet access until 2030 requires increased public expenditures on ICT infrastructure, governmental incentives for private investments as well as adoption of regulatory framework introducing, among other things, minimum standards for quality and pricing. In many countries, these objectives are achieved through the universal service mechanism, which involves public funding for investments that would otherwise be unprofitable, for example, development of the ICT infrastructure in rural and remote areas or maintaining low, non-market prices of Internet access. Universal service policies differ significantly among countries and might include mandatory service obligations, tax incentives, device subsidies or public private partnerships. In addition, some countries incorporate sustainability in their policies highlighting the importance of digital training and self-sufficiency of local communities. Such requirements have been included in the policies adopted in Bolivia, Colombia, Dominican Republic, Indonesia, or Uganda (Dorward 2013). Existing evidence indicates, however, that such policies in order to be effective require long-term perspective, transparent legal framework, monitoring tools, and compliance mechanisms that ensure adequate implementation of their objectives.

Technology Transfer Diffusion

The impact of technology on sustainable development goes beyond the ICTs and is particularly pronounced in agricultural and pharmaceutical sectors. Improvements in food production and agricultural productivity in recent decades allowed to keep up with the increasing food demand, albeit climate change, natural disasters, and armed conflicts did not allow to eradicate hunger (FAO 2018). Most existing studies indicate significant yield decreases from 2030s onwards, in particular for wheat (Challinor et al. 2014). For this reason, smallholder farmers, who account for 80% of global food production, are in urgent need of climate-resilient varieties of crops (Access to Seeds Foundation 2019). These challenges are addressed by several transnational biotechnological corporations which are, however, heavily criticized for increasing market concentration. Major concerns relate to seed prices and pace of innovation despite little evidence in these matters (Deconinck 2019). There is common understanding that three large mergers and acquisitions between 2017 and 2018 have led to an unprecedented level of industry consolidation (Dow Chemical and DuPont; ChemChina and Syngenta; Bayer and Monsanto), although precise market shares are unclear due to scattered data (OECD 2018a). Some studies indicate that market concentration remains economically justifiable as, on average, commercialization of genetically modified plants takes 13 years and 136 million dollars from the initial discovery (McDougall 2011). Nevertheless, global trends tend to escalate tensions between business actors, typically

located in the developed world, and developing countries.

Major incentive for private investments in agricultural research and development was the emergence of intellectual property regime in the 1970s and the rise of biotechnology in 1980s (OECD 2018a). The *sui generis* plant breeders' rights have been internationally recognized for the first time in the International Convention for the Protection of New Varieties of Plants of 1961 (revised in 1972, 1978 and 1991; hereinafter: UPOV). Although *sui generis* system is the dominant regime regulating the protection of plant varieties, in some countries it is complemented or modified by the patent regime. The latter is regulated at international level by the Trade-Related Aspects of Intellectual Property Rights (TRIPS) of 1994 (in particular Article 27(3)b).

In the context of attaining SDG 10, two issues are of crucial importance, namely provisions facilitating technology transfer to developing countries and exceptions to intellectual property protection. Strengthening transfer and dissemination of technology is missing in UPOV but has been clearly set out among the objectives of TRIPS. The latter is sometimes depicted as the global consensus between the developed world (advocating for the better protection of intellectual property) and developing countries (supporting corresponding obligations of international technology transfer) (Hutchinson 2012). According to its Article 7, WTO Members are obliged to prevent the abuse of IP rights (e.g., licensing practices) that adversely affect the international transfer of technology (Article 8.2, Article 40.1). In addition, the agreement specifies an obligation of developed countries to provide incentives to enterprises under their jurisdiction to promote and encourage technology transfer to LDCs (Article 66.2). Nevertheless, existing evidence indicate that the consolidation of IP regimes across the world facilitate transfer of technology (including foreign direct investments) to middle-income and large developing countries with no observed positive impact on LDCs (Hall 2014). Moreover, Article 66.2 TRIPS has not been implemented so far despite various proposals to establish a dedicated notification framework that would allow to monitor steps taken by the WTO Members (Shugurov 2015).

Limited technology transfer under TRIPS raises concerns whether the Agreement strikes the good balance between the interests of corporations and developing world. TRIPS leaves WTO Members free to decide whether plant varieties are to be protected under patent or *sui generis* regime, or any combination of thereof (Article 27.3.b). This means that national legislation might exclude plants from patentability. Nevertheless, the ability of less developed countries to shape their domestic policies and laws in this matter is significantly limited due to the dominant negotiating position of developed nations (in particular United States) and corporations themselves. A large number of governments from developing world have been obliged to accept "TRIPS-Plus" agreements that provide stronger protection for intellectual property than the minimum laid down in TRIPS (Tripp et al. 2007). Currently at least 60% of the 126 countries in the Global South allow for patenting plants (Correa et al. 2020). Although one might expect that these countries profit in some way from technology transfer, existing studies do not provide any conclusive evidence (Jarvie 2016).

For this reason, on numerous occasions, developing countries, in particular African Group, have called for the revision of Article 27.3.b claiming that the obligatory exceptions from patent protection should include plants that are used either for propagating or research purposes (WTO 2003). So far, patent holders' rights could be limited only in extraordinary situations necessary to protect *ordre public* or morality (Article 27.2). Reluctance of developed countries to meet these demands has recently mobilized anti-GMO sentiment, seed activism, and movement of seed sovereignty (Peschard and Randeria 2020).

Concerns over excessive IP protection and enforcement are equally relevant for pharmaceutical sector. Inequalities in revenue streams and levels of enforceability of IP regulations influence on the directions of research and development in the drug industry. For this reason, out of 1993 new drugs marketed between 1975 and 1999, only 16 targeted diseases that predominantly affect

population of the Global South (e.g., tropical diseases, tuberculosis) (Trouiller et al. 2002). Although this number increased to 37 between 2000 and 2011, this still represents only 4% of new marketed pharmaceuticals (Yamey et al. 2018). It is estimated that nowadays, neglected diseases affect even billion people contributing to increasing inequalities in health care between countries. Nevertheless, emergence of strong R&D sector and academia in some developing countries (e.g., Egypt, Brazil, India, Indonesia, Nigeria, and South Africa) might create a momentum for a global initiative that would bring together private, public, and philanthropic sectors and result in the establishment of successful incentive mechanism (Yamey et al. 2018). A good example is the Meningitis Vaccine Project developed under the auspices of WHO and PATH, with financial support of Bill & Melinda Gates Foundation. The vaccine has been developed for 26 African countries in the so-called "meningitis belt" and manufactured in five emerging economies (WHO 2016).

Disparities between regions are not limited to the availability of drugs for neglected diseases. In fact, affordability of medical treatment encompasses all types of pharmaceuticals. Suffice it to say that everyday drugs such as paracetamol costs ca. 20–30 times more in low- and middle-income countries than in developed countries (Silverman et al. 2019). In addition, markets in less developed are significantly more concentrated and, therefore, lack competition of unbranded generics which are typically the least expensive. For instance, in Zambia 5 out of 14 essential medicines is manufactured by one supplier (Silverman et al. 2019). One of the reasons for the low and little competition is the provisions of the TRIPS-Plus agreements, in particular the data exclusivity rule, which allows for a quick monopoly position and, as a consequence, to maintain high prices (Shaffer and Brenner 2009).

The negative impact of monopolies goes beyond the accessibility of pharmaceuticals and significantly affects technology transfer, local manufacturing, and innovation capacities which lead to increasing inequalities between countries. Although the TRIPS Agreement introduced mechanism of compulsory licenses that allows for an unauthorized use of patent in cases national emergency or public noncommercial use predominantly for the supply of the domestic market (Article 31), one should not forget that granting a license does not necessarily entail transfer of technology, know-how, or local manufacturing (Hutchinson 2012). For this reason, TRIPS Agreement did not establish any mechanism that effectively facilitates development of research and manufacturing in developing countries. Transfer of technology, whether in agricultural or pharmaceutical sectors, is primarily market-driven and regulatory interventions are successfully applied mostly by the largest middle-income developing countries such as Brazil or India (Hoen 2009).

COVID-19 Impact

The global drive toward reducing inequalities within and between countries has been challenged by COVID-19 outbreak. Most of the governments prioritized expenditures on healthcare and emergency response and therefore delayed infrastructural projects in other areas. At the same time, lack of regional of global coordination in emergency response, border closures, and economic lockdowns have revealed the fragility of global supply chains. A shortening and diversification of existing supply chains might be beneficial for some countries (e.g., Colombia, India, Mexico) while disadvantaging other manufacturers (e.g., in Asia-Pacific) (IFC 2020a). For this reason, implementation of Agenda 2030 should mitigate potential reshuffling of global economy.

The COVID-19 outbreak might severely impact global aspirations in achieving universal access to water, energy, and food by 2030. It is estimated that the pandemic put an additional 135 million people in need of urgent humanitarian food assistance (FSIN 2020). Furthermore, the poorest and most populous regions in developing countries experienced deficits in water supply and sanitation services which is hindering prevention and recovery. Increasing unemployment and economic instability resulted in the adoption of policies that are introducing either tariff adjustments

or exemptions for low-income households. Although this is a desirable measure in the fight with pandemic, one should not forget that it entails revenue losses and, consequently, reduced capital expenditures by water industry (IFC 2020b). Similar trend has been observed in the power sector (IFC 2020c). On the other hand, slowdown in demand for energy caused in many countries an unprecedented improvement in air quality. This has attracted attention of researchers worldwide and might be utilized for a better and more efficient decision-making in drive for goal SDG 11 (Le et al. 2020).

On the other side of the spectrum are telecommunication companies which benefited from increased traffic of data. In fact, policy of social distancing and stay-at-home orders resulted in an increased reliance on online technologies both in professional and personal lives. Although the delays in manufacturing and shipment as well as reduced availability of workforce might negatively impact ongoing ICT infrastructural projects in short-term, it is expected that the investments will accelerate once the economy becomes more stable and predictable (IFC 2020d).

Conclusion

Implementation of SDG 10 is a multidimensional challenge that requires investments in infrastructure, technology, and human capital at the same time. Lack of coordination between these three components might be in fact counterproductive – extensive investments in infrastructure might not pay off if there is no skilled labor to maintain it at reasonable costs. Similarly, increased public expenditures on research and development do not guarantee revenues if there is no adequate infrastructure allowing for mainstreaming technological innovation, in particular in telecommunications sector. In addition, some countries tend to overly rely on foreign investments and aid, disadvantaging domestic industry and innovation. For this reason, progress toward SDG 10 requires active and continuous engagement of international actors such as WTO, WIPO, ITU, UNESCO, OECD, and others in designing an adequate framework for technology transfer and international investments. Multilateral approach is particularly important to counter the imposition of unfavorable conditions in bilateral trade agreements between developed and developing countries.

Reducing inequalities within the countries require, on the other hand, increased investments in rural and remote areas where disproportionately more women, indigenous peoples and ethnic minorities are located. Along with the public expenditures in transportation, water, energy, and ICT infrastructure, governments should adopt national policies that introduce incentives for private sector. At the same time, more research is needed to assess efficacy of individual mechanisms such as compulsory licenses, universal service funds, or public-private partnerships. Contrary to conventional wisdom, their implementation does not necessarily entail technological and infrastructural improvements but might cause adverse effects such as limited market competition or increased spending on government bureaucracy.

The COVID-19 outbreak may also give rise to new inequalities, in particular in access to healthcare infrastructure and technologies. In many countries digital solutions were harnessed to support public health systems; however, their impact depends on the coverage and accessibility of ICTs. Limited infrastructure in developing countries and LDCs might therefore lead to the increased inequalities in access to high-quality healthcare and emergency response. For instance, the overall efficiency of contact-tracing and rapid case identification solutions depends on the digital mobilization of communities. One should also not forget that the digital divide persists in developed countries where people with lower socioeconomic status or from disadvantaged groups are lacking either digital skills or awareness of benefits that Internet can bring (Budd et al. 2020). For this reason, digital component should be an essential element of policies and emergency plans adopted both at national and international levels. ITU and WHO have recently called for unleashing information technology in fight against COVID-19 and

committed themselves to identify best evidence-based solutions (WHO and ITU 2020).

Cross-References

- ▶ Digital Divide: From a Peripheral to a Core Issue for All SDGs
- ▶ Government Policies in International Perspective: Global Inequalities Under the Covid-19 Pandemic and the One-Health Lens

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