## **Digital Divide DA**

#### **Digital divides are growing, especially because of the pandemic.**

Li, C. (2021, October 11). *Worsening global digital divide as the US and China continue zero-sum competitions*. Brookings. Retrieved December 14, 2021, from https://www.brookings.edu/blog/order-from-chaos/2021/10/11/worsening-global-digital-divide-as-the-us-and-china-continue-zero-sum-competitions/ Cheng Li is the director of the John L. Thornton China Center and a senior fellow in the Foreign Policy program at Brookings. He is also a director of the National Committee on U.S.-China Relations. Li focuses on the transformation of political leaders, generational change, the Chinese middle class, and technological development in China. Li is also the author or the editor of numerous books. //ech

The COVID-19 crisis has interrupted daily life and business routines across the world, caused a massive loss of millions of lives, and exacerbated economic disparities within and between countries. **COVID-19 has also revealed fundamental challenges in the international order.** As Kissinger has asserted, “the world will never be the same after the coronavirus.” One can reasonably expect that cynicism regarding regional and global integration, as well as radical populism, racism, ultranationalism and xenophobia, will likely continue to rise around the world. At this critical juncture, it has become even more essential to examine the urgent challenges that the world confronts and to engage in global cooperation instead of devolving into constant contention and confrontation. **One of the most urgent tasks for the international community is to overcome growing digital divides. Digital divides in least developed countries (LDCs) have been particularly salient, as digitally disconnected populations have been left further behind during the pandemic. The U.S. and China, two superpowers in the digital era, should work in tandem with the international community to jointly combat digital divides and COVID-19. Despite the global growth of digital technologies, a 2021 United Nations report noted that nearly half of the world’s population, 3.7 billion people, lack internet access. Deficiency of digital connectivity is especially prevalent within LDCs, where more than 80% of the population are still offline.** In comparison, the unconnected population in developed countries and developing countries stands at 13% and 53%, respectively. LDCs account for about 14% of the world’s population, and they comprise more than half of the world’s extremely poor. **Digital divides both reflect and reinforce socioeconomic disparities. The pandemic has aggravated existing inequalities, often resulting in a widening gap of digital skills. As a result of COVID-19-induced economic difficulties, the population of extreme poor in LDCs expanded by 32 million, and the number of people in poverty in LDCs grew to 36% in 2020, 3% more than in prior years. More specifically, LDCs lag further behind in the following three areas.**

#### **Starklink and other private entity developments could bridge existing digital divides, but regulations are inhibiting them.**

Estes, A. C. (2020, September 26). *The pandemic is speeding up the space internet race*. Vox Recode. Retrieved December 14, 2021, from<https://www.vox.com/recode/2020/9/26/21457530/elon-musk-spacex-starlink-satellite-broadband-amazon-project-kuiper-viasat>. Adam Clark Estes is the deputy editor of Recode. He was previously a senior editor at Gizmodo, an associate editor at Motherboard, and a staff writer at The Atlantic Wire. //ech

**In vast swaths of the United States and the world, there are millions of people who don’t have reliable internet access.** These unconnected people aren’t just in far-flung places like rural America or New Zealand or sub-Saharan Africa, either. There are plenty of people living in dense city centers with limited access to affordable broadband. **The** [Covid-19](https://www.vox.com/coronavirus-covid19) **pandemic has brought new urgency to the challenge of getting everyone connected**, and while companies like Google and Facebook have floated far-out ideas for solving the problem, the internet technology that’s most promising is also one that’s already proven: satellite broadband. In early March, just days before cities across the US shut down due to the pandemic, **Elon Musk** [shared the latest details](https://arstechnica.com/information-technology/2020/03/musk-says-starlink-isnt-for-big-cities-wont-be-huge-threat-to-telcos/) **about his plan to build a satellite broadband service called Starlink. Speaking at a satellite conference in Washington, DC, Musk described how a constellation of Starlink satellites will “blink” when they enter low-Earth orbit**. As described, they almost sound like streaks of glitter in the night sky, or magic bands of flying gadgets that can beam internet down to anyone on the planet. Combined with improvements to existing technology like DSL, cable, and fiber — not to mention 4G and 5G cellular networks — **futuristic satellite broadband stands to bridge the digital divide in the US and elsewhere.** And because the pandemic has prompted explosive demand for better, more widely available internet connectivity, fast progress seems more inevitable than ever. Musk’s new satellites went online in early September, giving beta testers download speeds [that rival those of terrestrial broadband](https://www.theverge.com/2020/9/3/21419841/spacex-starlink-internet-satellite-constellation-download-speeds-space-lasers). **SpaceX has now put 700 Starlink satellites into orbit in the past 16 months and** [has plans to deliver](https://spacenews.com/spacex-submits-paperwork-for-30000-more-starlink-satellites/) **as many as 30,000 more in the next few years. More satellites mean more bandwidth and faster speeds, and eventually, SpaceX says, its low-Earth orbit satellite constellations could deliver high-speed internet to the entire US.** [Amazon](https://www.theverge.com/2019/4/4/18295310/amazon-project-kuiper-satellite-internet-low-earth-orbit-facebook-spacex-starlink), [Facebook](https://www.wired.com/story/facebook-confirms-its-working-on-new-internet-satellite/), and several startups have made similar promises in recent years. The concept of satellite-based internet service is actually decades old. However, **the innovative low-Earth orbit satellite technology being developed by SpaceX and others could be essential, if not transformative, for everything from telemedicine to remote learning in places that aren’t already connected.**[Satellite broadband](https://www.vox.com/recode/2020/9/10/21426810/internet-access-covid-19-chattanooga-municipal-broadband-fcc) could also be very profitable for whichever company figures it out first. One could imagine Amazon using satellite broadband to boost its Amazon Web Services (AWS) business, or Facebook using it to ensure that more people get on its platform. And if Musk gets his way, his Starlink constellations will generate billions of dollars in profits to fund his mission to colonize Mars. This all sounds futuristic, but satellite broadband is already a very real thing. In fact, if you’ve ever connected to wifi on a plane or cruise ship, you’ve probably used it. The basic idea is that ground stations connected to the internet, known as gateways, can send data up to a satellite which then relays that data to antennas somewhere else on the ground — or on a ship or an airplane. **The problem with this technological feat is that it’s all very expensive**. **It can cost** hundreds of millions of dollars to launch satellites into space, and that’s not even taking into account what it takes **to get over regulatory hurdles**. Plenty of companies have tried and failed to crack the business model in the past 20 years. But rather suddenly, the space internet game has changed. “**The Covid-19 crisis has significantly accelerated attention to and investment in satellite technology**,” Babak Beheshti, dean of the College of Engineering and Computing Sciences at the New York Institute of Technology, told Recode. Beheshti added that the number of launches had gone up tenfold from last year to this year. “Why? Because schools, local governments, and others suddenly needed to have broadband internet access in areas where there was really no infrastructure in place.”

#### **Internet and technological regimes manipulate lesser developed countries so they become dependent.**

**Wade**, R. H. (20**02**, December). *Bridging the Digital Divide: New Route to Development or New Form of Dependency?* (Global Governance Vol. 8; Research Report No. 04). Brill.<https://www.jstor.org/stable/27800358>. Robert Hunter Wade is a political economy and development scholar. He is currently Professor of Global Political Economy at the Department of International Development, London School of Economics. //ech

**In this section, I look at the impact of the global ICT industry and the international ICT regimes on LDCs. ICTs seem to have a large quotient of public goodness about them and therefore high spillover benefits.** "The Internet was created in the United States, but its cost-slashing consequences for information and communications enhance people's opportunities everywhere," in the words of the Human Development Re port.16 **This might be taken to imply that LDCs are not much disadvantaged by the structure of the global ICT regimes. Not so. In several ways, developing country users are being tied more tightly into hardware and software escalation with ramifications difficult to anticipate (like the more abstruse parts of derivatives markets). Escape is increasingly limited, and the costs grow as the dependence of the users increases. This is a new form of international digital dependence for which we need a new version of the 1970s dependency theory.** The U.S./Microsoft Privilege in Software Developing countries are placed at a growing disadvantage by the soft ware-hardware arms race in the global market for savvy computer users. The software is constantly being rewritten to take advantage of unused slack in memory and speed, and then the hardware manufacturers esca late the headroom so that the new software can run as fast. The result ing complexity is attractive to the minority of younger, wealthier, and better-educated people but is a deterrence for others, who perceive that software is actually getting worse for many word processing and spreadsheet uses because the new features cause glitches and slow downs. **The effect of this technological arms race is to keep widening the digital divide between the prosperous democracies and the rest of the world. Every time Microsoft comes out with a new version of its software that can only run on the latest generation of chip, LDCs either face more costly and hassle-filled communication with customers and suppliers in the OECD countries, or spend scarce foreign exchange to re place their old machines and software.** **This is an inbuilt gravitational force against their ascent across the digital and income divide.** It is where Microsoft is most abusing its monopoly power, checked only a little by the unorganized anger of the "orphans" left with incompatible document formats.17 Almost certainly the software-hardware race and the constant need for further investment represents a huge misallocation of resources, not only in LDCs but even in the OECD countries. The rush to upgrade software, and hence hardware, comes first from large companies, ostensibly because they "need" the new capabilities. Large multinationals promote the idea of twenty-four-hour global working, for which they need to have messages and designs winging their way to Tokyo as Los Angeles closes down, and vice versa. But the rush to upgrade software is probably driven as much by organizational pressures from ICT staff and from top managers. Since salaries are linked to budgets, ICT staff press for whatever keeps ICT budgets high and fully spent by year's end. The top managers worry that the "brand" of the company will be downgraded if the company does not boast the latest ICT. Smaller organizations have to follow this trend, because otherwise they have difficulties exchanging attachments and various other text- and graphics bearing bits of software with the large companies with which they do business

#### **Lessening the Digital divide helps solve poverty, especially in Africa, by creating jobs.**

**The World Bank**. (20**21**, September 24). *Narrowing the Digital Divide Can Foster Inclusion and Increase Jobs*. IBRD - IDA. Retrieved December 16, 2021, from https://www.worldbank.org/en/news/feature/2021/09/24/narrowing-the-digital-divide-can-foster-inclusion-and-increase-jobs//ech

**A growing body of evidence demonstrates that digital technologies can enable economic transformation in Africa and help create more jobs for its people**. **Digital technologies do so by helping all people, and especially lower-income and lower-skilled entrepreneurs and employees, work better and learn better, catalyzing adoption and productivity of complementary technologies.** World Bank country-level studies, on Nigeria, Senegal, and Tanzania, have analyzed the impact on jobs of mobile internet availability (3G or 4G coverage), including the poor and most vulnerable. **Studies show that both internet availability and use of more sophisticated digital technologies lead to more and better jobs for lower-income, lower-skilled people, and hence reduce poverty. Labor force participation and wage employment increased significantly in areas with internet availability after three years, relative to those with no coverage.** For example, digital technologies such as the use of local language videos on tablet computers and use of a decision support tool app on a smartphone can provide personalized advice resulting in better jobs, and an increase in crop yields of lower-income farmers. Although mobile internet availability has increased, Africa’s internet coverage still lags behind other regions—with digital divides in availability still an issue in remote and poorer areas in all countries. Yet uptake is a bigger problem today than coverage. Africa’s uptake gap has widened, both relative to other regions and relative to availability: while 70 percent of Africa’s regional population have availability of mobile internet, less than 25 percent are using it—resulting in an average uptake gap of almost 50 percent. This uptake gap is highest in rural areas and informal enterprises; it is also high for older and poorer women and rural households. There are growing digital divides in use between richer, urban, literate, and better educated households with electricity and poorer households without electricity. Three World Bank country-level studies, on Nigeria, Senegal, and Tanzania, have analyzed the impact on jobs of mobile internet availability (3G or 4G coverage). **Better jobs and earnings for some people are also associated with large effects on total household consumption and poverty reduction**. **One key takeaway is that the more digital access Africans have, the more likely they are to reduce poverty over time.**

## **Licensing cp**

#### **CP text: States out to introduce a licensing system that decided using cost benefit analysis which would be decided on a case to case basis**

#### **Leepuengtham 17**, Tosaporn. “International Space Law and Its Implications for Outer Space Activities.” *Elgar Online: The Online Content Platform for Edward Elgar Publishing*, Edward Elgar Publishing, 27 Jan. 2017,<https://www.elgaronline.com/view/9781785369612/06_chapter1.xhtml>

However, the situation might be more complex if an intellectual property work created involved using outer space resources as a component of its output. Take, as a hypothetical example: Scientist A, a national of the United States, discovers a process to produce nuclear power using Helium-3 as its major constituent. Helium-3 is known to be a valuable resource for generating nuclear power which is rare on earth, but abundant on the Moon.[80](https://www.elgaronline.com/view/9781785369612/06_chapter1.xhtml#Footnote_0080) The production of nuclear power using this process would be cost-effective if produced in outer space. But would the process of producing this nuclear power violate the non-appropriation principle if the Moon’s natural resources are taken as part of this process? A strict interpretation would see use of Helium-3 as a type of appropriation of the Moon’s resources, and so a breach of the non-appropriation obligation. But, if neither the production of such nuclear power nor intellectual property rights protecting the process are allowed, the world community would lose the benefit of this additional source of power. However, a compromise could be put forward which would allow exploitation of this intellectual property work based upon licensing. Any such licensing scheme would need to ensure third parties fair and equitable access to this process in order to uphold the principle of freedom of exploration and use, but with appropriate safeguards in place, exploitation via licensing would guarantee Scientist A an opportunity to enjoy some benefit from his effort and investment. The situation is essentially the same when considering application of the non-appropriation principle to remote sensing and satellite telecommunication. This is because situating a satellite in orbit within a specific spatial area could be considered as an appropriation of outer space, particularly when taking into account the fact that geostationary orbits are considered a ‘limited natural resource’, and access to such resources must comply with the International Telecommunication Union (ITU) Constitution.[81](https://www.elgaronline.com/view/9781785369612/06_chapter1.xhtml#Footnote_0081)