

A BRIEF VIEW TO DIGITAL DIVIDE IN DEVELOPING AND DEVELOPED COUNTRIES

Dr. Sonal Gupta¹, Dr. Sarla²

¹Assistant Professor, Ram Lal Anand College, University of Delhi. Email ID: sonal.commerce@rla.du.ac.in

²Assistant Professor, Department of Commerce, Indira Gandhi University, Meerpur, Rewari, Haryana.
Email ID: sarla.comm@igu.ac.in

Abstract—The economy at the global level is in the phase of the Fourth Industrial Revolution, driven by the usage of information, data and technology digitally. This paper focuses on the initiative that permits the U.S., along with other private and public partners, for reducing the digital divide between people and the nation in a manner that assists inclusive advancement in low and middle-economic nations. It also shows the advancement in the strategic and economic interests of the U.S. and its related countries. The goals of sustainable development help in the reduction of poverty and also boost the livelihood of people and the nation. The data uses in this report explains the opportunity of the digital divide. Those countries that are not able to progress with the 5G wideband network will not be in the position to get the benefit of the technological and digital revolution.

Keywords: Digitalization, Digital divide, Industrial revolution, Innovation, Technological development.

Introduction

Operating and living in a digital society is not only the future of digitalization. The advancement in technology provides regulation and protection towards the policies and also increases the chances of positive channels purposes not for despicable purposes. Now, there is an urgent requirement for the construction of physical software and infrastructure, also set up policies and rules for the underserved nations so, that they can access digital literacy. Digital technology has a lot of potential and capacity to fulfil the future dreams of the present generation. Data solutions and travel distances serve meta-national, national and local populations in milliseconds. They also consider providing chances for teamwork and communication across the disseminated public that was not even imaginable in the past. The daily lives of individuals are greatly influenced by e-commerce, e-learning, e-government, e-portals, social media, e-gaming, e-education, e-social communication and e-finance. Traditional communication means and business learning are disrupted by the use of digital technology. It increases the speed and access the communication and information deeply that lowers technology costs, speeds up innovation, boosts efficiency, drives productivity, empowers financial inclusion, accelerates economic growth, builds resilient, advanced and innovative solutions, govt-citizen interaction and facilitates transparency in government transactions. It also helps in providing real-time information during normal and in situations of crisis. The digital techniques are providing services and products from the heart for empowerment purposes. We are getting affordable material for learning and education, current information for fisherman and farmers regarding market and weather, teachers' training, financial and banking services to the people living in remote areas and medical information and diagnosis for the underserved population and nation.

Objectives

- To study the economic power and the coverage and access through digitalization in low- and middle-income countries
- To outline the initiatives for bridging the digital divide by different Countries and Institutions

Research Methodology

The Fundamental and Descriptive research design has been used in this research paper. The data majorly used for this research study is Secondary. The websites and the sources consider for collecting the quantitative data in this research are UNCTAD, ITU, ICT Indicators Database, ITU World Telecommunication, World Development Indicators, World Bank and USAID. Some other secondary data sources are Journals, Web, Books and Different news articles.

Digital Technology- Economic power

The data flow across the border is expanding rapidly at the global level. More economic value is generated in this arena in the year 2019. According to the reports, the economy will reach \$11 by the year 2025. The digital transformation and the platform of digital media like e-services, and e-commerce generate \$1 trillion in revenue in the year 2019 from developing countries.

The export of (ICT) communication and information technology in the year 2017 was \$1.9 trillion. These services increased to \$2.9 trillion in the year 2018. Dynamism is found in the digital trade of Southeast Asia and South Asia. Southeast Asia reached 25% of total ICT globally in goods and 28% in services in the year 2019. There are Top ten ICT exporters of goods of which seven are from Southeast or East Asia. According to the results and UNCTAD reports, 15.5% of the total economy was digital in the year 2016 and it reached 25% by 2026.

Table 1: ICT Region-wise export in services and goods in the year 2019

Region	ICT Trade in goods (%)	ICT Trade in services (%)
World	12.5	10
Europe	5	11
India	2	2
North America	7	5
Latin America	7	5
Middle East & North Africa	4	8
South Asia	2	28
Southeast Asia	25	6
Sub- Saharan Africa	0.4	5

Source: UNCTAD

Access and Coverage

Connectivity is the factor that works with digitalization. Internet access is an issue of its coverage. In the year 2020, 3G shielded 93.1% of the globe. Its coverage, outside North America and Europe, differs from 96.1% in the Pacific and Asia and low in the Africa region (77.4%). In developing countries, 3.6 billion (approx.) people have no internet accessibility. The range of access was high in Central Asia & at 76.4% approximately and low in Africa at 14.3% approximately. According to the data, in the year 2018-19, 226 million users of the internet were added globally and day-wise the added users were 620,000. The highest growth was observed in the Pacific and Asia. Internet access and coverage differ from country to country and also depend on the developing and developed countries.

Table 2: Population share covered by internet access and wireless network in the year 2020

Area	Internet access (%)	3G coverage (%)	Daily new users added (Year 2018-19)
World	57.4	93.1	620,000
Africa	14.3	77.4	85000
America	69.8	95.5	72000
Europe	85	98.3	49000
Pacific and Asia	53.4	96.1	370,000
Central Asia	76.4	88.7	22000
States of Arab	58.9	90.8	55000

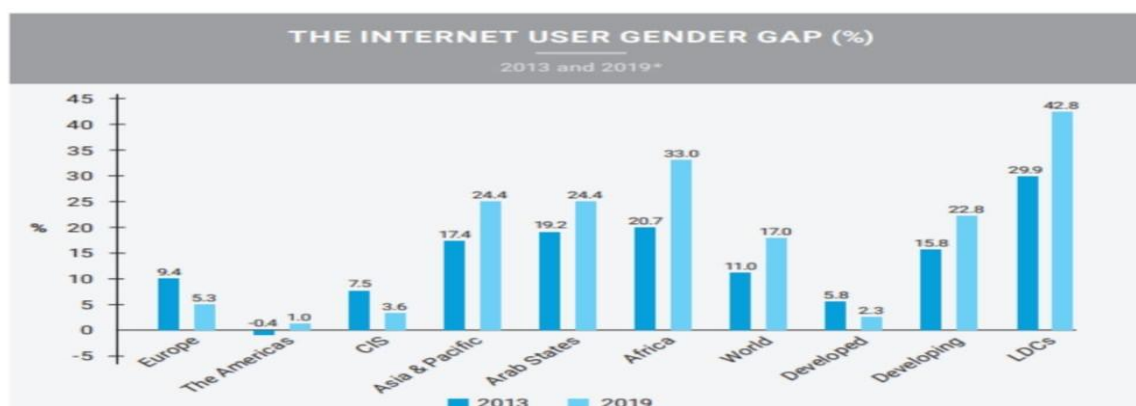
Source: ICT Indicators Database

Challenges of Digitalization

Digitalization reduces the level of poverty and promotes inclusive growth in the economy, but the result is not always positive. The real threat is re-industrialization. The outdated business has the issue of creative destruction like jobs taken away, less training and low mobility. More education is required for digital transformation. It also increases the disparity of income between countries and individuals. The pandemic also widens the digital divide, the individuals having internet connection and skills in computers continue their work and learn more and left others behind. Digital devices spread fake news easily and also increase the risk of private security. They also facilitate data misuse, cyber terrorism, ransomware, unchecked surveillance and intimidation that critically disrupts the functioning of the infrastructure. Women are taking fewer advantages of connectivity which also widens the gender divide in the use of the Internet. According to global reports, 327 million fewer women in comparison with men use smartphones and have an internet connection. The gap was more in the developing countries with 22.8% fewer women in comparison with men using internet services.

Measures to bridge the digital gap

The concept of digital technology is now equal to strategic battles and big power ideology of the era of the Cold war, but previously it was just the foundation of economic competitiveness globally. The government of the United States take an initiative and start the “Ending the digital divide initiative” that serves and catalyses as a multi-donor. This platform conveys coherence regarding the efforts for digital development enhancement in developing nations. This initiative by the U.S government covers reforms in the policies, cybersecurity, infrastructure, capacity building and interoperability. These types of measures would help in providing the chance for addressing the interconnected problems and attract the essential investment scale. These types of initiatives attract the vast potential for enhancing digitalization for the purpose of accelerating digital outcomes and preparing policy and technical frameworks for digital developments in the coming years.

Figure 1: Tools and Strategies of the United States

Source: ITU Estimates

A Brief view to Digital divide in Developing and Developed countries

The government of the U.S, majorly USAID, initiate three essential assets for digital developments such as models, tools and strategies. These initiatives serve as the foundation and discussion with the latent associates- private or public sector, government, civil society, International and other organizations. The Digital strategy reports released by USAID in the year 2020, target openness strengthening, the country's secure digital ecosystem and inclusiveness. The strategy components involve the enablement of sound regulation and policies of the government, the capability of providing digital services by the workforce, robust digital infrastructure and the empowerment of end-users. This strategy is structured in a manner that occupies private enterprises as its associates and encourages the adoption of proper practices and international standards. It covers data privacy protection, cybersecurity and responsibility. It is structured for addressing the gaps in governance standards and policies, resilience and security of associate nation digital ecosystem and the failures of the market. USAID inaugurate (DCCP) Digital Connectivity and Cybersecurity Partnership program planned to occupy the private division in the development of communication infrastructure, strengthening the capacity of cybersecurity and encouraging regulatory reforms for digital market competitiveness. This program encourages a secure, interoperable and open communication network. The program sets some explicit priorities in the partnership with civil society, the private sector and the government to advance:

- Policies based on rules
- Digital skills
- The role of civil society in accountability and advocacy
- Infrastructure investment
- Best norms and practices
- International standards
- Trafficking in illicit products and public
- Safety and security from misinformation, cybercrime and privacy abuse

Partnership

The set-up of common rules and bridging of the digital divide is more than enough for any of the donors. Innovation and the build-up of needed software and infrastructure for the fuel of digital development are not in the hands of the government and need a partnership with private sector enterprises. Civil society plays a major role in the facilitation and development of policy, accountability, advocacy and partnerships.

Table 3: Partnership

Country	Policy or Initiative	Purpose
Australia	Technology for Development	Internet connectivity and access improvement
Norway	Digitalization for Development	Digital development co-operation
Belgium	Digital for Development (R4D)	Digitalization for achieving better results
Germany	Digital strategy of the Federal Ministry of Economic Cooperation and Development	Human rights, good governance, equal opportunities and local innovations
Switzerland	Digital Foreign Policy Strategy	Development cooperation work

Source: USAID

These are some of the countries that introduced some policies and take initiatives for different purposes in an active manner in this digital era and assist as prepared partners in this endeavour. When the common and basic efforts link with their work, it would help in producing an efficient and coherent approach.

Table 4

Institution	Initiative
World Bank	Digital Development
African Union's	Digital Economy Initiative for Africa (Toolkits)
Inter- American Development Bank	Digital Economic Toolkit
Asian Development Bank	Towards E-Development in Asia and Pacific
European Bank for Reconstruction and Development	ICT- Enables Development and Growth sector strategy
ASEAN	Asian Community Vision (2025) ASEAN Digital Framework (2019)
Civil society partners	(DIAL) Digital Impact Alliance MOSIP, ID 2020, Mojaloop

Source: USAID

Urgency

Two things affect the justification and even the urgency of such endeavours. One is the competition for market share in the global economic and strategic arena for 5G and other digital services and technology. Second, because to the weakening economies and mounting debt loads in developing countries, little donor help has been provided for the enormous public and private investment needed for digital infrastructure and the associated policy and political reforms.

Conclusion

Digital connectivity and technologies can assist the developing results and lift a lot of people and nations from poverty, they also amplify inequality, and destabilize democracy and political divisions. The digital transformation and the platform of digital media like e-services, and e-commerce generate \$1 trillion in revenue in the year 2019 from developing countries. A digital divide exists between both rural and urban areas. There are some countries that introduced some policies and taken initiatives for different purposes in an active manner in this digital era. The Digital strategy reports released by USAID in the year 2020, target openness strengthening, the country's secure digital ecosystem and inclusiveness.

References

- [1] Ahmed, A. (2007). Open access towards bridging the digital divide—policies and strategies for developing countries. *Information Technology for Development*, 13(4), 337-361.
- [2] Akca, H., Sayili, M., & Esengun, K. (2007). Challenge of rural people to reduce digital divide in the globalized world: Theory and practice. *Government Information Quarterly*, 24(2), 404-413.
- [3] Avgerou, C., & Madon, S. (2005). Information society and the digital divide problem in developing countries. *Perspectives and Policies on ICT in Society: An IFIP Tc9 (Computers and Society) Handbook*, 205-217.
- [4] Billon, M., Lera-Lopez, F., & Marco, R. (2010). Differences in digitalization levels: a multivariate analysis studying the global digital divide. *Review of World Economics*, 146, 39-73.
- [5] Corrocher, N., & Ordanini, A. (2002). Measuring the digital divide: a framework for the analysis of cross-country differences. *Journal of Information technology*, 17(1), 9-19.
- [6] Dewan, S., & Riggins, F. J. (2005). The digital divide: Current and future research directions. *Journal of the Association for information systems*, 6(12), 298-337.
- [7] Giebel, M. (2013). Digital divide, knowledge and innovations. *Journal of Information, Information Technology, and Organizations*, 8, 1-24.
- [8] Gourova, E., Hermann, C., Leijten, J., & Clements, B. (2001). The Digital Divide—A research perspective. *Report to the G8 Digital Opportunities Task Force, IPTS*.
- [9] James, J. (2005). The global digital divide in the Internet: developed countries constructs and Third World realities. *Journal of information science*, 31(2), 114-123.
- [10] James, J. (2007). From origins to implications: Key aspects in the debate over the digital divide. *Journal of Information Technology*, 22(3), 284-295.

- [11] Kraemer, K. L., Ganley, D., & Dewan, S. (2005). Across the digital divide: A cross-country multi-technology analysis of the determinants of IT penetration. *Journal of the Association for Information Systems*, 6(12), 10.
- [12] Mathrani, A., Sarvesh, T., & Umer, R. (2022). Digital divide framework: online learning in developing countries during the COVID-19 lockdown. *Globalisation, Societies and Education*, 20(5), 625-640.
- [13] Norris, P. (2020). The digital divide. In *The information society reader* (pp. 273-286). Routledge.
- [14] Panda, M. I., Chhatar, D. C., & Mharana, B. (2013). A brief view to digital divide in Indian scenario. *International Journal of Scientific and Research Publications*, 3(12), 1-7.
- [15] Riggins, F. J., & Dewan, S. (2005). The digital divide: Current and future research directions. *Journal of the Association for information systems*, 6(12), 4.
- [16] Sein, M. K., & Furuholt, B. (2012). Intermediaries: Bridges across the digital divide. *Information Technology for Development*, 18(4), 332-344.
- [17] Thompson, M. (2004). Discourse, 'development' & the 'digital divide': ICT & the World Bank. *Review of African political economy*, 31(99), 103-123.
- [18] Van Dijk, J. A. (2006). Digital divide research, achievements and shortcomings. *Poetics*, 34(4-5), 221-235.
