

## Chapter 7

# A Detailed Analysis of the Digital Divide and Its Impact on the Development of Countries

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### ABSTRACT

*Information and communication technologies (ICT) lead to significant social and economic changes in the lives of individuals. In parallel with this change, new criteria are needed when evaluating nations' development levels. In this study, the Digital Economy and Society Index (DESI), the Women in Digital Index (WID), and Rural Digital Index (RDI) proposed by the European Commission were considered as the proxies of ICT. The effects of these indexes on human development and gender inequality were studied. Findings showed that there is a digital divide among EU countries. The effect of DESI on HDI is higher in developed countries than in developing countries. In addition, it was observed that the increase in the WID value affected countries with high gender inequality more, and the RDI has an impact on the development of countries.*

### INTRODUCTION

Today, Information and Communication Technologies (ICT) have become indispensable to life in many areas, from education and health to work and entertainment. ICT provides countless opportunities for personal fulfillment, professional development, and value creation (ITU, 2021). The digital age we are in causes a transformation in many areas, particularly economic, social and cultural. ICT makes an essential contribution to improving the flow of information; with access to ICT, individuals access more information in a much shorter time, and as a result, a competitive advantage is obtained by making more optimal decisions in many areas. The problems experienced in accessing ICT, on the other hand, lead to a slowdown in sustainable development (Tjoa & Tjoa, 2016).

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It has become a necessity to use ICT to work, learn and stay in touch, especially during the intense effects of the Covid-19 pandemic. As a matter of fact, 54% of the world's population was using the internet in 2019, while this rate increased to 63% with the pandemic (ITU, 2021). If ICT had been insufficient in this recent pandemic, more serious consequences could have been endured. For example, the health sector may have needed more time to provide effective services, information flow may not have been provided, education, production, and distribution processes may have been disrupted, and practical decisions may not have been made on many issues.

The impact of ICT on countries is not the same, and these effects occur at different rates. For this reason, countries are also affected by the benefits of ICT at varying levels. While internet usage in developed countries is 90% in 2021, it is 57% in developing countries and 2% in less developed countries. (ITU, 2021). The growth rate in internet usage is slower in developed countries, so the gap between developed and less developed countries is also narrowing; While the difference was 66% in 2017, it became 63% in 2021.

In terms of ICT access and Internet use, the difference between individuals, households, businesses, and geographic regions is defined as the digital divide (OECD, 2001). The digital divide is unequal access to and use of ICT (Hamburg & Lütgen, 2019). Not only in terms of access to digital but also in terms of individuals' ability to benefit from technological applications, the digital divide emerges depending on age, gender, and geographical area. Different social and economic conditions of countries inevitably prepare the ground for the formation of the digital divide. The disadvantaged group cannot benefit from digital technologies regarding economic inclusion, communication, and access to improved public or private services (Mariscal et al., 2019). If the gap between those with access to ICTs and those disadvantaged increases in this regard, the welfare gap will widen, and inequality will increase worldwide (Mariscal et al., 2019).

When the statistics of 2021 were examined, it was seen that internet usage was 90% in developed countries, 57% in developing countries, and 2% in less developed countries (ITU, 2021). As a result of both the ICT policy reforms followed and the falling prices in accessing mobile services, internet usage is increasing year by year, especially in developing and underdeveloped countries (Byrne & Corrado, 2017). In terms of internet usage, the growth rate is slower in developed countries, so the gap between developed and less developed countries is also closing; while the difference was 66% in 2017, it was 63% in 2021 (ITU, 2021).

Although there has been increased access to digital worldwide recently, there are still points to overcome regarding women's participation in this process (Mariscal et al., 2019). Since digital technology affects all areas of life, if the existing gender digital divide is not dealt with, this case can cause gender inequality problems in labor markets and other areas. This will result in women being unable to take advantage of better job opportunities, find fair-paying jobs, and ultimately a wider gender pay gap (Mariscal et al., 2019). The most critical social inequality in technology is the lack of women in areas that impact sustainable development, such as university research and new technologies (Kerras et al., 2020). BIT plays an essential role in ensuring gender equality and empowering women, as they allow women to have a say in social and economic development by allowing access to information. Women and Men are common actors and beneficiaries of development, so women's use of ICT, which constitutes half of the world's population, should be considered in terms of justice, human rights, and economic contribution (UNDP, 2015). Gender equality is an essential human right necessary for a prosperous, peaceful, and sustainable world; gender equality is among the sustainable development goals of the United Nations (UN, 2021). Gender-based inequality of interests and skills will be a problem for society as many areas

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