Chapter 2
Digital Economy and Digital Transformation

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ABSTRACT

The chapter's main objective is to analyze the digital economy and its characteristics. In a time of overlapping disruptions, the chapter describes the fast growth of the digital environment, the emergence of digital platforms, the diffusion of innovative digital technologies, and the related development of Industry 4.0, acknowledging the need to embrace ideas and concepts from multiple fields and integrate different research areas. The other related theme is digital transformation, which implies a structural change of the economies and organizations requiring a technological and cultural shift. In addition, the chapter's analysis highlights that digital transformation and its profound changes can generate imbalances if not addressed with awareness and the right mastery of digital skills. Reaping the digital revolution's benefits, and avoiding its pitfalls, will require organizations and economies to manage an unprecedented structural transformation for which the world seems still unprepared.

INTRODUCTION

The digital economy and the related digital transformation process transform everything: the nature of markets and products, how to produce, how to deliver goods and services and pay for them, the human capital requirement, and the scale of capital to operate globally. The digital economy is also adopting new technologies and boosting productivity, creating new business models, and new market access channels influencing consumer behavior.

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The process of digitalization is developing rapidly, also influencing the way to create and exchange value. Companies investing in digital technologies and digital solutions aim to boost productivity and competitiveness. In turn, digital technologies are redefining the competition in every industry and developing Industry 4.0. In addition, coupled with macroeconomic uncertainties, they are causing significant changes in the structure of industries, markets, and the future of work. In addition, the COVID-19 pandemic contributed to fuel digitalization efforts, the realignment of supply chains, and rethinking of how connectivity and other disruptive technologies can benefit organizations and the entire economy. In this time of overlapping disruptions, analyzing the digital economy and the related digital transformation becomes very important and can enrich the literature on this topic. In addition, the theme of digital transformation, accelerated by the evolution of digital technologies and the blooming of startups, is becoming transversal to different business disciplines. Understanding digital transformation needs to acknowledge the role of digital technologies in transforming organizations, consumer behaviors, and social relationships. It also needs to embrace ideas and concepts from multiple fields and integrate different research areas. All this will be useful to reap the benefits of the digital revolution and avoid its pitfalls. The contribution aims to analyze the digital economy and its characteristics, including the emergence of digital platforms, and examine the digital transformation process as a structural change that affects organizations, economies, and societies.

THE DIGITAL ECONOMY

The digital economy includes all those economic processes, transactions, interactions, and activities based on digital technologies (Schilirò, 2021). A digital economy is where consumers, companies, and governments live in a digital society that interacts and creates value benefitting all stakeholders. The digital economy has firmly established itself since 2010 with the growth and massive progress in the sophistication of semiconductors, the internet, and its service providers.

As UNCTAD (2021, p. 25) highlights in its report, the digital economy is data driven and is rapidly evolving amid huge divides in terms of digital readiness. As a result, data play an increasingly important role as an economic and strategic resource, a trend reinforced by the COVID-19 pandemic as many activities moved online. Two countries stand out as the frontrunners in harnessing the value of data: the United States and China. Together these two countries cover 90% of the market capitalization of the world's largest digital platforms and 94% of all funding of artificial intelligence (AI) start-ups. Moreover, the largest digital platforms increasingly