Chapter 11
Management Accounting in the Digital Economy: Evolution and Perspectives

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ABSTRACT

This chapter presents the evolution and perspectives of management accounting in the digital economy. The main objectives of this chapter are to present the different conceptual approaches of the digital economy and Industry 4.0, the B20 pillars and their impact on the management accounting, the role of management accounting and of the management accountant in the new economy, forecasts and solutions regarding the adaptation of the management accounting to the digital economy, and cost management of the implementation of innovative information technology. All aspects presented are based on national and international professional studies and attempt to present the current state of the themes addressed. The chapter ends with the author's conclusions regarding management accounting in the digital economy. Through the authors' contribution, the chapter offers perspectives and solutions to increase knowledge to implement information technologies and adapt accounting management to these innovative waves.

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INTRODUCTION

The implementation by companies of innovative digital technologies contributes to the expansion of social and organizational effects, affecting to a certain extent the operational and managerial economic processes within them. The impact of digitization also has consequences on the behavior and actions of company staff. This impact is also felt on the information and staff dealing with a company's accounting. Management accounting follows an entire process of redefining the shape taking into account the technical, behavioral and organizational dimensions (Bhimani, 2003). The expansion of the IT industry has led to increased organizational and environmental changes. This has created an intense relationship between management accounting, strategic management, performance management and information technology. Management strategies and management accounting innovations are key success stories and decisions are based on economic and social gains and losses (Oncioiu et al., 2017).

The main objectives of this chapter are: (1) *presenting the conceptual approaches of the digital economy and Industry 4.0*, (2) *presenting the impact produced by Industry 4.0 and the digital economy on management accounting, including proposals for possible solutions*; (3) *the role of management accounting and the role of the management accountant in the digital economy;* (4) *cost management and digital economy, and* (5) *predictions about major trends in management accounting.*

BACKGROUND

Digital Economy: Conceptual Approaches

IT technology has now become the cheapest, easiest, fastest, broadest and most impacting on a company's business, taking into account the very agitated business environment that characterizes contemporary society. Due to its major presence in all branches of the economy, it has been called a digital economy or a global knowledge economy that is based on short cycles of innovation and digital information stored on networks (Tapscott, 1996).

In other words, the digital economy is an internet-based network economy that consists in increasing cycles of innovation of technologies, internet applications, or business models that connect users, thus generating a critical mass of participants in a network common collective interests. This implies gaining some advantages by some sellers to the detriment of the losses suffered by other sellers or business participants, while the direct and indirect effects of the network lead to a continuous increase in efficacy (Arthur, 1996). The direct influences of the (social or business) network generated by interoperability and standardization depend to a large extent on the value of using applications or computer products. Thus, some specialists studied the effects of blocking effects due to network effects and switching costs (Shapiro, & Varian, 1999), while other specialists studied the relationship between the participants and the value of the network highlighted by Metcalfe's Law (Zerdick et al., 2001) with positive feedbacks. The basis of new applications is technology, business models and transformation of social behavior and the rules of the digital economy represent the background of the strategic management of applied business models.

The concept of digital economy describes the microeconomic processes of the transition of the industrial society to the information society. As it is well known, the structures of ever-changing economic and social systems contribute to these transformations, especially through technical innovations that