

# Chapter 7

## The Transformation of Auditing From Traditional to Continuous Auditing in the Era of Big Data

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### ABSTRACT

*Massive usage of internet and digital devices make it easier accessing the desired information. In the past, auditing was a periodic, reactive approach, but this must change. Today, volume, velocity, variety, veracity, and value of the information, which are the main criteria of big data, are crucial. Decision makers demand timely, true, and reliable information. This need has affected every sector including auditing. For this reason, the continuous auditing system comes to debate in the big data era. The main aim of this chapter is to shed light on how traditional auditing transformed into the continuous auditing and where big data stands in this transformation. It is concluded that even though many obstacles arise, continuous auditing systems and harvesting big data benefits are crucial to gain a competitive advantage. Also, using big data analytics and continuous auditing system together, management and shareholders gain detailed information about the company's present situation and future direction.*

### INTRODUCTION

Economic development of one country relies heavily on companies. Decision makers, whether they are major or small investors, demand true, timely and reliable information about their possible investment. Auditing provides this kind of information to decision makers. Auditing approach has started to change since the 20<sup>th</sup> century from traditional to continuous. With the auditing approach change, the volume of information changed as well. Today's information is voluminous and variable it is impossible to catch up. This era is called 'Big Data'. In the era of Big data, decision makers, whether they are managers of a company or president of a country, demand true, timely and reliable information. In this era, big data and continuous auditing system interaction are key in the name of providing this kind of information.

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In the literature, big data and continuous auditing are researched severely by practitioners and academicians separately. However, not many study focus on the interaction of both. In this study, the authors make an exploratory study and try to give a detailed examination of big data and continuous auditing development and their relationship.

This chapter organized as follows: In the second section, aim and methodology of the chapter are mentioned. Immediately after, the theoretical framework of traditional to continuous auditing, continuous auditing, and big data is mentioned. After that, the relationship between big data and continuous auditing is discussed based on related literature. This chapter is concluded with future research directions and conclusion.

## **MAIN FOCUS OF THE CHAPTER**

### **The Aim of the Study**

The main of this chapter is to shed light on how traditional auditing transformed into the continuous auditing and where big data stands in this transformation based on related literature.

### **Methodology**

In this chapter, the authors used an archival method. In Chiu, Liu, & Vasarhelyi (2014) study, they shed light on extant continuous auditing research and reveals its longitudinal development by reviewing, summarizing, and cross-comparing research characteristics of 118 relevant continuous auditing studies. The three main research methods identified in the CA literature are: analytical, archival, and experimental/behavioral. They define archival study as studies utilize sources from secondary records. In Brown, Wong, & Baldwin (2007) study they divided the research streams into five categories: demand factors, theory, and guidance, enabling technologies, applications, and impacts. The authors use theory and guidance from secondary sources to shed light on the transformation of auditing, how big data accelerate this transformation and the relationship between big data and continuous auditing.

## **THEORETICAL FRAMEWORK**

### **From Traditional to Continuous Auditing**

Massive usage of internet and digital devices make it easier to access the desired information. In the digitalization and globalization era, decision makers demand timely, true and reliable information. This pace has both positive and negative impacts. On the positive side, being able to reach the desired information anywhere and anytime. On the negative side, information noise, biased information and useless information are all over the place. Accurate, reliable and timely information is crucial for everyone. In the context of business, this kind of information is crucial for management, employees, and stakeholders who make decisions based on gathered information. To accomplish this task, auditing holds a very important position.

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