

Chapter 67

Use of Big Data Analytics by Tax Authorities

Brendan Walker-Munro

 <https://orcid.org/0000-0001-5484-1145>

Swinburne University, Australia

ABSTRACT

This chapter provides a thematic analysis for the Australian context of the legality and challenges to the use of big data analytics to identify risk, conduct compliance action, and make decisions within the tax administration space. Recent federal court jurisprudence and research is discussed to identify common themes (i.e., privacy/opacity, inaccuracy/bias, and fairness/due process) currently influencing the legal treatment of big data analytics within the tax administration and compliance environment in Australia.

INTRODUCTION

Computers and smart devices continue to play an increasingly significant role in our daily lives. The seamless integration of computers, smartphones, tablets and internet-enabled devices into our society has facilitated the rise of ‘big data’, the notion that near-infinite storage and fast computer processing has permitted the mass collection and storage of information regarding all aspects of our lives. Yet having access to enormous amounts of data is one thing; the ability to derive useful connections and observations from such data is what has fueled significant growth in another field: ‘big analysis’. Also known as analytics or data profiling, the growth of Big Analysis enables analysis of massive datasets and identification of trends, issues and risks invisible to human observation (Cohen, 2012). Fertik and Thompson (2015, p. 5) explains the difference between ‘big data’ and ‘big analysis’ as “knowing that you [a]re sitting on a gold mine [and] actually getting it out of the ground and turned into bullion”.

Nowhere is this concept becoming more prevalent than in the labyrinthine, complex public administration and enforcement of tax statutes. Incorporation of technology into the tax process has always been somewhat of a *fait accompli*—technological innovations in the tax system foster improved connections between the tax authority and consumers, as well as reduce the opportunity for tax evasion (Maciejewski,

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2016). In a world where computer programs can mine personal, social, economic or law enforcement information and then use this data to make informed, evidence-based predictions on individuals' or classes of individuals' likely actions and risks (Pasquale, 2011), it is not surprising such programs are attractive to tax authorities.

The objective of this chapter is to examine the use of big data analytics by tax administrations as represented by the Australian Taxation Office (ATO) from the following thematic perspectives:

- Inaccuracy
- Privacy
- Opacity
- Due process
- Fairness/bias

These themes are considered important as they are distilled from the Administrative Review Council (ARC) 2004 report into technology-assisted decision making (TADM) (Attorney-General's Department, 2004), and synthesized with more recent observations emerging from both regulatory (OAIC, 2018b) and academic literature (Houser & Sander, 2016; Hogan-Doran, 2017; Veit, 2019). Thus, the pervasive use of information technology, data collection and storage provides substantial datasets of interest and utility to the tax authorities in protecting the public revenue. Yet these data sets are unwieldy and uninformative without powerful and speedy means by which the data can be analyzed, transformed and distilled into practical insights. The purpose of this chapter therefore is to scrutinize this tax use from the thematic perspectives of inaccuracy, privacy, opacity, due process, and fairness/bias and identify the challenges and opportunities for future use.

BACKGROUND

Since their invention, computers have been an invaluable tool for public service agencies (Savas, 1969). The ATO (like many other tax administrations) has certainly been using computers in its compliance activities since the 1970s. Though originally seen as a more powerful typewriter and then as a medium for entering and storing greater amounts of public information, growth in computing power has witnessed an increase in computer use for the purpose of decision-making, where there is a clear niche for computers to assist delegates in making the correct and preferable decision. The 2004 ARC report noted that numerous government departments of the time were already using TADM without a suitably strong oversight or review framework. To fill this void, the Department of Finance and Deregulation published a better practice guide to assist with TADM in 2007, which sought to ensure the ARC principles were implemented in a way that was practical and based on good sense (AGIMO, 2007).

But the ARC report and subsequent better practice guide highlight that TADM involves providing support and guidance to a delegate or decision-maker. Under Australian law, this follows an approach permitted by the principles set down in *Carltona Ltd v Commissioners of Works* (1943), where the English Court of Appeal determined a person in whom decision-making power is reposed has implied authority to authorize another to exercise that power on their behalf. This is especially so in government, where “ministers have so many functions and powers, administrative necessity dictates that they act through duly

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