# The historical evolution and popularity of activity-based thinking in management accounting

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Suggested citation:

Berg, T. and Madsen, D.Ø. (2020), "The historical evolution and popularity of activity-based thinking in management accounting", Journal of Accounting & Organizational Change, Vol. 16 No. 3, pp. 401-425. https://doi.org/10.1108/JAOC-03-2020-0030

#### Abstract

**Purpose.** The aim of this research paper is to examine the historical evolution and popularity of activitybased thinking in management accounting. As an organising framework, this paper applies the lens of management fashion theory, which is a perspective that is well-suited to the examination of the lifecycles of management accounting concepts and ideas.

**Design/methodology/approach.** This paper pursues a bibliographic approach to better understand the past and present state of activity-based thinking. Thus, this paper attempts to piece together a mosaic picture by synthesising existing research on activity-based thinking from a wide range of academic and practitioner-oriented sources.

**Findings.** While the original activity-based costing model has evolved and broadened, and has generated new related concepts, studies suggest that it is not as successful as accounting concepts such as the balanced scorecard. The overall popularity trajectory of activity-based thinking can be considered negative and is currently not receiving much attention in accounting journals.

**Research limitations/implications.** This paper is based on desk research and is limited by a reliance on secondary sources. In addition, it may be subject to the authors' own biases when it comes to defining relevant articles studied.

**Practical implications.** This paper provides more insight into the evolution and popularity of activity-based thinking and discusses some of the reasons why it is not more widely used in practice.

**Originality/value.** Although many studies have examined the diffusion of activity-based costing related techniques, most are quite dated. More than 30 years have passed since the coining of the ABC term and the time is ripe to provide a historical re-examination of the impact of this type of thinking in the field of accounting, and to consider the latest developments and trends.

**Keywords:** Activity-Based thinking, Management Accounting Innovation, Management Fashion, Emergence, Evolution, Trajectory

## 1 Introduction

Since its introduction more than three decades ago, the concept of activity-based costing (ABC) (Cooper, 1987) has exerted a considerable influence on the field of management accounting and it is often considered to be one of the most dominant management accounting innovations (MAIs) (Ax and Bjørnenak, 2007, Gosselin, 2006, Brown et al., 2004). ABC has been widely discussed in the accounting literature. It has come to occupy a central position in accounting textbooks and encyclopedias (Mitchell, 2015), and it is frequently listed in handbooks on key management concepts and ideas (Hindle, 2008).

Several activity-based innovations have been introduced (e.g. activity-based costing/management and most recently time-driven activity-based costing). Therefore, in this paper we will use the more generic term "activity-based thinking," (hereafter ABT) which encompasses "any management accounting practice that uses the concept of 'activities' as its hard core" (Al-Sayed and Dugdale, 2015, p. 38). ABT encompasses a series of activity-based innovations, such as ABC, Activity-Based Management (ABM), and Time-Driven Activity-Based Costing (TDABC).

ABT has received much attention, both by academics and practitioners, and many researchers have sought to map the diffusion of ABC-related techniques (Gosselin, 1997, Bjørnenak, 1997, Malmi, 1999, Cohen et al., 2005, Askarany and Yazdifar, 2012, Nassar et al., 2011, Al-Sayed and Dugdale, 2015). These studies generally find that despite the discourse highlighting the potential benefits of ABC, relatively few organisations have adopted and implemented it (Gosselin, 1997). Adoption rates are reported to be less than 20-25% (Innes et al., 2000). This is the "ABC paradox," referring to the low rate of adoption and implementation of ABC despite all the suggested benefits (Innes et al., 2000, Gosselin, 1997, Brown et al., 2004). As Becker (2008) points out, ABC has not "travelled" as easily as the balanced scorecard (BSC), which is another MAI that has sustained a high level of popularity for nearly 30 years (Rigby and Bilodeau, 2018, Hoque, 2014).

To the best of our knowledge, there have been no recent attempts to synthesise the extant research and craft a more complete picture of ABT. Therefore, this paper aims to examine the historical evolution and popularity of ABT in accounting. To accomplish this, the paper applies the lens of management fashion theory (Abrahamson, 1996, Kieser, 1997, Abrahamson and Piazza, 2019) as an organising framework. This perspective is well-suited to examinations of the lifecycles of management accounting concepts and ideas (Zawawi and Hoque, 2010, Ax and Bjørnenak, 2007, Johanson and Madsen, 2019).

We contribute to the literature by shedding light on, and discussing possible reasons for the diffusion, travel, and evolution of MAIs (Ax and Bjørnenak, 2007, Becker, 2008, Johanson and Madsen, 2019). More broadly, this study may also contribute to the body of knowledge that constitutes the area of management accounting change. We do this by looking at ABC from four different but complementary perspectives: 1) ABC's conceptual evolution and popularity trajectory, 2) the characteristics and framing of the ABC concept, 3) the supply-side of ABC, and 4) the demand side of ABC. Our exploration of the concept's emergence, evolution, and current status will give a comprehensive picture of the historical emergence and evolution of ABT.

This paper is explorative in nature and it utilises a bibliographic research approach, synthesising existing research from a wide range of academic and practitioner-oriented sources. The aim is to construct a more complete picture and to give a historical narrative of ABT in the field of management accounting.

While there are limitations associated with relying on secondary sources when researching management concepts (Nijholt and Benders, 2007) or the development of academic disciplines (Schäffer and Binder, 2008), this approach is arguably a pragmatic choice when given the multitude of challenges that researchers encounter when attempting to map the diffusion and evolution of management (accounting) concepts and ideas (Benders et al., 2007, Madsen and Stenheim, 2013, Strang and Wittrock, 2019).

The rest of the paper is structured as follows. Section 2 provides an outline and justification of our theoretical lens; management fashion theory. Section 3 provides a brief history of ABT in accounting. Section 4 analyses the characteristics and framing of activity-based accounting innovations. Sections 5 and 6 analyse the supply and demand-sides, respectively. This is followed by a theoretical discussion in Section 7. This paper concludes in Section 8 by highlighting key findings and contributions, it also discusses the limitations and makes several recommendations for future research.

# 2 The management fashion perspective

There is a multitude of theoretical perspectives that can provide insight into how MAIs diffuse and evolve (Zawawi and Hoque, 2010, Johanson and Madsen, 2019). Since this article aims to develop a better understanding of the historical trajectory of ABT in terms of evolution and popularity, management fashion theory stands out as a particularly suitable perspective for our analysis. This is because management fashion theory is primarily a macro-level theory focusing on how management concepts evolve over their lifecycle (Perkmann and Spicer, 2008, Madsen and Slåtten, 2015a).

The theory of management fashion was developed during the 1990s (Abrahamson, 1996, Abrahamson, 1991, Kieser, 1997) as researchers sought to explain the continuous launching of new managerial innovations and, in some cases, their rapid and widespread adoption among organizations (Madsen and Stenheim, 2013). Today there is an extensive literature on fads and fashions in management practices (Piazza and Abrahamson, 2020), and the fashion perspective has been applied extensively in the field of accounting, particularly in the context of research on the diffusion of MAIs. For example, researchers have used the management fashion perspective to explain the adoption and diffusion of MAIs such as Balanced Scorecard, Intellectual Capital, Activity-Based Costing, and Beyond Budgeting (Ax and Bjørnenak, 2007, Malmi, 2001, Fincham and Roslender, 2003, Modell, 2009, Aksom, 2017).

The management fashion perspective provides explanations for why some management concepts, or in the context of the current paper, why some MAIs become widely popular and diffused while others do not. In other words, this perspective recognises that not all MAIs become popular (i.e., fashionable) and that fashionable MAIs is a subset of the total supply of MAIs. Jung and Kieser (2012) define management fashions as those management concepts that relatively speedily gain large shares in the public management discourse. Abrahamson (1996) argues that management fashion is "...a relatively transitory collective belief, disseminated by management fashion setters, that a management technique leads rational management progress" (Abrahamson, 1996, p. 257).

The market for management fashion, like any market, has both a supply-side and a demand-side (Abrahamson and Piazza, 2019, Abrahamson and Reuben, 2014). The supply side is populated by fashion-setting actors such as consulting firms and management gurus who are actively disseminating these MAIs (Jung and Kieser, 2012, Clark, 2004b), while the demand-side is made up of organizations

and managers who are prospective consumers of the fashion. There are also several interesting dynamics in the management fashion market. Supply-side actors play a key role in determining whether a MAIs become widely adopted by creating a wave of interest and helping it reach a critical mass of adopters, at which point bandwagon effects kick in and trigger further adoption (Kieser, 1997, Benders, 1999). As a MAI becomes more popular, new suppliers enter the market to fight for a slice of the market (David and Strang, 2006, Klincewicz, 2006). On the demand side, adoption decisions are driven by both rational and non-rational factors (Sturdy, 2004). Abrahamson (1991) suggests that the adoption of MAIs may be driven by efficiency-related (rational) pressures but could also be driven by imitation of prestigious consulting firms or peer organisations. Staw and Epstein (2000) show that the use of management fashions may increase organisational and managerial legitimacy. Westphal et al. (1997) find that pressures towards conformity are strongest in the early phase. In contrast, in the later stages, organizations are more inclined to customize management fashions to their needs.

Lastly, we will briefly address some ongoing debates in the management fashion literature that are relevant when studying the historical evolution of MAIs. The first debate is related to the assumption of transience. In early contributions, researchers emphasized the temporary nature of management fashions, i.e., that fashions ultimately decline in popularity and leave few traces behind (Abrahamson, 1996, Abrahamson, 1991, Carson et al., 2000). Over time, researchers have shown that management fashions may become more permanent features of organisational life (Perkmann and Spicer, 2008, Abrahamson and Piazza, 2019). The second area of debate is related to the assumption of coevolution between intensity of discourse and actual diffusion of a management concept. In management fashion research, supply side activity is often used as a proxy for demand side use. However, it has been noted that some fashions generate much noise but few actual organisational changes (Benders and Van Veen, 2001, Nijholt and Benders, 2007, Clark, 2004a). In some cases, usage remains high even after supply-side discourse has faded away (Benders et al., 2007). Similarly, elements and traces of once-fashionable concepts may stick around in organisational practice long after the "hype" in the public discourse has waned (Heusinkveld and Benders, 2012). These findings suggest that it is essential to take a balanced view of both the supply and demand sides of particular MAIs to analyse their trajectories since it is not given that use in organisational practice will follow the pattern seen on the supply-side.

The rest of the paper will utilize aspects of the fashion theory outlined above as an organizing framework. This involves a contextual background, an analysis of the characteristics of the activity-based innovations, and an analysis of the marketplace for activity-based innovations.

## 3 A brief history of activity-based thinking in management accounting

This section provides a brief history of ABT, its origins and emergence, in the field of management accounting, starting with the developments that led to the introduction of ABC.

#### 3.1 Origins and emergence

In this paper, we depart from the re-launch of the concept of ABT by Cooper in 1987, which was outlined by Cooper and Kaplan (1988). As others have pointed out (e.g., Innes and Mitchell, 1995), the ideas behind ABC had existed for decades before the 1980s. In their work, Major and Hopper (2010) cite Staubus (1971) and Shillinglaw (1982) as two sources that referred to activity costing. Staubus (1990) claims that he

started reflecting upon ABT in the 1950s. Furthermore, according to Kellermanns and Islam (2004), the concept can be traced back to Schmalenbach (1899).

The 1980s was an eventful decade in the field of management accounting. The crisis of management accounting was particularly highlighted by US-based accounting academics (Langfield-Smith, 2008). Interestingly, as Sharman and Vikas (2004) claim, ABC is "made in America", and US enterprises would benefit from learning about controllership practices in German-speaking countries. Hence, there is a question whether the view of an accounting crisis was universal. Notwithstanding, there was heavy criticism of the current state of practice (Nielsen et al., 2004), which is known as the "relevance lost" discourse. The standard reference is the 1987-book by Johnson and Kaplan, which synthesised and identified a need for better management accounting information (Johnson and Kaplan, 1987). ABC emerged in the aftermath of the relevance lost debate as one of the solutions that would provide better management accounting information. Several factors played a role in making ABC appealing during the 1980s, such as a more turbulent business environment, and a need for businesses to provide a wider product range, more customisation, more flexibility to meet customer demands, and better quality. This led to "changes in the structure of cost" (Innes and Mitchell, 1995, p. 116). ABC quickly received much attention in accounting discourse. According to Innes and Mitchell (1995), the rapid emergence and popularisation of ABC can be attributed to the work and efforts of Robin Cooper and Robert Kaplan, which can be attributed to the status and network of its authors. In previous research, it has been noted that the Harvard Business School network was influential in the introduction, popularisation, and legitimisation of the concept of ABC (Jones and Dugdale, 2002).

#### 3.2 Conceptual evolution

There has been considerable conceptual evolution since ABC was introduced in the late-1980s. As pointed out by Ax and Bjørnenak (2008), the development of ABC has been dynamic. The concept has been expanded and repackaged in many ways. Therefore, it is useful to speak of ABT or a series of activity-based innovations (AI-Sayed and Dugdale, 2015).

Table 1 shows the conceptual evolution of ABT, highlighting the similarities and differences between three main activity-based innovations: ABC, ABM, and TDABC. The main purpose of both ABC and TDABC is to analyse product and customer profitability, while ABM is meant to support managerial control and support decision-making.

[Insert Table 1: Conceptual evolution of accounting-based innovations about here]

ABC *emerged* in the late-1980s, and ABM did not appear until the late-1990s (Kaplan, 1998) when it was introduced as a development of ABC (Johnson, 1991). TDABC was introduced during the mid-2000s by Kaplan and Anderson (Kaplan and Anderson, 2004, Kaplan and Anderson, 2003) and fleshed out in a 2007 book (Kaplan and Anderson, 2007b). To the best of our knowledge, there has been no substantial conceptual contribution to ABT since the introduction of TDABC.

The *aim* of ABC is to determine the 'true' cost of objects, through better cost allocation. First, a finer identification of relevant costs for decision-making is allowed for by means of a cost hierarchy, as opposed to a 'traditional' method. Second, the notion of practical capacity is essential. The explicit focus on capacity is meant to help firms identify unused capacity and adjust the supply or demand for activities.

ABM has a more strategic aim than ABC. While ABC achieves improved accuracy in cost estimation, ABM describes the actions taken to improve operations, product quality, or reduce costs based on the numbers given by ABC (Babad and Balachandran, 1993). By identifying resources spent on activities related to products or customers, ABM is a mean to focus on the critical success factors and aims to enhance the competitive advantages. Furthermore, ABM can be classified into two categories: operational and strategic ABM—where the first is about "doing things right," the latter is about "doing the right things." More specifically, operational ABM aims to enhance operational efficiency and asset utilisation, while strategic ABM aims to alter the demands for activities and increase profitability through improved activity efficiency, i.e., choosing appropriate activities for the operation and selecting the most profitable customers (Blocher et al., 2010).

TDABC was introduced because ABCs, according to Kaplan and Anderson (2007a, p. 7), "were expensive to build, complex to sustain, and difficult to modify", and hence the purpose was to return to a simpler ABC model. TDABC departs from time as the fundamental cost driver, as represented by time equations, which represents a fundamental departure from two-stage allocation systems such as ABC (Balakrishnan et al., 2012). This implies that using TDABC means that there is no need to group resources into cost pools. Meanwhile, all aggregation of resources is included in time equations, which reduces the measurement errors (Datar and Gupta, 1994) that occur under ABC. Moreover, quantities and prices are separated.

ABC is considered to be one level of activity management (Gosselin, 1997). Consequently, it can be seen that ABC has changed considerably over time in terms of *scope* — from its early days as a rather narrow and technical tool/technique it has gradually become a broader management philosophy with strategic implications (Jones and Dugdale, 2002). In recent years, ABC has reverted to a more narrow and simpler management accounting technique that has time as the sole cost driver.

#### 3.3 Popularity trajectory

The popularity of ABT has varied considerably over time. ABC received considerable attention when it was (re-)introduced in the late-1980s, and that level of interest and intense discourse sustained for some time. The successful introduction and launch of ABC can be attributed to the concept's fit with the *zeitgeist* during the late-1980s. According to Kieser (1997), timing is a key factor that influences the success of prospective management concepts; in particular, a concept has to hit the "nerve of today's managers." During the 1980s, many US companies were under increased pressure as a result of tough competition from the Far East. Armstrong (2002) notes that the message of ABC resonated with audiences in the United States: "Outside Harvard Business School, ABC's message that America's mass products were actually more profitable than had previously been thought chimed well with the new 'stand and fight through manufacturing' mentality" (Armstrong, 2002, p. 101).

During the 1990s, ABC received so much attention that several researchers noted that there was an ABC bandwagon where organisations made a decision to adopt ABC not necessarily because it was an efficient choice but rather to gain legitimacy in the eyes of their peers and stakeholders (Bjørnenak, 1997, Gosselin, 1997, Jones and Dugdale, 2002, Malmi, 1999). In fact, Johnson (1992, p. 26) asked: "Where did the activity-based juggernaut get started, and how reliable are the claims made on its behalf?" Adding that, "using activity-based cost information to improve business as usual only helps companies commit relevance lost all over again!" (Johnson, 1992, p. 33).

## 4 The characteristics and framing of activity-based innovations

In this section, we aim to analyse the characteristics and framing of the activity-based innovations. This provides insight into why (not) these innovations attracted interest and appealed to managers. The analysis focuses on the framing of the innovation(s) itself. In the literature on management concepts and ideas, several researchers have shown that it is possible to identify several key characteristics that are likely to become management fashions (Røvik, 2002, Huczynski, 1992, Benders and Van Veen, 2001), including: (1) a catchy label, (2) promises of substantial performance improvements, (3) conceptual ambiguity and a wide room for interpretation, and (4) a presentation of the concept as being applicable in a wide range of situations. Table 2 provides an overview of the characteristics applied to three activity-based innovations.

[Insert Table 2: Characteristics of management fashion applied to activity-based innovations about here]

#### 4.1 Label

Management concepts are generally labelled in a catchy way (Røvik, 1998, Kieser, 1997) and ABC scores highly in this criterion. Management concepts often have three-letter acronyms (Grint, 1997, Røvik, 1998). Commonly used acronyms in the practitioner-oriented management accounting literature are EVA, BSC and ABC (Bjørnenak and Olson, 1999, Ax and Bjørnenak, 2007). The acronym ABC is easy to remember because it coincides with the first three letters of the Latin alphabet, even though its meaning is context-specific. TDABC deviates from the other two concepts because it is a five-letter acronym and is derived from ABC. Hence, one must be familiar with the underlying ABC concept to catch TDABC's meaning. In addition, ABM must be considered in the context of management accounting because the abbreviation has more than one meaning, one is anti-ballistic missile. Overall, ABC and ABM can particularly be characterised as "catchy," albeit catchy within a specific context.

#### 4.2 Promises of performance improvements

Management concepts are often promoted with promises of substantial performance improvements (Kieser, 1997, Røvik, 1998), which is necessary to catch the interest of managers who would not otherwise bother to consider the concept. For instance, Hindle (2008, p. 9) points out that *the Economist* wrote that ABC is "to change the way in which costs are counted." In particular, there have been a number of articles in the Harvard Business Review about the superiority of these concepts, such as: "Measure Costs Right:

make the Right Decisions" (Cooper and Kaplan, 1988) about ABC; "Tapping the Full Potential of ABC" (Ness and Cucuzza, 1995) among others claiming "Activity-based management helps companies become the one everyone else is copying"; and also Kaplan and Porter (2011) in their article titled "The Big Idea: How to Solve the Cost Crisis in Health Care" outlining how TDABC allows "... providers and payors to address virtually any costing question." Hence, it can be claimed that these concepts are promoted as means to substantial performance improvements.

#### 4.3 Interpretive space

Management concepts can be interpreted in many different ways (Benders and Van Veen, 2001, Swan, 2004). Conceptual ambiguity has the function of increasing the potential market size. The ABC concept is considered dynamic, with different degrees of variability, leaving room for alternative interpretations (Ax and Bjørnenak, 2007). Fincham and Roslender (2004), Fincham and Roslender (2003) note that this room varies across different management concepts. ABC is more concrete and has a more easily identifiable technical core than, for example, "intellectual capital", which according to Fincham and Roslender (2003) is little more than a collection of loose ideas. However, it has been shown that even relatively fixed management accounting techniques can lead to varying interpretations and outcomes (Emsley, 2008).

As outlined by Balakrishnan et al. (2012), there is no universally accepted definition of which practices constitutes an ABC system and the authors' understanding of a comprehensive ABC system may differ from what might be observed in practice. This may be due to the fact that ABC is a practice-driven, more than research-driven, concept that seems to have grown out of a series of case studies (Major, 2007). Furthermore, it is hard to define ABC because the concept has evolved considerably over time (Jones and Dugdale, 2002, Lukka and Granlund, 2002). However, the interpretive space has increased over time, from ABC to ABM, before reverting to a narrower view with TDABC.

#### 4.4 Universality

The fourth key characteristic of management concepts is their broad and universal nature. Proponents of new concepts tend to argue that they are applicable regardless of the national or sectoral context (Wittrock, 2015).

The universality of ABT has increased over time. ABC has broadened and become more generalised, and is applicable in a wider variety of businesses and sectors (Bjørnenak and Mitchell, 2002). This is also the case for ABM, which has been applied in services, health care, governmental organisations, and non-profits (Baker, 1998, Antos, 1992). In addition, most of the published papers in recent years are oriented towards empirical applications of (TD)ABC in different settings such as health/hospitals (Martin et al., 2018, Bobade et al., 2019, Heaton et al., 2019, Chou et al., 2018, Najjar et al., 2017, Kaplan and Witkowski, 2014, Kaplan, 2014), libraries (Sigüenza Guzmán et al., 2014), and hotels (Riediansyaf, 2014).

# 5 The supply-side of activity-based innovations

This section analyses the supply-side of activity-based innovations, which includes the various actors involved in the diffusion and dissemination of these techniques (Abrahamson, 1996, Jung and Kieser,

2012). Several different types of actors are involved in the supply of MAIs, such as consulting firms, management gurus, business media, book publishers, and business school professors (Ax and Bjørnenak, 2007, Ax and Ax, 2018, Johanson and Madsen, 2019). In the following, we will examine in greater detail the involvement and activities of these various suppliers of activity-based innovations.

#### 5.1 Consulting

Consulting firms are widely considered to be the most central actor in the diffusion of new management ideas (Jung and Kieser, 2012), and they have played a leading role in the promotion of ABT. Many consulting firms offered ABC consultancy services in the mid-1990s (Innes and Mitchell, 1995). Consultants took up the ABC thinking quite early, and US-based consultants have been very active in writing promotional articles about ABC/M (Bjørnenak and Mitchell, 2002). In particular, Armstrong (2002, p. 99) writes that "Activity-based costing and management are now the stock-in-trade of a lucrative industry, with at least one Big Six consultancy operation devoted wholly to their promotion." Over time, ABC has decreased in importance as a consultancy service, and it is less prominently displayed on consulting firms' websites.

#### 5.2 Business schools

In the literature on management concepts and ideas, business schools are recognised as an important actors involved in the diffusion and circulation of management knowledge (Engwall and Wedlin, 2019, Sahlin-Andersson and Engwall, 2002); management concepts become incorporated in business school curricula, and professors carry out research on these concepts and disseminate them in textbooks. Many studies have documented the role of business schools in the introduction and legitimisation of ABC. For example, it has been shown that academics drew on practical experiences and developed the thinking around ABC into a more general framework (Innes and Mitchell, 1995). The network around Harvard Business School has been heavily involved in this process (Jones and Dugdale, 2002), and the early experiences with ABC were published as Harvard Case Studies (Innes and Mitchell, 1995).

ABC has been extensively incorporated into business education worldwide and many ABC courses have been conducted (Innes and Mitchell, 1995). Over time, the concept has become well-established as part of management accounting, and most management accounting textbooks devote chapters to the concept (Horngren et al., 2009). However, not all business school professors have embraced ABC. There have also been critical voices among business school researchers, and ABC has also received some criticism in accounting textbooks (Beaulieu and Lakra, 2005).

Another indicator of academic interest in a management concept is the number of publications. Researchers have noted that there was a high number of publications that featured ABC (Innes and Mitchell, 1995) and that there was a growth in papers about ABC during the 1990s (Bjørnenak and Mitchell, 2002). However, research on ABC has slowed down in recent years, and there are relatively few papers about ABC-related concepts in accounting journals (Fitó Bertran et al., 2018). This can be seen as an indication that a fashion swing (Carmona and Gutiérrez, 2003) has occurred in ABC research.

#### 5.3 Gurus

Management gurus are documented to be an important group of actors involved in the diffusion and popularization of management concepts (Collins, 2019, Jackson, 2001). Jones and Dugdale (2002) pointed to the importance of the prominence and status of ABC's chief advocates, such as Kaplan and Cooper. In fact, there has been a "strong and durable advocacy" by Cooper and Kaplan (Innes et al., 2000, p. 349). Kaplan has been described as a management guru who has continually propagated and developed his ideas on various accounting and management topics (Hindle, 2008).

Furthermore, Armstrong (2002) notes that: "In the UK, the roadshow 'An Evening with Robert Kaplan' was a (very expensive) sell-out among line managers who did not like accountants very much. Of these, there were quite a few." As Harvard Business School professor, Kaplan belongs to several of the propagating categories. Nørreklit (2003) described how the concept of the BSC relies on emotional appeal and the reputation of Kaplan and Harvard Business School, more than sound logical development. ABC, ABM, and TDABC have all benefited from the reputation of Kaplan and Harvard Business School, more than sound logical development. ABC, an emotional appeal through the promise of performance improvements. However, ABC may be considered as being based on sound logical development (Christensen and Demski, 1995, Noreen, 1991, Datar and Gupta, 1994). Moreover, TDABC has been analysed and not failed logical reasoning (Balakrishnan et al. (2012).

#### 5.4 Business media

Management concepts can be disseminated and diffused via many types of business media, such as books, business newspapers, and magazines, or the Internet and social media (Barros and Rüling, 2019). In recent years, much of the discourse around new management concepts has shifted to social media platforms such as LinkedIn and Twitter (Madsen and Slåtten, 2015b, Barros and Rüling, 2019). However, as noted earlier, the discourse around ABT was most intense during the 1980s and 1990s, a time period when news and discussion about new MAIs took place in print-media channels. Therefore, the analysis will focus primarily on print-media such as books.

Previous research has been pointing out that book publishers (Harvard Business School affiliated) have played a key role in facilitating the spread and legitimisation of ABC (Jones and Dugdale, 2002, Sisaye and Birnberg, 2010). Although it is difficult to find data about the sales of the books about ABT, it appears that the last bestselling book on ABC was Kaplan's "Cost and Effect" (Kaplan, 1998). However, a simple search reveals that there are still books being published on ABC, such as a 2019 book about ABC in higher education (Hashim, 2019). Over time, the concept of ABC has become part of the field of management accounting, and it has become incorporated in textbooks. Most leading management accounting textbooks now include relatively detailed expositions and explanations of ABT (e.g., Horngren et al., 2009, Atkinson et al., 2011).

The analytical tool Google nGram provides an overview of the occurrence of specific terms in books up until 2008 (Michel et al., 2011). **Error! Reference source not found.** Figure 1 shows the occurrence of "ABC" in books in the period up until 2008. As can be seen, the term started appearing around 1987, and in the following year, there was a sharp increase hat continued until mid-1995, after which the occurrence of the term has plateaued and remained relatively steady.

[Insert Figure 1: Occurrence of the term "activity-based costing" in books (Source: Google nGram) about here]

Figure 2 shows the occurrence of the term "activity-based management" in books in the period up until 2008. This figure shows that until the mid-2000s, there was a steady increase in the occurrence of the term, after which the term appears to have plateaued.

[Insert Figure 2: Occurrence of the term "activity-based management" in books (Source: Google nGram)

about here]

#### 5.5 Professional organisations

Professional organisations play an important role in the institutionalisation of new management concepts because these organisations shape what it is considered "good practice." As opposed to concepts such as benchmarking (Jack, 2016), Lean (Benders et al., 2019) and Beyond Budgeting (Johanson, 2013, Becker et al., 2020), ABC has not been supported by similar types of organisations and clubs. This can help to explain why there is less intensive discourse and activity around ABC because, apart from the activities of Kaplan and colleagues, there is no effective diffusion infrastructure to sustain interest in the concept.

# 6 The demand-side of activity-based innovations

In this section, our focus is the demand-side of the market for activity-based innovation (i.e., potential adopters and users). We assess the impact of activity-based innovations on the demand-side by examining the following four areas: (1) interest, (2) awareness/knowledge, (3) adoption/diffusion, and (4) implementation.

#### 6.1 Interest

Google Trends can be used to gauge the level of interest in concepts and ideas (Madsen, 2016). The Google trends curves for ABC, ABM and TDABC show an overall downward trajectory as measured by Google search behaviour (Figure 3). This decrease can be explained in several ways. For example, it could be related to the fact that activity-based innovations are well-known and established in the accounting field, and there is less need to "Google" these concepts. Another explanation could be related to the fact that the activity-based concepts are relatively old and have been overshadowed by innovations such as Big Data Analytics.

[Insert Figure 3: Google Trends for different activity-based innovations (Data source: trends.google.com; Retrieved 23 February 2020) about here]

#### 6.2 Awareness and knowledge

ABC is a well-established part of management accounting. However, studies have shown that the awareness and knowledge of ABC varies across different contexts. For example, Nielsen et al. (2003) found the knowledge and awareness of ABC was high among Danish companies (around 80%). Cohen et al. (2005) also noted that there has been "a growing awareness of ABC." In contrast, Al-Okdah et al. (2011) reported a relatively low level of knowledge about ABC in Jordan. Awareness appears to be lower among SMEs. For example, Machado (2012) studied Portuguese SMEs and found that the respondents did not use ABC, and awareness and knowledge of the concept was very low.

#### 6.3 Adoption and diffusion

The literature shows that ABC has been implemented in a wide variety of societal and cultural contexts, such as in China (Liu and Pan, 2007). The concept has also been used in a wide variety of businesses and organisations, such as financial firms (Innes and Mitchell, 1997), and the manufacturing sector (Maelah and Ibrahim, 2006). Over time, activity-based innovations have also found their way into the public sector (Jackson and Lapsley, 2003, Baird et al., 2007). In the UK, ABC is used in government agencies, local government (Jackson and Lapsley, 2003), and governmental organisations at different levels (Arnaboldi and Lapsley, 2003). However, in general, survey evidence suggests that ABT is not widely diffused (Cohen et al., 2005, Askarany and Yazdifar, 2007, Bjørnenak, 1997, Innes et al., 2000, Lukka and Granlund, 1996).

As addressed by Askarany and Yazdifar (2012), several studies have indicated improved performance after the implementation of ABC, even though studies on diffusion and adoption have yielded mixed results. For instance, Baird et al. (2004) review several studies that show generally low rates of adoption. They use this as inspiration for a survey about Australian managers' perceived success from using ABC at different levels of activity management (Gosselin, 1997). They find that activity management is regarded to be moderately successful. In contrast, Askarany and Yazdifar's (2012) study from Australia, United Kingdom and New Zealand find an adoption rate of between 36% and 42% in these countries. One of their main points is to redefine how to understand adoption. They suggest that the 'stages model' should be replaced by a 'levels model'—where 'stages' of diffusion looks at ABC as one whole practice, while 'levels' looks at ABC as a process or a set of different activity levels. Hence, a more nuanced view of adoption is taken. This resonates with Sisaye and Birnberg (2010), who claim that ABC is more readily adopted than, for example, the BSC because it is more amenable to gradual introduction. Nassar and Al-Khadash (2013) found that the main obstacle to successful implementation of ABC was the provision of adequate training, while Rasiah (2011) found that the use of ABC was lagging in Malaysia due to the observation that other costing methods are considered as suitable as ABC.

Innes and Mitchell (1995) noted that only a minority of organisations have adopted ABC. Meanwhile, Innes et al. (2000) found that the adoption rates fell slightly between 1994 and 1999. The same result is indicated by Bhimani et al. (2007), where the authors looked at surveys up until 2003. Bhimani et al. (2007) find the same pattern across six different countries: Adoption rates have been and continue to remain low. Similarly, Innes et al. (2000) cite several studies of ABC adoption carried out during the early 1990s, which generally showed low adoption rates across countries. Indeed, ABC has also met some resistance. For example, Schildbach (1997) discusses German scepticism towards ABC because of a historic scepticism towards full cost as basis for decision-making purposes.

Cohen et al. (2005) cite studies showing that the adoption rates tend to be lower in Continental Europe (typically around 10%), while they are a bit higher in Australia, Canada and India. They also draw on Greek data and report that "diffusion in Greece is quite satisfactory" (Cohen et al. 2005: 988), and that it was increasing compared to previous studies Greece ABC studies. In the Jordanian context, Nassar et al. (2011) found that about 25% of the respondents were using ABC while about 10% were using ABM. Similarly, Fadzil and Rababah (2012) also found that about 20% of Jordanian manufacturing companies were using ABC. A survey among large Norwegian manufacturing companies (Berg et al., 2018) shows that only 20% to a large extent used ABC, and 40% did not use ABC at all. The similar counts for the 500 largest Norwegian companies, were 23% use ABC (Kringstad et al., 2020).

Bhimani et al. (2007) conducted a survey across seven countries, and over 70% of their respondents reported perceived usefulness from ABC. Although more than half of their respondents considered ABC as a success, almost 25% of the respondents had abandoned ABC and the speed of implementation varied across the countries studied (Canada, France, Germany, Italy, UK, US, and Japan). The questionnaire was sent to 3450 large companies, 416 responses were made, and the presented results are based on approximately 215 answers. However, their study does not indicate whether the 3000 non-respondents are ABC users or not. Cohen et al. (2005) aimed to learn more about the non-adopters of ABC. They distinguish between three types of non-adopting companies: supporters, deniers and unawares. Supporters are not satisfied with their existing costing system and then raise the question of changing the system in use. However, the reasons for adopting the ABT is not clear.

As Brown et al. (2004, p. 330) note, "overall, at best the results of these studies have been equivocal, and at worst contradictory." The same picture can be found in South Africa (Sartorius et al., 2007). The extent of ABC implementation is lower than that found in developed countries, but the evidence is inconclusive. The highest incidence of ABC adoption was noted in banking and mining companies. High level of fixed costs, size of banking and mining companies and competition faced by these two types of company seem to confirm that ABC adoption is contingent on the size of the firm, the amount of competition faced by the firm, and the level of fixed costs. A central justification for the non-implementation of ABC was lack of management support. Moreover, it is stressed that supporting systems and the IT architecture are critical, as are technical factors such as the selection of the optimum groupings of activities and the choice of a suitable cost driver for each cost pool. A similar picture was found in Sri Lanka by de Silva (2009), where firm size and competition were two central factors influencing the initial phase of ABC development.

#### 6.4 Implementation

Much research has also looked at how ABT is implemented in organizations (Major and Hopper, 2005, Shields, 1995, Englund and Gerdin, 2008, Major and Hoque, 2005). A review of the literature on the implementation of ABC underscores that the process is complex and there are numerous factors affecting outcomes (Lueg and Storgaard, 2017). In addition, how to define and interpret whether and the extent to which ABT is implemented is unclear (Askarany and Yazdifar, 2012, Krumwiede, 1998).

Studies by Cagwin and Bouwman (2002), and Kennedy and Affleck-Graves (2001) indicate that use of ABC positively impact financial performance. According to Shields (1995), the degree of success in ABC implementation depends on "how well it matches the preferences, goals, strategies, agendas, skills and

resources of dominant or powerful coalitions of employees, particularly top management" (Shields, 1995, p. 149). In addition, Byrne (2011) shows that top management support continues to be critical to ongoing ABC success. Major and Hopper (2010) reveal mixed findings in their case study—while the concept was used and welcomed by managers dealing with commercial matters, operational managers were more unconvinced and contributed to technical problems affecting its accuracy and operation.

Malmi (1997) suggests that that some of the (so-called) ABC failures may not have been failures at all. Instead, these supposed failures may have resulted from the narrow decision-making perspective adopted to assess ABC projects in firms; i.e., success and failure should acknowledge uses of accounting other than for decision-making purposes. According to Fitó Bertran et al. (2018), the study by Malmi (1997) stood out because it contrasted cases of success and failure. More recent studies have emphasised the hazards of a design based on an excessive diverse cost number (Homburg, 2001). These studies would corroborate the appropriateness of TDABC, which, by drastically reducing the diverse cost number, facilitates the implementation of the model to a great extent (Hoozée and Bruggeman, 2010).

There are several pitfalls documented regarding the implementation of ABC. Latshaw and Cortese-Danile (2002) report that there are still organisations with a significant proportion of direct labour and material costs. Therefore, it is important to understand the ABC model's inherent underlying assumptions, and that the assignment of costs to cost objects is an estimate. Pierce and Brown (2006) found in their study that there is a significant relationship between success of ABC/M systems and performance evaluation/rewards, and adequacy of training. The latter was also found among Jordanian firms (Nassar et al., 2009), and indeed confirmed in a study from South Africa by Wessels and Shotter (2000), where there was a lack of management support. As found in a case study of a bank by Soin et al. (2002), an ABC project should not be about more 'correct' cost allocation but it should create a new understanding of products, competitors and customers. As stated by Atkinson et al. (2011, p. 295) "any significant management innovation, such as ABC or JIT, requires a major cultural change for an organization". When Briers and Chua (2001) apply ABC as a case to use actor-network theory to illustrate how networks of heterogeneous machines, boundary objects, local actors and cosmopolitans can change an organisation's accounting and productive activities, they conclude that ABC could actually have been anything.

# 7 Discussion

An interesting feature of the emergence of ABT is the key role played by actors from accounting academia. As accounting scholars have noted, the ABC movement started in the Harvard Business School during the 1980s (Armstrong, 2002). The immediate legitimisation and popularisation of ABC can be attributed to the association with high status academics and the HBS network (Jones and Dugdale, 2002).

The key role played by business school actors in the emergence of ABT differs from other related management accounting concepts (e.g., benchmarking) that emerged as a result of experimentation and developments in organisational practice (Madsen et al., 2017).

In terms of conceptual evolution, our review has documented that the concept has changed from narrow (ABC) to broad (ABM), before reverting to a narrower form (TDABC). This suggests that management accounting concepts are dynamic in nature (Ax and Bjørnenak, 2008) and may evolve in

different ways over time, both at the intra-organisational and inter-organisational level (Johanson and Madsen, 2019).

In terms of popularity trajectory, the evidence suggests that ABT attracted much interest and became fashionable during the 1990s and had a particularly strong impact at the discursive level. Over time, ABT has received relatively less attention, both in the scholarly and practitioner-oriented management accounting literature. It is quite clear ABT no longer has a dominant position in public discourse, which means that following the definition of Jung and Kieser (2012) it can no longer be considered a management fashion.

What may explain the seemingly de-fashioning of ABT? One explanation may be related the level of competition in the management knowledge industry. It can be argued that ABT, at least to some extent, has become crowded out. In recent years, other MAIs such as BSC, Beyond Budgeting (Bogsnes, 2016), Business Intelligence (Qasim and Kharbat, 2020) and Big Data Analytics (Bhimani and Willcocks, 2014, Warren Jr et al., 2015) have taken larger shares of the discourse related to accounting issues. Elements of ABT has also been absorbed within other management movements such as Beyond Budgeting, where ABC is suggested as an important means to replace budgets (Bogsnes, 2009). However, it is possible that new technological trends and advances such as Big Data could lead to a revival of ABT (Andreassen and Bjørnenak, 2018, Bjørnenak, 2017), and possibly a re-adoption and re-fashioning of ABT (cf. Reinmoeller et al., 2019).

Another explanation of why ABT has not been able to sustain its popularity is the lack of diffusion infrastructure, such as organisations, clubs, and networks to sustain interest in the concept. To a certain extent, this is surprising because Robert Kaplan has successfully built consulting organisations and infrastructure supporting the BSC, his other main innovation (Cooper et al., 2017, Kaplan et al., 2018). However, these diffusion infrastructures have been important in the diffusion and institutionalisation of other concepts (e.g., Lean, benchmarking) (Benders et al., 2019, Madsen et al., 2017), which indicates that this could be a possible explanation of why ABT has become a relatively more low-profile concept in recent years.

The previous paragraphs have provided explanations for why the ABT has waned from public discourse. Similarly, numerous studies have shown that the use of ABC is not widespread in practice despite its apparent benefits. What may explain this "ABC paradox" (Gosselin, 1997, Innes et al., 2000, Brown et al., 2004)? One explanation is provided by studies suggesting that the activity-based techniques are not considered efficient and rational parts of businesses' management control packages. Ax and Bjørnenak (2007) point out that ABC-using companies are characterised by a large proportion of overhead costs. Recent studies from Norway (Berg et al., 2018, Kringstad et al., 2020) indicate that the proportion of overhead as well as other management accounting tools may contribute more, both for decision-making and attention-directing purposes.

To sum up, although ABT is less visible in public discourse and appears to be waning in popularity in practice, it is still too early to eulogise these MAIs. Studies show that ABT is still enduring in practice, and the concepts and terms such as ABC, ABM and TDABC have become part of the vernacular of business and industry (Hindle, 2008, Mitchell, 2015). Moreover, these techniques are taught in most business school programmes, which means that future business leaders are still exposed to them and view them as key management accounting tools.

## 8 Conclusion

While there have been many studies of the diffusion of ABC related techniques, most of these studies are by now quite dated. Our study has provided an updated historical picture and narrative of ABT, and our review shows that ABT has evolved in different ways since its introduction and emergence more than three decades ago.

In general, our review suggests that ABT is on the decline in public discourse and can no longer be considered a management fashion. Our findings suggest that even accounting researchers have lost interest in ABT, which could indicate that there are fashions in the field of management accounting research (Carmona and Gutiérrez, 2003). At the same time, the picture is more complicated given that ABT is well-established within the corpus of knowledge in management accounting and is still frequently used in management accounting practice (Mitchell, 2015).

Although this study is historical in nature, it contributes to the literature through a comprehensive longitudinal examination of one specific MAI, whose fashion lifecycle is approached from four complementary angles. We also find that even though ABT has fallen out of vogue in research, it is manifest in accounting textbooks and applied in practice. Hence, there are indications that the bridge between theory and practice represented by accounting textbooks are less subject to fashion swings compared to research and practice. This may ignite a debate on the role of textbooks in management accounting textbooks could contribute to turning fashions into institutionalised accounting practices (Huczynski, 2011, Perkmann and Spicer, 2008).

The current paper has several limitations that should be considered carefully. This paper is based on desk research and is limited by a reliance on secondary sources. Another limitation is related to the selection of sources, which may have been influenced by the authors' biases. In addition, even though we aimed to treat the topic of ABT comprehensively, the limits of a single paper mean that we have not been able to carry out an exhaustive review of each of the three activity-based innovations.

However, this paper gives important groundwork that future studies can build upon. The first possibility may be to delve into how and why ABT may be considered a managerial fashion. Second, a comparison of the results in this article may be compared with similar studies of adjoining management accounting concepts such as the balanced scorecard, Beyond Budgeting, and Lean. Moreover, our study could possibly inspire similar studies of other management accounting concepts and ideas. Altogether, this will substantially systematise the body of knowledge that constitutes the area of management accounting, and thereafter be input to a possible evidence-based theory of management accounting (cf. Pfeffer and Sutton, 2006a, Pfeffer and Sutton, 2006b, Malmi and Granlund, 2009).

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