

New development: The role of education in public sector accounting reforms in emerging economies: a socio-material perspective

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IMPACT

This article delivers new insights regarding the importance of continuous professional development (CPD) for practitioners designing and implementing public sector accounting (PSA) reforms. Public sector accounting education (PSAE) in universities has been the subject of many studies and its relevance is well recognized. By emphasizing the continuous professional development of public sector accountants, this article adds a new perspective to the debate on PSAE. The authors focus on PSA reforms in emerging economies, where the agenda is often driven by international financial institutions promoting IPSAS. Applying a socio-material perspective, the authors demonstrate that the technical aspects of reforms require human capacity development. This means conducting a preliminary evaluation of the CPD capabilities before drafting the agenda for any PSA reform.

ABSTRACT

Education undisputedly plays a central role in IPSAS-based PSA reforms. Using a socio-materiality perspective, the authors highlight a misalignment between human and technical aspects when implementing these reforms. Their analysis of past reforms in emerging economies suggests that the educational development of public sector accountants does not receive the same level of attention as the technical advancements set out to be achieved. By introducing a conceptual distinction between initial and continuous accounting education, the authors emphasize the relevance of continuous professional development when conceptualizing PSA reforms. They conclude that a successful accounting change requires a co-ordinated and integrated approach on developing human and technological capacity.

KEYWORDS

Accounting reforms; continuous professional development; emerging economies; International Accounting Education Standards Board (IAESB); IPSAS; public sector accounting education; socio-materiality

Introduction

Since the peak of New Public Management (NPM) in the 1980s and 1990s, numerous public administration reforms have been introduced all over the world, many with a strong public sector accounting (PSA) component (Brinkerhoff & Brinkerhoff, 2015; Hyndman et al., 2019, 2019; Jayasinghe et al., 2021; Lapsley et al., 2009; Lassou et al., 2021; Polzer et al., 2021; Schmidhuber et al., 2020; van Helden & Uddin, 2016). Within these reforms, accrual accounting was increasingly gaining attention (Benito et al., 2007; Lewis & Hendrawan, 2020), even more so since the development of the International Public Sector Accounting Standards (IPSAS) (Brusca et al., 2016; Galera & Bolívar, 2007; Jayasinghe et al., 2021). In many emerging economies, the introduction of accrual accounting standards, such as IPSAS, has been significantly influenced by international organizations (for example the World Bank, the International Monetary Fund and the European Union) as donors or sponsors of the reforms (Alawattage & Azure, 2019; Fahmid et al., 2020; Jayasinghe et al., 2021; Krishnan, 2021; Lassou et al., 2021; Tawiah, 2021).

For this reason, it is crucial for research in the area of PSA reforms to address the increasing global dissemination of IPSAS and how they influence reform processes, as they represent the public sector's only globally-recognized

accounting standards (Bergmann et al., 2019; Brusca et al., 2016; IFAC/CIPFA, 2019; Jorge et al., 2019; Polzer et al., 2019; Tawiah, 2021).

The academic debate about the actual benefits of implementing PSA reforms based on accrual accounting—which are usually accompanied by IPSAS adoption and/or approximation—has been going on for over two decades and will continue to do so (Adhikari & Gårseth-Nesbakk, 2016; Broadbent, 1999; Connolly & Hyndman, 2006; Fahmid et al., 2020; Lapsley et al., 2009; Oulasvirta, 2014; Polzer et al., 2019). International financial institutions (for example the World Bank and the International Monetary Fund) promote accrual accounting on a global level by encouraging countries to adopt IPSAS either directly or to reform their PSA environment in such a way as to reach a high degree of conformity with IPSAS, i.e. indirect adoption (World Bank, 2020). Since substantial sums have already been invested in PSA reforms (World Bank, 2008, 2021), it is vital to better understand the different challenges of such reforms (for example Lassou et al., 2021; Polzer et al., 2019; Tawiah, 2021).

Human capacity is very often identified as one of the critical factors of reform success (Polzer et al., 2021; Sciulli & Sims, 2007). Such capacity can only be created if it is an integral part of the education system (Adam et al., 2019; Heiling et al., 2022; Karatzimas et al., 2022). The majority of

the literature on public sector accounting education (PSAE) focuses on higher education institutions (HEI), i.e. universities and their respective curricula (Adam et al., 2019; Hoque, 2002; Karatzimas et al., 2022; Sciulli & Sims, 2007). Karatzimas et al. (2022) concluded in their literature review that over 75% of all the papers they analysed covered either the curriculum or teaching methods. Although the formal education aspect is essential, it is equally important to look beyond this, by highlighting the continuous professional development (CPD) of PSA professionals (IAESB, 2019a). For this reason, this article takes a wider angle on PSAE and also considers CPD provided by institutionalized bodies such as professional accountancy organizations (PAOs). We seek to fill a research gap identified by Karatzimas et al. (2022) asking for a stronger focus on international standards such as IPSAS, and attempting to develop a link between PSAE and the challenges involved in PSA reforms.

This article sheds light on the role of education in implementing IPSAS-based PSA reforms. Based on a structured literature analysis of (IPSAS-based) PSA reforms in emerging economies, it identifies the significant challenges concerning these reforms and argues that professional education has an important role to play. Drawing on socio-materiality theory, we argue here that a stronger focus on professional development for public sector accountants is necessary for technological advancements to materialize.

This is of particular relevance in emerging economies, as mentioned earlier, since they are very often the recipients of large-scale PSA reforms, initiated and driven by international financial institutions, which generally have a strong focus on technical elements such as the implementation of a given set of IPSAS (World Bank, 2020, 2018).

The following section consists of a literature review analysing education's role in PSA reforms and, in greater detail, the challenging and complex realities of PSA and IPSAS reforms in emerging economies. Next, we introduce the main ideas behind socio-materiality theory and how it is applied in this article. We conclude with a few practical implications and how they connect to the theoretical framework.

Literature review

Reforming a country's PSA system is not without challenges. This section will further explore the vast body of literature analysing PSA reforms in emerging economies and the role of human capacity and education within such reform settings.

The role of public sector accounting education

Education plays a vital role in every PSA reform endeavour, as it lays the foundation for skilled personnel and, at the same time, ought to ensure the continuity and sustainability of the reform goals. Many scholars have raised the argument that, in light of the increasing dissemination of IPSAS, accrual accounting should be addressed more prominently in PSAE (Adam et al., 2019; Cohen & Karatzimas, 2022; Heiling, 2020; Heiling et al., 2022). The International Accounting Education Standards Board (IAESB) provides a helpful distinction to structure accounting education. While initially developed for the private sector, it has been adapted for the public sector by addressing specific public

sector needs regarding accounting education (IAESB, 2019a). The IAESB generally distinguishes between initial professional development (IPD) and continuous professional development (CPD) and has published a set of eight international education standards (IES). We believe this terminology is immensely helpful for further research in PSAE; however, this is the first time it is applied in this area.

Of the eight IAESB standards, five refer to IPD focusing on technical competence (IES 2); professional skills (IES 3); professional values, ethics and attitudes (IES 4); practical experience (as part of IPD) (IES 5) and the assessment of professional competence (IES 6); and only one standard is concerned with CPD (IES 7).

The IAESB defines IPD as the 'learning and development through which aspiring professional accountants first develop professional competence leading to performing a role as a professional accountant' (2019b, para. 12). It is generally administered in an academic environment, i.e. in HEIs. This level of accounting education has received substantial attention from academics (for example Adam et al., 2019; Heiling, 2020) and Karatzimas et al. (2022) concluded in their literature review that most scholars focus on either university curricula or teaching methods.

In comparison, the second level of professional development has been far less explored in academic research relating to PSAE. Following the IAESB definition, CPD includes: 'learning and development that develops and maintains professional competence to enable professional accountants to continue to perform their roles competently' (IAESB, 2019b, para. 34). While some academics have touched on the subject, the focus is often on IPD rather than CPD (Adam et al., 2019; Heiling, 2020; Sciulli & Sims, 2007). Including the perspective of PSA reforms, some research has examined whether and how university curricula are aligned with the current international developments in accrual accounting and/or IPSAS (Adam et al., 2019; Heiling, 2020; Thom, 2019; Waymire et al., 2015). While IPD equips people with the necessary skills to accept an accounting position role, it is not designed to keep up with the ever-changing and ever-evolving IPSAS. Thus, to be capable of managing a dynamic accrual accounting reform setting, CPD is crucial, allowing for a more practice-oriented education. However, research in PSAE relating to CPD is still underdeveloped in the academic literature, especially in combination with IPSAS-based PSA reforms—the previously mentioned research gap identified by Karatzimas et al. (2022), which this article aims to fill.

PSA reforms in emerging economies

The success or failure of PSA reforms in emerging economies has been the topic of numerous studies. Most research in this area has focused on African or Asian countries, including studies on Sri Lanka (for example Adhikari et al., 2013, 2019; De Silva Lokuwaduge & De Silva, 2020; Wang & Miraj, 2018), Bangladesh (for example Rajib et al., 2019; Shahan et al., 2021; Wang & Miraj, 2018; Zaman Mir & Shiraz Rahaman, 2005), Nepal (for example Adhikari et al., 2013, 2019; Adhikari & Mellempvik, 2011; Wang & Miraj, 2018) and Indonesia (for example Harun, 2007; Harun & Robinson, 2010; Lewis & Hendrawan, 2020; McLeod & Harun, 2014). African countries subject to reform analysis have included

Ghana (for example Lassou, 2017; Uddin & Tsamenyi, 2005), Nigeria (for example Alozie, 2020; Bakre et al., 2017; Ijeoma, 2014; Ijeoma & Oghoghomeh, 2014; Iyoha & Oyerinde, 2010), Ethiopia (Peterson, 2001) and Tanzania (for example Goddard et al., 2016; Goddard & Mkasiwa, 2016), among others. Only very few studies been conducted in south-eastern Europe (Vašiček & Roje, 2019) and central Asia (World Bank, 2020, 2018). Most recently a study by the World Bank (2020) has taken a closer look at Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Croatia, Georgia, Kosovo, Moldova, Montenegro, North Macedonia, Serbia and Ukraine in terms of ongoing PSA reforms.

All these empirical studies show that emerging economies often struggle with limited organizational capacity (De Silva Lokuwaduge & De Silva, 2020; van Helden & Uddin, 2016; World Bank, 2020), a lack of both an appropriately trained workforce (Harun, 2007; World Bank, 2020) and the necessary technical skills to implement and apply accrual accounting concepts (IMF, 2016; World Bank, 2020). All these elements can be linked to potential gaps in PSAA systems when education programmes do not maintain pace with the global diffusion of accrual accounting (Cohen & Karatzimas, 2022)

Challenges of PSA reforms

PSA reforms require—and lead to—substantial organizational change. This change can be observed as a set of challenges, referring to different organizational aspects. These challenges can best be distinguished as human capacity or technical in nature.

Human capacity challenges: The central element here is a skilled workforce that can deliver all the planned reform activities and implement them fully. The importance of relevant initial ‘academic’ education, training and continuous professional development are crucial—irrespective of geographical location or economic development (Adam et al., 2019; Cohen & Karatzimas, 2022; Karatzimas et al., 2022; Lewis & Hendrawan, 2020; Polzer et al., 2019). In their study, Polzer et al. (2019, pp. 122–123) highlighted that most emerging economies cite capacity challenges in some form or another: ‘South Asia: lack of training and education; Africa: shortages of skilled staff; Asia/Pacific: lack of qualified accountants; insufficient training’. In the same vein, the World Bank’s study on south-eastern Europe and central Asia concluded that all countries in the region do require ‘specific capacity building activities (for example education, training, certification for staff) and external technical expertise’ (World Bank, 2020, p. 31).

Current literature on human capacity development in the sense of PSAA focuses to a large extent on HEIs, such as universities, and points toward a lack of IPSAS-specific training in those institutions (Adam et al., 2019; Heiling et al., 2022; Karatzimas et al., 2022). While it is undeniably a crucial element and a central challenge in this field, the continuous education of PSA professionals—particularly in the light of IPSAS-based PSA reforms—is equally important (Adam et al., 2019; IAESB, 2019a). Therefore, to establish and maintain a body of well-trained PSA personnel, it is

essential to distinguish between initial academic education and vocational training (CPD).

This distinction is important for two reasons: first, the content and focus of each level differ greatly, as highlighted in the previous section. The second distinguishing factor is the provider of the education programme. While IPD commonly takes place at universities or other HEIs, CPD is often provided by PAOs or regional and international organizations that provide recognized certifications. PAOs are long-standing professional bodies representing the interests of the (primarily private sector) workforce. They provide training, engage with academics and maintain standards in the accounting profession. In contrast, an underdeveloped accounting profession—both in the private and public sectors—leads to a lack of qualified personnel (Lewis & Hendrawan, 2020; van Helden & Uddin, 2016). In countries with well-established PAOs, the public sector can benefit from positive spillovers as accountants may migrate from the private to the public sphere. However, in cases where there is no PAO or similar body, the public sector is left to provide education and training, which consumes additional resources in already thinly stretched budgets (World Bank, 2020).

Technical challenges: Recent literature suggests that technical challenges are a crucial factor in PSA reform; however, besides traditional issues with IT systems or data quality, another technical dimension refers to the ‘technicalities’ inherent to IPSAS or the IPSAS terminology in general (Adhikari et al., 2013; De Silva Lokuwaduge & De Silva, 2020; Lassou, 2017; Polzer et al., 2019). For this reason, technical challenges can be separated into two groups. The first group is concerned with accounting-specific terminology, the most relevant here being accrual accounting. In particular, in those countries with no accrual accounting history (legacy), it may be harder to conduct and implement an (IPSAS-based) PSA reform. This is because accrual accounting requires the implementation of various unfamiliar concepts, for example double-entry book-keeping, various non-financial transactions (such as depreciation, contingent liabilities or employee benefits) or the development of notes, i.e. disclosures to the financial statement (IPSASB, 2014). It is even more relevant as the IPSAS evolve and adapt to the latest developments, leading to a steady increase in the number and complexity of the standards (Fahmid et al., 2020; Polzer et al., 2021).

The second group contains those issues relating to IT systems. In the context of PSA reforms, such systems are commonly referred to as an ‘integrated financial management information system’ (IFMIS) (Dorotinsky & Watkins, 2013). Only a few global players provide a fully-fledged IFMIS able to handle all the IPSAS requirements. However, having a state-of-the-art IFMIS is not always a goal worth achieving and, in many cases, it is simply not affordable (Dorotinsky & Watkins, 2013; World Bank, 2011). That said, even the most sophisticated IFMIS requires skilled operators, leading back to the previously mentioned issue—human capacity challenges.

Theoretical framework

The core idea of socio-materiality is to view humans and materials (i.e. non-human) as an intertwined network

rather than separate elements (Orlikowski, 2007); or, to put it differently, the technical and social are inherently inseparable. Socio-materiality regards objects and humans as symmetrical, rather than separate, and thus capable of influencing and affecting one another in a reciprocal relationship (Adhikari et al., 2023; Orlikowski, 2007; Tietjen et al., 2021). Socio-materiality relates to other social theories, such as the actor–network theory (Latour, 1994, 1996) which argues that change can only be explained in a network-like combination of human and non-human actors.

Through the lens of socio-materiality, there is no hierarchy of humans over material objects; instead, they are considered equal, giving agency to both in a balanced fashion (Tietjen et al., 2021). Socio-materiality has been applied in different fields of research in the social sciences, such as organizational studies (Adhikari et al., 2023; Orlikowski, 2007), as well as education (Fenwick & Landri, 2012; Sørensen, 2009; Tietjen et al., 2021). In this article, the concept of socio-materiality is used to explain that both social and material reform aspects are relevant success factors. While socio-materiality has been used to explain phenomena relating to PSA (Adhikari et al., 2023), this article is the first attempt to use it in the context of PSA education. Socio-materiality has the potential to be a powerful tool to explain accounting change, because accounting can be seen as an interlinked network of objects (for example spreadsheets, asset registers, accounting standards and IT systems) and humans (for example accountants, controllers, decision-makers and reform sponsors).

Zammuto et al. (2007, p. 751) examined the role of technology in organizational change more closely and concluded that it is often viewed as ‘automated plumbing’ and disregarded the effect technology has on organizational change. Similarly, Mora et al. (2021, p. 2) critically reflected on the ‘problem-solving capability’ of technology, challenging the narrative that the mere implementation and activation of technology automatically leads to the envisaged benefits. One reason for this assumption or ‘taken-for-grantedness’ lies within the rapid changes in technological systems and that it is simply impossible to sustain (Orlikowski & Scott, 2008; Zammuto et al., 2007). In addition, these systems have also grown in specialization, complexity and scale—which applies not only to IT infrastructure but also to the IPSAS as an ever-changing and ever-growing set of standards (Fahmid et al., 2020; Polzer et al., 2021). Accordingly, the intended benefits of organizational change—be they IT systems or a comprehensive set of IPSAS—do not materialize by default simply through activation or implementation but, rather, depend on how users adopt and interact with them (Mora et al., 2021; Orlikowski, 2010).

In education, learning can be seen as a socio-material assemblage (Sørensen, 2009; Tietjen et al., 2021), in the sense that learning is a co-production process of humans and materials through learning tools used in the practice of learning and teaching. Educational activities always connect humans, ideas, materials and symbols into an assemblage (Fenwick & Landri, 2012). The idea of socio-materiality has been applied to studies in education for about three decades, but has gained momentum through a seminal

work by Sørensen (2009, p. 2), who argued that ‘materials may be used by humans, but they may also use the humans and influence and change the educational practice, which then is no longer particularly human; instead it is socio-material’.

Conclusion: Public sector accounting reforms through the lens of socio-materiality

The concept of socio-materiality offers new perspectives and implications to analyse and design PSA reforms. It explains why education plays a vital role in facilitating accounting change. Through the lens of socio-materiality, successful accounting reforms are not solely dependent on fast technical progress (for example a new IFMIS system implemented) but on continuous training of the involved personnel. Successful accounting change can only be achieved by giving equal attention to education and technological advancement at the same time. Education and training can be seen as the lubricant of successful change engines. Education drives and enables technological change: accountants need to know how to apply a new IPSAS standard or how to use a new IFMIS. Decision-makers need to understand accrual information. At the same time, they will also influence and change accounting practices and organizational routines through their decisions and actions. Hence, if one wants to analyse how accrual accounting affects decision-making, one needs to understand the socio-material interplay between accrual practices and the social environment they are embedded in.

This article argues that successful accounting change requires sufficient socio-material capacity: a co-ordinated and integrated approach on developing human and technological capacity. No IFMIS or IPSAS will lead to better accrual numbers without adequate human capacity. Technology alone does not solve problems (Mora et al., 2021; Zammuto et al., 2007). Hence, technological advancements must be met with equal professional development. This can only be achieved through education.

Accounting reforms are complex socio-material reforms. Change, either successful or not, is co-produced by humans and technologies (Mora et al., 2021). It is therefore surprising to see that only a few studies have adopted a socio-material perspective in the context of PSA (Adhikari et al., 2023). Technical progress still receives more attention in PSA research and greatly impacts reform design and financing. There are numerous studies on IPSAS adoption and compliance where accrual progress is often measured against the numbers of standards implemented (for example IFAC/CIPFA, 2019). While such measures are easy to capture and compare, it is unclear whether they correlate with a sustainable and successful reform outcome. Applying a socio-material perspective to PSA reforms requires a shift in the way accounting reforms are designed and evaluated. At first, this would require putting more emphasis on understanding and strengthening the socio-material networks of accounting systems, while education will act as the lubricant for successful change.

In conclusion, the contribution of this article for PSA research is twofold:

- It introduces the IAESB (2019b) terminology of IPD and CPD as a basis of analysis.

- For the first time, it applies the concept of socio-materiality in this context.

In this sense, we believe we constructively contribute to the recent academic debate raised by Karatzimas et al. (2022), as well as Heiling (2020), calling for further research regarding the role and capability of PSAE in relation to IPSAS and PSA reforms in general. Acknowledging the novelty of our analysis, we look forward to seeing future research examining our argument of a strong CPD component in PSA reform design, as well as challenging the explanatory power of socio-materiality in PSAE research. For national and international policy-makers, our findings show that a preliminary evaluation of the CPD capabilities in a given context is needed, before drafting a reform agenda.

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