Constraints and stimuli in the implementation of public accounting reform: Systematic literature review and future research agenda

Abstract

Purpose: This article discusses the adoption of IPSAS in the public sector in developed and developing countries, identifying the constraints and stimuli they represent in the implementation of the public accounting reform. It also presents future research proposals on the factors identified.

Design/methodology/approach: The methodology is based on a systematic review of the literature described by Moher et al. (2009). The final sample includes 90 academic papers published from 2000 to 2022.

Findings: The main findings indicate that there are differences between constraints and stimuli in the implementation of accounting standards between developed and developing countries. In terms of constraints, the main factor in developed countries is the lack of training, whereas in developing countries it is the limitation on financial resources. In addition, the results demonstrate that in developed countries the factors that most encourage the implementation of accounting standards are modernization and improvement of accounting, while in developing countries, encouragement comes mainly from external and internal pressure.

Practical implications: This study helps countries and institutions to learn from experience and better prepare for the accounting reforms of public administration that they will undertake. Managers of public organizations may be willing to make decisions in the adoption of IPSAS if they take into account the factors established herein.

Social implications: This study helps countries and institutions to learn from the experience, better prepare for the public administration accounting reforms that they will undertake, and add greater transparency in the accountability of public accounts to citizens.

Originality/value: In addition to previous studies, this study addresses a number of factors perceived by those involved in the implementation of IPSAS in developed and developing

countries, and provides a robust research agenda to pursue during the coming years as there are several important unexplored questions that invite further research.

Keywords: Public accounting, Reform, Constraints, Stimuli, IPSAS, Public sector

Paper type: Systematic literature review

1. Introduction

In recent decades several public sector accounting reforms have been implemented around the world to improve the harmonization and comparability of public sector financial reporting (Steccolini, 2019; Gómez-Villegas et al., 2020; Sour, 2020). The International Public Sector Accounting Standards Board (IPSASB) has made great efforts to implement accrual-based accounting standards to improve public sector financial reporting worldwide by developing International Public Sector Accounting Standards (IPSAS) for use by governments and other public sector entities (Otavová, 2011; IPSASB, 2019). This reform has been strongly supported by international organizations such as the Organization for Economic Cooperation and Development (OECD), United Nations, World Bank, International Monetary Fund (IMF), and the European Commission (EC) (Adhikari et al., 2011; Grossi and Soverchia, 2011; Lokuwaduge, 2016). The COVID-19 pandemic demonstrates the importance of the public sector, its efficiency, and the effectiveness of the information produced, as well as the importance of supporting countries' economies and the living standards of citizens (Bracci et al, 2021; van Helden et al., 2021).

Most of the previous literature on the topic has focused on analyses of different institutional and economic factors and characteristics affecting the implementation of IPSAS (Gomes et al., 2019; Nakmahachalasint and Narktabtee, 2019; Sellami and Gafsi, 2019; Simpson et al., 2020). The main economic and political factors affecting the positive implementation of IPSAS are related to the political system (Archambault and Archambault, 2009), external economic openness (Alon and Dwyer, 2014), and international pressures (Lokuwaduge and Silva, 2020). Negative influences that have been identified include the complexity of standards (Inkina, 2019; Otrusinova and Pastuszkova, 2013), the legal system, and the political environment (van Helden and Reichard, 2018; Ademola et al., 2020). Some of these studies addressed developed countries and others observed developing and emerging economies, demonstrating great heterogeneity of factors (Sellami and Gafsi, 2019). This is not surprising considering the economic, political, and cultural characteristics of the different countries implementing IPSAS (Syarifuddin, 2018; Mattei et al., 2020; Polzer et al., 2021).

The adoption of IPSAS is a relatively new field of research in the public accounting literature. Although several reviews have been published over the last few years, they mainly address broad issues without investigating specificities in the IPSAS domain. Using the concept of new public management (NPM) and institutional theory, Rajib and Hoque (2016) provide a review of the public sector accounting research from 1992 to 2015 identifying different aspects of standards and discussing the implementation scenario of public accounting standards. Iacuzzi (2021) analyzes the financial indicators for local government based on 79 papers, develops a critical reading of the literature, and offers suggestions for future research.

A literature review on the harmonization of public sector accounting based on IPSAS was conducted by Schmidthuber, Hilgers, and Hofmann (2020). The authors focused on the antecedents of IPSAS adoption and outcomes of its adoption, providing a discussion about the gaps in the research. Polzer et al. (2021) developed a structured literature review of the adoption of IPSAS in emerging economies and low-income countries. Based on the diffusion theory, the findings offered a holistic understanding of the stages of IPSAS reforms and factors that influence the progression of reforms in the context of emerging economies. Moreover, van Helden et al. (2021) reviewed research on public-sector accounting in emerging economies. They concluded that accrual accounting is the main topic and that the majority of the research is dominated by accounting reforms inspired by the concept of new public management, highlighting performance management and budgeting. Finally, based on NPM theory, Grossi and Argento (2022) analyzed changes in the public sector arising from the implementation of public governance reforms. They reported that the practices of public sector accounting have changed, as reflected in the new types of accountability, performance management, and budgeting and reporting information.

Contrary to previous literature reviews that examine a limited number of studies (Iacuzzi, 2021), are not systematic (Rajib and Hoque, 2016), focus on the public governance development (Grossi and Argento, 2022), and analyze only emerging markets (e.g., Polzer et al., 2021; van Helden et al., 2021), this study systematically reviews a large number of studies that were published from 2000 to 2022 with a specific emphasis on stimuli and constraints that have influenced the adoption of IPSAS. The originality is that the present review covers a wide timeline, includes the recently published empirical studies, and addresses the implementation of the IPSAS in developed and developing countries. In light of the IPSAS adoption in developed and developing countries, the research question of this study is the following:

RQ: What constraints and stimuli have been identified in the implementation of public accounting reforms, and what are their differences between developed and developing contexts?

Our analysis of the 90 studies in our sample provides in-depth insights related to major topics as well as numerous avenues for future research. Combining central ideas of institutional theory and NPM, the contribution of this study is twofold: (i) understanding the constraints and stimulus issues of adoption of IPSAS in the public sector and discussing their differences between developed and developing contexts; (ii) mapping the gaps in the literature and suggesting research opportunities in this subset for the coming years.

The results suggest that there are differences between constraints and stimuli in the implementation of accounting standards between developed and developing countries. In terms of constraints, factors that most differentiate developed countries from developing ones are that the former point to the lack of training, while developing countries point more to limited financial resources. In addition, our results demonstrate that there are constraints that are identified in both developed and developing countries, such as the lack of accounting knowledge and skills and limitations of software and information technologies. This can be explained by the implementation of accounting reforms requiring more in-depth accounting and investment in new information technologies (Brusca and Martínez, 2016), which are hurdles to public administrations having very specific characteristics including the history of using cash accounting and forward-looking reports. Such specificities create a resistance to change that should not be overlooked (Brito and Jorge, 2021; Shehadeh, 2022).

Concerning stimuli, our results demonstrate that in developed countries the factors that most encourage the implementation of accounting standards are modernization or improvement and accounting experience, while in developing countries encouragement comes mainly from external and internal pressure. Developed countries are in a more advanced process of implementing accounting reforms while developing countries are almost forced by external and internal pressures to adopt the reforms, especially those stemming from the financing of international organizations (Tawiah, 2022).

Another valuable contribution of this paper is to provide a robust research agenda to follow during the coming years as there are several important unexplored questions that invite further research with theoretical and practical implications. Some of the most promising ones include a detailed analysis of: 1) the conditions in developing countries experiencing the lack of technical support as an obstacle to implementing an accounting system; 2) how the ambiguity and lack of harmonization that occur between budget accounting and accrual accounting in developed countries demotivate the implementation of IPSAS; and 3) whether external pressures from international organizations have actually led to increased quality of accounting information in the developed and developing countries.

The paper is structured as follows. The next section provides a brief theoretical note on the implementation of accounting reforms in the public sector. Then, the methodology is explained and finally the results are presented as the basis for discussions of the findings and opportunities for future research.

2. Literature review

2.1. The evolution of international public accounting

Rise of IPSAS

Formed in 1984, the Governmental Accounting Standards Board (GASB) determined a set of objectives for financial reporting with a strong emphasis on accountability and usefulness of information for decision-making purposes complemented by the possibility of incorporating non-financial measures of service efforts and accomplishments in financial reports. Currently, mindful of the importance of legal and budgetary compliance, the GASB still requires financial fund statements (Chan, 2009).

The International Federation of Accountants (IFAC) created the Public Sector Committee (PSC), which is the origin of the IPSASB. The IPSASB has issued 42 standards to date with the 130-plus countries across the globe that have adopted IPSAS (IPSASB, 2021). IPSAS aims to improve the quality of general-purpose financial reporting, increase transparency and accountability in the public sector, and improve the comparability of financial statements worldwide.

The need for greater transparency and accountability in government financial reporting was heightened by the global financial crisis, which reduced the resources available to governments. In some instances the information contained in cash-based financial statements had been insufficient for countries to predict and prevent sovereign liquidity crises (ACCA, 2017). These factors have encouraged countries around the world to make statements concerning the adoption of standards established on either cash basis IPSAS or accrual basis IPSAS, with various deadlines.

Currently, the IPSASB continues to work on new accounting standards, as is the case of the standard on fixed assets to be issued in the first quarter of 2023, which replaces IPSAS 17. The new standard adds public sector guidance on property and infrastructure assets aligning with the new measurement principles. The IPSASB has also developed three public sector-specific sustainability reporting projects (IPSASB, 2022).

The EC and Eurostat initiated a European Public Sector Accounting Standards (EPSAS) project in 2013 to develop a single accrual accounting system that could potentially become mandatory for all European Union (EU) member states. Although it has been concluded that the already existing IPSAS are not suitable for direct implementation in the EU, they could form an adaptable basis for future EPSAS. Even though EPSAS was seen as a necessary tool for further financial and budgetary integration in the EU, the reality shows that the implementation of IPSAS itself and other public accounting reforms so far has encountered obstacles and benefited from incentives that need to be explored.

Public accounting reform in developed and developing countries

Developed countries have used different approaches in the adoption of IPSAS and are in different stages of adoption, some of which have just begun, while other countries have completed the process. The Association of Chartered Certified Accountants (ACCA) states that despite the intention of the various developed countries to adopt IPSAS, few have completed the process successfully and without problems. Adoption and full compliance with IPSAS standards have been difficult for many countries, and efforts remain as what can best be described as a “work in progress”.

Despite the numerous benefits of IPSAS, its adoption is still not consensual. For example, there are still countries that even though having the resources and infrastructure needed for implementation, such as Finland and Germany, have refused to adopt IPSAS due to criticism of a fair assessment and arbitrary estimation (Tawiah, 2022). None of the countries in the EU have directly adopted IPSAS (Brusca et al., 2016). This reluctance stems in part from the fact that several studies show that IPSAS’ objectives of transparency, accountability, and decision-making are, in practice, below expectations. Yapa and Ukwatte (2015) report that the implementation of IPSAS does not really promote transparency and accountability, as IPSAS promoters have portrayed it. Similarly, Grossi and Steccolini (2015) claim that the adoption of IPSAS may not guarantee the expected disclosure and therefore not improve the quality of governance. Some scholars also argue that the prescriptions of IPSAS are vague and provide no detailed guidance (Agasisti et al., 2015; Bakre et al., 2017; Oulasvirta, 2014; Schmidthuber et al., 2020) and that this can lead to the abuse of discretionary measures for the benefit of politicians and government officials.

The institutional context in developing countries may be largely unsuited for the introduction of IPSAS. IPSAS measures pressured by international donors may be hitting donor targets, but they remain superficial, or they may even be detrimental to development (Polzer et al., 2019). Unlike developed countries, developing countries are characterized by weak regulations and low financial transparency (Fan et al., 2009). They are therefore forced by international organizations such as the World Bank and IMF to adopt high-quality international standards such as IPSAS to combat corruption (Allen, 2009; Brusca and Martínez, 2016; Rossi et al., 2016; Tawiah, 2021), but most countries are slow to adopt these standards. In fact, developing countries are presented as “adopters of IPSAS”, but their circumstances may differ widely, from governments that have expressed only the intention to adopt the standards to those at various stages of the implementation process.

Indonesia started its public sector reform program in 1999, and have the central government consolidation accounts received an unreserved audit opinion for 2016. Nevertheless, local governments continue to prepare their accounts on a modified cash basis. Vietnam is lagging behind and is still in the early stages of assessing the adoption of IPSAS standards, although the IFAC reported as early as 2007 that the country was in the process of moving to IPSAS (Kolesnikov-Jessop, 2018). Tanzania, on the other hand, is a success story in East Africa. The central government has begun implementing global rules by adopting cash-based IPSAS financial statements from the same date and began introducing IPSAS statements of competence in 2012, having improved its financial reporting documentation as a result of the implementation of IPSAS (Mosoba, 2017).

2.2. Related theories

Over the years several theories have been used to study the performance of accounting reforms in public administrations, the use of accrual accounting, and more recently the adoption of IPSAS. The literature on the implementation of IPSAS commonly focus around two predominant theories: NPM theory, as evidenced by the works of Hyndman and Lapsley (2016) and Bracci et al. (2021), and institutional theory, supported by Jacobs (2012) and Van Helden et al. (2021). In addition, Van Helden et al. (2021) conducted a comprehensive literature review, highlighting the prevailing influence of institutional theory in public sector accounting research over the past decade.

NPM theory is an approach that seeks to build an administration that implements flexibility, transparency, decentralization, the market orientation of public services, and privatization. Focussing on efficiency and effectiveness (Biswas, 2020; Bracci et al, 2021), it is a paradigm shift away from traditional public administration, leading to higher demands for reporting and transparency (Grossi and Argento, 2022).

Multiple studies have utilized NPM theory to illustrate the implementation of accounting reforms within public administrations, as demonstrated by van Helden and Reichard (2018), Anessi-Pessina et al. (2016), and Brusca et al. (2016), among others, across diverse contexts. Focusing specifically on developed countries, van Helden and Reichard (2018) conducted an investigation into the shift from cash budgeting to accrual budgeting in central governments. Their findings indicate that the transformation process in all four cases was influenced by various contextual factors, including cash-accounting legacies and prior NPM reforms. Based on the NPM theory, Brusca, Gómez-Villegas, and Montesinos (2016) argue that the adoption of IPSAS in Europe has been influenced by the rescue package, which aims to enhance trust, confidence, and comparability of financial institutions within the public sector. Studies conducted within the developmental context, drawing on the NPM theory, have consistently demonstrated improvements in public sector reporting systems as a result of implementing new accounting reforms (Christiaens et al., 2015; Sellami and Gafsi, 2019; Polzer et al., 2021; Tawiah, 2021).

Institutional theory posits that political, educational, cultural, and economic systems can exert pressure on economic units through three mechanisms of institutionalization: coercive isomorphism, normative pressures, and mimetic processes (DiMaggio and Powell, 1983). This theory emerged in the 1970s, notably through the pioneering work of Meyer and Rowan (1977), who argued that organizations seek legitimacy and, consequently, strive to adapt to their environment. Numerous studies have employed institutional theory to elucidate the adoption of public sector accounting reforms in both developed and developing countries. Notable examples include the works of ter Bogt and van Helden (2000), Harun and Kamase (2012), Hidayah and Zarkasyi (2017), and Jayasinghe et al. (2021).

In their study, ter Bogt and van Helden (2000) examined the effects of public sector accounting on the behaviors of managers and politicians in local governments in the Netherlands. The findings of their research demonstrate that while politics and top management have the ability to implement new accounting systems and procedures, the mere introduction of such measures does not guarantee their adoption by organizational participants. The authors propose that both external and internal pressures play a role in shaping the organizational culture surrounding public sector accounting reforms.

In the context of developing countries, several studies have explored the influence of coercive and normative pressures from institutional theory, particularly regarding how international organizations exert influence to implement IPSAS. Notably, Jayasinghe et al. (2021) contend that enhancing public accounting and transparency in Sub-Saharan African (SSA) countries can be achieved by effectively applying existing regulations and accounting systems. They argue against a purely coercive approach that seeks to replace these systems with externally imposed government accounting reforms. Both Hassan (2015) and Harun and Kamase (2012) emphasize the coercive pressures exerted by international lenders in the Indonesian context to facilitate the adoption of accrual-based accounting practices in line with IPSAS. Harun and Kamase (2012) further illustrate that the instrumental use of accounting as a political tool for control undermines its intended purpose of enhancing performance and efficiency. They argue that existing power structures can hinder the effectiveness of public sector reforms.

Furthermore, Hidayah and Zarkasyi (2017) conducted a study utilizing mimetic institutional theory to investigate the influence of human resource management competency and cultural factors on the implementation of accrual accounting and the resulting quality of accounting information in the Indonesian context. Moreover, Ada and Christiaens (2018) contend that international organizations like IPSASB serve as normative forces, exerting influence for the adoption of IPSAS in the Turkish context. In addition, Rajib et al. (2019), drawing upon the concepts of new institutionalism and entrepreneurship logic, observed that the disparities between Bangladesh and other emerging economies have diminished due to the escalating potency of institutional pressures. However, they caution that the adoption of cash basis IPSAS may still be more of a rhetorical commitment than a practical reality.

One approach to addressing the challenges associated with public accounting reforms involves standardization and the pressure exerted by legal organizations for the adoption of IPSAS (Jacobs, 2012; Van Helden et al., 2021). This issue is particularly prominent in developing countries, where there is additional pressure from international donors and organizations (Polzer et al., 2021). It is important to note that, within the framework of institutional theory, the management of public institutions is influenced by factors such as legitimacy, routines, scripts, and other cognitive phenomena, all of which vary across different contexts. Subsequent research has observed that many governments do not fully embrace IPSAS and have turned to institutional theory to explain the adoption of public accounting reforms (Ada and Christiaens, 2018; Rajib et al., 2019; Jayasinghe et al., 2021).

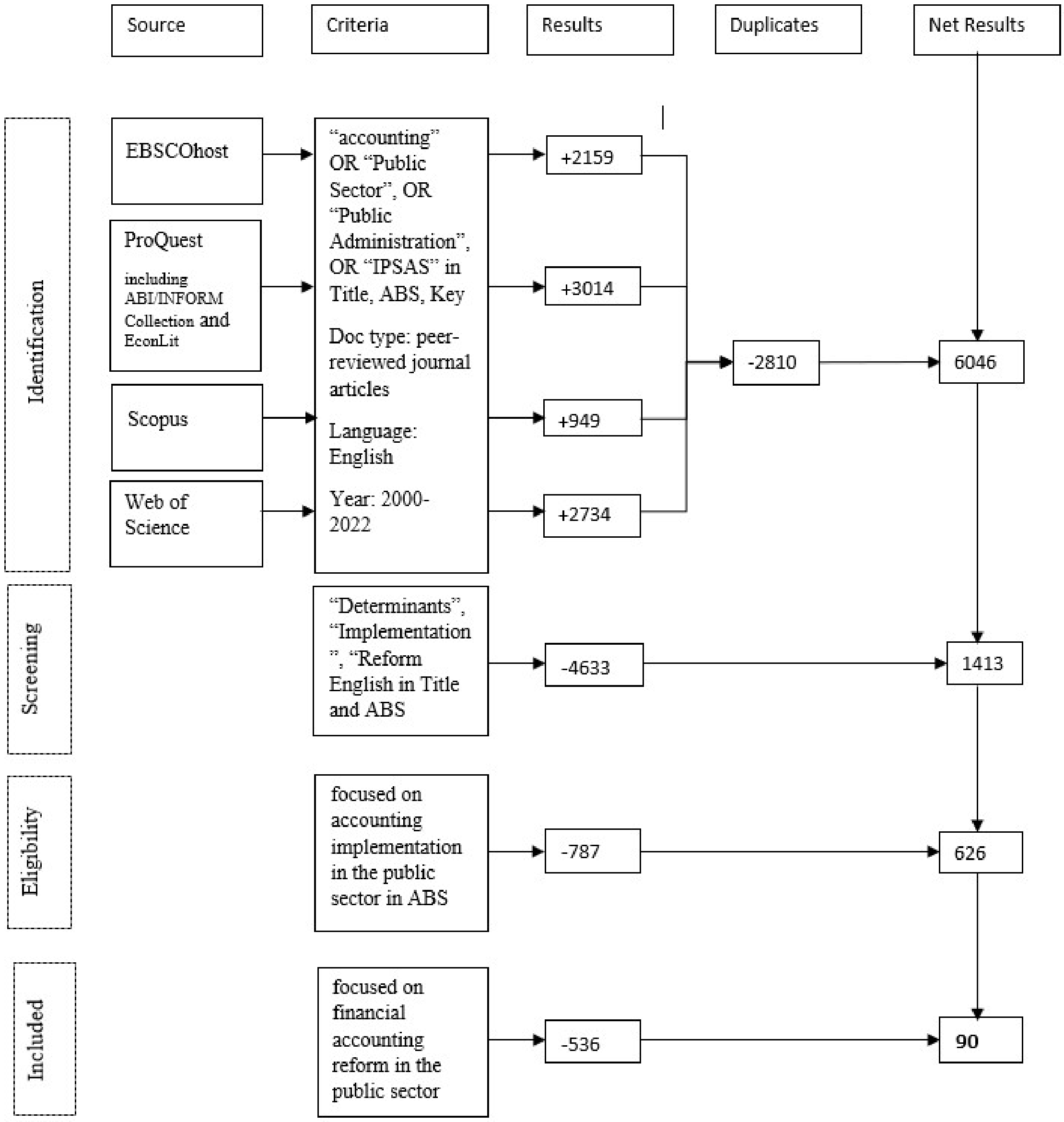
3. Methodology

3.1. Research protocol

The purpose of this study is to identify the factors that both constrain and facilitate the implementation of IPSAS, and discuss their differences between developed and developing countries. We performed a systematic review of the literature published from 2000 to 2022 using a guideline based on the preferred reporting item for systematic review and meta-analysis

(PRISMA) flow diagram (Moher et al., 2009). This method has been used in previous literature reviews in the field of public sector governance (Agostino et al., 2022; Dekker et al., 2020; Herda et al., 2022; Kim et al., 2019; Mu and Wang, 2020; Vale et al., 2022).

Figure 1. PRISMA Flow Diagram



Source: Based on Moher et al. (2009)

Identification of studies. First, to identify articles dealing with public sector accounting reform we use the terms that we consider most relevant to our study, making it possible to select from the three strands of accounting the topics addressing the accounting and stimulating factors underlying the reforms. We searched the databases Web of Science, Scopus, EBSCOhost, and ProQuest, including ABI/INFORM Collection and EconLit, and limited the results to peer-reviewed journal articles published in English. After removing duplicates, 6,044 records remained.

Screening. The relevance of search hits was assessed. We performed an initial screening of the title and abstract of each article by applying the keywords *"Determinants", "Implementation", "Reform", "Constraints"*, and *"Stimuli"*. This further reduced the sample to 1,411.

Eligibility. During the eligibility checks, we reduced our data set to 624 articles after analyzing the abstracts of each one and checking if the paper focused on accounting implementation in the public sector.

Included studies. Upon reading the full texts, we excluded articles that did not focus on our research topic. This led to the exclusion of audit papers and ERP implementation, for example, including only those referring to the implementation of financial accounting reforms in the public sector. This left 90 articles.

3.2. Descriptive analysis

Sources and timeline of the articles

Table 1 shows the distribution of the final list of papers by journal title and according to developed, developing, and multi-country studies. The most informative journal in our sample is *Financial Accountability and Management*, with 8 studies. The vast majority of articles were published in high-impact journals on the SCImago Journal and Country Rank 2019.

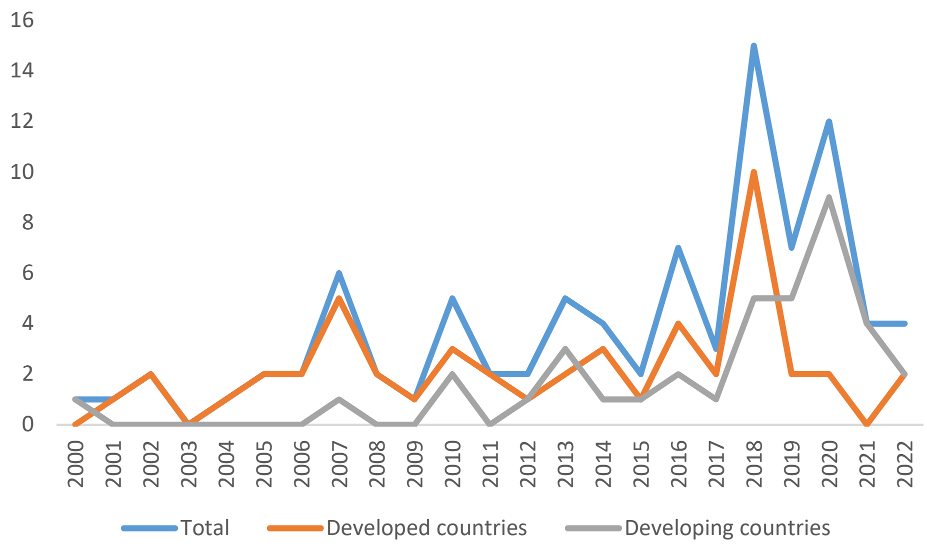
Table 1: Distribution of papers by journal

Journal	Total	Developed Countries	Developing countries	Multiple countries
Financial Accountability and Management	8	5	3	0
Public Money and Management	6	3	2	1
International Journal of Public Sector Management	4	1	3	0
Accounting, Auditing and Accountability Journal	3	3	0	0
International Journal of Public Administration	3	2	1	0
Journal of Accounting and Organizational Change	3	2	1	0
Journal of Accounting in Emerging Economies	3	0	3	0

Journal	Total	Developed Countries	Developing countries	Multiple countries
Journal of Public Budgeting, Accounting, and Financial Management	3	3	0	0
Innovar	2	2	0	0
International Review of Administrative Sciences	2	0	1	1
OECD Journal on Budgeting	2	2	0	0
Research in Accounting in Emerging Economies	2	0	2	0
Others (1 article each)	49	28	21	0
Total	**90**	**51**	**37**	**2**

Research on the implementation of accounting reforms in the public sector has increased over the years although not in a steady trend (see Figure 2). With the COVID-19 pandemic there was a fall in the number of publications pertaining to our topic.

Figure 2. Number of publications by year



Locus of studies

The country analysis (Table 2) shows that there are 9 studies (5.6%) from Indonesia, 7 from Italy (4.4%), and 6 from the United Kingdom (3.8%), while Portugal. Brazil, Spain, and Sri Lanka have 5 studies each. The remaining articles include another 22 countries. There is a degree of empirical breadth of research in the sample, with accounts from developed and developing countries.

Table 2: Locus of studies

Countries	Number of articles	%
Indonesia	9	5.6%
Italy	7	4.4%
Portugal	6	3.8%
United Kingdom	6	3.8%
Brazil	5	3.1%
Spain	5	3.1%
Sri Lanka	5	3.1%
Belgium	4	2.5%
Colombia	4	2.5%
Czech Republic	4	2.5%
Greece	4	2.5%
Malta	4	2.5%
Costa Rica	3	1.9%
Estonia	3	1.9%
Hungary	3	1.9%
India	3	1.9%
Nepal	3	1.9%
Peru	3	1.9%
Argentina	2	1.3%
Australia	2	1.3%
Austria	2	1.3%
Bolivia	2	1.3%
Chile	2	1.3%
Croatia	2	1.3%
El Salvador	2	1.3%
Germany	2	1.3%
Ghana	2	1.3%
Other single countries	31	19.4%

Research methodologies

In terms of research methods, Table 3 shows that qualitative methods have the greatest predominance (65.6%) in both developed and developing countries. Most qualitative studies (22.2%) use survey methodology (Carvalho et al., 2012; Frank and Gianakis, 2010), followed by interviews (17.8%), and 20.2% of the papers analyze data collected through case studies (Lassou et al., 2018; Timoshenko, 2008; Tóth, 2020) in the developed and developing countries.

Quantitative studies represent 27.8% of all studies, with questionnaire and survey data collection predominating (21.1%). In this methodology, most of the studies have been conducted in developed countries.

Table 3: Research methodologies

Methodology	Total	%	Developed countries	Developing countries	Multiple countries
Qualitative	**59**	**65.6%**	**31**	**27**	**1**
Content analysis	7	7.8%	5	2	0
Descriptive	15	16.7%	10	5	0
Case study	20	22.2%	11	9	0
Interviews	16	17.8%	4	11	1
Historical analysis	1	1.1%	1	0	0
Quantitative	**25**	**27.8%**	**16**	**8**	**1**
Survey/Questionnaire	19	21.1%	12	6	1
Mixed Quantitative	3	3.3%	1	2	0
Compliance index	3	3.3%	3	0	0
Multiple	**6**	**6.7%**	**4**	**2**	**0**
	90		**51**	**37**	**2**

Theories on the analytical framework

Table 4 reports the theories used in the studies analyzed. New public management and institutional theory are the prevailing theories in studies in both developed countries (Agasisti et al., 2018; Hyndman and Connolly, 2011; Inkina, 2019) and developing countries (McLeod and Harun, 2014). In addition, many studies used multiple approaches that combine two (Caruana, 2017; Cohen and Karatzimas, 2018) or more theories (Carvalho et al., 2007), which is also the approach followed in studies from developed countries (Amirkhani et al., 2019;

Fahlevi, 2016). Finally, contingency theory is also used in the studies realized in developed countries.

Table 4: Theories on the analytical framework

Theory	Total	%	Developed countries	Developing countries	Multiple countries
Not specified	26	28.9%	12	14	0
New public management	19	21.1%	15	3	1
Multiple approaches	15	16.7%	9	6	0
Institutional theory	11	12.2%	6	4	1
Contingency theory	3	3.3%	3	0	0
Neo-institutional theory	4	4.4%	1	3	0
Others	12	13.3%	5	7	0
	90		**51**	**37**	**2**

4. Findings

4.1 Constraints for public accounting reforms implementation

Table 5 shows the main results of the study, with the distribution of the papers by constraint topics, considering the developed, developing, and multiple countries.

Table 5: Constraints for public accounting reform implementation

Constraints	Total	Developed countries	Developing countries	Multiple countries
Exogenous	**83**	**48**	**32**	**3**
Political environment and commitment	31	16	13	2
Complexity of standards	22	13	8	1
Legal framework	18	10	8	0
Lack of visible benefits	12	9	3	0
Endogenous	**177**	**95**	**72**	**10**
Lack of accounting knowledge and skills	60	32	26	2
Limitations of information technologies	32	17	13	2
Lack of training	25	14	9	2
Limited financial resources	21	8	11	2
Lack of human resources	14	6	7	1
Absence of internal control	13	8	4	1
Relationship between systems	12	10	2	0

Note: The sum of the articles is greater than the total number of articles analyzed. Each article can mention more than one constraint and/or more than one country, and each country is analyzed by more than one article.

The exogenous factors about the implementation constraints of public accounting reforms that we highlight are the political environment and commitment, the complexity of standards, the legal framework, and the lack of visible benefits.

Political environment and commitment. In developed countries, the change of governments and the different priorities of government departments are not conducive to smoothly functioning reforms (Nakmahachalasint and Narktabtee, 2019; Reginato et al., 2010; van Helden and Reichard, 2018). Previous studies demonstrated that there is a lack of governmental commitment and involvement (Christiaens, 2001; Fuentes and Borreguero, 2018; Gomes et al., 2015; Venieris and Cohen, 2004). For instance, van Helden and Reichard (2018) investigate why central governments in European countries have moved to accruals budgeting while others keep using cash budgeting, and find that stakeholders in government show more reluctance when deciding on a budgeting concept than a financial reporting change, which is perceived as being less essential. Based on the local government, Reginato et al. (2010) show that the political environment and pressures discourage the introduction of new accounting tools in Italy.

There is also evidence that in developing countries the political and administrative culture can be one of the main obstacles to reforms, as politicians do not consider the management innovations introduced by reforms as a priority in the agenda (Ahmad and Nasseredine, 2019; Azevedo et al., 2020; Brusca and Martínez, 2016; Gómez-Villegas and Julve, 2012; Jani et al., 2020; Rajib et al., 2019; Shehadeh, 2022; Yuliati et al., 2019). Highly complex, multi-level government structures observed in developing countries such as Indonesia and Iran can also have a negative impact on accounting implementation and complicate the transition process, and sometimes institutions are not flexible enough to adapt to the necessary changes (Gómez-Villegas and Julve, 2012; Lokuwaduge and Silva, 2020). In short, a cultural shift is needed to move from a public administration based on procedures and compliance with laws to one that focuses on a comprehensive quality government environment, analysis of results, efforts, and performance (Ahmad and Nasseredine, 2019; Brusca et al., 2016).

Complexity of standards. Constraints regarding the complexity of standards were mainly observed in developed countries (Fuentes and Borreguero, 2018; Reginato et al., 2010). Otrusinova and Pastuszkova (2013) and find a lack of clear methodology for procedures of the IPSAS adoption. In parallel studies, Ada and Christiaens (2017) find evidence that there is a lack of guidance and templates for policies or procedures that should be adopted by the entity. The complexity stems from the fact that the standards are not specific enough to address public sector issues (Brusca and Martínez, 2016) and that there are difficulties in interpreting some of the technical criteria for implementing the standards (Elmezughi and Wakil, 2018; Hladika, 2022; Hyndman, 2016; Jorge et al., 2007), with uncertainties and doubts surrounding accrual accounting (Bruno and Lapsley, 2018; Santis et al., 2019).

In developing countries, previous literature suggests that the lack of conceptual definitions creates difficulty in interpreting and implementing new accounting standards (Adhikari et al., 2019; Ahmad and Nasseredine, 2019; Al-otoom and Alrabba, 2022; Brusca et al., 2016; Mattei et al., 2020; Shehadeh, 2022). There is also evidence that the importance of translation needs to be emphasized, recognizing that good translation and interpretation are also critical to success in developing countries (Mohammadrezaei et al., 2013; Ada and Christiaens, 2018).

Legal framework. The legal framework has proved to be a negative factor in the implementation of accounting in several developed and developing countries. For example, Jones and Caruana (2014) found a reluctance to change the financial legislation in Malta, as did Caruana (2017) in Italy, where legal instruments exist but are not properly interpreted. Considering the institutional theory, some studies found that EU countries adopted a type of corrective implementation by the imposition of European legislation but the normative form and even mimesis did not follow the change of processes (Ciurea, 2018; Nasi and Steccolini, 2008; Panozzo, 2000).

In developing countries, studies highlight that the legal systems create conflicts and barriers to implementing reforms at the level of public accounting (Adhikari et al., 2013; Brito and Jorge, 2021; Harun et al., 2021; Mbelwa et al., 2018; Mohammadrezaei et al., 2013; Nagirikandalage and Binsardi, 2015; Thanh et al., 2020). Nyahunal and Doorasamy (2021) found that weak environmental legislation spares them from developing and applying environmental management accounting systems within local government.

Lack of visible benefits. One of the factors identified in developed countries is the lack of visibility of the benefits from adopting of IPSAS (Agasisti et al., 2018) complemented by the lack of incentives to participate in the change process (Bruno and Lapsley, 2018; Connolly and Hyndman, 2006; Jorge et al., 2007; Nakmahachalasint and Narktabtee, 2019; Reginato et al., 2010). In addition, some studies emphasize lack of penalties for those institutions that do not apply new reforms (Ada and Christiaens, 2017; Christiaens and van Peteghem, 2007; Venieris and Cohen, 2004).

In developing countries, empirical studies report the lack of penalties (Harun and Kamase, 2012; Sulu-Gambari et al., 2018) and also the absence of performance-based rewards, both of which have largely eroded the motivation of public administrators to engage in the change process and get acquainted with new ideas (Rajib et al., 2019).

Regarding implementation constraints of public accounting reforms, the endogenous factors that can be highlighted are the lack of accounting knowledge and skills, limitations of information technologies, lack of training, limited financial resources, lack of human resources, absence of auditing, and the relationship between systems.

Lack of accounting knowledge and skills. Lack of accounting knowledge and skills was the most frequently cited barrier to implementing accounting reforms in the studies observed in developed (Antipova and Bourmistrov, 2013; Christensen, 2002; Scheers et al., 2006) and developing countries (Adhikari and Mellemvik, 2010; Rajib et al., 2019). In developed countries, several studies have analyzed the influence of a lack of previous experience or insufficient relevant expertise on accounting reform (Ding, 2000; Otrusinová, 2016; Santis et al., 2019). Other studies cite this lack of resilience and change resistance as critical factors to be considered (Agasisti et al., 2018; Arnaboldi and Lapsley, 2009; Christiaens and van Peteghem, 2007; Gomes et al., 2015; Kowalczyk and Caruana, 2022; Tikk, 2010).

In developing countries, authorities and regulators show resistance to adopting change, as the majority of public sector accountants are not trained and qualified for the implementation of the accrual-based IPSAS. Previous studies demonstrated that neither workers nor management have adequate financial and human resources for the implementation of the accrual-based IPSAS, which leads to the top management withholding commitment to the implementation of the accrual-based IPSAS (Ahmad and Nasseredine, 2019; Azevedo et al., 2020; Harun, 2007;

Ismaili and Ismajli, 2020; Tetteh et al., 2021; Thanh et al., 2020; Yuliati et al., 2019). The resistance to change is one of the barriers (Al-otoom and Alrabba, 2022; Brito and Jorge, 2021; Tetteh et al., 2021) because the age of senior managers has a negative impact on accounting implementation (Neves and Gómez-Villegas, 2020) for fear of losing control over the budget authority (Adhikari et al., 2019).

Limitations of information technologies (IT). Lack of technical support as an obstacle to implementing an accounting system is notable, especially the lack of an IT system (Bruno and Lapsley, 2018; Gigli et al., 2018; Hladika, 2022; Jorge et al., 2019; Lutilsky et al., 2016; Scheers et al., 2006; Venieris and Cohen, 2004) in both developed and developing countries. For instance, Caruana (2017) found that there was an insufficient allocation of funds for the acquisition of the new IT system, resulting in a strong barrier to the implementation of the accounting reform in Malta. In the same line, several authors argue that the implementation requires changes in too many systems to accommodate the accounting process, as this implementation sometimes creates an unwanted dependence on a commercial software provider (Cohen et al., 2007; Klimavičienė and Mykolaitienė, 2007; Ridder et al., 2005).

Also in developing countries, technological weakness is one of the major factors affecting IPSAS implementation (Ademola et al., 2020; Ahmad and Nasseredine, 2019; Harun et al., 2013; Ismaili et al., 2021; Mbelwa et al., 2018; Yahya et al., 2018; Yuliati et al., 2019), which makes process fairly difficult. Brusca et al. (2016) and Gómez-Villegas et al. (2020) show a greater problem related to information technologies, demonstrating that the new financial management information system was too complex, too expensive, and required too many system changes.

Lack of training. Several studies point out that in developed countries one of the difficulties in adopting accrual is the lack of training programs (Carvalho et al., 2007; Connolly and Hyndman, 2006; Elmezughi and Wakil, 2018; Fuentes and Borreguero, 2018; Nakmahachalasint and Narktabtee, 2019; Pina and Torres, 2002; Tóth, 2020). In developing countries, Rajib et al. (2019) found that in Bangladesh the lack of education and training opportunities for government accountants largely eroded the motivation of public administrators to engage in the change process and become acquainted with new ideas. The same problem occurs in other countries, where education and training are largely insufficient

(Adhikari and Mellemvik, 2010; Ahmad and Nasseredine, 2019; Brito and Jorge, 2021; Brusca et al., 2016; Simpson et al., 2020; Tickell, 2010).

Limited financial resources. In developed countries, the processes to implement accounting reforms are very costly and involve many expenses, including staff training, hardware, and software acquisition (Klimavičienė and Mykolaitienė, 2007; Lentner et al., 2020; Nakmahachalasint and Narktabtee, 2019; Ridder et al., 2005). For example, in a recent study about the constraints for the implementation of an accrual basis in public sector accounting in Croatia, Hladika (2022) found that public sector managers rated financial resources as the greatest constraint. The main reasons reported are the expected significant investments in software, additional education, and employee training.

However, the limited financial resource constraint is mentioned much more in studies conducted in developing countries (Ademola et al., 2020; Ahmad and Nasseredine, 2019; Azevedo et al., 2020). In other words, developing countries have major difficulties in getting adequate infrastructure and the human and financial resources to apply the standards (Brusca et al., 2016; Harun et al., 2021; Shehadeh, 2022; Thanh et al., 2020).

Lack of human resources. Human resources are the pillar of any organization, and their lack can compromise any type of reform, whether accounting or not. This problem is felt in developed countries on reform accounting implementation (Eriotis et al., 2012; Fuentes and Borreguero, 2018; Hladika, 2022; Jones and Caruana, 2014; van Helden and Reichard, 2018; Ismaili et al., 2021).

In developing countries, empirical literature underscores scarcities of human capital (Brito and Jorge, 2021; Gómez-Villegas et al., 2020; Mohammadrezaei et al., 2013) This problem is confirmed by Yuliati, Yuliansyah, and Adelina (2019), who mention that this human resource issue is found in almost all of the local governments sampled in Indonesia, that it is generally difficult to find accounting staff with an accounting background, and that human resources are inadequate in terms of quantity and quality.

Absence of internal control. In developed countries, the lack of internal control is identified as a constraint to the implementation of public accounting reform (Ada and Christiaens, 2017; Christiaens, 2001; Haldma and Kenk, 2014; Nakmahachalasint and Narktabtee, 2019). The study of Carvalho, Camões, Jorge, and Fernandes (2007) found that in Portuguese municipalities there is no legal entity to perform audits and that in fact the audits are carried out by the Court of Accounts and the General Financial Inspection authorities only to scrutinize legal form and fiscal regularity. Audits do not assess compliance with the new accounting system requirements in terms of policies and practices. The same problem was found in Flemish municipalities, which are not subject to a professional full audit and so do not stimulate the municipalities to comply with the reformed accounting regulations (Christiaens and van Peteghem, 2007).

In developing countries, the problem is almost the same (Tetteh et al., 2021). An investigation in Iran reveals that the lack of a single auditor in the executive systems is one of the most important administrative problems of financial supervision of auditors in the implementation of the public sector accounting system (Jani et al., 2020).

Relationship between systems. Previous studies point out that having various accounting systems simultaneously without abandoning an earlier one is an obstacle to successful reform implementation (Arnaboldi and Lapsley, 2009; Christiaens and van Peteghem, 2007; Hrůza and Valouch, 2016; Hyndman and Liguori, 2018; Scheers et al., 2006; van der Hoek, 2005). For example, Brusca and Julve (2014) addressed the duality of financial and budgetary accounting systems, which is a barrier to implementing accrual accounting in Spanish local governments.

Developing countries highlight the non-integrated systems. In Sri Lanka, Nagirikandalage and Binsardi (2015) found that all the areas in accounting are not yet linked to each other, and in Ghana, a lack of integration between human resources needs for organizations to engage with their external environment is one of the main issues of modern institutionalism (Tetteh et al., 2021).

4.2 Constraints - opportunities for future research

Developed and developing countries

Political environment and commitment are strong constraints on the reform of accounting found in developed and developing countries. In both cases there is a lack of top management support, a lack of support from the authorities, and the adoption of accrual accounting is not a priority (Araya-Leandro et al., 2011). Gómez-Villegas et al. (2020) found that some countries and governments are claiming that they follow the standards, ignoring their prerequisites and the internal changes that their implementation requires. For future research it would be interesting to compare developed and developing countries regarding different political environments to adopt the IPSAS.

Previous studies have demonstrated that the lack of a system of penalties leads to less commitment to IPSAS implementation on the part of the actors involved. Future research could compare the results of the implementation of accounting reforms in cases where there have been incentives for implementation, with cases where there have been penalties for non-compliance, to assess which of the measures best contributes to the success of the reform in the public sector.

The lack of accounting knowledge and skills is clearly the greatest factor of embarrassment in the implementation of accounting reforms. Further research may address this factor, analyzing whether the implementation of IPSAS contributed to the reduction of the lack of accounting knowledge and consequently contributed to the increase in the quality of accounting reports in the public sector in developed and developing countries.

The adoption of new accounting standards requires resources such as investments in IT systems. Lutilsky et al. (2016) identified that the greatest constraint to the implementation of the accrual accounting basis is political support and IT support. Scheers et al. (2006) sought to determine whether the information technology system has caused problems in Australia and the UK. Cohen et al. (2007) studied the IT failure experienced by Greek municipalities resulting from shortcomings of the software provided by vendors. Additional research could seek to identify whether the best solution for the implementation of accounting reforms is to use computer systems designed and defined by software vendors or to develop IT internally. An additional area of interest in IT systems would be to determine if developing and using eXtensible Business Reporting Language (XBRL) for financial statements addresses the challenges of a digital economy. XBRL has become mandatory in some countries for public sector organizations that adopt new accounting reforms. Future research could explore if cost reduction can be achieved by implementing electronic reporting (Grossi et al., 2023).

The absence of internal control is one of the factors identified in both developed and developing countries that are always present in the implementation of accounting reforms. The results of the study by Jani et al. (2020) underscore that auditors have a significant impact on the correct implementation of the public sector accounting system. Further research should assess the impact of the role of external auditors on the degree of implementation of accounting standards.

Developed countries

For developed countries, Fuentes and Borreguero (2018) concluded that regarding the number of human resources, the need to increase the number of people who work in the financial control area is apparent, especially in small local governments. This is one of the most important variables that determine an organization’s administrative capacity at the micro and macro levels (Duque, 2012). For future investigations we suggest the creation of Key Performance Indicators (KPIs) that allow for a comparison of the implementation of IPSAS in organizations with different administrative capacities and the quality of accounting information according to the new public reforms.

In the public sector of developed countries, the coexistence of budget, finance, and management accounting is frequent, each with its own rules and implementations at different paces, which causes some discordance. For example, Brusca and Montesinos (2014) determined that one of the demotivating factors in the implementation of IPSAS is the ambiguity and lack of harmonization that occurs between budget accounting and accrual accounting. It is therefore important to investigate this dichotomy by analyzing public sectors that have implemented budgetary, financial, and management accounting to assess the problems and benefits of coexistence.

Developing countries

The complexity of standards is most often seen in developed countries, with many uncertainties and doubts surrounding exercise accounting in the public sector. There is an underestimation of the complexity of financial accounting, especially its requirement to value and register assets (Adhikari et al., 2019; Scott et al., 2016). This is probably because the process of accounting harmonization is based on the application and adoption of models based on Anglo-American traditions. Future research might examine the relationship between the level of development and the level of implementation of IPSAS in a country.

The implementation of accrual accounting carries very high costs that become difficult to bear, especially in developing countries. Authors such as Ademola et al. (2020) and Ahmad and Nasseredine (2019) defend that a considerable amount of money should be set aside for the full adoption and implementation of IPSAS. This could be done by requesting support from various financial institutions, based on experiences using know-how and various donor projects, to finance and support the reform and its costs. Shehadeh (2022) argues that international institutions such as the IMF and World Bank should provide technical and financial assistance to developing nations in their implementation of IPSAS. Future investigations could compare the efficiency and effectiveness of implementing accounting reforms among countries that have had external financial assistance to implement such reforms compared to countries that have not.

4.3. Stimuli for public accounting reforms implementation

Table 6 shows the main results of the study, with the distribution of the papers by stimuli topics, considering the developed, developing, and multiple countries.

Table 6. Stimuli for public accounting reform implementation

Stimuli	Total	Developed countries	Developing countries	Multiple countries
Exogenous	**21**	**9**	**12**	**3**
External pressure	17	5	10	2
Financial crisis	7	4	2	1
Endogenous	**50**	**29**	**19**	**2**
Internal pressure	17	6	10	1
Modernization or improvement	16	9	6	1
Consultants' involvement	9	6	3	0
Accounting expertise	8	8	0	0

Note: The sum of the articles is greater than the total number of articles. Each article can mention more than one stimulus and/or more than one country, and each country is analyzed by more than one article.

Regarding implementation stimuli of public accounting reforms, we found external pressure and financial crisis as the leading exogenous factors.

External pressure. The reform in the public sector toward improving accounting and financial information has been strongly influenced by the involvement of international organizations (Adhikari et al., 2011; Grossi and Soverchia, 2011; Lokuwaduge, 2016; Yapa and Ukwatte, 2015). Christiaens et al. (2015) examine the external pressures of the new public reforms and found that within them there are different external pressures to adopt new public reforms. For example, Sweden, Finland, and the Netherlands were leaders in the new accounting developments, contrary to Romania and Ukraine, where the transition to accounting reforms has not been easy since the end of the communist era. Eastern European countries including Bulgaria, Croatia, Slovakia, and Slovenia appear to adopt the IPSAS more intensively, motivated by their wish to adhere to the EU. Finally, the harmonization process has been weak and partial in Italy, France, and Spain due to inadequate harmonization among different levels of government, which was then reflected in external harmonization (Ada and Christiaens, 2018; Gomes et al., 2015; Haldma and Kenk, 2014).

External pressure is very pronounced in developing countries but previous studies indicate that the reasons are different compared to developed countries. Due mainly to ethnic and political conflicts and sometimes wars, developing countries depend largely on international aid and loans for development activity, which has resulted in high external debt. Consequently, due to their elevated dependence on international funding and other resources, developing countries are under pressure from international organizations to adopt public sector accounting reforms for better accountability and transparency (Adhikari et al., 2013; Harun et al., 2021; Krishnan, 2021; Lokuwaduge and Silva, 2020; Mbelwa et al., 2018; Tetteh et al., 2021).

Financial crisis. In times of financial distress and scarce resources, the need for this kind of information is even greater. The global financial crisis caused great turbulence in various European countries, mainly evident in financially weaker member states such as Spain, Portugal, Italy, and Greece. This led to the development of a unique formation of external fund providers aiming to provide financial support to developed countries in need. For example, in Portugal the financial crisis was attributable to a great dependence on money lent by the IMF. The Portuguese government has now been reforming its financial information systems following international requirements oriented to IPSAS, copying the changes successfully introduced by other countries (Gomes et al., 2015). In the same line, Agasisti, Catalano, and Erbacci (2018) also found that the dramatic crisis involving Italy's national debt highlighted the need to improve financial reporting within governments and public sector organizations.

In developing countries financial crises are the drivers of most changes in public administrations. Sri Lanka is largely dependent on international aid and loans for development activity and the adoption of the accrual-based IPSAS as a measure of the effective use of public sector resources and transparency of financial information systems in the public sector (Lokuwaduge and Silva, 2020). Harun, Eggleton, and Locke (2021) mention that the Asian efforts to reform public sector finance practices following the financial crisis became a priority to make the handling of government expenditures more efficient and economical. Also, in Latin America the reforms of public financial management originally sought greater fiscal stability, intending to improve public finances and encourage economic growth in several waves (Gómez-Villegas et al., 2020).

Internal pressure, modernization and improvement, consultant involvement and accounting expertise were found to be the most important endogenous factors regarding the implementation stimuli of public accounting reforms.

Internal pressure. The literature shows that local governments have largely perceived consolidated financial statements as a tool that they can use to provide a clearer picture of their efficiency and effectiveness in the use of public resources while improving their transparency and raising the public's perception of their organizational conduct (Santis et al., 2019). In European countries such as Portugal (Gomes et al., 2015), Estonia (Haldma and Kenk, 2014), Hungary (Lentner et al., 2020), and Malta (Jones and Caruana, 2014) pressure from the central and local governments is seen as a stimulus in accounting reform through the adoption of the business accounting model to improve the economy and the efficiency and effectiveness of government operations.

Achieving improved efficiency, effectiveness, and transparency are very important incentives in developing countries in their accounting reforms that include mechanisms to fight corruption and increase accountability, which would allow for a more accurate assessment of the use of resources (Brito and Jorge, 2021; Gómez-Villegas et al., 2020; Krishnan, 2021; Mbelwa et al., 2018; Nagirikandalage and Binsardi, 2015; Rajib and Hoque, 2016). For instance, Harun and Kamase (2012) pointed out that the adoption of the new reporting system in Indonesia was stimulated by the wish to improve government organizations' performance. Tetteh et al. (2021) found that the pressure coming from stakeholders was one of the main drivers of the government's decision to adopt, implement, and use integrated financial management information systems (IFMIS) for the management of public financial resources.

Modernization and improvement. In public finances the books have become up-to-date, the classifications have been rearranged, and the use of appropriations complies with the relevant requirements (Ismail et al., 2018; Santis et al., 2019). For that, Hungary made a transition to accrual accounting, and the efficiency of business management has improved and has become more transparent, while accountability has also improved (Lentner et al., 2020). The fact that the government does not have a formal accounting system that is considered "modern" by the external environment makes it vulnerable to claims of negligence. This happened in Malta and it explains why a government would develop a new accounting system before deciding on the broader conceptual design features behind that new system (Caruana, 2017; Jones and Caruana, 2014; Kowalczyk and Caruana, 2022). In addition, Haldma and Kenk, (2014) found that the public sector in Estonia saw the expanding NPM concept for improving the efficiency and effectiveness of the public sector based on better financial and non-financial information, as a significant incentive for accounting reform.

In developing countries such as Colombia and Peru, for example, the main stimulus in the harmonization and adoption process of IPSAS has been the aim to modernize accounting systems, seeking to increase transparency in the use of financial resources (Brusca et al., 2016). Simpson, Tetteh, and Agyenim-Boateng (2020) determined that a major aim of the adoption and implementation of new accounting reforms in Ghana is to enhance transparency and accountability in the use of public resources and to reduce wasteful spending, and at the same time enhance credibility in the management of public resources and ensure improvement in budgeting preparation and execution.

Consultants' involvement. Consultants' involvement can help to solve the skills shortages that have hampered IPSAS adoption, can provide the technical expertise needed to improve performance, and provide an enabling environment for IPSAS adoption. In developed countries, an incentive for the implementation of accounting was found, namely the involvement of consultants (Connolly and Hyndman, 2006; Eriotis et al., 2012; Nakmahachalasint and Narktabtee, 2019). This can be found in the Flemish government, where the mere involvement of consultants can be considered a significant factor positively affecting the level of compliance to the reform at different periods (Christiaens and van Peteghem, 2007). The study conducted by Haldma and Kenk (2014) revealed auditors' requirements to be a stimulus for governmental accounting reform, as they substantially improved the accounting procedures in Estonian local governments moving toward the accrual basis and business accounting, and supported the formation and delivery of fairer and more reliable financial information (Christensen, 2002).

In developing countries, previous studies found consultants' involvement to be a stimulus for IPSAS adoption. For example, Shehadeh (2022) found that the involvement of external and internal auditors throughout the implementation process is one of the most important pre-requisites for the successful implementation of accrual-based IPSAS in the Jordanian public sector.

Accounting expertise. Ismail et al. (2018) mention that "change valence" has a significant impact on the willingness to adopt accrual accounting. However, the level of education of the accounting department staff and the level of specific training are important positive factors in explaining the alternative implementation scenarios adopted by different organizations in developed countries (Eriotis et al., 2012; Hyndman and Liguori, 2018). These alternative implementation scenarios are improved by the available accounting, regular assessments, and corrective actions that are perceived by the departments as being more efficient and effective (Scheers et al., 2006).

In an attempt to understand why central governments in some countries have moved to accruals budgeting while others continue to use cash budgeting, given that both groups of countries share that their financial reporting system has become accruals-based, van Helden and Reichard (2018) analyzed four countries: Belgium, Portugal, the United Kingdom, and Austria and found that accrual-based accounting information would require more accounting expertise than cash-based accounting information from public sector managers and especially from politicians. In Austria, the reform was facilitated by accrual elements already existing in the formally established hybrid bookkeeping system. In Greece, Eriotis, Stamatiadis, and Vasiliou (2012) analyzed the implementation of accrual financial and cost accounting practices in public hospitals and concluded that the education level of accounting department staff and the level of specific training are important positive factors in explaining the alternative implementation scenarios adopted by different public hospitals. In Malaysia, the government continually ensures the availability of experts and human capital to ensure the successful transition from cash accounting to accrual accounting (Ismail et al., 2018).

In developing countries, there are no studies identified that directly point to accounting expertise as a stimulus for IPSAS adoption. For instance, in Indonesia the government took special note of the accounting staff's competence, recruited new accounting staff, and encouraged the accounting staff to pursue higher education (Mulyani et al., 2018). In Cape Verde, Brito and Jorge (2021) analyzed the process of institutionalization of a new public sector accounting system and found that one of the drivers of the reform was a dominating doctrine of business accounting.

4.4 Stimuli – opportunities for future research

Developed and developing countries

The global financial crisis shifted the focus of accounting and financial management of the public sector in both developed and developing countries. IPSAS adoption in European countries has arisen after financial crisis to improve trust and comparability and quality of public sector accounting information (Brusca and Martinez, 2016). For example, in Portugal the financial crises that occurred were a stimulus to improve the accounting and reporting situation (Gomes et al., 2015). In Greece, despite the crisis that led to operations under special circumstances of financial pressure, the choice was to strengthen the existing money-based budget system (Cohen and Karatzimas, 2018). The recent crises represent an opportunity to explore the role of accounting under extraordinary conditions and difficult times. Future research needs to look more at the how the power of accounting can be used to buffer and anticipate the consequences of financial crises (Steccolini, 2019). Accounting systems can thus play a considerable role in shaping how crises are perceived and interpreted, providing organizations with tools and capacities to deal with unexpected events.

The modernization of governmental accounting has spread around the world. In both developed and developing countries governments are aware of the importance of modern accounting systems (Brusca and Martínez, 2016). Kowalczyk and Caruana's (2022) study mentioned that showing how the traditional cash-based budgetary accounting system has persisted amidst attempts by governments to "modernize" their accounting systems to perhaps meet private sector professional expectations reveals comprehensibility legitimacy. The modernization of governmental accounting brings new attention to how the technologies and digital solutions transform the way the public sector works. This may provide oportunities for future research to investigate how the public sector uses the different forms of information and communication technologies that offer the possibility of more efficiency in the adoption of international accounting standards (Grossi et al., 2023).

Concerning the factor of internal pressure as a stimulus in the implementation of accrual accounting, it should be seen that organizations in both developed and developing countries are also under internal pressure to implement accounting reforms, especially as managers see this reform as a way to improve the transparency of results. Simpson et al. (2020) state that accounting reform promotes efficiency, effectiveness, accountability, transparency, data management security, and comprehensive financial reporting to reduce wasted spending and corruption. Further research can investigate if in the countries where IPSAS has been implemented, there was an increase in efficiency and effectiveness in the management of public money.

Analyzing the consultants' involvement factor in developed and developing countries, external management consultants have been identified as key levers in the process of changing management practices in the public sector and facilitating the implementation process as technical implementation support and also as a "source of knowledge" (Lassou et al., 2018). Christensen (2002) concluded that the role of management consultants in the promotion, design, and implementation of public sector exercise accounting has been one of the most significant instances of epistemic influence on the inner workings of government over the past two decades. Future investigations can be carried out to determine how the quality of external consultants is a decisive stimulus in the implementation of IPSAS.

Developed countries

In developed countries accounting experience is a stimulating factor in the implementation of new international standards. Hyndman and Liguori (2018) showed that the changes in Westminster's public accounts were reinforced by the experience of the actors. Further research could also investigate how legitimation strategies enable actors to establish and exercise different power relationships during processes of change. Accounting experience can lead public sector organizations to develop new reporting tools in combination with the use of IT to create additional spaces for democratic participation (Grossi et al., 2023). Hence, future studies can investigate how the new reforms adoption use accounting experience to prepare and communicate information for citizens and other stakeholders. Internet and social media are digital tools for capturing citizens' perception about new public reforms adoption, involving them in public administration activities and increasing transparency for several stakeholders (Cohen et al., 2017). In turn, it would be interesting to investigate how accounting experience in using the digital tools can also be useful when preparing financial and non-financial reports for communicating with stakeholders.

Developing countries

Developing countries are known to often have weak or limited public financial management and accounting systems (Sellami and Gafsi, 2019), and the adoption of accounting reforms is the external factor that can signal improvements in public sector financial reporting systems (Tawiah and Soobaroyen, 2022). The institutions are providers of conditional promises of legitimacy, by which conditions require the state to agree on convergence with international standards. Krishnan (2021) pointed out that these institutional influences may likely lead to the existence of disparities between reasoning and real reasons for government accounting reforms undertaken by developing countries.

So far, a number of factors such as regulation, the experience of private sector international standards, openness, public value, and co-production are associated with IPSAS adoption. In turn, it would be interesting to examine the consequence of implementation of public accounting reforms, and how external pressures from IPSAS adoption translate into benefit outcomes for these countries. In addition, whether external pressures from international institutions such as the World Bank, IMF, African Development Bank, and Asian Development

Bank, in the context of policital and conceptual challenges, have actually led to increased quality of accounting information (Polzer et al., 2019).

5. Conclusion

This article discussed the adoption of IPSAS in the public sector in developed and developing countries, identifying the constraints and stimuli mentioned in 90 papers published from 2000 to 2022. It also addressed a number of perceptions of those involved in the implementation of IPSAS in developed and developing countries, and provided a robust research agenda to explore during the coming years.

Implementation of public accounting reforms in the developed and developing contexts remains the subject of considerable debate (Polzer et al., 2021). Addressing NPM theory and institutional teory, this paper identified constraints and stimuli factors in the implementation of public accounting reforms as well as the differences between developed and developing contexts. The main results suggest that there are differences between constraints and stimuli in the implementation of accounting standards between developed and developing countries. This is comprehensive, as the developed countries have used different approaches in the adoption of IPSAS and are in different stages of adoption, as compared to developing contries (Rossi et al., 2016). So far, it is widely argued that a number of factors such as political environment, regulation, corruption, financial resources, and salience of public sector organization differ between developed and developing countries (Tawiah and Soobaroyen, 2022).

Institutional theory emphasizes that the successful implementation of new accounting reforms relies on the actions of individuals and groups, who employ various logics to ensure consensus (Lapsley and Pallot, 2000). When examining the differences between developed and developing countries, research grounded in institutional theory suggests that the specific arrangements of institutions, intertwined with locally constructed issues, play a significant role in determining which accounting system is adopted and the type of government involved (Harun and Kamase, 2012). Moreover, the pressure to adopt IPSAS is particularly evident in developing countries due to the influence exerted by international donors and organizations (Polzer et al., 2021).

In terms of constraints, we find evidence that the main factor in developed countries is the lack of training, whereas in developing countries it is the limited financial resources. In addition, we identify constraints that are relevant in both developed and developing countries, such as the lack of accounting knowledge and skills, and limitations of software and information technologies. In turn, this study delineated the future directions for research on constraints factors in the adoption of public sector accounting. An ongoing debate about global implementation of public accounting reform includes a continuing suspicion that the costs of implementation far outweigh the benefits.

In terms of stimuli, we find evidence that the main factors in developed countries are modernization or improvement and accounting expertise, and in developing countries, external and internal pressure. Interestingly, accounting expertise is the stimulus for IPSAS adoption identified for developed countries. In addition, we identify stimuli that are relevant in both developed and developing countries, such as consultants' involvement and financial crisis.

The previously presented overview highlights several areas that are more mature within accounting studies (political environment, accounting knowledge and skills, financial crisis, external and internal pressure) or are developing (modernization, financial resources, internal control) depending on the country context. The most unexplored stages in the IPSAS adoption are the lack of human resources in the developed countries and the relationship between systems and lack of visible benefits in developing countries. Future research needs to address these issues and investigate the role of some accounting quality factors as a consequence of IPSAS adoption, such as readability (Ciurea, 201), and public values of accounting reforms (Bracci et al, 2021). Simultaneously, tecnological innovation has also profoundly modified public sector accounting, including the digital forms of information and communication technologies that are gaining interest in theory and practice for their potential to reach stakeholders (Jayasinghe et al., 2020). Accounting experience in using the digital tools also affects preparing financial and non-financial reports for communicating with stakeholders.

This study makes a significant contribution to academic knowledge and holds practical and social implications. It presents a comprehensive systematic literature review that analyzes all relevant studies on the adoption of IPSAS in the public sector, encompassing both developed and developing countries. By identifying the constraints and stimuli associated with IPSAS adoption, this study offers valuable insights for future research directions, making a meaningful contribution to academia.

The findings of this study hold practical relevance for public organizations currently engaged in the implementation of accrual accounting and, specifically, the adoption of IPSAS. The study's insights can assist these organizations in navigating the challenges and opportunities that arise during the implementation process. Additionally, the findings are pertinent to countries and their organizations that are considering undertaking the adoption of IPSAS, providing valuable guidance and lessons from the existing body of literature. This study holds significant value for managers of organizations involved in the transition to exercise accounting, as it identifies key factors that can assist them in making informed decisions during this process. By understanding the factors discussed in this study, managers can make more effective choices and navigate the challenges associated with transitioning to exercise accounting.

Furthermore, this study has broader societal implications. It sheds light on the factors that influence the paradigm shift towards greater transparency in public accountability, benefiting both citizens and taxpayers. By highlighting these factors, the study contributes to fostering a more transparent and accountable public sector, which ultimately enhances trust and accountability between the government and society.

REFERENCES

* = included in the literature review

ACCA. (2017). IPSAS implementation: current status and challenges about ACCA. *ACCA Magazine*, 30

*Ada, S. and Christiaens, J. (2017). Why do some Municipalities apply accrual-based rules mores than others? Evidence from Turkey. *Ekonomie a Management*, *20*(3), 189–206. https://doi.org/10.15240/tul/001/2017-3-013

*Ada, S. and Christiaens, J. (2018). The magic shoes of IPSAS: Will they fit Turkey? *Transylvanian Review of Administrative Sciences*, *14*(54E), 5–21.

https://doi.org/10.24193/tras.54E.1

*Ademola, A., Ben-Caleb, E., Madugba, J., Adegboyegun, A. and Eluyela, D. (2020). International public sector accounting standards (IPSAS) adoption and implementation in Nigerian public sector. *International Journal of Financial Research*, *11*(1), 434–444. https://doi.org/10.5430/IJFR.V11N1P434

*Adhikari, P., Kuruppu, C. and Matilal, S. (2013). Dissemination and institutionalization of public sector accounting reforms in less developed countries: A comparative study of the Nepalese and Sri Lankan central governments. *Accounting Forum*, *37*(3), 213–230. https://doi.org/10.1016/j.accfor.2013.01.001

Adhikari, P., Kuruppu, C. and Mellemvik, F. (2011). Public sector accounting reforms in two South Asian countries: a comparative study of Nepal and Sri Lanka. *Conditions for entrepreneurship in Sri Lanka: A Handbook* , 257–282

*Adhikari, P., Kuruppu, C., Ouda, H., Grossi, G. and Ambalangodage, D. (2019). Unintended consequences in implementing public sector accounting reforms in emerging economies: evidence from Egypt, Nepal and Sri Lanka. *International Review of Administrative Sciences*. https://doi.org/10.1177/0020852319864156

*Adhikari, P. and Mellemvik, F. (2010). The adoption of IPSASs in South Asia: A comparative study of seven countries. *Research in Accounting in Emerging Economies*, *10*, 169–199. https://doi.org/10.1108/s1479-3563(2010)0000010012

Agasisti, T., Catalano, G., Di Carlo, F. and Erbacci, A. (2015). Accrual accounting in Italian universities: a technical perspective. *International Journal of Public Sector Management*, *28*(6), 494–508. https://doi.org/10.1108/IJPSM-02-2015-0026

*Agasisti, T., Catalano, G. and Erbacci, A. (2018). How Resistance to Change Affects the Implementation of Accrual Accounting in Italian Public Universities: A Comparative Case Study. *International Journal of Public Administration*, *41*(12), 946–956. https://doi.org/10.1080/01900692.2017.1301469

Agostino, D., Saliterer, I. and Steccolini, I. (2022). Digitalization, accounting and accountability: A literature review and reflections on future research in public services.

Financial Accountability and Management, 38, 152– 176. https://doi.org/10.1111/faam.12301

*Ahmad, A. and Nasseredine, H. (2019). Major Challenges and Barriers to IPSASs Implementation in Lebanon. *Proceedings of the International Conference on Business Excellence*, *13*(1), 326–334. https://doi.org/10.2478/picbe-2019-0029

*Al-otoom, T. and Alrabba, H. (2022). Impact of Lack of Self-efficiency and Assets Evaluation on Resistance of IPSAS Implementation. *Information Sciences Letters*, *11*(5), 1771–1779. https://doi.org/10.18576/isl/110533

Allen, R. (2009). The Challenge of Reforming Budgetary Institutions in Developing Countries. *IMF Working Papers*. https://doi.org/10.5089/9781451872439.001

Alon, A. and Dwyer, P. (2014). Early adoption of IFRS as a strategic response to transnational and local influences. *International Journal of Accounting*, *49*(3), 348–370. https://doi.org/10.1016/j.intacc.2014.07.003

Amirkhani, T., Aghaz, A. and Sheikh, A. (2019). An implementation model of performance-based budgeting: Evidence from the Iranian healthcare sector. *International Journal of Productivity and Performance Management*, *69*(2), 382–404. https://doi.org/10.1108/IJPPM-05-2018-0171

Anessi-Pessina, E., Barbera, C., Sicilia, M. and Steccolini, I. (2016). Public sector budgeting: a European review of accounting and public management journals. *Accounting, Auditing and Accountability Journal*, 29 (3) 491-519. https://doi.org/10.1108/AAAJ-11-2013-1532

*Antipova, T. and Bourmistrov, A. (2013). Is Russian Public Sector Accounting in the Process of Modernization? An Analysis of Accounting Reforms in Russia. *Financial Accountability and Management*, *29*(4), 442–478. https://doi.org/10.1111/faam.12021

*Araya-Leandro, C., Caba-Pérez, C. and López-Hernández, A. (2011). Innovation in governmental financial information systems in the Central American region: Evidence from Costa Rica. *Innovar*, 21(41), 111–124

Archambault, J. and Archambault, M. (2009). An analysis of social factors influencing the adoption of International financial reporting standards. *Journal for Global Business Advancement*, *2*(1–2), 38–53. https://doi.org/10.1504/JGBA.2009.023093

*Arnaboldi, M. and Lapsley, I. (2009). On the implementation of accrual accounting: A study of conflict and ambiguity. *European Accounting Review*, *18*(4), 809–836. https://doi.org/10.1080/09638180903136225

*Azevedo, R., Aquino, A., Neves, F. and Silva, C. (2020). Deadlines and software: disentangling local government accounting reforms in Brazil. *Public Money and Management*, *40*(7), 509–518. https://doi.org/10.1080/09540962.2020.1766203

*Azevedo, R., Lino, A., Aquino, A. and Machado-Martins, T. (2020). Financial Management Information Systems and accounting policies retention in Brazil. *International Journal of Public Sector Management*, *33*(2–3), 207–227. https://doi.org/10.1108/IJPSM-01-2019-0027

Bakre, O., Lauwo, S. and McCartney, S. (2017). Western accounting reforms and accountability in wealth redistribution in patronage-based Nigerian society. *Accounting, Auditing and Accountability Journal*, *30*(6), 1288–1308. https://doi.org/https://doi.org/10.1108/AAAJ-03-2016-2477

Biswas, A. (2020). New Public Management: Meaning, 10 Principles, and Features. *School of Political Science*. https://schoolofpoliticalscience.com

Bracci, E., Saliterer, I., Sicilia, M. and Steccolini, I. (2021). Accounting for (public) value(s): reconsidering publicness in accounting research and practice. *Accounting, Auditing and Accountability Journal*, 34(7), 1513-1526. https://doi.org/10.1108/AAAJ-06-2021-5318

*Brito, J. and Jorge, S. (2021). The Institutionalization of a New Accrual-based Public Sector Accounting System : The Case of Cape Verde. *International Journal of Public Administration*, *44*(5), 372–389. https://doi.org/10.1080/01900692.2020.1728312

*Bruno, A. and Lapsley, I. (2018). The emergence of an accounting practice: The fabrication of a government accrual accounting system. *Accounting, Auditing and Accountability Journal*, *31*(4), 1045–1066. https://doi.org/10.1108/AAAJ-01-2016-2400

*Brusca, I., Gómez-Villegas, M. and Montesinos, V. (2016). Public Financial Management

Reforms: The Role of IPSAS in Latin-America. *Public Administration and Development*, *36*(1), 51–64. https://doi.org/10.1002/pad.1747

*Brusca, I. and Martínez, J. (2016). Adopting International Public Sector Accounting Standards: a challenge for modernizing and harmonizing public sector accounting. *International Review of Administrative Sciences*, *82*(4), 724–744. https://doi.org/10.1177/0020852315600232

*Brusca, I. and Montesinos, V. (2014). Accrual financial reporting in the Public Sector: Is it a reality? *Innovar*, *24*(54), 107–120. https://doi.org/10.15446/innovar.v24n54.46458

*Caruana, J. (2017). Reform for reform's sake: A never-ending story of governmental accounting change. *Business and Economic Horizons*, *13*(5), 676–705. https://doi.org/10.15208/beh.2017.46

*Carvalho, J., Camões, P., Jorge, S. and Fernandes, M. (2007). Conformity and diversity of accounting and financial reporting practices in Portuguese local government. *Canadian Journal of Administrative Sciences*, *24*(1), 2–14. https://doi.org/10.1002/cjas.1

Carvalho, J., Gomes, P. and Fernandes, M. (2012). The Main Determinants of the Use of the Cost Accounting System in Portuguese Local Government. *Financial Accountability and Management*, *28*(3), 306–334. https://doi.org/10.1111/j.1468-0408.2012.00547.x

Chan, J. (2009). Chapter 3 The History of American Government Accounting Reform. *American Government Accounting Standards and Their Relevance to China*, 1–16

*Christensen, M. (2002). Accrual accounting in the public sector: The case of the New South Wales government. *Accounting History*, *7*(2), 93–124. https://doi.org/10.1177/103237320200700205

*Christiaens, J. (2001). Converging New Public Management Reforms and Diverging Accounting Practices in Flemish Local Governments. *Financial Accountability and Management*, *17*(2), 153–170. https://doi.org/10.1111/1468-0408.00126

*Christiaens, J. and van Peteghem, V. (2007). Governmental Accounting Reform: Evolution of the Implementation in Flemish Municipalities. *Financial Accountability and Management*, *23*(4), 375–399. https://doi.org/10.1111/j.1468-0408.2007.00434.x

Christiaens, J., Vanhee, C., Rossi, F., Aversano, N. and van Cauwenberge, P. (2015). The effect of IPSAS on reforming governmental financial reporting: an international comparison. *International Review of Administrative Sciences*, *81*(1), 158–177. https://doi.org/10.1177/0020852314546580

*Ciurea, M. (2018). Considerations on the need to implement International Accounting Standards for the Public Sector in Romania. *Annals of the University of Petroşani, Economics*, *18*(1), 35–44

*Cohen, S., Kaimenaki, E. and Zorgios, Y. (2007). Assessing IT as a Key Success Factor for Accrual Accounting Implementation in Greek Municipalities. *Financial Accountability and Management*, *23*(1), 91–111. https://doi.org/10.1111/j.1468-0408.2007.00421.x

Cohen, S. and Karatzimas, S. (2018). The role of the Troika on the Greek central government accounting reforms: The reprioritization riddle. *International Journal of Public Sector Management*, *31*(3), 316–330. https://doi.org/10.1108/IJPSM-06-2016-0101

*Connolly, C. and Hyndman, N. (2006). The actual implementation of accruals accounting: Caveats from a case within the UK public sector. *Accounting, Auditing and Accountability Journal*, *19*(2), 272–290. https://doi.org/10.1108/09513570610656123

Dekker, R., Contreras, J. and Meijer, A. (2020). The Living Lab as a Methodology for Public Administration Research: a Systematic Literature Review of its Applications in the Social Sciences. *International Journal of Public Administration*, *43*(14), 1207–1217. https://doi.org/10.1080/01900692.2019.1668410

DiMaggio, P. and Powell, W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, *48*(2), 147–160

*Ding, Y. (2000). Harmonisation trends in Chinese accounting and remaining problems. *Managerial Finance*, *26*(5), 31–40. https://doi.org/10.1108/03074350010766666

Duque, C. (2012). Analysis of institutional capacity factors in small municipalities in the departments of Boyacá and Cundinamarca. *Cuadernos de Administración*, *28*(47), 11–24. https://dialnet.unirioja.es/servlet/articulo?codigo=5006532

*Elmezughi, A. and Wakil, A. (2018). Feasibility of transformation to accrual basis of accounting in the public sector: Kingdom of Bahrain context. *Academy of Accounting and Financial Studies Journal*, 22(6).

*Eriotis, N., Stamatiadis, F. and Vasiliou, D. (2012). Assessing Accrual Accounting Reform in Greek Public Hospitals: An Empirical Investigation. *SSRN Electronic Journal*, *4*(1), 153–183. https://doi.org/10.2139/ssrn.1978671

Fahlevi, H. (2016). Understanding why the role of accounting is unchanged in Indonesian public hospitals. *Journal of Accounting and Organizational Change*, *12*(2), 203–222. https://doi.org/10.1108/JAOC-03-2014-0020

Fan, J., Morck, R., Xu, L. and Yeung, B. (2009). Institutions and Foreign Direct Investment: China versus the Rest of the World. *World Development*, *37*(4), 852–865. https://doi.org/10.1016/j.worlddev.2008.07.016

*Frank, H. and Gianakis, G. (2010). What hath the GASB wrought? The utility of the new reporting model: A National Survey of Local Government Finance Officers. *Journal of Public Budgeting, Accounting and Financial Management*, *22*(2), 178–204

*Fuentes, S. and Borreguero, J. (2018). Institutional capacity in the accounting reform process in Spanish local governments. *Spanish Accounting Review*, *21*(2), 188–195. https://doi.org/10.1016/j.rcsar.2018.05.002

*Gigli, S., Mariani, L. and Trivellato, B. (2018). Assimilating accounting innovations: lessons from Italian public universities. *Journal of Accounting and Organizational Change*, *14*(4), 381–401. https://doi.org/10.1108/JAOC-10-2017-0101

Gomes, P., Brusca, I. and Fernandes, M. (2019). Implementing the International Public Sector Accounting Standards for consolidated financial statements: facilitators, benefits and challenges. *Public Money and Management*, *39*(8), 544–552. https://doi.org/10.1080/09540962.2019.1654318

*Gomes, P., Fernandes, M. and Carvalho, J. (2015). The International Harmonization Process of Public Sector Accounting in Portugal: The Perspective of Different Stakeholders. *International Journal of Public Administration*, *38*(4), 268–281.

https://doi.org/10.1080/01900692.2015.1001237

*Gómez-Villegas, M., Brusca, I. and Bergmann, A. (2020). IPSAS in Latin America: innovation, isomorphism or rhetoric? *Public Money and Management*, *40*(7), 489–498. https://doi.org/10.1080/09540962.2020.1769374

Gómez-Villegas, M. and Julve, V. (2012). Innovations in Governmental accounting in Latin America: The Case of Colombia. *Innovar*, *22*(45), 17–35

Grossi, G. and Soverchia, M. (2011). European Commission adoption of IPSAS to reform financial reporting. *Abacus*, *47*(4), 525–552. https://doi.org/10.1111/j.1467-6281.2011.00353.x

Grossi, G. and Argento, D. (2022). The fate of accounting for public governance development. *Accounting, Auditing and Accountability Journal*, 35(9), 272-303. https://doi.org/10.1108/AAAJ-11-2020-5001

Grossi, G. and Steccolini, I. (2015). Pursuing Private or Public Accountability in the Public Sector? Applying IPSASs to Define the Reporting Entity in Municipal Consolidation. *International Journal of Public Administration*, *38*(4), 325–334. https://doi.org/10.1080/01900692.2015.1001239

Grossi, G., Steccolini, I., Adhikari, P., Brown, J., Christensen, M., Cordery, C., Ferry, L., Lassou, P., Iii, B., Raudla, R., Sicilia, M., Vinnari, E. and Mcdonald, B. (2023). The future of public sector accounting research. A polyphonic debate. *Qualitative Research in Accounting and Management* 20(1), 1-37 https://doi 10.1108/QRAM-09-2022-0135

*Haldma, T. and Kenk, K. (2014). Development of Estonian local government accounting: the stages of evolution during the years 1991–2013. *Zeszyty Teoretyczne Rachunkowości*, 78, 109–130. https://doi.org/10.5604/16414381.1122869

*Harun, H. (2007). Obstacles to public sector accounting reform in Indonesia. *Bulletin of Indonesian Economic Studies*, *43*(3), 365–376. https://doi.org/10.1080/00074910701727613

*Harun, H., An, Y. and Kahar, A. (2013). Implementation and challenges of introducing NPM and accrual accounting in Indonesian local government. *Public Money and*

Management, *33*(5), 383–388. https://doi.org/10.1080/09540962.2013.817131

*Harun, H., Eggleton, I. and Locke, S. (2021). An integrated model of IPSAS institutionalisation in Indonesia: a critical study. *International Journal of Public Sector Management*, *34*(2), 155–170. https://doi.org/10.1108/IJPSM-07-2020-0195

*Harun, H. and Kamase, H. (2012). Accounting Change and Institutional Capacity: The Case of a Provincial Government in Indonesia. *Australasian Accounting, Business and Finance Journal*, *6*(2), 35–50

Hassan, M.M. (2015). Transformation to more accrual-based accounting practices in Indonesian government. *Journal of International Business Research*, 14(1), 139-165

Herda, N., Abdullah, N., Krishnan, S., Azrah, A., Zakaria, M. and Morris, G. (2022). Strategic management accounting practices in business: A systematic review of the literature and future research directions. *Cogent Business and Management*, *9*(1). https://doi.org/10.1080/23311975.2022.2093488

*Hidayah, N. and Zarkasyi, W. (2017). The effect of human resources management competency and the role of culture on accrual accounting implementation effectiveness and the impact on quality of accounting information. *European Research Studies Journal*, *20*(4), 183–199. https://doi.org/10.35808/ersj/884

*Hladika, M. (2022). Analysis of Public Managers' Attitudes Toward Constraints for Implementation of Public Sector Accounting Reform in Croatia. *Ekonomski Pregled*, *73*(1), 81–106. https://doi.org/10.32910/ep.73.1.4

*Hrůza, F. and Valouch, P. (2016). Public Sector Accounting Policy Reform in the Czech Republic: Experience from Local Governments (pilot). *European Financial and Accounting Journal*, *11*(4), 17–37. https://doi.org/10.18267/j.efaj.172

*Hyndman, N. (2016). Accrual accounting, politicians and the UK—with the benefit of hindsight. *Public Money and Management*, *36*(7), 477–479. https://doi.org/10.1080/09540962.2016.1237111

Hyndman, N. and Lapsley, I. (2016). New public management: the story continues, *Financial Accountability and Management, 32*(4), 385-408

*Hyndman, N. and Connolly, C. (2011). Accruals accounting in the public sector: A road not always taken. *Management Accounting Research*, *22*(1), 36–45. https://doi.org/10.1016/j.mar.2010.10.008

*Hyndman, N. and Liguori, M. (2018). Achieving radical change: A comparative study of public-sector accounting in Westminster and Scotland. *Accounting, Auditing and Accountability Journal*, *31*(2), 428–455. https://doi.org/10.1108/AAAJ-04-2016-2527

Iacuzzi, S. (2021). An appraisal of financial indicators for local government: a structured literature review. *Journal of Public Budgeting, Accounting and Financial Management*, *34*(6), 69–94. https://doi.org/10.1108/JPBAFM-04-2021-0064

Inkina, S. (2019). Bureaucratic reform and Russian transition: the puzzles of policy-making process. *Palgrave Communications*, *5*(1). https://doi.org/10.1057/s41599-019-0238-5

IPSASB. (2019). *HandBook of International Public Sector Accounting Pronouncements*. International Federation of Accountants

IPSASB. (2021). *HandBook of International Public Sector Accounting Pronouncements*. International Federation of Accountants

IPSASB. (2022). *IPSASB ENEWS: DECEMBER*. https://www.ipsasb.org/news-events/2022-12/ipsasb-enews-december-2022#contents11

*Ismail, S., Siraj, S. and Baharim, S. (2018). Implementation of accrual accounting by Malaysian federal government: Are the accountants ready? *Journal of Accounting and Organizational Change*, *14*(2), 234–247. https://doi.org/10.1108/JAOC-03-2017-0020

Ismaili, A. and Ismajli, H. (2020). Theoretical review on the implementation of IPSAS accrual basis and its benefits to the public sector. *International Journal of Management Cases*, *22*(2), 27–37

*Ismaili, A., Ismajli, H. and Vokshi, N. (2021). The importance and challanges of the implementation of IPSAS accrual basis to the public sector: The case of Kosovo. *Accounting*, *7*, 1109–1118. https://doi.org/10.5267/j.ac.2021.2.028

*Jani, M., Pifeh, A. and Faghani, M. (2020). Study and Investigation of the Administrative, Motivational and Individual Challenges and Constraints Characteristics of Financial Supervisors in Public Sector Organizations With the Approach of Desired Implementation of the Public Sector Accounting. *Turismo-Estudos E Praticas*, *2*, 1–18

Jayasinghe, K. Adhikari, P. Soobaroyen, T., Wynne, A., Malagila, J. and Abdurafiu, N. (2021). Government accounting reforms in Sub-Saharan African countries and the selective ignorance of the epistemic community: A competing logics perspective, *Critical Perspectives on Accounting*, 78. https://doi.org/10.1016/j.cpa.2020.102246

*Jones, R. and Caruana, J. (2014). Central government accounting reform in Malta: Is it just an illusion? *Bank of Valletta Review*, *49*, 51–78

*Jorge, S., Brusca, I. and Nogueira, S. (2019). Translating IPSAS into National Standards: An Illustrative Comparison between Spain and Portugal. *Journal of Comparative Policy Analysis: Research and Practice*, *21*(5), 445–462. https://doi.org/10.1080/13876988.2019.1579976

*Jorge, S., Carvalho, J. and Fernandes, M. (2007). Governmental accounting in Portugal: why accrual basis is a problem. *Journal of Public Budgeting, Accounting and Financial Management*, *19*(4), 411–446. https://doi.org/10.1108/jpbafm-19-04-2007-b001

Kim, M., Li, H., Holzer, M. and Zhang, M. (2019). Public Administration Research in Mainland China: A Systematic Review of Chinese Public Administration in English Language Journals (1996–2016). *International Journal of Public Administration*, *42*(9), 753–764. https://doi.org/10.1080/01900692.2018.1506936

*Klimavičienė, I. and Mykolaitienė, V. (2007). Changes in the Accounting System of the Public Sector in Lithuania. *Ekonomika Ir Vadyba*, *12*, 63–72.

Kolesnikov-Jessop, S. (2018). IPSAS implementation is gaining momentum but public sector reporting still has some way to go. A clear strategy, realistic timeframes, milestones and resources are needed. *Accounting and Business-China Edition*.

*Kowalczyk, M. and Caruana, J. (2022). Governmental accounting and budgeting in Malta and Poland – a different dance to the same tune. *International Journal of Public Sector Management*, *35*(7), 783–805. https://doi.org/10.1108/IJPSM-12-2021-0284

*Krishnan, S. (2021). Decision-making processes of public sector accounting reforms in India—Institutional perspectives. *Financial Accountability and Management*, 1–28. https://doi.org/10.1111/faam.12294

Lapsley, I. (2009). New public management: the cruellest invention of the human spirit? *Abacus, 45*(1), 1-21.

Lapsley, I. and Pallot, J. (2000). Accounting, management and organizational change: A comparative study of local government. *Management Accounting Research*, *11*(2), 213–229. https://doi.org/10.1006/mare.2000.0129

*Lassou, P., Hopper, T., Soobaroyen, T. and Wynne, A. (2018). Participatory and incremental development in an African local government accounting reform. *Financial Accountability and Management*, *34*(3), 252–267. https://doi.org/10.1111/faam.12154

*Lentner, C., Molnár, P. and Nagy, V. (2020). Accrual accounting and public finance reforms in Hungary: The study of application in the public sector. *Economic Annals-XXI*, *183*(5–6), 89–105. https://doi.org/10.21003/EA.V183-09

Lokuwaduge, C. (2016). Exploring the new public management (NPM)-based reforms in the public sector accounting: A Sri Lankan study. *Global Perspectives on Risk Management and Accounting in the Public Sector*, 49–67. https://doi.org/10.4018/978-1-4666-9803-1.ch003

*Lokuwaduge, C. and Silva, K. (2020). Determinants of public sector accounting reforms: A case study of Sri Lanka in rapidly developing Asia. *International Journal of Public Sector Management*, *33*(2–3), 191–205. https://doi.org/10.1108/IJPSM-03-2019-0085

*Lutilsky, I., Žmuk, B. and Dragija, M. (2016). Cost accounting as a possible solution for financial sustainability of Croatian public hospitals. *Croatian Economic Survey*, *18*(2), 5–38. https://doi.org/10.15179/ces.18.2.1

Mattei, G., Jorge, S. and Grandis, F. (2020). Comparability in IPSASs: Lessons to be Learned for the European Standards. *Accounting in Europe*, *17*(2), 158–182. https://doi.org/10.1080/17449480.2020.1742362

*Mbelwa, L., Adhikari, P. and Shahadat, K. (2018). An examination of the institutional and decision-usefulness factors in the implementation of accrual accounting reforms in the public sector of Tanzania. *Journal of Accounting in Emerging Economies*, 1–52.

*McLeod, R. and Harun, H. (2014). Public Sector Accounting Reform at Local Government Level in Indonesia. *Financial Accountability and Management*, *30*(2), 238–258. https://doi.org/10.1111/faam.12035

Meyer, J. and Rowan, B. (1977). Institutionalized Organizations: Formal Structure as Myth and Ceremony. *American Journal of Sociology*, *83*(2), 340–363. https://doi.org/10.1086/226550

*Mohammadrezaei, F., Banimahd, B. and Saleh, N. (2013). Convergence obstacles with IASB standards: Evidence from Iran. *International Journal of Disclosure and Governance*, *10*(1), 58–91. https://doi.org/10.1057/jdg.2012.10

Moher, D., Liberati, A., Tetzlaff, J. and Altman, D. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *BMJ (Online)*, *62*(10), 332–336. https://doi.org/10.1016/j.jclinepi.2009.06.005

Mosoba, M. (2017). Tanzania is an IPSAS implementation success story, having fully adopted accrual-based IPSAS four years ago, but the East African pioneer still faces challenges. *Accounting and Business-Africa Edition*.

Mu, R. and Wang, H. (2020). A systematic literature review of open innovation in the public sector: comparing barriers and governance strategies of digital and non-digital open innovation. *Public Management Review*. https://doi.org/10.1080/14719037.2020.1838787

*Mulyani, S., Puspitasari, E. and Yunita, D. (2018). Analysis of the Critical Factors in Supporting the Implementation of the Accrual-based Accounting in the Local Government. *Review of Integrative Business and Economics Research*, *7*(1), 183–199.

*Nagirikandalage, P. and Binsardi, B. (2015). Exploring public sector accounting reforms in an emerging economy: A case of Sri Lanka. *Research in Accounting in Emerging Economies*, *15*, 51–83. https://doi.org/10.1108/S1479-356320150000015003

*Nakmahachalasint, O. and Narktabtee, K. (2019). Implementation of accrual accounting in

Thailand’s central government. *Public Money and Management*, *39*(2), 139–147. https://doi.org/10.1080/09540962.2018.1478516

*Nasi, G. and Steccolini, I. (2008). Implementation of accounting reforms. An empirical investigation into Italian local governments. *Public Management Review*, *10*(2), 175–196. https://doi.org/10.1080/14719030801928573

*Neves, F. and Gómez-Villegas, M. (2020). Public sector accounting reform in Latin America and Epistemic Communities: an institutional approach. *Journal of Public Adminidtration*, *54*(1), 11–31. https://doi.org/10.1590/0034-761220180157

Nyahuna, T. and Doorasamy, M. (2021). Understanding Barriers to Environmental Management Accounting Development and Implementation in Waste Management Among South African Municipalities. *Indonesian Journal of Environmental Management and Sustainability*, *5*, 140–145. https://doi.org/10.26554/ijems.2021.5.4.140-145 1.

Otavová, M. (2011). Harmonisation efforts in the field of accounting of public sector. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, *59*(4), 195–202. https://doi.org/10.11118/actaun201159040195

*Otrusinová, M. (2016). Public sector accounting in the Czech republic and Slovakia. *Administratie Si Management Public*, *2016*(27), 30–45.

*Otrusinova, M. and Pastuszkova, E. (2013). Transformation process of state accounting to accrual basis accounting in conditions of the Czech Republic. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, *61*(7), 2593–2602. https://doi.org/10.11118/actaun201361072593

Oulasvirta, L. (2014). The reluctance of a developed country to choose International Public Sector Accounting Standards of the IFAC. A critical case study. *Critical Perspectives on Accounting*, *25*(3), 272–285. https://doi.org/https://doi.org/10.1016/j.cpa.2012.12.001.

Panozzo, F. (2000). Management by decree. Paradoxes in the reform of the Italian public sector. *Scandinavian Journal of Management*, *16*(4), 357–373. https://doi.org/10.1016/S0956-5221(00)00012-9

*Pina, V. and Torres, L. (2002). Accounting Developments of Spanish Local Governments: An International Comparison. *Journal of Public Budgeting, Accounting and Financial Management*, *14*(4), 619.

Polzer, T., Gårseth-Nesbakk, L. and Adhikari, P. (2019). "Does your walk match your talk?" Analyzing IPSASs diffusion in developing and developed countries. *International Journal of Public Sector Management*, *33*(2–3), 117–139. https://doi.org/10.1108/IJPSM-03-2019-0071

Polzer, T., Nolte, I. and Seiwald, J. (2021). Gender budgeting in public financial management: a literature review and research agenda. *International Review of Administrative Sciences*, 1–17. https://doi.org/10.1177/00208523211031796

Rajib, M. and Hoque, M. (2016). A Literature Review on Public Sector Accounting Research. *The Jahangirnagar Journal of Business Studies*, *5*(1), 269–281.

*Rajib, S., Adhikari, P., Hoque, M. and Akter, M. (2019). Institutionalisation of the Cash Basis International Public Sector Accounting Standard in the Central Government of Bangladesh: An example of delay and resistance. *Journal of Accounting in Emerging Economies*, *9*(1), 28–50. https://doi.org/10.1108/JAEE-10-2017-0096

*Reginato, E., Fadda, I. and Pavan, A. (2010). Italian municipalities' NPFM reforms: an institutional theory perspective. *Pecvnia: Revista de La Facultad de Ciencias Económicas y Empresariales, Universidad de León*, *11*, 153. https://doi.org/10.18002/pec.v0i11.633

*Ridder, H., Bruns, H. and Spier, F. (2005). Analysis of public management change processes: The case of local government accounting reforms in Germany. *Public Administration*, *83*(2), 443–471. https://doi.org/10.1111/j.0033-3298.2005.00457.x

Rossi, F., Cohen, S., Caperchione, E. and Brusca, I. (2016). Harmonizing public sector accounting in Europe: thinking out of the box. *Public Money and Management*, *36*(3), 189–196. https://doi.org/10.1080/09540962.2016.1133976

*Santis, S., Grossi, G. and Bisogno, M. (2019). Drivers for the voluntary adoption of consolidated financial statements in local governments. *Public Money and Management*, *39*(8), 534–543. https://doi.org/10.1080/09540962.2019.1618072

*Scheers, B., Sterck, M. and Bouckaert, G. (2006). Lessons from Australian and British Reforms in Results oriented Financial Management. *OECD Journal on Budgeting*, *5*(2), 133–162. https://doi.org/10.1787/budget-v5-art14-en

Schmidthuber, L., Hilgers, D. and Hofmann, S. (2020). International Public Sector Accounting Standards (IPSASs): A systematic literature review and future research agenda. *Financial Accountability and Management*, May, 1–24. https://doi.org/10.1111/faam.12265

*Scott, D., Wingard, C. and van Biljon, M. (2016). Challenges with the financial reporting of biological assets by public entities in South Africa. *South African Journal of Economic and Management Sciences*, *19*(1), 139–149. https://doi.org/10.17159/2222-3436/2016/v19n1a9

Sellami, Y. and Gafsi, Y. (2019). Institutional and Economic Factors Affecting the Adoption of International Public Sector Accounting Standards. *International Journal of Public Administration*, *42*(2), 119–131. https://doi.org/10.1080/01900692.2017.1405444

*Shehadeh, E. (2022). A Movement Towards the Accrual Based IPSAS Implementation in Developing Countries: Evidence from Jordan. *The Journal of Asian Finance, Economics and Business*, *9*(3), 389–397. https://doi.org/10.13106/jafeb.2022.vol9.no3.0389

*Simpson, S., Tetteh, L. and Agyenim-Boateng, C. (2020). Exploring the socio-cultural factors in the implementation of public financial management information system in Ghana. *Journal of Accounting and Organizational Change*, *16*(3), 349–368. https://doi.org/10.1108/JAOC-10-2018-0100

Sour, L. (2020). New development: Integration of budget and governmental accounting in Mexican states. *Public Money and Management*, 1–4. https://doi.org/10.1080/09540962.2020.1763066

Steccolini, I. (2019). Accounting and the post-new public management: Re-considering publicness in accounting research. *Accounting, Auditing and Accountability Journal*, 32(1), 255-279. https://doi.org/10.1108/AAAJ-03-2018-3423

*Sulu-Gambari, W., Stafford, A. and Stapleton, P. (2018). Public accountability reform in a Nigerian ministry. *Qualitative Research in Accounting and Management*, *15*(4), 485–509. https://doi.org/10.1108/QRAM-10-2016-0077

Syarifuddin. (2018). Accrual Basis Landscape: The Absence of Political Will in Preventing Dysfunctional Behaviour in Indonesia. *Accounting and Finance Review 3*(3), 77–83. https://ssrn.com/abstract=3267316

Tawiah, V. (2021). The impact of IPSAS adoption on corruption in developing countries. *Financial Accountability and Management*, 103–124. https://doi.org/10.1111/faam.12288

Tawiah, V. (2022). The Effect of IPSAS Adoption on Governance Quality: Evidence from Developing and Developed Countries. *Public Organization. Review*, https://doi.org/10.1007/s11115-022-00625-w

Tawiah, V. and Soobaroyen, T. (2022). The relationship between the adoption of international public sector accounting standards and sources of government financing: evidence from developing countries. *Accounting Forum*. https://doi:10.1080/01559982.2022.2151073

ter Bogt, H. and van Helden, J. (2000). Accounting change in Dutch government: Exploring the gap between expectations and realizations. *Management Accounting Research*, *11*(2), 263–279. https://doi.org/10.1006/mare.2000.0132

*Tetteh, L., Agyenim-Boateng, C., Simpson, S. and Susuawu, D. (2021). Public sector financial management reforms in Ghana: insights from institutional theory. *Journal of Accounting in Emerging Economies*, *11*(5), 691–713. https://doi.org/10.1108/JAEE-06-2020-0134

*Thanh, P., Thanh, H., Thanh, T. and Thuy, T. (2020). Factors affecting accrual accounting reform and transparency of performance in the public sector in Vietnam. *Problems and Perspectives in Management*, *18*(2), 180–193. https://doi.org/10.21511/ppm.18(2).2020.16

*Tickell, G. (2010). Cash To Accrual Accounting: One Nation's Dilemma. *International*

Business and Economics Research Journal, *9*(11), 71–78. https://doi.org/10.19030/iber.v9i11.32

*Tikk, J. (2010). Accounting changes in the public sector in Estonia. *Business: Theory and Practice*, *11*(1), 77–85. https://doi.org/10.3846/btp.2010.09

*Timoshenko, K. (2008). Russian public sector reform: The impact on university accounting. *Journal of Business Economics and Management*, *9*(2), 133–144. https://doi.org/10.3846/1611-1699.2008.9.133-144

*Tóth, B. (2020). The public sector accounting reform of 2014 in the light of the experiences of the local governments: A pilot project to explore the problems. *Public Finance Quarterly*, *65*(2), 245–262. https://doi.org/10.35551/PFQ_2020_2_6

Vale, J., Amaral, J., Leal, C. and Silva, R. (2022). Management Accounting and Control in Higher Education Institutions: A Systematic Literature Review. *Administrative Sciences,* 12, 14. https://doi.org/10.3390/admsci12010014

*van der Hoek, P. (2005). From Cash to Accrual Budgeting and Accounting in the Public Sector: The Dutch Experience. *Public Budgeting and Finance*, *25*(1), 32–45. https://doi.org/10.1111/j.0275-1100.2005.00353.x

van Helden, J., Adhikari, P. and Kuruppu, C. (2021). Public sector accounting in emerging economies: a review of the papers published in the first decade of Journal of Accounting in Emerging Economies. *Journal of Accounting in Emerging Economies*, *11*(5), 776–798. https://doi.org/10.1108/JAEE-02-2020-0038

*van Helden, J. and Reichard, C. (2018). Cash or accruals for budgeting? Why some governments in Europe changed their budgeting mode and others not. *OECD Journal on Budgeting*, *18*(1), 91–113. https://doi.org/10.1787/budget-18-5j8l804pq0g8

*Venieris, G. and Cohen, S. (2004). Accounting Reform in Greek Universities: A Slow Moving Process. *Financial Accountability and Management*, *20*(2), 183–204. https://doi.org/10.1111/j.1468-0408.2004.00192.x

*Yahya, I., Hasibuan, R., Torong, Z. and Muda, I. (2018). Factors that influence success implementation of government accounting standard (SAP) based on accrual in the government of the districts/cities in North Sumatera Province. *Journal of Management Information and Decision Science*, *21*(1), 1–14.

Yapa, P. and Ukwatte, S. (2015). The New Public Financial Management (NPFM) and Accrual Accounting in Sri Lanka. *Research in Accounting in Emerging Economies*, *15*, 7–50. https://doi.org/10.1108/S1479-356320150000015002

*Yuliati, R., Yuliansyah, Y. and Adelina, Y. (2019). The implementation of accrual basis accounting by Indonesia's local governments. *International Review of Public Administration*, *24*(2), 67–80. https://doi.org/10.1080/12294659.2019.1603954