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CANADIAN GOVERNMENT ACCOUNTING: A SYSTEMATIC REVIEW

Keywords: Canadian government accounting, financial accounting, managerial accounting, auditing, systematic review.

J E L Classification: M40, M41, M42, M48.

Abstract: This paper systematically reviews government accounting research in a developed economy, Canada, and suggests ways to advance knowledge in this area. The purpose of this study is to provide researchers with an up-to-date overview of the field of Canadian government accounting research. The methodology consisted of a structured literature search to select and analyze academic papers according to the thematic objectives of this study. Our review covers 29 articles published in accounting, finance, and public administration journals over 42 years. To the best of our knowledge,

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no systematic review has been done in Canadian government accounting. This study examines Canadian government accounting research coverage in financial, managerial, and auditing categories to date. This review identifies some under-explored areas, such as political influence on government managerial accounting practice, as well as unexplored areas, such as the influence of the internationally accepted conceptual framework on the quality of government accounting. This study contributes to the literature on government accounting by providing a review of the current literature and suggesting future research areas. This will be useful to researchers and practitioners in government accounting.

■■■ INTRODUCTION

Government is one of the most crucial constitutional bodies of a country (Lin, Baxter & Murphy, 1993). This essential institution relies on its accounting and auditing practices to maintain workflows among different units and ensure public transparency. Like many other countries, the Canadian government follows highly standardized accounting practices which have evolved over time. Fourteen senior government tiers—one federal, ten provincial, and three territorials—constitute the government landscape on Canada. In addition, municipal governments exist throughout the country providing governance at the local level. These tiers used to follow diverse accounting practices informed by their self-developed rules and standards (Baker & Rennie, 2018). The heterogeneity in accounting terminologies, presentation, and procedures among different government tiers has made it challenging to compare financial performance between and within units of the Canadian government (Lin, 1993). The Canadian government began adopting a standardized accounting system set by the Public Sector Accounting Board in response to some functional, professional, and political pressures (Baker & Rennie, 2018). Since the early nineteen eighties, all federal and provincial/territorial governments have adopted accounting practices in compliance with the Canadian Institute of Chartered Accountants (CICA) Public Sector Accounting Handbook.

In addition to financial accounting and reporting practices, government departments rely on various management accounting techniques, such as operating and capital budgeting (Chan, 2004), performance measurement, and costing (Fortin, Haffaf & Viger, 2007), to organize and coordinate resources.

The scope and impact of government accounting are very pervasive because they “affect not just how resources are produced and distributed in an economy, but [also] what is deemed organizationally and socially rational and valua-

ble” (Cooper & Robson, 2006, p. 415). By a similar token, Hyzyk (2013) suggests that government follows a variety of fund management strategies to maintain its economic resilience and financial capability. Considering the social, political, and economic significance of government accounting practices, academics have embarked on government accounting research.

A body of extant literature, including studies by Baker and Rennie (2006, 2011, 2012, 2013, 2018), Bruce and Warren (2018), Buhr (2012), Lin (1993), Lin et al. (1993) and Pollanen and Loiselle-Lapointe (2012) has contributed to furthering our understanding of Canadian government accounting. Nevertheless, to the best of our knowledge, no systematic review has been done to synthesize the coverage of those extant studies. To fill this research gap, this study systematically examines that body of prior research to uncover some under-explored and unexplored areas in Canadian government accounting. Additionally, this systematic review will provide an essential basis for setting future research directions for advancing the academic inquiries in this domain (Webster & Watson, 2002). Moreover, this study responds to the call “...to contribute to the dialogue on government accounting through studies of the Canadian perspective on government accounting, auditing and accountability” (Baker, 2019, p. 288).

The paper is structured as follows: in Section 1, the systematic review methodology is explained. Section 2 includes the basis for formulating the search string and research questions, explicit inclusion and exclusion criteria, and limitations and rigour of the research. Section 3 outlines the descriptive analysis of the selected articles. We categorize articles by journal focus, time and accounting area. Section 4 includes the findings of the empirical research over the last forty-two years. Section 5 provides suggestions for future research.

RESEARCH METHODOLOGY AND RESEARCH PROCESS

Key terms and search string

An initial search string was developed based on a preliminary of the extant literature on government accounting. Subsequently, drawing on this literature, we considered government accounting/accountability, public sector accounting/accountability, government budget, fund accounting, and government cost and management accounting as meaningful terms. We then used these terms to develop the following search string, which was applied when searching for the keywords in abstracts:

“government account” OR “government accountability” OR “government accountable” OR “government accountants” OR “government accounting” OR “government accounts”) OR “public sector account*” OR (“government audit” OR “government auditing” OR “government auditor”) OR “government performance indicators” OR “government accrual account*” OR (“public account” OR “public accountability” OR “public accountancy” OR “public accountant” OR “public accountants” OR “public accounting” OR “public accounts”) OR (“government budget” OR “government budgetary” OR “government budgeted” OR “government budgeting” OR “government budgets”) OR (“fund account” OR “fund accounting” OR “fund accounts”) OR “government costing system” OR “government management account*”

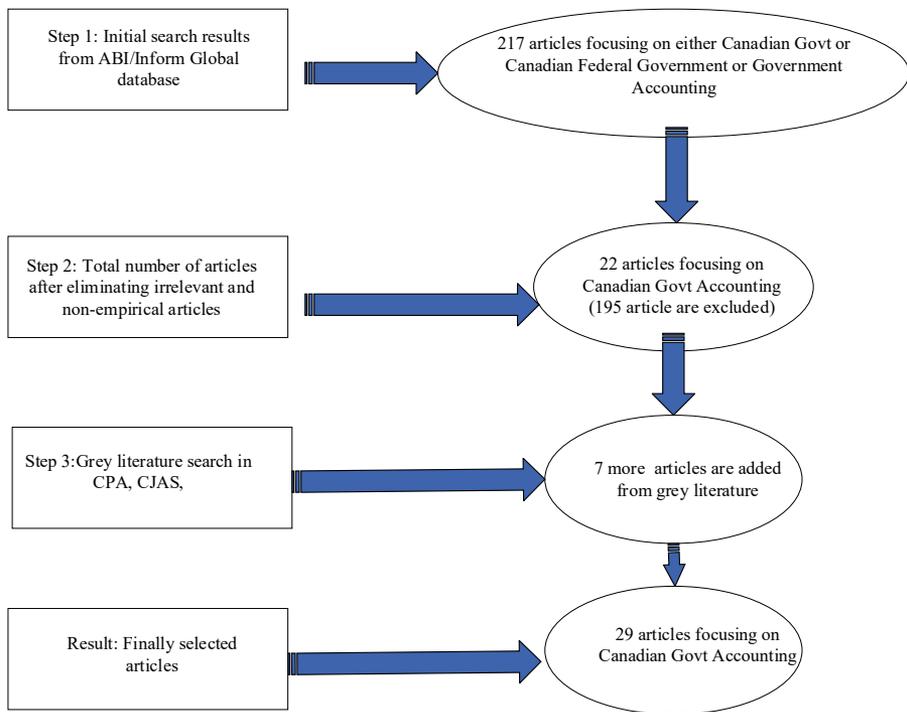
To limit the focus of the search to the Canadian context, the terms “Canadian government” OR “Canadian federal government” with the Boolean operator “AND” were added.

Screening protocol

Searches were conducted in one prominent interdisciplinary abstract and citation database – ABI/Inform Global – using the above-mentioned search string. ABI/Inform Global has an extensive and rich collection of full-text and full-image peer-reviewed articles in business and management publications dating from the 1920s. The search was limited to double-blind peer-reviewed articles in business and management. An additional restriction was placed on the publication dates and language preferences, limiting the search to articles published in English during the period of 1980 to 2021. The date limit was imposed because, since the early 1980s, all federal and provincial/territorial governments have adopted harmonized accounting practices in compliance with the Canadian Institute of Chartered Accountants (CICA) Public Sector Accounting Handbook (Baker & Rennie, 2018). Thus, this study reflects research conducted on current government accounting practices. The structured review intends to provide future research direction to scholars of Canadian government accounting. Hence, the selection of the articles needs to be reflective of prevailing government harmonized accounting practices.

Screening criteria

Initially, the search results from ABI/Inform Global were indexed separately in a collection folder in Zotero referencing software. The initial search process resulted in a total of 217 articles, which formed the basis for the next level of screening. In the following round, the articles were screened for relevance according to the themes of the structured review. The abstracts of all 217 articles were screened to assess whether they concentrated on Canadian government accounting practices. Any articles not focused on government accounting in the Canadian context were excluded from the selection. Though our focus is limited to Canadian practice, three papers had a multi-country perspective (e.g., Canada, US and Mexico, or Canada and U.K.), which were included to gather their insights about Canadian practices. After screening for relevance, a total of 24 articles were selected as those articles were suitable to the objective of this structured review. To confirm that all targeted articles were collected from key journals, we applied a grey literature search (Mahood, Van Eerd & Irvin, 2014) on the journals that have a significant history of publishing public sector accounting research: *Canadian Public Administration*, *Canadian Journal of Administrative Science*, *Canadian Journal of Economics*, *Canadian Accounting Perspective*, and *Financial Accountability and Management*. This grey literature search resulted in an additional 5 articles focusing on Canadian government/public accounting. Finally, the screening protocol resulted in a total of 29 articles. For a clear visualization of the entire article selection process, the search and screening protocol and the results are shown in figure 1.

Figure 1. Article selection protocol

S o u r c e : compiled by the authors based on the systematic review protocol applied in this study.

After the final selection, we exported the list of all articles, and their metadata (e.g., title, publisher and publication year) to a Comma-Separated Values (CSV) file. This CSV file was used as a codebook to record the category of journal focus, publication by year, the tier of the government unit studied, the theoretical framework and the methodologies used in each article.

Framing the research questions

Asking clearly framed question(s) justifies the rigour and relevance for preparing a systematic review (Cooper & Hedges, 1994). Clear and thought-provoking questions make the purpose and potential contributions explicit and comprehensible (Denyer & Tranfield, 2009). This review paper aims to explore how

government accounting has been studied in the Canadian context. The resulting research questions are:

- To what extent has government accounting been studied in the Canadian context?
- Which level of government tier is studied in that selected literature?
- Which theories and research paradigms inform those research inquiries?
- Which methodologies are employed in exploring government accounting regimes?

By addressing these questions, this review focusses on the current trends and coverage of Canadian government accounting. The findings of this study highlight some areas where more attention is needed. Future research on Canadian government accounting can build on this synthesis by shedding light on some unexplored and underexplored topics, theoretical frameworks, and methodologies and hence, advance scholarship in this area.

Limitations and rigour of the research process

Consistent with prior systematic reviews in the field of accounting (see Dumay, Bernardi, Guthrie & Demartini, 2016; Hahn & Kühnen, 2013; for example), this study followed a methodical research protocol similar to previous review studies. A set of clearly defined exclusion and inclusion criteria were followed. Though an extensive search for relevant articles in the ABI/Inform Global database was undertaken, we cannot account for articles that are not available in this database. Furthermore, as we have limited our search to post harmonized-accounting era, studies conducted prior to this period are excluded.

DESCRIPTIVE ANALYSIS

This extensive search resulted in a total of 29 articles. The papers finally selected for review were thoroughly examined and summarized in a spreadsheet. The summary included groupings according to publication year, journal focus, area of emphasis, theories, methods of data collection and the main findings. This summarization helped gain a broader sense of the selected articles and then extricate this overview into different tables according to various categorizations. A similar approach has been followed in the prior review studies such as Broadbent and Guthrie (2008); Goddard (2010); van Helden (2005); Scapens

and Bromwich (2010), and van Helden and Uddin (2020). During this process, a descriptive analysis of the selected literature was included.

Distribution according to journal type

This review followed an impartial approach for selecting all possible journals that published articles on Canadian government accounting. A total of 13 different outlets were used to publish these articles. As anticipated, a large body of literature (52 percent) is published in accounting-focused journals such as *Accounting Perspectives*, *Accounting History*, *Accounting Organizations and Society* and *Financial Accountability and Management*. *Accounting History and Financial Accountability and Management* are prominent in publishing Canadian government accounting among the seven accounting-focused journals. Though *Accounting Perspectives* is Canadian and accounting-focused, it was not a leading outlet for this research domain. The remaining non-accounting focused journals concentrated on public policy and administrations. Among the selected articles, 48 percent of studies were published in those journals. In the non-accounting-focused category, the C.D. Howe Institute¹ is a niche outlet publishing comments and critiques on Canadian government accounting practices and policies. Table 1 shows the descriptive analysis according to the journal focus.

Table 1. Article publication by journal focus

Accounting focused journals	Number of articles	Percentage	Canadian/Intl focused
Accounting Perspective	2		Canadian
Accounting History	4		International
Accounting History Review	1		International
Accounting, Organizations and Society	1		International
Meditari Accountancy Research	1		International

¹ The C.D. Howe Institute's, a registered charity, and an independent not-for-profit research institute whose mission is to raise living standards by fostering economically sound public policies, publications follow a peer-review process by independent experts from public and private sectors. Source: <https://www.cdhowe.org/about-us>. Accessed on Sep 6, 2021.

Table 1. Article...

Accounting focused journals	Number of articles	Percentage	Canadian/Intl focused
Financial Accountability & Management	4		International
Journal of Public Budgeting, Accounting & Financial Management	2		International
Total articles in accounting focused journals	15	52%	
Non-accounting journals			
Futures	1		International
Public Budgeting & Finance	2		International
Canadian Public Administration	3		Canadian
C.D. Howe Institute	6		Canadian
Public Administration Review	1		International
Journal of Public Procurement	1		International
Total articles in non-accounting journals	14	48%	
Total	29		

S o u r c e : compiled by the authors based on the publication outlet analysis applied in this study.

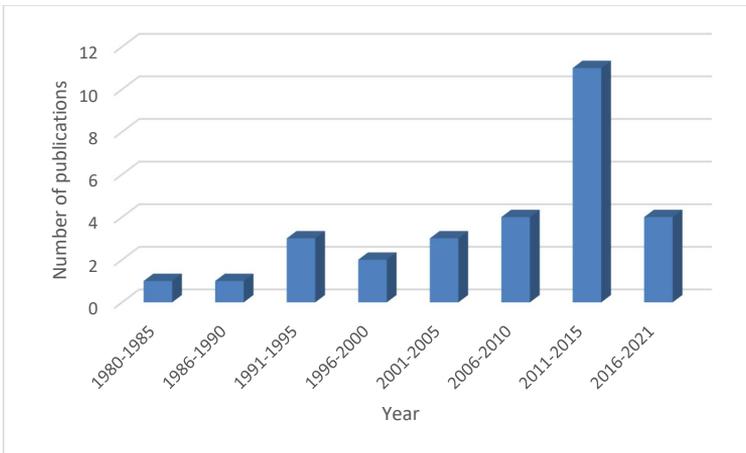
In addition to depicting the contribution of some journals in advancing knowledge of Canadian government accounting, this descriptive analysis reveals that the *Canadian Journal of Administrative Sciences*, one of the leading journals focusing on Canadian contexts, did not publish any papers in the target domain. Therefore, the call for the special issue on the Canadian perspective of government accounting, auditing, and accountability is a timely enterprise to fill this academic lacuna.

Distribution over time

We then categorized the selected articles according to the publication year. Since the early nineteen eighties, the Canadian government began harmonizing accounting practices. Limiting the search to this period (between 1980 and 2021) showed that publications from 1980 to 1990 are negligible, with only one article published roughly every five years.

Nonetheless, the number of publications increased slightly over the next two decades (from 1991 to 2010), where 2 to 4 articles were published every five years. A momentum of increase in the publications in the target domain is observed between 2011 and 2015. A large proportion of literature (11 articles) was published during this period. Nevertheless, publications in Canadian government accounting decreased in the most recent timeframe (from 2016 to 2021), as only four articles were published during this period. Figure 2 depicts the number of publications over the targeted search period.

Figure 2. Articles by publication year



Source: produced by the authors based on article publication year analysis in this study.

Distribution according to the focus on accounting area

To shed light on which area of accounting has been studied in the government accounting realm, we further categorized the articles according to the focus of the accounting area. We used the major branches of accounting, such as financial, managerial, and auditing, to synthesize the findings from the selected articles. The descriptive analysis shows that an equal percentage (43 percent in financial accounting and another 43 percent in managerial accounting) of the studies were done in financial and managerial accounting. The most frequently studied financial accounting topic is the accrual basis of accounting and transparency of public reporting. Studies focusing on management accounting are

more diverse and emphasize different tools and techniques of management accounting used in government management. The most frequently studied management accounting areas are budgeting (i.e., forecasting), fund and pension management, activity-based costing, and capital budgeting. Only one article, Gendron, Cooper and Townley (2007) focused on auditing, stressing the role of the auditor general in understanding the consolidation of the support network in the government auditing profession. A mentionable number of articles (4 articles) explored accounting as a practice rather than tools and techniques. Government accounting practices have evolved since the formation of the confederation (Baker & Rennie, 2006) and has been institutionalized (Baker & Rennie, 2013) and deinstitutionalized (Baker & Rennie, 2017) during this evolutionary process. During this time, various accounting innovations, such as reporting the net debt as a balance sheet item (Baker & Rennie, 2011), were introduced. Moreover, the current accounting practice of the Federal Government is an inherited practice from one of the influential provinces—the Province of Canada—in the pre-confederation era (Baker & Rennie, 2012). Table 2 shows the synthesis of articles by the type of accounting focus.

Table 2. Articles by area of accounting

Area of focus	Number of articles	Topics covered in the selected articles	Leading articles
Financial Accounting	12	Adoption of accrual accounting, historical evolution of public sector accounting, transparency, and accountability of public reporting	Baker & Rennie (2006); Baker & Rennie (2012); Baker & Rennie. (2018); Lin (1993); Lin et al. (1993); Pollanen, & Kristin (2012).
Managerial Accounting	12	Budget forecast and management, fund management, activity-based costing, capital budgeting and pension plan management.	Busby & Robson (2011); Brimberg & Hurley (2014); Chan (2004), Fortin et al. (2007); Savoie (1990)
Auditing	1	Role of the auditor general	Gendron et al. (2007)
Others	4	NPM and accounting change, Information technology and accounting	Baker & Rennie (2017); Bruce & Warren (2018); Jarvis (2009); Liguori (2012)
Total	29		

S o u r c e : compiled by the authors based on journal by accounting focus analysis.

FINDINGS ACCORDING TO THE RESEARCH OBJECTS

What extent of government accounting has been studied in the Canadian context?

Before the emergence of the PSA standards, government accounting practices varied across the provinces (Baker & Rennie, 2018). Gradually, over time and with an intervention from the Public Sector Accounting Board (PSAB), the federal government and all provinces and territories of Canada² adopted a harmonized accounting practice for external reporting. PSAB sets the “criteria that determine such matters as what is included in and excluded from the financial statements, how financial statement items are measured, how financial statement information is presented or otherwise disclosed, and what the appropriate reporting entity is” (Baker & Rennie, 2018, p. 407). Moreover, since the early 2000s, the Government of Canada has adopted an accrual basis of accounting to align with the emerging New Public Management (NPM) approach in the public sector (Baker & Rennie, 2017, 2018). Besides this financial accounting domain, like other public sector entities, the federal, provincial and territorial government tiers use various managerial accounting tools to organize activities and resources. This section categorizes the review findings into financial and managerial accounting coverage to highlight the relevance of both branches of accounting in public sector reporting and financial management.

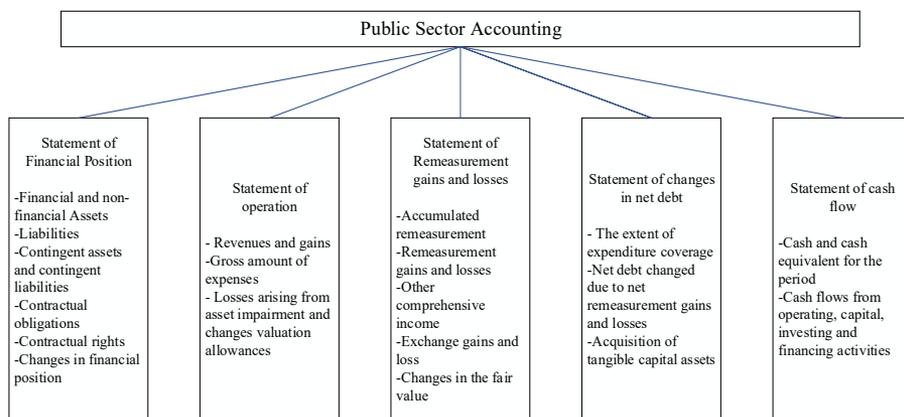
The PSA established four financial reporting objectives³ of public sector financial reporting (PS 1100), which serves the interests of a large variety of stakeholder groups such as citizens, policymakers, councilors, investors, and other government units (PS 1000).

To explore the financial accounting coverage in this review, we used the PSA guidelines prescribed by PSAB to set the scope. A brief chart of the PSA accounting framework is shown in figure 3.

² The CICA Handbook applies to federal, provincial, territorial, and local government organizations.

³ Four objectives of PSA reporting are: To report and present the full nature and extent of the financial affairs and resources (PS 1100, sec.16), financial position at the end of the accounting period (PS 1100, sec.20), changes in government’s financial position (PS 1100 sec.36), accountability of a government for the resources, obligations, and financial affairs (PS 1100, sec.61).

Figure 3. Scope of financial accounting in the public sector



Sources : compiled by the authors based on information available on the Public Sector Accounting website.

The first observation from the review synthesis is that two of the leading contributors in public sector financial accounting are Baker and Rennie. These authors published fifty percent (6 articles) of the articles in this domain. These authors examined the evolution of government accounting standards, emergence and entrenchment of net debt in public accounting, and the accrual basis of accounting of financial accounting research. They have used various historical analysis methods to explore the forces for Canadian Public accounting standards (Baker & Rennie, 2018), the adaption of accounting a new basis of accounting by the Government of Canada (Baker & Rennie, 2006), and the evolution process of the emergence and entrenchment of net debt reporting by the Government of Canada (Baker & Rennie, 2011). For more context, Baker and Rennie (2006) explained the role of public sector accounting standards in the Canadian federal government’s adoption of full accrual accounting.

Similarly, Baker and Rennie (2012) shed light on one of the historical events of Canada, the birth of Canada as a sovereign country, to explore whether the birth of a new nation triggers a new accounting system. Their historical analysis of policy documents states that creating a new political entity had a trivial influence on accounting practice. Accounting practices were informed instead by the traditional institutionalized practice of a dominant province (Baker & Rennie, 2012). Their findings highlight that the government accounting prac-

tice reflects legitimization rather than a political mutation to handle some challenges, such as settling the accounts and powers between pre-and post-confederation jurisdictions. Consequently, the need to coordinate resources and power has triggered the importance of having a standardized set of accounting practices across provinces. Baker and Rennie (2018) shed light on the institutional aspect of government accounting and reveal the role of an influential actor, the Office of the Auditor-General of Canada, in the process of the standardized-institutionalized public sector accounting practice. In their study published in 2017, Baker and Rennie pointed out that the government accounting practice was subject to deinstitutionalization or displacement. For the sake of transparency, the Province of Canada adopted the gross basis reporting of revenue and expenses of departments and custom offices and deinstitutionalized the net basis of reporting. The influence for such change came from another country outside Canadian jurisdiction (Baker & Rennie, 2017). Their findings indicate that Canadian government accounting is an institutionalized practice that reflects both national and international influences. Taken together, Baker and Rennie have advanced knowledge of Canadian government accounting by exploring it to reflect regulations, standards, institutions and legitimizations.

Among other articles concentrated on the Canadian government's financial accounting, Lin et al. (1993) examined the extent of compliance with the Public Sector Accounting and Auditing Committee's (PSAAC) Statement PSACs 3 and 4⁴ by senior governments in Canada. They further examined the effect of PSAAC's recommendations on government accounting and reporting and identified the significant areas of non-compliance in current practice. By a similar token, Lin (1993) reveals the Canadian experience of establishing accounting and auditing standards for the public sector to improve the government financial practices in the country. Lin's (1993) study reported that the voluntary nature of some PSAAC Statements makes the application of those in the public sector more challenging. Moreover, the notion to be aligned with jurisdiction-wide accountability principles makes public sector accounting even more challenging.

Whereas most articles that focused on financial accounting studied reporting practices in general, one study, Baker and Rennie (2011), shed light on a specific account of a balance sheet item. These findings indicate that only one study

⁴ PSACs 3 (1986) 'General Standards of Financial Statements Presentation for Governments'; and PSACs 4 (1988) 'Defining the Government Reporting Entity.'

has been done in the liabilities area, examining net debt (section 1.5, PS 1000 and PS 3200). However, opportunities are still there to investigate other balance sheet items and the statement of financial operation.

The subsequent thematic analysis of the review paper was done using the lens of managerial accounting. In contrast to financial accounting studies, management accounting studies are diverse and cover many disciplinary topics, such as budgeting, costing, and performance measurement. Hence, we can state that the diverseness of management accounting is common across economies. This finding is consistent with prior reviews in public sector management accounting development (van Helden & Uddin, 2016) in an emerging economy.

The most studied area is budgeting. Auld (1984) applied the measure of prediction accuracy to investigate whether the prediction of the national budget has improved over time. Their study suggests that the prediction accuracy of the Canadian federal budget has been enhanced since after the government started to use pre-paying taxes based on the previous year's taxable income. More recently, Chan (2004) surveyed selected municipal government's capital budgeting policies and techniques. This study reports that the Canadian government uses various capital budgeting techniques in evaluating capital projects. The author criticized the heavy use of quantitative measures in the assessment process. One of the primary intentions of government capital projects is social and community improvements, which cannot be measured using financial indicators. Hence, Chan (2004) proposed a multi-attribute decision model that factors in both tangible and intangible considerations. The national budget is considered one of the communication media between the public and the government in power. Hence, the accountability and transparency of the budgeting system are crucial. In a similar vein, Busdy and Robson (2011) surveyed different provinces to examine the quality of accountability and transparency of national revenue and expenditure budgets. Their results show that, though the Canadian government's revenue and expenditure budgets are better than other developed countries, there is still a need for a public account committee to improve accountability and transparency to the next level. Nonetheless, the extent of transparency varies across the provinces. The revenue and expenditure budgets are much more detailed and comparable in Ontario and New Brunswick, whereas, in other provinces, the presentation of public accounts is not that straightforward (Busby & Robson, 2013).

To that end, Savoie (1990) stressed a particular aspect of budgeting and provided a historical synopsis of three different expenditure budget management

systems: the Program Planning Budgeting System (PPBS), the Policy and Expenditure Management System (PEMS), and the Expenditure Review Committee (ERC). This study alludes that the complicated nature of government expenditure budgets can merely be dealt with through expenditure management systems if those technological ideas are borrowed elsewhere. Those new technologies were brought in as part of the political agenda for national elections. To be operational, a process and purpose-oriented expenditure management system is suggested by the author.

The performance evaluation system is a widely used management accounting tool for coordinating and organizing resources aligned with objectives and goals. Bourgault, Dion and Lemay (1993) explain how the performance measurement system of the Canadian federal government developed a sense of collective responsibility among deputy ministers. This sense of collectiveness has resulted in solid unity with the government as a whole (Bourgault et al., 1993) and brought modernity to resource management and control systems.

Understanding the nature and behaviour of costs is one of the fundamentals of an effective management accounting system. For context, Brimberg and Hurley (2014) stressed the importance of understanding the nature of government costs in managing lapsed funding. They examine the role of the information system in mitigating the lapsed funding of the Department of National Defense (DND) in Canada and suggest that, in addition to a better information system, a deeper understanding of cost behaviour can reduce the uncertainty in both operating and capital funds. As a result, the problem of lapsed funding will gradually decline (Brimberg & Hurley, 2014). Similarly, Fortin et al. (2007) unfold the implementation of activity-based costing in a federal government unit and shed light on the importance of understanding the nature of costs in reducing the budget deficits. As part of the modernization of the comptroller-ship project, in 1997, the Canadian federal government adopted activity-based costing to measure the cost of service more accurately. This costing system resulted in better control over accountability and performance measurement systems. Their survey-based quantitative analysis provides evidence that the adoption of activity-based costing has significantly contributed to financial improvements in various government units.

These study findings indicate that management accounting tools and techniques are well integrated into government operations. With advancements in the management accounting discipline, the government accounting practice embraces a new and modernized management accounting system.

**WHICH TIER(S) OF GOVERNMENT ARE STUDIED
IN THAT SELECTED LITERATURE?**

The subsequent thematic analysis that we used to understand government accounting practices is the tier of the government. The federal system of Canadian government comprises fourteen senior government units – one federal, ten provincial, and three territorial (Baker & Rennie, 2018). The local/municipal units are constituted under each provincial and territorial government. All these 14 senior government and local governments are relying on accounting system for external reporting and internal management. Table 3 lists the papers according to the tier of the government covered.

Table 3. Articles by tier of the government

Tier(s) of the government	No. of articles	Percentage	Area focus
Federal	20	69.0%	The federal budget, accounting reporting, accounting evolution, lapsed fund management.
Provincial	1	3.4%	Measurement of performance in an Auditor General's office
Municipal	2	6.9%	Accounts for both tangibles and intangibles, the influence of intra-organizational dynamics on accounting practice
Multiple tiers: Provincial and federal govt	1	3.4%	Net debt reporting
Govt in general (without making any reference of any tier)	5	17.2%	Accrual accounting in the public sector
Total studies	29	100.0%	

S o u r c e : compiled by the authors based on the analysis of articles by the tier of the government.

The federal government’s accounting practice is one of the primary foci of research in this domain. A large number of articles (20 articles representing 69 percent of the selected papers) have covered various accounting issues in federal government accounting. The emphasis of those papers is on the federal government’s budgeting and reporting system (Busby & Robson, 2011, 2013), fund management (Brimberg & Hurley, 2014; Stoney & Krawchenko, 2012), and the adaptiveness of the accounting system in response to both harmonizations

of accounting standards (Baker & Rennie, 2006, 2018) and neo-public management (Baker & Rennie, 2013). The next higher emphasis is on municipal government. Among the selected articles, two studies (6.9 percent) are conducted in the municipal area to unfold the influence of organizational dynamics on accounting practices. A very little research, only one article (3.4 percent), has been conducted in the provincial tier. The provincial-tier-focused study covered the performance measurement of the Auditor General's office. Most of the articles covered either federal, provincial, or municipal tiers of the government. However, a mentionable number of studies (5 articles representing 17.2 percent) in government accounting were conducted without referring to any tier of the government. The primary objective of those articles is to advance knowledge in public sector accounting in general. To sum up, the synthesis in this domain suggests that more studies are required to understand the accounting practice of local and territorial governments.

WHAT THEORETICAL FRAMEWORKS DOES CANADIAN GOVERNMENT ACCOUNTING RESEARCH ADOPT?

The subsequent thematic analysis applied in this review is the theoretical frameworks used and their paradigms. We borrowed the paradigm categorization from van Helden and Uddin (2016). Their structured review of public sector accounting has used three theoretical paradigms: mainstream, interpretive, and critical.⁵ We used these three categorizations to comment on the extent of the coverage of the theoretical frameworks. The selected literature heavily relied on the interpretive paradigm and used institutional, legitimacy, archetype, organizational and stakeholder theories to explore accounting as a socially constitutive practice. Consistent with van Helden and Uddin (2016), this review finding suggests that these social theories have the same primary intention: to seek subjective meaning for government accounting practices per-

⁵ The ontological and epistemological assumption of positivism is that reality exists independent of the researcher. Consequently, reality can be understood by using an accurate, objective measure. The interpretive theory presumes that reality cannot be understood tangibly. Instead, reality lies in human consciousness and comes into being through interpretation and sense-making processes. The critical approach is mainly for offering a critique of the existing social system with an envision for a better world (Prasad, 2005).

ceived by the actors. The complex nature of social practices such as government accounting can be understood deeply by applying different interpretive lenses. A total of 11 articles uses the interpretive paradigm to explore complex and dynamic government accounting practices.

Five articles adopted a positivist approach and utilized some mainstream accounting theoretical frameworks to understand relationships and associations. The positivist theories employed in investigating Canadian government accounting are contingency theory, resource-based view, organizational control, and rational expectancy theory. These theoretical frameworks examined the determinants of activity-based costing, the relationship between budgetary decisions with a surplus (deficit), and a predictive capacity of government budgets. These findings help to reflect the objective nature of government accounting.

Only a few (3) took a critical insight into the Canadian government accounting practices. Those studies employed Foucault’s discontinuities, Colonialism and Regulatory theory in understanding the tensions and struggles in Canadian government accounting. Critical paradigm views practices as the constitution of power and politics and addresses subjective and structural influences (Baxter & Chua, 2003; van Helden & Uddin, 2016) to understand societal and organizational change.

Seven articles did not provide a reference to any theory. Those articles are primarily descriptive and commentary. This finding is consistent with van Helden and Uddin (2016) and Jacobs (2012) who note that public sector papers’ authors and intended audiences are non-academic or consultants. Those non-academic-focused articles mainly serve as critiques and commentary on government accounting policies. Table 4 lists the selected literature according to paradigms and related theoretical frameworks.

Table 4. Articles by the theoretical framework

Theoretical framing	Number of articles	Paradigm	Research focus	Leading articles
Contingency theory/Resource-based view/Organizational control/Rational expectation theory	5	Mainstream accounting theory	Determinants of ABC, the relationship between budgetary decision-making reforms and surplus(deficit)	Fortin et al. (2007); Reddick (2004)

Table 4. Articles...

Theoretical framing	Number of articles	Paradigm	Research focus	Leading articles
Institutional theory/Legitimacy theory/Archetype theory/Organizational behaviour/Stakeholder theory	11	Interpretive	Evolution of different accounting practices, driving forces of accounting, alignment between public and private accounting practice	Baker & Rennie (2011); Baker & Rennie (2018); Carmela et al. (2020)
Foucault's discontinuities /Colonialism/Regulatory theory	3	Critical	Understand the role of technology, intra-organizational dynamics and process of standardization in public accounting,	Bake & Rennie (2017); Buhr (2012); Lin et al. (1993)
Descriptive/Review/Commentary with no explicit theory	7		Reflection on government accounting	Busby & Robson (2011); Busby & Robson (2013); Robson & Laurin (2015);
Empirical study but no reference of theory	3		Measuring the accuracy of budget, the success of ABC implementation	Auld (1984); Savoie (1990); Stoney & Krawchenko (2012)
Total articles	29			

Source: compiled by the authors based on the analysis of articles by theoretical framework used.

What methods does Canadian government accounting research employ?

The last categorization theme we followed was the data collection methods. Table 5 list the selected literature according to methods.

Table 5. Articles by methodological approach

Methodological approach	Number of articles	Examples of some intention	Leading articles
<i>Qualitative</i>			
Historical	9	Evolution of public account/ accrual accounting/net debt, factors influencing govt accounting, budgetary reforms	Baker & Rennie (2012), Baker & Rennie (2013), Buhr (2012)

Table 5. Articles...

Methodological approach	Number of articles	Examples of some intention	Leading articles
Single/Multiple case study	2	Rationale, approaches, and impact of accrual accounting; intra-organizational factor and accounting change	Liguori (2012), Pollanen & Loiseau-Lapointe (2012)
Descriptive	3	Performance appraisal system, public accounting practice variation across countries	Bourgault et al. (1993), Jarvis (2009)
Document/content analysis	3	International perspective on public accounting and lapse fund management	Bruce & Warren (2018), Gendron et al. (2007)
Public policy analysis	1	Standardization of public accounting	Lin et al. (1993)
Commentary	6	Accountability and transparency of public budget	Busby & Robson (2011), Busby & Robson (2013)
Review	1	Overview of harmonized accounting	Lin (1993)
Total qualitative papers	25		
Quantitative			
Survey	3	A decision model for both tangible and intangible budgeting, role of micro, small and medium enterprises in public procurement	Carmela et al. (2020), Chan (2004), Fortin et al. (2007).
Regression analysis	1	Alignment of public and private accounting with NPM	Auld (1984)
Total quantitative papers	4		

Source: compiled by the authors based on the analysis of articles by methodological focus.

In the qualitative category, historical analysis is the most frequent method of data collection (9 articles), while studies using document (3 articles), content (2 articles), and public policy analysis (1 article) are relatively limited. This finding contradicts Alawattage, Hopper and Wickramasinghe (2007) and van Helden and Uddin’s (2016) observation that public sector accounting research is mainly limited to case studies due to the lack of documents. The findings of this review suggest that as a publicly accountable body, government units have to make many accounts available to the public. Many of those documents and

policies are available in an archival format. As a result, historical documents, content, and public policy become a more accessible data collection method. The survey (3 articles) is a commonly used data collection method in the quantitative category, while studies using regression analysis (1 article) are rare. This finding, too, contradicts van Helden and Uddin's (2016) observation in emerging economies that the survey response rate is inferior. Due to cultural, social, and technological reasons, this response rate is slightly higher in a developed economy like Canada. Whereas van Helden and Uddin's (2016) research location is developing countries, this review concentrated on Canada, which could account for the increased civic engagement (Uslaner, 2002). A large proportion of the selected articles (9 articles) are commentary and descriptive, not employing specific methods.

■■■ CONCLUSIONS AND FUTURE RESEARCH DIRECTIONS

Given the dearth of synthesized knowledge on Canadian public accounting, we conducted a systematic review of the last 42 years' published studies to fill this knowledge gap. To shed light on what we know about Canadian government accounting, we sought to categorize studies according to the accounting area and topics covered. This review states that although a diverse range of research has been done in financial and managerial accounting, the opportunity still exists to set out future research directions.

This synthesis reveals that the formation of the confederation has provided a distinctive context for the evolution and adaption of an accounting system that legitimizes provinces. Despite political instability at that time, accounting systems worked as a coordinating mechanism for consolidating the financial results of different provinces. The financial accounting domain of Canadian government accounting research has applied some historical analysis techniques to unfold the influence of this political change on prevailing accounting practice. However, no research has been done to explore this political influence on managerial accounting practices.

The selected literature suggests that Canadian government accounting practices became institutionalized reflecting both national and international influences. Some study findings maintain that international institutionalization, influenced by foreign countries' policies has shaped accounting practices. This line of inquiry can be further extended by exploring the influence

of the International Public Sector Accounting Standard Board (IPSASB) on the prevailing practice. Studying the influence of international bodies such as the IPSASB, the United Nations, and the European Commission would be relevant and timely. More specifically, a study outlining the impact of an ongoing initiative by IPSASB to revise the conceptual framework for public sector accounting is warranted. Bruce and Warren (2018) conducted an empirical study on a different perspective of IPSASB's conceptual framework project to explore the institutional aspects such changes (coercive, memetic, or normative) using stakeholders' response letters. Nonetheless, an empirical case study or multiple case studies using in-depth interviews would reveal real tensions and changes in current accounting practice in response to this revised conceptual framework. In addition, how the Canadian PSAB is responding to the notion of change would be an interesting research topic. In a similar vein, Baker (2019) maintains that effective international accounting standards are one of the *prima facie* in encouraging general purpose financial reporting. Future research in Canadian government accounting can shed light on to what extent this internationally accepted conceptual framework contributes to improving the quality of government financial reporting.

This review synthesized the scope of financial accounting topics using topics listed on the PSA standards (see figure 3). The review finding depicts that only one paper (Baker & Rennie, 2011) has covered one balance sheet item (net debt) in their study. Research opportunities exist to explore other accounting topics from the statement of financial position, statement of operation, cash flow statement, and remeasurement of gains and losses. More specifically, future research can be directed to understand the nature, type, and reporting history of some unique items, such as contractual obligation and assets, remeasurement gains and losses, and cash flow from the capital.

Our review synthesis suggests that the research in Canadian government accounting is limited to different government tiers such as federal, provincial and territorial, and municipal. Nonetheless, PSA defines government accounting broadly and includes government business enterprise, government non-profit organizations, government partnership, and business partnership. Therefore, research can be pursued to explore the financial and management accounting practices of all different forms of government entities.

This review study contributes by providing a synthesized knowledge of Canadian government accounting on which future research can build. This study

made further contributions by identifying some under-explored and unexplored areas and alluding to areas where future research can be carried out.

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