ROUTLEDGE STUDIES IN ACCOUNTING

Cost Accounting in Government

Theory and Applications

Edited by
Zachary Mohr

Cost Accounting in Government

Managerial cost accounting is the financial and managerial tool that is used to estimate the organizational cost of products and services in business and government. In recent decades, cost accounting in the United States and other advanced industrial countries has been dominated by discussions of Activity-Based Costing, or ABC. While ABC can be shown to produce a more accurate estimate of cost than older and more basic types of cost accounting, ABC is not used extensively by many governments. We argue that this recent focus on ABC has stifled examination and discussion of how government cost accounting is being used and of how it could be used in practice. The study of cost accounting practice reveals an important and underexplored area of financial management in government.

Given the scandals that cost accounting estimates can create and that different types of cost accounting can create different estimates of cost, it may be reasonable to ask whether the cost accounting exercise is worth it? *Cost Accounting in Government: Theory and Applications* addresses these unusual and unusually important topics through a series of studies of different government cost accounting practices. The first section of the book presents two chapters on the history and the basic elements of cost accounting. The second section of the book provides further discussion and case studies of actual cost accounting practices in the main areas that cost accounting has been used in government: benchmarking the performance of government services, rate setting, grant overhead cost recovery, and cost management. The last two chapters discuss cost accounting practices in Europe and the future of cost accounting. These cases span local and federal governments and provide a much-needed context to the study of cost accounting in government.

Aimed at academics, researchers and policy makers in the fields of Accounting, Public Administration, and Government Studies, *Cost Accounting in Government: Theory and Applications* seeks to address the practical and theoretical gap in government cost accounting research with case studies of different public agencies that are using cost accounting for different purposes. The case studies illustrate that different purposes for cost accounting create unique and interesting cost accounting practices. The case studies provide useful examples of actual cost accounting systems that can inform both research and instruction.

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Abbreviations

A-122	OMB Cost Principles for Non-Profit Organizations
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AAR	After-Action Review
ABC	Activity-Based Costing
ABM	Activity-Based Management
ACE	Analytic Cost Expert
AFAD	Allocate, Functionalize, Allocate, Distribute
AMCOS	Army Military and Civilian Costing System
AUB	Army Uniform Board
BEP	Bureau of Engraving and Printing
BOB	Bureau of the Budget
BSC	Balanced Scorecard
CAP	Cost Allocation Plan
CAPN	Cost Accounting Principles and Norms
CARB	Contract and Acquisition Review Board
CASB	Cost Accounting Standards Board
CBA	Cost–Benefit Analysis
CFR	Code of Federal Regulations
COCOPS	Coordinating for Cohesion in the Public Sector of the Future
ERP	Enterprise Resource Planning
FAA	Federal Aviation Administration
FAF	Financial Accounting Foundation
FASAB	Federal Accounting Standards Advisory Board
FORSCOM	Army Forces Command
FTE	Full-Time Equivalent Employee
FYDP	Five-Year Defense Plan
G1	United States Army Personnel
G4	United States Army Logistics Innovation Agency
G8	United States Army Office of Financial Management
GAAP	Generally Accepted Accounting Principles
GASB	Governmental Accounting Standards Board

GFOA	Government Finance Officers Association
GIS	Geographic Information Systems
IAS	International Accounting Standards
IASC	International Accounting Standards Committee
ICMA	International City/County Management Association
IT	Information Technology
MCS	Management Control Systems
MFOA	Municipal Finance Officers Association
NCGA	National Committee on Governmental Accounting
NPFM	New Public Financial Management
NPM	New Public Management
OMB	Office of Management and Budget
ONR	Office of Naval Research
PD	Production Department
PI	Principle Investigator
PM	Performance Measurement
PPBS	Program Planning Budgeting Systems
TCE	Transaction Cost Economics
TEL	Tax and Expenditure Limitation
TQM	Total Quality Management
UK	United Kingdom

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Preface

What person with any common sense would pay over $400 for a hammer? So why, ask critics, does the federal government? The reality is—despite media reports to the contrary—the federal government does not actually pay that much for hammers.

The $400 government hammer is an unfortunate problem for government financial management. Beyond the political sensitivity of the framing of the purchase, the real problem is the cost accounting that was done to derive the direct and indirect cost of the object or service. In the case of the hammer, a very large amount of indirect engineering costs was distributed down to a relatively limited quantity of direct costs, which gives the appearance of excessive expense and waste.

Given the scandals that cost accounting estimates can create and the recognition that different types of cost accounting can create different estimates of cost, it may be reasonable to ask whether the cost accounting exercise is worth it. The answer to this question is actually yes. For a variety of reasons, cost accounting is important in government and is not solely a tool that is used in private industry. For example, governments often have enterprises that they are trying to run like a business. To assure that they are not being subsidized indirectly by general tax sources, governments need to account for all of the direct and indirect costs of these enterprise services. Local governments are also asked to provide federal services in the United States to local populations because they are often the level of government that is in the best position to provide the services. However, and like the enterprise funds, cost accounting is needed so that the grant administration expense is not being subsidized by local tax revenues.

Unfortunately, there is not a lot of research about cost accounting. There is a little bit of research on why governments do cost accounting. There is less research on the problems or complications of cost accounting—even though we know from experience that cost accounting can encounter serious problems that can become very political. And we know almost nothing about why cost accounting systems differ and if those differences lead to different outcomes.

Because of these absences in the literature on government financial management and government accounting, we believe that the time is ripe for a book on cost accounting in government. We hope that it will create an interest to more thoroughly understand how cost accounting and costs, in a general sense, are being used in government and related organizations.

Already, there is more work being done on government cost accounting related topics by financial management scholars in Europe. This is likely a result of the global recession that started in 2008, but these commendable scholars are also likely responding to the vacuum that is so clearly present in the literature. This book focuses most specifically on cost accounting practices in the governments of the United States. This is primarily because there is even more of a dearth of literature on cost accounting practices in the United States. The penultimate chapter looks at cost accounting practices outside the United States and analyzes a unique survey of government employees on their cost accounting practices in European countries.

Overall, we hope that this book contributes to the still emerging literature on government cost accounting. Hopefully, it can serve as a foundation for financial management scholars on the topic in the United States and can serve as a bridge to the more developed literature in Europe and Australasian countries.

Introduction to Government Cost Accounting

Cost accounting is an important and recognized aspect of accounting, finance, and business management. Cost accounting is the measurement, analysis, and use of financial and nonfinancial information to determine the direct and indirect costs associated with the consumption of resources in an organization. Cost accounting for businesses is critical simply because businesses must price their products and services in a way that will recover all of the cost of the resources that were used to produce the service so that the business will stay solvent. For business cost accounting, this simple and profound raison d'être is enough to justify that every accounting student have at least one class, and sometimes two classes, in cost accounting. It is critical that accounting students are able to calculate the cost and profitability of services. Thus, cost accounting information is used by businesses to make decisions related to strategy, the budget, investments, production plans, pricing of services, and other critical business purposes.

It may seem unusual to start a book about government cost accounting by first talking about business cost accounting; however, the reason for business cost accounting must be acknowledged first and foremost so that we can realize that government does *not* need cost accounting for its survival. Profit is not the primary motive for government activities. Governments provide services where there is a market failure, either the under-provision of public goods or providing services that would result in a natural monopoly. In either case, a government that has the power to tax or effectively determine the market price does not need to turn a profit as its survival is not dependent upon an economic profit.

If not a profit motive, why does government do cost accounting? There are some general answers in the literature, and this book focuses on these activities because they illustrate the most important uses of cost accounting and the most important aspects that make cost accounting in government unique. Businesses do not often get grants from the federal government to give services away. Local governments in the United States do get grants, and they must account for their costs in providing these services in a way that can be ascertained and reimbursed so that the federal government does not unduly burden local governments. Local governments also provide

services that they charge for such as transportation, water, sewer, gas, and electricity. These varied services would also benefit from good cost accounting so that they do not need to be subsidized by the general tax base. In sum, government services may be even more varied than private business and are, therefore, more likely to exhibit conceptually difficult variability when it comes to the cost accounting that is used.

This book is designed to start a discussion about government cost accounting. It provides a guide to the theory and research on its applications in government settings. As the literature on business accounting did in the 1970s, this research develops a descriptive theory of government cost accounting: when it is used, how it is used, and the unique aspects of government cost accounting. The following section describes the structure of the book proceeding from the general aspects, theory, and history of government cost accounting to the second part of the book, which further analyzes the primary purposes that have been described in the literature. The penultimate chapter looks at cost accounting outside the United States, and the final chapter discusses the potential for cost accounting in the future.

Structure of the Book

The first section of the book is made up of the first two chapters. This section provides background and foundations for understanding the cost accounting that is further elaborated on in the second section. These chapters cover the basics of what cost accounting is and the way that it has changed over time.

In the first chapter, Zachary Mohr provides a framework for understanding different cost accounting systems. The chapter presents the two archetypes of cost accounting for students to see how the different elements of cost accounting can lead to different estimates of cost. The chapter then proposes that in practice, these elements vary considerably based upon the purposes for which it is used and the forces that act upon it. It proposes that in practice the cost accounting that is used is a hybrid of the two textbook types of cost accounting. The theory of why this is appropriate for government cost accounting is then discussed with additional considerations that are important in different government contexts.

In the second chapter, William C. Rivenbark and Zachary Mohr contextualize cost accounting through different historical periods and note that it has changed considerably in its purposes over time. The use of cost accounting in government is not a new phenomenon. Fredrick Clow, the father of cost accounting in local government, published a manuscript in 1896 on the need for scholarly investigation into various aspects of municipal finance, which included a costing methodology for tracking efficiency trends over time and for making efficiency comparisons among multiple jurisdictions. Both scholars and practitioners have advocated the use of cost accounting in government on a period basis since that time, including Hebert Simon

during the 1930s and Harry Hatry during the 1970s. The purpose of this chapter is to review the historical lineage of cost accounting in government to specifically identify why this tool has been promoted over the past 100-plus years from a theoretical and technical perspective. This chapter begins with a review of cost accounting in government beginning with the work of Clow (1896) before summarizing the theory that supports the management tool and the technical application of using resources consumed to calculate measures of efficiency. It concludes that the tool has changed significantly over time, but it remains a valuable tool for many purposes, including performance measurement and management.

The second section of the book covers chapters three through six. These four chapters look at the four primary applications or purposes for cost accounting in government: performance measurement, rate setting, grant overhead recovery, and cost management. The chapters generally discuss the important aspects of cost accounting for the application and provide a case study or description of how cost accounting has been used for this purpose.

In the third chapter, William C. Rivenbark notes the intrinsic value of cost accounting for benchmarking and performance measurement. Research in benchmarking has shown that the likelihood of local officials using performance indicators to make decisions actually increases when they engage in benchmarking, representing the process of comparing performance measures from one local government against performance measures from other local governments. This same research also found that local governments tend to rely more heavily on efficiency measures than effectiveness measures when making changes to service delivery. The underlying question, however, is how do local officials ensure an apple-to-apple comparison when comparing efficiency measures across multiple local governments given the complexities of how expenditures are accounted for from one organization to another? The purpose of this chapter is to explore the intrinsic value of cost accounting to increase the probability of accurately benchmarking service efficiency among multiple local governments. It begins with a literature review on benchmarking in local government before presenting the cost accounting methodology used by the North Carolina Benchmarking Project for calculating total resources consumed for a defined service area, which is the basis for producing an accurate and comparable cost per output measures. This chapter concludes by presenting several cases on how local governments participating in the North Carolina Benchmarking Project have used efficiency measures to advance the processes of service delivery.

In the fourth chapter, JoEllen Pope and Zachary Mohr discuss the important use of cost accounting for setting user fees and rates for government services. Increasingly, many government agencies rely on charging other agencies or outside organizations for a significant portion of their revenue. These agencies, in many cases, utilize cost accounting to establish the rates to be charged; however, not all agencies make use of cost accounting for

rate setting. The purpose of this chapter is to examine the benefits of using cost accounting for rate setting and calculating user fees and identify issues that agencies might encounter. The chapter includes a special discussion of issues surrounding rate setting. The issues of cost accounting for rate setting and the trade-offs that must be made in this context are then discussed in the case of an internal charge between a city and an airport that became politically contested.

In the fifth chapter, Robert J. Eger and Bruce McDonald III explore the application of cost accounting principles and norms (CAPN) for state and local governments, nonprofits, and universities. The focus is on the budget, definition, disclosure statement, facilities and administrative costs, direct costs, and indirect costs contained within the grant. The objective of this chapter is to understand the application of CAPN to all financial aspects of the grant focusing on consistency in estimating, accumulating, and reporting costs while understanding the role of allowable and unallowable costs. In addition to the CAPN, this chapter will include the international accounting standard (IAS) 20, which is focused on accounting for government grants and disclosure of government assistance. IAS20 enriches the discussion of cost accounting for government grants by incorporating current aspects in the international accounting standards as they apply to grantee organizations in the United States.

In the sixth chapter, Dale R. Geiger explores the use of cost management tools in federal government agencies. As the fiscal resources of government become increasingly constrained, the management of operations becomes increasingly important in accomplishing the missions of government. Some federal organizations have demonstrated sustained capabilities in continuous improvement through several different forms of cost management and control: organization based, role based, and output based. The purpose of this chapter is to consider and contrast the cost accounting requirements of these successful innovators.

The third and final section of the book is to consider cost accounting beyond the current United States government context in which it has primarily been explored in the first six chapters of the book. The second-to-last chapter looks at cost accounting in European countries, and the final chapter looks at the prospects for cost accounting as a research subject into the future.

The seventh chapter by Ringa Raudla and James W. Douglas gives an overview of the use of cost accounting in the central governments of 19 European countries. Using data from a survey carried out within the framework of the largest comparative public management project undertaken in Europe so far, it provides a "cost accounting map" of the different countries, showing the variation in the intensity of the use of cost accounting within central government organizations. It explores the reasons that may explain the variation in the use of cost accounting between the European countries, including the role played by different administrative traditions,

the influence of the paradigm of New Public Management, and the severity of fiscal stress. We also explore whether the use of cost accounting practices depends on the characteristics of the policy field and whether intercountry differences with regard to the utilization of cost-accounting are larger than the intracountry differences.

The final chapter by Zachary Mohr provides a summary of the purposes, problems, and the prospects for cost accounting in government. How each chapter addresses the linkage between the purpose and the corresponding problems and prospects is discussed. It provides avenues for the development of research on government cost accounting.

1 A Framework for Cost Accounting Systems in Government

Zachary T. Mohr

As a general concept, the need to understand and manage costs in government is a topic on which virtually no one is opposed, but the topic lacks extensive theoretical or empirical development. No one opposes the idea that the federal government should not spend thousands of dollars on a hammer, and no one opposes the idea that the local parks department uses the lowest cost provider to maintain its vehicle fleet. In difficult financial times, the most is expected of managers when it comes to service delivery cost, and to manage one's costs is a platitude that borders upon the obvious. Of course, these aspirations must meet the realities of actually determining the total cost of services in public organizations, forging agreement on which estimate of cost is appropriate, and then managing the costs. In spite of strong exhortations and the logic of cost efficiency and effectiveness, accounting for the full costs of public services, both direct and indirect costs, seems to be a challenge that has not been adequately addressed by public organizations, which tend toward less cost accounting than seems warranted based upon the purported benefits (Geiger, 2000, 2010; Mohr, 2015; Premchand, 2006).

The few researchers that have worked with cost accounting in government invoke a greater need for understanding it in this context, but they readily acknowledge that the understanding of government applications of cost accounting is "limited" (Rivenbark, 2000, 2005) and "underdeveloped" (Lienert, 2008; Robinson, 2007). A step toward developing knowledge of cost accounting in the government context is taken in this chapter by describing the two "textbook" types of cost accounting systems. A third type of cost accounting system, the hybrid cost accounting system, which exists between these two academic constructs (Goertz, 2006), is then described.

The need for cost accounting is tied to the observation that government agencies understate the cost of services when they do not include the cost of indirect resources in cost estimates (Geiger, 2000; Mohr, 2016), and the understated costs distort the rational allocation of public resources. Historically, cost accounting is used to allocate resources to the most cost efficient services, to recover revenue through grants and charges for services, and to evaluate performance (Mohr, 2015). It is often simplistically assumed that

the best way to measure cost is to use the most advanced cost systems, such as activity-based costing (ABC), but this has to be weighed against the additional cost of measurement. More advanced cost accounting systems, like ABC, tend to provide more accurate estimates of the true cost of products and services (Cooper & Kaplan, 1988, 1992) and can be used for management and continuous improvement (Brimson, Antos, & Collins, 1999; Kehoe, 1995). For a variety of reasons, though, ABC may be inappropriate for general-purpose government use (Brown, Myring, & Gard, 1999; Collier, 2006; Flanagan & Britain, 2008; Flury & Schedler, 2006; Mullins & Zorn, 1999; Williams & Melhuish, 1999) and is not heavily used by cities in the United States[1] (Kennett, Durler, & Downs, 2007; William C. Rivenbark, 2005) or the federal government (Martin, 2005, 2007).

Developments in cost accounting since ABC, both scholarly and practical, provide a new foundation on which to understand different cost accounting systems and their managerial uses for government. By analyzing actual cost accounting systems that are being used by city and county governments, this chapter proposes that governments in the United States use hybrid cost accounting systems (Horngren, Datar, & Rajan, 2011) that combine features of traditional cost accounting and ABC. These developments in cost accounting provide a new basis upon which research about cost accounting systems in cities might proceed by providing a descriptive theory of cost accounting. This chapter reviews both traditional cost accounting, activity-based costing, and then proposes a hybrid form that is based on a review of actual systems in local governments. Attributes of each are compared to demonstrate the relevant differences and managerial uses for each type. It then reviews the main theories that have attempted to describe cost accounting in organizations with particular attention paid toward studies of government applications.

Types of Cost Accounting Systems in Government

In a historical analysis of cost accounting in the public sector, Rivenbark (2005) makes two important points about the general nature of cost accounting. The first is that cost accounting is to managerial accounting what fund accounting is to government financial accounting. In fact, managerial accounting is defined by the cost accounting exercise. Whether the cost accounting system is ABC or a more traditional cost accounting system, cost and managerial accounting must account for indirect costs (Mohr, 2016).

The other important point that Rivenbark makes for this analysis concerns a general disclaimer that needs to be made about cost accounting generally. Cost accounting has been implemented in different ways and is subject to various influences. This system has led to a nonstandard application of cost accounting. Where this chapter discusses traditional cost accounting, it is generally recognized that the "traditional" aspect is the standard

textbook definition of a general cost accounting system and is a generalization for expository and academic purposes (Goertz, 2006). This in no way assumes that cost accounting systems are uniform. Research regarding cost accounting suggests that the government context is more varied than that in private organizations (Flury & Schedler, 2006), with the effect being that cost accounting systems in practice exhibit conceptually difficult variability (Rivenbark & Carter, 2000).[2]

The following discussions of cost accounting systems are an attempt to describe the two academic constructs of cost accounting and to provide a description of hybrid cost accounting, which can be seen in the systems used by local governments in the United States. It then compares the three types of cost accounting along the relevant dimensions discussed. The theory section of this chapter provides a further discussion of the factors that lead to differences in cost accounting and suggests why hybrid cost accounting may have developed in local government.

Traditional Cost Accounting

Traditional cost accounting has been likened to spreading overhead costs over the departments of an organization like peanut butter being spread over a piece of bread (Kehoe, 1995). This metaphor captures the essence of traditional cost accounting because it will generally smooth the costs of overhead across the service departments of an organization. The reason that it smooths the costs over the organization is that traditional cost accounting uses allocation bases that vaguely link products and services to overhead resource consumption. The general nature of the bases generally distributes overhead and may not direct it in the system to the parts of the organization that are actually using the majority of the overhead. This smoothing makes the managerial uses of traditional cost accounting information not particularly useful for management purposes such as controlling overhead resource consumption by the service departments.

The most common cost objective, or use, of traditional cost accounting is to allocate the cost of overhead to the service providing departments and programs for the purpose of grant and financial reporting compliance (Flury & Schedler, 2006; Rivenbark, 2005). If the overhead costs were to be left out, this would significantly understate the true cost of providing that service and grant-funded activities may not be completely reimbursed, assuming, of course, that the grant allows the allocation of indirect or overhead costs. When overhead is not allowed by granting agencies, the local government must support the overhead costs from its own resources. When grants do allow for the provision of the capture of overhead and indirect costs, governments that do not allocate overhead costs to the grants give up resources that could be used to increase the welfare of local citizens.[3] Traditional cost accounting systems could also be used to include some measure of overhead cost for pricing services that would be provided by a

user charge. However, this method of pricing goods and services was inaccurate as has been pointed out by proponents of ABC. Traditional ways of allocating indirect costs in traditional cost accounting are to use either the direct or the step-down method, where overhead costs are allocated down to service departments in either one or two steps (Finkler, Purtell, Calabrese, & Smith, 2012).

An example of the traditional cost accounting system for the services of one department can be found in the hypothetical example of the City of Frugal[4] (Figure 1.1). The budget for the departments of Frugal is presented first. The first thing to notice with the traditional cost accounting plan is the allocation bases that will be used to distribute the costs to the departments. The

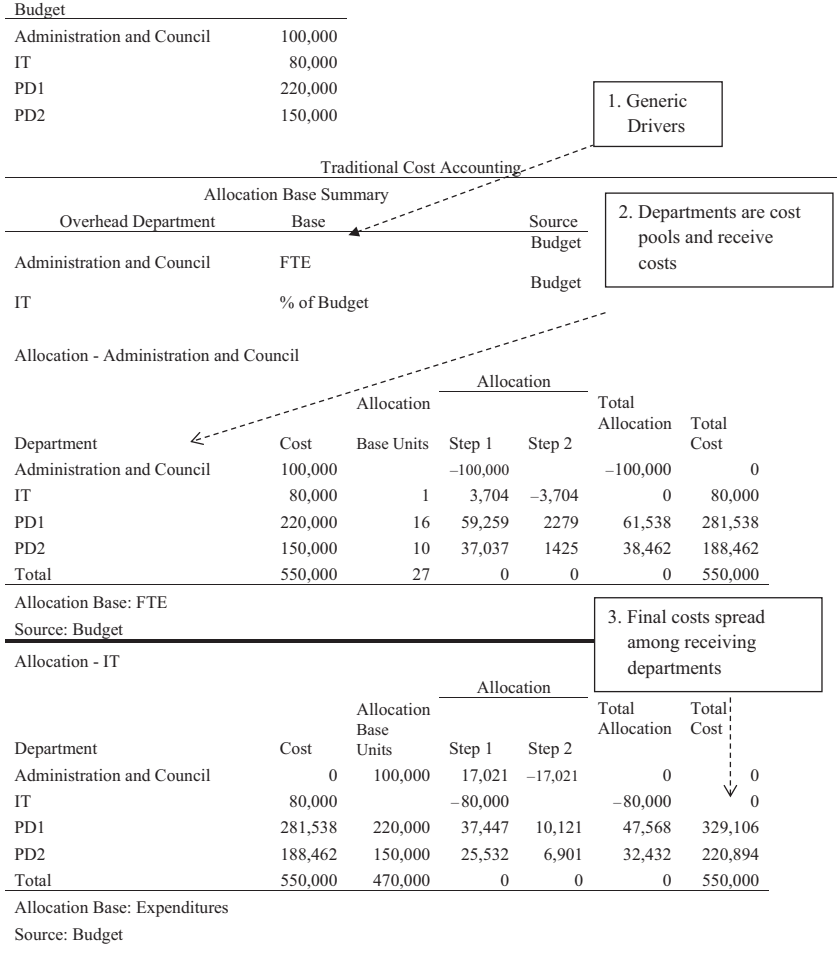


Figure 1.1 Traditional Cost Accounting System Example

allocation bases are general and ambiguously linked to overhead resource consumption, such as the use of Full-Time Equivalent (FTE) Employees or department's expenditures from the budget to distribute the cost (see the following example). As was noted previously, the effect of these general cost drivers is to spread the cost of the overhead departments between the receiving departments with little recognition of actual resource use and less ability to show managers how to control overhead costs.

In the traditional cost accounting system, it may *not* be necessary to drive the cost down to products and services as is done with ABC.[5] The receiving cost centers are departments or general categories of spending such as a grant service. Not only are the receiving departments general but so are the overhead cost pools. In this example, there are two cost pools that will be distributed to two department cost centers. The Administration and Council cost center has multiple activities that it performs, but all of the cost associated with all of these different activities are distributed in an equivalent way based on the number of employees. The Information Technology (IT) department also is a general cost pool with a general driver, which leads to ambiguous allocation of costs.

The costs of the administrative departments are allocated using the double-step-down method. It first takes the cost of the cost pool and allocates those costs on the basis of the driver to both overhead and service departments.[6] In the second allocation, the allocated costs from the first step down that were distributed to other overhead departments are then allocated based upon the remaining drivers to the service departments. The final cost of service departments is shown after the allocation for IT, where the Production Department 1 (PD1) accounts for $329,106 of the $550,000 cost and the Production Department 2 (PD2) accounts for $220,894 of the $550,000. The costs of the overhead departments have been spread across the service departments in a way that roughly corresponds with each department's share of the budget relative to the other service department. While the traditional cost accounting system can distribute the costs to the service department, these costs may not reflect the actual consumption of overhead resources.

Activity-Based Costing

Traditional cost accounting benefits from over a century of research and development in both municipal and federal government (Kraines, 1970; Rivenbark, 2005; Rubin, 1993). The relatively more recent activity-based costing (ABC) was proposed by Cooper and Kaplan (Cooper & Kaplan, 1988, 1992; Kaplan, 1988; Kaplan & Cooper, 1998) and comes from the critique that traditional cost systems were failing to provide the meaningful information on the costs of individual products and services needed for businesses to compete in a highly competitive, global environment (Johnson & Kaplan, 1987). Instead of just passing down overhead costs to cost

centers such as departments or programs, the cost objects of ABC are the individual products and services that the business makes and sells. These ideas were applied to governments that also had their own pressures to be more efficient and make difficult choices among services in the 1990s (Brimson et al., 1999; Kehoe, 1995; Weiss, 1997). Because of its more recent prominence, somewhat more is known about actual applications of ABC in modern governments than traditional cost accounting, but the knowledge and the applications of ABC have not led to a standard ABC development.[7] Due to this lack of development in the literature on a standard process for local governments to develop an ABC system, the general four-step process of ABC (Gosselin, 1997) is first discussed, and then the key elements of ABC are differentiated for contrast with traditional cost accounting.

The first step to any ABC system is "to identify the activities being performed by the organization's support resources" (Kaplan & Atkinson, 1998, p. 97). Within the ABC framework, the cost center is no longer the central focus of the analysis, and the central focus becomes the support resources that may come from either overhead cost centers or from the indirect costs within the service centers to provide a good or service. This distinction is important because a service center may provide many services and have many resources. In the ABC framework, the goal is to align the resources consumed to the production of products and services. This necessitates that the first step is to track the activities of support and service centers, which will eventually be used to determine all of the costs that go into each and every activity.

In the second stage of the ABC system, managers or accountants trace the costs of indirect costs to products or services by determining the "activity cost driver" or "cost driver." The cost driver is some quantifiable measure that can connect indirect costs to individual products or services through a "cause and effect relationship." ABC provides the mechanism to establish a causal relationship between common costs that must be ignored by traditional cost systems because managers are not provided the information they need to understand and control their usage of common costs (Kaplan & Atkinson, 1998, p. 99). Research in actual government settings provides some guide to the type of driver required (Geiger, 1999), but in general the driver should be specific to establish the cause-and-effect relationship between indirect resources actually used and resources accounted for in the cost attribution.

In the third stage of ABC, everything is put together to determine the full cost of doing an activity such as production or providing a service. The ABC designer links the indirect costs to the cost drivers identified and the direct costs of service to determine the actual cost of production or service. The key is that every cost is logically connected to the output. The estimate obtained is usually much more accurate because it is not based upon arbitrary allocation or overly generalized bases. It is in this stage that the true costs of activities are revealed. The purpose of ABC is

to ultimately give managers the information that they need to determine which products, services, customers, and processes add value to the mission of the organization. Services that do not add value should be redesigned or eliminated to increase the value of the organization. In the case of one nonprofit healthcare clinic, new information from ABC about the cost of services revealed that one of its dialysis treatments that the clinic thought was profitable was actually being subsidized by another dialysis treatment that was previously thought to be unprofitable (Kaplan & Atkinson, 1998). Once the true costs of services were known it was easy to determine that the customers that could receive the second type of treatment should receive it. With their old cost accounting system, the managers had been funneling their patients into an overly costly and unprofitable service. In this case, the customer and the clinic can be made better off by the increased awareness of the true cost of services.

The fourth and final stage is the active management of an organization's costs based upon the information obtained from an ABC process. This is also known as Activity-Based Cost Management or just Activity-Based Management (ABM). ABM generally requires some sort of process reengineering, total quality management, cost-of-quality analysis, continuous improvement, process modeling and simulation, value analysis, benchmarking, and others (Kehoe, 1995). In any case, information being used extensively in the management of an organization pushes an organization beyond activity based cost accounting and into ABM.

While the details of ABC such as cost drivers, attribution, and indirect costs are obviously different from traditional cost accounting, the major difference is the purpose of the system. Activity-based costing provides government managers and controllers a cost accounting technique that is specific enough to track the indirect resource consumption of individual products and services and then allows these costs to be managed. This focus on individual products and services and the specific cost drivers that it requires are the biggest differences between traditional cost accounting and ABC. Another important difference is that ABC promotes a hierarchy of costs that are traceable and avoidable. This hierarchy of cost concept is important to allow meaningful comparisons of the contribution margin of the various activities. While contribution margin analysis is primarily beneficial for services and products that are produced in a manufacturing environment, the same sort of marginal analysis may be important for setting optimal levels of service from a policy-theoretic framework as well.

For purposes such as grant reimbursement, traditional cost accounting may give an acceptable estimate of cost, but it usually does not give extremely accurate information for individual products or services. The original purpose of ABC was to provide managers with the information that they needed to have more profitable products and services and improve their processes (Kaplan & Cooper, 1998). While financial profitability is not a concern for

government as much as it is with business (Flury & Schedler, 2006; Mullins & Zorn, 1999), the use of more specific cost drivers to increase knowledge of processes, drive organizational learning, and increase efficiency is a concern for government managers (Brimson et al., 1999; Kehoe, 1995; Weiss, 1997), especially in times of fiscal scarcity (Geiger, 2010). These arguments for the utility of ABC often contrast with its extremely low levels of usage in public organizations such as cities (Kennett et al., 2007).

The hypothetical example of Frugal can be used to show how an ABC system specifically attributes the costs of indirect resources to develop a more accurate cost for products and services. The following example starts with the same small community, Frugal, with two overhead departments: Administration and Council and the IT department (See Figure 1.2). After doing an activity analysis, it is found that the Administration and Council cost pool are doing two distinct activities. The IT department is found to be doing primarily one activity, which is servicing the computers of the departments. For brevity, the example assumes that the service departments, PD1 and PD2, each do one activity. In a real example, departments do multiple activities, and using ABC the city could trace the cost down to the activity level in these departments using the method described.

Once the activity analysis is completed, the government then figures out cost drivers that are logically linked to the indirect resource usage. The first indirect resource is general administration, and it is found that the general nature of the administrative functions performed can only be based on the time the administrative officers of the city spent with the activities of the Council, IT, and the service departments. The Administration department begins tracking its time in the payroll system as a realistic way of basing the costs of administration. Of the proportion of the Council's time to be allocated, it is thought fair to distribute those costs based upon the number of agenda items that the council has to review. Also, the cost driver for IT is found to be the number of computers in each department, as that is the primary activity with which the department is concerned. The key to activity based cost drivers is that they unambiguously link the consumption of overhead costs with the direct costs of services.

An important difference between the ABC system of cost accounting and the traditional cost accounting system is the recognition that some costs may not be appropriate to distribute to the lower levels of service providing departments, because some of those costs are necessary to sustain the organization. In this case, only half of the Council's cost is attributed to the service departments because only half of the Council's time has been found to be related to actual departmental issues. A large portion of the time is related to general organizational maintenance activities such as interacting with citizens. This hierarchy of costs concept is as applicable at the departmental level that is being developed here and the within-department level when specific activities have costs that only apply to the batch and product-sustaining level (Kaplan & Atkinson, 1998). In both ABC and economic theory, the only costs that should be passed to the lower level activities are

Driver Summary

Overhead Department	Drivers	Source
Administration	Time	Payroll System
Council	50% Self & 50% Agenda Items	Council Minutes
IT	Computers	IT Records

1. Specific cost drivers

Activity - Administration

2. Hierarchy of cost

Activity	Cost	Driver units	Allocation Step 1	Allocation Step 2	Total Allocation	Total Cost
Administration	80,000		–80,000		–80,000	0
Legislature	20,000	384	8,000	–8,000	0	20,000
IT	80,000	384	8,000	889	8,889	88,889
PD1 Activity/Service	220,000	1,728	36,000	4,000	40,000	260,000
PD2 Activity/Service	150,000	1,344	28,000	3,111	31,111	181,111
Total	550,000	3,840	0	0	0	550,000

Driver: Administrative Time
Source: Payroll System

3. Activities are cost pools and activities receive cost

Activity - Council

Activity	Cost	Driver units	Allocation Step 1	Allocation Step 2	Total Allocation	Total Cost
Administration	0	1	357	–357	0	0
Legislature	20,000		–10,000		–10,000	10,000
IT	88,889	2	714	26	741	89,630
PD1 Activity/Service	260,000	5	1,786	66	1,852	261,852
PD2 Activity/Service	181,111	20	7,143	265	7,407	188,519
Total	550,000	28	0	0	0	550000

Driver: Agenda Items
Source: Council Minutes

Note: 50% of Legislative cost is allocated, other 50% allocated to self

Acitivity – IT

Activity	Cost	Driver units	Allocation Step 1	Allocation Step 2	Total Allocation	Total Cost
Administration	0	4	21,089	–21,089	0	0
Legislature	10,000	1	5,272	–5,272	0	10,000
IT	89,630		–89,630		–89,630	0
PD1 Activity/Service	261,852	2	10,545	4,394	14,938	276,790
PD2 Activity/Service	188,519	10	52,723	21,968	74,691	263,210
Total	550,000	17	0	0	0	550,000

Driver: Agenda Items & Council Minutes

4. Final costs related to resource consumption

Figure 1.2 Activity-Based Costing System Example

those that are both traceable and avoidable, although these concepts are rarely empirically observed (for an exception see Anderson & Sedatole, 2012).

Once the activities of the indirect resource departments are attributed with clear and specific drivers to the activities performed by the organization, the indirect resources can be attributed to the products and services of

the organization. As in the traditional cost accounting example, the double-step-down methodology is used. In this example, Administration has to be distributed before the Council and then the IT department. After all the service departments have attributed their indirect resources to the service departments, it is apparent that the PD2 consumes much more indirect resources than PD1. After the allocations from the three overhead cost pools, the total direct and indirect cost of providing the PD2 service is almost as much as the cost of providing the PD1 service, even though the direct cost of the PD1 service is $80,000 greater than the cost of the PD2 service, according to the budget. This example shows how ABC develops a generally better estimate of actual resource usage. The final cost also shows that some overhead resource costs such as Council expense are more general organization related than service related. Distributing these costs fully, or a full attribution, as is done with the traditional cost accounting system may overstate the true cost of services.

Hybrid Cost Systems: Between Traditional Cost Accounting and ABC System

The preceding analysis of traditional cost accounting systems and ABC systems is intended to contrast the two ends of the spectrum that are noted in the literature. The purpose of this chapter is to suggest and show that there is an intermediate position (and perhaps multiple positions) between the two poles for cost accounting in practice. This system represents a hybrid between the traditional cost system and the ABC system and is conceptually similar to the "hybrid system" of the accounting literature (Horngren et al., 2011). The "hybrid" system contains a mixture of both traditional and activity-based cost elements.

The example that Horngren et al. give of the hybrid system is specialized shoe manufacturing. These specialized shoe systems that can be found on the Internet and at specialized shops for making custom, brand name shoes have both activity specific cost drivers such as the level of customization, but they also have more general cost drivers such as the general cost of the base shoe. While an ABC system would map the activities for each individual shoe and give it a price, the level of individual customization makes this nearly impossible. Instead, the shoe manufacturer relies on a general cost and then builds on it using specific cost drivers such as separate colors, materials, or orthotic support. The hybrid cost system balances the cost of the system with the benefit by providing a mix of general and specific cost drivers.

The same mentality of balance between the cost and benefit of the system can be readily seen when one identifies formal cost plans in local governments. In December 2011, the cost plans of all cities with a population greater than 100,000 were requested. From the 272 cities in the sample, cost plans from 30 cities were received, which included 134 separate documents.

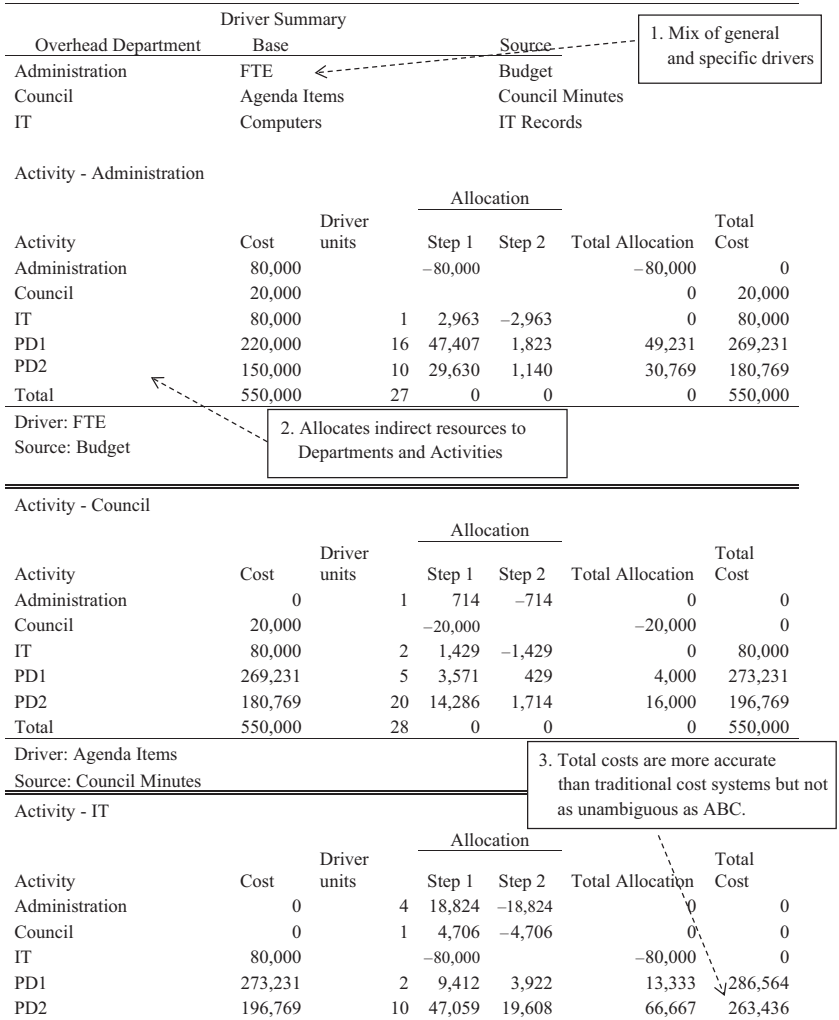
This large number is because several cities have multiple cost plans, and a couple of cities sent several years of cost accounting documents and source material. Upon reviewing and coding the 2011 plans for type and number of cost drivers for common overhead and production activities, it became apparent that the plans contain a mix of specific and generic cost drivers but only rarely have a hierarchy of costs. Representative examples of these plans can be found on the City of Houston and the City-County website of Nashville-Davidson County.[8] These plans are developed under the pressures that governments face: the need to be efficient even with the cost of making and maintaining their cost plans. The variety of development within the different types of cost plans indicates that the cost systems of local governments are a hybrid type of cost accounting that exhibit characteristics of both traditional and ABC systems.

The hybrid cost system exhibits varied development of the critical dimensions of difference between traditional and activity-based cost systems. For example, the hybrid system has a mix of general and specific cost drivers. While the traditional cost system uses basic cost drivers to roughly allocate the indirect resources down to service providing departments, the hybrid system uses some generic cost drivers and some specific drivers. For example, the City of Houston 2010 Full Cost Plan shows that cost drivers for the human resource department included full-time employees, classified full-time employees, selections, and number of employees trained (Maximus, 2009). Half of the human resources cost drivers are specific, but this percentage of general, and specific drivers can vary widely from department to department. This allows the hybrid system to have some claim to an unambiguous link to overhead resource consumption but, perhaps, not completely or in all departments or services. The number and type of cost drivers are critical to the development of the hybrid cost plan and those that generally have more specific cost drivers are more similar to ABC and those with fewer and basic cost drivers more like the traditional cost accounting systems.

Hybrid cost systems may also not have a hierarchy of costs or distribute the indirect resources of activities all the way down to products or services. The following example (Figure 1.3) is an illustration of the Frugal example using a hybrid system. First, it has a mix of general and specific cost drivers. Rather than keeping track of all the time spent on department business, the administration might logically conclude that it would be more cost effective to simply use the number of FTE in each department as a general cost base. Second, the hybrid system may not have a hierarchy of costs for the council. All of the cost of the council is distributed down to the service departments. Next, the indirect or overhead resources distributed by the hybrid system may be sent to either products and services or general departments. Finally, the cost of indirect resources is not spread evenly over the organization like the traditional cost accounting system, but it also is not as unambiguous as the ABC system. Generally, the hybrid system with mostly specific cost

drivers develops a better estimate than traditional cost systems but not quite as specific as ABC.

Having specific drivers not only increases the accuracy of the cost information about true cost of service, but it also increases the value of the information relative to traditional cost accounting. If the cost drivers vary from period to period, it will facilitate cost management and organizational learning (Geiger, 2010). Organizational leaders can use periodic hybrid cost data to do variance analysis of indirect resource consumption, streamline processes, and make better product or service allocation decisions. However,



Driver Summary

Overhead Department	Base	Source
Administration	FTE	Budget
Council	Agenda Items	Council Minutes
IT	Computers	IT Records

1. Mix of general and specific drivers

Activity - Administration

Activity	Cost	Driver units	Allocation Step 1	Allocation Step 2	Total Allocation	Total Cost
Administration	80,000		–80,000		–80,000	0
Council	20,000				0	20,000
IT	80,000	1	2,963	–2,963	0	80,000
PD1	220,000	16	47,407	1,823	49,231	269,231
PD2	150,000	10	29,630	1,140	30,769	180,769
Total	550,000	27	0	0	0	550,000

Driver: FTE
Source: Budget

2. Allocates indirect resources to Departments and Activities

Activity - Council

Activity	Cost	Driver units	Allocation Step 1	Allocation Step 2	Total Allocation	Total Cost
Administration	0	1	714	–714	0	0
Council	20,000		–20,000		–20,000	0
IT	80,000	2	1,429	–1,429	0	80,000
PD1	269,231	5	3,571	429	4,000	273,231
PD2	180,769	20	14,286	1,714	16,000	196,769
Total	550,000	28	0	0	0	550,000

Driver: Agenda Items
Source: Council Minutes

3. Total costs are more accurate than traditional cost systems but not as unambiguous as ABC.

Activity - IT

Activity	Cost	Driver units	Allocation Step 1	Allocation Step 2	Total Allocation	Total Cost
Administration	0	4	18,824	–18,824	0	0
Council	0	1	4,706	–4,706	0	0
IT	80,000		–80,000		–80,000	0
PD1	273,231	2	9,412	3,922	13,333	286,564
PD2	196,769	10	47,059	19,608	66,667	263,436

Figure 1.3 Hybrid Cost System Example

if it is distributed to a general cost pool or using a generic allocation base, the uses for the cost information may be more limited. The use of generic cost drivers does not allow extensive management of indirect resource consumption because the generic cost driver is not linked unambiguously to the indirect resource and often does not change enough to meaningfully be used to guide decisions about resource usage.

Comparison of the Three Systems

Table 1.1 describes key features of the three types of systems discussed. The key dimensions focus the point of discussion on the reasons for the cost system. Cost and benefit are standard considerations for any organization developing a cost system, but government systems may have multiple purposes for which they are trying to maximize the benefit to the organizations. Many cities have multiple cost accounting plans. The reason for this was that some cities had additional cost plans in addition to the cost plan that meets the specific requirement of 2 CFR Part 225 (formerly A-87)

Table 1.1 Key Attributes of Different Cost Systems

Cost System Attributes	*Traditional Cost Accounting Systems*	*Hybrid Cost Accounting Systems*	*ABC Systems*
Cost objective	Department/ Program	Some department and some programs/ activities	Mostly specific programs and activities
Indirect Costs	Only overhead departments	All overhead and some service departments	All overhead and departments with multiple activities
Driver quality	Generic	Specific and generic	Specific
Driver quantity	Few	Intermediate	Multiple based upon number of activities
Hierarchy or cost avoidability	No hierarchy, full costs or full absorption costing	Some hierarchy and avoidability considered	Explicit hierarchy of costs (traceable and avoidable)
Reason for the system	Compliance and reporting; to provide information on the average cost of services	Rate setting, general cost management such as variance analysis for specific areas	Continuous improvement; activity based management, managed competition and contracting
Cost accuracy & Benefits	Good	Better than traditional	Best
Cost of the cost accounting	Some	More than traditional	Most

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Anderson, S. W. , & Sedatole, K. L. (2012). Evidence on the cost hierarchy: The association between resource consumption and production activities. Journal of Management Accounting Research, 25(1), 119–141.

Anderson, S. W. , & Young, S. M. (1999). The impact of contextual and process factors on the evaluation of activity-based costing systems. Accounting, Organizations and Society, 24(7), 525–559.

Anthony, R. N. (1999). The fatal defect in the federal accounting system. Public Budgeting & Finance, 20(4), 1–10.

Brimson, J. A. , Antos, J. , & Collins, J. (1999). Driving value using activity-based budgeting. New York: John Wiley and Sons.

Brown, R. E. , Myring, M. J. , & Gard, C. G. (1999). Activity based costing in government: Possibilities and pitfalls. Public Budgeting & Finance, 19(2), 3–21.

Chenhall, R. (2003). Management control systems design within its organizational context: Findings from contingency-based research and directions for the future. Accounting, Organizations and Society, 28(2–3), 127–168.

Coase, R. H. (1937). The nature of the firm. Economica, 4(16), 386–405.

Collier, P. M. (2006). Costing police services: The politicization of accounting. Critical Perspectives on Accounting, 17(1), 57–86.

Cooper, R. , & Kaplan, R. S. (1988). Measure costs right: Make the right decisions. Harvard Business Review, 66(5), 96–103.

Cooper, R. , & Kaplan, R. S. (1992). Activity-based systems: Measuring the costs of resource usage. Accounting Horizons, 6(3), 1–13.

Crozier, M. (1964). The bureaucratic phenomenon. Chicago, IL: University of Chicago Press.

Dixit, A. (1997). Power of incentives in private versus public organizations. The American Economic Review, 87(2), 378–382.

Finkler, S. A. , Purtell, R. , Calabrese, T. , & Smith, D. (2012). Financial management for public, health, and not-for-profit organizations (4 ed.). Englewood Cliffs, NJ: Prentice Hall.

Flanagan, R. , & Britain, G. (2008). The review of policing: Final report. London: Home Office.

Flury, R. , & Schedler, K. (2006). Political versus managerial use of cost and performance accounting. Public Money and Management, 26(4), 229–234.

Geiger, D. R. (1999). Practical issues in cost driver selection for managerial costing systems. The Government Accountants Journal, 48(3), 32–39.

Geiger, D. R. (2000). Winning the cost war: Applying battlefield management doctrine to the management of government. Bloomington, IN: iUniverse Star.

Geiger, D. R. (2001). Practical issues in avoiding the pitfalls in managerial costing implementation. The Journal of Government Financial Management, 50(1), 26–34.

Geiger, D. R. (2010). Cost management and control in government, fighting the cost war through leadership driven management. New York: Business Expert Press.

Geiger, D. R. , & Ittner, C. D. (1996). The influence of funding source and legislative requirements on government cost accounting practices. Accounting, Organizations and Society, 21(6), 549–567.

Goertz, G. (2006). Social science concepts: A user’s guide. Princeton, NJ: Princeton University Press.

Gosselin, M. (1997). The effect of strategy and organizational structure on the adoption and implementation of activity-based costing. Accounting, Organizations and Society, 22(2), 105–122.

Hayes, D. C. (1977). The contingency theory of managerial accounting. Accounting Review, 52(1), 22–39.

Horngren, C. , Datar, S. , & Rajan, M. (2011). Cost accounting: A managerial emphasis (14 ed.). Englewood Cliffs, NJ: Prentice-Hall.

Johnson, H. T. , & Kaplan, R. S. (1987). Relevance lost: The rise and fall of management accounting. Boston, MA: Harvard Business Press.

Jones, C. T. , & Dugdale, D. (2002). The ABC bandwagon and the juggernaut of modernity. Accounting, Organizations and Society, 27(1–2), 121–163.

Kaplan, R. S. (1988). One cost system isn't enough. Harvard Business Review, 66(1), 61–66.
Kaplan, R. S. , & Anderson, S. R. (2007). Time-driven activity-based costing: A simpler and more powerful path to higher profits. Boston, MA: Harvard Business Press.
Kaplan, R. S. , & Atkinson, A. A. (1998). Advanced management accounting (Vol. 3). Englewood Cliffs, NJ: Prentice Hall.
Kaplan, R. S. , & Cooper, R. (1998). Cost & effect: Using integrated cost systems to drive profitability and performance. Boston, MA: Harvard Business Press.
Kehoe, J. (1995). Activity-based management in government. Washington, DC: Coopers & Lybrand.
Kennett, D. L. , Durler, M. G. , & Downs, A. (2007). Activity-based costing in large US cities: Costs and benefits. Journal of Government Financial Management, 56(1), 20.
Kraines, O. (1970). The president versus congress: The keep commission, 1905–1909: First comprehensive presidential inquiry into administration. The Western Political Quarterly, 23(1), 5–54.
Lawrence, P. , & Lorsh, J. (1967). Organization and environment. Cambridge, MA: Harvard Business Press.
Levin, J. , & Tadelis, S. (2010). Contracting for government services: Theory and evidence from US cities The Journal of Industrial Economics, 58(3), 507–541.
Lienert, I. (2008). Activity-based costing: Is it applicable in governments? Retrieved from http://blog-pfm.imf.org/pfmblog/2008/11/activity-based.html
Martin, R. (2005). Managerial cost accounting practices: Leadership and internal controls are key to successful implementation (GAO-05-1013R). Washington, DC: United States Government Accountability Office.
Martin, R. (2007). Managerial cost accounting practices: implementation and use vary widely across 10 federal agencies (GAO-07-679). Washington, DC: United States Government Accountability Office.
Maximus . (2009). City of Houston, Texas FY 2010 full cost allocation plan. Retrieved from www.houstontx.gov/finance/cost.html
Mohr, Z. T. (2013). Cost accounting in U.S. cities: Transaction costs and governance factors affecting cost accounting development and use. Dissertation: University of Kansas.
Mohr, Z. T. (2015). An analysis of the purposes of cost accounting in large US cities. Public Budgeting and Finance, 35(1), 95–115.
Mohr, Z. T. (2016). Performance measurement and cost accounting: Are they complementary or competing systems of control? Public Administration Review, 76(4), 616–625.
Mohr, Z. (Forthcoming). Cost accounting at the service level: A transaction cost analysis. Public Administration Quarterly.
Mullins, D. R. , & Zorn, C. K. (1999). Is activity based costing up to the challenge when it comes to privatization of local government services? Public Budgeting & Finance, 19(2), 37–58.
Porter, M. , & Kaplan, R. (2011). How to solve the cost crisis in health care. Harvard Business Rev, 89(9), 46–64.
Premchand, A. (2006). Public expenditure management: Selected themes and issues. In H. Frank (Ed.), Public financial management (pp. 21–44). Boca Raton, FL: CRC Press.
Rivenbark, W. C. (2000). The art of using performance and cost data. Local Finance Bulleting, 31(1), 1–5.
Rivenbark, W. C. (2005). A historical overview of cost accounting in local government. State & Local Government Review, 37(3), 217–227.
Rivenbark, W. C. , & Carter, K. L. (2000). Benchmarking and cost accounting: The North Carolina approach. Journal of Public Budgeting Accounting and Financial Management, 12, 125–137.
Robinson, M. (2007). Performance budgeting models and mechanisms. In M. Robinson (Ed.), Performance budgeting: Linking funding and results (pp. 1–18). New York: Palgrave Macmillan.
Rubin, I. S. (1993). Who invented budgeting in the United States? Public Administration Review, 53(5), 438–444.

Simon, H. A. , Guetzkow, H. , Kozmetsky, G. , & Tyndall, G. (1954). Centralization vs decentralization in organizing the controller's department. In R. Golembiewski & J. Rabin (Eds.), Public budgeting and finance (4 ed., pp. 203–210). New York: Marcel Dekker.
Tadelis, S. , & Williamson, O. (2012). Transaction cost economics. In R. Gibbons & J. Roberts (Eds.), Handbook of organizational economics (pp. 159–192). Princeton, NJ: Princeton University Press.
Thompson, J. D. (1967). Organizations in action: Social science bases of administrative theory. New York: McGraw-Hill.
Tiessen, P. , & Waterhouse, J. H. (1983). Towards a descriptive theory of management accounting. Accounting, Organizations and Society, 8(2), 251–267.
Van Helden, G. , & Huijben, M. (2014). Controlling overhead in public sector organizations. International Journal of Public Sector Management, 27(6), 475–485.
Watts, R. L. , & Zimmerman, J. L. (1990). Positive accounting theory: A ten year perspective. Accounting Review, 65(1), 131–156.
Weiss, B. (1997). Activity-based costing and management: Issues and practices in local government. Chicago, IL: Government Finance Officers Association.
Williams, C. , & Melhuish, W. (1999). Is ABCM destined for success or failure in the federal government? Public Budgeting & Finance, 19(2), 22–36.
Williamson, O. E. (1985). The economic institutions of capitalism. New York: Free Press.
Williamson, O. E. (1999). Public and private bureaucracies: A transaction cost economics perspective. Journal of Law, Economics, and Organization, 15(1), 306–342.
Wilson, J. (1991). Bureaucracy: What government agencies do and why they do it. New York: Basic Books.

Contextualizing Cost Accounting in Government From a Historical Perspective

Ammons, D. N. (1995). Overcoming the inadequacies of performance measurement in local government: The case of libraries and leisure services. Public Administration Review, 55(1), 37–47.
Ammons, D. N. (2001). Municipal benchmarks: Assessing local performance and establishing community standards. London: Sage.
Ammons, D. N. , & Rivenbark, W. C. (2008). Factors influencing the use of performance data to improve municipal services: Evidence from the North Carolina benchmarking project. Public Administration Review, 68(2), 304–318.
Anthony, R. N. (1999). The fatal defect in the federal accounting system. Public Budgeting & Finance, 20(4), 1–10.
Bales, A. F. (2015). DCAA contract audit manual (DCAA Manual 7640.1). Washington, DC: Defense Contract Audit Agency.
Brighton, G. R. (1950). Application of cost accounting to budgeting. Municipal Finance Journal, 22(3), 123–128.
Brimson, J. A. , & Antos, J. (1994). Activity-based management: For service industries, government entities, and nonprofit organizations. New York: John Wiley and Sons.
Brown, R. (1905). A history of accounting and accountants. London: Ballantyne, Hanson & Company.
Brown, R. E. , Myring, M. J. , & Gard, C. G. (1999). Activity based costing in government: Possibilities and pitfalls. Public Budgeting & Finance, 19(2), 3–21.
Buck, A. E. (1948). Techniques of budget execution. Municipal Finance, 21(1), 8–11.
Clow, F. R. (1896). Suggestions for the study of municipal finance. The Quarterly Journal of Economics, 10(4), 455–466.
Coe, C. (1999). Local government benchmarking: Lessons from two major multigovernment efforts. Public Administration Review, 59(2), 110–123.
Collier, P. M. (2006). Costing police services: The politicization of accounting. Critical Perspectives on Accounting, 17(1), 57–86.

Cooke, M. L. (1919). Our cities awake. Garden City, NY: Doubleday, Page & Company.
Cooke, M. L. , & Murray, P. 1940. Organized labor and production. New York: Harper & Brothers.
Cope, O. K. (1950). Cost controls for office operations. Municipal Finance, 22(3), 117–122.
Fox, K. (1977). Better city government. Philadelphia, PA: Temple University.
Frank, J. E. (1973). A framework for analysis of PPB success and causality. Administrative Science Quarterly, 18(4), 527–543.
Garner, S. P. (1954). Evolution of cost accounting to 1925. Tuscaloosa, AL: University of Alabama Press.
Gauthier, S. J. (2012). Governmental accounting, auditing, and financial reporting. Chicago, IL: Government Finance Officers Association.
Geiger, D. R. (2000). Winning the cost war: Applying battlefield management doctrine to the management of government. Bloomington, IN: iUniverse Star.
Haskins, C. W. , & Cleveland, F. A. (1904). Business education and accountancy. New York, NY: Harper & Brothers.
Hughes, P. S. (1968). Principles for determining costs applicable to grants and contracts with state and local government (Circular No. A-87). Washington, DC: Bureau of the Budget.
Johnson, H. T. , & Kaplan, R. S. (1987). Relevance lost: The rise and fall of management accounting. Boston, MA: Harvard Business Press.
Jones, C. T. , & Dugdale, D. (2002). The ABC bandwagon and the juggernaut of modernity. Accounting, Organizations and Society, 27(1–2), 121–163.
Kaplan, R. S. , & Anderson, S. R. (2007). Time-driven activity-based costing: A simpler and more powerful path to higher profits. Boston, MA: Harvard Business Press.
Kaplan, R. S. , & Cooper, R. (1998). Cost & effect: Using integrated cost systems to drive profitability and performance. Boston, MA: Harvard Business Press.
Kaplan, R. S. , & Norton, D. P. (1992). The balanced scorecard—measures that drive performance. Harvard Business Review, 70(1), 71–79.
Kelly, J. M. , & Rivenbark, W. C. (2003). Performance budgeting for state and local government. Armonk, NY: ME Sharpe.
Kennett, D. L. , Durler, M. G. , & Downs, A. (2007). Activity-based costing in large US cities: Costs and benefits. Journal of Government Financial Management, 56(1), 20.
Kimpel, H. M. (1944). Cost accounting for municipalities. Municipal Finance, 16(4), 30–32.
Lorig, A. N. (1950). Integrating cost accounting with general accounting records. Municipal Finance, 22(3), 98–103.
Martin, R. (2005). Managerial cost accounting practices: Leadership and internal controls are key to successful implementation (GAO-05–1013R). Washington, DC: United States Government Accountability Office.
Martin, R. (2007). Managerial cost accounting practices: Implementation and use vary widely across 10 federal agencies (GAO-07–679). Washington, DC: United States Government Accountability Office.
Metcalf, H. (1885). Cost of manufactures. New York: John Wiley and Sons.
Meyer, E. C. (1910). The national census bureau and our cities. *Proceedings of the* American Political Science Association, Vol. 7, Seventh Annual Meeting, 126–137.
Mohr, Z. T. (2013). Cost accounting in US cities: Transaction costs and governance factors affecting cost accounting development and use. Dissertation: University of Kansas.
Mohr, Z. T. (2015). An analysis of the purposes of cost accounting in large US cities. Public Budgeting and Finance, 35(1), 95–115.
Mohr, Z. T. (2016). Performance measurement and cost accounting: Are they complementary or competing systems of control? Public Administration Review, 76(4), 616–625.
National Committee on Government Accounting. (1951). Municipal accounting and auditing. Chicago, IL: Municipal Finance Officers Association.
National Committee on Government Accounting. (1968). Governmental accounting, auditing, and financial reporting. Chicago, IL: Municipal Finance Officers Association.
Niven, P. (2008). Balanced scorecard step-by-step for government and nonprofit agencies. New York: John Wiley and Sons.

Pelham, A. M. (1950). Institutional cost accounting. Municipal Finance, 22(3), 106–112.
Premchand, A. (2006). Public expenditure management: Selected themes and issues. In H. Frank (Ed.), Public financial management (pp. 21–44). Boca Raton, FL: CRC Press.
Previts, G. J. , & Merino, B. D. (1979). A history of accounting in America. New York: John Wiley and Sons.
Previts, G. J. , & Merino, B. D. (1998). A history of accountancy in the United States. Columbus, OH: Ohio State University Press.
Ridley, C. E. , & Simon, H. A. (1937). Technique of appraising standards. Public Management, 19(2), 46–49.
Riehl, E. P. (1948). Potential cost accounting applications. Municipal Finance, 21(1), 53–56.
Rivenbark, W. C. (2005). A historical overview of cost accounting in local government. State & Local Government Review, 37(3), 217–227.
Rivenbark, W. C. , & Allison, G. S. (2003). The GFOA and professionalism in local government. The Journal of Public Budgeting, Accounting & Financial Management, 15(2), 228–238.
Rivenbark, W. C. , & Pizzarella, C. M. (2002). Auditing performance data in local government. Public Performance & Management Review, 25(4), 413–420.
Roberts, S. M. (1948). Management responsibility for cost accounting. Municipal Finance, 20(3), 14–18.
Rowe, W. E. , & Miller, W. C. (1950). Cost accounting for public works. Municipal Finance, 22(3), 113–116.
Senecal, C. A. (1952). Imperative need for cost accounting in government. Municipal Finance, 25(2), 76–78.
Shih-Jen, K. H. , & Kidwell, L. A. (2000). A survey of management techniques implemented by municipal administrators. The Journal of Government Financial Management, 49(1), 46.
Stephen, A. H. F. (1939). Possibilities of the use of cost accounting in public budget making. Dissertation: University of Pennsylvania.
Takasaki, R. S. (1962). Measuring efficiency in government. Municipal Finance, 34(4), 145–149.
Vandermeulen, A. J. (1950). Guideposts for measuring the efficiency of governmental expenditures. Public Administration Review, 10(1), 7–12.
Walker, M. L. (1930). Municipal expenditures. Baltimore, MD: Johns Hopkins University Press.
Weiss, B. (1997). Activity-based costing and management: Issues and practices in local government. Chicago, IL: Government Finance Officers Association.
Williams, D. (2003). Measuring government in the early twentieth century. Public Administration Review, 63(6), 643–659.
Williams, D. (2004). Evolution of performance measurement until 1930. Administration & Society, 36(2), 131.
Wilson, F. B. (1940). Municipal cost accounting. Municipal Finance, 12(4), 26–41.
Woodruff, C. R. (1908). Pittsburgh conference for good city government. Washington, DC: National League of Cities.

The Intrinsic Value of Cost Accounting for Benchmarking Service Efficiency

Ammons, D. N. (1999). A proper mentality for benchmarking. Public Administration Review, 59(2), 105–109.
Ammons, D. N. (2000). Benchmarking as a performance management tool: Experiences among municipalities in North Carolina. Journal of Public Budgeting, Accounting & Financial Management, 12(1), 106–124.
Ammons, D. N. , & Rivenbark, W. C. (2008). Factors influencing the use of performance data to improve municipal services: Evidence from the North Carolina benchmarking project. Public Administration Review, 68(2), 304–318.

Ammons, D. N. , & Roenigk, D. J. (2014). Benchmarking and interorganizational learning in local government. Journal of Public Administration Research and Theory, 25(1), 309–335.
Bovaird, T. , & Loffler, E. (2002). Moving from excellence models of local service delivery to benchmarking good local government. International Review of Administrative Sciences, 68(1), 9–24.
Coe, C. (1999). Local government benchmarking: Lessons from two major multigovernment efforts. Public Administration Review, 59(2), 110–115.
Davis, P. (1998). The burgeoning of benchmarking in British local government. Benchmarking for Quality Management & Technology, 5(4), 260–270.
Kelly, J. M. , & Rivenbark, W. C. (2011). Performance budgeting in state and local government. Armonk, NY: M. E. Sharpe.
Kissler, G. R. , Fore, K. N. , Jacobson, W. S. , Kittredge, W. P. , & Steward, S. L. (1998). State strategic planning: Suggestions from the Oregon experience. Public Administration Review, 58(4), 353–359.
Kuhlmann, S. (2010). Performance measurement in European local governments: A comparative analysis of reform experiences in Great Britain, France, Sweden, and Germany. International Review of Administrative Sciences, 76(2), 331–345.
Moynihan, D. P. (2008). The dynamics of performance management: Constructing information and reform. Washington, DC: Georgetown University Press.
Osborne, D. , & Gaebler, T. (1992). Reinventing government. New York: Penguin Group.
Rivenbark, W. C. (2001). A guide to the North Carolina local government performance measurement project. Chapel Hill, NC: Institute of Government.
Rivenbark, W. C. , Ammons, D. N. , & Roenigk, D. J. (2005). Benchmarking for results. Chapel Hill, NC: School of Government.
Rivenbark, W. C. , & Carter, K. L. (2000). Benchmarking and cost accounting: The North Carolina approach. Journal of Public Budgeting, Accounting & Financial Management, 12(1), 125–137.
Rivenbark, W. C. , Fasiello, R. , & Adamo, S. (2016). Moving beyond innovation diffusion in smaller local governments: Does performance management exist? Public Administration Quarterly, 40(4), 73–98.
Rivenbark, W. C. , & Pizzarella, C. M. (2002). Auditing performance data in local government. Public Performance & Management Review, 25(4), 413–420.
Rivenbark, W. C. , Roenigk, D. J. , & Fasiello, R. (in press). Twenty years of benchmarking in North Carolina: Lessons learned from comparison of performance statistics as benchmarks. Public Administration Quarterly, 40(4), 763–788.
Roenigk, D. J. (2015). Final report on city services for fiscal year 2013–2014. Chapel Hill, NC: School of Government.
Walker, R. M. , & Andrews, R. (2015). Local government management and performance: A review of the evidence. Journal of Public Administration Research and Theory, 25(1), 101–133.
Williams, D. W. (2003). Measuring government in the early twentieth century. Public Administration Review, 63(6), 643–659.
Yasin, M. M. (2002). The theory and practice of benchmarking: Then and now. Benchmarking: An International Journal, 9(3), 217–243.

Cost Accounting for Rates and User Fees

Carnegie, G. D. , Tuck, J. , & West, B. (2011). Price setting practices in Australian local government. Australian Accounting Review, 21(2), 193–201.
Carnegie, G. D. , & West, B. (2010). A conceptual analysis of price setting in Australian local government. Australian Accounting Review, 20(2), 110–120.
Cavalluzzo, K. S. , Ittner, C. D. , & Larcker, D. F. (1998). Competition, efficiency, and cost allocation in government agencies: Evidence on the Federal Reserve System. Journal of Accounting Research, 36(1), 1–32.

Collier, P. M. (2006). Costing police services: The politicization of accounting. Critical Perspectives on Accounting, 17(1), 57–86.
Crea, J. F. (2015). Identification of revenue requirements. In G. A. Raftelis (Ed.), Water and wastewater finance and pricing (pp. 149–180). Boca Raton, FL: CRC Press.
Cuniff, M. M. (2015, April 20). Court: San Juan Capistrano's tiered water rates are illegal, may hinder conservation. Orange County Register.
Cuniff, M. M. (2016, January 13). Lawsuit again San Juan Capistrano seeks millions in water-rate refunds. Orange County Register.
Downs, A. (2000). Stuck in traffic: Coping with peak-hour traffic congestion. Washington, DC: Brookings Institution Press.
Geiger, D. R. , & Ittner, C. D. (1996). The influence of funding source and legislative requirements on government cost accounting practices. Accounting, Organizations and Society, 21(6), 549–567.
Jung, C. , & Bae, S. (2011). Changing revenue and expenditure structure and the reliance on user charges and fees in American counties, 1972–2002. The American Review of Public Administration, 41(1), 92–110.
Krane, D. , Ebdon, C. , & Bartle, J. (2004). Devolution, fiscal federalism, and changing patterns of municipal revenues: The mismatch between theory and reality. Journal of Public Administration Research and Theory, 14(4), 513–533.
Millonzi, K. (2010). CED in NC blog: Using utility rates as an economic development incentive tool. Retrieved from https://www.sog.unc.edu/blogs/community-and-economic-development-ced/using-utility-rates-economic-development-incentive-tool
Mohr, Z. T. (2015). An analysis of the purposes of cost accounting in large US cities. Public Budgeting and Finance, 35(1), 95–115.
Mohr, Z. T. , & Mushipe, T. (2015). Beyond bean-counting: The role of costs during the Charlotte-Douglas Airport takeover. Paper presented at the North Carolina Political Science Association, Charlotte, NC.
Musgrave, R. (1959). The theory of public finance. New York: McGraw-Hill.
Shadbegian, R. J. (1999). The effect of tax and expenditure limitations on the revenue structure of local government, 1962–87. National Tax Journal, 52(2), 221–237.
Woodcock, C. (2015). Determination of cost of service. In G. A. Raftelis (Ed.), Water and wastewater finance and pricing (pp. 183–203). Boca Raton, FL: CRC Press.

Cost Accounting for Government Grants

Benston, G. J. , Bromwich, M. , & Wagenhofer, A. (2006). Principles-versus rules-based accounting standards: The FASB's standard setting strategy. ABACUS, 42(2), 165–188.
Camfferman, K. , & Zeff, S. A. (2007). Financial reporting and global capital markets: A history of the international accounting standards committee, 1973–2000. New York: Oxford University Press.
Epstein, B. J. , & Mirza, A. A. (2000). WILEY IAS 2000: Interpretation and application of international accounting standards 2000. Somerset, NJ: John Wiley and Sons.
International Financial Reporting Standards Foundation. (2012). Technical summary: IAS 20 accounting for government grants and disclosure of government assistance. Retrieved from http://www.ifrs.org/documents/ias20.pdf
Kieso, D. E. , Weygandt, J. J. , & Warfield, T. D. (2011). Intermediate accounting (IFRS ed.). Hoboken, NJ: John Wiley and Sons.
Mader, D. (2014). M-14–17: Metrics for uniform guidance (2 C.F.R. 200) [Memorandum]. Washington, DC: Office of Management and Budget.
Office of Management and Budget. (2004a). OMB circular A-21: Cost principles for educational institutions. Retrieved from https://www.whitehouse.gov/omb/circulars_a021_2004/
Office of Management and Budget. (2004b). OMB circular A-122: Cost principles for non-profit organizations. Retrieved from https://www.whitehouse.gov/omb/circulars_a122_2004/

Office of Management and Budget. (2004c). OMB circular A-87: Cost principles for state, local, and Indian tribal governments. Retrieved from https://www.whitehouse.gov/omb/circulars_a087_2004/
Office of Management and Budget. (2013). Uniform administrative requirements, cost principles, and audit requirements for federal awards—final guidance. Retrieved from https://federalregister.gov/a/2013–30465
Uniform administrative requirements, cost principles, and audit requirements for federal awards, 2 CFR 200 (2013).
United States Department of Health and Human Services. (1997). A guide for state and local government agencies: Cost principles and procedures for establishing cost allocation plans and indirect cost rates for grants and contracts with the federal government. Retrieved from http://www.dol.gov/oasam/boc/asmb_c-10.pdf

Cost Management Innovations in Federal Agencies

Geiger, D. R. (2000). Winning the cost war: Applying battlefield management doctrine to the management of government. Bloomington, IN: iUniverse Star.
Geiger, D. R. (2001). Practical issues in avoiding the pitfalls in managerial costing implementation. The Journal of Government Financial Management, 50(1), 26–34.
Geiger, D. R. (2010). Cost management and control in government, fighting the cost war through leadership driven management. New York: Business Expert Press.
Martin, R. (2005). Managerial cost accounting practices: Leadership and internal controls are key to successful implementation (GAO-05–1013R). Washington, DC: United States Government Accountability Office.
Martin, R. (2007). Managerial cost accounting practices: Implementation and use vary widely across 10 federal agencies (GAO-07–679). Washington, DC: United States Government Accountability Office.

Cost Accounting in European Countries

Al-Omiri, M. , & Drury, C. (2007). Organizational and behavioral factors influencing the adoption and success of ABC in the UK. Journal of Cost Management, 21(6), 38–48.
Barlow, J. , & Röber, M. (1996). Steering not rowing: Co-ordination and control in the management of public services in Britain and Germany. International Journal of Public Sector Management, 9(5–6), 73–89.
Benito, B. , & Brusca, I. (2004). International classification of local government accounting systems. Journal of Comparative Policy Analysis: Research and Practice, 6(1), 57–80.
Brown, D. A. , Booth, P. , & Giacobbe, F. (2004). Technological and organizational influences on the adoption of activity-based costing in Australia. Accounting and Finance, 44(3), 329–356.
Carvalho, J. B. D. C. , Gomes, P. S. , & José Fernandes, M. (2012). The main determinants of the use of the cost accounting system in Portuguese local government. Financial Accountability & Management, 28(3), 306–334.
Cavalluzzo, K. S. , & Ittner, C. D. (2004). Implementing performance measurement innovations: Evidence from government. Accounting, Organizations and Society, 29(3), 243–267.
Chenhall, R. (2003). Management control systems design within its organizational context: Findings from contingency-based research and directions for the future. Accounting, Organizations and Society, 28(2–3), 127–168.
Collier, P. M. (2006). Costing police services: The politicization of accounting. Critical Perspectives on Accounting, 17(1), 57–86.

da Costa, T. D. C. S. , & da Costa Carvalho, J. B. (2007). Cost accounting applications in local governments: The case of municipal tariff and price setting in the north of Portugal. Revista Contemporânea de Contabilidade, 1(7), 11–24.
DiMaggio, P. , & Powell, W. W. (1991). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. In W. W. Powell & P. Dimaggio (Eds.), The new institutionalism in organizational analysis (pp. 63–82). Chicago, IL: University of Chicago Press.
Doyle, G. , Duffy, L. , & McCahey, M. (2008). An empirical study of adoption/non-adoption of activity based costing in hospitals in Ireland. UCD Business Schools Working Paper, 1–43.
Evans, P. , & Bellamy, S. (1995). Performance evaluation in the Australian public sector: The role of management and cost accounting control systems. International Journal of Public Sector Management, 8(6), 30–38.
Flury, R. , & Schedler, K. (2006). Political versus managerial use of cost and performance accounting. Public Money and Management, 26(4), 229–234.
Geiger, D. R. , & Ittner, C. D. (1996). The influence of funding source and legislative requirements on government cost accounting practices. Accounting, Organizations and Society, 21(6), 549–567.
Gomes, P. S. , Fernandes, M. J. , & Carvalho, J. B. D. C. (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.
Gordon, L. A. , & Miller, D. (1976). A contingency framework for the design of accounting information systems. Accounting, Organizations and Society, 1(1), 59–69.
Groot, T. , & Budding, T. (2008). New public management's current issues and future prospects. Financial Accountability & Management, 24(1), 1–13.
Guthrie, J. , Humphrey, C. , Jones, L. R. , & Olson, O. (Eds.) (2005). International public financial management reform. Charlotte, NC: Information Age Publishing.
Guthrie, J. , Olson, O. , & Humphrey, C. (1999). Debating developments in new public financial management: The limits of global theorising and some new ways forward. Financial Accountability & Management, 15(3–4), 209–228.
Hammerschmid, G. , Oprisor, A. , & Stimac, V. (2013). COCOPS executive survey on public sector reform in Europe: Research report. Retrieved from http://www.cocops.eu/wp-content/uploads/2013/06/COCOPS-WP3-Research-Report.pdf
Hood, C. (1995). The "New Public Management" in the 1980s: Variations on a theme. Accounting, Organizations and Society, 20(2), 93–109.
Hood, C. , & Peters, G. (2004). The middle aging of new public management: Into the age of paradox? Journal of Public Administration Research and Theory, 14(63), 267–282.
Jackson, A. , & Lapsley, I. (2003). The diffusion of accounting practices in the new "managerial" public sector. International Journal of Public Sector Management, 16(5), 359–372.
Johansson, T. , & Siverbo, S. (2009). Explaining the utilization of relative performance evaluation in local government: A multi-theoretical study using data from Sweden. Financial Accountability & Management, 25(2), 197–224.
Johnson, H. T. , & Kaplan, R. S. (1991). Relevance lost: The rise and fall of management accounting. Boston, MA: Harvard Business Press.
Krumwiede, K. R. (1998). The implementation stages of activity-based costing and the impact of contextual and organizational factors. Journal of Management Accounting Research, 10(2), 293–27.
Lapsley, I. , & Wright, E. (2004). The diffusion of management accounting innovations in the public sector: A research agenda. Management Accounting Research, 15(3), 355–374.
Laughlin, R. , & Pallot, J. (1998). Trends, patterns and influencing factors: Some reflections. In O. Olson , J. Guthrie , & C. Humphrey (Eds.), Global warning: Debating international developments in new public financial management (pp. 376–399). Oslo: Cappelen Akademisk Folag.
Libby, T. , & Waterhouse, J. H. (1996). Predicting change in management accounting systems. Journal of Management Accounting Research, 8(1), 137.
Lin, Z. J. , & Yu, Z. (2002). Responsibility cost control system in China: A case of management accounting application. Management Accounting Research, 13(4), 447–467.

Liu, Y. J. L. , Mitchell, F. , & Robinson, J. (2008). A longitudinal study of the adoption of an activity-based planning system in the crown prosecution service of England and Wales, United Kingdom. Journal of Accounting & Organizational Change, 4(3), 318–342.
Lynn, L. (2006). Public management: Old and new. New York: Routledge.
McChlery, S. , McKendrick, J. , & Rolfe, T. (2007). Activity-based management systems in higher education. Public Money and Management, 27(5), 315–322.
Mohr, Z. T. (2013). Cost accounting in U.S. cities: Transition costs and governance factors affecting cost accounting development and use. Dissertation: University of Kansas.
Mohr, Z. T. (2016). Performance measurement and cost accounting: Are they complementary or competing systems of control? Public Administration Review, 76(4), 616–625.
Montesinos, V. , & Vela, J. M. (2000). Governmental accounting in Spain and the European Monetary Union: A critical perspective. Financial Accountability & Management, 16(2), 129–150.
Mussari, R. (2005). Public sector financial management reform in Italy. In J. Guthrie , C. Humphrey , & L. R. Jones (Eds.), International public financial management reform: Progress, contradictions, and challenges (pp. 139–168). Charlotte, NC: Information Age Publishing.
Olson, O. , Guthrie, J. , & Humphrey, C. (1998). Growing accustomed to other faces: The global themes and warnings of our project. In O. Olson , J. Guthrie , & C. Humphrey (Eds.), Global warning: Debating international developments in new public financial management (pp. 435–466). Oslo: Cappelen Akademisk Forlag AS.
Olson, O. , Humphrey, C. , & Guthrie, J. (2001). Caught in an evaluatory trap: A dilemma for public services under NPFM. European Accounting Review, 10(3), 505–522.
Ongaro, E. (2009). Public management reform and modernization: Trajectories of administrative change in Italy, France, Greece, Portugal and Spain. Cheltenham and Northampton: Edward Elgar.
Osborne, D. , & Gaebler, T. (1992). Reinventing government: How the entrepreneurial spirit is transforming government. New York: Plume Books.
Painter, M. , & Peters, G. B. (2010). Tradition and public administration. Basingstoke: Palgrave Macmillan.
Paulsson, G. (2006). Accrual accounting in the public sector: Experiences from the central government in Sweden. Financial Accountability & Management, 22(1), 47–62.
Pina, V. , & Torres, L. (2003). Reshaping public sector accounting: An international comparative view. Canadian Journal of Administrative Sciences, 20(4), 334–350.
Pollitt, C. , & Bouckaert, G. (2004). Public management reform: A comparative analysis. Oxford: Oxford University Press.
Pollitt, C. , & Bouckaert, G. (2011). Public management reform: A comparative analysis—new public management, governance and the Neo-Weberian state. Oxford: Oxford University Press.
Raudla, R. (2013). Budgeting during austerity: Approaches, instruments and practices. Budgetary Research Review, 5(1), 30–39.
Raudla, R. , Randma-Liiv, T. , & Savi, R. (2015). Public sector financial and personnel management during cutbacks: Looking back at the literature of the 1970s and 1980s. Administrative Culture, 16(2), 117–140.
Reid, G. C. , & Smith, J. A. (2000). The impact of contingencies on management accounting system development. Management Accounting Research, 11(4), 427–450.
Rivenbark, W. C. (2005). A historical overview of cost accounting in local government. State & Local Government Review, 37(3), 217–227.
Rivenbark, W. C. , & Carter, K. L. (2000). Benchmarking and cost accounting: The North Carolina approach. Journal of Public Budgeting Accounting and Financial Management, 12(1), 125–137.
Robbins, G. , & Lapsley, I. (2005). NPM and the Irish public sector: From reluctant reformer to statutory codification. In J. Guthrie , C. Humphrey , & L. R. Jones (Eds.), International public financial management reform: Progress, contradictions, and challenges (pp. 109–138). Charlotte, NC: Information Age Publishing.
Tan, S. S. , Geissler, A. , Serdén, L. , Heurgren, M. , van Ineveld, B. M. , Redekop, W. K. , & Hakkaart-van Roijen, L. (2014). DRG systems in Europe: Variations in cost accounting

systems among 12 countries. The European Journal of Public Health, 24(6), 1023–1028.
ter Bogt, H. J. (2008). Management accounting change and new public management in local government: A reassessment of ambitions and results—an institutionalist approach to accounting change in the Dutch public sector. Financial Accountability & Management, 24(3), 209–241.
Torres, L. , & Pina, V. (2004). Reshaping public administration: The Spanish experience compared to the UK. Public Administration, 82(2), 445–464.
Turney, P. B. (2010). Activity-based costing: An emerging foundation for performance management. Cost Management, 24(4), 33.
Vagnoni, E. (2005). Eastern European nations and new public financial management. In J. Guthrie , C. Humphrey , & L. R. Jones (Eds.), International public financial management reform: Progress, contradictions, and challenges (pp. 87–107). Charlotte, NC: Information Age Publishing.
Van Helden, G. J. (2005). Researching public sector transformation: The role of management accounting. Financial Accountability & Management, 21(1), 99–133.
Verbeeten, F. H. (2011). Public sector cost management practices in The Netherlands. International Journal of Public Sector Management, 24(6), 492–506.
Verheijen, T. , & Coombes, D. L. (Eds.) (1998). Innovations in public management: Perspectives from East and West Europe. Cheltenham: Edward Elgar Publishing.
Vogl, M. (2012). Assessing DRG cost accounting with respect to resource allocation and tariff calculation: The case of Germany. Health Economics Review, 2(1), 1–12.

Extending the Application and Theory of Government Cost Accounting

Carvalho, J. B. D. C. , Gomes, P. S. , & José Fernandes, M. (2012). The main determinants of the use of the cost accounting system in Portuguese local government. Financial Accountability & Management, 28(3), 306–334.
Coe, C. (1999). Local government benchmarking: Lessons from two major multigovernment efforts. Public Administration Review, 59(2), 110–123.
Collier, P. M. (2006). Costing police services: The politicization of accounting. Critical Perspectives on Accounting, 17(1), 57–86.
Geiger, D. R. (2001). Practical issues in avoiding the pitfalls in managerial costing implementation. The Journal of Government Financial Management, 50(1), 26–34.
Kennett, D. L. , Durler, M. G. , & Downs, A. (2007). Activity-based costing in large US cities: Costs and benefits. Journal of Government Financial Management, 56(1), 20.
Mohr, Z. T. (2015). An analysis of the purposes of cost accounting in large US cities. Public Budgeting and Finance, 35(1), 95–115.
Mohr, Z. , & Mitchell, D. (2014). Old techniques and new concepts: Cost accounting in public management networks. Paper presented at the Western Social Sciences, Las Vegas.
Ter Bogt, H. J. (2008). Management accounting change and new public management in local government: A reassessment of ambitions and results—an institutionalist approach to accounting change in the Dutch public sector. Financial Accountability & Management, 24(3), 209–241.
Verbeeten, F. H. (2011). Public sector cost management practices in The Netherlands. International Journal of Public Sector Management, 24(6), 492–506.
Zarkin, G. A. , Dunlap, L. J. , & Homsi, G. (2004). The substance abuse services cost analysis program (SASCAP): A new method for estimating drug treatment services costs. Evaluation and Program Planning, 27(1), 35–43.