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## Management accounting innovations for rationalizing the cost of services: The reassessment of cash and accrual accounting

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### ABSTRACT

Management accounting can be a useful tool in austerity government because it produces information about the costs of public services and can be used for informed decision-making. Spanish local governments are required to submit data on the cost of their services to central government, which publishes this information online. The calculation of costs is based on budgetary cash accounting instead of accrual accounting; therefore cash accounting is being used for decision-making and accrual accounting has no role in this process. This paper critically analyses the innovation from three perspectives: the use assigned to the cost information in the legal framework; the opinion of academics and experts; and the perception of professionals about the usefulness of the information produced with the new system.

### IMPACT

This paper offers insights into the usefulness of cost accounting in local governments, comparing cash and accrual information. The results show that information about the full cost of services is extremely valuable in the public sector. To increase the usefulness of accrual accounting, laws and regulations should start focusing on it to embed it into public sector organizations. The paper contains some other proposals that can facilitate the implementation and use of full-cost accounting.

### KEYWORDS

Accounting innovations; accounting usefulness; cost accounting; local government; management accounting

The Institute for Government (2009, p. 1) has described innovation as a combination of ‘invention, adoption, diffusion, and evaluation’ leading to new products or services, or to the implementation of new management procedures. In public financial management, the concept of innovation has been used to embrace reforms aiming at improving and modernizing the processes and practices (Caperchione, Brusca, Cohen, & Manes Rossi, 2016). One of these developments has been the introduction of management accounting in the public sector (Lapsley & Wright, 2004), particularly after the 2008 financial crisis put pressure on many governments to reduce their expenses (Arnaboldi, Lapsley, & Steccolini, 2015; Pollitt & Bouckaert, 2017).

Rationalization of resources has been one of the main concerns of Spanish public managers for a good number of years (Montesinos, Brusca, Manes Rossi, & Aversano, 2013). Local public sector entities use a financial accounting system based on the business accounting model and adapted to the International Public Sector Accounting Standards (IPSAS), but budgetary reporting uses a modified cash criterion (Brusca, Caperchione, Cohen, & Manes Rossi, 2015). The financial crisis and problems of local governments have also led to changes in the Spanish government’s information systems. A law for the rationalization and sustainability of local governments, passed in 2013, required Spanish local governments to calculate the

annual cost of the services they provide. This information is separated from the financial report and must be submitted to central government, which publishes the information from all local governments online. This aim is to improve efficiency in public service delivery and accountability to citizens.

This could be considered a milestone because previous literature argues for the use of cost accounting in decision-making and in resource allocation (Oseifuah, 2014). However, the main characteristic of the new system is that the cost of services is based on budgetary modified cash accounting (it considers the expenditures from the executed budget) and it is not a full cost (based on accrual accounting). Furthermore, there is an overlap with the accounting regulation—since 2017 all entities with more than 50,000 inhabitants are required to include information in the financial report about the full cost of services and activities that are financed with fees paid by the public.

This means that Spanish local governments, from 2017 on, should have two systems of cost accounting: one based on modified cash accounting and the other based on accrual accounting.

This paper analyses the new reporting system, to find out if this innovation has been for the better or for worse and its implications for the accrual–cash debate. We have a legally-driven accounting innovation, so we also provide some insights into top-

down reforms and on a binding system of rules. The research is based on the analysis of scholarly papers, official documents, and financial officers' (FOs) opinions, collected through interviews. We used multiple case study and interviews with FOs in some Spanish local governments. The context of austerity, where accounting can play an important role, and the fact that the innovation has been introduced by law, consistently with Spain's dominant legalistic tradition which is common to continental European Napoleonic countries (Kuhlmann & Bouckaert, 2016), makes the paper an interesting case study about the use of cash accounting for introducing reforms and rationalizing public expenditure in legalistic jurisdictions. Public sector reforms are introduced top-down in many countries and it is important to know how these reforms fit into and are accepted by organizations (Modell, 2009), especially when they go to the core of public financial management, as in the case of using cash or accrual accounting for decision-making and the rationalization of resources.

The paper contributes to research about the success of legally-driven accounting innovations and to the debate on the use of accrual and cash accounting information when the budget and regulation maintains cash or modified cash accounting.

The results show that, when budgetary cash accounting is maintained, accrual is not embedded in the political debate, but the enforcement of a system based on modified cash for determining cost is not considered satisfactory by both practitioners and academics. The opportunity to build a full-cost accounting system has been lost. In addition, legal accounting reforms need to be legitimated to increase their chances of success (Hyndman & Liguori, 2016). Reforms require politicians and managers to work together in the same direction.

### **Management accounting innovations for the rationalization of resources**

Ansari and Euske (1987, p. 553) describe three alternative theoretical perspectives on the use of accounting data in organizations:

- Technical-rational, which is driven by considerations of efficiency.
- Socio-political, which aims to the pursuit of power and influence.
- Institutional, which stems from the need to present an appropriate face for the world to see.

The three perspectives have some overlap and can coexist because different individuals use the data differently. In the first perspective, the main use for external users will be resource allocation and accountability, while for internal users the main role will be

measuring technical efficiency. The socio-political perspective puts the emphasis on the use of accounting to rationalize and justify actions to members while, according to the institutional perspective, the information is selected and presented because this is expected by the external constituencies. As pointed out by Ansari and Euske (1987), in public sector organizations, the distinction between internal and external information is difficult to maintain in practice, considering that internal information is public property (Ansari & Euske, 1987). This helps in understanding why the design of cost systems is determined by the information needs of external stakeholders relatively more than in private sector organizations (Schoute & Budding, 2017).

The reforms introduced under the umbrella of New Public Management in the public sector emphasized the use of accounting data for the technical-rational perspective as a tool for modernizing and rationalizing public sector services (Lapsley, 1999). Performance measurement tools have been introduced, although they have not always had a positive impact in performance and effectiveness (Arnaboldi et al., 2015). One of the techniques used is management and cost accounting, and in particular the activity-based costing system (ABC), which has been considered a desirable option to provide the necessary information in public administrations (Goddard & Simm, 2017), although its implementation has some difficulties and challenges (Oseifuah, 2014).

In the public sector, the adoption of accounting technologies is triggered mainly by legislation and in response to external demands (Lapsley & Wright, 2004). This is especially the case in countries with a legalistic administrative tradition, as in Spain, where management accounting has been designed by central government as a rationalization tool. This contrasts with the situation in private sector organizations, where management accounting systems have often been developed by internal users.

### ***What kind of management accounting system was developed by the Spanish central government for local councils?***

The design of cost accounting in the public sector has been dominated by accounting regulations (Schoute & Budding, 2017), therefore it is important to look at the systems that have been put in place in the local governments. There is a trend towards implementing accrual financial reporting in governments worldwide, but in most cases the governments maintain a cash basis for the budget, generating a dual system (van Helden & Reichard, 2016). Both systems can be seen as complementary, although they have different objectives. As there is a predominance of the use of the budgetary subsystem for decision-making in many

countries (van Helden & Reichard, 2016), it is interesting to investigate whether management accounting systems should be linked to budgetary reporting, and thus to cash accounting, or whether accrual accounting should be used.

We analysed a legally-driven system of cost accounting based on budgetary reporting in order to evaluate how it was designed and how it was received by managers, experts and stakeholders, therefore reassessing the debate about accrual and cash in the public sector (Andriani, Kober, & Ng, 2010; Cohen, Kaimenakis, & Venieris, 2013).

## Research design

We analysed the new system from three perspectives:

- Use of the information in regulation and its operability (potential use).
- The opinions of academics and experts in cost accounting.
- Practitioners' views on the usefulness of the information.

We used multiple sources of evidence, with triangulation to assess perceived opinions on the usefulness of the new system. Official documents and data published by Ministry of Finance and Public Function and municipalities about the cost of services were analysed and we carried out a literature review. Information was gathered on practitioners' views, via a discussion forum and semi-structured interviews.

We interviewed a total of 25 FOs of municipalities, collecting their opinions about the usefulness of the new system and whether the goals have been achieved. Eight entities were randomly selected and the other 17 were participants in a discussion forum organized at a workshop of practitioners about accounting reforms. Eighteen of our interviewees were financial directors (FDs), five were economists (Es), one was an accountant (A), and one was the responsible for 'cost management and evaluation' (RCM). The latter was the leader of the implementation of ABC in the municipality of Barcelona. We also interviewed two FOs of provinces—a higher level of government that can co-operate with local governments in co-ordinating local service delivery. One of the 27 interviewees had a degree in political science and administration and the others had degrees in business administration/economy, so they can be considered an appropriate sample to evaluate the divergence between accrual and cash information for the cost of the services.

An important limitation of the sample is that most of the interviewees had not implemented a system of accrual cost accounting. Only two of the largest local governments had implemented cost accounting with

accrual. In others, some efforts had been initiated to implement a system of information of full-actual cost, but they were still in an early stage. Most of the councils implementing models of cost accounting focused on ABC, which seems to be the most widespread model in the local sector (Oseifuah, 2014).

## The framework of the innovation: cost accounting based on budgetary reporting

In Spain, in an attempt to control expenditure and deficits, Law 27/2013 on the rationalization and sustainability of local administration (the 'Law'), introduced a major innovation—a new information system based on 'effective cost' (*coste efectivo*). Effective cost is a measure of the cost of each local government service. The main peculiarity of this new system of performance measurement is that it is based on budgetary information (year-end), which uses modified cash accounting. This means that, in the modified cash budget, revenues and expenditures are recognized when they generate short-term cash flow, independently of when they are accrued (revenues are cash or nearly cash receipts and expenditures are cash paid or to be paid in the short term). Consequently, both direct and indirect costs will be identified with the year-end or executed expenditures in the budget (ordinary expenses paid or to be paid in the short term), although the system also incorporates the depreciation 'of assets acquired during the year and previous years'.

An Order of 2014 established the common criteria that governments must use to determine the cost of the obligatory services of the municipalities. Direct costs include personnel costs, current expenditures on goods and services, and expenses arising from the amortization of the investments. Indirect expenses, derived from the allocation of overheads, are divided proportionally to the weight of direct expenses in each service. This is an important deficiency of the system if we compare with the ABC, which allocates and distributes the indirect costs according to the activities carried out. Other deficiencies of the measure are that it does not consider financial expenditures or accrual expenditures.

The new system of information was required by the central government from 2014. Use of that information was a mixture of technical-rational and socio-political (Ansari & Euske, 1987). The Ministry of Finance and Public Function publishes the cost of the services of all the municipalities on its website (Ministerio de Hacienda y Función Pública, 2018). In most cases, we found that the cost of services does not include any amortization.

There are two reasons that our study is important:

- The Law was passed in a context of austerity and the need rationalize public expenditure, so it is important to know if it has been effective.

- It is a top-down performance system that uses budgetary reporting, without considering the existence of accrual financial reporting.

In addition, the new system is mainly based on modified cash accounting, so we have been able to produce information about the usefulness of cash versus accrual reporting. The new system is meant for decision-making about choices in service delivery.

### Evaluating the innovation: reassessing the usefulness of accrual and cash accounting for decision-making

The introduction of a cost information system for services based on budgetary information (and thus modified cash accounting) meant that, from 2017, Spanish local government has had two measures of the cost of services. Table 1 compares the two.

Management accounting is a general concept that includes both the concept of effective cost and full-actual cost. As seen in Table 1, the differences between the two concepts are mainly the source of the information and distribution of indirect costs. While the full-actual cost is based on accrual accounting, effective cost is based on modified cash accounting. As pointed out by Cohen (2012), we can assume that the values of expenses or revenues are different

under modified cash accounting and accrual accounting, so two different measures of the cost of services will be obtained. In fact, for the municipality of Barcelona, the total cost included in the effective cost of services in 2014 represents just the 57.23% of the total cost using the ABC model (Salanova & Vivas, 2017). This shows that there are important differences between effective cost and full cost.

Another important difference is the role assigned to the information for decision-making. While full-actual cost may be useful for internal decision-making, such as setting public fees, effective cost is a measure for benchmarking and decision-making from a centralized perspective.

From a normativity perspective, the two costing systems will coexist, but the central government gives absolute priority to effective cost for benchmarking and performance measurement, which may once again indicate that accrual has not been embedded in the political debate and politicians do not trust accrual accounting. When regulation requires the use of cash accounting to control expenditures and performance, what is the role of accrual accounting? The answer is that, in Spain, the law gives no role to accrual accounting and this is part of the explanation of the low level of usefulness of accrual accounting.

We evaluated the innovation from the perspectives explained earlier.

**Table 1.** Differences between full-actual cost and effective cost.

	Full-actual cost	Effective cost
Regulation of the requirement	Accounting standards for local government (passed on 2013)	Law 27/2013 on the rationalization and sustainability of local administration
Type of entities included	Compulsory for local governments with more than 50,000 inhabitants	Compulsory for all Spanish local governments
Year in which it became compulsory	2017	2014
Information used	Accrual financial accounting	Budgetary accounting (year-end)
Expenditures and distribution of indirect cost	All accrual expenses; all indirect costs are distributed. An option is the use of activities for the distribution	Budgetary expenditures, not all the indirect costs are distributed. Indirect costs are assigned directly to obligatory services
Objectives	Internal decision-making and accountability	Benchmarking, central government control and decision-making and accountability.
Users	Internal and external	Internal and external
Normalization	There are no standard criteria for all local governments	Some standard criteria for all local governments but differences in indirect cost allocation.
Frequency of publication	Annual	Annual
Publicity	The information should be included in the financial report of the entities	All the information is published by central government on its web

### Benchmarking

First, one objective of the system is benchmarking, as the information should be theoretically comparable. However, in practice, there are some problems that are implicit in its calculation, such as the consideration of depreciation or the distribution of indirect costs, which introduce some subjectivity into the process and make data non-comparable among cities (Carrasco, Buendía, & Llorente, 2016). We compared the data from 10 similar municipalities for four services over three years, and our results show that the data are not really comparable even for the same entity (the costs are sometimes double from one year to another, without any differences in the form of service provision). As a consequence, this objective has not been achieved. FOs are aware of this limitation.

### Control and rationalization of cost

Second, the Law 27/2013 initially stated that effective cost must be taken as the reference to make decisions about the form of provision of local services and that higher level governments (central and provincial government) will control this cost to decide whether it could be reduced by a joint provision of the service through several small entities. This shows that the innovation was a measure for the centralization of decision-

making in local services delivery. However, a decision by the Constitutional Court in 2016 cancelled the possibilities of centralized decision-making and the use of the information for this purpose, as it was considered that this violates the principle of local autonomy. In order to assess the effect of the publication of the information about the effective cost of the services, we analysed the evolution of four services in 10 municipalities. Service delivery has not been changed in any of these in the three years of availability of the information. As for the evolution of the cost, costs have been reduced in only one service in only one entity!

### Price-setting

Third, the Law recognizes that effective cost should not be used in the setting of public prices, which at the moment is one of the needs in local governments (Ibarloza-Arrizabalaga, Erkizia-Olaizola, & Malles-Fernández, 2017). In fact, one of the directors interviewed argued that politicians' only worry about cost is that, in services with prices and fees, the price should not be higher than the cost (citizens could sue the government in this case).

### Academic perspective

As for the academic perspective, the scholarly literature in Spain has already reflected disappointment with the concept of effective cost (Robleda, 2015; Carrasco et al., 2016; Buendia, 2017), arguing for example:

*We do not understand the sense of the system for municipalities with a population greater than 50,000, especially when from now on they will have to calculate the real cost of providing local public services using accrual financial information (Carrasco et al., 2016, p. 48).*

And about the potential use of the information:

*... the lack of concretion and in definition about their calculation ... creates confusion and impact on the credibility of the information ... we do not agree that the effective cost constitutes a reference element for the concession of subsidies or other types of decisions with financial transcendence (Robleda, 2015, p. 7).*

### Professional perspective

Looking at the assessment of professionals of the two systems, we did not find any consensus, but most interviewees (19 in total) thought that full-actual cost was more convenient than effective cost. Of the six professionals who thought that the effective cost was better than the full-actual cost, four worked in municipalities with fewer than 50,000 inhabitants. Opinions from professionals in larger entities included:

*It is a catastrophic invention (FO: municipality with 700,000 inhabitants).*

*It does not inform about the cost of the services (FO: municipality with 1.7 million inhabitants).*

*The criteria used to distribute indirect cost are not objective and not developed (FO: municipality with 790,000 inhabitants).*

One FO also argued that the information is not useful as 'it is not comparable' and nine FOs said that:

*... the only use of the information is to comply with the legal requirement, but nobody uses it.*

Our evidence shows that managers do not see any value added in the accounting innovation, because they consider that the system does not fit the particularities of all governments. They would have preferred a system based on accrual financial accounting. So there is a clear decoupling between politicians, who regulate, and managers and professionals, who implement the accounting system. As in the private sector, public sector entities should be able to participate in the design of their management accounting system.

Nevertheless, some smaller municipalities consider that the cost of services can be determined with budgetary reporting, so it is not necessary to implement a full-actual cost accounting system. Among the advantages of the effective cost system, these directors (a minority) argued that:

*The information is easier to determine and more objective than the information obtained from accrual accounting (FO: municipality with 35,000 inhabitants).*

*The information is more comparable than when the full-actual cost is used, accruals being more subjective and introducing more possibilities of creative accounting (FO: municipality with 46,000 inhabitants).*

The majority of financial managers who considered that the full-actual cost is better for decision-making argued that:

*Instead of developing the effective cost, efforts should have been done to introduce a system for management accounting allowing the determination of the full-actual cost (FO: municipality with 3.2 million inhabitants).*

*An opportunity has been lost to invest all these resources in just one direction, instead of dividing the efforts between the two systems (FO: provincial government).*

Most FOs of municipalities could not see any potential for using the information. This was also the opinion of the FOs in the two provinces (higher level governments that co-operate with municipalities), who thought that effective cost information could not be used to make decisions about service delivery because it does not provide the cost of the services. One of them argued:

*... most of the entities do not include the depreciation of assets and there are some indirect costs that are not allocated.*

In one of the provinces (Barcelona), efforts were being made to implement a system of full-actual cost in all the municipalities of the province, which will be more useful. In fact, they have a pilot entity that has already implemented a system of management accounting with full-actual cost, and its results are very positive and encouraging. They are supporting municipalities with implementation because they understand the difficulties involved in providing the necessary financial resources, human resources, and expertise.

To compare the potential uses of the two systems, we asked FOs to value the usefulness of each of the systems from 1 (low usefulness) to 5 (high usefulness), for the main objectives traditionally assigned to cost information. Table 2 compares the means obtained for the two systems. In all cases, the difference of means was statistically significant according to the T-test with a 0.01 significance level.

As seen from Table 2, if we consider all the entities, the full-actual cost has higher values than the effective cost. This suggests that FOs do not consider the modified cash-based figures obtained from the legally-driven system to be very useful. This was supported in the literature with the empirical study of Cohen (2012) on Greek local government. The only municipalities that supported the new system based on cash accounting were the smallest, which only have this system and do not want to implement accrual accounting.

Furthermore, FOs were aware of the advantages of determining the full-cost of services (in all cases the mean was about four out of five in the score), which contrasts with the low level of implementation of full-cost accounting systems. FOs argue that full cost has many difficulties due to the complexity of the activities in the governments. It requires financial resources to be invested in good information technologies, which is difficult with cuts and restrictions. They also said that local FOs and managers were not getting enough training in cost accounting. Two of the municipalities that were implementing the process had outsourced the design of the system of management accounting, arguing:

*... we are not able to design a cost accounting system because we do not have the resources and technologies.*

Nevertheless, in the opinion of the managers, the main limitation in the implementation of full accrual cost accounting is politicians will, as they do not consider the information of the cost of services to take decisions necessary. One director highlighted that in his municipality:

*... the politicians always said that the cost is not so important, as other aspects motivate the decisions, such as social objectives or the purposes of the political party.*

Another example is the opinion of a public sector workers' union that reiterated the:

*... scarce relevance of the cost of public services because otherwise the principles that characterize public services, such as solidarity, redistribution, equality, equity, will remain in the background.*

The reason for this decoupling may be in the structure and functioning of institutions in Spain, with a separation between managers and information, on the one hand, and politicians and decisions on the other. Politicians will tend to only use the accounting information that helps them to achieve specific political goals (Guarini, 2016).

Politicians have an important role in both implementing and using management accounting systems, as the manager of Barcelona municipality pointed out:

*... the main driver has been the desire of the politicians, they are the main users of the information about the cost.*

This municipality has developed an ABC model that allows them to analyse all the processes of creation of public value in the municipality in depth (22 processes, 87 sub processes, 310 activities and 979 tasks). About possible conflicts with other issues in taking decisions, the manager said:

*Cost analysis does not question or invalidate political decisions of any kind, it is only a matter of incorporating useful information for the political decision-makers that allows them to assess, in an environment of scarce and limited resources, the quantitative consequences, in the present and in the future, of the decisions taken.*

This can be considered a best practice and it is being imitated in other municipalities that are designing cost accounting models.

Despite this interest in cost accounting based on accrual accounting, we noticed in the interviews that budgetary reporting still had primacy over accrual accounting, as our FOs considered that the statement of execution of the budget and the statement of cash surplus were the most useful information. This shows that accrual accounting information has not really been embedded in local government life and culture, nor is it playing much of a role in everyday decision-

**Table 2.** Usefulness of full-actual cost and effective cost in local governments.\*

	Full-actual cost	Effective cost
To assess the cost of services and take decisions about the form of management	4.05	2.86
To allocate financial resources to services provided	4	2.76
To define the targets of the services	3.9	2.43
To support the process for defining public prices	4	2.86
To assess the efficiency of the services	4.14	2.62

\*Scores from 1 = low to 5 = high

making. This confirms the results of Cohen et al. (2013) for Greek local governments. Among the possible reasons for this, van Helden and Reichard (2016) refer to the relevance of money, consistency with fiscal policy, its understandability, and the lower risk of manipulation. We would add the focus of the legislation on cash accounting and, in particular, the political debate. A change of mindset will be necessary to reset this focus to accrual accounting (Andriani et al., 2010).

## Conclusions

The financial crisis led to budget cuts and austerity measures in a number of countries, as well as to requirements to control government spending and rationalize the use of resources. Management accounting can be a useful tool for this, for example by producing information about the costs of services. In Spain, the central government designed a cost accounting system for local governments to try to improve efficiency. The system is based on budgetary reporting and, consequently, on modified cash accounting. It is a top-down legally-driven innovation and local government managers were not involved in designing it.

This paper contributes to the ongoing debate about top-down reforms and the usefulness of cash and accrual accounting in a context of maintaining a duality of systems. Our analysis shows that neither managers nor experts consider that the new system has added value, which demonstrates the importance of involving managers and other stakeholders in regulation. Top-down reforms introduced by legislation have some risks if they do not fit the context and needs of organizations. Furthermore, if laws do not ask for the use of accrual accounting, its use will be limited (Cohen, Manes Rossi, Caperchione, & Brusca, 2018).

In the case studied, where budgets are still prepared using modified cash accounting, the regulation assigns an important role to the information elaborated with modified cash criteria, and there is no role for accrual accounting. This confirms that, while the budget is maintained in cash or modified cash accounting, the use of accrual accounting is not embedded in the political debate for regulation in spite of managers being aware of its convenience for calculating the cost of the services. This evidences some decoupling between the legislation and the needs of managers, due to the improper use of accounting technologies.

The literature contains several criticisms of this new system by academics in Spain, who consider that it is unsuitable for local government and that it would be more appropriate to have a single full cost system based on accrual accounting. The opinions of FOs of entities with more than 50,000 inhabitants were generally in line with the academics' views. This evidences

that reforms that are top-down driven should be legitimated by users—participation by these actors is a cornerstone to success.

However, some entities with fewer than 50,000 inhabitants were more optimistic and said that this information was an approximation to the cost and, therefore, could be used for decision-making and service management. They were, however, in a minority. Most FOs thought that the new information system was not an accurate enough measure to use for decision-making.

## *For better or for worse?*

In a nutshell, neither academics nor professionals were happy with the new system. This can help to answer the question of the mini theme, for better or for worse? As the information is not used and requires resources (financial resources, human resources, and time), the balance tilts towards the negative side. In addition, by focusing their efforts on the new system, local governments have lost the opportunity to implement full-cost accounting.

One positive, indirect effect of the new system is that FOs are now becoming more aware of the importance of full-cost accounting systems. They thought that efforts should have been made in this direction, instead of dividing them between two systems. In this sense, it seems that managers are aware of the relevance of accrual accounting, while politicians have not embedded it into the regulatory process. If regulators want to increase the use of the information, laws and standards must require its use.

Our study has two main lessons. First, even if external users are important in the design of cost accounting systems for local government (Schoute & Budding, 2017) and central government has to lead the process, it is vital to involve local government managers in the design of new systems. So, innovations in local government would be more successful when alliances between legislators, politicians and practitioners are created and all their efforts are in the same direction. The second issue is that a cultural and organizational change will be necessary in Spanish local governments before they will use accrual-based financial and cost accounting. This cultural change should embed cost accounting in organizations and decision-making. An organizational change that makes decisions more technical than political is also required. The municipality of Barcelona has implemented an ABC system and reports on it positively, which can be considered a best practice and an example of how information can be embedded in management and accountability processes.

This paper is not exempt from limitations, including the relatively small number of interviews and the national setting of the analysis. More research is

required on the topic in future studies, including for example the perspective of regulators and that of politicians about the use of a cost accounting system. Nevertheless, the lessons here have significance to regulators and policy-makers, as well as for practitioners and local government managers.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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