SALVADOR CARMONA AND MARTA MACÍAS

Institutional Pressures, Monopolistic Conditions and the Implementation of Early Cost Management Practices: The Case of the Royal Tobacco Factory of Seville (1820–1887)

In spite of our increasing understanding of the underpinnings of early cost management systems, little is still known about the reasons for the implementation of such systems in firms operating under monopolistic conditions. This article studies the enforcement by law of cost and budgeting systems in the Royal Tobacco Factory of Seville (Spain), a manufactory of the state-owned monopoly. By doing this, we seek both to enhance understanding of the state's motivation to enact institutional pressures aiming at the implementation of early cost management practices as well as to study different organizational responses to simultaneous pressures arising from a single institutional source. It is suggested that the state's motivation to legally enforce the implementation of early cost and budgeting systems may be attributed to (a) the seeking of legitimacy by the state regulatory body, (b) the active agency of senior employees of the state regulatory body to keep their jobs and compensation packages on the eve of the privatization of the industry, and (c) the interest of the regulatory agency to instil the basis of mimetic isomorphism within the monopoly. Different responses by the RTF to pressures for reporting cost and budgeting information were explained by (a) the expected diffusion of firm's non-conformity within the institutional area, (b) the expected impact of institutional rules and norms on organizational goals, and (c) the extent to which the institutional source is consistent in its demands.

Key words: Cost accounting; Institutional; Management accounting; Management budgeting; Monopoly; Tobacco; Theory.

Salvador Carmona is Professor of Accounting and Finance, School of Social and Legal Sciences, Universidad Carlos III de Madrid, and Marta Macías is a Lecturer in the Area de Contabilidad y Control, Instituto de Empressa.
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Much valuable knowledge has been gleaned about the reasons that motivated the design and implementation of early cost accounting systems. Contributions of the three camps addressing the emergence of cost accounting practices in organizations provide many perceptive insights into the underpinnings of such early practices (e.g., Loft, 1995; Fleischman *et al*., 1996). First, accounting historians of the neoclassical economics school contend that increasing competition during the Industrial Revolution slashed profit margins of companies, and this in turn galvanized a greater concern of managers about cost issues. The implementation of cost systems, it was argued, would improve firms' efficiency and strengthen their competitive position (e.g., Johnson and Kaplan, 1987; Edwards and Newell, 1991; Fleischman and Parker, 1991; Fleischman *et al*., 1997). Second, contributors drawing on Foucault's ideas contend that early cost accounting systems constituted a signal of the late eighteenth-century cultural shift towards the examination and scrutiny of human performance. Instead of supporting the search for efficiency that constituted the central argument of 'traditionalists', Foucauldian accounting historians mainly contend that disciplinary and political motives lie at the heart of the implementation of early cost accounting systems (e.g., Hoskin and Macve, 1986, 1988). Lastly, the labour-process school challenges the efficiency argument by noting that the deployment of management accounting techniques (e.g., budgets) were targeted at increasing the efforts of workers without increasing their wages accordingly (e.g., Hopper and Armstrong, 1991). The labour-process school argues that such techniques played a significant role in the process to de-skill the labour process that occurred during late nineteenth and early twentieth centuries in Anglo-Saxon countries.

Studies conducted using these three perspectives on the emergence of cost management systems, however, have in common an overwhelming reliance on evidence gathered from firms operating in competitive environments, such as those that characterized many Anglo-Saxon industries (e.g., Edwards *et al*., 1995, p. 2; Fleischman and Tyson, 1998). Therefore, conclusions drawn from such studies are considerably influenced by the conditions of stiff market competition that forged some Anglo-Saxon industries (e.g., the textile and iron sectors: see Edwards and Boyns, 1992; Fleischman *et al*., 1997; Tyson, 1998). Though research on the role of governmental agency in the emergence of cost systems has produced many perceptive insights (e.g., Ezzamel *et al*., 1990; Tyson, 1993), much is still to be learned about the emergence of cost management practices under monopoly or strict market regulation (e.g., such as those that characterized the economies of both Spain and its overseas colonies). In short, as Scott (1995, p. 146) asserts, 'It is difficult, if not impossible, to discern the effects of institutions on social structures and behaviors if all our cases are embedded in the same or very similar contexts'.

This article attempts to fill this gap by examining the design and implementation of budgeting and costing systems in one of the manufactories which composed the state-owned tobacco monopoly in Spain, the Royal Tobacco Factory of Seville (RTF),[1] during the period 1820–87. This period encompasses the operation of the

1 Archival evidence was gathered from three separate primary sources. The Archive of the Tobacco Company (Archivo de Histórico de la Fábrica de Tabacos de Sevilla, AHFTS) constitutes a compre-

tobacco industry as a state-owned monopoly supervised by the Dirección General de las Rentas Estancadas (Steering Agency for State Monopolies, the Steering Agency), as management of the industry was privatized in 1887. As noted below, the observation period witnessed significant political, economic and social turbulence that, we argue, exerted a prominent impact on both the structure of the tobacco industry and on its accounting systems. The embracing objectives of this paper are twofold. First, to examine the motivation of the Steering Agency to enforce tobacco factories to produce budgeting and costing information. Second, to investigate the diverse responses of the RTF to such compelling demands. These responses ranged from compliance (e.g., budgeting information requirements) to dismissal (e.g., cost data demands) of environmental pressures.

This is the third article exploiting archival work based on the records of the RTF (i.e., Carmona *et al*., 1997, 1998). The present investigation differs from the two previous articles in several respects. First, this work studies the enforcement by the state of early cost management practices in industrial factories, whereas the cost accounting system investigated by Carmona *et al*. (1997) was the outcome of an in-house initiative, led by a junior accountant of the RTF. Second, continuous political turmoil and bankruptcies of the state's finances characterized the period of our investigation (1820–87), and this contrasts with the political stability and the Enlightenment ideology of the 1770s RTF which was the relevant period for the earlier studies. Lastly, whereas in the 1770s the RTF was the sole producer of tobacco in Spain, by the end of our period of study it was only one of ten state-owned factories that formed the tobacco monopoly. The organizational context of the 1770s, we contend, differed significantly from that of the current investigation, and this in turn provides an additional motivation for this study. As Hopwood, (1983), argued, organizational environments exert a lasting influence on the characteristics and functioning of accounting systems.

Contributions of both institutional theory and resource dependence theory have examined organizational responses to environmental pressures (e.g., Meyer and Rowan, 1977; Pfeffer and Salancik, 1978). Early versions of institutional theory suggested conformity to rules and norms as the usual organizational response to institutional demands (e.g., Selznick 1948, 1949, 1957; Berger and Luckmann, 1967). Organizations conforming to institutional pressures, it was argued, avoid claims of irrational or negligent behaviour, invest themselves with legitimacy and enhance their life prospects. Nevertheless, the lack of attention by 'old' institutional theorists towards organizational responses different from conformity has attracted

hensive source to understand internal developments at the RTF as well as to study the relationship between the focal organization and the Steering Agency. The National Archive (Archivo Histórico Nacional, AHN) is a valuable source to both address the role of the Steering Agency in the management of the tobacco monopoly and to double-check correspondence between the Steering Agency and the focal organization. Lastly, the Bank of Spain hosts two archives of interest: the Archive of the Bank of Spain (Archivo Histórico del Banco de España, AHBE) and the Special Archive of Registries of the Bank of Spain (Archivo Especial de Registros del Banco de España, AERBE), which are instrumental to investigate the privatization of the tobacco monopoly. The three sources are both well preserved and indexed, and provide free access to interested researchers. The first archive is located in Seville, whereas the remaining sources are situated in Madrid.

severe criticisms from 'new' institutionalists (e.g., Meyer and Rowan, 1977; Covaleski and Dirsmith, 1988a, 1988b; DiMaggio, 1988). Drawing on contributions from institutional sociology and resource dependence theory, Oliver (1991) provided a consistent alternative to the determinism of 'old' institutionalism. In a seminal theoretical work, she analysed a variety of strategic organizational responses to institutional pressures and showed that such responses range from conformity to challenge and manipulation of rules and norms. Insofar as we address the responses of organizations to institutional pressures to implement budgeting and costing systems, contributions of the new institutional sociology are of considerable interest to this article.

This article may be of interest for several reasons. First, primary archival evidence is provided on the implementation of costing and budgeting systems in the nineteenth-century Spanish tobacco industry. In contrast to studies addressing private-sector initiatives to deploy uniform costing systems in some U.K. industries (e.g., printing industry: Mitchell and Walker, 1997; Edwards *et al*., 2000), our work attempts to highlight the role of the state in the legal enforcement of cost management systems in firms. By doing this, we expect to contribute to the sparse literature that studies the role of such cost systems in the interface between business and the state (e.g., Hoskin and Macve, 1986; 1987; Ezzamel *et al*., 1990; Tyson, 1993) as well as to the growing number of studies that examine the emergence of cost management systems in non-Anglo-Saxon settings (e.g., France: Bhimani, 1994; Nikitin, 1996; Boyns *et al*., 1997; Spain: Carmona *et al*., 1997).

Second, accounting history research is required to render visible the contextual factors of the events under investigation (e.g., Previts and Bricker, 1994). Institutional sociology constitutes a framework that may inform accounting history research's need to address firms' environments (e.g., Covaleski and Dirsmith, 1995). Institutional sociology is depicted as an important stream of research in organization theory[2] as well as an influential research framework in management accounting research (e.g., Covaleski *et al*., 1996). In spite of this, institutional sociology remains a largely neglected framework in accounting history research (Luft, 1997; see Covaleski and Dirsmith, 1995; Carmona *et al*., 1998 for two significant exceptions). Using this framework will enhance current understanding about the motives of external factors (e.g., the state) to exert institutional pressures on organizations (e.g., Zucker, 1987).

Third, we shall draw on recent contributions of institutional theory to examine how the observed organization enacted different reactions to pressures from a single source to produce both budgeting and costing figures. That is, whereas the RTF complied with budgeting information requirements, it largely dismissed legal pressures to report cost data. Different responses of the RTF to pressures for information were especially remarkable as both demands were simultaneously made by the same institutional source. By drawing on institutional theory, we expect to contribute to the sparse but increasingly growing literature that addresses the role

[2] *Administrative Science Quarterly* placed Scott's (1987) theoretical review of institutional theory as its lead article in the 1980s. As Hall (1991, p. 289) contends, 'these placements are hardly accidental'.

of self-interest and active agency as motives for non-compliance with environmental pressures (e.g., Mezias, 1990; Oliver, 1991). It is suggested that the state's motivation to legally enforce the implementation of early cost and budgeting systems may be attributed to (a) the seeking of legitimacy by the state regulatory body, (b) the active agency of senior employees of the state regulatory body to keep their jobs and compensation packages on the eve of the privatization of the industry, and (c) the interest of the regulatory agency to instil the basis of mimetic isomorphism within the monopoly. Different responses of the RTF to pressures for reporting cost and budgeting information were explained by (a) the expected diffusion of firm's non-conformity within the institutional area, (b) the expected impact of institutional rules and norms on organizational goals, and (c) the extent to which the institutional source is consistent in its demands. The analysis thus reveals that institutional sociology provides perceptive insights into organizational responses to institutional demands but also identifies some limitations of the theory in explaining how organizations react to simultaneous pressures from a single source.

Lastly, as noted above, research on early cost accounting practices is overwhelmed by evidence gathered from companies operating in eighteenth- and nineteenth-century Anglo-Saxon contexts. Drawing on Spanish-based evidence enhances understanding of nineteenth-century accounting practices in Spain. As Hernández-Esteve (1995, p. 257) aptly reports, investigation of such accounting practices has been widely neglected by accounting historians.

THE FRAMEWORK OF INSTITUTIONAL SOCIOLOGY

Institutional sociologists conceive of institutions as consisting of 'cognitive, normative, and regulative structures and activities that provide stability and meaning to social behavior' (Scott, 1995, p. 33). A basic tenet of institutional sociology is that institutions exert strong pressures on organizations to infuse their decisions with an appearance of rationality (e.g., Meyer and Rowan, 1977). Institutional pressures on companies concern conformity to social norms of acceptable behaviour as well as demands to accomplish satisfactory levels of performance (Covaleski *et al.*, 1996, p. 11). The implementation of cost accounting systems by firms, it is argued, exemplifies the notion of institutional pressures in the accounting terrain (e.g., Meyer, 1986). Firms complying with such pressures avoid claims of negligible behaviour and thus convey the belief that they are in control of resources. Organizations operating in similar environments are expected to experience comparable demands and tend to look like each other or, as new institutionalists put it, become isomorphic (DiMaggio and Powell, 1983). DiMaggio and Powell distinguish three types of institutional isomorphism. First, coercive isomorphism refers to pressures exerted on firms by organizations on which they are dependent. Coercive isomorphism is illustrated by the influence of the state on an organization, especially through the enactment of legislation that impinges on organizational actions. In nineteenth-century Spain, tobacco factories were legally enforced to implement budgeting and cost accounting systems and, by bringing this about, the state attempted to instil isomorphism in the tobacco monopoly. Second, mimetic isomorphism concerns the imitation of practices implemented by successful organizations. It is argued that organizations mimic others when either their goals are ambiguous or when there exist high levels of environmental uncertainty (Sevón, 1996). As will be shown, the Steering Agency scrutinized the cost reports of tobacco factories to assess their performance and disseminate successful managerial practices among manufactories. Lastly, normative isomorphism is a consequence of pressures exerted by the professions to normalize organizational actions, as shown by the influence of professions on the education of potential entrants as well as by their role in the certification process of firms (e.g., quality assurance). Moreover, the consultancy profession contemporarily exerts pressures on firms to adopt 'innovative' management and accounting practices (e.g., total quality management, activity-based costing) and, by doing this, acts as 'change agents' of organizations (e.g., Carnegie and Parker, 1996).

Institutions, however, are not monolithic and do not always elicit compliance and agreement from organizations (e.g., Covaleski and Dirsmith, 1988a; Oliver, 1991; Mezias and Scarseletta, 1994). Organizational responses to external demands depend on the tangible and intangible resources supplied to the firm by constituents (e.g., financial resources: investors, banking system; reputation: the public opinion at large). It is contended that the Steering Agency typified a powerful constituent of the RTF as long as it was both the regulatory body of the factory and its supplier of financial resources.

In her typology, Oliver (1991) suggests organizations show a variety of strategic responses to institutional demands. She identifies five strategic responses: acquiescence, compromise, avoidance, defiance and manipulation. These in turn embrace fifteen possible tactics. First, acquiescence refers to conformity to institutional pressures. Organizations sharing values and intentions with external constituents and/or being strongly dependent on them are expected to conform to societal demands. Second, organizations facing multiple, contradictory pressures from their institutional environment may attempt to compromise by balancing, pacifying, or bargaining with their external constituents. Third, avoidance embraces organizational behaviour aimed at deterring the necessity to conform. Fourth, defiance involves a strong resistance to institutional pressures that may imply dismissal, challenge, and attack. Finally, manipulation is defined as 'the purposeful and opportunistic attempt to co-opt, influence, or control institutional pressures and evaluations' (Oliver, 1991, p. 157). The last four strategic behaviours are predicted in cases of multiple pressures from the wider socio-economic environment. In contrast, resource dependence, shared values, and pressures entrenched in a legal framework by external parties are constitutive factors of expected conformity. Conformity of firms to institutional demands, however, is not always guided by the intention of managers to instil rationality in their organizations (e.g., cost efficiency programs). Instead, it is not uncommon that firms comply with such demands to convey the imagery of efficiency and rationality to external constituents rather than actually deploying such programs (e.g., Abernethy and Chua, 1996). This contrast between actual and apparent behaviour is referred to as 'decoupling' by institutional theorists (e.g., Meyer and Rowan, 1977).

Studies in management accounting research have examined the responses of firms to institutional pressures aimed at implementing cost management systems (e.g., Granlund and Lukka, 1998). Management accounting systems are depicted as artefacts that invest firms with the symbolic benefits of economic accountability and rationalization (Covaleski *et al.*, 1996; Meyer, 1986), that is, legitimization and access to resources. Investigation of the legitimacy potential of such systems thus constitutes a significant line of inquiry in management accounting research. Covaleski and Dirsmith (1988a, 1988b) examined the extent to which the budgeting process of a large American university facing periods of rise, transformation, and fall reflected societal expectations of budgetary practices. They provided compelling support for the notion that the university rejected the institutionalized budgeting procedure when the goals enshrined in such procedure were inconsistent with those of the university. Such conclusions, in turn, concur with those of Etherington and Richardson (1994) who investigated the impact of institutional pressures on university accounting education in Canada and found that universities certainly respond to such pressures strategically. In particular, their results showed that conformity is correlated to faculty aspirations, or when pressures originate from agents who control resources needed by the university. Covaleski and Dirsmith (1995) examined the institutionalization of accounting practices in Wisconsin at the turn of the century under the progressive rule of Governor La Follette. They found that the institutionalization of such practices constitutes a reflection of the relative power of organized interest groups. Lastly, Abernethy and Chua (1996) examined control mechanisms of organizations operating in highly institutionalized environments and highly dependent on resources supplied by governmental agencies. These organizations reacted to institutional pressures by providing a low profile response to such demands. As Abernethy and Chua (1996) demonstrated, organizational responses to demands from constituents were aimed at exerting the minimum estimated effort to convey the belief that the firm is in control of resources. They concluded that changes in control mechanisms of a firm are contingent on both the intensity of institutional demands and the accumulated experience of the organization that receives such pressures.

Accounting studies using the framework of institutional sociology thus depart from the traditions of the three above-mentioned paradigms in accounting history research (e.g., the neoclassical economics school, the Foucauldian approach, and the labour-process school). Institutional sociology perceives the social world as subjective and attempts to understand it from the perspective of those being studied (Hopper and Powell, 1985, p. 446). Accordingly, accounting is perceived as a legitimating device rather than as a craft that instils rationality in organizations (e.g., Covaleski *et al.*, 1996). Institutional sociology, in short, differs from the assumptions of social order and causal, economic relationships that characterize studies of the neoclassical economics school. Moreover, though studies drawing on the institutional sociology perceive accounting systems as drivers of organizational change, such emphasis does not encompass the wider social and political spheres that characterize the Foucauldian and labour-process perspectives. Under the tradition of institutional sociology, the purposive objectivity of accounting calculations targets the external legitimation of managerial decisions rather than the deployment of regimes of discipline and surveillance that characterize the Foucauldian approach or the de-skilling of workforce that typifies the labour-process school.

THE CONTEXTS OF THE TOBACCO INDUSTRY

The Privatisation of the Monopoly

The tobacco monopoly in Spain contributed to 12.5 per cent of the state's total income during the period 1820–87 (e.g., López-Linaje and Hernández-Andreu, 1990). As a consequence of its economic importance, the tobacco monopoly was considerably affected by an intellectual and political debate on the privatization of state monopolies that comprised the entire observation period, and which in turn brought about various attempts at privatization. Since such attempts exerted a lasting influence on the cost and budgeting practices of factories, the purpose of this section is to embed the institutional analysis of management accounting practices into its context of environmental beliefs (e.g., DiMaggio and Powell, 1983).

Political parties, intellectuals and the public at large were engaged in a lengthy debate about the privatization of state-owned monopolies during nineteenth century. The privatization camp was led by liberal politicians. Privatization, they contended, would both profit the public sector and diminish smuggling (Maureta, 1975). Piernas-Hurtado and Miranda-Eguía (1875) summarized the arguments of this camp concerning the tobacco monopoly: 'monopoly, as the [organizational] form in which tobacco taxes are being articulated, constitutes a serious constraint towards free labour and trade, [monopoly] harms production [efficiency] and posits arbitrary patterns into the rationalization of consumption'.

The conservative camp, in contrast, emphasized tax reasons for the existence of monopoly of tobacco. The collapse of public finance, in García de Torres' opinion, largely justified the operation of the monopoly: 'the situation of the country, as shown by the collapse of public finance and the state's inability to honor its debts, posits serious risk on any measure attempting to change the pattern of state income, either in the short or long-term [the financial situation of the country] could probably worsen if such changes are put in place' (García de Torres, 1875, p. 40).

The 1812 Constitution was re-enacted upon the liberal revolution of 1820 and a number of liberal reforms thus affected the tobacco monopoly. The decree of 9 November 1820 established the privatization of the tobacco monopoly as of March 1821. The announcement, however, brought about a significant increase in tobacco smuggling[3] and a corresponding reduction in the state's income. This led to the refusal of the liberals to continue with the implementation of the process. The return of the absolutists into office motivated the decree of 16 February 1824, which removed the legislation in favour of privatization.

[3] To maintain the state's level of income, early attempts to privatize the tobacco monopoly were accompanied by substantial increases in tobacco taxes, and this in turn provided strong incentives for tobacco smuggling.

Spanish public-sector accounting was characterized by its lack of efficient monitoring devices. Accordingly, accountability of peripheral units to the Ministry of Finance was regularly behind schedule. Mr López-Ballesteros, Finance Minister, enacted a decree on 14 November 1825 to reform public sector accounting, especially aimed at '[producing] yearly and monthly anticipated knowledge of state income and wealth. In this manner, the state will be able to honour its debts as well as to proceed with expense reductions, [because] expenses must be adjusted to the wealth of people'. The reform, however, failed to achieve its goals because of the absence of control mechanisms to enforce routines and procedures and also because of harsh resistance from civil servants. Toreno (1834, p. 22) summarized the situation of public finance: 'the total cost of both the public sector overall and that of its agencies is unknown. Moreover, it is not possible to distinguish between this year's payments and those made in the previous years.' The centralization of the public budgeting system was thus regarded as a fundamental action for its rationalization and control.

The Royal Statute of 1834 established that the state's budget was subject to parliamentary control; article 36 stated that '[the Finance Minister] is annually obliged to submit [to the Parliament] for consideration a proposal of expenditures and its corresponding sources of income'. This new procedure of accountability of the executive, as we demonstrate below, affected considerably the accounting systems of the tobacco monopoly.

The first decade of Queen Isabel II's reign (1844–54) coincided with a period of stability that fostered enduring reforms (e.g., the Mon-Santillan tax reform [1845] and the Bravo-Murillo public sector reform [1850]). The first government of Queen Isabel II established the lease of the entire tobacco monopoly (e.g., purchasing, manufacturing and distribution) to the Marqués de Salamanca, by Royal Decree of 20 February 1844. This decision was explicitly motivated by (a) financial constraints of the Spanish public sector, and (b) a belief of the government that private sector management would produce higher levels of manufacturing performance: 'it will be impossible to report better results if the government directly manages the factories' (RD, 20 February 1844). It was argued that the 'cold attitude of civil servants will be replaced by the vigilance and close monitoring of those who have their wealth at stake'. The contract established a ten-year term lease and a yearly rent of Reales 75 million, to be paid by the Marqués de Salamanca. The state, however, cancelled the lease one and a half months later, in May 1844, upon the appointment of Alejandro Mon as Finance Minister. Mon demonstrated that the clauses of the lease contract caused considerable losses to the state.

As noted above, in 1850 Bravo-Murillo enacted an enduring reform of the Spanish public sector. The Accounting Act of 20 February 1850 constituted a crucial element of that reform. The Act comprised a number of distinctive characteristics: (a) The public sector annual budget shall have a one-year term, which in turn implied that the executive and its agencies were no longer allowed to transfer funds between annual budget items; (b) state agencies will draft an annual budget proposal to be consolidated by the Ministry of Finance into the state's annual budget; (c) once the state annual budget is approved by the parliament, the executive will subsequently split it into monthly operating budgets; and (d) cash funds will be transferred to the state's agencies on a monthly basis upon provisions made in the consolidated operating budget of the state.

A period of political instability that was characterized by economic depression and public sector bankruptcy provided social support for a military coup that led to the Queen's abdication in 1868 and to one of the most unstable episodes in Spain's history (e.g., Comellas, 1996). A federal republic privatized the monopolies of salt and tobacco in June 1869. However, a sudden increase in smuggling as well as the political instability of the country reversed the privatization decision in early 1871. Finally in 1887, the tobacco monopoly ceased to be administered by the state, and was leased to the Bank of Spain.

The Industry and the Focal Organization

The tobacco monopoly comprised three central activities: (a) the imports of raw materials and finished goods to Spain from its overseas colonies, (b) the manufacture of tobacco in the Steering Agency's Spain-based factories, and (c) the distribution to Spanish provinces (Alonso Álvarez, 1996). The Steering Agency directly managed the import and distribution stages, and closely supervised tobacco manufacturing in the manufactories of the state-owned monopoly**.** Tobacco factories did not sell output to consumers, and thus did not receive any cash from the market. Instead, factories transferred output either to the distribution stage of the Steering Agency (*estancos*) or to other factories. Thus, from an accounting viewpoint tobacco factories constituted cost centres of the Steering Agency. To accomplish production schedules, they received funding and raw materials from the agency.

An overall depiction of the nineteenth-century tobacco industry shows it as an expanding market. This conclusion is supported by some important indicators. For example, imports of raw materials from Spain's overseas colonies grew from an annual average of 715 tons during the last fifteen years of King Carlos III's reign (1773–88), to 10,000 tons in 1840 (e.g., López-Linaje and Hernández-Andreu, 1990). Accordingly, the number of shop floor employees increased from 2,000 in 1780 to 32,000 in 1887. Moreover, demand for cigars stagnated on account of high prices, and this provoked the proliferation of new, more affordable products (e.g., cigarettes). Management of the tobacco monopoly became increasingly complex as a consequence of business growth (e.g., factories, products, variety of raw materials). The Steering Agency faced serious logistical problems to supply raw materials and work in process to its production facilities, especially during the civil wars. Tobacco factories became increasingly intertwined and finished goods of one factory constituted work in process for other facilities. Moreover, demands from the expanding tobacco market caused the Steering Agency to ask its factories to increase output. To meet such targets, factories frequently shortened manufacturing lead time by delivering production without keeping the standard for drying tobacco. This in turn attracted continuous consumers' complaints of the high humidity of tobacco leaves.

The RTF was the largest, main manufactory of those that comprised the state-owned tobacco monopoly**.** Changes in the external environment of the factory considerably affected its internal organization. First, the number of 'factories' inside the RTF increased from two at the beginning of the century to six in 1882. Second, changes in the mix of products, from snuff to smoked tobacco, brought about notable increases in the volume of workforce (e.g., from 1,560 employees by the end of the eighteenth century to 6,500–7,000 in 1887; see Gálvez Muñoz, 1997). Whereas snuff production processes were mechanized, production of smoked tobacco was handcrafted.

Third, there was a wider range of incoming raw materials into the production process of the RTF. Our observation period witnessed a significant loss of Spain's overseas empire. The Steering Agency thus looked for alternative sources of raw materials, which in turn introduced considerable complexity into operations management.

Lastly, in 1860 steam machines were introduced into the production of cut tobacco. The latter constituted either work in process for the cigarette factory or was sold to consumers. Implementation of this technology, however, was not extended to the entire factory but coexisted with handcrafted workshops, and this posed considerable problems to the management of the RTF (e.g., operations scheduling), because of the different production lead-time between mechanical and hand-crafted workshops.

BUDGETING AND THE RTF

The Royal Statute of 1834 and the public sector reform of 1850 established the foundations of the budget cycle of state agencies. This section draws on these documents as well as on the actual budgets of the RTF to show the specifics of the Steering Agency's demands for tobacco factories to prepare budgets as well as the extent to which the focal organization reported on budget attainments.

As noted above, in an attempt to prevent the state's bankruptcy, the preparation of public sector budgets in nineteenth-century Spain was highly centralized. The Spanish parliament had to approve the state's annual budget. This comprised the foundations for the expense budgets of both the Steering Agency and its tobacco factories. The budget procedure encompassed a fixed monthly allocation of funds to factories. Such procedure, however, confronted a steady shortage of funding supply from the Steering Agency to the tobacco factories as consequence of the expanding market. Moreover, the financial situation of the monopoly worsened, as the Ministry of Finance was unable to provide the factories with regular transfers of cash. Thus, for example, the general manager of the RTF issued a memorandum to the director of the Steering Agency, on 14 February, 1838 (AHFTS, Legajo 281), which stated:

> in a letter of 7th February, I submitted to you an account of funds transferred to the Cash Office (of the RTF) during last year as well as a detailed statement of the uses of such funds. [In this letter] I attempt to demonstrate the insufficient funding of this factory, especially by considering that increases in production volume are accompanied by the stagnation of funding [from the Steering Agency] . . . You may check the increasing production of cigars, by comparing present figures with those of 1835 and 1836.

> Moreover . . . the market value of this factory's production is Reales 30,176,260. Is it possible to look at the tremendous wealth produced by this endless mine in an indifferent manner? Isn't it sensible, in contrast, to make an additional effort to preserve it so that its outcome may help ease the country's problems? . . . It is clear that a monthly budget of Reales 300,000 may be deemed insufficient, even in the case of market stagnation. I, thus, suggest to you a monthly budget of Reales 400,000 for this factory. [Permission for such increase] fully fits within your scope of control . . . In this manner, I guarantee to honor all commitments arising from this factory and will attempt to avoid the continuous leave of my most competent cigar workers because they move to other Spanish tobacco factories that regularly meet payment . . .

Delays in cash transfers caused serious problems to tobacco factories. Such delays were sometimes attributed to the arduous routines established in Spanish regulations for the transfer of funding from the Ministry of Finance to the tobacco factories. According to these rules, funding for the tobacco factories was to be provided by the provincial delegations of the Ministry of Finance (AHN, Libro 8091). This caused considerable problems to the management of factories and required the intervention of the general manager of the Steering Agency to resolve the conflict. For example, on the 10 April 1838, the general manager of the Steering Agency wrote to the provincial delegate of the Ministry of Finance:

> I was informed by the general manager of the RTF, on 28th March, of the delay in [cash] transfers of January, February and March . . . Such cash delays make it impossible to undertake production activities. Moreover, the delay encourages many valuable cigar rollers to leave the factory and engage in smuggling activities . . . As a General Director, I have repeatedly asked you to make on time transfers of Reales 300,000/month [to the RTF], and this should be your most important commitment . . . otherwise you will be held responsible for any damage attributed to cash delays. (e.g., AHFTS, Libro 178-No 33)

Cash delays, however, were not resolved by the intervention of the general manager of the Steering Agency. On the contrary, in August 1838, after a four-month delay in payments, a strike of operators took place. As delays in transfers of cash to factories were partially attributed to the collapse of the provincial delegations of the Ministry of Finance, the Steering Agency made provisions to enlarge the number of delegations suitable for supplying funding to tobacco factories. Moreover, the Steering Agency required factories' management to produce monthly reports of cash delays.

The public sector reform of 1850 attempted to improve the process of cash transfers to factories by instilling some flexibility in the procedure. Under the new system, the Steering Agency submitted a monthly production plan to each tobacco factory and asked them to make monthly forecasts of expenses. The archives show that such forecasts were closely monitored by the Steering Agency; for example, on 6 June 1860 the Steering Agency asked the general manager of the RTF to increase production of common cigars and allowed him to hire as many (female) cigar rollers as needed. The general manager, however, disregarded that measure. The Steering Agency sent reminders on 16 and 29 June 1860. As the RTF did not react to such requests, the Steering Agency sent the following letter to the RTF's general manager on 10 September: 'After examining your expenses forecast for October, we realized that you just requested funding to produce 24,000 pounds of common cigars. However, demands from the provinces strongly indicate that you double such production, that is, to manufacture 48,000–50,000 pounds every month until the end of this year. Therefore, we will increase your budget and ask you to proceed accordingly' (AHFTS: Libro 718).

Lastly, reports on budget attainments constituted an essential part of the budget cycle of tobacco factories, as noted below. The Steering Agency requested from tobacco factories monthly reports on the previous month's expenses. Such reports were tightly monitored by the Steering Agency. For example, on 24 October 1860 the Steering Agency submitted the following letter to the general manager of the RTF:

> After examining at this end your report on September expenses, we realized that this year's accumulated office expenses [of the RTF] are Reales 8,174. Since this year's budget was Reales 10,000 for that item, you had an allowance of Reales 7,500 until the end of last month . . . We hereby let you know that your factory cannot use more than Reales 10,000 in office expenses during this year. Should you do otherwise, we shall ask you to reimburse the difference. (AHFTS, Libro 718)

Failures in Budget Reporting

The RTF reported information on either budget preparation or budget attainments in a more regular fashion. The complete list of the RTF's failures to report is shown below:

1. 1838: The Steering Agency requested information about inventory and accounts receivable (AHFTS, Legajo 281).
2. 1844: As noted above, the lease of the tobacco monopoly to the Marqués de Salamanca brought some substantial changes in the accounting systems of tobacco factories. The RTF attributed delays in reporting budgeted figures to confusion and stress associated with the changes (AHFTS, Legajo 287).
3. 1861: On 31 May the Steering Agency demanded submission of some delayed budget figures (AHFTS, Libro 747).
4. 1865–6: The Steering Agency sent an internal memorandum to RTF to request submission of some delayed budget figures (AHFTS, Libro 798).

Appendix A depicts the report that the RTF submitted to the Steering Agency on its budget attainments in July 1877. As will be seen below, it was produced at a time when the RTF was not complying with the Tobacco Agency requirement to report costing information.

COSTING IN THE RTF

The state exerted different legal pressures on tobacco factories to report cost data. As shown in this section, the cost data requests varied considerably during our observation period and this provided motivation for the RTF not to comply with such demands. This section highlights the different legal demands imposed by the Steering Agency on the tobacco factories to report cost data; the responses by the RTF to such requests (as shown below) and, lastly, the use of costing reports by the Steering Agency.

The decree of 9 November 1820 enacted the privatization of the tobacco industry during the liberal triennial. Shortly before, the Steering Agency issued the Royal Order of 12 October 1820, which requested tobacco factories to 'prepare as soon as possible a statement comprising a detailed classification of inventories. The Accounting Office, in particular, is asked to prepare a statement depicting all additional expenses to be made to complete the production process of existing inventories' (AHFTS: Legajo 631).

Though this request does not necessarily imply the existence of a costing system in the RTF, it clearly assumes that cost accounting technologies could be expediently put in place by the RTF. For example, a concrete request to report cost data within the month was enshrined in an internal memorandum (*circular administrativa*) issued by the Steering Agency in October 1826 which states:

> By the end of this month, the RTF is hereby requested to prepare an inventory report, consisting of raw materials, work-in-process, and finished goods. A clear distinction should be made between inventories suitable for processing or sale from those to be considered as waste. Cost calculations and market value for the former should be reported as well as an explicit mention of expected waste and losses of weight . . . The report should be certified by the Accountant of the RTF. (AFTS: Legajo 258)

The RTF complied with such information demands. Concerning reported information, we can make two additional observations. First, cost calculations were not the regular outcome of the RTF's costing systems. Instead, this report displayed *ad hoc* cost calculations made by the RTF upon request of the Steering Agency. Second, in spite of the absence of regular cost calculations at the RTF, the prompt response to the demand showed that cost accounting technologies were well known to personnel of the Accounting Office.

Tobacco factories were required to prepare regular cost calculations as of 30 November, 1834, as enacted in article 60, Chapter II of the General Instruction for tobacco factories: '[tobacco factories] should prepare cost calculations of cigars made in their workshops; reports should follow models 4, 5, 6 and 7' (AHN, Libro 8090). There is no trace of cost calculations in the RTF, however, until 1838. The Steering Agency submitted the following letter to the general manager of the RTF (AHFTS, Legajo 281, 6 December 1838):

> Art. 60 of the General Instruction for tobacco factories established their obligation to report a yearly overall account. [The account] shall show cost figures of both finished products and work-in-process tobacco. This Steering Agency, however, verifies that such an important and necessary information is not being reported . . . Factories attribute this non-reporting to their lack of information about cost of raw materials (e.g., tobacco leaves of the following types: Havana, Virginia and Kentuqui [*sic*]) . . . This memorandum establishes the cost of raw materials and, by doing so, there is no justification for failures in reporting the requested cost figures . . . [Moreover] these calculations should be reported from the factories to the Steering Agency on a three month basis as well as to the factories receiving their output as work-in-process . . .

Though the RTF reported cost figures for all products manufactured in its premises, it did not accomplish this with the requested frequency; instead of producing quarterly cost reports, it reported cost data on a yearly basis. The overall structure of product costing information is shown in Appendix B.

A Royal Order of 29 July 1840 enforced an overall reform of the accounting books to be kept in the tobacco factories (e.g., AHFTS, Legajo 283 and 2193), which embraced some changes in the structure of cost reports. It responded to the regular complaints of factories about the considerable weight of raw material costs in total cost figures. Raw materials costs were largely dependent on the source (e.g., Havana, Kentucky, Virginia) and quality (e.g., exquisite, fine) of inputs. To resolve this problem, the General Accounting Office provided factories with a yearly weighted average cost of raw materials to be used by all factories. Allocation of indirect costs to products, according to the provisions of the Royal Order, was as follows: (a) indirect costs of individual factories should be assigned to product costs, and (b) common costs of the Steering Agency should be firstly allocated to individual factories and then to products manufactured in such factories. Lastly, the Royal Order required that the reporting of product costs to the Steering Agency should be made on a quarterly basis. The Royal Order, however, was abolished shortly after its promulgation.

As previously noted, in 1844, the tobacco monopoly was leased to the Marqués de Salamanca. The Marqués introduced substantial changes in the accounting systems of the factories, but they were totally removed once the monopoly returned to the public sector. Such changes, though, posed serious problems to the regular process of the monopoly's accountability to the Steering Agency and managers were asked 'to report at least as satisfactory results as those that would be shown by the lessee' (AHFTS, Legajo 287; memorandum dated 23 July 1844).

In 1850, the public sector reform of Bravo-Murillo considerably influenced the accounting system of the tobacco monopoly. Firstly, new series of cost data had to be reported by factories to both the Steering Agency and the General Accounting Office. Secondly, the cost models to be filled in were printed, formalized and largely conformed with the structure of the state's budget. With respect to the structure of costing data, the Bravo-Murillo reform drew heavily on data produced during the period 1838 to 1850 (AHFTS, Legajo 2808). This structure of the cost reports still experienced some changes. First, in 1859 factories were required to report separately raw materials and direct labour costs from indirect costs, so as to shed some light on the two main components of total production cost (AHFTS, Legajo 2812). Second, in 1862, the scheme was abolished in favour of the Bravo-Murillo model (AHFTS, Legajo 2813). This reform, however, demanded more detailed information on the cost of raw materials and standardized a report that analysed forecast versus actual production volume on many measures (e.g., indicators about scrap and waste).

Costing information was no longer reported during the period 1876–86. In the latter year, shortly before the lease of the monopoly to the private sector, the Steering Agency required tobacco factories to produce annual costing figures for the past ten years through a decree enacted on 18 May 1887, which contained a new costing system (e.g., AHFTS, Legajo 2820).

The Use of Cost Reports

The Steering Agency used cost data to monitor factory performance. For example, on 7 October 1844 the Steering Agency submitted the following memorandum to the general manager of the RTF:

> The Steering Agency strongly requests from your factory as well as from others forming the tobacco monopoly that a special concern be shown in processing raw materials and the exercise of strict control of general expenses. Nevertheless, we have observed considerable differences in the reported costs of many items. Such differences reveal that cost concern is not as seriously observed in the factories as this Steering Agency would expect. For example, costing figures of boxes for packing cut tobacco should expectedly produce slight differences between factories. In contrast, reported figures show outstanding variations within manufacturing facilities. (AHFTS, Legajo 287)

The Steering Agency attached a report that contained a sample of the paper used for packing in Madrid and Seville. The Madrid sample was both larger and cheaper. The Steering Agency concluded: 'Comparisons between this cost [reported by the Madrid factory] and the one reported by that factory reveals that important cost savings are attainable [at your end], if you implemented the same procedures being used in Madrid' (AHFTS, Legajo 287).

The Steering Agency also used cost figures to assess cost performance of factories. For example, it verified in 1850 that the Alicante factory was consistently reporting the lowest cost figures of cut tobacco (e.g., AHFTS, Legajo 296). Accordingly, the Steering Agency requested all factories to implement the same production procedure being used in Alicante 'to smooth [*sic*] your expenses'. The memorandum of the RTF explained the underpinnings of the process which roughly reflected the division of labor in the factory: two women to make packs, eight to nine women to fill in and weigh the packs, one to two for closing the packs, and one to two women for storing. The RTF administrators replied that such procedure would be difficult to implement. Lastly, the Steering Agency responded, 'it is up to the general manager of the RTF to implement the procedure . . . However, we hereby request you to reach the costing targets of Alicante as of January 1'.

Costing information was useful in the event of damages to inventory in its transportation either to the distribution stage or to other factories. In cases of loss or damage, 'the transportation company should reimburse its total cost' (AHFTS, Libro 680; memorandum dated 13 December 1858). Cost figures were used to claim reimbursements from either the railway company (AHFTS, Libro 803), or from operators who mishandled inventory (AHFTS, Libro 677).

Failures of the RTF to Report Costing Information

Our data reveal that the RTF elicited different responses to the Steering Agency's demands for cost data as opposed to its demands for budgeted information. Below we list the complete failures of the RTF to report costing information:

1. 1838: The RTF was asked to provide costing information about cigars, snuff tobacco, rapé, and cut tobacco for 1837. By August 1838 such information had not yet been reported. The general manager of the RTF appealed to technical

difficulties in his justification for the delay in reporting the demanded information. By October 1838 the RTF had succeeded in reporting cost data about cigars. Costing information about the other products was never submitted (AHFTS, Legajo 281).

2. 1839: The RTF sent a memorandum to the Steering Agency on 23 February to apologize for the expected delay in the reporting of its cost data as of 1 March. By August 1839, such cost information, however, had not yet been reported (AHFTS, Legajo 281).
3. 1850: On 12 February the Steering Agency requested that the RTF submit all of the information enacted in the Bravo-Murillo reform. The RTF reported all requested information except the cost data (AHFTS, Órdenes de la Contaduría General de Valores, Libro 499, No. 6).
4. 1858: Correspondence between the Steering Agency and the RTF reveals that the latter did not report cost data to the former (AHFTS, Legajo 677).
5. 1859: Reported cost data of 1858 was both late and did not conform to the form requested by the Steering Agency (AHFTS, Libro 716).
6. 1860: In June, the Steering Agency corresponded with the RTF to request cost data of 1859 (AHFTS, Libro 718).
7. 1862: On 22 November the Steering Agency claimed that cost data of 1861 had not yet been reported (AHFTS, Libro 753).
8. 1865–6: The Steering Agency submitted to the RTF the following order: 'The Steering Agency aimed to secure timely reporting from the RTF. However, some issues are consistently delayed and we do not see any justification for it . . . Cost data should be reported monthly and there is no excuse for the RTF's failure to do so. Cost data are of particular importance to the Steering Agency and shall be reported ten days after the completion of the reporting period, at the latest' (AHFTS, Libro 798).
9. 1870: In July, the Steering Agency requested cost data of the period 1868–9 (AHFTS, Libro 861, No. 210).
10. 1870: In November, the Steering Agency noted that cost data of the period 1867–8 had not yet been reported.

As noted above, the Decree of 18 May 1887 required tobacco factories to report costing information for the previous ten years.

DISCUSSION

Investigations of the underpinnings of the design and implementation of early cost accounting systems has revealed three main rationales: competitive pressures which in turn brought about the deployment of cost systems to remove waste and inefficiency; the enforcement of disciplinary practices; and the quest for greater labour productivity. Most of these studies, however, have largely focused on companies that operated under competitive conditions, such as those that characterized many Anglo-Saxon industries (Edwards and Newell, 1991; Fleischman and Parker, 1991; Fleischman *et al*., 1997). A sparse number of studies, mostly informed by the

Foucaldian approach, have investigated the deployment of costing systems in public sector organizations (e.g., Carmona *et al.*, 1997; Hoskin and Macve, 1986, 1987). Though such studies have considerably increased our understanding of how cost systems were created and developed, evidence gathered from different contexts may arguably provide interesting insights into the reasons that motivated the design and implementation of early cost systems. In contrast to the competitive environment that characterizes most of extant research contexts, the Spanish economy was subject to stiff market regulation.[4] Even when there was no competition, some monopolies nonetheless implemented sophisticated cost accounting and budgeting systems during the nineteenth century in response to pressures from their regulatory agency. Our data provide some insights into the underpinnings of the Steering Agency's demand for tobacco factories to produce costing and budgeting information. Our data also highlights the motives behind the different responses of the RTF to each of such pressures.

Through the law, the Steering Agency enforced tobacco factories to report costing information in 1821, 1826, 1834, 1840, 1850, 1859, 1862 and 1887. Though Spanish legislation usually started with a statement on goals (*exposición de motivos*), such statement was not issued when enacting any of the cost regulation. Consequently, our analysis of the underpinnings of the Steering Agency is based on indirect evidence. First, Mellemvik *et al.* (1988) noted that organizations exerting a dominant influence on their environments legitimate themselves by issuing regulations that signal their environmental control. The Steering Agency, we contend, played a dominant role on the tobacco factories; the latter were largely dependent on the former in aspects such as the supply of critical resources: imports of tobacco leaves, logistics arrangements to transport critical work-in-process between factories, monthly supply of cash, and full authority to remove factory management (e.g., Pfeffer and Salancik, 1978; Oliver, 1991). By enforcing tobacco factories to report budgetary and costing information, the Steering Agency signalled its dominant position over the monopoly as well as its control on tobacco manufacturing.

Second, the enactment of cost data demands was particularly intense shortly before or after many of the attempts to privatize the monopoly. For example, in 1821 the Steering Agency requested tobacco factories to report cost 'as soon as possible' shortly after the privatization attempt that took place during the liberal triennial (e.g., AHFTS, Legajo 631). In a similar vein, on 18 May 1887, shortly before the final privatization of the monopoly's management, the Steering Agency compelled tobacco factories to reconstruct the cost data series of the previous ten years (1876–86). In these crucial periods, concerns of the Steering Agency's management with cost data may be attributed both to their reliance on cost data for inventory valuation purposes and to their interests in signalling their knowledge and control of the tobacco business. Evidence gathered from our searches in different archives reveals that such signalling may have been deemed crucial for managers

[4] Most common goods, such as bread, potatoes, barley or thread were subject to trade quotas—*monopolized*—(Santillán, 1856) and the operation of state-owned monopolies (e.g. sectors such as wool clothing, glass, brass, foundry, salt and tobacco) were owned and managed by the state (Comín, 1991).

of the Steering Agency to keep their jobs and compensation packages after the privatization of the monopoly. For example, on the eve of taking over the tobacco monopoly after privatizing its management, the new general manager sent a letter to employees, dated 23 June 1887: 'as I said in a recent address to the Senate . . . present employees of the tobacco monopoly should not have fears of working for the new company. *Their task performance will be rewarded by stability in their jobs and merit acknowledgement. In cases of satisfactory performance, they will enjoy full stability in their jobs*' (AHFTS, Legajo 354; emphasis added).

This statement may be interpreted in view of provisions enacted in the Law of 22 April 1887, 8th clause, which enforced the privatization of the tobacco monopoly's management. Such a clause established employees' conditions for the forthcoming privatization. Whereas as much as 25 per cent of workshop operators could be fired by the new management (AERBE, e-22301), recruitment of future employees and managers by the new company was completely open to the discretion of the new management, as noted by the statement dated 20 June 1887 and issued by the forthcoming general manager of the tobacco business: 'Second. Employees' recruitment and determination of compensation packages are hereby assigned to Mr. Camacho, who will develop this task with full authority' (AHBE, Secretaría, Caja 667; Actas del Consejo de Gobierno, 1887).

In short, it is argued that managers of the Steering Agency viewed cost data reporting a crucial justification to legitimate their past undertakings in the monopoly (e.g., Meyer, 1986). The finding that some cost requirements aimed at the *ex post* reconstruction of the series of cost data reinforces this argument. Albeit important, efficiency improvement was not the sole concern of the management of the Steering Agency when they requested such information. For the managers of the Steering Agency, thus, there was a separation between the actual internal processes of tobacco factories (e.g., functioning of cost systems) and the perception that constituents may have on the use of costing information in efficiency improvement programs. It was more important for managers of the Steering Agency to convey the notion that they were under control of resources than their actual undertakings in the monopoly. Therefore, the cost data requests were subject to a process of decoupling (e.g., Meyer and Rowan, 1977), that is, such data were strongly requested whenever the performance of the Steering Agency's managers was under scrutiny (e.g., on the eve of the privatization of the monopoly), disregarding the actual role of such data in cost improvement programs.

Third, the data also suggest that the Steering Agency enacted costing reporting practices to instil in the factories the basis of mimetic isomorphism (DiMaggio and Powell, 1983). In this manner, the Steering Agency systematically collected cost data from its tobacco factories and attempted to act as a change agent (e.g., Carnegie and Parker, 1996) by diffusing the best management practices, such as the paper purchasing procedures from the Madrid factory to the RTF (AHFTS, Legajo 287), and a more efficient labour division procedure from the Alicante manufactory to the RTF (AHFTS, Legajo 296).

Results about non-conformity by the RTF to cost data requirements imposed by the Steering Agency contradict predictions of institutional sociologists, who contend that firms are expected to conform to institutional pressures when such demands are legally enforceable (Oliver, 1991; Suchman, 1995). Moreover, the RTF was largely dependent on resources supplied by the Steering Agency, and this dependency is depicted by institutional theorists as an important cause of a firm's conformity to institutional rules (e.g., Etherington and Richardson, 1994; Goodstein, 1994; Oliver, 1991). A comparison of the reporting practices of cost versus budgeting data reveals that whereas the RTF did not consistently provide cost data, it regularly reported budgeting information to the Steering Agency. In explaining these notable differences in the reporting practices of the RTF, we propose the following reasons.

First, a firm's conformity to institutional pressures directly depends on the expected diffusion of non-conformity within the institutional area. It is contended that expected diffusion of non-conformity is a function of the number of actors within the organizational field that may notice, or are affected by, the non-compliance of firms with institutional rules and norms. As noted above, the Steering Agency referred to provisions enshrined in the 1834 Royal Statute to enforce and supervise cost reporting practices of tobacco factories. Knowledge about the extent to which factories reported such data was restricted to the domain of the Steering Agency. In cases of non-reporting, factories may refer to a number of reasons for non-compliance with institutional pressures (e.g., lack of technical skills of the Accounting Office's employees, in 1838; see AHFTS, Legajo 281). Tobacco factories' management was aware of the degree to which their reasons for non-conformity may appeal to their superiors in the Steering Agency. Understanding the non-conformity arguments by the Steering Agency, in turn, was dependent on the context and the dynamics of relations between the Steering Agency and the factories. As noted above, the RTF did not report cost data in 1838 and 1839. The moral authority of the Steering Agency to enforce cost reporting practices of factories was arguably weak at that time, for this was when the RTF regularly complained about the consequences of delays in cash transfers on the morale of the best cigar workers (e.g., AHFTS, Legajo 281). In short, lack of technical skills by employees of the Accounting Office and shortages in funding due to delays in cash transfers may have been perceived by officers of the Steering Agency as compelling arguments that justified non-compliance of the RTF to cost reporting demands. The Steering Agency, moreover, was the sole recipient and user of costing information and, consequently, had full autonomy to accept or dismiss the arguments of the RTF administrators for non-compliance.

In contrast, knowledge about non-conformity to budgeting practices went beyond the domain of the Steering Agency. That is, such information was instrumental to consolidate the tobacco monopoly's budget, which in turn had to be used in the consolidation process of the state's budget. It is our contention that non-compliance of one tobacco factory to budgetary demands from the Steering Agency would be widely known within the institutional area (e.g., by the Minister of Finance), and this clearly diminished the capacity of factories to justify/negotiate reasons for non-conformity to institutional rules with the Steering Agency. Non-conformity of factories to pressures from the Steering Agency for budgeting reporting had the immediate effect of collapsing the processes of aggregation and consolidation of the state's budget and that would be immediately noticed at the Ministry of Finance. Delays of the Steering Agency to report budgeting figures to the Ministry of Finance caused by the non-compliance of factories thus had an expectedly devastating effect on the position and compensation packages of factories' managers, who were held responsible for such delays. Pressures on the RTF to report cost and budgeting figures to the Steering Agency, overall, produced a response aimed at exerting the minimum estimated effort to garner legitimacy from the institutional source (e.g., Abernethy and Chua, 1996). This in turn implied compliance with budgeting requirements and dismissal of pressures to report cost data in the context of an overall process of decoupling (e.g., Meyer and Rowan, 1977). Failures to report costing information cannot be attributed to the complexity of such information and the accompanying shortage of competent personnel. Indeed, the data reveal both that the RTF consciously failed in reporting costing information and that only a marginal effort was required by the RTF to comply with the requests of the Tobacco Agency. For example, on 4 August 1887—that is, on the eve of the privatization of the tobacco monopoly—the superintendent of the RTF felt compelled to report cost data and issued the following statement to the Tobacco Agency: 'the costing information of the years 1876–77, 1878–79, 1883–84, 1884–85 and 1885–86 is still missing. The preparation of each [set of data] requires a month'. On 8 August 1887 the Tobacco Agency insisted on the urgency of the requested information and authorized the superintendent to hire some more personnel to comply with the requests. On 10 September 1887 the RTF submitted the following letter to the Tobacco Agency: 'the summaries of cost data for the years 1876–77, 78–79, 83–84, 84–85, 85–86 and 86–87 are on the way to the Tobacco Agency. This is a preliminary report that will require further work' (AHFTS, Legajo 354).

In short, consistent with the view of institutional sociologists, conformity to institutional pressures is contingent on the intensity of such demands (e.g., Abernethy and Chua, 1996; Oliver, 1991; Goodstein, 1994). Perceived intensity of simultaneous demands arising from a single institutional source largely depends on the expected diffusion and consequences of non-conformity within the institutional context. That is, *ceteris paribus*, the more the expected diffusion of non-compliance, the higher will be the probability of conformity to rules and norms.

Second, firms can be expected to conform to institutional pressures when demands have a clear, salutary effect on organizational goals (e.g., Covaleski and Dirsmith, 1988a, 1988b; Deephouse, 1996; Etherington and Richardson, 1994). The goal of the tobacco monopoly was to increase income for the Spanish Crown. Management of the RTF was conscious about the significant contribution of the factory to state income. As noted above, in 1838 the general manager of the RTF reported profits to the Steering Agency of Reales 24,576,260 which was deemed a considerable return despite the absence of raw materials and depreciation costs in such calculations[5]: 'the tremendous wealth produced by this endless mine' (AHFTS, Legajo 281). In view of such significant profitability of factories to state income,

[5] Our searches in the archives show that the tobacco monopoly produced profitability indexes, excluding depreciation, of 253 per cent (see AHBE, Operaciones, Legajo 954).

factory managers arguably found little motivation to gather and report data that would have a spurious effect on the bottom line.

Third, the data support Oliver's (1991) prediction that firms will be less prone to conform to institutional pressures when such demands arise from an ever-changing institutional environment. Though demands for budgeting information were enforced by the Royal Statute of 1834 and remained stable during our observation period, the format and the structure of cost reporting practices experienced considerable changes (e.g., in 1850, 1859, 1862; see AHFTS, Legajos 2808, 2812, 2813). Moreover, in spite of the legal request of the Royal Statute of 1834 for such demands to be permanently enacted, the institutional source neglected its application during the period 1876–87. This changing emphasis in application of cost reporting requirements, posed additional uncertainty on the RTF about the consistency of the demands.

The data relied on evidence gathered from a non-Anglo-Saxon context characterized by regulation and monopolistic conditions. Such conditions, however, are not idiosyncratic of the eighteenth- and nineteenth-century Spanish economy but also apply to both countries with underdeveloped capitalistic institutions and capitalist economies which were subject to significant regulation. Future comparative work on the design and development of cost management systems in regulated and transitional economies will certainly enhance our understanding about the underpinnings of such systems as well as about the generalizability of the conclusions in this work.

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APPENDIX A

REPORT ON BUDGET ATTAINMENTS

Tobacco Factory of *Seville* — Month of *July* 1877

Statement of Expenses Payed for Liabilities of Monopolized Incomes in the Mentioned Month, and Those Outstanding at its End

				Budget of the Economic Year 1876–7 (until the end of December 18)				Budget of the Economic Year 1877–8			
				Payed		Outstanding		Payed		Outstanding	
Section	Chapter	Article		Pesetas	Cents	Pesetas	Cents	Pesetas	Cents	Pesetas	Cents
	13		Employees' Salaries	*6777*	*55*					*6781*	*03*
	14		Office Materials	*494*	*38*					*209*	*74*
8	27	2nd	Rentals, Works and Reparations in the Factories								
	33	3rd	Transport to the Factories and between them	*2355*	*92*	*8217*	*12*			*655*	*12*
		4th	Manufacturing expenses and acquisition of sundry materials	*99618*	*46*	*5303*	*56*			*98399*	*72*
	52		Closed periods Liabilities without budgetary credit								
	53		Id. that become unpaid according to the definitive accounts								
			Total	*108946*	*31*	*13520*	*68*			*106045*	*61*

Seville, 31st of July 1877

In agreement.
The Accountant

APPENDIX B

OVERALL STRUCTURE OF COST REPORTS

- Ordinary expenses.
  - Raw materials (tobacco leaves). An average cost was calculated by the General Accounting Office. If such cost was not available, factories should aggregate the cost of its acquisition and transportation expenses.
  - Auxiliary materials: boxes, tins.

  Some indirect costs were also considered as ordinary expenses. In allocating such costs to the ordinary expenses item, management of the RTF used the weight of tobacco production as a cost driver:
  - A portion of wages of those employees involved in non-specific jobs.
  - A portion of other expenses (e.g., office, energy).
- Extraordinary expenses. Production costs were charged according to their consumption of raw materials.
  - Swept tobacco.
  - Scrap tobacco.
  - Waste.
  - Tare.
- Extraordinary revenues (*Beneficios*).
  - Portion of revenues for sales of byproducts.
  - Savings for packs returned from the distribution stage.
  - Returns of tobacco.

Source: AHFTS: Legajo 2191