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GOVERNMENT/BUSINESS SYNERGY: EARLY AMERICAN INNOVATIONS IN BUDGETING AND COST ACCOUNTING

Abstract: This paper examines certain interactions between American government and business which resulted in important innovations in the areas of budgeting and cost accounting early in the twentieth century. The evidence suggests that budgeting methods were initially developed by municipal reformers of the Progressive era and were subsequently adapted by business for planning and control purposes. In like fashion, standard costing and variance analysis were significant cost accounting techniques born to an industrial environment which came to contribute markedly to a continuing improvement of governmental budgeting procedures.

Budgeting is a major tool of business and government in the contemporary world. Its central role in planning and control is so well established that it is difficult to remember that, unlike double-entry accounting, budgeting is a very recent innovation. Budgeting in the United States is barely a century old, introduced and refined in the first three decades of the twentieth century as a product of governmental and business synergies. This paper examines the early history of municipal budgeting with particular reference to the interaction between governmental reformers and scientific management specialists of the period. The importance and value of budgeting as a control mechanism was initially appreciated by a host of Progressive era municipal figures at the turn of the century. With the passage of time, this lesson was communicated to the world of business. However, early governmental budgets were limited in their effectiveness, particularly as a planning device, until pur-

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poseful cost accounting became integrated into the systems. Accounting techniques, such as standard costing and variance analysis, were initially developed in the United States by the engineering profession, but were later communicated to government from industrial practice.

The early history of municipal budgeting in the United States occurred against the political backdrop of the Progressive movement. For the three decades between 1890 and 1920, reformers fought an ongoing battle against corruption, bossism, unbridled plutocracy, and the general erosion of traditional values. Many of these efforts were focused on American cities, branded by such epithets as "America's most conspicuous failure" and "the most corrupt in Christendom" [Holli, 1974, p. 134]. Political remedies designed to return "honest men" to government through openness in the municipal process and the elimination of cronyism and ward politics were articulated [Upson, 1926, p. 136; Hays, 1971]. Budgeting for control purposes was a concept pivotal to the activities of the numerous groups and individuals dedicated to the reform of municipal governance.

During the same time, new techniques of production and scientific management were being developed within the industrial sector. The new accounting techniques which accompanied the scientific management innovations of Frederick W. Taylor were sweeping, particularly in the areas of standard costing and common costs allocation. The synergies between governmental budgeting, business cost accounting, and engineering advances in standard costing formed the foundation of modern cost and budget procedures in both the private and public sectors.

GOVERNMENTAL BUDGETING: EARLY HISTORY

Though there is evidence of rudimentary budgeting activity in both the Chinese [Fu, 1971, p. 41] and Roman [Brown, 1905, pp. 30-40; Rogers, 1932, p. 186] civilizations, the real antecedents of American governmental budgeting were English. Stourm [1917, pp. 10-3] traced a prohibition on unlicensed spending from the *Magna Carta* to the *Petition of Right* in 1628. A more modern linkage to control the British Crown's power to tax was evinced by the "national budget" in 1760 [Theiss, 1937, p. 43]. There are divergent views as to precisely when in the nineteenth century municipal accounting in general and budgeting in particular became effective in England [Holls, 1896, p. 229;

Haskins, 1901, p. 308; Theiss, 1937, p. 44]. Notwithstanding, a time lag ensued as serious beginnings were not in evidence in the United States until the early twentieth century. British governmental budgets remained a yardstick by which to measure nascent American efforts [Powers, 1909, pp. 261-2].

Uniform municipal accounting efforts predated budgeting advances in this country by at least a decade. In 1894, the National Municipal League (NML) was founded as a capstone organization to a number of state and local reform societies [Fleischman, 1987, p. 297]. An early emphasis of the NML was uniformity in municipal financial reporting. Different accounting methods were frequently in evidence among various departments of the same municipality [Hartwell, 1899, p. 127; Haskins, 1901, p. 312]. In 1899, a proposed municipal program appeared featuring reporting schedules (model forms) of NML design [Rowe, 1899]. Shortly thereafter in 1901, the Committee on Uniform Municipal Accounting and Statistics was established under the leadership of E. M. Hartwell. Reports appeared yearly until 1905, citing municipalities which had adopted the NML's model forms. Hartwell [1905, pp. 223-5] listed 28 papers on uniform municipal accounting which had appeared in the NML *Proceedings*, between 1896 and 1904. The Committee's efforts to effect standardization received a boost from the U.S. Department of Labor and the Census Bureau. In 1898, Congress asked the Department of Labor to gather comparative statistics on cities, an onerous task which would have been reduced an estimated 90% if the NML forms had been universally employed [Hartwell, 1901, p. 256]. The Census Bureau took up the cudgels in 1903, sponsoring a conference of auditors, comptrollers, and expert accountants on the subject [Woodruff, 1904, p. 119]. Commencing in 1904, papers written by Census Bureau personnel regularly appeared in the NML's *Proceedings*. These articles, outlining the contribution uniformity could provide in terms of comparability and accountability, were most often written by LeGrand Powers, the Bureau's Chief Statistician [Powers, 1905; 1908; 1909; Hole, 1912].

It was at least a decade after the municipal reform movement started before interest in the subject of budgeting began in earnest. In 1900, budgeting remained virtually unknown in the United States [Stewart, 1950, p. 7]. Henry Bruere of the influential New York Bureau of Municipal Research had never heard the term "budget" until it was brought to his attention by Thorstein Veblen, his economics professor at the University of

Chicago [Dahlberg, 1966, p. 149]. As late as 1917, journals still put quotation marks around the word “budget” in a municipal context [*Ibid.*]. An “expense budget” was mentioned in the NML *Proceedings* in 1900, but only as a basis for determining tax levies [Henderson, 1900, p. 252]. Haskins [1901, pp. 302-14] in his lengthy article on Chicago’s municipal governance, did not even mention budgeting as a potential reform area. It was not until 1908 that the regular contributors to the *Proceedings* began to address budgeting issues [Chase, 1908, p. 339; Powers, 1909, pp. 260-70]. Nine papers on budgeting appeared in the *Proceedings* between 1909 and 1912 [Stewart, 1950, p. 128]. In 1909, the NML established the Committee on City Finance and Budgets, replaced four years later by a successor group, the Committee on Municipal Budgets and Accounting [*Ibid.*, pp. 128-9].

The United States is the only major nation whose history features an initial establishment of budgetary systems at subnational governmental levels [Chatfield, 1977, p. 194]. Early budgeting reform was oriented toward controlling the increasing costs of municipal government precipitated by political corruption [Rightor, 1916, p. 406; Cleveland and Buck, 1920, p. 70]. The Tweed Ring in New York City remains the classic example of the jobbery associated with the spoils system, ward politics, and rampant political patronage. Buck [1926, p. 4] related the story of a court house with an estimated value of \$250,000 constructed for a modest eight million dollars of municipal funds. New York Comptroller Prendergast [1912, pp. 47-8] observed, “it was this uncontrolled and uncontrollable increase in the cost of government that. . . became the soil in which the budget idea finally took root and grew.”

The first serious article on budgeting in the NML *Proceedings* appeared in 1908. Chase [1908, p. 339] described how municipal budgets, where they existed at all at that time, were little more than departmental estimates of the following year’s expenses with justifications provided only if increases from the previous year were requested. Appropriations were typically of the “mongrel” or lump-sum variety with unrelated expenses amalgamated into single line items. For example, the 1911 budget of Philadelphia committed \$25,000 for “postage, ice, files, incidentals, meals, repairs, advertising loans, and entertainment of city and visiting officials” [Sands and Lindars, 1912, p. 139]. Since estimates had very little basis in fact and were slashed substantially to benefit favored special interest groups, departments regularly encountered financial shortfalls. In these in-

stances “special revenue bonds” were issued to cover year-end deficits [Sait, 1913, p. 48]. Given these methods, early budgeting was little more than a “license to spend” [Rightor, 1916, p. 406].

Budgeting literature is replete with commentaries identifying the problems of these early days. An obvious shortcoming was the lack of control, either by a responsible executive, an accountable department head, or an involved citizenry. Municipal budget making was most frequently in the hands of a select few. Appropriations were typically the end result of special-interest-group log-rolling, a political rather than an accounting event [Powers, 1909, p. 260; Beard, 1912, p. 145]. Departmental estimates were seldom correlated with actual needs nor were comparisons made with previous years. Budgets were passed in piece-meal fashion, and as such were little more than departmental appropriations rather than an expenditure plan for the entity as a whole. The pivotal relationship between revenues and expenditures and the effects of spending on a city’s credit or debt structure were rarely considered [Powers, 1909, pp. 262-3; DeWitt, 1915, p. 321].

For urban reformers of the early Progressive period, the answer to these criticisms was the “segregated” or “classified” budget. The idea was to group departmental expenditures according to function [Bruere, 1913, pp. 183, 190-1; Schiesl, 1977, pp. 106-7]. It was here that the early uniform municipal accounting efforts of the NML and the Census Bureau became linked to the budgeting movement. Chase, in an address reported in the *National Municipal Review* [1915, p. 185], spoke of the process by which municipal governments, commencing with Newton, Massachusetts in 1900, had extended the categories of the model forms to the budgeting function. This modicum of standardization addressed the comparability issue that Powers [1909, pp. 267-70] had identified as a shortcoming of early budgeting. Now with a functionally universal chart of accounts for many American cities, projected expenditure numbers could be conveniently compared not only with past years, but with other entities as well.

A primary agent in implementing this change was the municipal research bureau [Fleischman and Marquette, 1986, pp. 73-4]. The first and most influential was founded in New York City when in 1906 three young reformers (Cleveland, Bruere, and Allen) formed the New York Bureau of Municipal Research (NYB). The NYB was generously supported by philanthropists of the magnitude of Andrew Carnegie, J. P. Morgan, and John

D. Rockefeller [Gill, 1944, pp. 16-7; Dahlberg, 1966, pp. 166-7]. The impact of the NYB on New York's budgeting process was immediate and continuous, advances which were not hidden under a bushel. Herman Metz, the enlightened New York City Comptroller, endowed a fund for disseminating "handbooks" to three hundred U.S. municipalities popularizing the new methods. The NYB also established a graduate training school for municipal government officials in 1911. Graduates accepted posts throughout the country and contributed to the movement toward improved municipal budgeting in the following decade.

The NYB was also instrumental in harnessing popular support to the reformers' cause through the agency of the "budget exhibit." An alliance with an informed and vigilant citizenry was essential to early budgeting progress. The NYB sponsored the first budget exhibit in 1908. Intended as an exposé of corruption and inefficiency, New Yorkers were informed that the city had paid \$.60 each for six-cent coat hooks, and had then hired two full-time workers for an entire month to install 165 of them [Woodruff, 1908, p. 154]. Subsequent exhibits in 1910 and 1911 were attended by crowds in excess of one million people. The NYB had found a way to turn budgeting into news, and the resulting press coverage brought throngs of citizens to see how the city was spending their money. The idea of the budget exhibit spread to over twenty other American cities during the next decade [Upson, 1915, p. 67].

The proselytizing efforts of the NYB spawned an abundance of municipal research bureaus around the country. An article in the 1916 *National Municipal Review* listed 25 of these good government agencies [Rightor, 1916, p. 637]. Budget making became a primary emphasis [Bureau of Municipal Research, 1916, p. vii]. The NML's "model program" in 1899 had been a source of inspiration for the uniform municipal accounting movement. In 1915, a second municipal governance paradigm appeared with more explicit budget provisions. In particular, detailed estimates were mandated not only for current expenses but for permanent improvements as well. Comparative budget numbers with past and future years permitted planners a better understanding of the city's financial position [Woodruff, 1919, pp. 208-9].

An interesting new feature of the 1915 program was a recognition of the value inherent in state supervision [*Ibid.*, pp. 205-6]. State governments proved significant allies as municipal budgeting improved. Rowe [1899, p. 109] observed how some

states examined the local accounts of constituent municipalities at an early date. The lead of Minnesota and Wyoming was mentioned as an important contributing factor to the early history of the uniformity movement. Ohio, in 1902, became the first state to mandate that its cities adopt the NML's standard forms for municipal reporting [Fleischman and Marquette, 1987, p. 86]. Hole [1912, p. 687] of the Census Bureau paid tribute to those states whose bureaus of accounting had prescribed forms to assist in budget making comparability. By 1920, 44 of the 48 states had either adopted or introduced budgeting legislation, following the lead of Wisconsin and California [Cleveland and Buck, 1920, p. 118]. Buck [1926, pp. 5-6], who literally wrote the book on municipal budgeting, paid homage to state research bureaus and laws for assisting the advance of scientific budgeting.

However, a similar assist was not forthcoming from the national level. President Taft, though imbued with the budgeting spirit, was unable to achieve enabling legislation. He appointed Frederick Cleveland, a founding father of the NYB, to lead his Committee on Economy and Efficiency in 1911. Subsequently, Taft wrote an introduction to Cleveland's budgeting monograph in which he espoused the idea in best Progressive rhetoric that governmental budgeting was essential to the elimination of "invisible government" [Cleveland and Buck, 1920, p. xiii]. However, it was not until 1921 that the first national Budgeting and Accounting Act was passed.

The early history of municipal budgeting can be divided chronologically into two distinct periods with 1914 being the watershed. Uniformity and comparability, as previously described, were the watchwords of the first phase. It was also a time when urban reformers came to realize that even honest, well-intentioned officials could not by themselves guarantee efficient governance [Woodruff, 1919, pp. 262-3]; the so-called "goodness fallacy" as Allen [1913, pp. 10-2] eloquently put it. It was a developmental stage in which governmental reformers functioned as "slaves to system," wherein the best of intentions could not diminish the red tape leading inexorably to inefficiency and waste [DeWitt, 1915, pp. 320, 331-32].

The report of the NML's Committee on Municipal Budgets [1914, pp. 218-22] summarized the state of the art at the watershed. The major points, though providing few earthshaking advances, reflected a useful two decades of progress: (1) the annual municipal budget was to act as the foundation of the finan-

cial system; (2) budgeting was essentially an executive act; (3) the budget was to be comprehensive and classified by the organizational units of government and function; (4) the budget was to be itemized in the greatest practical detail; (5) the budget was to be made comparable with the previous year's, particularly with regard to revenues and expenditures; (6) budgetary categories were to distinguish capital outlays from maintenance/operations; and (7) the budget was to serve as the basis for the annual appropriation act.

BUSINESS BUDGETING AND COST ACCOUNTING

Chatfield [1977, p. 196] observed that "cost accountants helped systematize budgeting by establishing a system of records within which standard costs could be developed and routinely compared with actual results." Traditional accounting history texts (Chatfield, Garner, Littleton, Solomons) have dated the advent of meaningful cost accounting from the mid-1880s, an aspect of the scientific management movement. Inspired by the insights of Frederick W. Taylor, a variety of new productive methods and managerial approaches were introduced to American industrial enterprises. A cost accounting literature appeared for the first time featuring works from both sides of the Atlantic. Accounting theorists articulated many good costing ideas, particularly standard costing and variance analysis [Metcalf, 1885; Garcke and Fells, 1887; Norton, 1889]. However, it was the engineering profession that was more instrumental in the development of standards. *The Transactions of the American Society of Mechanical Engineers* took the lead in communicating details about standard costing systems which could be used for planning and control purposes [Epstein, 1978, p. 2]. Tsuji [1975, p. 23], in tracing the contributions of three industrial engineers during the early 1900s, noted how many engineers advocated "engineer's accountancy" in preference to "accountant's accountancy." Although Tsuji [*Ibid.*, p. 28] found examples of forecasts, standards, expected versus actual cost comparisons, and, most importantly, the extension of these ideas to administrative costs, he did not find the use of the word "budget."

Accountants, on the other hand, were unimpressed by cost accounting and generally considered "cost-keeping" and "cost-finding" the work of others [Epstein, 1978, p. 3]. Advances in cost accounting techniques may have been hampered by the prevailing opinion that such systems were properly treated as

business secrets to be hoarded and used for competitive advantage. The secrecy explanation for cost accounting's late development has been frequently claimed [Garner, 1954, p. 30; Chatfield, 1977, p. 104; Wells, 1978, p. 62], a characterization which Fleischman and Tyson [forthcoming, p. 8] found fallacious at least during the British Industrial Revolution. *The Journal of Accountancy (JA)* [1908-9, pp. 333-4] reprinted an article from the *Engineering Record* which contended there was no secrecy among large contracting firms with regard to costing despite the industry's highly competitive nature.

Recent research in American cost accounting history has suggested an earlier timetable for sophisticated cost accounting. Chandler [1977] found origins in the golden age of American railroading; Johnson [1972] at the Lyman textile mills in New England around 1850; and Hoskin and Macve [1988] at the Springfield Armory in the 1840s. Edwards [1989; 1991] and Fleischman/Parker [1991] have detailed purposeful eighteenth century costing during the British Industrial Revolution.

Though norm-based standards were a feature of earlier times, the transition to variance analysis and, inevitably, to budgeting did not predate the 1890s. An early business budget was presented by H. M. Lane at a New York meeting of the American Society of Mechanical Engineers in 1896. Lane provided a format for developing and examining actual and standard production costs on a month-by-month and year-to-date basis. The system was designed to provide managers with an early warning of deviations from planned levels of cost and production. From an historical perspective, Lane's contribution appears to have been a major step forward in using cost data for purposes of planning and control. To his contemporaries, however, caught up as they were in scientific management's frenzy of time and motion studies, it seemed woefully inadequate. In the discussion which followed his presentation, Lane was told that engineers should strive for a system which focused attention to deviations, not monthly, but:

... on the very day when they occur, and where (the manager) can know at six o'clock at night whether he earned a dollar for the company or lost one, and the exact spot where it was lost too, that he may regain it the next day [Lane, 1897, p. 227].

This enormous faith in the possibilities of the scientific method ensured the continued development of standard costing.

It would be many more years, however, before the concept of budgeting was extended beyond the manufacturing process, and twenty years before the word "budget" began to appear regularly in the business literature.

Though standard costing was an innovation of industrial engineers and accountants, there is ample evidence to suggest that budgeting was a lesson conveyed from government to business during the 1920s. At the 1922 conference of the National Association of Cost Accountants (NACA), Stephen Gilman of the International Accountants Society claimed that "the modern business budget is an inheritance from the municipal and governmental budget" [NACA Yearbook, 1922, p. 263]. At the same meeting, W. O. Cutter, the Comptroller of U.S. Rubber Company in New York, acknowledged that "no mention is made of the use of the budget in industry because it has been the custom until recently to consider a budget only something which had to do with government finances" [Cutter, 1922, p. 237]. Walter Vieh [1925, p. 173], writing for *JA* began his article, "Why the Budget?" by admitting that "most of us think of budgets as having something to do with public finance or with the successful management of a household." Resistance to business budgeting could, in fact, be attributed to "a reluctance to subject . . . business to methods which seem . . . to be of governmental origin" [Bruere, 1925, p. 664].

Although Solomons [1952, pp. 45-9] cited de Cazaux (1825) in France and Hess (1903) and Bunnell (1911) in this country as precursors of business budgeting, the initial introduction of the "budget idea" to U.S. business came from the general business literature of the post-World War I period. During 1921, J. O. McKinsey, a Chicago CPA, published a series of nine articles in the newly established journal, *Administration*. These articles provided a cogent rationale for business budgeting, followed by an in-depth development of a master budget. He also described the importance of the budget committee and internal lines of authority and responsibility for effective budgetary control [McKinsey, 1921 a-i].

Beginning in 1920, trade associations were becoming active in introducing budgeting to U.S. business. The first volume of *The Accountants' Index* [1920] listed only four trade association articles on the application of budgeting to the construction, retail dry goods, engineering, and iron production industries. In the *1921-22 Supplement*, by contrast, there appeared 55 trade association articles on budgeting, ranging from the casket

manufacturers' association to the ice cream trade journal. Likewise, the overall emphasis was shifting away from literature on government budgets (over 100 articles in 1920; approximately 50 in 1921-2) to business budgets (fewer than a dozen in 1920; in excess of 140 in 1921-2). When *The Accountants' Index* published a *Second Supplement* for 1923-27, the shift was nearing completion with almost 300 references to business budgeting and a mere 40 on governmental topics. Despite this emerging business literature, it was still not an *accounting* literature. Most articles were to be found in journals aimed at management (e.g., *Administration*, *Factory*, and *100% Management*) or industrial engineering (e.g., *System* and *The Bulletin of the Taylor Society*).

An examination of *JA* during the first two decades of the twentieth century demonstrates how business budgeting developed from earlier governmental efforts. *JA* began publication in late 1905. From 1905 to 1916, there were only a dozen articles on the subject of budgeting, each referring to governmental budgeting and each authored by a municipal finance expert. The word "budget" appeared in *JA* as a major subheading for the first time in 1914 in an article discussing the need for a national budget to curb runaway spending by the federal government.

Remarkably, from 1916 to 1922 there were no major index headings for "budget" or "budgeting" in *JA*. Cost accounting papers appeared; standard costing papers appeared with continuing frequency; but the word "*budget*" disappeared. Then in 1924, an article was published discussing the implementation of budgeting for a newspaper [Lazarus, 1924]. This paper was one of a series of writings describing the installation of budgets in different industries. The series, sponsored by the Metropolitan Insurance Company, was based on surveys of policy-holders regarding their budgeting practices. The results were then summarized and distributed to all policy-holders as a customer service. The series began in the early 1920s with the pamphlets being codified into book form several years later [Bruere and Lazarus, 1926]. Unfortunately, these early writings on business budgeting failed to receive much attention in mainstream accounting literature. It is also interesting to note that even the Metropolitan Insurance Series was written by experts in *governmental* budgeting. This pattern in the accounting literature supports Theiss' [1937, p. 53] general point that the thrust of budgeting literature was entirely governmental through the conclusion of World War

I, and that business budgeting as a significant topic only appeared thereafter.

The elements were all in place for budgeting to emerge as a major management tool. The idea and the basic structure had been provided by governmental accountants. The concept that costs could be measured, standardized, and routinized had long been a part of business practice. Industrial engineers had added systems for collecting and allocating cost data, and had brought these methods center stage in the literature. By 1920, NACA could point to 69 industries in which unified standards had been articulated for price-fixing purposes [Chatfield, 1977, pp. 183-4]. Coupled with the efforts of the trade associations, the outpouring of literature was impressive. Yet, accountants and accounting journals continued to manifest little interest in the budget. As late as 1922, a NACA conference participant, George Lamb of Haskins and Sells, complained that the "literature is almost barren as regards budgets" [NACA Yearbook, 1922, p. 267].

The primary agent responsible for changing this state of affairs and introducing accountants to the budgetary process was the NACA. Although there is no mention of budgeting or budgets in the first two volumes of the NACA's *Official Publications*, the third (1921-22) contained an article by J. O. McKinsey describing the relationship between budgeting and cost accounting [NACA *Official Publications* #8]. In his article, McKinsey described the manner in which costs are fed into the budgetary planning process and described the advantages of coordinating the various segments of a business through the budgeting mechanism. McKinsey was only trying to gain the accountants' cooperation, however; he was not advocating that accountants become budget analysts. In his book, *Budgetary Control*, published in 1922, McKinsey complained that data provided by the accounting department were not sufficiently timely to be useful in the budgeting process [1922, pp. 40, 292-3]. McKinsey was not alone in thinking that this was not accountants' work. At this point, even the accountants were awaiting the innovation of the "budgetary engineer" [Cutter, 1922, p. 237].

Throughout the 1920s, NACA worked to popularize budgeting through official publications and speakers at its annual conferences. A full session was devoted to budgeting at both the third (1923) and the fourth (1924) meetings. At the latter conference, a session was also dedicated to the work of trade associa-

tions in disseminating cost data and budgetary techniques.

From 1923 to 1927, nine additional articles on budgeting appeared in the NACA *Official Publications*. Nevertheless, a notable chairman at the 1927 conference, Arthur E. Andersen of Chicago, opened his session by confessing that budgeting was an area where “our knowledge and experience is all too limited . . .” [NACA, *Yearbook*, 1927, p. 236]. In this same session an interesting change could be noted in the attitude of J. O. McKinsey. McKinsey, the keynote speaker in Andersen’s budgeting session, now argued that accountants *should* assume major responsibility for the budget [McKinsey, 1927, p. 242].

Interestingly, McKinsey had provided a major tool for movement in that direction with the publication of his book *Budgetary Control*. McKinsey [1922a, p. iii] offered his book as “the first attempt . . . to present the subject [of budgeting] as a whole.” “In the past,” he continued:

. . . budgetary control has been considered primarily in connection with governmental units. . . . As a consequence many people have come to think of budgetary control as an instrument for governmental administration. Not only is this the popular view but practically all the literature on budgetary control is confined to a discussion of governmental budgets [*Ibid.*, p. 4].

The state of the art, as described by McKinsey, included only a small number of firms practicing budgeting in an informal manner. Most did not use it at all [*Ibid.*, p. 12]. The book focused on the planning aspects of the budget process. Indeed, of six goals of “scientific” budgeting, only one related to expenditure control [*Ibid.*, p. 422]. The book was highly praised in a *JA* review [Oakey, 1923], with McKinsey being congratulated for a thorough and cogent explication on how business enterprises could benefit from detailed budgeting. That cost accountants had not made much use of earlier published works in business budgeting could be verified by examining the discussions on the topic published in the NACA *Yearbook*. “Mr. McKinsey’s splendid book is the first real effort that has been made in this important subject. . . . Professional accountants have something new to think about” [NACA *Yearbook*, 1922, p. 267].

The earliest articles on business budgeting to appear in major accounting journals concurred that business budgeting did not mature until after the end of World War I [Rogers, 1932, p. 186; Theiss, 1937, p. 49]. It is clear that the war effort, with

governmental demands for increased productivity and standardized products and processes, furthered the development of an atmosphere where routine budgeting could flourish.

Research into the corresponding relationship between British government and industry during the same period has corroborated the impact of war materiel contracting on improved cost accounting methods [Loft, 1990]. Still, it was not until the Great Depression that cost control in the United States became a matter of supreme importance to business management. A similar reaction had occurred during the recession of 1920-21, but many businesses which had adopted budgets for survival dropped them with the return of prosperity [Sweet, 1922, p. 225]. While early business budgeting had attempted the control of marginal, "discretionary" spending like advertising and charitable contributions [Theiss, 1937, p. 48], the Depression made budgeting a matter of business survival.

By the early 1930s, production budgeting had become a well established technique. Sophisticated sales budgets were prepared which incorporated estimates of market share, industry outlook, and macro-economic business cycle activity [Rogers, 1932, p. 193]. Distribution and administrative costs were not merely budgeted, but allocated back to products and departments. Rudimentary flexible budgets were introduced into management literature with works by an unnamed factory manager at Penberthy Injector [1922], Maynard [1928], and Drucker [1929].

Like government, business had learned that "there can be no effective control of . . . costs unless there is a proper classification of accounts" [Rogers, 1932, p. 196] with costs recorded by line item in the department that incurred them. In the final analysis, business developed financial budgets for short and long-term planning, for cash flows, and for capital acquisitions. This trend toward business budgeting was supported by the financial community. Banks often gave superior credit ratings to businesses that had instituted budgeting; credit organizations endorsed this new idea for financial planning; and, as previously described, insurance companies distributed instructions on the implementation of budgets as a form of institutional advertising [Theiss, 1937, p. 52].

COST ACCOUNTING ADVANCES IN MUNICIPAL GOVERNMENT

Accounting historians have recognized the contribution of industrial engineering and cost accounting in introducing to government performance standards previously developed in the business sector [Chatfield, 1977, p. 195]. These linkages between business and municipal governance became more pronounced in the second stage of the early history of municipal budgeting. It was not until the later Progressive era (circa 1914) that urban reformers began to stress in the literature the lessons that could be learned from the private sector. From the onset of the organization, the NYB was closely tied to the business community, both ideologically and financially [Bureau of Municipal Research, 1913, pp. 203-5]. It was a stated ideal that citizens should have the same quantity and quality of information about their city as stockholders were provided for the companies in which they invested [Dahlberg, 1966, pp. 203- 4]. Bruere [1913, p. 103] wrote of the NYB's goal of "bringing city business methods up to the level of best private business methods. " Rightor [1916, pp. 403-4] observed that one of the dominant features of budgeting recently was the increased interest and involvement of citizens generally and businessmen specifically. In a 1920s retrospective, a prime mover in the municipal reform movement identified the modern city as a great business corporation where success is linked to systems modeled on private business [Upson, 1926, pp. 135-6].

A transition to a greater business orientation was reflected by two new directions in the reform movement's leadership. First, academicians and public affairs students ceased operating as the driving force in municipal reform as had been the case [JA, 1908-9, pp. 333-4; Cleveland and Buck, 1920, pp. 70-1]. The early leadership gave way to municipal officials better positioned in authority roles to effect change. Second, there developed an appreciation for the fact that budgeting improvement could only take place in the presence of centralized, executive leadership, be it a mayor or city manager, representing the city as a whole [Beard, 1912, p. 148; Cleveland and Buck, 1920, pp. 70-1]. Only in this way could the preparation of the annual budget be an accounting rather than a political event. An interesting example of this realization was the effort of Comptroller Metz of New York to establish control of the budgeting process. Even with the standardization of forms for the city, he found that his

office was not empowered to furnish adequate control. A number of conferences with financial and accounting officers from private enterprises were held, resulting in the establishment of executive, as opposed to legislative, responsibility for the budgeting process [Bureau of Municipal Research, 1913, pp. 203-5; Dahlberg, 1966, pp. 152-3].

The lag between business and governmental record-keeping was brought out forcefully in a NYB examination of the financial reports of 75 cities. The NYB concluded, "if the books of private corporations were kept with the looseness displayed by the municipalities, no expert accountant would or could certify to the correctness" [Howe, 1969, p. 328]. The cure lay in adopting efficiency measures from the private sector. Bruere [1913, p. 117] listed "veritable shibboleths" of efficiency, including standardizing, systematizing, coordinating, and controlling. The NYB [1916, p. vii] introduced a survey of municipal governance activities by indicating that administrative efficiency would be badly hamstrung in the absence of a cost accounting system and scientific budget making. Cleveland was convinced that in business every aspect of administration was controlled by cost accounting [Schiesl, 1977, p. 99]. Standard costing was that aspect of the industrial sector's accounting methodology upon which reformers focused attention. As early as 1912, Beard [1912, p. 128] identified it as a primary concern for municipal research bureaus.

During the first stage of municipal budgeting history, there was considerable interest in the classification of expenses and the comparison of expenditure levels with past years. In the second phase, the shortcomings of these approaches became evident. The utilization of past expenditures as a measure of future needs could be a meaningless exercise [Sands and Lindars, 1912, p. 146]. Costs taken in isolation, without any indication of physical outcome, were just not helpful [Beard, 1912, p. 127]. Instead, the clarion call for standard costing was frequently sounded [Prendergast, 1912, p. 51; Bruere, 1913, p. 26; Munro, 1916, p. 461; Upton, 1926, p. 148; Dahlberg, 1966, p. 205]. Municipal reformers came to accept this lesson transmitted from the business world. Even where profit was not a motivation, standard costing was able to fulfill the function of guaranteeing that the city was receiving fair value for its dollar [Buck, 1926, p. 193]. Moreover, the use of standards provided a mechanism for defending budgetary estimates and establishing

individual responsibility for expenditures at the department level and below [Tausig, 1912, pp. 59, 62].

The degree to which municipalities actually responded to these new directions is difficult to measure. The evidence is much more sporadic and anecdotal during the decade of the 1910s. Fox [1977, pp. 78-80] was convinced that the efforts of the Census Bureau, commencing in 1910, to sell the concept of "correlating unit cost with unit output" produced notable results, though specific details were not provided. Fleischman and Marquette [1988, pp. 138-43] charted advances in Cincinnati and Dayton, 1912-14, in the areas of centralized purchasing and the standardization of costs and specifications. Sands and Lindars [1912, p. 276] chronicled the development of output standards in Milwaukee. Gill [1944, p. 44] credited Cincinnati (1912), Dayton (1914), and Detroit (1918) with the adoption of new procedures in purchasing, competitive bidding requirements, standardized specifications, contract requirements, and centralized storage.

DENOUEMENT

With the close of the Progressive era, traditionally dated 1920 with the termination of the Wilson presidency, it is not at all clear that progress had been universally made on the adaption of business methods, particularly cost accounting, to municipal governance. Munro [1921, p. 381] observed that too little attention had been focused on the functioning mechanism of city government, compared with the successes of efficiency engineers in the world of business. Buck [1926, pp. 56-7], as late as 1926, was still talking futuristically about the benefits of cost accounting in aiding the budget making process, particularly in terms of determining efficiency. He was rather critical of the lag in municipal costing behind the industrial sector [*Ibid.*, p. 194]. Other municipal experts of the 1920s had visions of budget making refinements yet to come. Cleveland and Buck [1920, p. 71] discussed the possibilities of utilizing budgets for planning purposes to complement what by then had become reasonably effective control mechanisms. Upton [1926, p. 151] was satisfied that municipal officials had learned many cost accounting techniques, but that a logical next step was the "correlation" of these methods with the budgeting process.

A most depressing commentary on the state of municipal budget making was provided in *The Accounting Review* in 1934.

Morey, a leading specialist of that decade, described "a most pressing need for an improved and uniform classification of expenditures." He anticipated a cost accounting system as "clearly forward-looking in character" [Morey, 1934, p. 323]. A National Committee on Municipal Accounting had recently been organized which Morey felt confident would rectify the difficulties of earlier efforts which "lacked coordination or unification" [*Ibid.*, p. 325].

Recorders of municipal governmental accounting history have underscored the contribution of business practice to urban reform during the Progressive era. Fox [1977, pp. 87-9], for example, though unwilling to accept a business ancestry to the centralized, functionally departmentalized government structure as traditionally thought, did acknowledge the legacy of cost accounting. Potts [1978, p. 535] observed during the 1900-20 period an "overemphasis on the similarities between commercial enterprises and governmental operations," resulting in an attempted imposition of identical accounting systems. What appears to have been lacking in these analyses is the interactive nature of developments in the budgeting area. While there were serious questions as to the degree of implementation, governmental theorists and activists were outspoken in propagandizing the benefits business-derived standard costing and centralized purchasing methods could provide in the budgeting process. However, just as integral a part of the synergy were the basics of budgeting, widely adopted into business practice subsequent to their development in municipal government during the century's first two decades.

It is difficult to understand the fervor with which the budget idea swept through this country. In 1908, when the NYB asked an editor to allocate regular space in his daily newspaper to matters of city finance, he replied, "It can't be done. We do not *make* news; we *print* news" [Cleveland & Buck, 1920, p. 72]. Only four years later, belief in the value of governmental budget making had reached the level of a secular religion. The following quote from Prendergast [1912, pp. 55-7] will provide some idea of the lofty heights to which budget making was expected to take its user:

Budget making is the force uniting men into groups and blending smaller groups into larger ones. It makes a social group out of all who keep their budgets in the same way and creates an economic morality that pre-

vents the aggressions of individuals from injuring members of the group. . . . The fundamental change separating industrial nations from their primitive predecessors is the rise of budgetary concepts . . .

There were, of course, still numerous advances and innovations to be made — sophisticated flexible budgeting, program budgeting, zero-based budgeting, and an array of statistical and analytic techniques for deriving and tracking budgeted data. However, by 1930, the budget was definitely well on its way to becoming the powerful administrative tool in use today. As Professor Reed of the University of Michigan observed concluding his book on municipal governance — budgeting, virtually unknown in American city government twenty years ago, “is now practically universal” [Reed, 1926, p. 334].

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