An Institutional Model of Organizational Practice: Financial Reporting at the Fortune 200

Stephen J. Mezias
Yale University

This paper compares applied economic models and an institutional model in an empirical study of financial reporting practice at the Fortune 200 between 1962 and 1984. The findings indicate that the institutional model adds significant explanatory power over and above the models that currently dominate the applied economics literature. Thus, the primacy of organizational level rationality implicit in existing models is shown to be overly narrow and inadequate. In discussing the conclusions of the study and their implication for future research, particular emphasis is placed on the question of how institutional environments change over time.•

INTRODUCTION

The institutional approach to the study of organizations has produced a tremendous amount of interest and research in recent years (Meyer and Rowan, 1977; DiMaggio and Powell, 1983, 1990; Meyer and Scott, 1983; Zucker, 1983, 1987, 1988; DiMaggio, 1988). Reviews of empirical work in this paradigm reveal, however, that most studies to date have been of public or nonprofit organizations: Municipal governments, public agencies, schools, publicly funded hospitals, and museums are archetypical examples (Scott, 1987). Relatively few studies incorporating institutional variables have examined the adoption of practices or structures by for-profit organizations. At the same time, interest in financial reporting practices has increased among organization theorists; this is manifested in a stream of literature that has addressed accounting practices from both a sociology of organizations perspective (Perrow, 1986: 272; Zald, 1986) and an institutional perspective (Boland, 1982; Meyer, 1986; Covaleski and Dirsmith, 1988). However, there has been no research on the predicted relationships between institutional variables and the financial reporting practices used by individual organizations. In particular, there has been no study of the adoption of accounting practices by a group of for-profit organizations. Such a study would expand the universe of organizations to which an institutional model has been applied and advance the growing sociology of accounting.

This study attempts to do this by answering the question, What factors can explain the financial reporting practices used by large for-profit enterprises? The current answer to this question, which pervades the literature of applied economics, is as follows: The observed pattern of financial reporting practice is the result of the dominant coalitions of firms maximizing their utility. This argument suggests that the unit of analysis should be the focal firm; while some attention may need to be paid to external constituencies, especially stockholders and debt holders, causality is lodged almost exclusively at the level of the individual firm. In contrast, this study emphasizes the increased degree of both collective organization and professionalization in the environment of for-profit organizations. It follows that an institutional model might explain the financial reporting practices observed over time in a sample of for-profit firms. Such an explanation focuses on entities in the institutional environment that determine the content of generally accepted accounting principles. Characteristics of individual firms are emphasized only to the extent

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that they can be used to determine which firms are more or less subject to pressures to achieve isomorphism (DiMaggio and Powell, 1983) with generally accepted accounting principles.

The Investment Tax Credit

As emphasized in almost all institutional arguments (Berger and Luckmann, 1967; Meyer and Rowan, 1977; Meyer and Scott, 1983; DiMaggio and Powell, 1983; Zucker, 1983), analyses should be contextual. For this reason, this study of financial reporting practices is grounded in a very specific context with clear relevance to both for-profit enterprises and institutional theory. It is an examination of the spread of a financial reporting practice among the Fortune 200 from 1962 to 1984. The particular practice examined is the recording on the income statement for financial reporting purposes of the investment tax credit (ITC), a provision in the Revenue Act of 1962 granting companies making qualified capital investments a credit that reduced income taxes. A percentage of qualified investments, initially 7 percent, reduced income taxes for the fiscal year in which those investments were made. For example, a company making a $1,000,000 investment in equipment covered by the law could deduct $70,000 from taxes payable in the year that the investment was made. If XYZ Company had received a $70,000 credit in 1964 and had an income tax bill of $800,000, then taxes payable would be reduced to $730,000 by the credit. Companies losing money in the year of eligible capital investments were allowed to carry forward the credit until a year when income was earned and there were taxes payable. Eventually, companies even were allowed to sell the credits they could not use immediately. However, this study includes only those fiscal years in which a company could use some portion of its ITC to increase net income on the financial statements. Typical entries for such a transaction as they would be made on the financial statements for tax purposes are depicted in the upper portion of Table 1. There is a critical distinction between the income statements for tax purposes and those for financial reporting purposes. Income statements for tax purposes are those prepared for authorities charged with collecting taxes. Income statements for financial reporting purposes are sent to outside parties in forms like the 10-K and annual reports. These two types of financial statements are distinct, and the net income numbers on them need not agree. The focus of this study is on how the tax credit taken on the income statement for tax purposes is entered on the income statement for financial reporting purposes.

Based on prevailing accounting practice, two generic alternatives for reporting the credit in the income statement for financial reporting purposes existed. The credit could be amortized, or the credit could be expensed. In either case, the amount of the credit reduced taxes payable; the two methods differ, however, in how the tax credit is presented on the income statements for financial reporting purposes. If amortized, the company is said to have used the deferral method (DM). This is illustrated in Table 1. Normally, some portion of the tax credit is used to reduce income tax expense in the current year; in the illustration, 10 percent of the credit, or $7000, is reported this way. The result is an increase to net

Table 1

Sample Income Statements for Tax Purposes and Financial Reporting Purposes

Tax Purposes			
Income Taxes Due			$800,000
Investment Tax Credit			70,000
Taxes Paid			$730,000
Financial Reporting Purposes			
Deferral Method			
Income statement entry:		Balance sheet entry:	
Income Taxes Expenses	$800,000	Reserve for Investment Tax Credit Deferred	$63,000
Less Tax Credit Amortized	7,000		
Total Tax Expense	$793,000		
Flow-through Method			
Income statement entry:		No balance sheet entry	
Taxes on Current Income	$800,000	(The ITC is "flowed through" the income statement.)	
Less Tax Credit	70,000		
Total Tax Expense	$730,000		

income on the financial statements for financial reporting purposes. The remainder of the credit, $63,000 in the illustration, is put into a special reserve on the balance sheet called "Investment Tax Credit Deferred." Some portion of that reserve will be used to reduce income tax expense in future fiscal years; as a result, the net income number on the financial statements for financial reporting purposes will increase. Net income is increased gradually rather than all at once; the boost to net income from receiving the tax credit accrues to the company over several fiscal years. If expensed, the full amount of the credit against income taxes payable enters the income statement in the year of the investment; the company is said to have used the flow-through method (FTM). As a result, net income is increased by the full amount of the credit in the fiscal year during which taxes payable are reduced. Financial statement entries for this reporting method also are presented in Table 1. These alternatives represent a classic choice dilemma for both persons and organizations: When faced with a potential utility, is it all consumed immediately or is some portion put away for the proverbial rainy day? In this case, the utility is an increase in reported net income resulting from a tax credit. For all firms studied here, the credit against income taxes payable has been obtained. The organizational choice is how to record the tax decrease on the income statements for financial reporting purposes. Companies could use the FTM, increasing net income in the current fiscal year by the full amount. Conversely, companies could use the DM, deferring part of the credit to increase net income in the future.

There are several reasons why the case of the ITC is a particularly good choice for an empirical study of the adoption of financial reporting practices. The first is timing: The Accounting Principles Board (APB) only recently had been created as the agency to oversee accounting standards at the time the ITC was granted. There were high expectations that the APB would move to resolve major financial reporting questions; the ITC became the foil on which it first attempted to do this. As a result, there were major changes and controversies in

the institutional environment. Second, these changes were well documented and can be measured precisely to test for their effects on financial reporting practices at firms. Third, because of the controversies and the newness of the credit, company records are quite good. It is relatively easy to determine when firms adopted which practice and the effect on reported net income. Fourth, with respect to the ITC, firms can be placed easily in just two categories. Some firms expensed the credit using the FTM; other firms deferred the credit using the DM. This allows for use of familiar logistic regression techniques. Fifth, movement among firms is from initial use of the DM to eventual adoption of the FTM. Not one firm in the sample resumed use of the DM after adoption of the FTM. In addition, there are no direct effects on the cash flow to firms, which simplifies measurement. The only cash flows that accrue to firms as a result of the credit are from reductions in income taxes. These are reflected in full on the income statements for tax purposes (see Table 1), regardless of whether firms use the FTM or DM to report the ITC on income statements for financial reporting purposes.

The Applicability of Institutional Theory

The applicability of institutional theory is suggested by a variety of forces at work in the interorganizational field in which financial reporting procedures are determined. First, the elaboration of complex relational networks (Meyer and Rowan, 1977; DiMaggio and Powell, 1983) has been driven by the growth of companies with securities that are traded publicly. Exchanges between the various internal and external constituencies puts financial reporting practices at the center of an ideological struggle. The list of participants in this struggle includes the most powerful organizational constituencies: management, owners not involved in the day-to-day operations of the organization, financial institutions lending to the organization, and security analysts interested in its equities. Since financial reporting practice is crucial to the interests of all these groups, an important outcome has been the definition of legitimate methods for use on financial statements. Meyer and Rowan (1977) and Meyer and Scott (1983) argued that leadership efforts by individual organizations will be aimed at establishing their practices as legitimate and encoding them in institutional rules. These efforts are aimed at defining prevailing accounting practice and codifying it in generally accepted accounting principles. In this way, the past choices made by some firms are defined as legitimate and included among the generally accepted accounting principles for use by organizations in the field.

Second, the degree of collective organization of the environment (Meyer and Rowan, 1977; DiMaggio and Powell, 1983) in which generally accepted accounting principles are developed has increased steadily in the last fifty years (Mezias, 1987). This has served both to reinforce and constrain the definitions of legitimacy that arise as a result of the elaboration of complex relational networks. The Securities and Exchange legislation of the 1930s, passed in the wake of the stock market collapse of 1929, was designed to reduce the discretion of both firm management and certified public accountants with respect to financial statements. However, in 1937, the newly created Securities and Exchange Commis-

sion (SEC) passed the power to dictate the content of generally accepted accounting principles to a private commission dominated by the accounting profession, the Committee on Accounting Procedure. Its principal role was to determine generally accepted accounting principles that the SEC would apply in its oversight of the financial statements of companies with publicly traded stocks. This role has been consistently controversial, resulting in frequent disagreements among powerful players in the institutional environment. Principally as a result of these upheavals in the institutional environment, the Committee on Accounting Procedure and the Accounting Principles Board have been replaced by the Financial Accounting Standards Board. Further, other regulatory agencies, such as the Interstate Commerce Commission and the Federal Power Commission have jurisdiction over the financial statements of particular types of companies. This situation is a good example of fragmented centralization (Meyer and Rowan, 1983), in which authority for the determination of generally accepted accounting principles is centralized, but authority for their enforcement is dispersed to several agencies.

Third, Meyer and Scott (1983) and DiMaggio and Powell (1983) have suggested that institutional analysis should include an explicit focus on the role of professionals and professionalization. With respect to the ITC, the accounting profession has important effects in two ways. The first effect must be viewed within the structure of authority over financial reporting practice in the American context. Although the accounting profession has been awarded the exclusive right to audit firm financial statements, external auditors, in general, do not impose financial reporting practices on management. They can note an exception to generally accepted accounting principles that may render the financial statements unacceptable to the SEC, but unless the practice that engendered the exception is forbidden under generally accepted accounting principles, rejection by the SEC is not a certainty. In addition, a decision by one external auditor to note an exception may prompt management to search for an external auditor who is more sympathetic to the financial reporting practice in question (Boland, 1982). Thus, although external auditors may advise firms of their opinions regarding financial reporting practice, lending such practices legitimation and expert authorization, they usually do not impose preferred practices on their client firms. The second effect of the profession comes in its dominance of the agencies that have been charged with determining legitimate accounting standards. Beginning with the Committee on Accounting Procedure in 1937, certified public accountants have been a majority of every body charged with determining generally accepted accounting principles.

Telling the story of accounting for the ITC in terms of the evolution of an institutional environment highlights two important aspects of the social embeddedness of financial reporting practices: First, the history of the institutional environment immediately prior to the enactment of the credit is important in understanding the outcomes that followed enactment. Second, the outcomes that followed enactment resulted in a clear pattern of change in the institutional

environment that can be used to predict firm-level behavior. The important points of the history of the institutional environment immediately prior to the enactment of the ITC are three: First, one standard-setting agency, the Committee on Accounting Procedure had been dissolved recently and replaced by the APB; one of the espoused reasons for this was the failure of the Committee on Accounting Procedure to limit the discretion of individual organizations over financial reporting practices. Thus, the APB had been created with a mandate to reduce managerial discretion in the preparation of financial statements. Second, an early mission adopted by the APB was to develop a theoretical basis for the resolution of accounting controversies. This attempt to replace the existing, conservative system based on historical cost with a new framework failed, largely because of the resistance of influential organizations. High expectations that the APB would move to reduce multiple, conflicting accounting practices were dashed (Moonitz, 1968). Third, the APB was under considerable pressure to act in a case where a coherent theory of accounting practice could be applied to limit managerial discretion. In 1962, the APB decided to apply a theory of accounting principles to limit managerial discretion in accounting for the ITC (Mezias, 1987).

In acting on the ITC, the APB used accounting theory to classify the tax credit transaction and match that classification with a preferred practice, the DM. The board's commitment to limitations on managerial discretion became the justification for requiring all firms to use the DM. There was strong support for this among the certified public accountants who predominated at the APB, and a two-thirds majority voted in favor of Pronouncement #2, requiring the use of the DM. Despite the support of the majority of the accountants serving on the board, there was not unanimous support for the DM requirement among all members of the certified public accounting profession. Each of the Big Eight accounting firms had a representative on the board, and four of these Big Eight members voted against this rule. This was due, at least in part, to tremendous opposition to the board's recommendation among the client organizations of these firms. Representatives of these firms announced publicly that they might not note an exception to generally accepted accounting principles for firms using the FTM, even though the pronouncement mandated this.

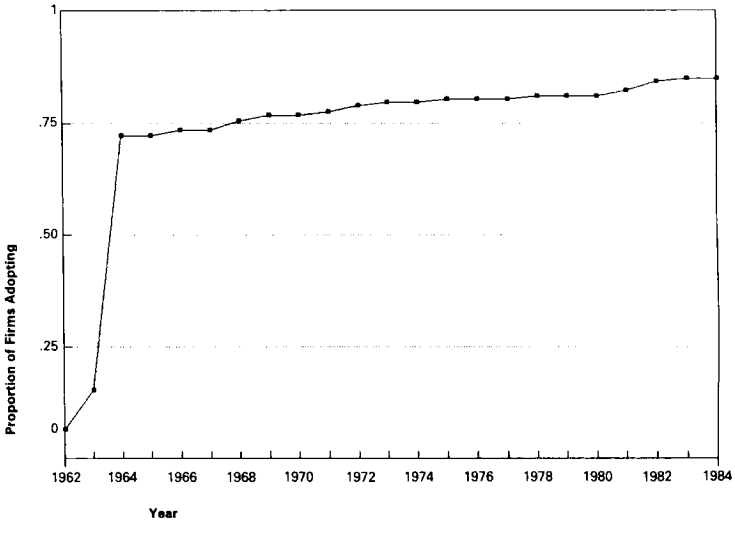
When the APB refused to change its ruling, individual organizations and the members of the Big Eight opposed to the requirement lobbied the SEC to prevent enforcement of the DM requirement. After some delay, the SEC issued a rule that was a compromise between the positions requiring only the DM and the position advocating use of the FTM for the full amount of the credit. Its pronouncement required deferral of at least 52 percent of the credit, but allowed up to 48 percent of the credit to be expensed. In effect, this was a victory for opponents of the rule requiring DM; even though it was not an endorsement of the full FTM, which some firms wanted, it was a clear backtracking from the concepts that the DM was preferred and that all firms must use the same practice. Two years of controversy and confusion followed, with generally accepted accounting principles as defined by

the APB and the SEC differing on this point. The Revenue Act of 1964 increased the ITC and eliminated the loss of depreciation for part of the investment equal to the credit. At this point, the SEC, with the support of the administration, announced that the FTM would be allowed for the full amount of the ITC. In the wake of this decision, the APB issued Pronouncement #4, which stated that the DM was the preferred practice but allowed either FTM or DM as part of generally accepted accounting principles.

This study argues that changes in the institutional environment drive changes in the financial reporting practices used by individual firms. With respect to accounting for the ITC, the behavior of firms will differ significantly in three distinct periods delineated by longitudinal variation in the institutional environment. First, during 1962 and 1963, a prohibition against use of the FTM for the full amount of the ITC was in effect, and prevailing practice was to use the DM for at least some portion of the ITC. Nonetheless, there was considerable controversy regarding what was the appropriate method for reporting the credit. The APB and other regulatory agencies proposed different standards, and the SEC eventually decided not to enforce the DM requirement. Second, in 1964, changes to the legislation governing the ITC resulted in the amendment of generally accepted accounting principles to include either the FTM or the DM. Third, in years after 1964, prevailing practice changed, and the FTM became the dominant method for reporting the ITC on financial statements. The use of the FTM during these three periods of time is tracked in Figure 1, showing the cumulative proportion of Fortune 200 firms to have adopted the FTM between 1962 and 1984.[1]

In addition to these theoretical reasons why financial reporting practice is a good choice for studying institutional processes, there is also a variety of methodological reasons. First, financial reporting practice represents a relatively routine, albeit important type of behavior at large, bureaucratic

Figure 1. Adoption of the FTM over time, 1962–1963, 1964, and 1965–1984.



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This pattern of adoption is not peculiar to the Fortune 200; a similar pattern was found using as a sample the 600 companies surveyed for the *1965 Accounting Trends and Techniques*. From 1962 to 1964 the percentage of companies in this sample that did not defer any part of their ITC jumped from zero to over 50 percent.

organizations: Designated accounting units gather information for presentation in the financial statements according to professionalized standard operating procedures and programs. The introduction of a new financial statement item, while relatively infrequent, represents more of a mundane than an extraordinary occurrence. The result is an important behavior, comparable across organizations, dominated by a constellation of forces: regulatory pressures, norms of good practice, and professionalization. Second, the range of important players includes the accounting profession, individual organizations, and regulatory agencies, covering phenomena at both the organizational and interorganizational levels. The mix of phenomena at different levels allows for an emphasis that shifts from the individual organization to its context in the institutional environment. Thus, the study of financial reporting practices allows for an exploration of isomorphic pressures produced by actions at both the organizational and interorganizational levels. Third, the data are fairly reliable and readily available. Precisely because of the routineness of the choice and its importance to different organizational constituencies, public records of choices, comparable across different organizations, are of good quality.

Hypotheses

Applied economic models. Existing models of choice among financial reporting practices in the accounting literature are consistent with models of consequential choice (March, 1981). In such models, the analyst posits certain consequences or outcomes that are assumed to guide choice. The process is one of optimal choice, given the characteristics of the firm. Three categories of such models have been found in the literature on accounting practices. The first model suggests that firms want to maximize reported net income on financial statements; this is the so-called mechanistic hypothesis (Gordon, 1964; Gordon, Horwitz, and Meyers, 1966). Hypotheses derived from this model presume two features of organizational life: It is assumed that managerial utility increases with reported net income because managers mistakenly believe that they can induce higher stock prices by reporting higher earnings (Ronen and Sadan, 1981; Watts and Zimmerman, 1986). Further, changing ITC accounting is assumed to be a viable means of achieving this end. These assumptions are combined to make empirical predictions about the widespread adoption of the FTM, an income-increasing accounting method. These predictions assume that managers change accounting methods purposively to manipulate income numbers. The second model is based on the concept of income smoothing and is related to the notions of aspiration-level effects on the behavior of managers (Cyert and March, 1963). This model presumes two features of organizational life: First, managerial utility decreases with variation in reported net income (Ronen and Sadan, 1981). Second, changing ITC accounting is a viable means of reducing this variation. Again, the two assumptions can be combined with the empirical fact of widespread adoption of the FTM, an income-increasing accounting method, to predict which firms are most likely to adopt. These predictions assume that managers change accounting methods to reduce variation in reported-income numbers. The third model, called

positive accounting theory, is based on managerial economic theories (Watts and Zimmerman, 1986). This model attempts to measure secondary cash-flow effects from the adoption of the FTM. Some constructs based on this model assume that when external firm constituencies are more dispersed or less active, managers prefer to adopt financial reporting practices that increase reported income. Other constructs are various measures of the incentives that have been structured to control or constrain managerial behavior. Various frameworks for examining these issues are proposed; all are variations on how managers and other organizational constituencies trade off their interests.

The argument that firms attempt to maximize reported net income pervades the literature on financial statement regulation. Watts and Zimmerman (1986: 134–135) summarized this view as follows: " . . . managers select accounting procedures to increase reported earnings . . . . " When the exigencies of the short-run point to the need to have higher reported income, switching to the FTM is one way to accomplish this. Simply put, the prediction is that those firms for which the ITC is most significant relative to earnings, in accounting-ese most material, will be most likely to change methods:

Hypothesis 1: Firms with the largest amounts of ITC will be most likely to adopt the FTM.

Managers are assumed to want to avoid variation around the level of reported income considered normal for their firm (Ronen and Sadan, 1981). The reported income in previous years becomes an expectation for normal performance by the firm, and both managers and other organizational constituencies become anchored on this target level of performance (Cyert and March, 1963). Therefore, if income is highly variable over time and tends to decrease, the FTM might be adopted in an attempt to reduce the variance by dampening the negative direction:

Hypothesis 2: Firms with a percentage change to income that is highly variable over time and on average negative are most likely to adopt the FTM.

In their discussion of political visibility, Holthausen and Leftwich (1983) argued that firms seek to avoid criticism by unions, employees, consumers, politicians, and bureaucrats. Consequences of criticism by these social actors include antitrust actions, imposition of taxes, boycotts, and demands for wage increases. Watts and Zimmerman (1978, 1986: 235) argued that large firms tend to adopt standards that lower reported earnings to reduce these costs: "Ceteris paribus, the larger the firm, the more likely the manager is to choose accounting procedures that defer reported earnings from current periods to future periods." Since the FTM increases reported net income, large firms will be less likely to adopt it:

Hypothesis 3: Large firms are less likely to adopt the FTM.

The literature on managerial economics (Williamson, 1964, 1967) argues that managers exercise discretion in the operation of the firm to increase their utility. In particular, the separation of ownership and management leads to incentive problems (Watts and Zimmerman, 1986: 180–191). In a typical story, management might use its discretion to increase

reported income on financial statements (Salamon and Smith, 1979; Dhaliwal, Salamon, and Smith, 1982). Thus, managers of firms in which stockholders are relatively less influential, so-called managerially controlled firms, will be more likely to use income-increasing accounting methods, in this context the FTM:

Hypothesis 4: Organizations that are managerially controlled are more likely to adopt the FTM.

Managerial actions are proscribed by debt convenants, which limit the amount of dividends, the amount of additional debt, and may even require costly renegotiation of debt contracts if reported income goes below a certain amount (Holthausen and Leftwich, 1983). To the extent that changing to income-increasing accounting rules can help the firm avoid activation of these restrictions, management has an incentive to adopt them (Salamon and Smith, 1979; Dhaliwal, Salamon, and Smith, 1982; Hagerman and Zmijewski, 1979; Zmijewski and Hagerman, 1981). Watts and Zimmerman (1986: 216) summarized this line of argument: Firms facing restrictive debt covenants are "more likely to select accounting procedures which shift reported earnings from future periods to the current period."

Hypothesis 5: Firms facing restrictive debt covenants will be more likely to adopt the FTM.

The next hypothesis is based on the effects of incentive-compensation schemes on managerial utility. Watts and Zimmerman (1986: 208) summarized the argument in the bonus-plan hypothesis: "Ceteris paribus, managers of firms with bonus plans are more likely to choose accounting procedures that shift reported earnings from future periods to the current period." Applying this argument to adoption of the FTM assumes that bonus plans are based on reported net income and do not adjust computation of the bonus for accounting changes (Healy, 1985). As a result, managers will have an incentive to increase their bonus income by adopting the FTM.

Hypothesis 6: Firms with incentive-compensation plans are more likely to adopt the FTM.

The institutional model. An institutional model of choice among financial reporting practices is consistent with models of choice as obligatory action (March, 1981). In particular, the obligation that will govern choice among accounting practices most strongly is compliance with generally accepted accounting principles. The institutional model directs attention to entities in the institutional environment that determine generally accepted accounting principles. Two types of factors therefore are examined in developing the institutional model of financial reporting practice. First, the direct effect of agencies charged with the determination of generally accepted accounting principles will be examined. Second, characteristics of firms will be used to ascertain the degree to which particular firms are subject to pressures to become isomorphic with the institutional environment.

Studying the direct effect of changes in generally accepted accounting principles is consistent with Scott's (1987) discussion of the imposition of organizational structure. The analogy

here would be the imposition of accounting practices; it occurs when institutional fields contain environmental agents powerful enough to impose practices on organizations. In the case of financial reporting practice, the designated standard-setting agency, with the backing of the SEC, can impose financial reporting practices. In addition, there are several regulatory agencies that impose accounting standards on firms under their jurisdiction. The first hypothesis derived from this argument is that the policies of the APB will affect the likelihood of adoption of the FTM. The key event regarding regulation of accounting for the ITC is the end of the prohibition of the FTM by the APB in 1964. The effect of this change in the regulatory environment is to increase the probability of adopting the FTM:

Hypothesis 7: The probability of adopting the FTM is increased by the end of the prohibition against that method by the APB in 1964.

The Interstate Commerce Commission and the Federal Power Commission regulated the rates charged in two monopolistic industries. The normal formulae to determine rates were based on net reported income. Since the DM tended to lower that income relative to the FTM, these agencies required companies subject to their regulation to use the FTM on financial statements. This leads to the following hypotheses:

Hypothesis 8: The probability of adopting the FTM is increased among companies subject to regulation by the Interstate Commerce Commission.

Hypothesis 9: The probability of adopting the FTM is increased among companies subject to regulation by the Federal Power Commission.

The direct effect of generally accepted accounting principles is explored further by examining how inertia in practices is related to change in the institutional environment. Scott (1987: 505) pointed out that the notion of imprinting is most consonant with those institutional theorists who stress the social construction of reality. At the time of founding, organizations adopt certain practices because of beliefs among social actors that such practices represent the appropriate way to organize. The distinctive characteristic of imprinting is the virtual elimination of alternatives not considered appropriate at the time of founding. A problem with this imprinting argument is that it cannot account for any change after founding; in particular, it cannot account for the adoption of methods of accounting for the ITC that occur long after organizational birth. However, a midlife imprinting hypothesis can be derived from Meyer and Rowan's (1977) argument that institutional environments induce the elaboration of the structure of existing organizations. Thus, imprinting will occur when a practice is first adopted and will not change afterwards. However, such a midlife imprinting argument cannot account for the widespread change to the FTM in 1964 after initial adoption of the DM. This study proposes a theory of institutional imprinting; this more comprehensive theory argues that crucial choices must be made at important junctures of change in the institutional environment. In this case, two such junctures occur: In 1962, firms made their initial choice about how to

account for the ITC with a prohibition against the FTM in effect. However, a second juncture of important change occurred just two years later when the APB ended the prohibition. The institutional imprinting argument suggests that firms that adopted the FTM in 1964 would be unlikely to resume use of the DM. It also predicts that firms that did not adopt the FTM in 1964 can be regarded as being imprinted in favor of the DM. Such firms are regarded as less likely to adopt the FTM in subsequent years:

Hypothesis 10: Firms that did not adopt the FTM in 1964 are less likely to adopt the practice in subsequent years.

DiMaggio and Powell (1983) argued in their discussion of normative isomorphism that the degree of professionalization of a sector or field is an important consideration in understanding pressures of institutional isomorphism. For this reason, the relationship between firms and the certified public accountants who serve as external auditors of financial statements is examined. When the APB voted on its Pronouncement #2 forbidding the use of the FTM, four of the Big Eight firms voted for this rule. It is hypothesized that firms using one of the Big Eight firms that voted to prohibit the FTM would be less likely to adopt the FTM:

Hypothesis 11: Firms whose external auditor is one of the four Big Eight firms that voted for Pronouncement #2 will be less likely to adopt the FTM.

Scott (1987: 504) argued that under certain conditions organizational participants may attempt to "model their own structures on patterns thought to be, variously, more modern, appropriate, or professional." The primary source of such legitimate methods for use on financial statements is prevailing practice in the organizational field. DiMaggio and Powell (1983) argued that mimetic pressures to adopt the normatively sanctioned practice will be greatest for those firms facing the most uncertainty. If high variance over time in the amount of ITC creates uncertainty, then firms with higher variance would be more likely to conform to prevailing practice. During early years, when the DM was the prevailing practice, these firms would be most likely to follow the APB directive and not adopt the FTM. However, once the FTM became the prevailing practice, these same firms become more likely to adopt it. Thus, these firms will display decreased likelihood to adopt the FTM up to 1964 and increased likelihood from 1965 to 1984 (see Figure 1):

Hypothesis 12: Firms with high variance over time in the amount of ITC on their financial statements are more likely to conform to prevailing practice.

The acquisition of organizational practices also may be affected by turnover among top managers. The entry of new personnel to the top-management team from both inside and outside the organization may lead to conformity as a result of the increasing professionalization of management and the resulting exposure to a common cognitive base produced at universities. The entry of outsiders also may contribute to the diffusion of normative models by supplying personnel who have experience with practices that are widespread but not yet adopted by the focal organization (DiMaggio and Powell, 1983). These arguments are interpreted to suggest that turnover in top-management teams will be an engine of con-

formity with prevailing practices. The effect of turnover will depend on which accounting method is the prevailing practice. Firms with high management turnover will display decreased likelihood to adopt the FTM up to 1964 and increased likelihood from 1965 to 1984:

Hypothesis 13: Firms experiencing high turnover among the top-management team are more likely to conform to prevailing practice.

METHOD

Sample

Data for firm years from 1962 through 1977 were constrained by the availability of empirical measures for the managerial control construct. Because of this missing-data problem, the sample mimics that of Kotz (1978). It consists of the 200 largest nonfinancial corporations in the United States in 1969. Since the Fortune 200 for 1969 was the sampling criterion but the sample began in 1962, the number of different companies actually in the sample is 207. Of the Fortune 200 companies in 1969, several had been formed by merger between 1962 and 1969 of two extremely large companies. This involved a name change for at least one of the companies. Rather than not use either company or use only one of the two in these cases, both were included. Of the 207 companies, 10 had no annual reports available covering the period when the FTM was adopted. Thus, missing data made it impossible to determine when adoption occurred. Of the remaining 197, 46 did not report the year of adoption of the FTM, though annual reports were available. Both of these types of companies, 56 in total, were excluded from the sample. The only significant difference between the overall sample and the companies that were excluded because of missing data was that the vast majority of petroleum companies were in the second missing-data category. Although their annual reports were available, these companies systematically did not report the adoption of the FTM to their shareholders. Of the remaining 151 companies, one was excluded because the majority of its income was subject to Canadian tax laws even though it was nominally an American company. The remaining 150 companies are diversified by industry, including utilities, transportation, merchandising, and manufacturing companies. Dependent and independent variable data came from annual reports of this sample of companies from 1962 to 1984. Some data for independent variables in years after 1972 were obtained using COMPUSTAT and proxy statements.

Dependent Variable

The unit of analysis is the firm fiscal year and variables are measured for each firm for each fiscal year. The standard practice in tests of applied economic models of financial reporting practice has been not to distinguish years in which a practice is first adopted from years in which that same practice is maintained. In this study, the dependent variable provides a contrast between maintenance of the DM and adoption of the FTM. The dependent variable, called METHOD, is coded zero if the firm maintained the DM during the fiscal year; it is coded one if the firm adopted the FTM during the year in question. Firms that adopt the FTM are included up to and including the year of adoption; after that,

they are removed from the sample. This approach does not mix years in which the use of the FTM was maintained with years in which it was adopted.

Independent Variables

Variables derived from applied economic theories. The first set of variables was derived from applied economic theories. Hypothesis 1 predicted that firms with the largest amounts of ITC would be most likely to adopt the FTM. Especially for early years, however, this information was not available. The proxy used instead (called MTLTY) is the amount of ITC included in the current year's calculation of net income on the financial statements stated as a percentage of total net income in the current year.[2] Hypothesis 2 predicted that firms with changes to reported income characterized by high variance and a negative mean would be most likely to adopt the FTM. This was measured using percentage changes in the earnings per share of the firm over the five fiscal years up to and including the current fiscal year. The mean percentage change in this series was multiplied by its variance; thus, a large negative number implies that the firm had a mean change that was negative, as well as a large variance in those changes. This variable, called ASPR, was expected to have a negative effect.

The remaining firm-level variables were derived from positive-economics arguments. Hypothesis 3 concerned the effects of size on the propensity to adopt the FTM. To create a measure of this construct that would be comparable both cross-sectionally and longitudinally, the following procedure was used: For all firm fiscal years that ended within a particular calendar year, the median total assets was determined. This was subtracted from the total assets of each firm in that year; the difference then was divided by the median total assets. The result is a measure of size (called SIZE) equal to each firm's position above or below the median total assets of all firms in the sample that year. Such a measure has two advantages: First, given that the basis of the sample was the 200 largest nonfinancial firms, it is important to have an adjusted size comparison; using the median of the sample firms in a given year does this. Second, by stating the relative size of the firm as a percentage of the median in each year, the measure is rendered comparable across the inflationary years in the sample. A negative value means that the firm was smaller than the median sample firm in a given year; a positive value implies the opposite. Hypothesis 4 concerns managerially controlled firms. This effect was tested with a dummy variable, called MC, coded one if the firm was categorized as managerially controlled in the fiscal year in question, and zero otherwise. For fiscal years 1962–1972, the measurement was based on Kotz's (1978) classification. For fiscal years 1972–1977, the classification was based on Herman's (1981) classification. For years after 1977, a firm was coded as under management control if no individual owned 5 or more percent of the voting stock of a firm according to the 10-K report. Hypothesis 5 was derived from a discussion of the effects of debt contracts on managerial decision making. Two measures were used to test for the effects of debt contracts: The first is a dummy variable, called DR, which indicates whether debt restrictions were mentioned in the notes to fi-

2

This measure may bias the results in favor of rejecting the null hypothesis, since firms will take a greater amount of ITC in the income statement as a result of adoption regardless of their intent to increase reported net income. Running the results only for later periods when the actual amount of ITC received in the current year was reliably available yields no changes to the acceptance or rejection of null hypotheses reported in the results; however, the *t*-statistic for MTLTY falls from 3.57, as reported in Table 4, to 2.04.

nancial statements in the annual report. It was coded one if such restrictions were mentioned and zero otherwise. The second variable, URRE, measured the differential importance of these restrictions across firms by computing the proportion of the firm's total retained earnings that are not restricted by debt covenants. The assumption is that the greater the proportion of unrestricted retained earnings, the less likely firms are to adopt the FTM. Thus, this variable was expected to have a negative effect. Hypothesis 6 predicted that managers of firms with incentive-compensation schemes would attempt to increase reported net income; thus, these firms would be more likely to adopt the FTM. The existence of such schemes is tested with the dummy variable ICOMP; it was coded one if such schemes were mentioned in either the 10-K or annual reports and zero otherwise.

Variables derived from institutional theory. The first set of institutional variables were meant to test for the effects of changes in the definition of generally accepted accounting principles. Hypothesis 7 concerned the effect of the end of the APB prohibition against the FTM in 1964. The effect was tested with a dummy variable, called FY64, indicating whether the observation represents a firm fiscal year ending in calendar year 1964. Hypotheses 8 and 9 were tested using dummy variables that indicate whether the firm was under the jurisdiction of the Interstate Commerce Commission or the Federal Power Commission in the fiscal year represented by the observation. These variables are called ICC and FPC. Hypothesis 10 concerned the imprinting of financial reporting practices. The argument was that firms that did not adopt the FTM in 1964 were imprinted with the Deferral Method and are less likely to adopt the FTM in subsequent years. The variable to test for this effect is a dummy variable, called LATE, for fiscal years ending during calendar years between 1965 and 1984. It should be noted that in a model including the dummy variables FY64 and LATE, the effect of being in the years 1962 and 1963 is captured by the constant.[3] Hypothesis 7 implied that the end of the APB prohibition would increase the probability of adoption. This same reasoning can be used to imply that the probability of adoption should be lower during 1962 and 1963. Therefore, the effect of the constant in the model should be negative and significant.

The second set of institutional theory hypotheses concerned differential pressures toward institutional isomorphism experienced by firms. Hypothesis 11 concerned the use of one of the Big Eight accounting firms that supported the prohibition against the FTM. The variable to test for this effect was a dummy variable called ADTR, coded one if the firm's auditor in a given fiscal year was one of the Big Eight that supported the prohibition, and zero otherwise. The effect of this variable should be significant and negative. The remaining institutional hypotheses were derived from arguments about how the outcomes of firm-level processes would change as the prevailing accounting practices changed. Hypothesis 12 concerned firms with high variance in the amount of ITC. The proxy for this was the coefficient of variation of capital expenditures over the five periods up to and including the current fiscal year, called VCE.[4] The greater the variation in capital expenditures, the more likely the managers at a firm

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The first dummy variable codes the fiscal year 1964; the second codes all fiscal years between 1965 and 1984. This leaves the years 1962 and 1963 as the omitted category, the effect of which is measured by the constant (Johnston, 1984: 228–231).

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Capital expenditures were used because for early adopters there is no series with which to estimate the variance in ITC. It makes no difference to the results if actual variance of ITC is used in periods when it is available.

are to conform to prevailing practice. The hypothesis predicted that this variable will have a negative effect from 1962 to 1964 and a positive effect from 1965 to 1984; thus, two variables are created. The first, called EVCE, is equal to VCE from 1962 to 1964 and is zero if the year is later than 1964; it is predicted to have a significant, negative effect. The second, called LVCE, is equal to VCE from 1965 to 1984 and is zero if the year is earlier than 1965; it is expected to have a significant, positive effect. Hypothesis 13 argued that top-management-team change would be a source of normative pressures to conform with prevailing practices. The top-management team was operationalized as the officers of the corporation listed in the annual report. Turnover was measured as the percentage of the current year's top-management team who were not members of the top-management team in the previous year. The hypothesis predicts that this variable will have a negative effect from 1962 to 1964 and a positive effect from 1965 to 1984; as above, two variables were created. The first, called ECHMT, represents management turnover from 1962 to 1964 and is zero if the year is later than 1964; it is expected to have a significant, negative effect. The second, called LCHMT, represents management turnover from 1965 to 1984 and is zero if the year is earlier than 1965; it is expected to have a significant, positive effect. Descriptive statistics for all variables are reported in Table 2; correlations among variables are reported in Table 3.

Table 2

Descriptive Statistics for Dependent and Independent Variables (*N* = 934 for All Variables)

Variable	Mean	S.D.	Min.	Max.
METHOD	0.14	0.34	0.00	1.00
MTLTY	0.07	0.15	0.00	2.00
ASPR	−0.00	0.28	−2.15	3.56
SIZE	1.31	4.95	−0.96	47.57
MC	0.21	0.40	0.00	1.00
DR	0.56	0.50	0.00	1.00
URRE	0.71	0.33	0.00	1.00
ICOMP	0.33	0.47	0.00	1.00
FY64	0.14	0.35	0.00	1.00
ICC	0.03	0.18	0.00	1.00
FPC	0.10	0.30	0.00	1.00
LATE	0.53	0.50	0.00	1.00
ADTR	0.41	0.49	0.00	1.00
EVCE	0.16	0.22	0.00	1.35
LVCE	0.18	0.22	0.00	1.25
ECHMT	0.05	0.09	0.00	0.58
LCHMT	0.07	0.10	0.00	0.92

Estimation of the Models

The time-series data used in this study represent cross-sectional observations over a finite and relatively small number of periods. For this reason, the assumption of continuous time estimation, necessary for many longitudinal estimation techniques, was not appropriate. A maximum-likelihood LOGIT estimation (Flath and Leonard, 1979; Allison, 1984) is an efficient estimation technique for a categorical dependent variable. The assumption implicit in using such a technique for

Table 3

Correlations among the Dependent and Independent Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. METHOD																
2. MTLTY	.061															
3. ASPR	.008	.053														
4. SIZE	−.088	−.033	−.016													
5. MC	.055	−.025	.068	−.092												
6. DR	−.019	.052	.041	−.295	.004											
7. URRE	−.023	−.055	−.029	.257	−.056	−.770										
8. ICOMP	−.113	.098	.012	.047	−.108	−.049	.052									
9. FY64	.601	−.035	.010	−.037	.030	−.002	−.073	−.091								
10. ICC	.152	−.043	−.025	−.030	−.049	−.150	.134	−.130	.044							
11. FPC	−.046	−.049	.001	−.021	−.137	−.034	.192	−.228	−.072	.000						
12. LATE	−.308	.243	.032	.093	−.069	.041	.087	.192	−.438	−.198	.145					
13. ADTR	−.085	.048	.018	.136	−.099	.089	.015	−.105	−.061	−.081	.156	.161				
14. ECHMT	.130	−.142	−.027	−.023	.022	−.019	−.077	−.154	.254	.137	−.106	−.584	−.044			
15. LCHMT	−.149	.157	.043	.050	−.024	.028	.006	.126	−.269	−.122	.037	.615	.014	−.359		
16. EVCE	.247	−.185	−.085	−.130	.061	.045	−.166	−.189	.375	.147	−.166	−.791	−.147	.461	−.486	
17. LVCE	−.233	.232	.002	−.038	−.124	.178	−.056	.192	−.342	−.155	.013	.780	.145	−.456	.504	−.618

time-series observations is that the probability of an event, in this case adoption of the FTM, is invariant with respect to temporal distinctions not specified in the model.[5]

RESULTS

Estimation of Comparative Models

Given the adequacy of the assumption of constant hazards within periods distinguished in the model, the next step in testing the theories was to estimate models comparing the two theories. First, a model that included only those variables specified in applied economic models was estimated. Second, a model that also included the institutional variables was estimated so that the increment in explanatory power gained by adding the variables suggested by an institutional perspective could be assessed. A model including only those independent variables suggested by applied economic theories was estimated first; results are presented in Table 4. The model as a whole is a significant predictor of the adoption of the FTM. The χ^2 statistic allows rejection of the null hypothesis of no effect from the independent variables ($p < .001$); however, the pseudo R^2 is a modest .165.[6] Next the combined model was estimated; results are reported in Table 5. The difference in the χ^2 statistics is extremely significant ($p < .001$). Adding the institutional variables significantly increases the explanatory power of the model as reflected in the increase in the pseudo R^2 from .165 to about .51. With the applied economic variables, only about one-sixth of the variance could be explained by the model. By including the variables suggested by institutional theory as well, that figure climbs to over one-half. These significant results are obtained despite some modest to high correlations among the independent variables, as depicted in Table 3. The procedure followed by Beaver, Griffith, and Landsman (1984) was used to assess whether the acceptance of particular null hypotheses is the result of the multicollinearity. The results of this procedure suggest that multicollinearity is not driving the results. In particular, the procedure shows that the institutional variables are significant even after assigning all explanatory power they

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The validity of this assumption has been tested and is supported for this data set. Interested readers can contact the author if they wish to receive an Appendix detailing the test.

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This is actually higher than some comparable R^2 figures in the accounting literature. For example, the highest R^2 among the three models estimated by Zmijewski and Hagerman (1981) was less than .10.

Table 4

Results of Maximum-Likelihood Logistic Regression (Applied Economics Model)

Explanatory variable	Estimated coefficient	S.E.	*T*-statistic
Constant	−0.81	.50	−1.61
MTLTY	1.03	.52	2.00•
ASPR	0.04	.33	0.33
SIZE	−0.20	.08	−2.50•
MC	0.17	.23	0.76
DR	−0.77	.33	−2.33•
URRE	−0.58	.47	−1.25
ICOMP	−0.75	.24	−3.09•

R-squared = .16
Chi-squared = 35.95 (d.f. = 7)

• $p < .05$ for rejection of null hypothesis.

have in common with the applied economic variables to those variables.

The comparison of the models, especially the significant difference in the χ^2 statistics, suggests that a model including only the applied economic variables is misspecified. First, the model omits variables that have a significant effect on the dependent variable (Johnston, 1984). Second, the omission of these variables ignores important longitudinal variation in the hazard rate (Allison, 1984). Both of these problems can lead to biased coefficients and biased test statistics. For this reason, the results of the full-model estimation are the valid ones to use in assessing the acceptance or rejection of the individual hypotheses. Therefore, for those significance tests

Table 5

Results of Maximum-Likelihood Logistic Regression (Full Model)

Explanatory variable	Estimated coefficient	S.E.	*T*-statistic
Constant	−2.71	0.80	−3.38•
MTLTY	2.13	0.60	3.57•
ASPR	−0.04	0.38	−0.11
SIZE	−0.28	0.11	−2.57•
MC	0.32	0.30	1.05
DR	0.15	0.45	0.32
URRE	0.78	0.66	1.18
ICOMP	−0.43	0.32	−1.35
FY64	3.44	0.33	10.53•
ICC	1.62	0.51	3.15•
FPC	0.13	0.54	0.23
LATE	−2.01	0.72	−2.79•
ADTR	−0.34	0.28	−1.22
EVCE	−0.85	0.77	−1.11
LVCE	0.85	1.25	0.68
ECHMT	−2.85	1.51	−1.89•
LCHMT	3.74	1.61	2.33•

R-squared = .51
Chi-squared = 301 (d.f. = 16)

• $p < .05$ for rejection of null hypothesis.

that differ between the two models, those of the first model must be regarded as incorrect. Examination of the two tables reveals that the differences in the test statistics occur for both the debt restriction, DR, and incentive-compensation scheme, ICOMP, variables. The nonsignificant findings of the model including both the applied economic and institutional variables are statistically valid; the significant findings for these variables in the applied-economics-variables-only model are not.

Applied Economic Variables

Hypothesis 1 suggested that firms would choose the FTM in order to boost reported net income on financial statements. The variable MTLTY, which measures this effect, is significant ($p < .001$) and positive, as predicted. Hypothesis 2 suggested that managers would choose the FTM in order to smooth reported net income over time. This effect was measured by the variable ASPR, which had no significant effect. Hypothesis 3 suggested that large firms would be less likely to select the FTM; this effect was measured by the variable SIZE, which was significant ($p < .01$) and negative, as predicted. Hypothesis 4 suggested that firms under managerial control would be more likely to adopt financial reporting practices that increase reported net income. The dummy variable MC, included to test for this effect, did not have a significant effect. Hypothesis 5 suggested that firms facing restrictions on actions as a result of debt covenants would be more likely to adopt income-increasing financial reporting practices. Neither of the two variables used to test this hypothesis, DR and URRE, had a significant effect on adoption of the FTM. Hypothesis 6 suggested that firms with incentive-compensation plans would be more likely to adopt the FTM. This effect was tested by the dummy variable ICOMP, which had no significant effect.

Institutional Variables

The first set of institutional hypotheses were tests for the direct effects of change in the institutional environment. Hypothesis 7 suggested that the effect of the end of prohibition of the FTM by the APB would be an increase in the probability of adoption; this effect was tested with the dummy variable FY64, which was the most significant variable in the model ($p < .001$) and positive, as predicted. The converse of this prediction would be that firms would be less likely to adopt the FTM in 1962 and 1963. The constant becomes a proxy for the years 1962 and 1963 after the entry of the variables FY64 and LATE. The fact that it is negative and significant ($p < .001$) thus lends additional support to hypothesis 7. Hypothesis 8 suggested that firms under the jurisdiction of the Interstate Commerce Commission would be more likely to adopt the FTM. The variable ICC had a significant ($p < .01$) positive effect, as predicted. However, hypothesis 9, which made the same prediction for firms under the jurisdiction of the Federal Power Commission, was not supported.

The second set of institutional hypotheses were attempts to measure differential pressures to comply with the requirements of the institutional environment. Hypothesis 11, which predicted that firms that were audited by one of the four Big Eight firms that voted for the prohibition of the FTM would be

less likely to adopt the FTM, was not supported. The variables used to assess hypothesis 12 also had no significant effects. However, hypothesis 13, which predicted that firms experiencing high turnover in the top-management team would be more likely to conform to prevailing practice, was supported. Turnover prior to 1965, measured by ECHMT, was predicted to have a negative effect. Turnover during 1965 and later, measured by LCHMT, was predicted to have a positive effect. Both variables had significant effects ($p < .05$) in the predicted direction.

DISCUSSION AND CONCLUSIONS

The results suggest a story about the adoption of financial reporting practices that is an interesting account of change in a collection of organizations. Applied economic arguments call attention to two effects that held throughout the time period of the study. First, firms seemed to adopt in order to boost reported net income. Second, larger firms were systematically less likely to adopt. However, the majority of the variance explained by the model is added by variables suggested by institutional theory; longitudinal variation is crucial in predicting and interpreting their effects. The prohibition of the FTM by the APB had a significant negative effect on adoption; this can be seen in the significant, negative value for the constant, which measures the effect of a fiscal year ending in calendar years 1962 or 1963, when the prohibition was in effect. Turnover in the top-management team of firms during the period from 1962 to 1964 was associated with increased likelihood of conformity to the prevailing practice of maintaining the DM. The major group of firms to adopt the FTM in this period were the railroads, in response to an Interstate Commerce Commission ruling. However, firms are not completely controlled by the imposition of practices by institutional entities. The utility companies, faced with a dictate from the Federal Power Commission to use the FTM, lobbied to block the requirement. In an event that is perfectly consonant with fragmented centralization (Meyer and Scott, 1983), these companies cited the APB prohibition against the FTM in arguing against compliance with the FTM requirement issued by the Federal Power Commission (Mezias, 1987).

In 1964, when the prohibition was lifted, the majority of the Fortune 200 adopted the FTM (see Figure 1); these firms were institutionally imprinted with the FTM, and not one resumed use of the DM. However, there were some exceptions to this widespread adoption of the FTM; among these exceptions, the resistance to the diffusion of the FTM seems to have been institutionally imprinted. The likelihood of adoption among these firms was reduced considerably compared to the rest of the sample; this is indicated by the significant, negative coefficient on the dummy variable encoding periods after 1964, LATE. Fifteen of the sample firms did not adopt the FTM by the end of the study in 1984; they are listed in Table 6. The results suggest that one important circumstance seemed to weaken this resistance. When these firms experienced large-scale turnover in the top-management team, as measured by LCHMT, they were more likely to conform to prevailing practice by adopting the FTM. Other than experiencing higher turnover, the holdouts seem remarkably similar

Table 6

Right-Censored Firms in the Sample of Companies

American Telephone & Telegraph
Boeing Company
Commonwealth Edison Company
Control Data Corporation
General Electric Company
General Motors Corporation
GTE Corporation
Great Atlantic and Pacific Tea Company
Public Service Electric and Gas
Delta Airlines, Inc.
Litton Industries, Inc.
International Business Machines
The Southern Company
Teledyne, Inc.
Jim Walter Corporation

to the rest of the sample and are diversified by industry and regulatory agency. Attempts to infer systematic differences between these 15 holdouts and the rest of the sample did not yield any significant results.

The results serve as a reminder that organizations are embedded in social networks (Granovetter, 1985), what DiMaggio and Powell (1983) call organizational fields. Organizational outcomes are affected by the actions at the level of the institutional environment, not by firm-level characteristics alone. This is illustrated graphically by the power of institutional explanations for changes in financial reporting practices at the Fortune 200. Current models of financial reporting practice stress the focal firm, assuming organization-level rationality (Watts and Zimmerman, 1986). Financial reporting practices are explained as the outcome of a process of consequential choice guided by coherent self-interest at the organization level of analysis. Studies based on these explanations have tended to ignore two factors that are highlighted by the institutional model. First, they have tended to ignore the effects of the social context, even regulatory pronouncements (Salamon and Smith, 1979; Hagerman and Zmijewski, 1979; Zmijewski and Hagerman, 1981; Dhaliwal, Salamon, and Smith, 1982). In the case of the ITC, however, it is clear that the actions of entities at the interorganizational level are significant predictors of financial reporting practices at firms. Second, they have carried the metaphor of choice to the point where no distinction need be made between years when a practice is adopted and years when that practice is maintained. As the support for the institutional imprinting argument demonstrates, however, there can be significant history dependence in choice among accounting standards.

The important conclusions outlined here need to be tempered by other realizations and questions. First, the reliability of these results can be ascertained only by replication. While the study was designed to try to tap into reasonably systematic responses to typical organizational situations, the context is quite narrow. Obviously, extension to other practices and structures will serve to strengthen the conclusions. In particular, the relations not demonstrated prior to this study need to be interpreted cautiously. For this reason, the support for

the extension of imprinting arguments to an institutional imprinting argument might be regarded as somewhat more tenuous than other findings. Similarly, the relation between turnover in top management and changes that conform to prevailing practices also might be seen as more tentative.

Implications for Institutional Theory

The conclusion that significant effects on the behaviors of firms come from decisions by entities at the level of the institutional environment suggests the need for a comprehensive theory of change at that level. As Scott (1987:508) observed: "Shifting levels of analysis, institutional theorists can usefully inquire not only into ways in which institutional features shape organizational structures but also can examine the determinants of institutional systems themselves." In the ensuing discussion, the nation-state and professionals are cited as two important influences on institutional systems. Both the nation-state, in the form of various regulatory agencies, and professionals, in the form of the certified public accounting profession and the Big Eight firms, are important in the determination of generally accepted accounting principles. In addition, the theory of change suggested by the empirical evidence gathered here focuses attention on a theoretical conundrum in Meyer and Rowan's (1977) original formulation of institutional theory. One resolution of this conundrum, suggested below, is to include individual organizations and their constituencies among the important agents in the evolution of financial reporting standards.

Early in the description of rational myths, Meyer and Rowan (1977:344) stated that they are "in some measure beyond the discretion of any individual participant or organization." The conundrum arises shortly after this statement, when Meyer and Rowan (1977: 348) admit that "powerful organizations attempt to build their goals and procedures directly into society as institutional rules." The argument offered here is that there are three compelling reasons to stress the second of these statements rather than the first when discussing determinants of institutional change: First, while discretion may be limited for many individuals and organizations in the short run, it is not limited for all individuals and organizations in the long run; the history of change to accounting pronouncements on the FTM certainly attests to this. Second, emphasizing the powerlessness of organizations in the determination of generally accepted accounting principles is a reification of socially constructed reality that ignores Berger and Luckmann's (1967) admonition: Socially constructed reality is a human product, however, massive, external, and objective it may appear. Third, it assumes an atomistic distribution of power over the production of social information that is not empirically plausible (Perrow, 1986). Thus, while generally accepted accounting principles, as a rational myth, may be beyond the discretion of relatively small, peripheral organizations or beyond the discretion of any social actors in the short run, a theory of change at the level of institutional environments must recognize explicitly the power of large firms. In the long run, these firms have important inputs into the rational myths that govern formal organization. Accepting that organizations can have powerful impacts on institutional environments suggests adding powerful organizations and

their constituencies to the nation-state and professionals in modelling the evolution of the rational myths embedded in generally accepted accounting principles.

Telling the story of accounting for the ITC in terms of this model, which suggests the three institutionalized actors who will have direct effects on the content of generally accepted accounting principles, is enlightening. Although certified public accountants predominated at the APB, the representatives of the Big Eight on the board split over the requirement that all firms use the DM. This was due, at least in part, to tremendous resistance among large firms to the APB's recommendation. These organizations and the members of the Big Eight opposed to the requirement lobbied the SEC to prevent enforcement of the DM requirement. After considerable controversy and some delay, the SEC waffled. It did not give full support to either position: Its pronouncement allowed some flow-through but required 52 percent of the credit to be deferred. Two years of controversy and confusion followed, with generally accepted accounting principles as defined by the APB and the SEC differing. The Revenue Act of 1964 increased the ITC and eliminated the provision that did not allow for depreciation of an amount of the investment equal to the credit. At this point, the SEC, with the support of the administration, decided to allow for full expensing of the credit. The APB saw the handwriting on the wall and issued Pronouncement #4; the new rules kept the DM as the preferred practice but allowed either FTM or DM as part of generally accepted accounting principles. At this point, there was a rapid stampede to adopt the FTM, and, from this point forward, the FTM was the prevailing practice among the Fortune 200.

This summary of the evolution of the institutional environment demonstrates that it changed in response to actions by three groups of interacting social actors: the accounting profession, the nation-state, and individual organizations. The story of the ITC also suggests that three simple models of dominance of the institutional environment, dominance by self-interested regulators (Niskanen, 1971), dominance by professionals (Scott, 1983), and dominance by organizations (Peltzman, 1976), are inadequate to explain the outcomes. The reasons for not accepting these simple models can be outlined in terms of the events that occurred. A model of regulatory-body dominance of the institutional environment, a form of the self-interested regulator model, seems inadequate on several counts. First, the degree of fragmented centralization (Meyer and Rowan, 1983) in this institutional environment requires cooperation by several regulators to produce coherence. The complex overlapping of regulatory authority embedded in the SEC, the APB, the Interstate Commerce Commission, and the Federal Power Commission, to name just four relevant entities, limits rationality and cohesiveness. Further, a model of self-interested regulation would require a separate definition of self-interest for each agency. With respect to at least one of these actors, the Accounting Principles Board, a model of the agency as a rational actor (Allison, 1971) seems forced. Closer examination of the decisions made by the board with respect to the ITC suggests the applicability of a model of the agency as an organized anarchy

(Mezias, 1987). The second dominance model, the professional version of capture theory, seems inadequate to explain the outcomes, for at least two reasons. First, if professionals can be modeled as a cohesive group dominating the determination of generally accepted accounting principles, the split of the profession over the FTM prohibition is troubling. Second, if the professionals dominate, it seems unlikely that the professionals who controlled the APB would have backed down in the face of opposition by firms. The last of the dominance models, that organizations capture the regulatory agency and proceed to use it to shape the institutional environment, can be rejected on several grounds. First, if organizations dominate the agency, it seems unlikely that a requirement unpopular with firms would have been passed in the first place. Second, if the firms dominated, they should have been able to reverse the requirement in less than two years. Third, they would not have needed to align the change with a change in tax laws that increased the credit. Finally, if firms dominated, it would not have been necessary to mobilize half of the Big Eight to oppose the requirement and assist firms in having it reversed.

The evidence here suggests an alternative to these simple dominance models; this alternative model suggests that new institutional requirements, such as the move to require firms to use the DM, begin at the interorganizational level of analysis as coincidences of interests among the nation-state, professionals, and individual firms.[7] Given differential access to social resources, the formation of these coincidences of interests probably does not occur without the participation of at least some relatively powerful groups (Olson, 1965). Weaker groups without support of any powerful groups or isolated powerful groups are not likely to prevail in establishing coalitions of coincidence of interest. In addition, when weaker groups do manage to form a coalition, they are likely to be most subject to defection, renegotiation, and free-riding (DiMaggio and Powell, 1990). This is exactly what happened to the APB when it tried to impose a standard that individual firms and a significant part of the accounting profession, represented by half of the Big Eight, did not support. Thus, self-interest and power are key variables in the formation and short-run ability to sustain an institution. The role of power will be important in determining which institutions succeed: In the case of the ITC, a subset of the accounting profession and some large, powerful organizations were able to prevail in their advocacy of the FTM. The power of the elites advocating this income-increasing reporting method should not be underestimated. At the same time, the role of power in the explanation begins to fade with a resolution in the battle over generally accepted accounting principles. The APB's reversal on the FTM signalled the widespread use of that method; hence, it began to become part of the symbolic universe (Berger and Luckmann, 1967), a taken-for-granted reality (Zucker, 1977, 1983, 1988). Firms adopting the FTM after this point justified their decision based on prevailing practice rather than on the change in regulatory requirements, which had been the justification among firms that changed earlier. Once a practice is established, power is not as important as the habitus (Bourdieu, 1977) that leads to organizational com-

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The story elaborated here is consistent with three-person game theory with differential access to resources and differential ability to muster normative aspects of political contests, e.g., economic efficiency. The implicit view is that institutional models, rather than replacing efficiency arguments, contextualize and complement them (Scott, 1987).

pliance with generally accepted accounting principles. This compliance characterized the Fortune 200 even in 1962 and 1963, when they refrained from using the full FTM, while vigorously pursuing reversal of the prohibition of that method.

Perrow (1986: 265–272) warned against the use of an institutional model without explicit consideration of differential power. His admonition can be made more specific in terms of a research agenda for institutional theory. As recent explorations of the institutional perspective have made clear (Scott, 1987; Zucker, 1988), the attention of institutional theorists is turning increasingly to models of change at the interorganizational level of analysis. This study suggests that a theory of longitudinal change at the interorganizational level of analysis may offer the best possibility of integrating the power and institutional perspectives. At the same time, such a theory may offer some hope of reconciling and integrating some of the major points of theoretical divergence within institutional theory. For example, the points of divergence discussed by Zucker (1988: xiv) can be seen as illustrations of how institutional processes and theories differ according to whether they are addressing periods of change or stability. In addition, the somewhat contradictory statements cited from Meyer and Rowan (1977) can be resolved within this line of reasoning. With respect to compliance with stable, established institutional norms, even large, powerful organizations probably have little discretion under most circumstances. However, at times of institutional change, when the content of rational myths is determined or altered, powerful organized actors have important effects.

The promise of institutional theory is borne out further by this study, with two principal implications for future research. First, calling attention to the interorganizational level of analysis and the social structure in which firm actions are embedded is justified by the empirical evidence gathered here. Institutional environments provide a context for action that should be studied so that behaviors by large, for-profit organizations can be understood more fully. Better understanding of how institutional environments contextualize and shape the rational pursuit of profit by organizations should be a primary goal of future research. Second, this study suggests that the determination of generally accepted accounting principles offers a rich empirical setting for the study of longitudinal change in institutional environments. It points to the need for a comprehensive theory of the effects of institutional environments that would suggest how multiple institutional factors interact and change over time. The institutional explanation for the widespread adoption of a financial reporting practice is an interesting beginning to this comprehensive theory. Along these lines, the need for a theory of fragmented authority that describes how government bodies and the accounting profession interact with each other and with the organizations over which they exercise authority is highlighted by this study (Meyer and Scott, 1983). Further work in this institutional setting, as well as others, is required to improve our understanding of institutional effects on formal organization.

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