

Comparing Public and Private Sector Decision-Making Practices

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ABSTRACT

Public and private sector decision making is studied with an experiment. The study compares decision making in a tax-supported general purpose governmental agency with that done by a business firm selling to a market, using a simulation to capture differences in the preferences and practices of mid-level managers working in the two sectors. The simulation calls for participating managers to assess the risk and prospect of adopting budgets tailored to match each sector. A cognitive culture that stresses analysis, speculation, bargaining, or networking is employed to fashion a budget appropriate for a public and a private sector organization, each with a controversial and a noncontroversial budget amount. The literature on public/private differences was consulted to make predictions, suggesting that public sector managers would favor bargaining and networking and private sector managers would favor analysis and speculation. The cognitive style literature suggests that managers favor budgets constructed with an approach that is consistent with their preferred cognitive style and see less risk in the choice, except in a public setting where risk would be unaffected. The study finds that private sector managers are more apt to support budget decisions made with analysis and less likely to support them when bargaining is applied. Public sector managers are less likely to support budget decisions backed by analysis and more likely to support those that are derived from bargaining with agency people.

INTRODUCTION

Rodriguez and Hickson (1995) and Schwenk (1990) examine decisions in public and private organizations and report notable differences. Private, for-profit organizations have smoother decision-making processes. Public organizations experience more turbulence, interruptions, recycles, and conflict (e.g., Perry and Rainey 1988; Rainey, Backoff, and Levine 1976; Ring and Perry 1985). Scholars attribute these differences to the roles that public and private organizations play in our society. Private sector organizations sell products or services to consumers in markets to create wealth for shareholders. The typical general purpose, tax-supported governmental agency, such as a state department of mental health, contracts for services and collects information about the needs of people that call

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for a public response. These distinct roles suggest vastly different kinds of expectations and accountability that may call for different decision-making practices. Decision-making research seldom accounts for these differences, so generalizing from one sector to another is suspect (Papadakis and Barwise 1998).

This research effort explores some of these differences by comparing how mid-level managers in each sector view the prospects of approval and the risk in simulated budget decisions. Explanatory variables include *sector*, *budgeting practices*, the *cognitive makeup* of the participant, and level of *controversy*. The budgeting practices draw on the modes of understanding found in four kinds of decision-making cultures and are applied to controversial and noncontroversial budget requests. Statistical interactions of the explanatory variables are used to examine the influence of the practices thought to be consistent with those favored by typical public and private organizations. Managers with at least five years' experience who were currently working in the public or the private sector participated in the study. Answers for two questions were sought. First, do experienced managers in the public and private sectors have different views of *risk* and *adoption* when similar decision practices are used? Second, are managers in the two sectors equally likely to act, and do they see the same level of risk in acting? The findings suggest problems and prospects in the oft-repeated call for public sector organizations to adopt private sector practices.

SECTOR, CULTURE-BASED DECISION MAKING, AND CONTROVERSY

As noted by Papadakis and Barwise (1998), the influence of context on decision making is largely unexplored. Contextual influences arise from an organization's role in a society, such as being an instrument of public policy or a means for creating wealth for shareholders. This role dictates the governance arrangements that are needed to exercise control for different types of owners, such as elected officials or shareholders. Yamamoto (1997), Lioukas, Bowrantas, and Papadakis (1993), and Mallory et al. (1983) report that the approach to governance leads managers in each sector to experience different demands and expectations, which are apt to influence their decision making. Each sector's role calls for dealing with users and clients in different ways, which may also influence how decisions are made (Chaffee 1985; Fredrickson 1985; Hitt, Ireland, and Hoskisson 2003; Mintzberg 1973; Pettigrew 1990).

A "public-private difference" stream of research, begun by Rainey, Backoff, and Levine (1976), initiated a study of the roles that public and private organizations have in our society. Using this framework, researchers have found that the demands placed on public and private organizations vary to the extent that different practices are recommended for each sector (Blumenthal 1983; Dahl and Lindblom 1953; Nutt and Backoff 1993; Perry and Rainey 1988; Ring and Perry 1985). Organizations with public features are seen as being constrained in ways that limit what they can do when making strategic choices. Discussions about a choice in a public organization are subject to disclosure. Legislative mandates constrain budgets, which limits or even prohibits public sector leaders from spending money to collect information for decision making. Agency heads must report to people in oversight roles who are often political appointees and prone to leaking discussions. This limits the type of planning in which preliminary lines of inquiry are explored to search for ideas. These and other influences make decision making in public organizations different from that in a for-profit organization. Empirical studies of

decision making that account for public-private differences have considered support systems (Bretschneider 1990), the extent of participation and smoothness of a decision process (Bryson, Bromiley, and Jung 1990; Coursey and Bozeman 1990; Hickson et al. 1986), and tactics (Nutt 1999), but not how a manager's preferences couple with sector demands to influence decisions. Failing to account for these public-private differences may have led researchers away from important distinctions, producing inaccurate generalizations about decision-making practices.

There are many federal, state, and local agencies with countless variations and nuances in how they operate. To avoid blurring key distinctions, special cases, such as public agencies that rely solely on fees, are not considered in this research. Instead, the research concentrates on the general purpose government agency that typifies what Bozeman (1987) calls "tax-supported" and represents the bulk of public sector agencies at all levels of our society. My aim is to compare decision making in a tax-supported public agency with that found in a private sector organization that sells to a market. This follows the experimental tradition of posing and testing sharp contrasts in experimental efforts. Watered-down differences in public and private organizations, denoting a host of infrequently occurring exceptions, muddy the water and hide important distinctions. The approach in this study will narrow the generalizations from the research to the extent that nuanced agencies are excluded. However, a great many agencies correspond to the features noted, so the findings should have widespread interest. An exploration of factors that give rise to public-private differences delineated in this way follows.

Sector Differences

A variety of schemes has been used to distinguish public and private organizations (e.g., Allison 1984; Bozeman 1987; Neustadt 1979; Perry and Rainey 1988; Ring and Perry 1985). The most widely accepted classification, developed by Rainey, Backoff, and Levine (1976) and updated by Rainey (1989) and by Nutt and Backoff (1993), uses environmental, transactional, and process factors to highlight differences. These factors and the distinctions they identify have been further adapted in this article to account for strategic decision making. The postulated effects appear in table 1. Moving from left to right in the table shows how the postulated impacts of market, cooperation/competition, data availability, constraints, political influence, scrutiny, ownership, goals, and authority place limits on decision making in public organizations, compared to the typical private sector organization. To underwrite their operations public organizations are more dependent on tax dollars, which are provided by an oversight body such as a legislature. This dependency declines when revenues depend more on fees paid by customers or clients. As the proportion of the operating funds that stem from tax dollars increases, the organization takes on more and more public sector features (Bozeman 1987; Coursey and Bozeman 1990).

"Environmental" factors arise external to an organization. They include markets, cooperation and competition, data availability, and political influence. In a private organization the buying behavior of people suggests effective organizational actions. A public organization lacks a market to provide revenues. Instead, operating funds come from one or more oversight bodies that allocate tax dollars to the agency or set reimbursement rules for the services provided (Drucker 1973). Appropriations and fees are divorced from market mechanisms. Critics contend this allows public organizations to

Table 1
Uncovering Alternatives in Public, Private, and Third Sector Organizations

Factors	Sector		Impact on Strategic Decision Making
	Private Organizations	Public Organizations	
Environmental			
Market	The buying behavior of people defines the market	Oversight bodies make up the market	Decision makers are obliged to seek out views of people in oversight bodies in public sector organizations.
Cooperation vs. Competition	Competition among organizations that offer a given service	Collaboration among organizations that offer a given service expected	Competition shifts to collaboration in a public organization, so key players must have a role in suggesting alternatives.
Data Availability	Performance and intelligence data available	Performance and intelligence data limited	Limited availability of performance and intelligence data declines in public organizations.
Constraints	Autonomy and flexibility limited only by law and the need for internal consensus	Mandates and obligations limit autonomy and flexibility	The need for consensus increases in public organizations.
Political Influence	Political influence indirect and internal	Political influence stems from authority network and from users	More time is required to balance user needs with demands of oversight bodies in a public organization.
Transactional			
Scrutiny	Can sequester the development of ideas	Cannot sequester the development of ideas	Alternatives are more apt to be disclosed as they are identified in a public organization.
Ownership	Ownership vested in stockholders whose interests are interpreted using financial indicators	Citizens act as owners and impose their expectations about organization's activities and the conduct of these activities	More people are involved in decision making in a public organization.
Organizational Process			
Goals	Goals often clear and agreed upon; efficiency dominant concern	Goals shifting, complex, conflict-ridden, and difficult to specify; equity dominant concern	Clarity about the desirability of an alternative declines, increasing the time to make decisions in a public organization.
Authority Limits	Power vested in authority figures who have the authority to search	Stakeholders beyond the authority leaders' control influence the search for ideas	Search time and resources are more limited in a public organization.

Note: Adapted from Nutt and Backoff (1993).

duck pressures to improve efficiency and effectiveness. Budget allocations and allowable charges for services rendered often follow historical precedent (Dahl and Lindblom 1953; Nutt 1982). This suggests that public sector decision makers must determine the expectations of people who serve in authority networks, as alternatives are being uncovered (see table 1).

Public organizations are prohibited from competing for customers. The service area is stipulated and not grown by marketing. Public sector organizations are also expected to collaborate with other organizations that offer similar services and not compete with them for resources. Competition would create a duplication of services, universally regarded as undesirable. As a result, public sector strategic decision makers attempt to enhance cooperation and collaboration by giving many of the key players an opportunity to suggest alternatives. This situation is quite different in a private sector organization. Private sector organizations hold ideas close and experience few demands to disclose or collaborate as they uncover alternatives.

In public organizations performance and intelligence data are often missing and hard to collect. Many public organizations are prohibited from diverting funds from service delivery to collect data on emerging trends in that service delivery. Even when information collection is possible, professionals are reluctant to take resources from service provision to collect such data. In addition, what constitutes good performance can be augmentable. This is compounded by ambiguous signals in the environment of public organizations. As a result, strategic decisions are made with comparatively little data support, which limits knowledge about useful alternatives. This situation is markedly different in private sector organizations. The private sector organization can spend considerable sums to acquire data about technology and other developments that may offer useful ideas. In contrast, decision makers in public organizations have less clarity about options when making a strategic decision.

The external environment of a public organization is littered with political considerations. The views of opinion leaders, outright manipulation by legislators and interest groups, and opposition to an agency's prerogatives are more important than economic issues, which are crucial for private organizations (Levine et al. 1975). Disagreements, reciprocity, and quid pro quos can occur at any time and, within limits, are permissible ingredients in public decisions. Bargaining is required to find the permissible arenas of action. How things are viewed and understood by stakeholders holds more salience than the accuracy of claims. The meaning of a claim is derived from opinions as well as facts. If economic reasoning, such as efficiency, is applied, it must be preceded by a decision to deal with efficiency questions, which often has political undertones. The prospect of influence prompts public organizations to build buffers in the form of coalitions, advisory groups, and interagency coordinating bodies to help with negotiations. Private organizations need far fewer buffers. Thus, decision makers in public organizations need more time to find ways to balance users' needs with the demands of those who must be catered to, such as oversight bodies.

Public organizations develop numerous and complex transactions with key entities in their environment to deal with the environmental factors. These relationships are mediated by scrutiny and ownership factors.

The prospect of scrutiny increases as decision making moves from private to public organizations (Millet 1966; Stahl 1971). Most public organizations do not have the luxury of sequestering their strategic decision making. "Sunshine laws" force the conduct of

business into the open, requiring organizations to make decisions in front of hostile interest groups or even with the media present. Mechanisms of accountability and oversight make all actions in public organizations, even contingency plans or hypothetical scenarios, subject to review and interpretation by outsiders. Blumenthal's (1983) "fish bowl management" aptly describes the way in which public organizations must function to make strategic decisions. This suggests an increase in publicness brings with it the disclosure of an alternative, as it is uncovered. Evaluating an alternative as soon as it is identified makes creativity difficult and limits the prospect of innovation (e.g., Nisbett and Ross 1989).

Ubiquitous ownership also distinguishes public from private organizations (Wamsley and Zald 1973). Everyone has an ownership stake in a public organization. Strategic decisions in a ubiquitously owned entity are very different from those made in private organizations, in which the owners are stockholders or families. In public organizations the strategic decision maker must appreciate the desires and expectations in the delivery of service from service recipients and the tax-paying public. Cumbersome mechanisms are needed to deal with the logistics of consulting with the citizen stakeholder. Devices such as public meetings, task forces, and public announcements are used to determine expectations and refine understandings about what the public organization should do and how it should act. As a result, strategic decisions in public organizations prompt a complex web of transactions. The complications posed by inter- and intraorganizational coordination, in which agencies or work-units stake out their claims for domains of action, often creates inertia. This calls for widespread involvement in strategic decisions.

Key organizational processes that distinguish public and private organizations stem from goals and authority limits. Public organizations have multiple goals, which can be vague, controversial, or both (Baker 1969; Bozeman 1984). There is no "bottom line" as a proxy for success in the typical public organization. Instead, the demands made by interest groups, flux in missions, and manipulation by important stakeholders and third parties create a complex and confusing set of expectations, which often conflict. Equity in dealing with clients and providing services is more important than efficiency in such organizations. Using efficiency and its cost-reduction proxy become less useful as equity concerns increase in importance. Goal ambiguity makes vital performance outcomes unclear for public sector organizations. The more public the organization, as given by its dependence on public monies as opposed to fees for service, the greater the difficulty (Levine et al. 1975). Vague goals and equity criteria cloud the merits of alternatives, which makes decisions inefficient and political in both sectors.

Public sector decision makers have weaker power bases and lack the funds to make investments that reshape systems they manage, compared to private sector managers (Bozeman 1987). Autonomy and flexibility is generally lower in public organizations. For instance, a welfare administrator may know how to improve fund disbursement efficiency but have no way to initiate useful changes without petitioning a legislative body for funding to develop the idea. As a result, the investments made to uncover alternatives in public sector organizations are far lower than those found in private sector organizations.

Decision-Making Practices and Controversy

Culture, borrowed loosely from anthropology, is used by researchers to characterize how things are done in an organization. Morey and Luthans (1985) see culture as made up of

a set of beliefs, values, or ideas that are not innate but are rather learned and shared. Cultures, in their view, transfer and cumulate, create referents, and adapt to changing times and emergent needs. The attributes of culture are thought to mark off a group and show how it is distinct from other groups. These attributes have an enduring quality that can be observed in the rituals, ceremonies, and rites used by organizations (Trice and Beyer 1984).

Many treat culture holistically, seeking to capture key aspects of the organization. Examples include federated organizations, such as for-profit multihospital systems, and franchises, such as McDonalds. The distinctive features in each image are suggestive of a culture. Kets De Vries and Miller (1986) use the holistic notion of culture to identify neurotic styles of management that result in various types of dysfunctional cultures, such as paranoid or neurotic, and suggest manifestations for correction. Personnel practices (Trice, Belasco, and Alutto 1969), managerial successions (Gephardt 1978), the impetus for strategic change (Clark 1972), codes and behavior (Gregory 1983), and the origin of accounting rules (Boland 1982) have been classified in this way. Weick (1979) and Pondy (1978) contend that culture has symbolic significance for organizations and reveals ideologies that are incorporated into decision making.

Cultural research has concentrated on the compelling imagery evoked by the Catholic Church or the pink Cadillac used by Mary Kay cosmetics, discounting the measurement of effects that can be attributed to culture. As Trice and Beyer (1984) point out, culture can and should be studied from an outcome-consequence perspective. Instead, much of this literature is filled with platitudes, untested prescriptions, and dubious assertions. For instance, Ouchi (1981) contends that strong cultures produce strong organizations and, by inference, high-performing ones. According to Peters and Waterman (1982) and Peters (1995), organizations that lack a strong culture do not act decisively to foster change. The databases from which such inferences have emerged are largely anecdotal, derived from biographies, speeches, and documents and not from careful rigorous studies. Jelinek, Smirchich, and Kirch (1983) and others question such evidence and call for empirical studies that link culture with success.

Empirical studies pose two dilemmas. First, the definition of culture is often situation specific, such as the IBM look or the accountant's worldview, which makes it hard to pinpoint causes and consequences. For instance, has IBM's success been due to the IBM look? What makes up this look? Should others emulate it? More clarity about what others are to emulate is needed to make such a prediction. Second, effects must be documented. If a culture can be shown to have consequences for an organization, it is important to document them. Defining a culture with sufficient clarity so that it can be emulated by others is missing in organizational culture research. One way around such dilemmas is to define culture narrowly in order to capture an aspect of its effects for others to build on. In this study I focus on how cognitive preferences make up one feature of an organizational culture that has allowed researchers to make predictions.

Mitroff and Kilmann (1975) suggest how an individual's cognitive makeup indicates an aspect of culture. Cognitive beliefs have a strong influence on preferences, as shown by studies that have linked peoples' cognitive makeup with descriptions of ideal organizations and ideal planning approaches (Nutt 1993). A striking agreement between these preferences and the individuals' cognitive makeup were observed in several studies (e.g., Dandridge, Mitroff, and Joyce 1980; Keen and Scott-Morton 1978). Cognitive makeup identifies individual and, by inference, group values about preferred practices. Group values emerge through work environments that cater to a particular cognitive style. For

example, the U.S. Bureau of the Census and the Internal Revenue Service (IRS) weed out people with styles that are incompatible with the analytical style that dominates these organizations. This self-selection effect, in which people gravitate toward organizations with a group values that are compatible with their style, is documented in a number of studies (e.g., Morgan 1986; Pondy and Mitroff 1979; Smircich 1983). To extend this line of reasoning, decision makers in public and private organizations prefer to work in settings that employ practices that are consistent with their values and avoid work settings that embrace practices that are incompatible with their preferred way of doing things. This self-selection effect offers a way to study the preferred practices of a work environment.

Measuring Decision-Making Preferences

The Myers-Briggs type indicator (MBTI) was developed by Briggs (Myers and Myers 1980) to measure Jung's ([1923] 1970) theory of psychological type. In this instrument, categories have been created that classify people according to their cognitive preferences. According to Buros (1978), Keen and Bronsema (1981), and Tzeng et al. (1983), the MBTI has conceptual, construct, and predictive validity, making it a rich psychological measure of cognitive makeup.

Two dimensions of the MBTI link to decision making. They determine an individual's preference for types of data and ways to process the data to reach a decision. According to Jung, information acquisition stresses either sensing or intuition. A sensing (S) individual prefers hard data that deals in specifics, whereas the intuitive (N) individual looks for information that describes hypothetical possibilities and accepts qualitative and subjective information. The sensing person asks, "what is," while the intuitive looks for "what might be." Thinking and feeling approaches are used to reach a decision. Thinking (T) stresses logic and formal modes of reasoning, and feeling (F) considers the decision in personal terms, the personal stakes of people affected, and hence values are used as the criteria. Thinking generalizes, and feeling personalizes.

Individual Preferences

People prefer one of the data types and data processing approaches. This leads to four cognitive styles: ST (sensation-thinking), NT (intuition-thinking), SF (sensation-feeling), and NF (intuition-feeling). These cognitive styles create decision-making styles that are suggestive of different cultures. Many researchers have used these two dimensions to classify the decision-making styles preferred by managers (e.g., Blaylock and Rees 1984; Churchman 1971; Mason and Mitroff 1973; and Nutt 1993). This body of work has made extensions of Jungian theory that suggest how managers with each style prefer to make decisions.

Group Preferences

Organizations and work groups can take on one of these styles of decision making as well, as suggested by the body of work on how people gravitate toward a work environment that is compatible with their preferences (Nutt 1989, 1993). Following this line of reasoning, dominant ST values prompt *analytic* decision-making cultures, such as the U.S. Bureau of the Census or the IRS. Here, careful analysis with hard data would be stressed, suggesting that organizational standard operating procedures (SOP's) would call for logic and analytical approaches. An NT style points to a *speculative* culture, such as Shell's use of scenarios to anticipate future events. The NT approach calls for analysis but acquires

broader information than an ST approach seeks. A “what if” analysis looks to external factors, such as demand or utilization, to make a decision and suggests an NT decision culture. SF preferences suggest a *consultative* culture, such as Gore and Associates and Levi Strauss. A SF decision culture advocates extensive interaction with groups of people, asking representative bodies to sort and interpret sensory data. The values here call for widespread involvement at all levels of an organization. An NF style calls for one-on-one *networking* with key people, typically influential insiders and outsiders, looking for preferences, beliefs, and expectations about what to do. An NF decision-making culture caters to key players, and the organizations and work centers they represent, and attempts to reconcile conflicting interpretations and expectations. The NF believes that relationships must be built with powerful individuals who influence or are influenced by important decisions using networking approaches, such as mutual adjustment (Lindblom 1965).

Controversy

Making big commitments is apt to be controversial (Slovic, Fischhoff, and Lichtenstein 1977). Research shows that options that call for a significant jump in resources, well beyond the norms set by historical increases, would make a decision seem controversial. Options with resource requirements similar to those that have been made historically would lack controversy.

Developing Hypotheses

Factors that influence strategic decision making in public and private sector organizations, shown in the last column of table 1, are used to fashion hypotheses. These factors suggest preferences and practices that decision makers in each sector are apt to favor.

Public Organizations

Managers in public organizations face constraints that arise from limitations imposed by their external environment, from transitional expectations, and from required features of their organizational processes that influence how they must make strategic decisions. The market in a public sector organization is given by the views of oversight bodies that disperse tax revenues. Public sector decision makers seek out and reconcile these views to make strategic decisions. Collaboration with oversight bodies often produces suggestions that become favored alternatives. Public sector managers are expected to use these ideas, which can distort and limit their search. In addition, decision makers in public organizations often lack information to fend off ideas they believe to be inappropriate. The power of people in oversight bodies, coupled with this lack of information, limit what alternatives can be considered. The limited autonomy of public sector decision makers and the political influence that can be marshaled by users and stakeholders make it difficult to evaluate ideas thrust on them.

Transactional expectations for a public organization bring scrutiny in which decision makers are expected to disclose what they are considering. This can force alternatives to be made public as they are discovered. Disclosure prompts supporters and detractors to look for evidence that describes the fitness of an idea, leading to premature evaluation. Evaluating alternatives, as they are uncovered, is universally regarded as bad practice because early evaluations stifle innovation and limit the range of ideas considered (e.g., Nisbett and Ross 1989). Broad ownership is a second feature inherent in the transactions of

a public organization. Public sector decisions have many stakeholders who believe they have a right to participate in the process of making a decision. The decision-making approach must be able to cope with ubiquitous stakeholders, which gives a broad range of people a voice in what will be done (Freeman 1984).

Goals and authority limits also influence the way strategic decisions are made in public sector organizations. Goals are often vague in public organizations and stress notions of equity. When there is little clarity about what is wanted as a result, it is difficult to rule out suggestions from oversight bodies, users, or any other source. Authority limits make it hard to find the time and money required assess these ideas. These limitations make quantitative approaches difficult, if not impossible to carry out. The pressures for involvement and the need for negotiation push public organizations toward a consultative or networking-like decision culture in which bargaining and negotiation are stressed. People with these preferences are more apt to stay; those with preferences for analysis or speculative practices are more apt to leave. Such a turnover would further consolidate the dominant practice-based decision culture of bargaining and networking. The difficulties of acquiring diagnostic performance data, funding analysis, and goal ambiguity make analysis difficult to carry out. When analysis is not used, there is little history and thus limited understanding of ways to think about risk in strategic decisions. When risk is not quantified, it is often understated (Nutt 2002; Tversky and Kahneman 1973). Because the public sector organization must conduct its business in full view of critics and others in a watchdog role, such as the media, its decision makers avoid courses of action that appear to be controversial. This would tend to make public sector decision makers action averse, if not risk sensitive. This suggests that:

- H₁ Decision makers in public organizations are:
 - H_{1a} more apt to use consultative or networking practices to make decisions;
 - H_{1b} more inclined to act when consultative or networking practices are used and view those practices as less risky; and
 - H_{1c} less apt to make decisions using analytical and speculative practices, seeing them as more risky.

- H₂ Decision makers in public organizations are less inclined to act if a decision seems controversial.

Private Organizations

Decision makers in private sector organizations have the latitude as well as the resources to use analysis. Furthermore, competitive forces make it essential to show due diligence with the trappings of analysis before taking action. Performance data availability also makes analysis possible. Accountability requires that analysis comes to terms with uncertainty by making a risk assessment of options before taking action (Nutt 2002). The advantage of being a first mover in a market calls for the private sector decision maker to hide the impending decision as he or she balances risk with the size of the payoff. This suggests that private sector decision makers are more action-oriented *and* more sensitive to risk than their public sector counterparts. The private organization is not as open to scrutiny as a public organization, which makes it easier to keep ideas under wraps as decision makers commission an analysis and wait for answers (Nutt 2002). This suggests that decision

makers in private organizations will be drawn to decision practices that call for analysis. There is less need to mediate with people in key power centers. Decision makers face fewer demands to appease such groups, so they have less need to bargain and to network. This suggests that:

- H₃ Decision makers in private organizations are:
 - H_{3a} more apt to use analytic and speculative practices;
 - H_{3b} more inclined to act when analytic and speculative practices are used and see less risk in decisions made this way; and
 - H_{3c} less inclined to act when consultation and networking are used and see more risk in decisions made in this manner.
- H₄ Decision makers in private organizations are less adverse to controversial decisions than their public sector counterparts.
- H₅ Decision makers in public organizations see less risk in their choices than their private sector counterparts when faced with comparable decisions.

A test of these hypotheses requires a study of comparable choices made by decision makers in public and private sector settings.

METHODS

The influence of sector on decision making can be investigated either with a laboratory study or with an investigation of actual decisions. A laboratory study with students was ruled out because such studies lack external validity. Students are unable to draw on their experience to role-play strategic decision making in an organization. This made the participation of experienced managers seem essential. However, no single organization or organizations locally available could provide a sufficiently rich cross section of views. A random sample of organizations is not feasible because there is no way to ensure that selected organizations will participate. Nonrespondents in such studies are usually very high, which poses threats to internal validity. A simulation administered under controlled conditions is used here because it offers internal validity and some external validity, as data can be collected from practicing managers. The artificiality of the task and the extent to which participants understand the role they are to play are the key limitations. These are overcome, to some extent, if plausible scenarios can be constructed for the simulation and if the participants are able to visualize the managerial actions they will be asked to evaluate. A simulation can systematically vary controversy and culture-based practices and describe a choice that an experienced manager would have encountered. In this section, the construction of the simulated decision is described, followed by a discussion of participant selection and experimental controls.

The Simulation

A budgeting decision was selected for the simulation because managers in public and private organizations periodically consider budget proposals from operating units that have strategic importance. Participants were asked to play the role of the chief executive officer,

making budgeting decisions for several operating units. According to by Mintzberg, Raisinghani, and Theoret (1976) and Hickson et al. (1986), a strategic decision has lasting effects and high visibility. The decisions in the scenarios appear to meet this test. To control for issues extraneous to the study, the operating units were described as having similar needs, measured by factors such as the age of infrastructure and demand.

A state department of natural resources (DNR) and an automotive company were selected as the organizational settings for the simulation. A DNR is one of the few public organizations that has a geographically dispersed structure with semiautonomous units that could have evolved differently. Different cultures are plausible in each of the many DNR districts found in a state. In addition, a DNR district could have budget needs that differ from other districts due to changes in service usage and local initiatives to create parks and the like. An auto company was selected as the private sector organization because growth by acquisition is a possibility. Practice differences stemming from the independent evolution of the acquired business would be plausible. Each serves a local region so shifts in budgets to capture new business, which could crop up in a local economy, are plausible as well. Some of these local economies can be healthier than others are, making different requests a possibility. Industry-specific information was added to make the scenarios seem realistic.

Simulation Factors

Controversy and culture-based decision practices were included in the simulation to determine how each interacts with sector. The level of controversy was defined by the size of the budget that was forecasted. A 3 percent increase represented inflation equalization, and a 20 percent increase marked a substantial jump. The 20 percent figure was identified by participants in a pretest as large and, thus, controversial. They saw this as pumping substantially more funds into a district or a division. A substantial increase is apt to draw attention to a district or division and would be subject to more scrutiny by oversight bodies or higher-ups. The 3 percent increase was identified by the pretest participants as inflation-driven, and thus noncontroversial, and less apt to bring an increased level of scrutiny.

Morey and Luthans (1985) call for the use of “cultural scenes” in a scenario to capture the “insider language” that would be salient to a participant. Varying key features in this language provides a way to simulate each culture. Following this, decision practices are defined in the scenarios in terms of decision styles, as shown in table 2. These descriptions were drawn from ideas offered by Mason and Mitroff (1973), Mitroff and Kilmann (1978), and Robey and Taggart (1983). These factors are grouped into two categories: organizational climate and budget approach (table 2). Appraisal, structure, goals, and leadership features drawn from these sources depict the culture in which each forecast was made and the cognitive preferences in each forecast. Using Jungian concepts, performance appraisal in an ST approach would stress objective measures of cost centers. To assess performance in an NF approach, department heads would be compared against the NF manager’s view of their potential. SF managers would use objective measures of subordinates, and NT managers would compare the department to impersonal norms depicting its potential. In a performance appraisal, then, a manager with ST preferences is predicted to be drawn to indicators such as volume and costs; the NT manager would compare margin (book charge over cost) with well-operated districts/divisions; the NF manager would compare the district’s/division’s ability to meet the expectations set for the department head; and the SF manager might consider people-based measures, such as personnel turnover and absenteeism in the district or division. Structure, goals, and

Table 2
Culture-Based Budgeting Practices and Other Features of the Cases

	Analytic ST	Speculative NT	Consultative SF	Networking NF
Organizational Climate				
Preferred Structure	Centralized with well-defined authority in each position	Centralized with formal liaison to key groups	Decentralized with clear-cut work roles and rules	Decentralized with liaison to key groups by trusted associates
Leadership Approach	Defining goals and pushing for results	Leadership by example	Attention to individual needs and building rapport	Building access to stakeholders with whom they must network
Goal	Stay in budget	Outperform the other areas (more service at less cost)	High-quality service to the community of users	Improved division/department image and perceived stature
Budget Approach				
Forecasting Method	Box-Jenkins exponential smoothing model that forecasts using data in the information system	Computer-based model used to pose what-if questions using data in the information system	Predictions by knowledgeable subordinates after examining data in the information system	Estimates by trusted colleagues, experienced in managing the district or division's programs, who interpret data in the information system
Validation Procedure	Checking details of calculations	Demand projections linked to economic trends and use patterns	Agreement among department heads	Adjusting information using personal experience
Estimate	Single value	Range	Single value	Range

Table 3
Design of Scenarios

Budget Increase	Analytic ST	Speculative NT	Consultative SF	Networking NF
3% (Inflation equalization)	Division or District 1	Division or District 3	Division or District 5	Division or District 7
20% (Substantial increase)	Division or District 2	Division or District 4	Division or District 6	Division or District 8

Note: NT and NF state forecasts as a range of $\pm 2\%$ of forecast. ST and SF state forecast as a single value at the midpoint of the range.

leadership are also identified to provide more detail. In an NF decision culture, structure would be decentralized, operating through delegation; goals would be articulated by service to customers/clients; and managers would engage in networking behaviors. An NT decision culture would be more centralized; it would stress liaisons to important external agents and stress goals that seek a comparative edge over competitors or peer organizations; and it would call for leadership by demonstrating one’s capability to act. The ST decision culture would be centralized with clear lines of authority, and it would stress goals that call for demonstrable returns, such as return on investment (ROI), and employ leaders who push for results. The SF decision culture would be decentralized with clear-cut personnel policies about roles and rules for people; it would call for meeting the needs of users as goals; and it would cultivate strong interpersonal ties as the preferred leadership approach.

For budgeting, cognitive differences may also crop up in preferences for information gathering and forecast validation. A decision culture can emerge around the information gathering and validation practices institutionalized by an organization. In an NF decision culture, understanding stems from information provided by the estimates of trusted colleagues who are familiar with the forecast to be made. Validation occurs when trusted people agree that the forecast has incorporated their personal experience. In an ST decision culture, a formal model (a Box-Jenkins exponential smoothing model) is used to process data from an information system. Validation occurs when the details of these calculations have been checked and found to be accurate. In an SF decision culture, understanding stems from predictions and projections made by knowledgeable subordinates who review available information and note the unique features of this year’s needs. Validation stems from buy in: whether key department heads support the estimate. An NT decision culture derives understanding from posing questions about factors, such as demand or use, that could change the forecast. A forecast is validated when projections stemming from economic trends and user behavior have been incorporated.

Scenario Construction

The high and low forecasted amount and budgeting approaches based on ST, NT, SF, and NF styles were included in the scenarios, creating a 2 × 4 factorial design. All combinations of the two factors are used to define the basic features in the eight budget requests considered by the participants (table 3). The orthogonal nature of the factors in a factorial design eliminates multicollinearity and allows unfettered estimates of each factor’s effect size to be made. The budget requests were summarized as a report that described how each forecast was made, followed by two rating scales. The report shown in Appendix 1 depicts an NF/networking decision culture in a DNR, constructed for District 7 in table 3. Appendix 2 describes the report for an ST/analytical decision culture in an automotive company, drawn for Division 1 in table 3.

Participants and Experimental Controls

Study participants were mid-level managers who were attending executive training programs offered by the author. This has two virtues. First, it ensures that diverse organizations and a broad cross section of viewpoints will be included in the data. Data for the study were drawn from five classes, or cohorts, taken over a five-year time period for managers who worked in firms and public organizations across the United States. Second, experimental control is exercised by having the participating managers make simulated decisions in a classroom environment. This ensures that respondents follow instructions, do not consult with others as they rate the budget proposals, and have the time required to complete the surveys. These precautions allowed the responses to be treated as independent observations. Finally, controlled conditions ensured that questions would be clarified in a consistent manner and allowed for debriefing.

The participants came from organizations across the United States and its possessions. Information was taken from application forms to determine organizational level, gender, age, and experience. Level was defined following the Thompson (1967) classification of executive, managerial, technical core, and staff. Participants who held staff positions or lacked five years' experience were not included in the study. Most participants fell into Thompson's "managerial" category. Few fell into the executive category, so generalizability will be limited to middle managers. While it is preferable to concentrate on top-level managers, few top-level managers attend such sessions, making it impossible to do a statistical analysis. The design asks mid-level participants to role-play as a top manager. This seems reasonable. Most mid-level managers aspire to such a role and are involved with top-level people in the budget process. Gender, age, and experience were found to have no influence on the results and were not considered further in the study. After the deletions, there were 103 private sector participants and 134 public sector participants.

The eight budget requests were distributed to the participants. The private sector and the public sector participants got scenarios tailored to their sector, as shown in appendixes 1 and 2. Participants were told that my purpose was to learn about their views and that there were no right or wrong answers. Participants were asked to role-play the chief executive officer of an organization with several districts/divisions, as described at the top of appendixes 1 and 2. To control for social desirability and related effects, lectures and handouts followed the data collection.

Ratings of the prospect of approval and perceived risk were used to capture participants' evaluations of the eight budget proposals. Both measures are needed because managers who are oriented toward action may or may not see this orientation as risky. Thus, approval and risk provide unique ways to see a decision. The rating scales follow the budget request from each district/division (appendixes 1 and 2). These scales were reversed so that a rater would not mark both scales at the same location. The scale anchors had two purposes. First, the anchors link actions with the scale increments and define the endpoints, giving them an action-related meaning. Defining scale increments in this way gives interval scale properties to the participants' ratings, so parametric statistical methods can be used. Second, the anchors provide a way to link mean values with a type of action. The anchors provide the vehicle to interpret what action would be taken, such as a likely approval.

The managers were asked to review the eight budget requests and indicate their likelihood of approving each budget and its perceived risk. The managers were instructed to check the point on each scale, provided at the bottom of each budget report, that best

represented their views of adoptability and risk. Data were recorded as a value from 0 to 100, in increments of one unit from each scale.

The managers were asked not to review previous ratings as they made their ratings. To make this comparison difficult, the forecasts were put on separate pages. These precautions were taken to try to keep the ratings independent. If an explicit comparison between projects is made, a dependency results. Such a dependency calls for the use of less powerful analytical techniques, which often limit the persuasiveness of the findings.

After the budgets had been rated, the Myers-Briggs instrument MBTI was given to each participant to determine his or her decision style (Myers 1963). Standard MBTI scoring rules were used to classify the respondents as ST, NT, SF, or NF. The breakdown of the participant's MBTI type classifications, by sector, follows: private sector managers (28 ST, 26 NT, 19 SF, and 30 NF, totaling 103) and public sector managers (30 ST, 23 NT, 51 SF, and 30 NF, totaling 134).

Reliability

Reliability was tested in two ways. To determine *consistency*, participants were asked to make the same ratings at two separate points in time. Fifteen volunteers were given the same eight requests to rate after six months had elapsed. This provided a test-retest reliability measure. Changing the example in the scenarios and asking respondents to make a second set of decisions later in the day tested *congruence*. Fifteen additional volunteers were given scenarios that dealt with budgeting in a Coke franchise, described in the same manner as those in this study. It was not feasible to use randomization here, so some bias may be present. The two set of volunteers had profiles of decision styles like those noted above for the entire set of observations. In each case, reliability was measured by a factor with two levels (first and second rating). A one-way fixed effect analysis of variance (ANOVA) was used, treating other effects as blocks, to test each of the reliability factors. A significant difference for the consistency or the congruence factor indicates that the participant choices are unstable and thus difficult to capture using the scenarios developed for this research. The error variance in the ANOVA measures individual differences (e.g., capriciousness) and measurement error, such as perceived scale ambiguity. The consistency and congruence reliability factors, measured by the first or second set of ratings made by each participant, were compared to the error variance, using an *F*-test of statistical significance. Neither of the tests had a significant difference. This suggests that the views of participants do not vary with decision topic or time and that the scenarios reliably captured the views of the study participants.

Analysis

ANOVA and repeated measures are used to analyze the data. The repeated measures approach may be needed in spite of the precautions to ensure independent ratings. Participants may recall salient aspects of past budget requests and use them in subsequent ratings, making the ratings dependent. Repeated measures deal with such dependencies by blocking for the respondent and computing the residual to account for dependent ratings. In the analysis, the respondent serves as a block for different instances of treatment. These precautions proved to be unnecessary because the two analyses produced the same inferences. This suggests that the ratings can be treated as independent and that the standard ANOVA techniques can be used, which are easier to interpret.

Statistical interactions of *sector* with *controversy*, *culture-based practices*, and *decision style* provide a way to test the hypotheses. ANOVA determines whether the interactions of sector with controversy, culture-based practices, and the participant's decision style influence the *approval* prospects and the *risk* ratings of the budget requests. An ANOVA is run for each of the dependent variables. These analyses treat participants with a particular decision style, in a particular sector, as replicates. A paired *t*-test is used to look for differences in public and private organizations for each category of interest (e.g., a public sector decision maker in an ST decision culture facing a controversial decision). A Duncan Multiple Range Test (DMRT) is used to make a posterior test of the differences when a factor has three or more levels. This test compares the levels of a factor two at a time using a *t*-test with a .05 level of significance.

Statistical interactions can be difficult to visualize. In the simplest case, there are two factors with two levels each. This often results in high-high, low-low, and two high-low categories to be examined. When an outcome, such as cost, in one of the four categories is much larger or much smaller than the rest, it gives rise to a significant result. If larger, there are no main effects, and the interaction captures all of the significance in a statistical test. In this study, things are a bit more complicated, but interpretations proceed in the same way. We look for an outcome for a combination of conditions that has a much larger or much smaller value than other categories. The interpretation flows from a comparison of categories that have large differences in outcomes, such as high or low ratings of adoptability or risk assessment.

RESULTS

Tables 4 and 5 present the empirical results. This discussion is organized according to the explanatory variables in the hypotheses. First, *sector* and *controversy* are considered. Then the interactions of sector with controversy, culture-based *decision practices*, and *decision style* (cognitive makeup) are discussed. To read the tables, note that table 4 lists the average participant ratings for *approval* and *risk assessments* in two blocks at the left and right of the table. The columns present explanatory factors at the left of the table, documenting some key main effects and the two-way interactions of interest. In table 5 the average participant ratings for *approval* and *risk assessment* appear in two blocks at the top and bottom of the table. Table 5 presents the three-way interactions. The format has the explanatory factors for the three-way interactions located in the first three columns. The next four columns provide the ratings.

Sector and Controversy

There are significant differences in how the managers in the two sectors respond to the budget requests, shown by the main effects at the bottom of table 4. Significance stems from the paired *t* results, shown in the column to the right of the ratings. Private sector managers are a bit more likely (denoted by an average rating of 60 in the table) to approve the budgets than public sector managers (rated 57) are; and private sector managers saw more risk (rated 53) in these approvals than did the public sector managers (rated 40). These findings support hypotheses 2, 4, and 5. There are differences in how the managers responded to controversy as well, seen by comparing the results in the public and private columns in table 4. Not surprisingly, budgets that lacked controversy in the two sectors

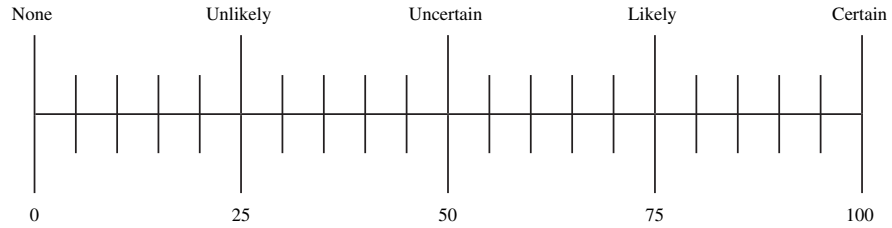
Table 4
Empirical Results for Main Effects and Two-Way Interactions

Explanatory Factors	Approval Prospects				Paired <i>t</i>	Risk Assessment				Paired <i>t</i>
	Public		Private			Public		Private		
	Rating	DMRT	Rating	DMRT		Rating	DMRT	Rating	DMRT	
Controversy with:										
a) Low	71		73		ns	40		37		ns
b) High	44		47		ns	53		68		<i>p</i> < .05
Significance	<i>p</i> < .0001		<i>p</i> < .0001			<i>p</i> < .0001		<i>p</i> < .0001		
Culture-Based Practices with:										
a) Analytic-ST	61	A	64	A	ns	55	A	39	B	<i>p</i> < .01
b) Speculative-NT	59	A	54	B	ns	43	A	56	B	<i>p</i> < .05
c) Consultative-SF	60	A	50	A/B	<i>p</i> < .02	48	B	46	A	ns
d) Networking-NF	52	B	54	B	ns	55	C	58	B	ns
Significance	<i>p</i> < .04		<i>p</i> < .05			<i>p</i> < .0001		<i>p</i> < .05		
Decision Style with:										
a) ST	58		77	A	<i>p</i> < .02	47	A	20	A	<i>p</i> < .01
b) NT	54		70	A	<i>p</i> < .02	49	A	54	C	ns
c) SF	62		60	B	ns	43	A/B	55	C	<i>p</i> < .05
d) NF	48		77	A	<i>p</i> < .05	52	A	49	B	ns
Significance	ns		<i>p</i> < .05			<i>p</i> < .05		<i>p</i> < .02		
Gender with:										
a) Female	59		58		ns	47		57		ns

b) Male	57	61	ns	47	51	ns
Significance	ns	ns		ns	$p < .07$	
Totals	57	60	$p < .07$	47	53	$p < .05$

Note: The following indicates the scales used:

Approval:



Risk:

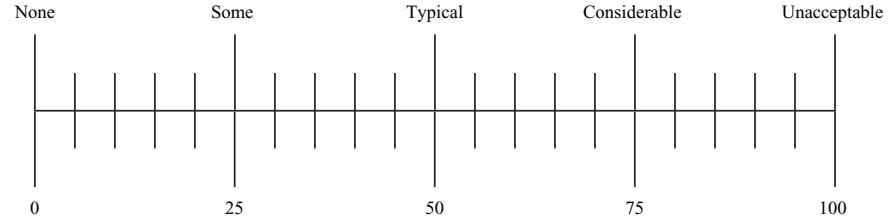


Table 5
Interactions of Sector, Controversy, and Culture

Explanatory factors			Approval Prospects			
Decision Style with:	<i>Setting</i>	<i>Controversy</i>	<i>ST</i>	<i>NT</i>	<i>SF</i>	<i>NF</i>
	Public	Low	70	69	73	75
	Private	Low	75	77	67	74
			ns	ns	ns	ns
	Public	High	47	45	45	35
	Private	High	52	45	37	53
			ns	ns	ns	ns
Culture-Based Practices with:	<i>Setting</i>	<i>Controversy</i>	<i>Analytic-ST</i>	<i>Speculative-NT</i>	<i>Consultative-SF</i>	<i>Networking-NF</i>
	Public	Low	75	59	73	65
	Private	Low	78	74	83	65
			ns	<i>p</i> < .03	ns	ns
	Public	High	44	47	45	39
	Private	High	65	72	52	44
			<i>p</i> < .05	<i>p</i> < .01	<i>p</i> < .07	ns
Decision Style with:	<i>Setting</i>	<i>Controversy</i>	<i>ST</i>	<i>NT</i>	<i>SF</i>	<i>NF</i>
	Public	Low	38	45	37	44
	Private	Low	36	39	41	34
			ns	ns	ns	ns
	Public	High	54	54	48	60
	Private	High	70	70	70	34
			<i>p</i> < .01	<i>p</i> < .01	<i>p</i> < .01	<i>p</i> < .01
Culture-Based Practices with:	<i>Setting</i>	<i>Controversy</i>	<i>Analytic-ST</i>	<i>Speculative-NT</i>	<i>Consultative-SF</i>	<i>Networking-NF</i>
	Public	Low	32	43	36	51
	Private	Low	35	42	28	44
			ns	ns	ns	ns
	Public	High	51	53	49	60
	Private	High	67	70	65	71
			<i>p</i> < .06	<i>p</i> < .03	<i>p</i> < .06	ns

have a likely approval, rated as 71 to 73 (across the two sectors) in the controversy row in table 4, and controversial budgets have an uncertain prospect of approval, rated as 44 to 47 (across the sectors), supporting hypotheses 2 and 4. Different reactions to risk are in the directions predicted. Private sector managers are as likely to approve budgets with and without controversy as public sector ones. Differences are found in risk assessments. As predicted, private sector decision makers see perceived risk as approaching “considerable” (rated 68) for a large budget increase, compared to public sector managers who see the same increase as “typical” (rated 53), supporting hypothesis 5. Public sector decision makers in the study see less risk in the decisions but are just as likely to act as their private sector counterparts. Together, these findings offer support for the public-private differences found in hypotheses 2, 4, and 5.

Sector and Decision-Making Practices

To simplify and highlight the more important distinctions, this discussion considers each culture-based decision-making practice separately. Then, to explore public-private differences, the joint impact of controversy and decision practices is introduced. First, the two-way interactions in table 4 are considered, followed by discussion of the three-way interactions shown in table 5. First, we explore how sector interacts with culture-based decision-making practices in the scenarios and with decision makers who have a particular decision style, forming two-way interactions. Next, controversy is added to create a three-way interaction. In each case, a paired *t*-test determines the significance of public-private differences in each of the categories found in the interactions. Statistically significant results appear in bold type in the tables.

Analytic-ST Practices

Hypotheses 1 and 3 predict that decision makers in public organizations avoid analysis while decision makers in private organizations are drawn to it. The culture-based practice results for analytic practices support this, in part. Public sector managers from an analytic culture find “about typical” risk (rated 55 in the culture-based ST row in table 4) in the budget forecasts. Private sector managers see these same forecasts as having a bit more than “some” risk (rated 39 in same row of table 4), supporting hypotheses 1 and 3. The three-way interaction of controversy and culture-based practice with sector elaborates this finding (see the ST column in table 5). When controversy is high, private sector managers find a forecast based on analysis as approaching likely approval (rated 65). Public sector managers view the same budget decision as below uncertain approval (rated 44). Moreover, a different risk assessment is made. Private sector decision makers see the risk in analysis as approaching considerable (rated 67). Public sector managers see it as typical (rated 51). Controversy brings out sector differences as analytical practices are put to use.

A stronger test is made by accounting for managers’ affinity for practices that correspond to their decision style (Nutt 1988, 1993). Private sector managers having an ST style are “likely” to approve (rated 77) budget forecasts made with an analytical approach (see the ST row for decision style in table 4). This affinity is less pronounced for the public sector managers who view the prospect of approval as a bit more than uncertain (rated 58). Risk assessments confirm these findings. Private sector managers with an ST style see forecasts based on analysis as having little risk (rated 20). Public sector managers with an ST style find the risk in an analytical forecast to be typical (rated 47).

The three-way interaction, found in the ST column of table 5, supports this finding as well. Managers find controversial forecasts as having uncertain prospects of approval in both sectors. The prospect of adoption is not influenced by controversy, but it does influence perceived risk. Private sector managers with an ST style exposed to controversial budget decisions see them as having considerable risk (rated 70). ST public sector managers see these same decisions as having typical risk (rated 54), supporting the discounting of risk in a public environment. These findings offer strong support for hypotheses 1 and 3. The push for analysis seems rated to be held back by the daunting barriers to making decisions in this way in a public setting.

Speculative-NT Practices

The predicted differences are noted for speculative decision culture as well (see the NT rows in table 4). Private sector managers see a bit more risk in a budget drawn with NT logic, but they are no more inclined to adopt it than the public sector manager is. The three-way interaction (see culture-based NT column in table 5) finds that budget decisions with NT logic, made by private sector managers, are apt to be approved, whether controversial or not (being rated 72 and 74 across the levels of controversy). Public sector managers see the adoption of these same budgets as uncertain (rated 47 and 59, across the levels of controversy), supporting hypotheses 1 and 3. Moreover, controversy seems to attenuate the perceived risk for budget decisions made with NT logic. Private sector managers see considerable risk in these decisions (rated 70 in the NT column in table 5), whereas public sector manager see the same risk as typical (rated 53), supporting hypothesis 5.

The interaction that pairs the ratings of managers with an NT style who evaluated budgets made with NT logic confirms the findings noted above. Private sector managers, with an NT style, rate controversial forecasts made with NT logic as having “considerable” risk (rated 70, as shown in the NT column in table 5). Public sector managers with an NT style rate NT forecasts as having “typical” risk (rated 54). Private sector NT managers see more risk in their decisions but would approve them, supporting hypothesis 5. A match of style and culture-based practices demonstrates the predicted risk indifference of public sector managers.

Consultative-SF Practice

Hypotheses 1 and 3 predict that managers in public organizations are drawn to grouplike decision making and that private sector managers tend to be indifferent to such practices. Public sector managers view budgets drawn with group methods as safe and lean toward approving them (rated 60, see the culture-based SF rows in table 4). Private sector managers had less faith in budgets formed by consultation, calling their approval “uncertain” (rated 50). The assessed risk in the budget decisions is seen as typical (rated 46 and 48 for the sectors), providing some endorsement for hypotheses 1 and 3. Small differences are noted for the controversial budget proposal (see the SF column in table 5); with the prospect of adoption a bit greater for private sector managers (rated 52 for the private sector and 45 for the public sector). The co-optative power of consultation (Hackman 1990) arises in the ratings of noncontroversial budget decisions in which approvals are likely (rated 73 to 83) for managers in the both sectors. However, private sector managers see the risk differently, calling it approaching “considerable” (rated 65), and public sector managers view risk in group-based decisions as “typical” (rated 49), supporting hypothesis 5.

The pairing of SF managers and budgets with SF logic finds no differences in adoption prospects of noncontroversial budgets between public and private sector managers (see the

SF column in table 5). Co-optation draws private sector managers with an SF style to consultative decisions, much the way it does other managers (Hackman 1990). Perceived risk is affected for the controversial budget decision. Private sector SF managers see group decisions as having considerable risk (rated 70). Public sector managers see these same group decisions as having less than typical risk (rated 48), supporting the hypothesized lower risk perception in public sector decision makers.

These findings provide qualified support for hypothesis 1 and 3. The power of a group's efforts seems to cloud a public sector manager's judgment about risk when subordinates or peers are involved. In the simulation, underlings and peers could be co-opted, but oversight bodies would not be. There seems to be an unrealistic hope that co-opting peers and underlings makes budgets low risk. Private sector managers have a more realistic view of co-optation but discount its power, unless they have an SF style and its preference for grouplike practices.

Networking-NF Practices

The networking called for by an NF decision culture seems well matched to public sector decision making. The data, however, fail to confirm this. Managers in public organizations are no more inclined to approve a budget made following NF logic than the managers in private, for-profit organizations are. Both are uncertain about budget's approval with a typical level of risk (see the culture-based NF rows in table 4). Accounting for the controversial budget decision is unable to find differences in sector either (see the NF column in table 5).

The match of NF managers with NF-based practices picked up differences, but not those that were predicted. Surprisingly, as shown in the NF column in table 5, public sector managers with an NF style see controversial budget decisions as having considerable risk (60). Private sector NF managers see these same decisions as having a bit more than some risk (34). Furthermore, private sector NF managers are more likely to adopt (rated 77 in the decision style NF row in table 4). Public sector managers with an NF style see these same decisions as uncertain (rated 48). This suggests that private sector NF managers find *more* value in networking than do their public sector counterparts.

The findings for NF managers fail to confirm hypotheses 1 and 3 but do raise some interesting questions. Public sector *leaders* may see the necessity of networking and mutual adjustment, but the participating public sector *managers* did not share this view. Study participants were mid-level managers, with civil service protection, working in bureaus and departments of state and local government. Bureau and department leaders are political appointees that require NF skills to survive. This suggests that NF logic is essential to make strategic decisions, but middle-level managers in the study may not appreciate it.

Private sector managers with an NF style had more appreciation of the value of NF skills than predicted. This suggests that private sector NF participants had a keener appreciation of the "boundary-less" organization and the needs for networking across traditional organizational lines to pull in people and negotiate, seeking arenas of mutual interest in which a decision can be fashioned that is acceptable to the key players.

CONCLUSIONS

The views of participants that were uncovered in the study offer some interesting conclusions and implications for managers and management. Managers in the private sector seem to place too much reliance on analytics and too little on bargaining. Those in the public sector may

place too great an emphasis on bargaining and too little on networking, but they do seem to understand the limits of analysis. This may be explained as follows. Public sector managers see bargaining with peers and subordinates as sanctifying the effort. This belief may inadvertently coax them to discount networking, which is done with externals. Whatever the reason, such preferences can create a false perception of support for a decision.

Differences in the assessment of risk were detected as expected. Public sector managers saw the level of risk in the budget decisions as typical, but the private sector managers saw the same decisions as having considerable risk. These differences held up no matter what the cognitive makeup of the manager or the culture to which he or she was exposed. This discounting of risk may lead the mid-level public sector manager to engage in some questionable practices. Risk signals the need to look more closely by commissioning an analysis to learn more about prospects and possibilities. Public sector managers are led away from analysis because their decision culture does not support it and because it is difficult to free up funds to carry such analysis out. These difficulties, coupled with a seeming lack of sensitivity to risk, erect formidable barriers to doing analysis.

These findings have several implications. Commissions that seek to reform government by calling for the use of private sector business practices in public agencies should pay more attention to the barriers to using analysis, real and imagined, if they hope to see their recommendations followed. The recommended practices invariably call for analytic procedures and practices. These procedures and practices are difficult to carry out in a public agency because of tradition, lack of funds, *and* a seeming failure to appreciate risk. The success of transferring private sector business practices depends on overcoming these barriers. Some are known, such as the tradition and funding problems, but the risk issue is new. To encourage the hoped-for practice transfers, public sector managers must be sold on the value of making risk estimates (Nutt 1989).

Public sector managers may engage in dangerous practices. Study participants saw little risk in a group decision made by peers and underlings. Such decisions can be very dangerous if an oversight body opposes them. The notion of co-optation has both internal *and* external implications. In private sector organizations, internal co-optation may be all that is needed. Public sector managers improve their chances of success by networking with external constituencies, such as clients and oversight bodies. However, public sector middle managers, at least those in this study, failed to see much value in such networking. The difficulty of involving oversight bodies and the necessity of their support make strategic decision making take on a networking-like appearance. Oversight bodies must be involved to reduce the risk of failure. This calls for external involvement, and networking is an effective way to facilitate this involvement. Middle-level managers in public organizations may not fully appreciate this, suggesting a worthwhile executive education topic.

The failure to appreciate networking has important implications. Oversight bodies have a big impact on public sector decisions. Their scrutiny can be intense, and politics is far more pervasive than in private organizations (Pfeffer 1992). There is an implied commitment to the ideas and visions of people in oversight roles. How leaders handle scrutiny and the expected use of outsiders' ideas creates much of the politics found in public organizations. Leaders appease people on oversight bodies by adopting their ideas and by making the expected scrutiny easy to carry out. This type of politics is far more pervasive and has more impact than the internal politicking found in private sector organizations.

An explanation for the failure to appreciate networking can be found in some of my other work on decision making. External interest groups can and do derail decisions in the

public organization. This tends to occur *after* a decision is made, and long after the objecting oversight body has been asked for their views (Nutt 2002). Often, objections arise from inquiries by elected officials who question a practice found to disadvantage a single constituent. The same officials, who object to a specific decision, rarely respond or offer advice when the procedure or practice to be implemented in a decision is being considered. As a result, public organizations face fickle oversight, not the pervasive monitoring and tinkering with ideas that the literature suggests. This “deferred reaction” by elected officials is both unfortunate and hard to manage by the public sector decision maker. The best approach calls for learning about available choices and anticipating problems that can derail a decision-making process. Oversight bodies must be coached, showing them how the public interest is served (or not served) in a decision.

The study has several limitations. No analysis of individual responses was offered, although such an analysis can be carried out with the data collected. For this study, individual results cloud the issue under investigation. However, some interesting questions could be considered with a study that includes such an analysis. Few of the participants were executive level, limiting what could be said about the public-private differences of top managers. The role-playing did not capture the context of budgeting, in which events can cause delays, revisions, and frustrations. Contextual factors, such as interest groups and oversight interference, could offer additional qualifications. The simulation said nothing about big-ticket decisions, such as siting a power plant or a prison in the public sector or a new line of business in the private sector. Different preferences may emerge when such decisions become politicized or controversial. Decisions such as commuting a death sentence or going to war are far removed from the managerial decisions considered here and seem rightfully excluded, but they can be studied with the methods developed for this study. Similarly, the decisions of legislatures and other elected bodies could be studied with decision simulations. Organizational decision-making literature is tangential to pluralistic decision-making theory, so it must be augmented by sources, such as political science, to derive appropriate scenarios.

APPENDIX 1

Public Sector Budget Decisions

Imagine that you are the director of a State Department of Natural Resources (DNR) that has a decentralized structure. The state is divided into eight districts with each district headed by an associate director. Your predecessor installed an information system that archives annual usage patterns for all revenue-generating services under DNR’s jurisdiction (e.g., cabin rentals in state parks, license fees for hunting and fishing, boat dock fees, etc.). Each year the associate directors propose a budget for their district by forecasting revenues for user fees and adding these revenues to the state appropriation. Each of the eight districts is unique, due to differences in the local economies. The associate directors are civil service employees, and all have a long tenure in their position. Each associate director has developed a unique style of management and uses a different approach to make the budget forecast. You are concerned that some of these budgeting approaches may not be sound. You have concerns about some of these approaches and have met with the associate directors to find out how they carry out budgeting. You plan to evaluate each budget request according to the approach used to prepare it.

Please adopt this role and evaluate the budgets for the eight districts using the scales provided, indicating your likelihood of approving it and your view of its risk.

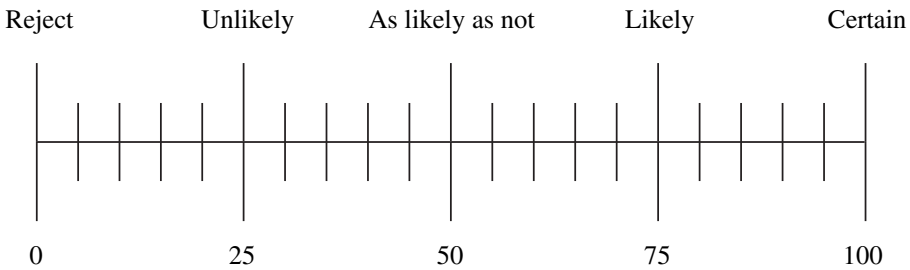
District 7

This associate director is asking for a 1 to 5 percent increase over last year’s budget.

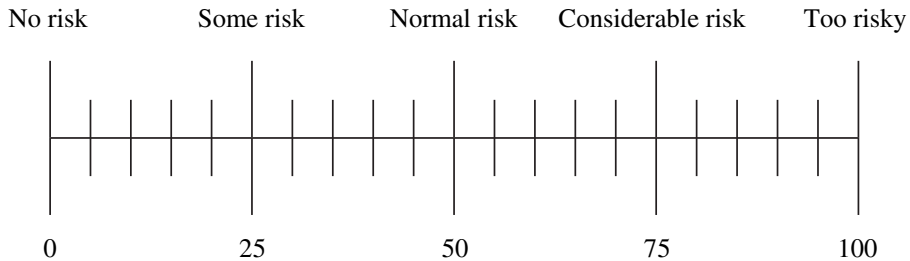
The associate director who leads this district has a decentralized structure headed by loyalists who are longtime associates. Leadership is thought to hinge on being seen as charismatic by people in local business and by local government officials. Department heads are expected to give subordinates the latitude to do their jobs and to ensure that each department’s image is maintained.

The budget process is carried out by an executive committee, made up of department heads and people who provide liaison to key groups (e.g., legislators, elected officials, and user group associations). These trusted colleagues discuss likely future trends and events, interpret data in the information system, and propose a forecast for the district’s budget. The associate director listens to the arguments for each component of the budget and makes adjustments to create what seems to be a reasonable range for the budget forecast. The associate director indicates the benefits of budget and programs that will be enhanced if this budget is adopted. The associate director believes that experience and knowledge are essential to ensure that the budget’s forecast is realistic.

Please rate your likelihood of approving this budget on the following scale:



Please indicate the level of risk you believe is associated with adopting this budget on the following scale:



APPENDIX 2

Private Sector Budget Decisions

Imagine that you are the chief executive officer of a large decentralized automotive part manufacturing organization that makes several products for the automotive after-market.

The organization has a number of geographically separated divisions, each producing the same six products (wheels, hubcaps, steering wheels, gas caps, fuel injectors, power seats, and window controls). The company grew by acquiring manufacturing facilities from other companies, which now make up their divisions. Eight of these divisions have been experiencing strong demand for all of its product lines. All eight divisions have a good record for efficient operation and have comparable, up-to-date equipment. They differ in their styles of management, a holdover from their days of independent operation, and each division vice president has a different way to do budget forecasts. To dispel concerns about some of these approaches, you met with each vice president to find out how he or she prepared the budget. You plan to evaluate each request according to your view of the approach used to prepare it.

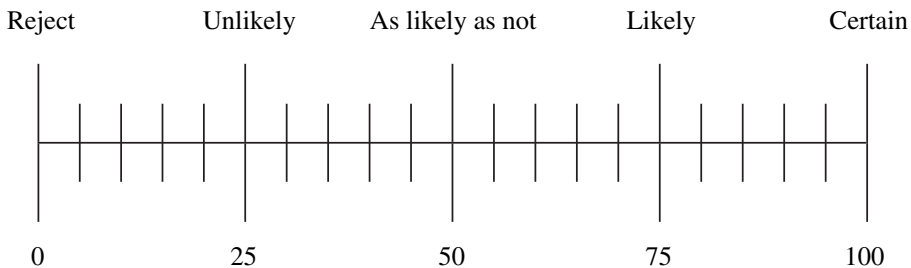
Please adopt this role and evaluate the budgets for the eight districts using the scales provided, indicating your likelihood of approving it and your view of its risk.

Division 1

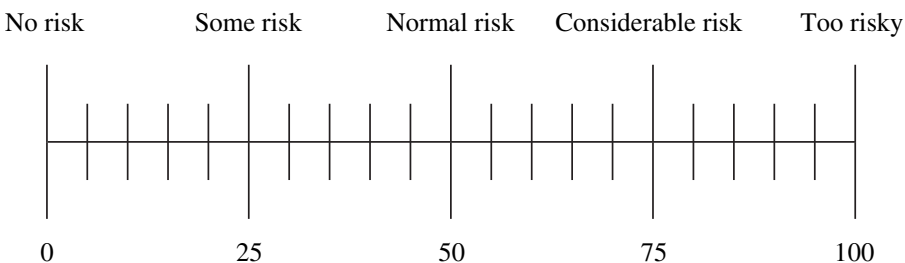
This division had \$9.95 million in sales last year. In this division, performance is measured by using objective indicators of productivity for each cost center. The division is centralized, with well-defined authority invested in each management position. Historically, an efficiency goal has been stressed. Defining roles, assigning work, and pushing for results have been the preferred leadership style.

A computer-based forecasting model using appropriate accounting and financial data was developed and, considering the volatility of past sales, predicts that a 3 percent increase over last year’s budget is needed. The calculations and the details of the data acquisition process were carefully checked, and the methodology was found to be tight.

Please rate your likelihood of approving this budget on the following scale:



Please indicate the level of risk you believe is associated with adopting this budget on the following scale:



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