TQM in American Cities:
Hypotheses Regarding Commitment and Impact

Evan M. Berman and Jonathan P. West
University of Miami

ABSTRACT

This article uses data from a national survey on total quality management in municipalities to test a range of hypotheses. Results show that executive culture and top management leadership are significant determinants of TQM commitment and impact, whereas demands from external stakeholders such as citizens and council members are not. This suggests that theories of external exchange may be of limited value in explaining TQM in public management. This study also finds that commitment to TQM and its impact are no greater in cities with council-manager forms of government, which suggests that government form is a poor predictor of these variables.

In recent years, TQM (total quality management) has been hailed as an important new strategy for "reinventing" municipal service delivery. The principal objectives of TQM are increased customer (and stakeholder) satisfaction and increased productivity. These objectives are accomplished through a variety of approaches, including identifying customer needs, continuous improvement in meeting these needs, emphasis on factual information, employee empowerment, and process reengineering (i.e., taking a systemic perspective on the delivery of services). The scope of applications is extremely broad, ranging from paperwork reduction to improved customer service in city hall from the police, and in solid waste management. TQM has drawn considerable praise (Cohen and Brand 1993; Davis and Hyde 1992; Kravchuck and Leighton 1993; Milakovich 1991 and 1992) as well as criticism (Bleakley 1993; Carnevale and Hummel 1993; Swiss 1992; Chang 1993; Walters 1992), but examples in the literature suggest that many cities are finding positive uses of TQM (West, Berman, and Milakovich 1994a; 1994b; 1994c; Walters 1994).

For scholars, TQM provides the opportunity to test theories about the efficacy of both productivity improvement and implementation strategies. Public administration provides numerous theories that aid in predicting which cities are more likely to implement innovations like TQM, which factors determine the level of commitment to such efforts, and which strategies are likely to increase TQM success. *The credibility and advancement of the academic enterprise depends on applying new practices such as TQM for testing the veracity of both "mainstay" theories and propositions at the frontier of current thinking.* This article provides such testing by using systematic data from a comprehensive national survey on quality management in local government. The survey examines driving forces, barriers, and TQM implementation strategies. The availability of these systematic data is significant because hitherto only case studies and anecdotal evidence have been available about the use of TQM in cities (Denhardt 1993; Galloway 1992; Sensenbrenner 1991). Such site- and service-specific data are often impressionistic.

This study examines two important measures of quality management, namely *TQM commitment* and *TQM impact*. TQM commitment is defined in this study as the level of TQM implementation, measured by (1) the number of TQM applications and the availability of (2) training, (3) rewards and (4) resources for TQM. The use of a composite measure of TQM commitment is consistent with the literature that describes the need for training, resources, and new reward structures in implementing TQM (Barzelay 1992; Berry 1991; Cohen and Brand 1993). The second measure, TQM impact, is used to assess the effect of TQM on (1) organizational processes and (2) performance and is based on the subjective assessment of respondents. Although high levels of positive TQM impact are the ultimate measure of success, the level of TQM commitment is more objectively determined (e.g., training for employees is either available or it is not). In both measures, TQM is defined as a productivity improvement effort that meets all the following criteria:

- commitment to customer-driven quality;
- employee participation in quality improvement;
- actions based on facts, data and analysis;
- commitment to continuous improvement; and
- systemic perspective.

These criteria are frequently mentioned in the quality literature (Loney 1993; Milakovich 1992; Swiss 1992). Productivity improvement strategies that use only some of these elements are not considered to be TQM in this study, even though such efforts

are likely to result in important productivity or effectiveness gains. The operationalization of the above measures of TQM commitment and impact is discussed in the methods section.

FRAMEWORK

Two questions of considerable present interest are: Which cities are most committed to quality improvement initiatives (that is, what are the determinants of municipal TQM commitment)? Which strategies are associated with successful implementation? These questions have both practical and theoretical merit. For example, practically, the first question can help predict whether a city is likely to commit itself to TQM. Theoretically, empirical data can be used to assess contradictory claims about the importance of different driving forces or strategies. Theories of bureaucratic politics and organizational change are used in this framework for the development of hypotheses relating to these two questions, principally because these theories have widespread currency and because they contain such contradictory claims. Seven hypotheses are discussed below.

The bureaucratic politics and strategic planning literatures suggest that agencies are highly responsive to their stakeholders, particularly those stakeholders who can affect current or future levels of resources (F. Berry 1994; Halachmi 1992; Meier 1993; Wilson 1980 and 1989). On the one hand, it can be hypothesized that municipal agencies are (highly) responsive to city councils, mayors, citizens, and voters (Cohen 1988; Goodsell 1993; Lipsky 1980; Saltzstein 1992). Each of these could be a significant driving force behind municipal quality initiatives (Stupak 1993; Sensenbrenner 1991). In a similar vein, federal level agencies often are highly responsive to requests of congressional sub-committees (Fessler and Kettl 1991; Hill 1992; Ripley and Franklin 1991). Such agencies also are responsive to requests by the president. Parallel developments have been noted in the private sector where many firms have embraced innovative initiatives like TQM in response to encouragement from major customers and other external stakeholders. On the other hand, some authors cast doubt on this hypothesis by suggesting that demands from external stakeholders provoke short-term responses (band-aid remedies) that are inconsistent with the need for long-term strategic planning (Radin and Coffee 1993; Ammons 1992). According to this latter view, responsiveness to stakeholders even may be negatively associated with TQM implementation. A second concern is whether customers have the ability to exercise leverage regarding the use of TQM in the public sector because these stakeholders have few means to affect the level of resources

available to governments. The inclusion of customers as stake-holders is suggested by strategic management and stakeholder theories, and this study provides an additional test of such assertions in the municipal setting (Freeman 1984; Halachmi 1992; Wood and Gray 1991). Hence, the following hypothesis is formulated:

Hypothesis 1: External stakeholder demands are positively associated with TQM (a) commitment and (b) impact.

Stakeholders include: council members, mayors, voters, and citizens.

The public policy, management of change, and TQM litera-tures discuss the role of resources in innovation (Cohen and Brand 1993; Nice 1994; Van Horn, Baumer, and Gormley 1992). On the one hand, it is argued that necessity is the mother of invention, and that therefore resource scarcity causes managers to search for new ways of doing things (Walters 1992; Stupak 1993). Specifically, TQM provides managers with the opportun-ity to prioritize services, thus eliminating or curtailing those services that meet goals least. TQM also suggests that through "systemic analysis" (i.e., reengineering) and empowerment (e.g., delayering management) it is possible to improve the cost-effectiveness of services. Thus the lack of funding increases TQM commitment and impact. This is consistent with assess-ments of private-sector experience where the presence of a threat (e.g., poor financial health) is thought to make it more likely that quality initiatives will succeed (Reynolds 1994; Brown, Hitch-cock, and Willard 1994).[1] On the other hand, other authors write that the lack of resources causes inadequate funding for training and implementation of productivity initiatives like TQM (Downs and Larkey 1986). TQM requires considerable up-front invest-ment in the training of managers and employees, for example in the use of customer surveys, reengineering, statistical analysis, group facilitation, and other skills. Yet in traditional organiza-tions, training often is reduced when resources are constrained (Gordon 1991; Brown, Hitchcock, and Willard 1994). Thus the impact of resources on TQM is double-edged, and the following hypotheses are formulated:

Hypothesis 2-1: Budget pressures are positively associated with TQM (a) commitment and (b) impact.

Hypothesis 2-2: Inadequate funds for training and other imple-mentation activities are negatively associated with TQM (a) commitment and (b) impact.

[1]Other authors have suggested that the propensity to innovate also depends on the extent of current organizational decline, if any, and agreement that TQM effectively can address the causes of decline. When such agreement is lacking, organizational decline can reduce inno-vation (Guy 1989). Thus the relationship between budget pressures and innovation is more complex than is presented here.

It often is hypothesized in the literature on municipal governments that reformed governments are more prone to adopt productivity improvement strategies like TQM because of a more professional orientation of management (Mushkin and Sandifer 1979; West 1986). Council-manager forms of government, created in the 1900s and thereafter, evolved historically as an effort to reform machine politics and to promote values of economy and efficiency. Although reformed governmental structures like the council-manager system often are hypothesized to be associated with professionalism, form of government alone does not account for the general tenor of government operations and professional behavior today (Straayer, Wrinkle, and Polinard 1994). Instead, additional indicators of managerial professionalism should be employed. In this study, professionalism is measured in part by the extent to which municipal quality initiatives are driven by public managers and agency directors, many of whom belong to professional organizations (e.g., ICMA, ASPA, IPMA) which promote cutting edge managerial innovations like TQM. A professional, managerial orientation also is indicated by concern for productivity and by the application of new techniques in an experimental fashion to improve municipal service delivery. Such professionalism sometimes is called an *executive management culture,* and cities with such a culture can be hypothesized to more frequently adopt modern management practices than can cities lacking such characteristics (Gabris 1992). Hence:

Hypothesis 3: Cities with an executive management culture are more likely to experience higher (a) commitment to and (b) impact from TQM than cities without such a culture.

The literatures on productivity improvement, TQM, and management of organizational change all agree on the importance of top management leadership in the adoption of innovation (Balk 1992; Guy 1992; Halachmi 1992; Heiss 1993; Rosen 1993; and Trice and Beyer 1993). Top management commitment and involvement is described as critical because high-level managers influence the culture and rewards of organizations. This is particularly important in TQM implementation because TQM sometimes is described as a quantum or radical departure from traditional organizations (Cohen and Brand 1993; Patten 1991). Top management commitment is necessary to ensure the legitimacy of a customer orientation to municipal services, as well as to ensure that resistance (and resisters) to change is overcome. Top management leadership is shown through various municipal activities that demonstrate top-level interest and support, such as the reformulation of vision or mission statements that endorse

quality as a goal, the reliance on comprehensive planning, and the encouragement of coordination among organizational units to assure cross-functional support (Fenwick 1991; Brough 1992; Smith 1993).

Hypothesis 4: Top management leadership is positively asso-
           ciated with TQM (a) commitment and (b) impact.

The literatures on organizational change and on TQM imple-
mentation also discuss employee resistance as a formidable
barrier (Pfister and Van Wart 1993; West, Berman, and Mila-
kovich 1994c; Denhardt 1993; and Rosen 1993). Employee resis-
tance occurs because existing policies and practices often are
more predictable and less threatening than new ones and may
leave employees better off in terms of rights and responsibilities.
Employee resistance also is furthered when new techniques create
conflicting demands on employees and when employees are given
inadequate resources or responsibilities to complete new tasks
that are required of them. In TQM, the latter may occur when
employees experience insufficient empowerment to identify and
meet new stakeholder needs (Ammons 1992; Guy 1992;
McGowan and Spagnola 1992; Brown, Hitchcock, and Willard
1994). Hence:

Hypothesis 5: Employee-related barriers are negatively asso-
           ciated with TQM (a) commitment and (b) impact.

The governmental reform literature, as well as general
skepticism about the feasibility of TQM in government, suggests
that society's ability to develop new productivity improvement
strategies is greater than its ability to implement them (Downs
and Larkey 1986). It often is suggested that successful change
strategies have the following principles in common:

- ensuring top management commitment;
- using mid-level implementation teams to involve managers
  and create early successes;
- involving employees in implementation;
- assessing internal performance; and
- monitoring both employee satisfaction and customer
  satisfaction.

The rationale is that these principles take into account sources of
employee and managerial resistance within organizations and
employ the best measurement technology available (Milakovich
1990; Rosen 1993). This study suggests that TQM is more likely
to be implemented when these conditions are present. Hence:

Hypothesis 6: Multifaceted implementation strategies are positively associated with TQM (a) commitment and (b) impact.

This study also examines TQM commitment and impact over time. Specifically, we hypothesize that the start-up phase of implementation is characterized by a low level of TQM commitment and impact because TQM is not widely implemented and because not all forms of training and resources are yet being used. Among organizations that continue their TQM journey, we expect that within a few years following start-up (intermediate or growth phase) such efforts will become more widespread and that a broader range of resources, rewards, and training efforts will become available (intermediate or growth phase), indicating higher levels of TQM commitment. These additional, marginal increases in TQM commitment increase the overall level of TQM commitment. Also, successful impacts of TQM are likely to be more evident at this stage. However, as quality management becomes the modus operandi several years after initial implementation (fine-tuning stage), extensive training and resource allocations may become less necessary. For example, awareness training at this third stage may be needed only for new entrants to the workforce, and senior managers will have been indoctrinated fully in the use of TQM; hence, only limited levels of quality-related training will be required. Rewards for TQM also might decrease as they are diverted to achieve more current management priorities. Thus the level of TQM commitment will diminish from the previous high, even though quality management still is used extensively. Measures of TQM impact also decline because contributions to organizational productivity are realized increasingly through other and newer management activities.

Hypothesis 7-1: From the *initial* to the *intermediate* stages of TQM implementation, the levels of TQM (a) commitment and (b) impact increase.

Hypothesis 7-2: From the *intermediate* to the *fine-tuning* stages of TQM implementation, the levels of TQM (a) commitment and (b) impact decrease.

METHODS

A national survey was administered during the summer of 1993 to city managers and chief administrative officers (CAOs) concerning the use of TQM in their municipalities. The twelve-page survey contained questions about the service areas in which

TQM is applied; areas in which implementation strategies are used; reasons for applying TQM; and barriers to implementing quality initiatives and impacts to date. Although most of the response options use Likert scales, the survey also provides open-ended comments for respondents to elicit examples of TQM applications. The survey was pretested on a group of fifty city managers and chief administrative officers. Following modifications, the questionnaire was sent to all 1,211 cities with a population over 25,000. After four waves of mailings and telephone calls, 433 usable responses were received. Of these, 237 respondents claimed to be using TQM in at least one function. To better evaluate the extent to which responses were obtained from all cities that implement TQM, a telephone survey of one hundred randomly selected nonrespondents was conducted. This latter survey found that 14 percent of nonrespondents implemented TQM; hence, $[(1211 - 433) * 0.14 =]$ 109 cities that implement TQM are not represented in the respondent group. It follows that the *effective response rate among cities that use TQM is [237 / (237 + 109) =] 68.5 percent.*

To ensure valid data, a number of procedures were undertaken. First, the instrument included the definition of TQM stated in the introduction (see p. 214), and respondents were instructed to address the questions only with regard to TQM as defined. Upon completing the survey, respondents were asked whether in fact they had used the above definition. By being specific about the measurement of TQM, we sought to reduce problems of "false positives," that is, respondents stating that they are using TQM when in fact they are not. Second, we also used the phrase *quality improvement* instead of TQM in order to eliminate the potential that cities using TQM but calling it by another name, such as *quality service,* would state that they are not using TQM. Third, we contacted respondents who had reported a large number of quality applications to verify the validity of these responses. Very few adjustments were made as a result of these interviews. Fourth, an additional fifty telephone conversations were held with municipal executives to obtain details about TQM implementation in their locales. These conversations "from the trenches" aided our understanding and interpretation of results.

As stated in the introduction, this study uses two dependent variables, TQM commitment and TQM impact. TQM commitment is operationalized as a multivariable construct based on four indices, namely, the number of services in which TQM is being used, the extent of training, the availability of rewards, and the level of resources provided for TQM implementation. The survey included twenty-three service areas in which TQM might be

used, and nineteen measures that constitute the training, resources, and rewards indices.[2] The Cronbach alpha measure of reliability among the four indices is 0.71 (for cities that have TQM) to 0.88 (for all cities in the sample), which suggests moderate (acceptable) to high reliability. Analysis of the implementation index shows that TQM is implemented most often in police, parks and recreation, and personnel services. Among the other indices, recognition of achievement, training in techniques, and new performance measures are used most frequently. About two-thirds of the survey respondents implement TQM in four or less service areas and use fewer than seven (about one-third) of the nineteen measures. A total of 292 respondents report complete information regarding the composite measure of TQM commitment.

TQM impact is also a multivariable construct based on respondents' assessment of the level of improvement in service outcomes and organizational processes. A total of seventeen measures constitute these two indices.[3] The Cronbach alpha of this measure is 0.86. Over 40 percent of the 433 survey respondents did not provide data on outcomes because they felt that it was still "too early to tell." A total of 235 respondents provided complete data with regard to this construct. Those responding indicate modest positive impacts. Using a five-point scale (-2 = very negative impact to 2 = very positive impact), respondents gave, for example, the following ratings: efficiency gains (0.98); cost reductions (0.84); quality of service (1.04); and customer satisfaction (0.99). Similarly, there are some gains in improving group decision making (0.92); delegating responsibility (0.77); increasing communication in units (1.01); and coping with resource constraints (0.88). Fewer than two percent of respondents identified negative impacts.[4]

FINDINGS

Results of the statistical analyses are shown in exhibits 1 and 2. The effects of pressures by external stakeholders on TQM commitment and TQM impact are statistically insignificant (hypothesis 1). These external stakeholder measures concern pressure to specifically implement TQM. The consistency of this finding, tested for different measures of the dependent variables, suggests that this statistical result is not a measurement error. Although the absence of significant relationships in either a positive or negative direction implies that only suggestive conclusions can be drawn at this time, the lack of significant associations in the light of strong theoretical arguments regarding constituency responsiveness suggests a counterbalancing of

[2]The measures are: training in TQM techniques for senior managers; training in TQM techniques for employees; training in team skills; training in awareness for senior managers; training in awareness for employees; using the human resource function in providing training; rewarding group performance; implementing new performance measures; using new performance measures consistently; recognizing achievement; sharing gains with employees; implementating budgets for quality improvements; using consultants; forming a quality council; visiting sites; using central coordinators for TQM; developing a plan for cultural change; and assessing a unit's readiness for implementation.

[3]The measures are improvements in productivity; cost reduction; quality of services; amount of service; customer satisfaction; timeliness of services; group decision making capabilities; delegation of decision making to lower levels; communication throughout units; availability of information for decision making; timeliness of internal processes; response to resource constraints; implementation of new performance measures; assessment of productivity and quality goals; stimulation of high quality performance; commitment to stakeholders.

[4]For a complete reporting of findings on impacts see West, Berman, and Milakovich 1994c.

Exhibit 1
Results of Hypotheses (coefficients are Stuart's Tau-c)

	TQM Commitment	TQM Impact
HYPOTHESIS 1: External Stakeholders		
Council member interest	-0.047	-0.076
Mayor interest	0.012	-0.042
Voter demands	-0.027	0.067
Public complaints	-0.003	0.077
Aggregate (alpha = 0.79)	0.022	0.035
HYPOTHESIS 2: Role of Resources		
Budget pressures (H2-1)	0.040	0.054
Inadequate funds for training (H2-2)	-0.119**	-0.099
Inadequate funds (other purposes H2-2)	-0.053	-0.041
Aggregate (alpha = 0.78)	-0.085*	-0.059
HYPOTHESIS 3: Executive Culture		
Council-manager form of government	0.027	-0.011
Initiative from agency directors	0.013	0.146***
Initiative from senior managers	0.041	0.165***
Concern with productivity	0.180***	0.242***
Professional associations	0.042	0.148***
Success of pilot projects	0.216***	0.147**
Aggregate (alpha = 0.71)	0.151***	0.195***
HYPOTHESIS 4: Top Management Leadership		
City manager interest	0.197***	0.079
City manager support	0.425***	0.109*
Reformulating mission statements	0.522***	0.131*
Top-down planning for TQM	0.423***	0.342***
Coordination among units	0.529***	0.240***
Aggregate (alpha = 0.65)	0.473***	0.186***
HYPOTHESIS 5: Employee-related Barriers		
Employee resistance to change	-0.009	0.077
Competing demands on employees	-0.017	-0.052
Inadequate employee empowerment	0.024	-0.126
Aggregate (alpha = 0.73)	-0.015	0.021
HYPOTHESIS 6: Multifaceted implementation		
Top management leadership	0.692***	0.372***
Midlevel implementation teams	0.591***	0.310***
Involving employees in implementation	0.476***	0.212***
Monitoring employee satisfaction	0.460***	0.311***
Monitoring customer satisfaction	0.453***	0.210***
Assessing internal performance	0.473***	0.203***
Aggregate (alpha = 0.74)	0.567***	0.331***

***1 percent significance; **5 percent significance; *10 percent significance.

Note: The index of hypothesis 2 includes only the lack of funding measures. The index of hypothesis 3 excludes the form of government variable.

Exhibit 2
Multiple Regression

INDEPENDENT VARIABLES	DEPENDENT VARIABLES	
	TQM Commitment	TQM Impact
Intercept	3.819	2.752
Stakeholder pressures (H1)	0.031	-0.007
Budget pressures (H2-1)	0.068	-0.123
Lack of resources (H2-2)	-0.350*	-0.752**
Executive culture (H3)	0.167**	0.610***
Leadership (H4)	0.929***	0.147
Employee barriers (H5)	-0.120	0.135
Multifaceted implementation (H6)	1.621***	1.700***
Size	0.576***	0.117
N =	255	213
R-square (adj) =	0.51	0.20

***1 percent significance; **5 percent significance; *10 percent significance.

Note: The variable *Multifaceted implementation* excludes the leadership variable in order to ensure independence between the variables. The statistical significance of both models is p < 0.001.

forces. This is further indicated by the fact that a majority of respondents evaluated as *important* the role of external stakeholders in causing concern with productivity improvement. Public complaints were rated by 75 percent of respondents as important or very important reasons for doing TQM, and voter demands are rated by 59 percent as important or very important. Thus external pressures are both strong and indeterminate.[5]

The results regarding hypothesis 2-1 show that budget pressures are insignificant driving forces for cities' TQM commitment and impact. Hypothesis 2-2, concerning the effect of a lack of resources on TQM commitment, is significant at the 10 percent level: The lack of funding for training is a significant negative force affecting TQM commitment. Comments by survey respondents reinforce that training often is cut in the presence of budget shortfalls.

This study finds support for hypothesis 3 regarding the efficacy of a professional orientation. Initiatives from managers and agency directors, and interest in professional concerns such as productivity, are significantly associated with increases in both TQM commitment and TQM impact. The significance of these findings suggests that future studies may wish to examine other

[5]The possibility of counterbalancing forces also is suggested by interviews. In interviews, several city managers indicated that public complaints had led them to instruct agency directors to improve quality in their departments. This suggests an indirect effect, namely, public complaints causing city managers to *direct* agency heads to implement TQM, which in turn may cause TQM commitment and impact. However, public concern does not always equate to support for TQM. One city manager commented that although elected officials were critical of municipal services, "many council member are retirees who are locked into outdated management strategies."

measures of professional or executive culture.[6] The aggregate measure excludes the form of government variable, which is found to be insignificant for both dependent variables. The levels of TQM commitment and TQM impact do not vary significantly for cities with different forms of government.

Support for hypothesis 4, regarding the role of top management leadership, is also strong. The variables shown in exhibit 1 include both support and interest from city managers or CAOs and activities such as reformulating mission statements, engaging in comprehensive planning, and coordinating organizational units. The justification for including these indicators is that their implementation necessarily requires top management leadership. In the literature, these measures often are mentioned as critical to implementing quality management (Smith 1993; Hyde 1992; Fenwick 1991). Findings suggest that the extent of top management leadership in support of quality can be regarded as a partial predictor of TQM impact and that top management "lip service" to quality is unlikely to produce positive results.

This study does not find evidence that employee-related barriers are associated with decreases in TQM commitment and impact (hypothesis 5). A possible explanation is that employee-related barriers are more likely to be a factor in cities with high levels of TQM commitment because such cities implement TQM in more services, adopt new performance measures, and use more resources, all of which may provoke resistance. By contrast, cities with low levels of implementation are likely to experience lower levels of employee resistance. As stated earlier, only a minority of cities in the sample have (very) high levels of TQM commitment. On a scale of $0 =$ not a barrier to $2 =$ very important barrier, these employee-related barriers rated on average 1.1, and cities with higher levels of TQM commitment and impact report somewhat higher levels of employee-related barriers.

Strong support is found for the imperative of multifaceted implementation (hypothesis 6). The measures of this variable consider top management commitment as well as the use of mid-level implementation teams; involvement of employees; assessment of internal performance; and monitoring of both employee and customer satisfaction. These items individually, and as an aggregate measure, are positively and significantly associated with TQM commitment and TQM impact. These results provide empirical support for change models advocated in the management literature (Heiss 1993; T. Berry 1991).

[6]The validity of this measure is further supported by the fact that professionalism is positively and significantly associated with city size.

The hypotheses about TQM commitment and impact over time (hypotheses 7-1 and 7-2) are confirmed. On a scale of 1 = low to 10 = high, commitment in cities that started TQM in 1991 or later rated 5.4, whereas cities that began TQM between 1988 and 1990 (i.e., three to five years before the survey) have a commitment score of 6.3. This difference between the *initial* and *intermediate* stages is statistically significant (t = 2.32, p ≤ 0.02). However, cities that implemented TQM before 1988 (*fine-tuning* stage) have a TQM commitment score of only 3.7 (t = 6.37, p ≤ 0.01), which shows that commitment deceases after the high *intermediate* period, as hypothesized. This does not necessarily mean that cities in the third stage are less committed to TQM, but rather that other activities may command greater resources, training, and rewards. The measure of TQM impact follows a similar pattern. Cities with the most recent implementation have an impact score of 6.3, cities with three to five years experience score 6.9, and cities with more experience score 4.8. The first difference is not significant, but the latter difference is (t = 3.77, p < 0.01).

Finally, the significance of the above measures through multiple regression is examined. To ensure the independence of variables, the measure of top management leadership (which is used to test hypothesis 4) is excluded from the composite index used to test hypothesis 6. The results show that the model accounts for considerable variance in the TQM commitment variable (R^2-adjusted = 0.51), and substantially less variance in the TQM impact variable (R^2-adjusted = 0.20). The independent variables were tested for multicollinearity, but none was found. The regression shows that although leadership is associated with TQM commitment, it is no longer significantly associated with TQM impact when controlled for the other variables. A possible explanation is that the *executive culture* variable includes elements of top management leadership, such as concern with productivity and ensuring initiatives from top managers. This regression also includes city size as a control variable. Various authors have suggested that larger cities may have more resources for implementing TQM, although others have suggested that large organizations are more resistant to change and that therefore TQM is more likely to be implemented in smaller organizations. Additionally, large cities that implement TQM are likely to do so on an agency-by-agency basis. The results show that larger cities have significantly higher levels of commitment to TQM but not higher levels of impact.[7]

[7] The zero order correlation of size on TQM commitment is 0.125 (tau-c, p ≤ 0.01) and -0.012 on TQM impact (not significant). It is also possible to construct a causal model, which might suggest indirect, significant relationships. For example, although leadership is not statistically associated with TQM impact, leadership is associated with TQM commitment which may be associated with TQM impact. Such linkages are not examined in this article.

CONCLUSION

This study finds that professional managerial culture, top management leadership, and multifaceted implementation strategies are significantly associated with higher levels of municipal TQM commitment and impact. By contrast, budget pressures and demands from external stakeholders, including public complaints, are not significantly associated with increases in TQM commitment and impact. Budget pressures may result in a lack of quality-related training and rewards, thereby impeding innovation. Overall, these findings suggest that professionalism in public administration is important to improving the quality of public services.

As new forms of public management and organizations develop, it is necessary to conceptualize new theories that provide guidance (e.g., LaPorte 1994). Part of this effort includes debunking old theories that no longer comport with reality. In a sense, the state of public policy and administration theory is one of continuous reinvention. This study suggests that it may be necessary to rethink the heavy reliance on standard forms of municipal government as predictors of support for certain policy and management initiatives or for success of such efforts. Specifically, this study fails to find significant differences in TQM commitment and impact among cities with council-manager and mayor-council forms of government. Outcome did not follow form, a finding that is consistent with some other studies of urban policy (e.g., Morgan and Pelissero 1980).

Results also suggest that there are some limits on the usefulness of transactionalism as a basis for theoretical predictions. In our study, the demands of external stakeholders are not associated with increased levels of commitment. It is unclear that increased responsiveness produces better service delivery, given the possibility of public preferences for short-term solutions, widespread unfamiliarity with modern management techniques, and cynical expectations of low quality in government services.[8] Although external demands ensure accountability, it is largely the career officials who translate these demands into services. Their orientation and level of knowledge is critical, and in this regard professional orientation as culture is a significant determinant of TQM implementation. Indeed, we confidently predicted on the basis of the literature (Pindur, Kim, and Reynolds 1993; Patten 1991) that tangible support for TQM was more likely to be evident and that quality improvement initiatives were more likely to succeed in jurisdictions that shared a culture that was already largely consistent and aligned with the values of TQM. In this

[8]Another reason for taking the efficacy of external actors less seriously is that the interactions between organizations and their external customers are often indirect (through city managers and frontline workers), haphazard, and infrequent.

regard, it is necessary to take seriously the importance of professional, organizational, personal values and ideals as predictors of receptivity to a quality thrust and successful attainment of TQM objectives. In short, organizational culture matters.

The significance of multifaceted implementation strategies, such as combinations of top-down with bottom-up strategies, suggests that there is not one best way to implement TQM. This is consistent with theories of search strategy, which suggest that rational actors often use multiple and simultaneous courses of action. This is because the magnitude of prospective barriers is often unknown and because multiple strategies increase the availability of information. The multiplicity of strategies need not confuse stakeholders and alienate their support, as is sometimes assumed, because senior managers can provide constancy of purpose toward final goals. This is accomplished through consistent patterns of commuciation and rewards. In sum, what are often called implementation strategies are perhaps only tactics: The concept of implementation strategy is broader and requires a longer time frame as suggested by search theories.

What are the implications of this study for future research? A caveat in this study is the exclusive reliance on city managers and chief administrative officers as respondents. Their responses well may differ from those of mayors, agency heads, and employees. We have no way of knowing in what ways these other groups' responses may differ from those of city managers, although we believe that city managers and CAOs are more informed about TQM in their municipalities than these other potential respondent groups. Subsequent studies should examine the reactions of elected officials, executives, managers, supervisors, and employees as well as other external stakeholders who have an interest in quality management. Additional systematic research is needed to assess the influence of organizational culture on TQM implementation. Research can build on baseline findings from exploratory studies like this one to advance our understanding of this important new development in municipal management.

REFERENCES

Ammons, David.
1992 "Productivity Barriers in the Public Sector." In Marc Holzer, ed. *Public Productivity Handbook.* New York: Marcel Dekker.

Balk, Walter.
1992 "Organization Theories as Instigators of Public Productivity Improvement in Action." In Holzer, ed.

Barzelay, Michael.
1992 *Breaking Through Bureaucracy.* Berkeley: University of California Press.

Berry, Francis.
1994 "Innovations in Public Management: The Adoption of Strategic Planning." *Public Administration Review* 54:(July/Aug.):322-30.

Berry, Thomas.
1991 *Managing the Total Quality Transformation.* New York: McGraw-Hill.

Bleakley, Fred.
1993 "Many Companies Try Management Fads, Only to See Them Flop." *Wall Street Journal,* July 6.

Brough, Regina.
1992 "The Eight Rules for Producing Results." *Journal of State Government* 65:(Jan.-Mar.):4-8.

Brown, Mark; Hitchcock, Darcy; and Willard, Marsha.
1994 *Why TQM Fails: And What to Do About It.* New York: Irvin.

Carnevale, David, and Hummel, Ralph.
1993 "The Soul in the Machine: Quality, Power and the Future of Work." Paper presented at the annual meeting of the American Society for Public Administration.

Chang, Richard.
1993 "When TQM Goes Nowhere." *Training and Development Journal* 47:(Jan.):23-9.

Cohen, Steven.
1988 *The Effective Public Manager.* San Francisco: Jossey-Bass.

Cohen, Steven, and Brand, Ronald.
1993 *Total Quality Management in Government.* San Francisco: Jossey-Bass.

Davis, J.A., and Hyde, Al.
1992 "Quality Perspectives: Editorial—What's Personnel Got to Do With It?" *Periscope* 13:(Sept.):1.

Denhardt, Robert.
1993 *The Pursuit of Significance.* Belmont, Calif.: Wadsworth.

Downs, George, and Larkey, Patrick.
1986 *The Search for Government Efficiency.* New York: Random House.

Fenwick, Alan.
1991 "Five Easy Lessons." *Quality Progress* 24:(Dec.):63-6.

Fessler, James, and Kettl, Donald.
1991 *The Politics of the Administrative Process.* Chatham, N.J.: Chatham.

Freeman, Edward.
1984 *Strategic Management: A Stakeholder Approach.* Boston: Ballinger.

Gabris, Gerald.
1992 "Strategic Planning in Municipal Government: A Tool for Expanding Cooperative Decision Making Between Elected and Appointed Officials." *Public Productivity and Management Review* 16:(fall):77-93.

Galloway, Robert.
1992 "Quality Improvement and the Heightened Self-esteem: The Brighton Police Story." *National Productivity Review* 11: (autumn):453-61.

Goodsell, Charles.
1993 *The Case for Bureaucracy.* Chatham, N.J.: Chatham.

Gordon, Jack.
1991 "Training Budgets: Recession Takes a Bite." *Training* 28: (Oct.):37-45.

Guy, Mary.
1989 *From Organizational Decline to Organizational Renewal: The Phoenix Syndrome.* New York: Quorum Books.

1992 "Productive Work Environments." In Holzer, ed.

Halachmi, Ari.
1992 "Strategic Management and Productivity." In Holzer, ed.

Heiss, Arleen.
1993 "Quality as Change Management." *Public Manager* 22:(fall): 57-9.

Hill, Larry.
1992 *The State of Public Bureaucracy.* Armonk, N.Y.: Sharpe.

Holzer, Marc, ed.
1992 *Public Productivity Handbook.* New York: Marcel Dekker.

Hyde, Albert.
1992 "The Proverbs of Total Quality Management: Recharting the Path to Quality Improvement in the Public Sector." *Public Productivity and Management Review* 16:(fall):25-37.

Kravchuk, Robert, and Leighton, Robert.
1993 "Implementing Total Quality Management in the United States." *Public Productivity and Management Review* 17:(fall): 71-82.

La Porte, Todd.
1994 "A State of the Field: Increasing Relative Ignorance." *Journal of Public Administration Research and Theory* 4:(Jan.):5-15.

Lipsky, Michael.
1980 *Street Level Bureaucracy: Dilemmas of the Individual in Public Services.* New York: Russell Sage.

Loney, Timothy.
1993   "TQM and Labor Relations
        Cooperation: A Match Made in
        Heaven or Devil Take the Hind-
        most?" Paper presented at the
        annual meeting of the American
        Society for Public Adminis-
        tration.

McGowan, Robert, and
Spagnola, Robert.
1992   "Developing New Technol-
        ogies." In Holzer, ed.

Meier, Kenneth.
1993   *Politics and the Bureaucracy:
        Policymaking in the Fourth
        Branch of Government.* Belmont,
        Calif.: Brooks/Cole.

Milakovich, Michael.
1990   "Enhancing the Quality and Pro-
        ductivity of State and Local
        Government." *National Civic
        Review* 79:(May/June):266-76.
1991   "Total Quality Management in
        the Public Sector." *National
        Productivity Review* 19:(spring):
        195-213.
1992   "Total Quality Management for
        Public Service Productivity
        Improvement." In Holzer, ed.

Morgan, David, and Pelissero, John.
1980   "Urban Policy: Does Political
        Structure Matter?" *American
        Political Science Review* 74:
        (Dec.):999-1005.

Mushkin, Selma, and Sandifer, Frank.
1979   *Personnel Management and Pro-
        ductivity in City Government.*
        Lexington, Mass.: Lexington
        Books.

Nice, Donald.
1994   *Policy Innovation in State
        Government.* Ames: Iowa State
        University Press.

Patten, Thomas.
1991   "Beyond Systems—The Politics
        of Managing in a TQM Environ-
        ment." *National Productivity
        Review* 11:(winter):9-19.

Pfister, Jack, and
Van Wart, Montgomery.
1993   "Successful Examples of TQM
        in State and Local Government."
        Paper presented at the annual
        meeting of the American Society
        for Public Administration.

Pindur, Wolfgang; Kim, Pan S.; and
Reynolds, Keith R.
1993   "Reformulating Organizational
        Culture: The Key to Total Qual-
        ity Management in the Public
        Sector." Paper presented at the
        annual meeting of the American
        Society for Public Administra-
        tion.

Radin, Beryl, and Coffee, Joseph.
1993   "A Critique of TQM: Problems
        of Implementation in the Public
        Sector." *Public Administration
        Quarterly* 17:(spring):42-53.

Reynolds, Larry.
1994   *Beyond Total Quality Manage-
        ment.* London: Sheldon Press.

Ripley, Randall, and Franklin, Grace.
1991   *Congress, the Bureaucracy, and
        Public Policy.* Pacific Grove,
        Calif.: Brooks/Cole.

Rosen, Ellen.
1993   *Improving Public Sector Produc-
        tivity: Concepts and Practice.*
        Newbury Park, Calif.: Sage.

Saltzstein, Grace.
1992   "Explorations in Bureaucratic
        Responsiveness." In Larry Hill,
        ed. *The State of Public Bureau-
        cracy.* Armonk, N.Y.: Sharpe.

Sensenbrenner, Joseph.
1991   "Quality Comes to City Hall."
        Harvard Business Review
        69:(Mar.-Apr.):64-75.

Smith, Keith.
1993   "Total Quality Management in
        the Public Sector: Part 1."
        Quality Progress 26:(June):45-8.

Straayer, John; Wrinkle, Robert; and
Polinard, John.
1994   *State and Local Politics.* New
        York: St. Martin's.

Stupak, Ronald.
1993   "Driving Forces for Quality
        Improvement in the 1990s."
        Public Manager 22:(spring):
        32-5.

Swiss, James.
1992   "Adapting Total Quality Man-
        agement to Government." *Public
        Administration Review* 52:(July-
        Aug.):356-62.

Trice, Harrison, and Beyer, Janice.
1993   *The Cultures of Work Organiza-
        tions.* Englewood Cliffs, N.J.:
        Prentice-Hall.

Van Horn, Carl; Baumer, Donald; and
Gormley, William.
1992   *Politics and Public Policy.*
        Washington, D.C.: Congres-
        sional Quarterly Press.

Walters, Jonathan.
1992   "The Cult of Total Quality."
        Governing 5:(May):38-42.
1994   "TQM: Surviving the Cynics."
        Governing 7:(Sept.):40-5.

West, Jonathan.
1986   "City Government Productivity
        and City Service Reforms."
        Public Productivity Review
        39:(special issue):45-59.

West, Jonathan; Berman, Evan; and
Milakovich, Michael.
1994a   "Implementing TQM In Local
        Government: The Leadership
        Challenge." *Public Productivity
        and Management Review* 17:
        (winter):175-90.
1994b   "HRM, TQM and
        Organizational Policies: The
        Need for Alignment." Paper pre-
        sented at the Academy of Busi-
        ness Administration, London.
1994c   "Total Quality Management in
        Local Government." In ICMA,
        The Municipal Year Book.
        Washington, D.C.: International
        City/County Management Asso-
        ciation.

Wilson, James.
1980   *The Politics of Regulation.* New
        York: Basic Books.
1989   *Bureaucracy: What Government
        Agencies Do and Why They Do
        It.* New York: Basic Books.

Wood, Donna, and Gray, Barbara.
1991   "Toward a Comprehensive
        Theory of Collaboration."
        *Journal of Applied Behavioral
        Science* 27:(June):139-62.