

Article

Strategy Implementation Style and Public Service Effectiveness, Efficiency, and Equity

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Abstract: Strategic decision-making theories suggest that organizations that combine rational and incremental strategy implementation styles are likely to perform better than those that emphasize a single style. To assess whether these arguments apply to the public sector; we explore the strategy implementation style and perceived service effectiveness, efficiency and equity of Turkish municipal government departments. Using fuzzy cluster analysis, we identify four distinctive though inter-related styles of strategy implementation in our sample organizations: logical-incremental; mostly rational; mostly incremental; and no clear approach. A logical-incremental and mostly rational style of implementation are associated with better effectiveness, efficiency and equity; with the absence of an implementation style associated with worse performance. Theoretical and practical implications are discussed.

Keywords: strategy; implementation; performance; public sector; quantitative analysis; fuzzy clustering

1. Introduction

Strategic management tools and ideas have been brought into play by governments across the world to enhance capacities and performance standards in the face of increasingly challenging economic and political circumstances [1,2]. In response, researchers have begun to investigate the antecedents and effects of strategic management practices in the public sector [3,4]. A growing number of studies now shed light on the nature of strategic planning in public organizations and its relationship with the performance of those organizations (e.g., [5–9]). However, research on the dynamics of strategy implementation in the public sector is still in its infancy [10,11]. The challenges and problems in implementing strategies and the key attributes of successful strategy implementation have been identified in several articles (e.g., [12–14]). Still, even though it is widely hypothesized that the style of strategy implementation makes a difference to organizational outcomes [15,16], only a handful of studies have explored strategy implementation along with organizational performance in a public sector context (e.g., [17,18]). To build empirical understanding of the dynamics of strategic management in the public sector, this study investigates the relationship between different strategy implementation styles and the effectiveness, efficiency and equity of the service departments of a sample of large Turkish metropolitan municipalities.

There are numerous approaches to the study of strategic management, including the resource-based view, Porter's strategic positioning, process theories, game theory, transaction-cost theories, institutional theory and contingency theory [19]. Many of these approaches have been applied successfully in public sector settings (see, [2]). However, such approaches have rarely been utilized to address issues relating to the implementation of strategies in public organizations. In this study, strategic decision-making theories are used to frame our research because they focus squarely on the need for organizations to select between different styles of strategy implementation [16,20].

From a decision-making perspective, the successful implementation of strategies depends on the particular style of implementation that an organization decides to adopt, which, in turn, has important implications for organizational performance. In seeking to understand what works, and when, for strategy implementation, strategic decision-making theories focus on two key implementation styles: a rational or planned style of implementation; and an incremental or ad-hoc style of implementation.

A rational implementation style prioritizes getting people to follow precise procedures for the introduction of new policies and strategies, and the use of systems that can ensure that such organizational changes follow a pre-planned sequence of steps [21]. By contrast, an incremental implementation style emphasizes the fluid nature of change management, and the need to encourage and support the modification of strategies on the ground by the people responsible for making them work [22]. Each of these styles possesses distinctive merits, which may lead to enhanced organizational performance. By systematizing the process through which new strategies are introduced, a rational implementation style is thought to ensure that top management is able to monitor and closely control organizational change [13]. Because it recognizes the importance of adaptation and learning, the adoption of an incremental implementation style is argued to result in greater responsiveness to the organizational and political problems associated with making new strategies work [23]. Whatever the individual merits of these contrasting implementation styles, strategic decision-making theories have suggested that the key to maximizing the chances of success is their dual application [20]. Hence, in this study, we seek to identify whether emphasizing one implementation style or combining them is associated with better organizational performance.

In addition to extending existing research on strategy implementation and organizational performance in the public sector, we aim to contribute more generally to research on strategic management in the public sector by exploring its dynamics in Turkish local governments. Most of the research on this topic has been conducted in the public sector of developed Western countries (though see, [24]). As a result, comparatively little is known about the nature of strategy implementation in non-Western contexts—still less about its relationship with the performance of public organizations in those contexts. To remedy this important gap in our understanding of strategic management in the public sector, this study concentrates on the management and performance of Turkish local governments, more specifically metropolitan municipalities. In doing so, it will help to clarify whether the concepts and theories used in previous studies are applicable in another public management context. In addition, the results of the research will have the potential to contribute to policy debates about the improvement of the performance of public organizations in non-Western settings.

Is a rational strategy implementation style associated with good organizational performance? Does an incremental strategy implementation style have a stronger or weaker relationship with performance than a rational one? Or does some combination of the two styles result in the best performance outcomes? Furthermore, are these theoretical ideas even applicable in a non-Western setting? In this paper, we seek to provide answers to these important questions by applying fuzzy clustering and regression techniques to the relationship between strategy implementation styles and the perceived effectiveness, efficiency and equity of Turkish municipal service departments. The paper will begin by developing theoretical arguments about the performance benefits of different strategy implementation styles, before considering the ways in which the combination of a rational and incremental implementation style might lead to optimal levels of performance. Measures of local government effectiveness, efficiency, and equity, and strategy implementation style and a range of appropriate control variables will then be identified and described. Thereafter, the results of the statistical modelling that we undertake are presented and discussed. Finally, the conclusion will elucidate the theoretical and practical implications of the findings.

Theory and Hypotheses

The effective implementation of strategies has been recognized as crucial to organizational performance in the public as much as the private sector [18]. However, it is also widely acknowledged

that strategy implementation is a particularly challenging aspect of strategic management. According to some researchers, less than 50% of the strategies that organizations formulate ever get implemented [25–27]. One important reason for this ‘implementation gap’ is that strategy formulation and implementation are often seen as completely separate processes [10]. An emphasis on strategizing and the development of strategies has sometimes meant that effective strategy implementation is taken for granted. The work of Mintzberg [28], and others (e.g., [29,30]), on emergent strategies highlights the way that strategies are actually implemented within organizations is as critical to their success, as are the actual content of those strategies and the way in which they were initially formulated.

Within the strategic management literature, implementation is now seen as the most difficult phase of the strategy process because implementation activities take a longer time frame than formulation, involve more people and greater task complexity. In particular, they imply a need for sequential and simultaneous thinking on the part of the managers responsible for strategy formulation and implementation [31]. Hill and Jones [32] highlight that strategy implementation involves putting strategies in practice, which entails the introduction of new service delivery models, monitoring the effectiveness of operational changes and redesigning the organizational structure, evaluation system, and culture required to fit the new strategy. Hence, Jenkins et al. [33] argue that the implementation of a strategy in an organization is akin to fighting a long and bloody battle—and, one that has a comparatively high possibility of failure. All of which draws attention to the question of whether one way of doing strategy implementation might be better than another.

Conceptual studies have developed alternative frameworks for categorizing different approaches to strategy implementation (see, for example [20,34,35]). Common to these frameworks is a distinction between more or less planned styles of implementation [36,37]. A planned or rational style of implementation tends to be top-down and hierarchical, involving the use of pre-prepared action plans, performance monitoring, and review processes [31,38,39]. By contrast, an unplanned or incremental style of implementation is more bottom-up and less hierarchical, with staff deeply involved in adjusting and amending new practices as they are being introduced.

In theory, organizations may adopt different implementation styles for different purposes; for example, using a highly formal process for introducing an efficiency-focused strategy, while adopting a more fluid and incremental approach to the exploratory search for innovative solutions to service delivery problems. In practice, an organization’s strategy implementation style typically reflects the taken for granted routine of putting strategies into practice and can be described as the way “we do things around here”. Nutt [40] for instance, emphasizes that managers often develop a particular style of implementation and stick with it. Hence, while all organizations will utilize a rational and an incremental implementation style to some extent, they will either prioritize one approach over the other or may even attempt to pursue them both simultaneously. For this reason, it is highly likely that organizations will adopt quite distinctive strategy implementation styles that result in observable variations in organizational performance.

According to strategic planning theories, organizations adopting a predominantly rational strategy implementation style are likely to benefit from the greater control that they are able to exert over the introduction of new organizational systems and structures [31]. From this perspective, strategic management is a deliberate policy of conscious thought, with the development and implementation of strategies occurring in a chronological sequence that culminates in the achievement of the strategic objectives set out at the very beginning of the process. Consistent with classical notions of rationality, diagnosis follows prescription and, in turn, is followed by action. Critically, analytical and evaluative techniques are employed to maintain commitment to strategic goals as they are being implemented, and the potential for plans to be updated in response to environmental change is (in theory) built into the whole system [41]. As a result, an emphasis on a rational implementation style is thought to result in better organizational performance because the goal clarity on which it rests facilitates the on-going coordination and integration of activities [42].

Overall, the evidence from the private sector suggests that a rational strategy implementation style is associated with better organizational performance (e.g., [21,42]). However, the picture from the public sector is a bit less clear-cut. Miller's study [15] of 11 decisions from private and public organizations, finds that strategic planning has a stronger positive influence on the success of implementation than a more ad-hoc approach in which decisions are made on an incremental basis as situations arise. By contrast, Andrews's et al. study [18] in Welsh local government finds that a rational implementation style is unrelated to performance. Nevertheless, based on prior theory and the growing evidence in support of the wider benefits of rational planning in the public sector (see, for example, [1,43]) our first hypothesis is:

Hypothesis 1. *A rational strategy implementation style is positively related to organizational performance.*

Proponents of incremental strategy-making believe that senior managers have only a somewhat generalized idea of the future position of their organizations and so strive to move towards this position gradually through piecemeal improvements rather than radical changes [44,45]. From this perspective, an incremental strategy implementation style is effective because it acknowledges that the environment of any organization is too complex to be systematically analyzed, predicted, and controlled. In particular, the demands of multiple stakeholders need to be negotiated and operational issues resolved on the ground depending upon the needs of each separate situation [46]. Because strategy-making unavoidably takes the form of a learning process over time, formulation and implementation become indistinguishable, which reduces the likelihood of implementation failure [25] and enhances responsiveness to environmental change [47]. For all these reasons, an incremental strategy implementation style is likely to be associated with good organizational performance.

There are only a few empirical studies that examine the relationship between an incremental strategy implementation style and performance. Stewart and Kringas' [48] case study of strategic change in six Australian public agencies finds that the more intense negotiations between top and middle management associated with an incremental implementation style resulted in higher performance. Veliyath and Shortell's [49] analysis of 406 hospitals in the United States shows that amongst the best performing organizations, those that adopted a more incremental style of strategy implementation were more likely to be successful than those that utilized a more planned approach. However, Andrews et al.'s [18] study of service departments in Welsh local government suggests that an incremental implementation style is actually associated with worse organizational performance, whereas a rational approach has no such performance penalty. As a result of this mixed evidence, our second hypothesis is therefore:

Hypothesis 2. *An incremental strategy implementation style is positively related to organizational performance, however less so than a rational style.*

Incrementalism can be described as the deliberate improvement of strategy by experimenting and learning from partial commitments [50]. From this perspective, strategic planning and rational implementation processes may form the basis for a framework within which the incremental adaptation of strategy is encouraged and supported. Quinn [51] observed that the processes through which companies formulate their strategy are typically evolutionary and frequently intuitive rather than 'rational'. Even with the existence of a well-developed strategic planning system, major strategic decisions are still regularly taken outside that planning framework. According to Quinn [51], this implies a broad strategic approach of 'logical incrementalism', which combines elements of rational planning and incremental strategy adaptation in order to capture the benefits of both.

A logical-incremental style of strategy implementation blends a rational and an incremental implementation style by treating strategic management as a series of small steps towards agreed strategic goals, each of which is related to previous adjustments and amendments in ways that are recognizable to front-line managers and employees [52]. In addition to seeking the benefits of the goal

clarity associated with planned implementation, such a 'dual' style of implementation attempts to ensure the continued commitment of the different interests within the organization to key strategic goals. Such an approach may therefore result in better organizational performance than either a predominantly rational or incremental implementation style because of its more comprehensive outlook on the challenges associated with achieving strategic and organizational change [53].

To date, few studies have explicitly addressed the performance effects of a logical-incremental strategy implementation style. Nevertheless, the research that has been undertaken suggests that it may represent an especially effective approach to implementation. Hickson et al.'s [20] study exploring implementation style and performance in a sample of public and private organizations finds that a dual approach combining elements of both planned and adaptive implementation has a stronger positive association with organizational performance than an emphasis on either planning or adaptation. Hence, our third hypothesis is that:

Hypothesis 3. *A logical-incremental strategy implementation style will have a stronger positive relationship with organizational performance than either a rational or incremental implementation style.*

Inkpen and Choudhury's [54] concept of "strategy absence" suggests that it is possible for organizations to have no clearly discernible style of strategy implementation. In such organizations, there is no taken-for-granted or preferred routine for implementing strategies. Neither a rational nor incremental implementation style are prioritized, nor is there a coherent attempt to combine these approaches. The absence of a clear approach to strategy implementation may therefore be associated with poorer performance because those involved in the introduction of new practices have few processes and procedures to draw upon or are not encouraged to participate in decision-making on the ground. Hickson et al.'s [20] study indicates that the implementation of decisions that is neither "experience based" nor "readiness based" may be associated with worse performance than that which either prioritizes one or both of these approaches. Therefore, our final hypothesis is:

Hypothesis 4. *The absence of a strategy implementation style is negatively related to organizational performance.*

2. Materials and Methods

Data for this study were drawn from an email survey of managers in Turkish local governments. The study specifically focuses on metropolitan municipalities which are the biggest local elected bodies in Turkey, operating in territorially-bounded geographical areas, receive just over half of their income from Turkish central government and generate the remainder from their own revenues. Metropolitan municipalities are publicly elected entities established in thirty Turkish provinces, each with a population of over 750,000. They have considerable administrative and financial autonomy, and are multi-purpose governments delivering local public services in the areas of public health, policing, fire protection, leisure, culture, transport, waste management, town planning, and community development.

Turkish local government is an especially interesting context in which to study the dynamics of strategy implementation. Strategic management in the public sector outside the Anglophone world is still little documented, yet there are many interesting and important examples of its application in non-Western countries. Historically, Turkey has had a strong republican ethos typical of the Napoleonic public administrations of Southern Europe, but with even greater importance given to the state's pre-eminence over society than countries such as France, due to its roots in the centralized bureaucracy of the Ottoman Empire [55]. Nonetheless, in recent times, Turkey has developed a more Anglo-Saxon emphasis on business-style management practices in the public sector as part of its drive to modernise the political system and gain membership of the European Union [56].

In the 1990s, Turkey attempted to separate policy-making and service delivery by moving away from traditional public administration models in favour of a more strategic approach to public

management. Coupled with the desire to modernize the state and democracy in line with European standards, this was driven by economic difficulties, following which the central government sought to address weaknesses and inefficiencies in public-policy design, service delivery, and the misallocation of resources. Modernisation of the Turkish state continued throughout the 2000s, as the drive to integrate with Europe intensified and the effects of the political and economic instability of the 1990s persisted.

Within this context of democratization and modernization, the Turkish central government brought together key actors from within and outside government to support a range of reforms intended to make the public sector more strategic in its behavior [57]. Strategic planning tools and techniques and performance management initiatives have therefore been implemented in many public organizations, especially metropolitan municipalities, which have a certain degree of financial and operational autonomy from Turkish central government. Much like strategic management initiatives in Western countries, though, the adoption of planning processes has been driven by a central government keen to make the public sector more efficient [58]. Hence, this study provides a unique insight into the effectiveness of New Public Management (NPM)-style public management reform in a country undergoing significant political and administrative change.

2.1. Management Survey

To investigate the relationship between strategy implementation styles and the performance of Turkish municipalities, a questionnaire survey was designed to capture the views of municipal managers on strategic management within their organizations. The survey was administered by email in the Spring of 2016. A pilot version of the survey was sent to managers from several metropolitan municipalities to pre-test it. Based on responses to the pilot process, a revised and amended version of the survey was created. Because the survey was conducted in a non-English reading context, the questionnaire items were first translated from English into Turkish. Thereafter, as per Brislin's [59] recommendations for cross-cultural research, the Turkish version of the questionnaire was back-translated into English and the two versions compared for meaning equivalency. Following this process of comparison, further amendments were made to the Turkish questionnaire to address important discrepancies between the original English version and the back-translation. Email addresses for the entire population of the first three tiers of metropolitan municipalities' managers were drawn from municipalities' websites and specialized survey software was used to send the survey to the respondents. The questionnaires were self-coding and converted to SPSS for analysis.

To ensure we captured the perceptions of performance and strategy implementation of managers at different levels in the organization, we distributed the survey to deputy general secretaries, department heads and unit heads. This circumvents sample bias problems associated with surveying informants from only one organizational level [60]. These are also the types of informants who are likely to know most about organizational strategy and performance. Deputy general secretaries can have various responsibilities in all divisions for service management, delivery, and improvement on behalf of the municipal mayor and general secretary. Department heads are those senior managers with responsibility for the delivery and management of main services (e.g., Department Head of Waste Management, Department Head of Finance). Unit heads are front-line supervisory managers focused on the management and the process of delivery within specific service areas, such as Unit Head of Street Cleaning.

In each metropolitan municipality, questionnaires were sent to all deputy general secretaries, department heads and unit heads across certain core service areas: culture, corporate, back office, fire, health, finance, police, protection, planning, transport, and waste. The total number of potential informants was 840, and the number of actual responses was 154 (18%), of which 126 (15%) were complete in terms of the data necessary for this study. Responses were received from 20 metropolitan municipalities, and the actual respondents included 6 deputy general secretaries, 28 department heads, and 91 unit heads.

2.2. Service Performance

Organizational performance in the public sector is complex and multi-dimensional. Public organizations are typically required to meet multiple and potentially conflicting organizational goals [61]. The analysis presented here focuses on three key dimensions of the performance of local public services: effectiveness; efficiency; and, equity. We measure the achievements of Turkish metropolitan municipalities on these different dimensions of performance, using managers' perceptions of how well their service department does compared to other departments. Informants indicated on a seven point Likert scale from 1 (strongly disagree) to 7 (strongly agree) the level of their department's performance in terms of the three key core administrative values of effectiveness, efficiency and equity [62].

Effectiveness captures the successful (or otherwise) implementation of major policies (i.e., the extent to which local governments were able to achieve the objectives set for them by senior management or higher levels of government) [63]. Efficiency refers to how well resources are managed by an organization (i.e., the extent to which local governments pay a reasonable price for inputs, such as staff and equipment, and whether they spend more or less money than anticipated in order to achieve desired outcomes) [64]. Finally, the concept of equity pertains to the availability of public services to disadvantaged social groups, especially the extent to which poor people are able to access the same quality of publicly-funded services as wealthy people [63].

Specifically, respondents were asked: To what extent do you agree that your department performs well in comparison with others on: effectiveness (e.g., whether your objectives were achieved); Value for Money (i.e., efficiency) (e.g., cost per unit of service delivery); and, equity (e.g., services are fairly distributed amongst local citizens, e.g., in the neighborhoods). On average, respondents rated the performance of their departments similarly across the three dimensions, but were marginally more positive about service equity (Mean 5.75, Standard Deviation (SD) 1.38) and efficiency (Mean 5.65, SD 1.13) than effectiveness (Mean 5.63, SD 1.30).

Managers' perceptions of the effectiveness, efficiency and equity of local public services within their municipality offer a unique perspective from which to undertake analysis of the effects of strategy implementation style. Despite concerns about the discrepancy between self-reported measures of performance and more 'objective' ones drawn from administrative sources [65], prior research has found managers' perceptions of performance to be valid, reliable and sensitive [66]. Moreover, such perceptual data may be the only comparable information available on the achievements of key public services on different dimensions of performance in countries that lack extensive performance management regimes and information. Indeed, a number of recent studies of strategic management in the public sector have drawn on subjective performance measures (e.g., [24,67]).

2.3. Strategy Implementation Style

The questions assessing strategy implementation style included in the survey are shown in Table 1. To measure a rational approach to implementation, respondents were asked five questions on the use of formal procedures in their approach to implementing strategies in their service department (R1-R5 in Table 1). These included elements such as the extent to which implementation tasks were clearly defined and whether progress against targets was regularly reviewed [34,35]. Respondents were asked five further questions relating to an incremental approach to strategy implementation (I1-I5 in Table 1). These focused on elements such as the gradual introduction of strategies and the on-going adjustment and amendment of strategies throughout the implementation process [35,52]. Seven-point Likert scales were again used ranging from 1 (strongly disagree) to 7 (strongly agree).

Table 1. Strategy implementation style items.

Implementation Questions	Mean	Min	Max	SD
When implementing strategies we have clearly defined tasks (R1)	5.427	1.000	7.000	1.731
We have weekly—monthly plans to implement strategies (R2)	5.298	1.000	7.000	1.643
We have precise procedures followed for achieving strategic objectives (R3)	5.242	1.000	7.000	1.584
When implementing strategies we regularly review progress against targets (R4)	5.387	1.000	7.000	1.560
We implement strategies by piloting them initially and then implement them in full (R5)	4.813	1.000	7.000	1.596
We implement our strategies gradually, not in an instant (I1)	5.301	1.000	7.000	1.525
During the implementation process, we amend our strategies if necessary (I2)	5.398	1.000	7.000	1.475
To keep in line with our environment during the implementation process, we make continual small scale changes to strategy (I3)	5.377	1.000	7.000	1.416
New strategies are introduced in a very similar way to those that have already been implemented (I4)	5.320	1.000	7.000	1.550
Our strategy develops through a process of ongoing adjustment while implementing (I5)	4.828	1.000	7.000	1.699

The descriptive statistics in Table 1 highlight that respondents were slightly more likely to indicate that incremental implementation processes were present in their service department. To assess whether the use of performance and strategy implementation measures from the same data source might be susceptible to common method bias, Harman's single-factor test was performed, which revealed that the first factor did not account for the majority of the variance. For this reason, it is likely that the regression results presented below are not subject to the common method bias that can affect studies drawing on the same data sources for the independent and dependent variables [68].

2.4. Control Variables

Upper echelon theory suggests that the personal characteristics of managers have a direct bearing on how they choose to interpret their organizational environment [69]. Several individual-level variables are therefore included in the statistical modelling to control for the possibility that personal characteristics influence perceptions of performance, beginning with the gender, age, job tenure length, and education level of managers. As regards gender, a dichotomous variable is constructed for inclusion in the statistical models by coding female respondents one and male respondents zero. Research has suggested that women are more likely than men to underestimate their task performance [70], and so it may be anticipated that female managers are more inclined to hold a negative view of the performance of their organization than their male counterparts.

Respondents' age is measured in the survey using five categories (18–29, 30–39, 40–49, 50–59, and 60 or older). Age was therefore treated as an ordinal scale for the purposes of our analysis. Respondents' length of tenure within their current job was measured using five categories (0–1 year, 2–5 years, 6–10 years, 11–20 years, and more than 20 years). Again, tenure was treated as an ordinal scale. Older individuals and those that have been employed in post for a longer time period tend to have a more positive view of their organization [71], and thereby may be more inclined to over-estimate its achievements. Within the survey, education level is captured by a question asking respondents to indicate their highest level of qualification in relation to four general categories (high school, graduate, post-graduate (Master's level), and doctoral degree). A dichotomous variable coded 1 for postgraduate education level respectively and 0 otherwise was added to the model. More educated individuals are assumed to have less positive views about the organization for which they work [72], and therefore be less likely to overestimate organizational performance.

Variations in perceived performance are also conceivably likely for managers located in different places in the organizational hierarchy and between different services. Construal level theory indicates that more powerful stakeholders tend to offer more positive and abstract judgements on events due to the social distance between them and what is happening on the ground [73]. Hence, more senior managers tend to think strategically and positively about their organizations [74]. Middle managers, by contrast, are more embroiled in the day-to-day management of organizational sub-units, while frontline managers tend to focus on the task-related demands of their jobs and the needs of the clientele they are serving [75]. We control for the potential influence of position within the organizational hierarchy by including dichotomous variables coded 1 for deputy general secretaries and department heads and 0 otherwise.

Turkish metropolitan municipalities are large complex multipurpose organizations delivering a range of services. It is, therefore, possible that variations in goals and tasks will result in varying performance perceptions in different service areas. Such differences may be especially pronounced between street-level services and those more focused around administration. For example, managers in public health services may be more cognizant of the socio-economic challenges faced by the municipality, whereas corporate service managers are likely to be detached from these due to their inward focus on organizational processes. Likewise, managers in regulatory or technical services gain knowledge and information about service delivery in their daily work, and so are more externally-orientated than those working in administrative departments. To capture potential variations in perceived performance relating to the mission of the department in which managers work, we include dichotomous variables coded 1 for managers working in distributive (i.e., public health, leisure), regulatory (i.e., waste management, land use planning) and safety (i.e., fire, police) service areas and 0 otherwise, with managers working in corporate services (i.e., central administration, HR) taken as the reference category. Descriptive statistics for all the control variables are shown in Table 2.

Table 2. Descriptive statistics.

Control Variables	Mean	SD
Women	0.071	0.259
Age	3.033	0.096
Job tenure	3.647	1.161
Postgraduate education	0.318	0.467
Deputy secretary general	0.048	0.214
Department head	0.222	0.417
Distributive department	0.127	0.334
Regulatory department	0.381	0.488
Community safety department	0.103	0.305

3. Results

3.1. Fuzzy *c*-Means Clustering of Strategy Implementation Styles

Clustering is a well-known technique for finding groups in data (see, [76]). We use fuzzy *c*-means clustering [77,78] which, unlike crisp *k*-means clustering [79], and Ward's method [80], recognizes that each object included in an analysis may be associated with more than one cluster. Instead, degrees of cluster membership are indicated by membership coefficients (see, [81]). Fuzzy clustering is an especially effective technique for discerning patterns amongst ambiguous data, such as in the investigation of strategy implementation styles, where organizations can display varied combinations of more or less planned styles of implementation. Hence, our fuzzy cluster analysis is performed with the understanding that a municipal department may be associated, to varying degrees, with different clusters of implementation style.

We investigated four clusters without loss of generality. The selection of four clusters was based on their theoretical and empirical validity [79], although three, five, and six cluster models were also considered in earlier stages of data analysis. The clusters represent groups of municipal departments that are distinguished by the extent to which they adopt rational and/or incremental strategy implementation processes, as measured using the ten implementation style variables (R1-I5). The box plot presented in Figure 1 depicts the results of our cluster analysis. It shows cluster mean scores for each of the 10 implementation variables (R1-I5, with abbreviated descriptions presented along the horizontal axis) (see, McDermott et al. [82], for previous use of this form of visualization). The cluster means are derived by grouping the responses for service departments according to a majority association rule: for a given department the cluster with the highest associated membership coefficient is chosen as the majority association cluster (further details of the cluster means and ANOVA/post hoc analyses of ‘neighbor’ clusters are given in Appendix A Table A1).

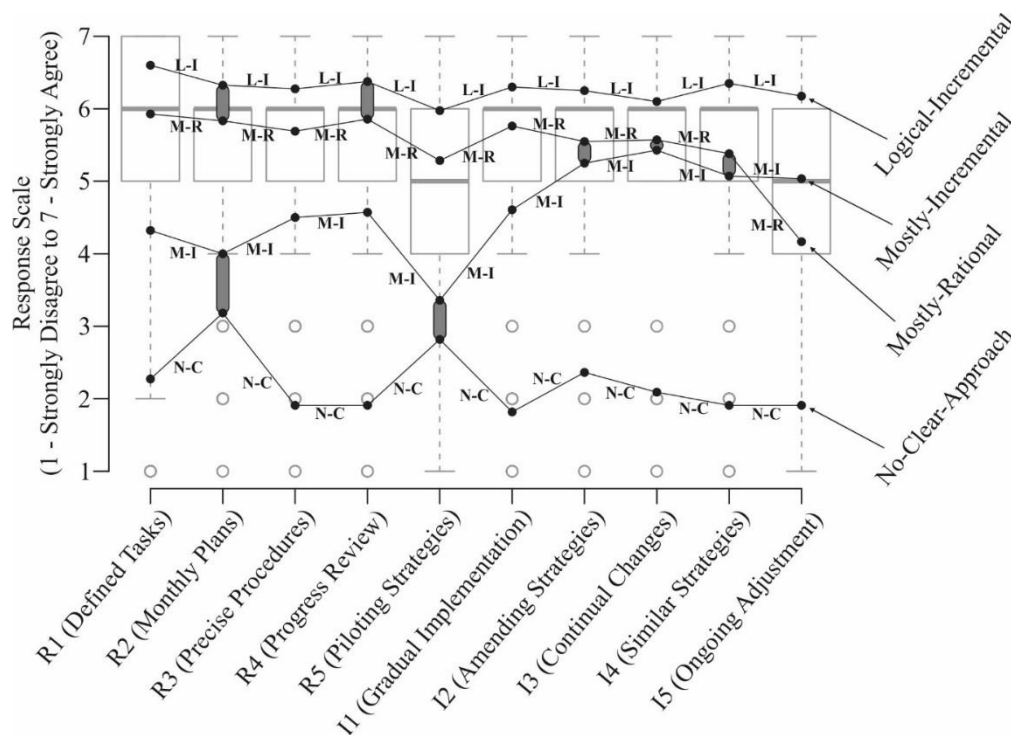


Figure 1. Constituent means for strategy implementation clusters.

Comparison of the mean scores for each of the clusters reveals four different types of strategy implementation style: a logical incremental (L-I) cluster composed of departments that score highly across all the implementation measures (R1-I5)—to a greater extent than any other cluster; a mostly rational (M-R) cluster composed of departments that tend to score higher on the measures of rational (R1-R5) than incremental (I1-I5) implementation; a mostly incremental (M-I) cluster composed of departments that tend to score higher on the measures of incremental (I1-I5) than rational (R1-R5) implementation; and, finally, a no clear approach (N-C) cluster composed of departments with low scores across all the implementation measures (R1-I5). To ease understanding, the types of strategy implementation style are labelled in abbreviated form across the lines connecting the cluster mean scores and in full on the right-hand side of Figure 1. The ties between some of the cluster mean scores (e.g., M-I and N-C for R2) indicate that there is no statistically significant difference between the two mean scores in question.

In terms of the numbers of managers associating their department with each strategy implementation style, 40 were primarily associated with a logical-incremental style, 42 with a mostly

rational style, 28 with a mostly incremental style, and 11 with no clear implementation approach. All of which suggests that rational implementation processes may be used more intensively than incremental processes in Turkish metropolitan municipalities.

3.2. Strategy Implementation Style and Public Service Performance

This section considers the relationship between strategy implementation style (as defined via the established clusters) and the perceived performance of service departments in Turkish metropolitan municipalities (in terms of effectiveness, efficiency and equity). To begin, in Table 3 we compare the mean levels of service effectiveness, efficiency and equity across the different clusters of implementation styles by carrying out post-hoc statistical tests to evaluate whether there are statistically significant differences in levels of perceived performance between the clusters.

Table 3. Perceived performance across strategy implementation style clusters.

Performance Variables and Clusters	Performance Differences		
Effectiveness	Logical-Incremental (L-I) (6.100) > Mostly-Rational (M-R) (5.833) > Mostly-Incremental (M-I) (5.444) > No-Clear Approach (N-C) (4.600)		
	Mean Difference	Standard Error	Significance
L-I and M-R	0.267	0.209	1.000
L-I and M-I	0.656 *	0.235	0.037
L-I and N-C	1.500 **	0.338	0.000
M-R and M-I	0.389	0.233	0.586
M-R and N-C	1.233 **	0.332	0.002
M-I and N-C	0.844	0.349	0.104
Efficiency	Logical-Incremental (L-I) (6.175) > Mostly-Rational (M-R) (5.805) > Mostly-Incremental (M-I) (5.33) > No-Clear Approach (N-C) (4.300)		
	Mean Difference	Standard Error	Significance
L-I and M-R	0.370	0.252	0.866
L-I and M-I	0.842 *	0.282	0.021
L-I and N-C	1.875 **	0.401	0.000
M-R and M-I	0.472	0.281	0.575
M-R and N-C	1.505 **	0.400	0.002
M-I and N-C	1.033	0.787	0.574
Equity	Logical-Incremental (L-I) (6.333) > Mostly-Rational (M-R) (5.976) > Mostly-Incremental (M-I) (5.577) > No-Clear Approach (N-C) (3.727)		
	Mean Difference	Standard Error	Significance
L-I and M-R	0.358	0.258	1.000
L-I and M-I	0.756 +	0.292	0.065
L-I and N-C	2.606 **	0.394	0.000
M-R and M-I	0.399	0.289	1.000
M-R and N-C	2.248 **	0.391	0.000
M-I and N-C	1.850 **	0.415	0.000

Notes: Mean values for effectiveness, efficiency and equity shown in brackets. Bonferroni's post-hoc tests. ** $p \leq 0.01$, * $p \leq 0.05$, + $p \leq 0.10$ (two-tailed tests).

The results presented in Table 3 indicate that perceived effectiveness, efficiency, and equity are all highest amongst the departments associated with the logical-incremental (L-I) cluster, followed by the mostly-rational (M-R), mostly-incremental (M-I) and then the no-clear approach (N-C) clusters—broadly in line with the arguments developed earlier in the paper. Furthermore, there are statistically significant differences between the four clusters in four out of six cases for effectiveness and equity, and in three out of six 'cluster paired' cases for efficiency.

Figure 2 provides a graphical depiction of the performance differences for the four clusters, with the tie-points highlighting the absence of a statistically significant difference between particular 'neighbour' clusters.

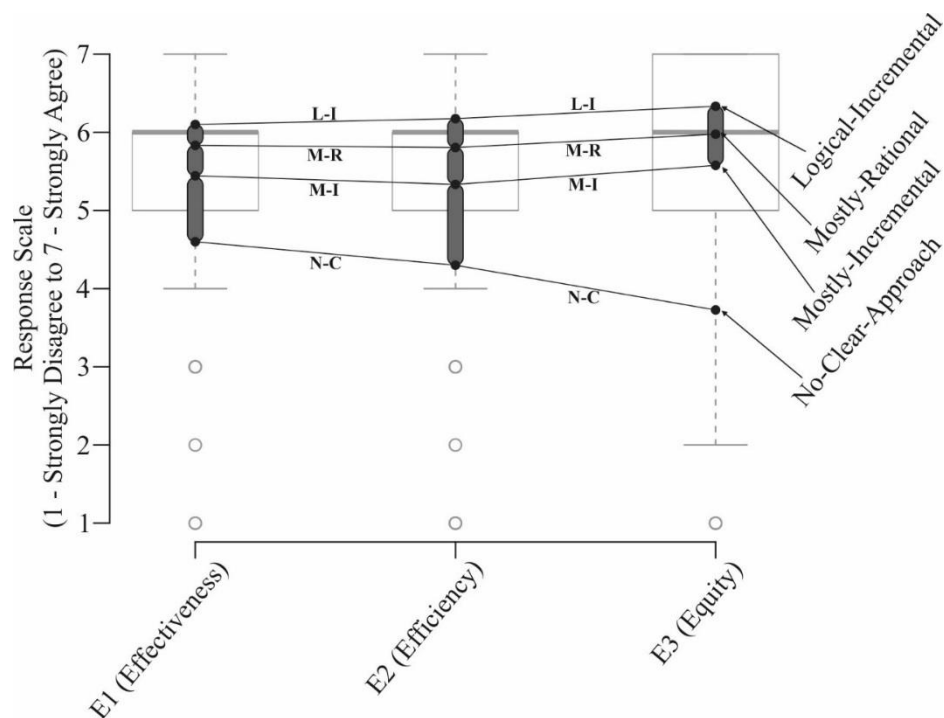


Figure 2. Strategy implementation clusters and perceived performance.

Taken as a whole, the post-hoc analyses identify significant differences in perceived effectiveness and equity between the logical-incremental cluster and the mostly incremental and no clear approach clusters; and between the mostly rational and mostly incremental clusters and the no clear approach cluster. From this perspective, a logical-incremental and a mostly rational implementation style are equally successful approaches to the implementation of strategies in the public sector. Interestingly, the performance differential between a mostly incremental style and no clear approach is absent for perceived efficiency and perceived effectiveness. This suggests that while a mostly incremental implementation style may be better than nothing for the equitable provision of local public services, it is not much of an improvement on no approach at all for effectiveness and efficiency. Nevertheless, to form firmer conclusions about the relative merits of each style of strategy implementation for public service performance it is necessary to analyze variations in perceived effectiveness, efficiency and equity when controlling for other potential determinants of performance perceptions.

Hierarchical regression analyses of the relationship between styles of strategy implementation and perceived effectiveness, efficiency, and equity are shown in Table 4 (as employed in Janssens et al. [80]). To facilitate the regression analyses, the four clusters were transformed into dummy variables using the membership coefficient values for the positive cluster values generated from the fuzzy *c*-means clustering, rather than a single positive value as would be the case for crisp-set clustering techniques (a development on the approach in Janssens et al. [80]). Four separate regression equations were calculated, with a different implementation cluster used as a reference category for each model. We are then able to compare the level of perceived performance of three (dummy scored) clusters with the remaining fourth cluster that serves as the reference category.

Table 4. Strategy implementation style and perceived performance.

Variables	Effectiveness				Efficiency				Equity			
	N-C	M-I	M-R	L-I	N-C	M-I	M-R	L-I	N-C	M-I	M-R	L-I
L-I	2.96 *	1.63 **	0.09	-	2.58 *	1.32 +	1.00	-	4.08 *	0.62	0.13	-
M-R	2.87 **	1.54	-	-0.09	1.58 **	0.32	-	-1.00	3.96 **	0.49	-	-0.13
M-I	1.33	-	-1.54	-1.63 **	1.26	-	-0.32	-1.32 +	3.47	-	-0.49	-0.62
N-C	-	-1.33	-2.87 **	-2.96 **	-	-1.26	-1.58 **	-2.58 *	-	-3.47 +	-3.96 **	-4.08 **
Female	-0.03	-0.02	-0.02	-0.03	0.52 +	0.52 +	0.52 +	0.52 +	0.07	0.07	0.07	0.07
Age	0.06	0.06	0.06	0.06	0.12	0.12	0.12	0.12	0.09	0.09	0.09	0.09
Job tenure	0.04	0.04	0.04	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Postgraduate education	-0.32	-0.32	-0.32	-0.32	-0.20	-0.20	-0.20	-0.20	-0.04	-0.04	-0.04	-0.04
Deputy general secretary	-0.22	-0.22	-0.22	-0.22	-0.20	-0.20	-0.20	-0.20	0.24	0.24	0.24	0.24
Head of department	0.22 *	0.22 *	0.22 *	0.22 *	0.53 **	0.53 **	0.53 **	0.53 **	0.09	0.09	0.09	0.09
Distributive department	0.34	0.34	0.34	0.34	0.08	0.08	0.08	0.08	0.27	0.27	0.27	0.27
Regulatory department	-0.14	-0.14	-0.14	-0.14	0.08	0.08	0.08	0.08	-0.25	-0.25	-0.25	-0.25
Comm. safety department	-0.37	-0.37	-0.37	-0.37	-0.48 **	-0.48 **	-0.48 **	-0.48 **	-0.41	-0.42	-0.41	-0.41
F	9.07 **				36.93 **				12.80 **			
R ²	0.32				0.28				0.41			

Notes: Unstandardized beta coefficients; + $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. $N = 110$.

The average Variance Inflation Factor (VIF) score for the independent variables in all of the models is less than 2, suggesting the results are unlikely to be distorted by multicollinearity [83]. The models are estimated with robust standard errors clustered by municipality to account for unobserved heterogeneity across municipalities. Critically, this controls for the potential influence of municipal-level socio-economic, political, and organizational influences on the relationships that we investigate.

In terms of the control variables, the results presented in Table 4 indicate that gender makes a difference to how managers perceive the support of external stakeholders. Contrary to our expectations, the coefficient for female managers is positive and statistically significant for perceptions of efficiency, indicating that women managers perceive their departments to be achieving better value for money than their male counterparts—though, women and men’s perceptions of service effectiveness and equity do not differ. While the coefficients for age, tenure, and postgraduate education all have the expected signs, they are not statistically significant. In accordance with our expectations, it seems that managers in the upper echelons of the organization are more likely to perceive the performance of their organization positively than those in the lowest echelon—the coefficient for Head of Department is positive and statistically significant for perceived service effectiveness and efficiency. Finally, the type of department in which managers work appears to be important, with those working in distributive departments having a positive perception of service effectiveness and efficiency, and those working in community safety have a negative perception of efficiency.

Turning to our main variables of interest, the estimates presented in Table 4 highlight that a logical-incremental (L-I) and a mostly rational (M-R) strategy implementation style have a strong positive association with managers’ perceptions of the performance of their departments. That said, the relationship between a mostly rational implementation style and performance is statistically indistinguishable from that between a mostly incremental implementation style and performance when the latter style of implementation is treated as the reference category. Likewise, although a ‘no-clear approach’ implementation style clearly exhibits a negative relationship with performance, its associations with effectiveness and efficiency are indistinguishable from those observed for a mostly incremental style.

Overall, then, interpretation of the subtle nuances in the precise dynamics of the relationship between strategy implementation style and different dimensions of performance suggests that our hypotheses are confirmed regarding the rank order of the performance-advantage of different implementation styles: a logical-incremental implementation style is consistently the best approach, with a mostly rational style not far behind, and a mostly incremental style being little better than no clear implementation approach. These findings corroborate the sparse evidence on the benefits of a ‘dual’ strategy implementation style (i.e., Hickson et al. [20]), as well as previous work around the benefits (or lower costs) of a rational versus an incremental implementation style (e.g., Andrews et al. [18]). In doing so, the analysis presented here reaffirms that strategic management theories can be usefully applied in public sector organizations, and that they can be extended to non-Western settings.

4. Discussion

This study has examined the relationship between alternative strategy implementation styles and the perceived performance of service departments in Turkish metropolitan municipalities. Fuzzy cluster analysis identified four different styles of strategy, reflecting varying levels of commitment to features of rational and incremental strategy implementation: logical-incremental, mostly rational, mostly incremental, and no clear approach. Findings from multivariate hierarchical regression analyses suggest that a logical-incremental and a mostly rational implementation style are associated with higher levels of effectiveness, efficiency and equity than the other implementation styles, with no clear approach associated with the lowest level of performance. These findings have important theoretical and practical implications.

Strategic decision theory is an important school of thought in management studies. Nevertheless, comparatively few studies have systematically examined the relationship between alternative strategy

implementation styles and the performance of public service organizations. The modest research effort to date has focused on the relationship between strategy implementation style and implementation success (e.g., Hickson et al. [20]), the performance effects of discrete implementation styles (e.g., Andrews et al. [18]) or is undertaken in Western organizational settings (e.g., Stewart and Kringas [48]). Our study addresses each of these gaps in the literature by investigating the relationship between single and dual implementation styles and three core dimensions of public service performance in the non-Western context of Turkish metropolitan municipalities.

The analysis presented here highlights that public service organizations adopt different combinations of implementation style and that those combinations can have varying implications for organizational outcomes. Importantly, a logical-incremental implementation style appears to be an especially successful approach to strategy implementation, with the results for a mostly-rational style indicating that the adoption of rational implementation processes may hold the key to better performance. Unsurprisingly, no clear implementation approach appears to be ineffectual, but a mostly-incremental style also seems to be sub-optimal. Policy-makers seeking to improve the effectiveness, efficiency and equity of local public services should therefore consider the extent to which it is possible to encourage incremental adaptation of strategies alongside the use of more formal implementation processes, such as action plans and review meetings.

In addition to illustrating the potential benefits of logical incrementalism, these findings also affirm the value of strategic decision theory as a framework for investigating strategic management and public service performance in non-Western as well as Western settings. It is possible that this theory works well in Turkey because of the impact of NPM reforms on the administrative culture of the Turkish state. It is also conceivable that a rational implementation style is especially successful within Turkish local governments because they are largely responsible for 'strategic' regulatory services, such as waste management and land use planning, rather than welfare services, such as education and social care, that may require a more flexible response to changes in the demands of service users as they arise. Nevertheless, since the findings accord with prior research indicating that rational strategy processes are especially effective tools of strategic management (e.g., Boyne and Gould-Williams [6]; Elbanna et al. [14]), it seems reasonable to suggest that the public sector in other non-Western modernizing countries could reap the benefits of planned strategy implementation.

While the statistical findings in the main provide support for our hypotheses, the study design has clear limitations, which furnish opportunities for further research. First, the analysis presented here has drawn upon the perceptions of a particular group of public service managers working within a particular set of public organizations during a specific time period. It would therefore be important to identify whether the relationships between strategy implementation style and performance we identify here differ over other time periods and in other organizational settings in the public sector. For example, our findings may not be as applicable in healthcare organizations, which may be more insulated from political control than local governments and have a stronger user-centred orientation than the local regulatory services provided by Turkish metropolitan municipalities. Likewise, it would be valuable if future research were to investigate the ways in which the dynamics of strategic management in the public sector may vary across non-Western countries at different stages of democratization.

Second, although we offer a novel test of strategic decision theory in the public sector, we draw upon a cross-sectional dataset that does not enable us to fully tease out the causal effects of changes in the style of strategy implementation and organizational performance. Panel data incorporating information on implementation style and organizational performance would undoubtedly enable the relationship between the two to be investigated in even more depth.

Third, due to the limited availability of 'objective' performance measures in the Turkish local government context, we are forced to rely on managers' perceptions of performance to test our hypotheses. It may be possible to draw on administrative data to explore organizational outcomes in other settings, and to develop measures of strategy implementation that directly capture the use of action plans, progress meetings, and project planning team feedback sessions in public service organizations. Comparative studies of strategic management in the public sector in multiple countries

could also seek to incorporate differences in national administrative culture and politics explicitly within their research design.

In summary, our study has highlighted the role that different styles of strategy implementation can play in shaping the performance of public service organizations. In doing so, we have identified implementation styles that are more or less successful for large local governments, and have highlighted that strategic management matters in the public sector of non-Western countries as much as in Western ones. Further research investigating the interactions between the different elements of strategy in public service organizations (i.e., content, formulation, and implementation [84]) in both Western and non-Western settings, would therefore add vital knowledge on the forces that shape organizational performance in the public sector.

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Appendix A

Table A1. Statistical differences between the factors used in the clustering (mean, standard deviation, ANOVA, and post hoc analyses).

Mean Order and ANOVA (post hocs)	R1 (5.446, 1.717)				R2 (5.331, 1.604)			
	N-C	M-I	M-R	L-I	N-C	M-I	M-R	L-I
	2.273 (1.794)	4.321 (1.701)	5.929 (0.778)	6.600 (0.496)	3.182 (1.779)	4.000 (1.633)	5.833 (0.824)	6.325 (0.829)
	(56.401 *, 0.000) ^a N-C <(*,*) M-I <(*,*) M-R <(*,*) L-I				(37.099 *, 0.000) ^a N-C <(-,*) M-I <(*,*) M-R <(-,*) L-I			
	R3 (5.265, 1.553)				R4 (5.371, 1.571)			
	N-C	M-I	M-R	L-I	N-C	M-I	M-R	L-I
	1.909 (0.831)	4.500 (1.291)	5.691 (0.811)	6.275 (0.751)	1.909 (0.944)	4.571 (1.289)	5.857 (0.843)	6.375 (0.586)
	(72.956 *, 0.000) ^a N-C <(*,*) M-I <(*,*) M-R <(*,*) L-I				(81.002 *, 0.000) ^a N-C <(-,*) M-I <(*,*) M-R <(-,*) L-I			
	R5 (4.843, 1.586)				I1 (5.314, 1.522)			
	N-C	M-I	M-R	L-I	N-C	M-I	M-R	L-I
	2.818 (1.779)	3.357 (1.446)	5.286 (0.864)	5.975 (0.660)	1.818 (0.874)	4.607 (1.286)	5.762 (0.656)	6.300 (0.564)
	(47.856 *, 0.000) ^a N-C <(-,*) M-I <(*,*) M-R <(*,*) L-I				(92.714 *, 0.000) ^a N-C <(*,*) M-I <(*,*) M-R <(*,*) L-I			
	I2 (5.422, 1.453)				I3 (5.397, 1.405)			
	N-C	M-I	M-R	L-I	N-C	M-I	M-R	L-I
	2.364 (1.690)	5.250 (1.175)	5.548 (0.916)	6.250 (0.742)	2.091 (1.136)	5.429 (1.136)	5.571 (0.859)	6.100 (0.672)
	(42.238 *, 0.000) ^a N-C <(*,*) M-I <(-,*) M-R <(*,*) L-I				(57.615 *, 0.000) ^a N-C <(-,*) M-I <(-,*) M-R <(-,*) L-I			
	I4 (5.314, 1.555)				I5 (4.826, 1.706)			
	N-C	M-I	M-R	L-I	N-C	M-I	M-R	L-I
	1.909 (0.944)	5.071 (1.086)	5.381 (1.229)	6.350 (0.622)	1.909 (0.944)	5.036 (1.138)	4.167 (1.576)	6.175 (0.675)
	(57.056 *, 0.000) ^a N-C <(*,*) M-I <(-,*) M-R <(*,*) L-I				(44.342 *, 0.000) ^a N-C <(*,*) M-R <(*,*) M-I <(*,*) L-I			

Notes: Superscripts (h, k) denote post hoc significance levels based on h, Bonferroni, and k, Games-Howell; * $p \leq 0.05$; + $p \leq 0.10$; - $p > 0.10$ (two-tailed tests). ^a The bracketed values (x, y) denote F-statistic and significance based on one-way ANOVA.

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