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# *Journal of Public and Nonprofit Affairs*

Vol. 5, No. 1

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## **Managing for Citizen Satisfaction: Is Good Not Enough?**

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Citizen satisfaction is a popular means of performance management. It underscores a common conception that citizens are customers who are concerned about the quality of public goods and services. We offer a theory that suggests the quantity of public goods and services is also important. We develop our theory based on democratic models of the public where citizens are concerned about equity and accessibility to public goods and services. Using data from two municipal surveys and Structural Equation Modeling (SEM), we test three hypotheses and find that both quality and quantity of public service provision are significant antecedents to citizen satisfaction. In our conclusion, we explain how these results call for a more complex conceptualization of the performance associated with managing for citizen satisfaction, and we recommend public managers develop and employ skills that recognize the complex consumptive and democratic attributes of citizens in a public economy.

**Keywords:** Citizen Satisfaction, Service Quality, Service Quantity, Performance Measurement, Equity

Especially at the local level of government, professional public managers and elected officials face strong pressures to satisfy citizens. If they do not meet or exceed citizen satisfaction, these public managers and elected officials may face replacement resulting from the economic and political consequences of citizens voting with their ballots or their feet (Oates, 1972; Ostrom, Tiebout, & Warren, 1961; Peterson, 1981; Van Ryzin, Muzzio, Immerwahr, Gulick, & Martinez, 2004). Reliance on citizen satisfaction performance measures is controversial; however, this could be because the means to (and results of) citizen satisfaction have not yet been fully explored. For the purposes of this article, we define citizen satisfaction as “...happiness or contentment with an experience or experiences with the services (or goods, or process, or programs) provided by government bureaucracies and administrative institutions” (Morgeson, 2014, p. 7).

Market models of public administration (i.e., treating citizens as customers) value easily measured and communicated performance indicators, such as those from satisfaction surveys. Elected officials often hold professional public managers accountable for these types of indicators (Bozeman, 2002). Yet, some scholars suggest that market models of citizen satisfaction misidentify the nature of citizens; consequently, managerial attention is directed

toward the aggregated preferences of individual customers and away from the public interest (Denhardt & Denhardt, 2003; Jones & Needham, 2008).

Kelly (2005) summarizes the implications of this debate about citizens, satisfaction indicators, and performance accountability when asking whether we are “...sure that our drive to measure and report the performance of public programs amounts to accountability for outcomes that *matter to citizens*” (emphasis added; p. 76). With different conceptions of who citizens are (i.e., consumers or all citizens regardless of consumer status), then, it is likely that managers may overlook some elements of what matters as they work under the imperative to manage for citizen satisfaction.

This research is about citizen-centric performance measurement and professional public management, especially at the local level of government. In particular, we ask whether the quality of government service provision is the only evaluative criterion that matters for satisfied citizens or whether the quantity of government goods and services offered also affects citizen satisfaction. Although these questions apply to public managers at all levels of government (Morgeson, 2014), these issues are most relevant for municipal governments (especially in the context of council–manager forms and strong mayors with Chief Administrative Officers [CAOs]). These questions are important for local public managers because, traditionally, these managers have considered better service quality to be a critical component of improving citizen satisfaction. Our research, however, reminds public managers to pay attention to the quantity of public service provision as well.

To answer our research question, we first examine the tension between market models of public administration that view citizens as individualistic customers concerned about the quality of public goods and services. Then, we explore democratic models of public administration, in which citizens are participant-partners who are concerned about equity and accessibility to public goods and services within a collective production and consumption enterprise. We recognize the complexity of citizens’ roles and preferences and theorize that both quality and quantity assessments of government service provision predict “what matters to citizens” and, thus, their satisfaction.

Using data from two municipal surveys and Structural Equation Modeling (SEM), we test three hypotheses and we find that both quality and quantity are important to citizens because they affect citizen satisfaction. In our conclusion, we discuss how this research can inform related debates about the utility of citizen satisfaction as a performance metric and the importance of using citizen satisfaction in conjunction with deliberative democratic institutions.

### **What Makes a Satisfied Citizen?**

How to manage for citizen satisfaction is a debate largely driven by one’s conception of citizens (Thomas, 2013). On the one hand, scholars who see citizens as consumers regard satisfaction as a central managerial objective (Kaboolian, 1998; Kettl, 1993; Nagel, 1997; Osborne & Gaebler, 1992; Powell, Greener, Szmigin, Doheny, & Mills, 2010; Song & Meier, 2018). However, adopting this conception leads to a parallelism that limits citizen satisfaction to quality assessments of public goods and services. By implication, managing for citizen satisfaction becomes an exercise in quality control. Indeed, the central tenet in private sector management is that the quality of goods and services is the primary driver of consumer satisfaction (Anderson & Fornell, 2000; Fornell, Johnson, Anderson, Cha, & Bryant, 1996; Oliver & Swan, 1989).

Maintaining and improving consumer satisfaction (i.e., quality assessments) is important for retaining or even enhancing customer loyalty, retention, and willingness-to-pay for private

goods (Babakus, Bienstock, & Van Scotter, 2004; Homburg, Koschate, & Hoyer, 2005). Public management scholars operating from the consumer conception have observed similarities when using quality assessments to explain variation in citizen satisfaction. The best example is the application of the American Customer Satisfaction Index framework as an indicator for citizen satisfaction (Brown, 2007; Rodríguez, Burguete, Vaughan, & Edwards, 2009; Van Ryzin, Muzzio, Immerwahr, Gulick, & Martinez, 2004; Van Ryzin, 2004a; Van Ryzin, 2004b; Van Ryzin, 2005; Van Ryzin, 2015; Vigoda-Gadot & Mizrahi, 2007). The parallel between customers and citizens even extends to the linkage between higher quality assessments and outcomes such as citizen retention (Van Ryzin et al., 2004), willingness-to-pay for government provision (Collins & Kim, 2009; Donahue & Miller, 2006; Simonsen & Robbins, 2003, Wilson, 1983), and trust in government (Barnes & Prior, 1996; Van de Walle & Bouckaert, 2003; Van Ryzin, 2007; Vigoda-Gadot, 2006; Yang & Holzer, 2006). In sum, adopting a citizen-customer conception considers citizen satisfaction to primarily be a function of meeting the service quality needs of citizens.

However, previous studies question the validity of this service quality conceptualization. First, citizens' expectation of services may significantly affect their judgment (Morgeson, 2012; Van Ryzin, 2013; Hjortskov, 2018). Second, citizens' cognitive and information limitations may hinder accurate assessment of service quality (Olsen, 2017; Belle, Cantarelli, & Belardinelli 2017; Andersen & Hjortskov, 2015; Barrows, Henderson, Peterson, & West, 2016). Third, citizens may hold anti-public sector biases that negatively skew their perceived service quality (Olsen, 2015; Marvel, 2015; Van de Walle, 2018). Last, context effects, such as different question orders in the design of a citizen survey, can substantially influence results (Hjortskov, 2017).

Instead of criticizing the flaws of a market approach to citizen satisfaction, other studies view citizens as participants in democratic collective decision-making about public welfare (Alford, 2002; DeLeon & Denhardt, 2000; Denhardt & Denhardt, 2003; Jones & Needham, 2008). From this perspective, citizens are community members who obtain utility from collective goods and services, rather than an atomistic utility of an individual consumer. Therefore, a bundle of public goods and services that benefits all the citizens may be as significant as providing quality goods and services. In this regard, the critique does not diminish the importance of service quality as an essential determinant of citizen satisfaction. Instead, it raises concerns about the inequalities of political power that ultimately affect who has access to certain public goods and services (Barnes & Prior, 1995; Fountain, 2001; Hood, Peters, & Wollmann, 1996; Jung, 2010; Martin & Webb, 2009; Potter, 1988; Furlong, 2013). In other words, satisfied citizens may not only require a provision of quality goods and services but may also require adequate and equal access to them.

The descriptions of market versus democratic models of citizens above are admittedly broad and oversimplified, but they highlight important normative debates that seemingly present a competing dichotomy. However, as Jung (2010) explains, understanding citizens is not an exercise building conceptual silos, but "citizens" do play many roles in the public space. Members of the public who shop in stores also make locational decisions about where to live, they are clients of bureaucratic services, and voters in elections. Segmenting the public into discrete conceptual categories does not describe the complex phenomenon of public attitudes or behaviors. However, simplifying assumptions is often necessary to gain purchase on explaining and predicting public attitudes and behaviors. Therefore, even if scholars gravitate toward market or democratic models of the public, we must recognize that the roles, activities, and preferences of citizens are multiple and overlapping, so democratic and market conceptions are not expected to be mutually exclusive. Hence, we embed citizens in the context of public economy to frame a theory that integrates multiple perspectives, extends extant theories, and strengthens empirical evidence about managing to enhance citizen satisfaction.

## **A Composite Theory of Managing for Citizen Satisfaction**

To extend our understanding of citizen satisfaction, we begin with the premise that citizens play multiple, overlapping roles as consumers of public goods within a local public goods market and a local democratic polity. We focus on the role of citizens as customers who hold attitudes and demonstrate behaviors similar to customers in private markets. Indeed, citizens can act like customers when choosing among discrete and bundled government service provision based on quality (Teske, Schneider, Mintrom, & Best, 1993; Tiebout, 1956). Failure to satisfy citizens can motivate relocation to other jurisdictions (Peterson, 1981; Van Ryzin et al., 2004). Despite the existence of theoretical critiques of citizen consumerism (Jung, 2010), the idea of citizen consumerism is consistent with empirical research that finds quality assessments of government provision to be positively related to citizen satisfaction (Brown, 2007; Roch & Poister, 2006; Van Ryzin, 2004a). Therefore, we present the following testable hypothesis:

*Hypothesis<sub>1</sub>: An increase in the assessed quality of public amenities is associated with an increase in citizen satisfaction.*

Although we are willing to accept that citizens can think and behave as customers, they are also positioned as owners in a public economy. This public economy places an emphasis on public values rather than on unitary, narrow evaluations of quality. Ownership originates from political rights, duties, and civic participation that imbues citizens with a social calculus emphasizing the public values potentially realized by holding and exercising controls over the governance enterprise. Schachter (1995) compares this role to shareholders in the private sector, but citizens make financial investments (i.e., taxes) and hold both elected officials and public managers accountable for collective interests, or what Musgrave (1959) describes as the provision for “public wants” (p. 15).

Smith and Huntsman (1997) appropriate a similar metaphor to explain that citizens are “...coinvestors and equal shareholders of the public trust” (p. 312). As they point out, investment needs not be limited to financial capital because both political and social capital can also be directed toward the creation of public values, which entails the provision of community assets (e.g., land, parks, and facilities), wealth creation, and the equitable access to the benefits thereof. These public values derive from the underlying social exchange in which citizen-owners are willing to invest financial, political, and social capital. They invest this capital under the expectation that governing agents will identify and deliver the collective benefits that equitably diffuse through society (Alford, 2002). Therefore, the ownership role draws attention to the collective transaction and outcomes of social exchange rather than the individual transaction and outcomes of market transactions.

The local government arena provides a salient example of how ownership can influence citizen satisfaction apart from quality assessments. In this context, citizens act as owners when they incorporate municipalities, extend municipal authority through annexation, or create special districts for narrow issue-area governance (Oakerson, 1999). As shareholders of the public trust, citizens engage one another, elected representatives, and appointed professional managers through democratic institutions (both formal and informal) to make collective decisions about the provision of community assets. Ostrom and colleagues (1961) identify this collection of discrete community assets as the bundle of government provision that defines what assets or amenities are excluded or included and, if included, how many.

In sum, a bundle includes both a quality and quantity of goods and services. The quantity dimension suggests that citizens may be more or less satisfied based on whether community assets are accessible to themselves or others, regardless of bundle quality. We theorize that as owners, citizens have expectations regarding what government *should* provide. Gaps between delivered and expected provision should lead to lower satisfaction. Such gaps are likely to arise

from budgetary constraints, tax competition, information-poor public economies, and the inherent vagaries of aggregating individual preferences into a collective choice (Arrow, 1951; Klingner, Nalbandian, & Romzek, 2002; Oakerson, 1999). Such deviation between an expected and observed quantity of amenities presents an expectation gap that drives citizens toward dissatisfaction. Therefore, we identify the bundle gap as a key assessment of the quantity of amenities in government provision that exists when citizens perceive too few preferred amenities in the extant bundle. The bundle gap should be directly and inversely associated with citizen satisfaction as specified in the hypothesis below:

*Hypothesis<sub>2</sub>: An increase in the perceived bundle gap is associated with a decrease in citizen satisfaction.*

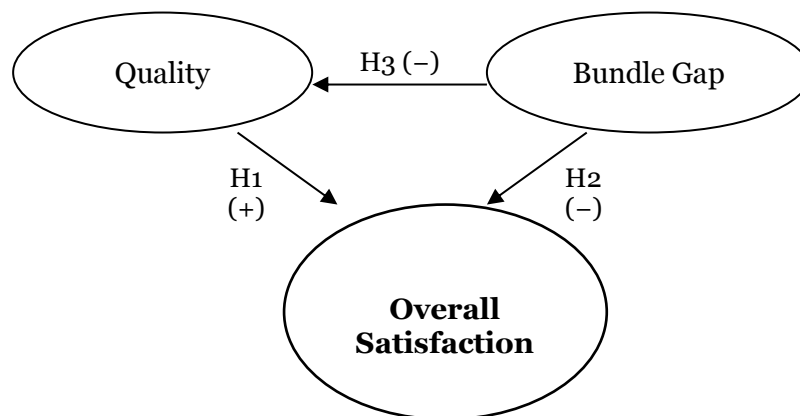
Thus far we have moved beyond a singular focus on citizen-customers and quality to identify a second factor that theoretically influences citizen satisfaction. The two hypotheses presented above suggest that quality and quantity assessments independently affect satisfaction. However, we do not expect that quality and quantity assessments are unrelated. Proponents of the two-factor theory of customer satisfaction argue that some determinants of satisfaction are necessary but not sufficient conditions for inducing satisfaction (Hui, Zhao, Fan, & Au, 2004; Maddox, 1981; Oliver, 1997; Swan & Combs, 1976). More specifically, the two-factor theory suggests that quality assessments are necessary conditions for satisfaction, but other factors may mitigate the impact of quality on satisfaction. If customers do not have access to desired goods and services, their frustration may cause them to develop a negative attitude toward the quality of goods and services (Armistead, 1990; Johnston & Lyth, 1991; Walker, 1990). Johnston (1995), for example, finds that unavailable services (meaning lack of service quantity and limited range of services available) are associated with customer dissatisfaction. Similarly, studies by Zhou and Soman (2008) and Hui and colleagues (2004) show that access to goods and services as a result of long waits or perceived unfairness diminishes quality assessments and satisfaction. Similar findings show that the accessibility of social welfare services affects quality assessments and ultimately satisfaction with those services (Rhee & Rha, 2009).

For citizen satisfaction, provision decisions determine the quantity of public service provision. These decisions set the physical conditions under which citizens can gain access to the services. This presents a condition in which quantity assessments may affect quality assessments (Guengant, Josselin, & Rocaboy, 2002); according to the two-factor theory, this linkage should ultimately affect satisfaction. Therefore, we argue that although citizens may find the bundle of services offered to be sufficient, *perceptions* of a bundle gap may generate citizen frustration with the quantities provided, thus diminishing satisfaction by reducing quality assessments. Therefore, we propose that an increase in the perceived bundle gap (as a quantity assessment) has an indirect impact on citizen satisfaction by reducing perceived quality as specified in the hypothesis below:

*Hypothesis<sub>3</sub>: An increase in the perceived bundle gap is associated with a decrease in the perceived quality of an extant service provision.*

These three testable hypotheses, summarized in Figure 1, present a theory that challenges the typical justifications for using citizen satisfaction in performance accountability. Even if quality is a key antecedent to citizen satisfaction, our theory proposes that the quantity of services is important as well. If public managers or elected officials do not consider both quantity and quality of public services, then quality alone may not be enough to satisfy citizens. The following section details the research design and tests used to examine the hypotheses presented above.

**Figure 1.** A Public Economy Model of Citizen Satisfaction



### Data and Methodology

The data for the study were collected from surveys in two Texas cities: Lubbock and Arlington. The Earl Survey Research Laboratory at Texas Tech University randomly sampled households within Lubbock and Arlington and conducted phone interviews with an individual at least 18 years of age in each of the surveyed households. Random selection of household members was not part of this protocol. The sample frame was the city-at-large with no other substrata. The Lubbock survey was fielded in June of 2006, while Arlington’s was fielded August through September of 2006. The cooperation rate was 43% for the Lubbock survey and 46% for the Arlington survey with roughly equal sample sizes ( $n_{Lubbock}=429$  and  $n_{Arlington}=400$ ).

The selection of these cities provides a robust environment for hypothesis testing. The cities are similar in demographic indicators as suggested in Table 1. Both cities serve large, diverse populations that have significant service demands on public managers. Both cities have a council–manager form of government. Lubbock often benchmarks with Arlington. Yet, Arlington is embedded in a densely populated metropolitan area with more than 130 municipal corporations. Lubbock, located in West Texas, is a central city within a metropolitan area that has only a few other (very small) municipalities. Using data from two cities provides an advantage over analyses that rely upon only one polity because we can control, at least in part, for contextual differences.

The survey used for both municipalities focused on overall satisfaction with the complex bundle of goods and services commonly known as parks and recreation. This substantive area of municipal management provides an excellent opportunity to assess our model. First, the nature of goods and services in a parks-and-recreation bundle varies significantly. These bundles include physical goods such as facilities and parks, and services such as programs and sports leagues. The components of a bundle vary in both quality and quantity. In short, there should be sufficient variation to explore the linkage between quality assessments and bundle gaps derived from specific assets and services. Hence, there should be sufficient variation to analyze overall citizen satisfaction with parks and recreation, a bundle of goods and services. We think this type of approach is generally analogous to examining overall satisfaction with all municipal amenities. In each case, the underlying process involves an evaluation of the component amenities in a complex bundle of services as well as overall citizen satisfaction with that bundle. The scope may differ, but theoretical mechanisms should be the same according to our model. Van Ryzin and colleagues (2004) suggest significant variation across subgroups of municipal amenities, but no theory as of yet explains such variation.

**Table 1.** Demographic Comparisons

Variable	Lubbock	Arlington
Population (2003)	206,481	355,007
Persons under 18 years of age (2000)	24.90%	28.30%
White persons (2000)	72.90%	67.70%
Persons of Hispanic or Latino origin (2000)	27.50%	18.30%
Black or African American persons (2000)	8.70%	13.70%
High school graduates age 25+ (2000)	79.50%	84.90%
Median value of owner-occupied housing units (2000)	\$69,500	\$96,400
Median household income (1999)	\$31,844	\$47,622
Land area in square miles (2000)	115	96

Table 2 presents the descriptive statistics of our dependent and independent variables. The dependent variable is overall satisfaction with a municipality's parks and recreation goods and services measured using a seven-point scale. As with all attitudinal measures, the data represent numerical indications of subjective evaluations. The bundle gap is a composite score of dummy variables aggregated for 13 park facilities or programs. For instance, if a respondent indicated that five out of 13 facilities or programs currently available in the city were too few, the bundle gap score was five. An increase in the score should be negatively associated with our satisfaction measure.

The proposed model includes one latent independent variable: *quality*. We first evaluated the construct validity of 14 measures for the quality variable using Maximum Likelihood Estimation. Table 3 presents the magnitudes and significance of the factor loadings for the measured indicators associated with quality. All the estimated factor loadings are statistically significant ( $p < 0.001$ ) and confirm the unidimensionality of the measurement model. Among the indicators, "quality of facilities and fields at the parks" is the most prominent indicator (standardized factor loading=0.76), while "quality of golf course" is the least prominent indicator (standardized factor loading=0.55).

We use Structural Equation Modeling (SEM) to test the hypotheses derived above. Figure 2 describes the model specification with the variables in rectangles as single indicators and the oval indicating the latent variable. Control variables include the number of children in the household, education, age, and income levels of respondents. These variables control for variation in park preferences, visitation, and perceived benefits (Walker, 2004). SEM has been widely used to investigate complex models that include latent variables associated with multiple indicators, mediating relationships among the variables, and multigroup comparisons. SEM has been particularly important in the citizen satisfaction literature (Van Ryzin et al., 2004; Vigoda, 2002; Wen, Lan, & Cheng, 2005). This approach values consistency as we attempt to build upon the solidly laid foundation of previous literature. We used AMOS 6.0 to estimate the model parameters for hypothesis testing and for conducting a multigroup comparison to determine whether the values of the model parameters are moderated by group membership, i.e. Lubbock or Arlington.

## Results

To test the goodness of model fit to the data, we report four statistics. First, the  $\chi^2$  statistic is significant ( $p < 0.001$ ). This result indicates that the null hypothesis, i.e. that the model has a perfect fit in the population, is rejected at the 0.001 level. However, relying only on the  $\chi^2$  statistic is limited because the statistic is sensitive to the sample size and the size of correlations (Kline, 2004). In addition to the  $\chi^2$  test, we calculated three additional fit indices: Normed Fit

**Table 2.** Descriptive Statistics of Independent and Dependent Variables

Variables	Mean	Standard Deviation
<b>Quality</b> (1: "very low quality"... 7: "very high quality")		
Park areas	5.31	1.41
Recreation programs, classes, or special events	5.11	1.46
Facilities and fields at the parks	5.08	1.45
Jogging, walking, or bicycle trails	5.21	1.65
Athletic leagues for adults	4.96	1.54
Athletic leagues for children	5.53	1.35
Youth programs or camps	5.21	1.52
Senior citizen activities	4.91	1.57
Athletic fields and courts	5.22	1.39
Public pools	5.04	1.60
Tennis center	5.01	1.64
Public golf courses	5.15	1.58
Community centers	5.16	1.48
Disc golf	4.41	1.90
<b>Bundle Gap (Quantity)</b> (1: "Too few," 0: "Enough")		
Park areas	0.38	0.49
Recreation programs, classes, or special events	0.30	0.46
Jogging, walking, and bicycle trails	0.53	0.50
Athletic leagues for adults	0.28	0.45
Athletic leagues for children	0.28	0.45
Youth programs or camps	0.34	0.48
Senior citizen activities	0.31	0.46
Athletic fields and courts	0.30	0.46
Public pools	0.41	0.49
Public golf courses	0.18	0.38
Community centers	0.37	0.48
Disc golf areas	0.19	0.40
Extreme sports parks	0.41	0.49
Aggregate Bundle Gap Score (range: 0~13)	4.28	3.31
<b>Satisfaction</b> (1: "very dissatisfied"... 7: "very satisfied")	5.22	1.46

**Table 3.** Standardized Factor Loadings of Quality Indicators

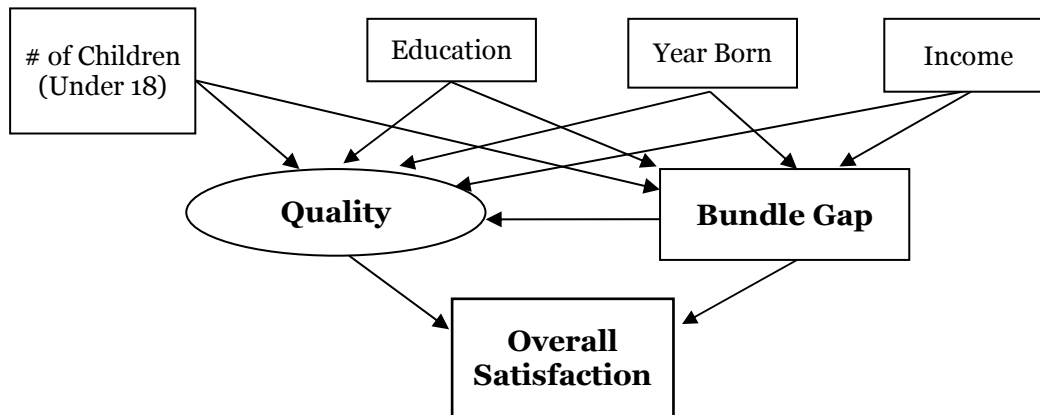
Quality Indicators	Factor Loadings
Park areas	0.64***
Recreation programs, classes or events	0.75***
Facilities and fields at the park	0.76***
Jogging, walking or bicycle trails	0.68***
Athletic leagues for adults	0.69***
Athletic leagues for children	0.67***
Youth programs or camps	0.70***
Senior citizen activities	0.64 <sup>†</sup>
Athletic fields and courts	0.73***
Pools	0.67***
Tennis courts	0.60***
Gold course	0.55***
Community (recreation) center	0.75***
Disc golf	0.57***

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

<sup>†</sup>indicates that loading is fixed to 1 for the indicator in unstandardized solution.



**Figure 2.** Structural Relationships for Estimation of Citizen Satisfaction



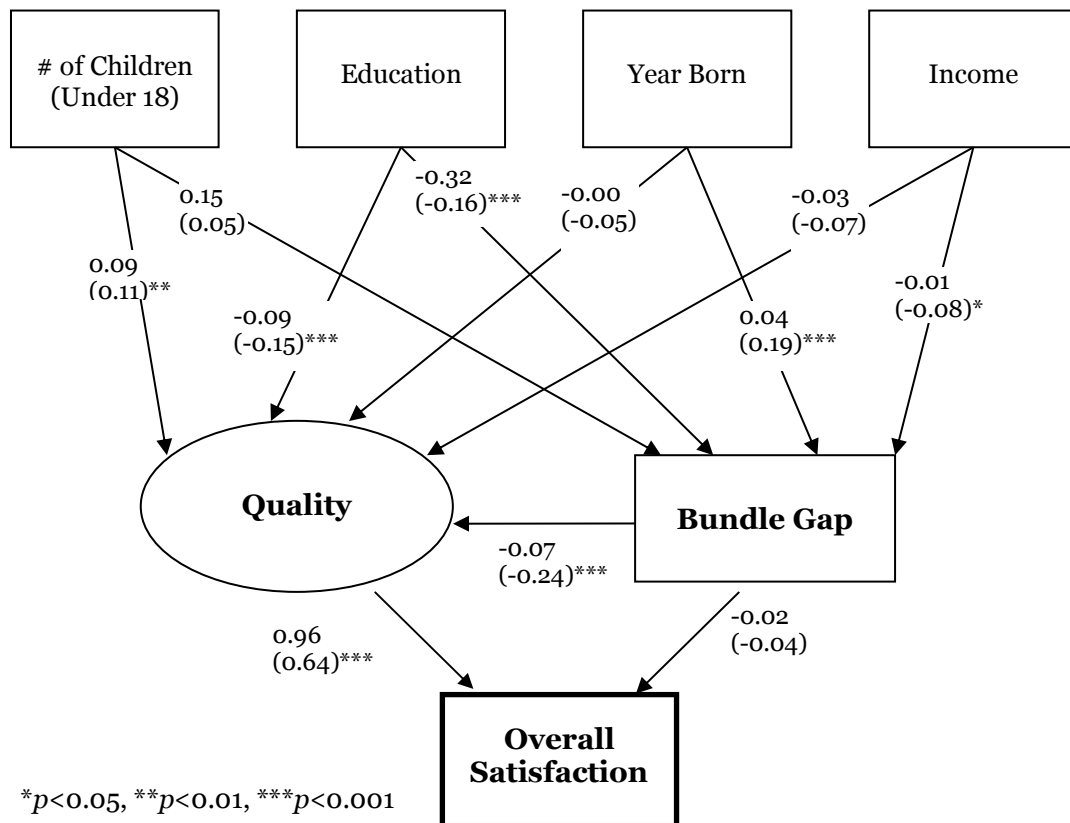
Index (NFI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA). We report values greater than 0.90 for NFI and CFI, which is considered as a good fit (Bentler & Bonett, 1980; Bentler, 1990). The RMSEA score, which is smaller than 0.05, is considered an excellent fit of the data to the proposed model (Browne & Cudeck, 1993). In sum, all the fit index values suggest a good fit of the hypothesized structural model to the data (NFI=0.91; CFI=0.94; RMSEA=0.05).

The estimation result of the structural model reported in Figure 3 supports Hypotheses 1 and 3, while no statistically significant evidence is reported for Hypothesis 2. The path from perceived quality to overall satisfaction (Hypothesis 1) is positive and significant at the  $p < 0.001$  level. The link from bundle gap to perceived quality (Hypothesis 3) is negative and significant at the  $p < 0.001$  level. The bundle gap, then, imposes an indirect impact ( $p < 0.001$ ) on overall satisfaction through perceived quality. However, the path from bundle gap to overall satisfaction is not statistically significant. Thus, we find no support for Hypothesis 2. The association between bundle gap and overall satisfaction is mediated by citizens' perceived quality of goods and services. When citizens determine the degree to which they are satisfied with parks and recreation services, the perceived inadequate quantity does not directly reduce satisfaction. There is an indirect effect, however, mediated through quality assessments. In other words, citizens may not notice the insufficient quantity of parks and recreation services unless this insufficiency diminishes quality assessments of the services—which ultimately triggers the decrease in overall satisfaction. This finding implies that citizens are sensitive to unrealized opportunities of enjoying parks and recreation amenities because the bundle gap is counted into the quality assessment as a factor-depreciating quality (see Figure 3).

The proposed model reveals that the underlying structure reasonably fits the data without adding any constraints based on group membership (i.e., either Lubbock citizenship or Arlington citizenship). However, some social, political, and economic differences between these two cities may create variance between them; therefore, the parameter estimates could vary across the two groups. To address this concern, we conducted a multiple group comparison with the null hypothesis that the two samples are drawn from the same population. First, we estimated the unconstrained model that allows parameters to differ across groups. The fit indices from this estimation show an adequate fit of the model to the data ( $\chi^2$  statistic=673.60, d.f.=304,  $N=829$ ,  $p < 0.001$ ; NFI=0.86; CFI=0.92; and RMSEA=0.04). Next, we examined a constrained model by forcing all the parameters to be equal across the two groups. We then compared the  $\chi^2$  difference between the unconstrained and constrained models.

Table 4 shows a significant difference between the models. The constrained model significantly reduces the goodness of fit at the  $p < 0.001$  level. From this result, we can conclude

**Figure 3.** Unstandardized (and Standardized, in Parentheses) Estimates



that all the constraints are not reasonable. Additionally, we can conclude that, because the constrained model added parsimony with only a minimal increase in the  $\chi^2$ , it does not significantly improve the model compared with the unconstrained model. Therefore, we need to estimate the parameters by using the unconstrained model (see Table 4).

Figure 4 reports significant differences of path coefficients between the municipalities only in the paths from control variables to quality and bundle gap variables (i.e., the path coefficient is statistically significant in one city but not significant in the other, which is indicated by bold font). There is no significant difference between the two groups in terms of path coefficients among the focus variables: *bundle gap*, *quality*, and *satisfaction*. The multigroup comparison findings are identical to the findings in the base model. Specifically, the bundle gap is not an antecedent that is directly associated with the level of overall satisfaction. Yet, we still observe an indirect effect between the bundle gap and the level of overall satisfaction, which is mediated by citizens' quality assessment (see Figure 4).

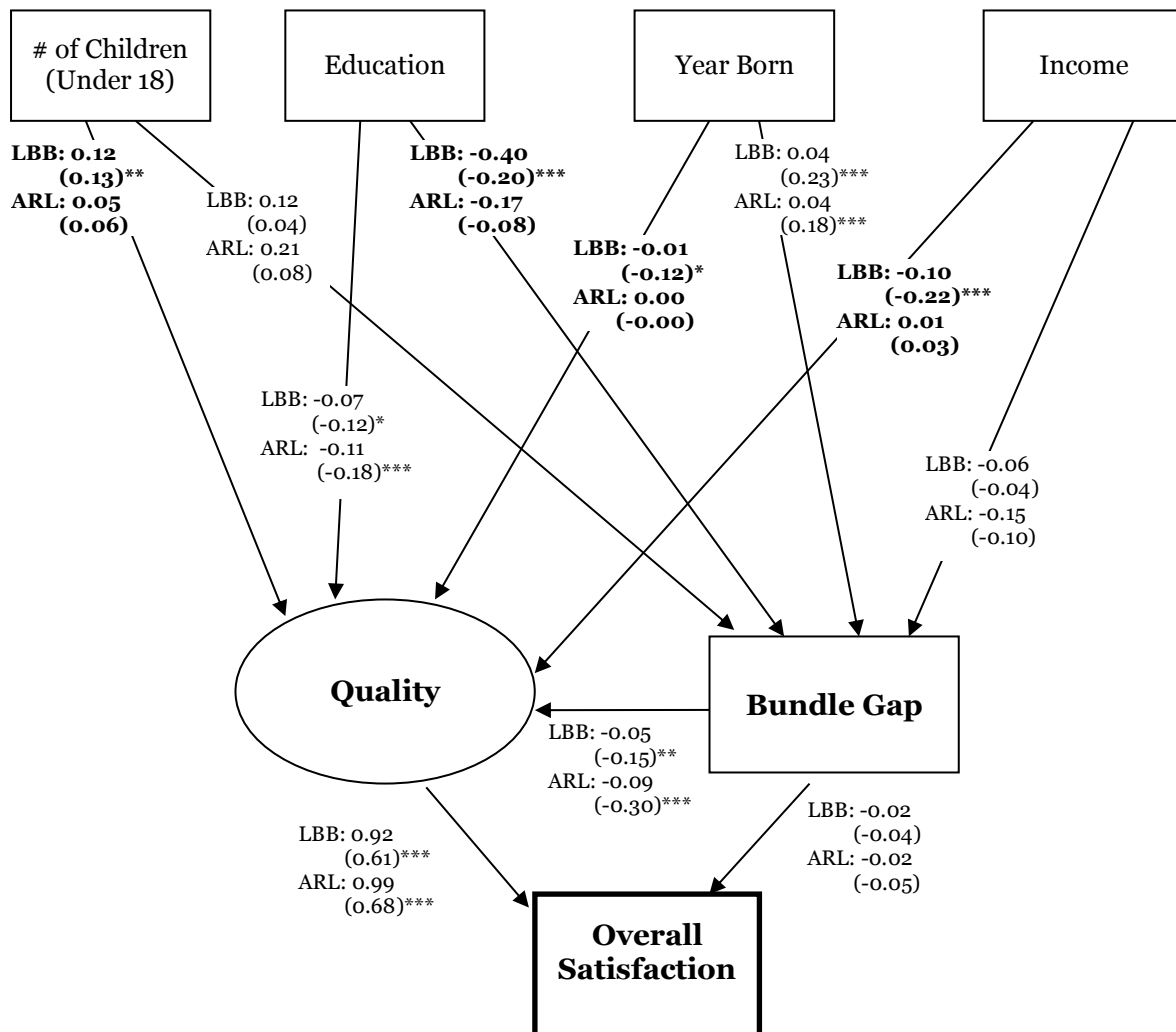
### Discussion and Conclusions

The major goal of this study was to determine whether quantity assessments, in addition to quality assessments, influence citizen satisfaction of public goods and services. Our empirical findings support the conclusion that both quantity and quality of public goods and service provision influence citizen satisfaction with complex bundles of public amenities. However, we do not find evidence supporting the hypothesized *direct* relationship between quantity and satisfaction. Therefore, we conclude that managing for citizen satisfaction requires a more complex conceptualization about what matters to citizens. Indeed, simple citizen-customer models that primarily focus on quality assessments should also recognize that quantity assessments also matter to some extent. Both economic and democratic models of citizens inform this approach.

**Table 4.** Multiple Group Analyses by Citizenship

	$\chi^2$	d.f.
Unconstrained model	673.60	304
Constrained Model	749.13	341
$\Delta \chi^2$	75.54	
$\Delta$ d.f	37	
$\Delta \chi^2$ (critical value)	52.19 ( $p=0.05$ )	
	59.89 ( $p=0.01$ )	
		69.35 ( $p=0.001$ )

**Figure 4.** Unstandardized (and Standardized, in Parentheses) Estimates for Multi-Group Model



\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

Note: LBB refers to Lubbock and ARL refers to Arlington.

The findings from the research suggest that public managers should redefine the performance problem of citizen satisfaction as being concerned with both quality *and* quantity assessments. Managing for citizen satisfaction requires prioritizing amenities that need to be improved (Van Ryzin & Immerwahr, 2004; Van Ryzin, 2007), changing the way services are delivered (Kelly, 2005), and producing quality services more efficiently (Kamensky, 2008). However, some quantity-oriented strategies should be important to public managers who seek to improve citizen satisfaction. In particular, public managers who are oriented toward customer models of the citizenry typically require strategies that recognize a democratic conception of the public. For example, if we assume that the politics-administration dichotomy is more prescriptive than descriptive, then professional managers already recognize that they are political actors in a game with elected officials. Although the two actors *may* have aligned objectives (e.g., to increase citizen satisfaction), often they will not. Professional managers, for instance, may want to collect taxes to increase the quality or quantity of goods and services, while elected officials may not. Elected officials, then, have strong incentives to provide constituent-specific goods that may not add collective value to the community.

Such tension is the fundamental normative justification for a politics-administration dichotomy. Yet, professional public managers may need to coalesce and leverage public dissatisfaction with quantity to motivate a greater willingness to pay for more provision of desired public amenities (Collins & Kim, 2009). Such political action may be directed toward the public at large or during the development of policies and budgets with elected officials. In contrast, elected officials may be concerned with citizen satisfaction, but they may also have incentives to act contrary to the objective of increasing collective citizen satisfaction by promoting more localized and limited pockets of satisfaction congruent to their elector interests. Elected officials may blame public managers for “poor” performance if citizen satisfaction declines or does not meet some standard. Public managers, however, cannot blame elected officials for failure to comply with professional advice that could support greater satisfaction.

Professional public managers undoubtedly exercise some influence over provision decisions, especially those concerned with production technology or outreach. To some degree, managers may exercise discretion that creates a direct trade-off between quantity and quality, but a quality-only approach to citizen satisfaction assumes a more expansive scope of managerial control than is warranted. Even if quality is good or improved, either the public or the elected officials could hold professional staff accountable for quantity decisions that are more directly and appropriately associated with elected officials.

We also recognize that professional managers do have some accountability for both the quality and quantity of services. For example, public managers have strong incentives to ignore citizen-centric assessments such as satisfaction by emphasizing more objective, professionally defined indicators and engaging in “marketing” and “outreach” campaigns to “correct” public misperceptions (Kelly, 2005, p.78). Such strategies may be partially justified in light of the failure to find consistent linkages between objective performance indicators and citizen satisfaction (Kelly & Swindell, 2002; Swindell & Kelly, 2000). Yet, substituting professional preferences regarding the quality and quantity of public services raises concerning questions about the democratic accountability of public bureaucracies.

We conclude, then, with three recommendations regarding managing for citizen satisfaction. First, professional public managers can benefit from recognizing the complex and overlapping roles of the public. The people who consume, either directly or indirectly, the benefits of public goods and services do so as both atomistic consumers and a democratic community. Managing for citizen satisfaction requires professional public managers and elected officials to navigate this complex environment, whether cooperatively or not.

Second, our results suggest that practitioners proceed cautiously when measuring and assessing citizen satisfaction because it is challenging to disentangle quality and quantity. In practice, this means that instrument design should include both dimensions, and statistical analysis of citizen satisfaction should deconstruct the antecedents by quality and quantity when feasible. Just as a quality-importance matrix analysis is useful, so is a quality-quantity matrix. Doing so may mitigate some concerns about using citizen satisfaction as a goal in performance management.

Finally, future research should address the limitations of this study. These limitations include the number of municipalities selected to analyze as well as the selected bundle of provisions. Investigating more (and different) units of government, different bundles of public provisions, and incorporating time-series analysis can confirm or extend the findings in this research.

In conclusion, this research highlights the importance of accounting for a richer, more complex, conceptualization of the public that includes both market and democratic models. This, however, is only the starting point for theoretical developments that encompass the mutual inclusivity of these approaches. Additional research is necessary to confirm and extend these results. These findings should encourage practitioners, though, to focus carefully on the meaning behind satisfaction numbers so that they can obtain actionable information about both the quality and quantity of public goods and services.

## Disclosure Statement

This work was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2016S1A3A2924956) and by a Korea University grant (K1808531).

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