

PUBLIC SECTOR INNOVATION FOR EUROPE: A MULTINATIONAL EIGHT-COUNTRY EXPLORATION OF CITIZENS' PERSPECTIVES

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This study presents a three-year effort to study public sector innovation in Europe from the viewpoint of the citizen. It examines a model of public sector innovation across a multinational sample of eight countries and 626 participants. The paper develops a theory of antecedents to and consequences of innovation in public administration as perceived by knowledgeable citizens and end-users. Participants were senior and mid-level managers of third sector organizations that work closely with citizens both as individuals and groups, and with public sector agencies in various domains. Structural Equation Modelling technique was used to examine two theoretical and five alternative models. Major findings that transcend national borders were found to be: (1) responsiveness, together with leadership and vision, are important antecedents of innovation in the public sector; (2) public sector innovation affects trust in and satisfaction with public administration; and (3) the effect of public sector innovation on trust and satisfaction is both direct and mediated by the image of public organizations. The paper ends with a discussion of the theoretical and practical implications for public administration theory, especially for public sector innovation in Europe, and with directions for future studies.

INTRODUCTION

Extensive criticism is frequently voiced against governments and bureaucracies worldwide, suggesting that their perceived rigid red-tape nature, inefficiency, lack of flexibility, and negative attitudes towards change, restrict social progress and economic growth in modern states. Similarly, public administration scholars and experts suggest that 'innovation' in the public sector is a powerful engine and a key instrument for the reform and revitalization of both fully state-owned bodies and quasi-governmental organizations and agencies.

Nonetheless, comprehensive efforts to examine innovation in the public sector are scarce. Borins (2001) and Golembiewski and Vigoda (2000) have claimed that innovation and bureaucracy make an 'odd couple' due to numerous differences in core principles. For example, bureaucracy relies on old organizational models (tradition, vertical communication channels, compliance, order, and control) rather than on innovative ones (creativity, commitment, mixed flow of communication, autonomy, and responsibility). Successful innovation, therefore, is self-defeated when grounded in the classic bureaucratic models (see Golembiewski and Vigoda 2000).

In addition, with the exclusion of a small number of studies (see, for example, Golembiewski *et al.* 1996; Cooper 1999), most previous contributions to our knowledge about public sector innovation have been either theoretical or limited in empirical scope. Conversely, major strides have been made in studies of innovation in the business sector (see, for example, Abrahamson 1991; Damanpour 1991; Scott and

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Bruce 1994; Frambach and Schillewaert 2002). Studies in the public sector context have generally adopted either an intra-organizational perspective of employees or managers, or a comparative view of best practices and benchmarking (see Evans 1996; Borins 1998; 2000a, b). The public administration literature, however, has thus far failed to integrate the knowledge gained in the general management literature about the antecedents and outcomes of innovation. Indeed, the applicability of business models of innovation to public administration and public management has received little consideration and almost no empirical attention. Finally, the discussion about innovation in the public sector has relied mainly on data from individual nations and cultures, neglecting multinational and multicultural contexts, especially in the European context.

In an effort to identify some of the inhibiting barriers to innovation in public organizations, as well as the possible outcomes of innovation, this paper develops a conceptual framework designed to examine these issues in the wider context of the European setting and to test it empirically. This effort follows some other attempts to increase innovativeness in the European context (see, for example, the EUPAN- European Public Administration Network and the European Quality Conferences – <http://www.eupan.org/>). As will be discussed below, the approach used in this paper is one of analysing public sector innovation from the less conventional standpoint of knowledgeable end-users/citizens. Building on information gathered from knowledgeable citizens and managers of citizenry groups, we lay the ground for a systematic analysis of antecedents and outcomes of innovation in the European public sector.

In sum, the goals of the study presented here are fourfold: (1) to review the extant literature on public sector innovation; (2) to develop a conceptual and testable model on the basis of the general management literature that can be used across Europe, or even globally; (3) to suggest a knowledgeable citizens' perspective for the analysis and understanding of public sector innovation; and (4) to recommend the best alternative among competing theoretical models.

PUBLIC SECTOR INNOVATION: THIS TIME FROM THE CITIZENS' PERSPECTIVE

Rogers (1983, p. 11) defines innovation as 'an idea, practice, or object that is perceived as new by an individual or another unit of adoption'. His examples of innovative policies (and non-policies), and barriers to innovation in public administration and policy-making worldwide, highlight a need for systematic approaches to exploring the inhibitors and facilitators of innovation. Rogers' ideas have been discussed by Vigoda-Gadot *et al.* (2005), who developed a comprehensive conceptual framework for a system-based analysis of antecedents to and results of innovation, based on current knowledge from the business and management sciences. This system-based approach advocates new methods for studying innovation. For example, the conventional approach to studying organizational innovation is through intra-organization perspectives such as employees' and managers' attitudes, technological or financial data, or best practice comparisons across firms, cultures, or time (see, for example, Berry 1994; Evans 1996; Borins 2000a, 2001). While such an approach has been valuable in studies about innovation and its evolution in the modern world, they have largely overlooked the perceptions of citizens towards innovation and innovative activities of public sector agencies.

Such neglect stands in contrast with the increasing interest in studying citizens' perceptions of public administration performance in general (for example, Pollitt 1988, 1993; Vigoda 2002; Van Ryzin *et al.* 2004; Holzer and Kloby 2005; Ebdon and Franklin 2006). Possibly, citizens' perspectives have gained more attention in the public administration domain because of the New Public Management (NPM) reform. Today, NPM represents a codename for the infusion of successful managerialism into old-style bureaucracies. NPM has been exported to many developed and developing countries over the past two decades (Pollitt and Bouckaert 2000). A cornerstone of the NPM reform is viewing citizens as clients and improving services through market-based mechanisms (that is, competition, integrative performance measurement tools, and innovativeness) (Pollitt 1988, 1993; Terry 1998; Lynn 1998).

Despite criticism of the citizens' perspective (see, for example, Stipak 1979, 1980), broad consensus exists that it has major advantages for the study and practice of public administration (Pollitt 1988; Pollitt and Bouckaert 2000). Its benefits are threefold: (1) through its use of an end-user's lens to examine this phenomenon, it enables a comparison with other innovation perspectives (that is, the intra-organization and the benchmark perspectives); (2) it allows a constructive public voice to enter the process of assessing innovations in public administration, which is aligned with the NPM paradigm; and (3) it extends the scope of analysis and focuses on innovation outcomes beyond existing intra-organizational variables (that is, trust in government, the image of the public sector, and satisfaction with services). Thus, citizens' perspectives of innovation in public administration could be used to enrich our understanding of outcomes beyond the intra-organization level. In democratic societies that are becoming market oriented, citizens' views may also direct attention to the outcomes of non-innovative bureaucracies.

The citizens' perspective can also suggest new performance indicators (PI) in accordance with the NPM paradigm. Such PIs can be used to measure the levels of innovation in terms of creativity, entrepreneurship, and willingness to adopt changes or emulate successful reforms. Such a perspective may also foster openness to solutions that have not yet been tested in the public arena. Hence, the citizens' perspective may facilitate improvements and reforms in public administration based on new PIs. Thus an understanding of innovation PIs from the citizens' perspective can drive change and renewal in the old-style, conservative mechanisms of bureaucracies. Like other NPM ventures, this process also builds on the knowledge gained in the business sector and has theoretical and practical advantages, which will be discussed in further detail below.

THEORETICAL MODELS: ANTECEDENTS TO AND OUTCOMES OF PERCEIVED INNOVATION IN PUBLIC ADMINISTRATION IN EUROPE

Our selection of the antecedents to and outcomes of public sector innovation was based on two principles. First, they were grounded in the management or public administration literature as relevant to the study of innovation, reform, and creative change in organizations. However, as will be explained below, some components of our models are unique and offer a new perspective on public sector innovation. Second, they represent measurable, valid and reliable constructs for citizen-based testing. Importantly, the European setting of our study allowed us to control for various bureaucratic systems while aggregating data across heterogeneous populations with divergent cultural characteristics. Thus, the generalizability of the findings should be enhanced.

The literature suggests several individual- or organizational-level variables that can be related to innovation in the generic managerial environment context (that is, individual factors of commitment, *esprit de corps*, openness to change, organizational factors of market orientation, sales, profitability or competitiveness). Studies by Frambach and Schillewaert (2002), Shoham and Rose (2001), Jaworski and Kohli (1993), and Narver and Slater (1990) inspired our theoretical model (see figure 1). However, unlike these studies, our model recognizes and accounts for the uniqueness of public organizations' innovation and includes variables that are relevant to the nexus between citizens as end-users and public organizations as service providers (responsiveness, professionalism, organizational politics, morality and ethics, and leadership and vision). Whereas these variables represent only a partial list of possible antecedents to innovation in public administration, we believe they are of special importance due to their centrality in recent years to the ongoing NPM discourse. Amongst the outcomes of innovation, and in line with the previous argument, we focused on citizens' satisfaction with services, as well as on the less studied aspects of 'public sector image' and 'trust in governance'. Thus, while our model is partially based on previous studies, it also uses new variables in the context of modern bureaucracies.

Antecedents to perceived innovation in the public sector

The first antecedent that is proposed to relate with public sector innovation is responsiveness of public agencies to citizens' needs. The management science literature defines responsiveness as consisting of two sets of activities: design (using information to develop plans) and implementation (executing the plans). Thus, studies such as Deshpande *et al.*

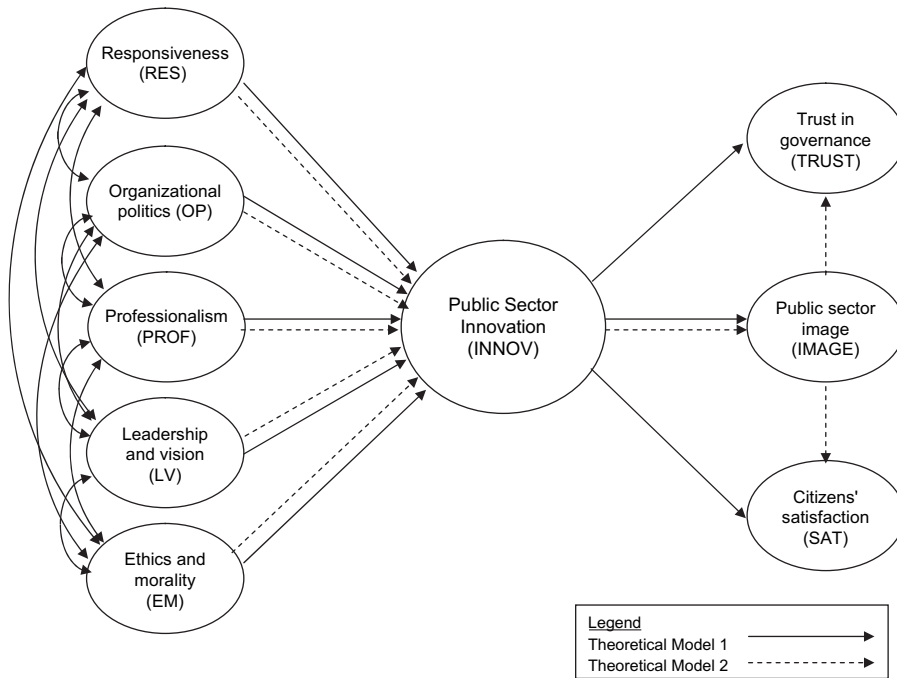


FIGURE 1 Multinational citizens' perceptions of public sector innovation in Europe: theoretical models

(1997), Kohli and Jaworski (1990), and Narver and Slater (1990) have emphasized information management and information dissemination as strongly related with both responsiveness and building a learning process aimed at providing quality services or products based on clear and speedy timetables. Similarly, the responsiveness of public agencies may affect citizens' perceptions of their innovativeness. A responsive agency is one that is more oriented toward innovativeness as it adopts new and creative ways to address citizens' needs. Moreover, highlighting the question of cultural barriers in the context of public sector innovation (Rogers 1983; Rogers *et al.* 1991), studies have suggested that the impact of responsiveness and innovation on organizational outcomes is not country specific, enabling policy learning to take place in a globalizing public sector beyond cultures (see Levi-Faur and Vigoda-Gadot 2004). Such learning is enhanced by organization wide shared interpretations of the acquired and disseminated information (Argyris 1977; Senge 1990). Consequently, how public agencies manage information and respond to it can affect innovativeness via learning (Slater and Narver 1995) and further affect bureaucratic outcomes such as citizens' satisfaction, the image of the public sector, and trust in governance.

Another important construct that may serve as an antecedent to innovation in the public sector is organizational politics. This construct reflects both the level of conflict and the use of power by organizational members in their efforts to influence others and secure interests – or, alternatively, to avoid negative outcomes within the organization (Vigoda-Gadot 2003). Studies on workplace politics and conflicts (see, for example, Ferris *et al.* 1989; Cropanzano *et al.* 1997) have suggested that politics reflects fairness and justice in the organization. These studies have supported the notion that politics, fairness and justice have substantial impacts on creative organizational climate and outcomes (see Kacmar and Ferris 1991; Ferris and Kacmar 1992; Folger *et al.* 1992; Vigoda-Gadot 2003). As such, organizational politics, especially as perceived by citizens (Vigoda-Gadot and Yuval 2004), may potentially reduce innovativeness and creativity in any organization, including those of the public sector. Moreover, interpersonal or interdepartmental communications may actually be harmed by higher levels of conflict and politics in the organization, which may then reduce innovation and innovativeness. Finally, studies indicate that public sector agencies are those which are more exposed to intraorganizational conflicts and politics, mainly due to the nexus between the professional and the political cadres since these often have diverging interests and visions (Vigoda-Gadot 2003). The resulting antagonism may reduce information dissemination, lessen responsiveness to citizens' needs and demands (Ruekert and Walker 1987), and inhibit organizational innovativeness (Jaworski and Kohli 1993).

Antecedents to public sector innovation also include professionalism and the proper implementation of policies. Public personnel, as policy implementers, are responsible for transferring innovative technology, regulations, behaviours and processes to citizens. Public service systems may be perceived to be more innovative when the professionalism of bureaucrats is high, resulting in improved responses to complex requests and increased responsiveness in delivering services. The quality, skills, and training of public personnel, as well as their understanding of their jobs and their commitment to their duties, was found to have a positive effect on public sector performance at the personal, team and organizational levels (see Terry 1998). Sapat (2004), for example, examined the adoption of environmental policy innovations by state administrative agencies *vis-à-vis* waste regulation and found that administrative professionalism is a determinant of innovation adoption. Thus, in our study, we expected that the professionalism of the public cadre,

as perceived by citizens, would be positively related with perceptions of public sector innovation.

In line with the rationale described for employees, we further argue that top public management and leadership plays an important role in instituting organizational changes or innovations in public systems (Moon 1999). Management's attitude towards change and its willingness to take risks should affect innovation positively. A risk-averse mindset, typical of many state-controlled agencies, might reduce innovativeness, and a risk-oriented one might enhance it (see Damanpour 1991; Shoham and Rose 2001; Rose and Shoham 2002). Support from leaders has also been identified as critical to the success of innovations (see, for example, Webster 1988; Kohli and Jaworski 1990; Jaworski and Kohli 1993; Selnes *et al.* 1996). Strong top management support increases the chance that innovations will be adopted. Top management's vision in the public sector should also stress innovativeness in order to make its importance apparent to all employees. Public administration studies have shown the importance of managerial and entrepreneurship vision in setting a clear policy and implementing long-range planning (Berry 1994; Evans 1996; Thompson and Ingraham 1996; Moon 1999), a view reiterated following the tragic events of 11 September 2001 (Sloan 2002).

A final potential antecedent to public sector innovation in our model is the ethics and morality of the public personnel cadre. More than four decades ago, and subsequently in more recent studies, this issue received the attention of influential public administration scholars such as Graham (1974) and Golembiewski (1989). Administrative ethics and morality have now become even more central in public administration studies (Gawthrop 1976; Wilenski 1980; Richardson and Nigro 1991; Suzuki 1995; DeLeon 1996; Lui and Cooper 1997). However, citizens' views about such topics are considered infrequently, particularly with regard to public sector innovation. We therefore expect that citizens who perceive public personnel as interested, honest and ethical will expect to see them as more innovative, creative and caring about the systems they serve. This rationality is based again on the NPM approach. The citizens-as-clients motif increasingly urges independent perspectives towards moral issues in public administration, and such perceptions may positively affect feelings about the innovativeness and entrepreneurship of public personnel and public agencies.

Consequences of perceived innovation in the public sector

To date, most research on the consequences of public sector innovation has focused on the effect of innovativeness and innovation adaptation on organizational performance (see, for example, Miles *et al.* 1978; Frambach and Schillewaert 2002). Such research has viewed public sector innovation and innovativeness as a strategy aimed at enhancing an organization's competitive advantage and performance. This approach highlights organization- and market-level consequences and focuses on the economic, business-oriented or managerial outcomes of innovation. Hence, it may be considered as emanating from the NPM paradigm that emphasizes competition based on the economic considerations of a free market and implementing it, with some constraints, in the public sector arena (Lynn 1998). Similarly, citizens' perspectives for analysing the consequences of public sector innovation may be seen as another NPM element, one which is useful for a better understanding of innovation. Our study is therefore geared to the wider citizen-oriented outcomes of innovative governance. We believe that satisfaction with services, trust in governance and public sector image, as perceived by citizens, are the predominant characteristics of such citizen-oriented outcomes.

Citizens' satisfaction has been used as a core measure of high performance in public administration, local governance and other state or federal agencies (see, for example, Vigoda 2002; Vigoda and Yuval 2003; Van Ryzin *et al.* 2004). Its analysis is based on a comprehensive, distinctive, reliable and continuous assessment of governmental operations. Satisfaction measures have become prevalent in state and federal agencies, largely prompted by the client canon of NPM and by the vision of 'putting citizens first' (Caiden and Caiden 2002). Public administration officials also encourage the use of satisfaction measures as part of performance evaluations for public agencies (see Poister and Henry 1994; Swindell and Kelly 2000). Although some limitations of measuring performance by citizens' satisfaction have been recognized (see Stipak 1979, 1980), this method of performance measurement is prevalent in academic studies and considered to be an element of the use of performance indicators (PIs) in the public sector.

Similarly, trust in governance is another aspect of a well-performing bureaucracy. Trust is a psycho-political concept. To trust a person, a group or an institution, is to assume their reliability' to believe that they will act 'as they should' (Barber 1983; Citrin and Muste 1999). Psychologically, trust is an informal contract between at least two parties that brings some certainty into their relationship. Trusted people are expected to fulfill unwritten agreements, and thus allow the trusting person to plan under the assumption that the agreement will be honoured. Hence, trust has political implications that are relevant for national- and community-level relationships such as those between citizens and central and local government or other public administration agencies (Nye *et al.* 1997; Vigoda and Yuval 2003). Nonetheless, the linkage between trust and innovation in public administration has received little empirical consideration. Previous studies have suggested that citizens' trust is related to innovative knowledge sharing through interorganizational networks (Hartley and Benington 2006), to positive attitudes towards new and innovative healthcare technologies (Calnan *et al.* 2005), and to innovative e-government initiatives (Hazlett and Hill 2003). Other studies found a relationship between managerial innovation, leadership credibility, and board behaviour in local governance (Gabris *et al.* 2001). Yet others discussed the relationship between creative personnel development and citizens' trust in non-Western cultures (Caspar 1993). These relationships may be based on social exchange theory (Blau 1964), where people react to the efforts of modernization and the improvement of services by having confidence and faith in the systems that develop such services. It is thus possible that trust is a reflection of the legitimacy that citizens confer on the bureaucratic system in response to innovative changes and reforms that try to make better use of public money.

Finally, organizational image has been shown to impact private firms' outcomes (see, for example, Gatewood *et al.* 1993; Dutton *et al.* 1994; Fombrun 1996). The public sector's image and organizational outcomes (efficiency, customer satisfaction, intention to join/stay in the organization) are positively related (Vigoda-Gadot *et al.* 2003; Vigoda-Gadot and Ben-Zion 2004; Cohen *et al.* 2005). To the best of our knowledge, the relationship between public sector innovation and its perceived image in the eyes of citizens has not yet been fully explored. In addition, image may be an outcome of innovation or a mediator leading to outcomes such as citizens' satisfaction and trust in governance. The rationale is that citizens' reactions to public sector innovation may be based on the accumulated process of image building (Dutton *et al.* 1994), something which only later leads to satisfaction and trust in governance. Consequently, we propose two versions of the theoretical model: one for 'image as a direct result of innovation' (Model 1) and the second for 'image as a mediator between innovation and satisfaction and trust' (Model 2).

METHOD

The PUBLIN project

This study was based on the EU's Fifth Framework Project of PUBLIN (Public Sector Innovation), conducted simultaneously in Ireland, Israel, Lithuania, The Netherlands, Norway, Slovakia, Spain, Sweden, and the United Kingdom during 2003–2005. The project was designed to explore the nature of innovation in social and health services, its antecedents, and results based on qualitative and quantitative methods. Except for the UK, eight country teams provided data on citizens' perspectives. Our analysis is based on this data.

Sample and procedure

Unlike other studies that use intraorganizational data/surveys or citizens' responses to assess the performance of public services (see, for example, Carter *et al.* 1992; Van Ryzin *et al.* 2004), this study used the less conventional approach of surveying 'knowledgeable' citizens as sources. Participants were senior and mid-level managers of third sector organizations who work closely with citizens and public sector agencies in social and healthcare services. The countries' own research teams selected the organizations. The organizations selected represented major agencies in each country, those with an impact on a national level, and coordinated the work of many volunteers and employees in these sub-sectors. In our view, such organizations were extremely representative of third-sector activity in this context. The managers were authentic representatives of civic groups, as well as knowledgeable informants on governmental agencies. This approach allowed us to minimize biases due to a lack of awareness of public service outcomes and subjective evaluations based on word-of-mouth, two problems that frequently bedevil ordinary citizens' surveys. Respondents with tenure of at least five years with their organizations were asked to provide data based on their own experience with contacts with various public agencies.

We distributed a total of 1156 questionnaires in eight countries. A direct distribution and return method was used to maximize potential participants' commitment and to provide participants with confidence that the data they provided would be used properly. Country research teams selected between 5 and 10 organizations that worked closely with citizens and public sector agencies in the fields of social services (for example, dealing with children in need, elderly populations, or the unemployed) or healthcare (public clinics or hospitals). A total of 626 usable questionnaires were returned (an overall response rate of 54.2 per cent). Received/distributed questionnaires and response rates (in parentheses) by nation were: Ireland: 118/200 (53.6 per cent); Israel: 103/140 (73.6 per cent); Lithuania: 68/120 (56.7 per cent); Norway: 121/225 (53.8 per cent); Slovakia: 81/120 (67.5 per cent); Spain: 72/120 (60 per cent); Sweden: 44/81 (54.3 per cent); and Holland: 20/150 (13.3 per cent). Thus, except for Holland, the response rates (53–74 per cent) were reasonable (see PUBLIN's final report on <http://www.step.no/publin/reports.html> for additional psychometric properties of each country surveyed). In terms of gender, 64.3 per cent of the combined multinational sample were female. The average age was 45.48 years (s.d.=16.96) and the average years of education was 15.64 (s.d.=3.94). In terms of income, 39.2 per cent earned an average income in their country, 32.6 per cent were below the average, and 28.2 per cent above it. The final N for Structural Equation Modelling (SEM) statistics was thus 626, which is satisfactory, since the most frequent level reported in previous studies that used a SEM technique was between 200 and 400. However, we

aimed at a higher N mainly due to our pooling together of data from eight countries and considering the fact that the number of degrees of freedom in the theoretical model ranged between 47 and 191. Finally, unless stated otherwise, all questionnaire items were measured on five-point (1 = strongly disagree to 5 = strongly agree) scales.

Measures

Public sector innovation (INNOV)

This variable reflects entrepreneurial actions, creativity, flexibility, a willingness to adopt new ideas, and the initiation of original enterprises to improve people's services (Rogers 1983; Borins 1998). We were unable to find an appropriate established scale of innovation in the public sector of the participating countries that could be used. The study group therefore developed three specific items that addressed most of the issues about innovation in the studies on healthcare and social services organizations: (1) 'creativity is encouraged in the public social/health sector'; (2) 'the public social/health sector constantly tries to develop and offer new services'; and (3) 'the public social/health sector has introduced many new services during the past three years'. Country-level internal reliability ranged from 0.60 to 0.90, and the overall reliability was 0.82.

Responsiveness (RES)

This variable refers to the accuracy and speed of public sector reaction to citizens' demands. Relying on Thomas and Palfrey's conceptualization (1996), it was measured by three items evaluating the speed and accuracy of public services provided to citizens by the authorities in each country. The items were: (1) 'in general, the administration of the public social/health sector responds to public requests quickly'; (2) 'the public social/health sector administration is efficient and provides quality solutions for public needs'; and (3) 'citizens' appeals to the public social/health sector agencies are treated properly, concisely, and within a reasonable period of time'. Respondents were asked to report the degree to which they agreed with the items. Country-level internal reliability ranged between 0.77 and 0.86, with an overall reliability of 0.84.

Professionalism (PROF)

This variable refers to the professionalism and quality of public personnel as perceived by citizens (Vigoda-Gadot and Yuval 2004). It was measured by two items: (1) 'employees in the public social/health sector in my country are professionals and highly qualified'; and (2) 'employees of the public social/health sector in my country show understanding, care, and a willingness to serve the citizens'. Country-level internal reliability ranged between 0.60 and 0.85, with an overall reliability of 0.78.

Organizational politics (OP)

This variable reflects the level of political considerations in administrative work and decision-making as perceived by citizens (Vigoda-Gadot and Yuval 2004). A three-item scale to assess a country's public sector in general was used: (1) 'the actions of the public social/health sector administration serve only the purposes of a few groups or individuals, not the public interest in general'; (2) 'favouritism rather than merit determines who gets ahead in the public social/health sector in my country'; and (3) 'generally speaking, the public social/health sector administration operates in a fair and just manner and respects political decisions taken by the parliament or the government' (reversed score). A higher

score reflects a higher perceived level of organizational politics. Country-level reliability ranged between 0.60 and 0.84, with an overall value of 0.68.

Leadership and vision (LV)

This variable represents general views about the quality and vision of leading administrative groups, managers, and senior bureaucrats. It was taken from Vigoda-Gadot and Yuval (2004) and includes two items: (1) 'senior managers of the public social/health sector in my country have a clear vision and long range view as to where we are going'; and (2) 'the leadership and senior managers in the public social/health sector are well qualified and have high professional standards'. The reliability scores ranged from 0.63 to 0.91 across countries, with an overall value of 0.76.

Ethics and morality (EM)

This variable includes two items that describe attitudes about the ethics, morality, and fairness of civil servants (Vigoda-Gadot and Yuval 2004): (1) 'in this country most civil servants in the public social/health sector show high moral integrity', and (2) 'Citizens of this country receive equal and fair treatment from public social/health sector employees'. Higher scores represent a more positive (moral and ethical) view of the public sector. Except for Spain, country-level internal reliability ranged between 0.69 and 0.84, with an overall value of 0.75.

Trust in government and public administration (TRUST)

This variable refers to the level of citizens' confidence in state authorities and administrative branches (Citrin and Muste 1999). It was measured using a list of eight state agencies and public organizations (for example, the public social/health sector, public educational system, police, public transportation system, employment services, political parties, and parliament). Respondents indicated how much trust they had in each on a five-point scale (1 = very low trust to 5 = very high trust) with an option of indicating if they had enough knowledge to evaluate each service/institution. Analysis was conducted only for those who indicated that they had sufficient knowledge to make such judgments. With the exception of The Netherlands, country-level reliability ranged between 0.68 and 0.86, with an overall value of 0.79.

Citizens' satisfaction (SAT)

This variable refers to citizens' satisfaction with six groups of institutions and organizations that deliver various services (the public social/health sector, the public educational system, police, the public transportation system, welfare and social security, and employment services). They were asked to report how satisfied they were with the treatment they received. Country-level reliability ranged between 0.60 and 0.82, and the overall reliability was 0.71.

Public sector image (IMAGE)

This variable refers to the reputation and prestige of public bureaucracies in the eyes of citizens and was based on a scale developed by Dutton and Dukerich (1991) and Oswald (1996). We adopted a two-item scale: (1) 'many of my acquaintances think that a job in the public social/health sector is a respectable and a good one'; and (2) 'I believe that a job in the public social/health sector is a respectable and good one'. Country-level internal reliability ranged between 0.60 and 0.88, with an overall value of 0.72.

Finally, it should be noted that the variables 'trust in government' and 'citizens' satisfaction' were the only exogenous variables in this study. They were defined in terms of attitudes towards a broad range of public sector institutions. This operationalization is in line with the expectations for a spillover effect of attitudes from one domain (the specific sector – health or social services) to other sectors as well (Wilenski 1980). Thus, the measures described above reflect our intention to test the degree to which perceived innovation and its antecedents affect the image of two specific public services (health and social services) and to determine the longer-range effect on more general feelings of satisfaction with and trust in the entire public sector arena.

Analysis of models

Structural Equation Modelling (SEM) with AMOS 6 was used for the assessment of the research models. SEM is a statistical method that is based on path-analysis, and was originally designed to test competing models in the social sciences (Joreskog and Van Thillo 1973; Joreskog 1977). We used a correlation matrix as an input, treated the multi-item scales as single indicators of each construct and corrected for measurement errors as suggested by Bollen (1989). Eight indices were used to assess the fit of the models. The first two were chi-square tests (a low and non-significant value of the chi-square represents a good fit to the data) and the ratio of the model chi-square to degrees of freedom (a ratio up to 2 is considered a satisfactory value). In accordance with other studies (Bentler and Bonett 1980; Bollen 1989; Bentler 1990; Medsker *et al.* 1994), we also used the Relative Fit Index (RFI), the Comparative Fit Index (CFI), the Normed Fit Index (NFI), and the Tucker-Lewis Index (TLI), which helps in overcoming problems with the NFI. The closer the value of RFI, CFI, NFI, and TLI to 1, the better the fit. The Root Mean Square Error of Approximation (RMSEA) value of up to .05 indicates a close fit, and values up to .08 represent reasonable errors of approximation. Another recommended index for the selection of one of several *a priori* specified models is the Expected (single sample) Cross-Validation Index (ECVI) that should be as close to zero as possible.

In addition, to assess the superiority of one model over another, we considered path coefficients and explained variance, defined as the 'plausibility criterion' (Joreskog and Sorbom 1994). This criterion means that the path coefficients in the plausible better-fit model adhere well to the general theoretical conception and to the hypotheses. This adherence should hold in terms of magnitude as well as in the expected directions. Accordingly, a model that fits the data well, but many of its theoretical paths do not support the theoretical arguments, cannot be defined as correct. Some balance must be demonstrated between the fit indices and the theoretical predictions or hypotheses regarding the relationships among research variables. Therefore, the accuracy of the theoretical predictions can be tested by the path coefficients in each of the models, as was done in this study. Finally, we calculated the percentage of explained variance for four variables: public sector innovation, citizens' satisfaction, trust in governance, and public sector image. A low percentage of explained variance in a certain model indicates that it is of lower quality (Saris and Stronkhorst 1984).

RESULTS

Table 1 provides descriptive statistics for the research variables across the participating countries. The number of usable questionnaires in six countries (Norway, Ireland, Israel, Slovakia, Spain, and Lithuania) was above the minimum level of 50 that is

TABLE 1 Descriptive statistics for the participating countries

N	Ireland		Israel		Lithuania		Norway		Slovakia		Spain		Sweden		Netherlands									
	118		103		68		124		81		72		44		20									
	Mean	SD	α	Mean	SD	α	Mean	SD	α	Mean	SD	α	Mean	SD	α	Mean	SD	α						
1. Innovation	2.95	1.41	.78	2.85	.91	.84	3.20	.75	.69	2.82	.85	.77	3.33	.94	.86	2.53	.94	.90	2.38	1.14	.80	2.48	.81	.60
2. Responsiveness	2.56	1.12	.86	2.72	.89	.84	2.83	1.63	.81	2.82	.85	.84	2.11	.68	.85	2.31	.78	.77	1.89	.90	.78	2.05	.64	.79
3. Professionalism	3.74	.62	.85	3.06	.99	.83	3.19	.74	.60	3.84	.79	.68	3.04	.66	.72	3.53	.80	.64	4.10	.74	.81	3.14	1.1	.81
4. Organizational politics	3.23	.76	.67	3.25	1.07	.84	3.08	.93	.62	2.97	1.1	.68	3.17	.71	.70	3.07	.80	.64	1.66	1.38	.75	3.18	.91	.60
5. Leadership and vision	2.77	.71	.76	2.72	.91	.82	3.00	.82	.73	3.34	.87	.73	2.82	.71	.78	2.87	1.0	.71	2.11	1.49	.63	2.75	.85	.91
6. Ethics and morality	3.02	.71	.74	3.05	1.03	.69	2.61	.90	.82	3.51	.90	.70	2.76	.77	.69	3.34	.74	<.60	3.42	1.27	.77	3.07	.78	.71
7. Trust in governance	2.79	.42	.80	2.75	.63	.82	2.88	.49	.71	3.31	.59	.79	2.61	.57	.82	2.71	.52	.68	2.83	.81	.86	2.75	.48	<.60
8. Image	3.81	.75	.70	3.30	.89	.67	3.37	.81	.70	3.83	.84	.76	3.11	.93	.76	3.68	.78	.64	2.14	.96	.60	3.75	.80	.88
9. Citizens' satisfaction	2.89	.38	.60	2.84	.71	.82	3.00	.51	.68	3.28	.56	.72	2.83	.65	.85	2.85	.58	.66	2.86	.58	.74	2.75	.47	.66

Note: N=626.

required for independent statistical analysis under the principle of normal distribution. For Sweden and The Netherlands, however, it was comparatively low (44 and 20, respectively), which did not allow for an independent analysis. The table shows that most of the reliability levels exceeded 0.60 (with the exception of ethics and morality in Spain and trust in governance in The Netherlands). Table 2 provides descriptive statistics and inter-correlations for the combined sample of 626 participants. For both theoretical and empirical reasons, we decided to pool the data. From the theoretical perspective, the goal of our study was not to look for cross-cultural differences, but instead to suggest a generic model that was applicable to the European setting. Empirically, as will be demonstrated in more detail below, we found no strong evidence for cross-country differences as far as the theoretical model was concerned.

Thus the correlation matrix shows that innovation was positively related with responsiveness, leadership and vision, and citizens' satisfaction ($r=.26$; $p<.001$, $r=.27$; $p<.001$, $r=.23$; $p<.001$, respectively). The table further demonstrates somewhat weaker, positive relationships with public sector image, trust in governance, and ethics and morality ($r=.17$; $p<.001$, $r=.14$; $p<.001$, $r=.10$; $p<.01$, respectively). The correlations between innovation and organizational politics and professionalism were not significant.

Table 3 provides the fit indices for the models. As was suggested in the discussion above, pooling the country data was based on two main reasons. First, we conducted a further analysis using the eight countries as a dummy variable in an equation that tested the theoretical model. The findings of this analysis showed no differences based on country, especially for the endogenous variables 'trust' and 'satisfaction'. For the variable 'image', we found some marginal differences that, in our view, still allow pooling of the data, especially considering the low sample size in several of the countries studied. Second, the theoretical models were tested separately for each of the six participating countries that provided a minimum of 50 usable questionnaires (except for Sweden and The Netherlands). Using SEM, we calculated fit indices and path magnitudes for the theoretical models in each of the participating countries. Results showed no significant differences in the fit indices and thus in the quality of the models for these countries. Therefore, we combined the samples and analysed the integrative database as one.

As table 3 shows, the analysis of the theoretical models for the combined data yielded weak fit indices, below the recommended levels in the literature (for example, Bentler and Bonett 1980; Bollen 1989; Bentler 1990; Medsker *et al.* 1994). We therefore decided to

TABLE 2 Descriptive statistics and intercorrelations matrix (reliabilities in parentheses) for the combined sample

	Mean (SD)	1	2	3	4	5	6	7	8	9
1. Innovation	2.86 (1.04)	(.82)								
2. Responsiveness	2.51 (1.03)	.26***	(.84)							
3. Professionalism	3.49 (.86)	.08	.29***	(.78)						
4. Organizational politics	3.04 (1.03)	-.05	-.11**	-.29***	(.68)					
5. Leadership and vision	2.87 (.94)	.27***	.41***	.41***	-.12**	(.76)				
6. Ethics and morality	3.12 (.95)	.10**	.30***	.30***	-.25***	.41***	(.75)			
7. Trust in governance	2.86 (.61)	.14***	.36***	.38***	-.18***	.37***	.42***	(.79)		
8. Image	3.46 (.95)	.17***	.30***	.30***	.03	.37***	.25***	.27***	(.72)	
9. Citizens' satisfaction	2.94 (.58)	.23***	.40***	.37***	-.18***	.42***	.37***	.72***	.27***	(.71)

Note: N=626; ** $p<.01$; *** $p<.001$.

TABLE 3 *Goodness of Fit Indices*

Model	X ²	df	X ² /df	p	NFI	RFI	TLI	CFI	RMSEA	ECVI
Theoretical models 1	1269.66	191	6.67	<.000	.76	.69	.72	.79	.10	2.30
Theoretical models 2	1055.29	191	5.52	<.000	.80	.74	.78	.83	.09	1.96
Revised model A	242.76	58	4.19	<.000	.91	.86	.89	.93	.07	.54
Revised model B	131.45	47	2.79	<.000	.95	.91	.94	.97	.05	.35
Revised model C	235.77	58	4.07	<.000	.91	.86	.89	.93	.07	.52
Revised model D	339.35	82	4.14	<.000	.89	.84	.87	.91	.07	.71
Revised model E	319.96	82	3.90	<.000	.89	.85	.88	.92	.07	.68

Note: N=626.

trim the original theoretical models and used several revised models that focus on specific antecedents. Table 4 shows that the three most influential antecedents to public sector innovation are responsiveness, leadership and vision, and organizational politics (the minimum level of the path coefficients with innovation was .34; $p < .001$, .31; $p < .001$, and $-.10$; $p < .111$, respectively). Thus, we analysed five competing models (figure 2; models A–E). Revised models A–C suggest a direct relationship with the outcome variables, and revised models D–E suggest an indirect relationship, with image serving as a mediator.

As shown in table 3, model B demonstrates the best-fit indices amongst all the tested models, including the theoretical ones. Whereas its X² value is significant, its X²/df value is the closest to 2, NFI, RFI, TLI, and CFI are the closest to 1, and RMSEA and ECVI are the closest to 0 amongst all other models. These findings indicate that this model demonstrates the closest fit with the theoretical conception. The other alternative models (A, C, D, and E) are also superior to the original theoretical models and, based on their fit indices, are quite similar.

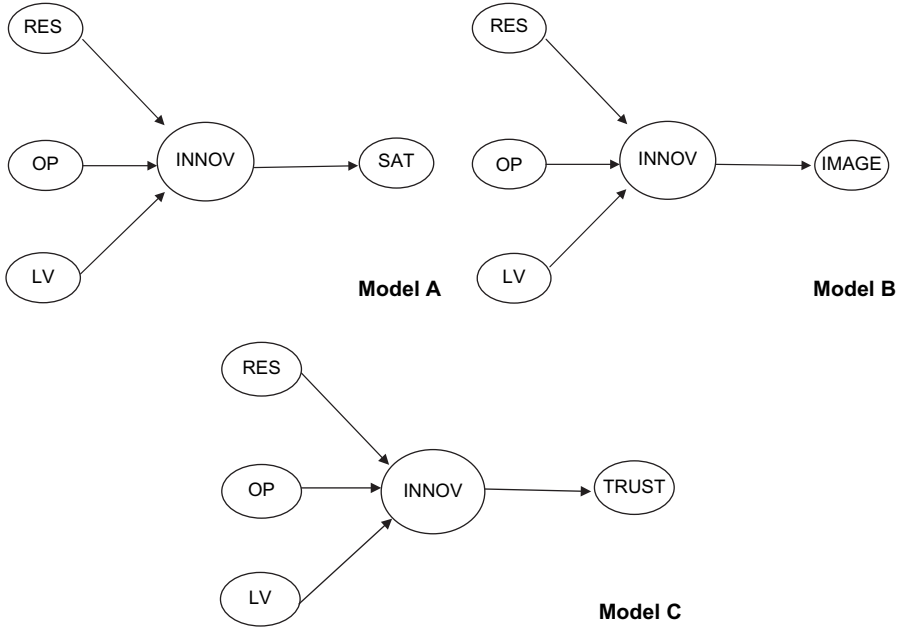
In addition to the models' fit, table 4 allows an in-depth comparison of the models in terms of path coefficients and explained variance (R²). Across the models (2 theoretical and 5 alternative models), responsiveness, and leadership and vision, have a positive effect on public sector innovation, ranging between .29 and .38 for responsiveness and .21 and .32 for leadership and vision. As can be seen, path coefficients for model B work in the expected direction, as is the case for the other models. For example, model B's path coefficient between innovation and image is in the expected positive direction (.31; $p < .001$), as are D's and E's (.34; $p < .001$ and .32; $p < .001$, respectively) and the theoretical models 1 and 2 (.37; $p < .001$ and .38; $p < .001$, respectively). The only exception in all the models, including B, is the insignificant relationship between organizational politics and public sector innovation. Therefore, according to the path coefficients, and in contrast with the results based on the fit indices, it might be overstating the case to conclude that model B is the correct model. Furthermore, R² statistics show that the highest explained variance for innovation and for the dependent variables is with the theoretical models. It reaches a level of 36.7 per cent for innovation in theoretical model 1 and 28.6 per cent in theoretical model 2. In addition, explained variance for 'trust' is 23.4 per cent and 29.2 per cent and for 'satisfaction' 32.7 per cent and 29.2 per cent, respectively for theoretical models 1 and 2. The explained variance for 'image' in the theoretical models is around 14 per cent. In comparison with these scores, the explained variance in model B is 24.2 per cent for 'innovation' and 9.6 per cent for 'image'. Hence, these findings suggest that, overall, model B is the one with the best fit, but the other models may also represent significant relationships and advantages – especially in terms of explained variance – that

TABLE 4 Path coefficients and explained variance (*p* values in parentheses)

Model Path	Theoretical model 1	Theoretical model 2	Revised model A	Revised model B	Revised model C	Revised model D	Revised model E
RES → INNOV	.38 (<.001)	.34 (<.001)	.30 (<.001)	.29 (<.001)	.30 (<.001)	.29 (<.001)	.29 (<.001)
PROF → INNOV	-.05 (<.581)	-.09 (<.319)	—	—	—	—	—
OP → INNOV	-.09 (<.149)	-.10 (<.111)	-.07 (<.177)	-.07 (<.188)	-.08 (<.176)	-.07 (<.192)	-.07 (<.19)
LV → INNOV	.32 (<.001)	.31 (<.001)	.23 (<.001)	.22 (<.002)	.21 (<.003)	.22 (<.002)	.22 (<.002)
EM → INNOV	-.09 (<.340)	-.12 (<.210)	—	—	—	—	—
INNOV → TRUST	.48 (<.001)	—	—	—	.33 (<.001)	—	—
INNOV → IMAGE	.37 (<.001)	.38 (<.001)	—	.31 (<.001)	—	.34 (<.001)	.32 (<.001)
INNOV → SAT	.57 (<.001)	—	.44 (<.001)	—	—	—	—
IMAGE → SAT	—	.54 (<.001)	—	—	—	.39 (<.001)	—
IMAGE → TRUST	—	.54 (<.001)	—	—	—	—	.39 (<.001)
R ²							
INNOV	.367	.286	.265	.242	.249	.247	.245
TRUST	.234	.292	—	—	.107	—	.153
SAT	.327	.292	.192	—	—	.118	—
IMAGE	.137	.145	—	.096	—	.150	.105

Note: N=626.

Direct effect models (Model A, Model B, Model C):



Indirect mediating models (Model D, Model E):

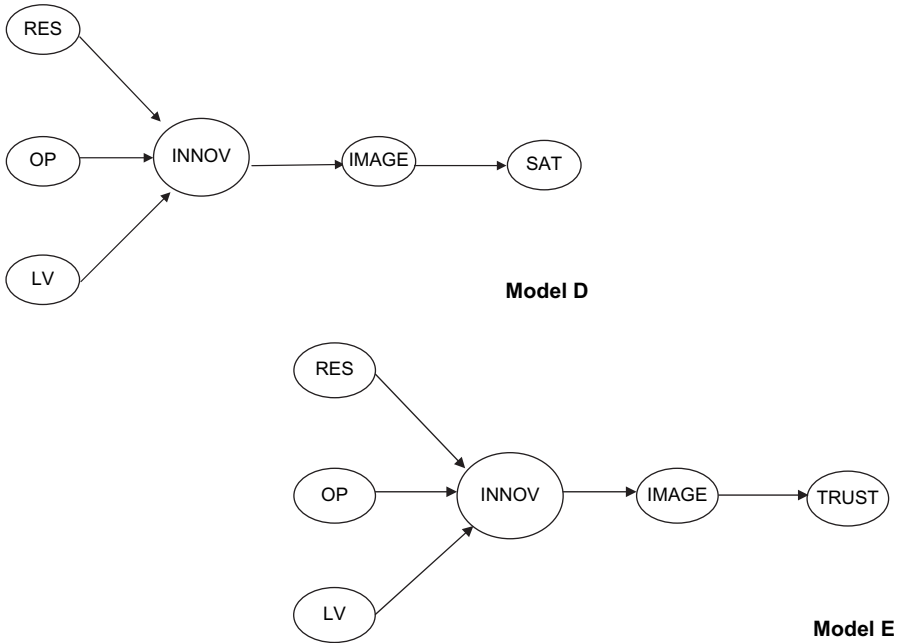


FIGURE 2 Five revised models: direct and mediating effects

should be considered in the discussion and implications section below. Finally, it should be noted that the theoretical models and the alternative models were run again to test for another combination of the exogenous variables of 'trust' and 'satisfaction'. During this stage, we calculated 'trust' and 'satisfaction' as representing only the healthcare and social services in each country. Results of this analysis were quite similar to those reported above for both the theoretical and alternative models.

INNOVATION AND CITIZENRY OUTCOMES IN THE EUROPEAN ADMINISTRATIVE LANDSCAPE: DISCUSSION AND SUMMARY

The literature on public sector innovation is lacking in a comprehensive view that transcends nations, cultures, and populations. Most importantly, it largely overlooks the street-level perspective of citizens as customers or clients, a view of the public frequently suggested in much of the NPM literature. The study reported here attempts to aggregate data over eight European countries and to propose an analysis of innovation in the public sector beyond these borders and from the less conventional approach of knowledgeable citizens' perspectives. The logic for this approach is rooted in both the general knowledge on organizational innovation that has been integrated into the managerial sciences (see Abrahamson 1991; Damanpour 1991; Scott and Bruce 1994) and in the need to explore innovation in the public sector, using new, creative perspectives and methods (Evans 1996; Borins 1998, 2000a, b; Vigoda-Gadot *et al.* 2005). Hence, our theoretical models examined both the antecedents and possible outcomes of innovation in the European public social sector and healthcare sector. The findings, based on these models, led us to believe that the theoretical models are useful but can be improved by narrowing the explanatory set of variables and striving to create a more parsimonious model. For this purpose, and based on multivariate analyses, we suggested five alternative models that emphasize three major antecedents of innovation (responsiveness, leadership and vision, and organizational politics) as well as three citizenry-oriented outcome variables (image, trust, and satisfaction).

One major finding shows that public sector innovation is best explained by citizens' perceptions of 'responsiveness' and by 'leadership and vision' in the European administrative landscape. The more responsive the public social and healthcare systems are, and the better leadership and vision they demonstrate, the higher the perceived level of innovation in these systems. This finding was consistent across the participating countries (at least for the six countries with a sufficient number of participants). The finding about the relationship between responsiveness and perceptions of innovativeness is consistent with several studies from the field of management and marketing (see, for example, Kohli and Jaworski 1990; Narver and Slater 1990; Deshpande *et al.* 1997). In addition, and to the best of our knowledge, the finding about the relationship between leadership and vision and perceptions of innovativeness is less common and has received less attention in previous studies. Other variables, such as the professionalism of public sector officers, the perceived level of ethics and morality among public sector employees, and internal politics, as perceived by citizens, seem important, but according to our empirical findings, demonstrated very little or no relationship with perceptions of innovativeness. Most of these relationships were found only in the bi-variate analysis and diminished in the more complex, multivariate analyses. We conclude therefore that these variables, although highlighted extensively in previous management and public administration studies (see Webster 1988; Kohli and Jaworski 1990; Jaworski and Kohli 1993; Selnes *et al.* 1996; Moon 1999; Shoham and Rose 2001), are only secondary to responsiveness and to leadership

and vision in their effect on public sector innovation in Europe. Nonetheless, we believe they still deserve attention in future studies.

Another major finding of our study is the effect of both the independent variables and perceived innovation on the citizenry outcomes that were tested here. As demonstrated in model B, the best-fitted model (that also worked quite nicely according to the 'plausibility criterion' of Joreskog and Sorbom (1994)), the most notable outcome of public sector innovation in Europe is the 'image' of this sector in the eyes of citizens. While the effect of innovation on citizens' satisfaction and especially on trust in governance is also significant (see model C for comparison), it seems that the most salient effect is the direct relationship between innovation and image. Another support for the centrality of image is the modest, but interesting, advantage of theoretical model 1 over theoretical model 2, both in terms of fit indices and in terms of most of the explained variance statistics. This finding offers additional support for the notion that image plays an important role in explaining citizenry outcomes of innovation, such as satisfaction with services and trust in governance. Thus, one may conclude that innovation and innovativeness in government agencies strongly improves the image of this sector in the eyes of citizens. This finding is important and is indeed consistent with other theoretical ideas and empirical examinations in both the generic management literature (see, for example, Gatewood *et al.* 1993; Dutton *et al.* 1994; Fomburn 1996) and in the public administration literature (see, for example, Vigoda-Gadot *et al.* 2003; Vigoda-Gadot and Ben-Zion 2004; Cohen *et al.* 2005).

Nonetheless, we still recommend that the above interpretation be made with caution. It should be noted that the magnitude of this relationship in model B, although significant, is still inferior to the magnitude of the same relationship in the indirect models (D and E) and even more so in the theoretical models. It is therefore possible that the more accurate interpretation of our findings is that public sector innovation has a main effect on image, but that in the same vein it has a secondary, relevant, effect on trust in governance and also on citizens' satisfaction with services. This latter interpretation is more consistent with other studies that put stronger emphasis on citizens' satisfaction (for example, Poister and Henry 1994; Swindell and Kelly 2000; Van Ryzin *et al.* 2004), or on citizens' trust in governance (for example, Caspar 1993; Gabris *et al.* 2001; Calnan *et al.* 2005; Carter and Bélanger 2005; Hartley and Benington 2006) as major outcomes of the innovative/well-performing public sector or as outcomes of the image and reputation of the public sector in the eyes of citizens.

In sum, whereas model B seems to be the one with the best fit to the data, it is still far from being the only 'correct' model in this study. Its major limitations are: (1) the fact that its fit indices are not optimal; and (2) the competitive advantages of the indirect models (D and E) in terms of path coefficients and effect on the other dependent variables, trust in governance and citizens' satisfaction. Another limitation of model B is the fact that it demonstrated no superiority in terms of explained variance.

What are the theoretical implications of this study, for European countries and even beyond them, for the collective knowledge about innovation in public sector organizations? We believe that a primary theoretical contribution can be made in the general context of innovation studies in public management. The citizens-as-clients perspective enriches the customer-marketing perspective by adding a dimension of the public marketing arena to the business-oriented studies on innovation. In the opposite direction, this study exemplifies how managerial thinking contributes to our knowledge in public administration, in line with the prevailing philosophy of NPM. Therefore, we argue that this study makes a cross-disciplinary contribution both to managerial and business

thinking and to the specific field of public administration and public policy, as well as to public opinion and communication studies.

In addition, the study contributes to our understanding of public sector innovation by adding variables – such as responsiveness, leadership and vision, and organizational politics – that have not yet been studied in this context. Moreover, the fact that the theoretical models worked similarly in six out of the eight countries provides support for a more generic model of innovation that holds beyond national and cultural characteristics, at least for the European region. However, other studies are needed that adopt our strategy, methods, and/or tools to further support our ideas in a more universal context.

Beyond its theoretical and regional contribution, this study may also have some practical implications for improving administrative agencies in Europe and beyond. First, the study emphasizes several factors that can enhance innovation in public agencies. Beyond the attention already paid in many countries to the quality of leadership and vision, to the creation of an appropriate ethical and moral climate, and to the improvement of professionalism among public servants, this study suggests two other variables that deserve more attention: responsiveness and internal politics. We argue that practitioners in the public sector realm should pay more attention to the improvement of responsiveness to citizens by various techniques (technological, sociological and psychological). The stronger the sense of responsiveness, the stronger the perception of the specific public sector agency as innovative. This recommendation is also much in line with the interest in recent years in the NPM doctrine. Another practical implication is the idea that internal politics in public administration may damage the innovative climate as perceived by citizens and thus may have a negative effect on other organizational outcomes such as image, satisfaction and trust (Vigoda 2003). Whereas the findings in this regard were rather disappointing, we still encourage future studies to replicate and re-test our ideas. We therefore recommend that public officials, policy-makers and implementers heed the results of this study and maximize their efforts in two major directions: (1) improving their responsiveness to the public's demands, as well as enhancing their leadership and vision; and (2) minimizing organizational politics. Public sector organizations provide goods and services to their communities that vary in type and quality. These agencies must find better ways of allocating resources across their communities. Those that pay greater attention to the factors that affect innovativeness will prove more successful in improving citizens' satisfaction, trust in governance, and the general image of the public sector.

Finally, despite the contributions of this study, its major limitations should also be mentioned. Most importantly is the modest number of usable questionnaires obtained from the countries. This small number was a problem, especially in Sweden and The Netherlands, where responses did not reach the minimum level of 50, and in the UK where no data were returned. Whereas a sample of 626 is relatively satisfactory for a SEM technique, the study could benefit from a higher number of respondents, especially in specific countries. The fact that we pooled together data from eight countries was a compromise that allowed us to make more generalizations about the models, but does not allow us to make statements about each of the participating countries. Despite the fact that the study would benefit from a higher response rate and from a more impressive number of such questionnaires, the effort invested in conducting the cross-European research is notable. This study can be regarded as pioneering in its scope. We believe that future studies would benefit from adding other countries to the bank of knowledge on innovation in the public sector. In the same vein, interpretations of the results should be made with caution, especially regarding the new democracies such as those of Lithuania

and Slovakia (and, in addition, perhaps, that of Spain). Historically, due both to their experience of governance and their attitudes towards surveys, the data collected in these countries may differ from those of more established democracies such as Norway or Ireland.

Second, the cross-European effort and the method of approaching knowledgeable citizens also forced us to shorten the questionnaires as much as possible, something which resulted in extremely condensed scales for the studied variables. In some cases, as in Spain and The Netherlands, this step left us with relatively low reliabilities for two of the variables. Thus, we suggest that future studies try to enrich the scales with additional items that may contribute to the solidity, validity and reliability of the scales. In so doing, we would hope that the quality of the results will improve. We also recommend that other studies try to correlate the innovation aspects in various countries with local adaptations of specific NPM innovations as well as with other performance indicators to demonstrate the global importance of innovation and its uniqueness in various countries (see Ammons *et al.* 2001). Unfortunately, our cross-country data do not allow such comparisons. In addition, despite using the SEM technique that allows causal interpretation of the findings, we still believe it would be overstating the case to suggest causal relationships among the models' variables. We thus recommend that our findings be interpreted as correlative and not causal. Finally, this study reports on the use of knowledgeable citizens' perspectives for the evaluation of the models. Therefore, one may argue that the study suffers from a common method or common source bias. However, readers should be aware that the study as reported here was part of a more extensive effort to explore innovation in the European public sector and that other parts aggregated additional data based on qualitative in-depth interviews with senior managers and quantitative surveys of other managers and front-line employees (for more details, see Shoham *et al.* 2006). Our effort to uncover citizens' perspectives about innovation is thus only one part of the more collective effort in the project, and therefore we believe that the problem of common method or common source bias is marginal.

In sum, this study attempted to discuss innovation in the public sector from the less conventional perspective of citizens' views, and relied on an original and extensive European dataset to explain some specific relationships in this context. No doubt, more research is needed in this direction to determine if the findings suggested here hold beyond the European arena. The study demonstrated again, both theoretically and empirically, the importance of an innovative public administration and its usefulness to the explanation of citizenry-oriented outcomes, such as administrative public sector image, trust in governance and citizens' satisfaction, which are core elements of both the well-performing modern European state and of every advanced democracy.

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