Innovation in the Public Sector

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Report on the Publin surveys

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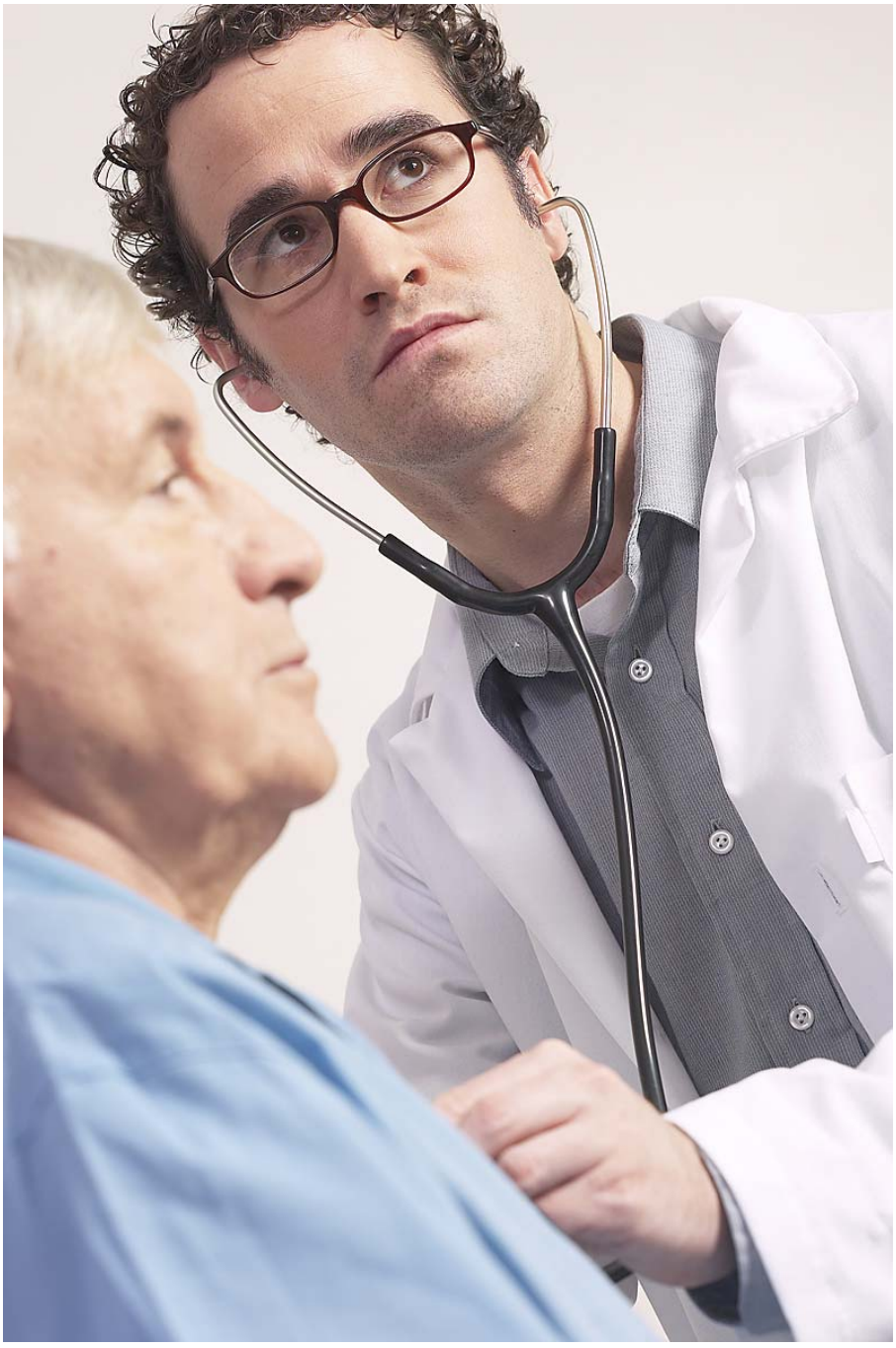

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PUBLiN

PUBLIN WP 3

Summary and Results

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SUMMARY OF RATIONALE

Organizational innovativeness has been a central topic for inquiry in multiple disciplines, including management, strategy, entrepreneurship, political science, and marketing. This document integrates research pertaining to organizational innovativeness from these disciplines and discusses the antecedents to, characteristics of, and outcomes emerging from innovativeness as studied under WP3, both quantitatively and qualitatively. In so doing, the document develops a nomological network of public sector innovativeness.

INTRODUCTION

Organizational innovativeness has been studied in many disciplines (e.g., management/strategy, entrepreneurship, political science, and marketing). Yet, scientific knowledge in this area has been generally limited to the private sector. Additionally, most inquiries have been confined to the specific disciplines within which they have been conducted, restricting the opportunity for cross-disciplinary perspectives. This document sets up a model of organizational innovativeness, applicable to the private and public sectors. We integrated academic research from multiple disciplines to suggest possible antecedents to, characteristics of, and outcomes emerging from innovativeness, resulting in a nomological network of innovativeness. Below, we delineate the antecedents of innovativeness, assess the building blocks of innovativeness, viewed as an organizational trait, and suggest possible organizational outcomes of innovativeness.

ANTECEDENTS OF INNOVATIVENESS

We recognize three sets of antecedents: informational, organizational, and top management dimensions.

Information Dimensions

Following the marketing perspective, we view information management as a determinant of innovativeness. Three facets of information management are important to developing innovativeness at the public organizational level: information generation, information dissemination, and organizational responsiveness (Deshpande, Farley, & Webster, 1993; Kohli & Jaworski, 1990; Narver & Slater, 1990). Recent examinations of market orientation (Deshpande, Farley, & Webster, 1997; Diamantopoulos & Cadogan, 1996; Diamantopoulos & Hart, 1993; Golden et al., 1995; Greenley, 1995; Pelham & Wilson, 1996; Rose & Shoham, 2002; Selnes, Jaworski, & Kohli, 1996; Shoham & Rose, 2001) have linked information management and the private and public sectors' organizational performance across countries.

The first facet of information management is information generation: "organization-wide generation of market intelligence pertaining to present and future customer needs" (Jaworski & Kohli, 1993, p.54). Public sector "customers" can be external or internal users of a given service. The second facet, dissemination of the intelligence across departments and individuals, refers to information's movement through the organization. The third facet requires organizations to respond to the information generated and disseminated, where responsiveness includes two sets of activities: design (using information to develop plans) and implementation (executing the plans).

Organizational Antecedents to Innovativeness

We recognized two sets of organizational characteristics as innovativeness antecedents (Damanpour, 1991): internal communications and organizational structure.

Internal communications. The important construct here is intra-organizational conflicts. Inter-departmental conflicts hinder innovativeness through their negative impact on inter-departmental communications (Ruekert & Walker, 1987), resulting in a causal chain of inter-departmental conflicts → inter-departmental communications → information dissemination → responsiveness to information (Jaworski & Kohli, 1993).

Organizational structure. Five structural characteristics were expected to affect innovativeness. Formalization and centralization, typical of large organizations (Damanpour, 1991), hinder innovativeness (Slater & Narver, 1995). Formalization and centralization reduce market orientation and innovativeness (Deshpande & Zaltman, 1982).

Internal politics was expected to reduce innovativeness. Such activities include organizational members' use of power to influence others, secure interests, or avoid negative organizational outcomes (Bozeman et al., 1996). Irrespective of whether they view organizational politics as aggregated employee influence tactics (Kipnis et al., 1980) or through cognitive analyses (Ferris, Russ & Fandt, 1989), studies have documented that the level of organizational politics reflects fairness and justice in the organization. Politics, fairness, and justice affect organizational climate and outcomes (Ferris & Kacmar, 1992; Folger et al., 1992; Kacmar & Ferris, 1991; Vigoda, 2000A, 2000B). As such, they have the potential for reducing organizational innovativeness, including in the public sector (Golembiewski & Vigoda, 2000).

High levels of employees' participation in decision-making are typical of direct and permissive democratic leadership behavior, which combines participative management with high and low leaders' direction, respectively (Muczyk & Reinmann, 1987). Permissive democratic leadership "is appropriate when participation has informational and motivational value, when time permits group decision-making, when the employee group is capable of improving decision quality" (Dunham & Pierce, 1989,

p.560). These conditions appear to characterize the innovation context. Thus, participative decision-making should enhance innovativeness.

Finally, organizational reward systems should be tied to their desired end-goals. Rewarding organizational innovativeness should motivate employees to be inventive in their approach to their work (Selnes et. al., 1996).

Top Management Characteristics as Antecedents to Innovativeness

Top management plays an important role in instituting organizational change. We identified three top management characteristics that should affect innovativeness: attitude towards change, emphasis on and support for innovations, and organizational vision.

Management's attitude towards change should affect innovativeness, especially in the context of managers' risk-taking tendencies. A risk-averse mind-frame reduces innovativeness, whereas a more forgiving environment encourages employees to try new approaches (Damanpour, 1991; Kohli & Jaworski 1990; Rose & Shoham, 2002; Shoham & Rose, 2001).

Top management's emphasis on and support for innovation is critical to the success of new approaches (Selnes et al., 1996; Webster, 1988). Thus, the stronger the top managers' support for innovation, the more likely we will see new methods and approaches tried and used.

Top management's vision, defined as the future, positive image of the organization, should stress innovativeness as a means to that end and make its importance apparent to all employees (Bennis & Nanus, 1985; Conger & Kanungo, 1998; Strange & Mumford, 2002). This image of the future should enhance organizational innovativeness under two conditions. First, the vision should be clear, focused, and easy to understand, thus guiding employees towards the desired level of innovativeness (Mumford, et al. 2002). Hence, managers need to articulate the goals and clarify the paths to goal attainment. Second, the vision must allow decision-makers and actors to "think outside

the box", expanding the range of new ideas and solutions considered for achieving a particular goal (Ford, 2002; Gavetti & Levinthal, 2000).

DEFINITION AND COMPONENTS OF INNOVATIVENESS

Gopalakrishnan and Damanpour (1997, p.16) argued that "on the most basic level, innovation means 'something new'", whether it is a new idea, product, method, or service (Rogers, 1983). Thus, innovativeness is perceived in the literature as the adoption of many new ideas, methods, or services, which are its end "products", namely, actual innovations (Subramanian & Nilakanta, 1996). Stated differently, a highly innovative organization is one that adopts many innovations. However, we view innovativeness as a multi-dimensional organizational trait. Accordingly, our definition of organizational innovativeness includes five dimensions: creativity, risk-taking, openness to change, future orientation, and pro-activeness.

Creativity. Creativity, defined as the generation of new ideas, is "the starting point for any innovation" (Rosenfeld & Servo, 1990, p.252), making it a fundamental facet of innovation. Creativity leads to innovations when ideas are transformed into a new product, technology, process, or service. However, not all new ideas are generated inside the focal organization; some are generated externally but are adopted by the organization (Damanpour & Gopalakrishnan, 1998). Thus, we extended the concept of creativity to include the adoption of a new idea.

Risk-taking. From the organization's perspective, risk is "the extent to which there is uncertainty about whether potential significant and/or disappointing outcomes of decisions will be realized" (Sitkin & Pablo, 1992, p.10). The development and adoption of new ideas involves some degree of risk because there is no guarantee of positive outcomes (Lumpkin & Dess, 1996). The strategic management literature associates risk with novelty. An idea involving a high level of novelty is associated with a high degree

of risk. Stewart and Roth summarized their meta-analysis of risk propensity differences between entrepreneurs and managers (2001, p.145): “The risk propensity of entrepreneurs is greater than that of managers.” By analogy, as innovativeness is inherently risky, risk-taking should characterize highly innovative organizations.

Organizational Openness to Change. This construct refers to organizations’ flexibility, adaptability, and openness to change. Previous examinations conceptualized openness as a personal-level construct. Thus, openness requires individuals to be receptive to divergent views, tolerant of ambiguity, and users of non-traditional thinking (Costa & McCrae, 1992; McCrae, 1987). Openness, however, can be studied at the organizational level. To illustrate, Taggar (2002, p. 317) argues for “a positive association between openness to experience and creativity processes, as measured by group member behavior”, an expectation borne out by his data. In short, open organizations should be receptive to and pursue new ideas.

Hult et al. (2004, p. 430) and Zaltman et al. (1973, p. 43) saw openness to innovations as a feature of organizational culture. Organizational openness addresses whether organizational members are willing to consider the adoption of innovations or whether they resist it. Van de Ven (1986) refers to this tendency as the management of organizations’ cultural attention to recognize the need for new ideas and actions. According to Hurtley and Hult (1998, p. 44), innovativeness is the notion of openness to new ideas and is an integral part of a firm's culture. They view innovativeness as a measure of the organization’s orientation toward innovation.

Future Orientation. We live in a turbulent world in which environmental changes are fast and furious. Such changes necessitate a reliance on the past, coupled with an eye to the future. Research has acknowledged the importance of a temporal perspective in which the organization looks both backward and forward. This organizational tension can be traced to bounded rationality (Simon, 1955). Some scholars focused on the evolution

of stable routines, leading to backward dependence in the evolution process (e.g., Nelson & Winter, 1982). Others, building on psychological cognitive representations, assumed that managers base choices on an analysis of and speculation about decisions' outcomes (e.g., March & Simon, 1958; Tversky & Kahneman, 1986). We use the latter approach and, given our conceptualization of innovativeness, believe that creative organizations need to be forward-looking.

Pro-activeness. Pro-activeness refers to the organizational pursuit of business opportunities that may or may not be related to its present line of products or services (Knight 1997; Kreiser, Marino, & Weaver, 2002; Lumpkin & Dess, 2001; Stevenson & Jarillo, 1990; Venkatraman, 1989). As such, pro-activeness reflects the firm's willingness to overcome inertia by taking the initiative in exploiting emerging opportunities, experimenting with change, and anticipating and acting on future needs (Dess et al., 1997; Lynn et al., 1996).

Since pro-activeness suggests an emphasis on initiating activities, the strategic and entrepreneurship literature perceive pro-activeness as central to innovative organizational behavior (e.g., Dess et al. 1997; Lumpkin & Dess, 1996; Morgan & Strong, 2003; Morris & Paul, 1987). Furthermore, according to Caruana et al. (2002), pro-activeness also requires managers to convince employees of the merit of the innovative concept in order for it to be implemented. Thus, we include pro-activeness as part of our innovativeness construct.

Another facet of innovation is organizational learning, which is enhanced by a shared, organization-wide interpretation of the acquired and disseminated information (Argyris, 1977; Senger, 1990). Thus, organizational learning was measured relative to organizational innovativeness.

Finally, organizational learning may be considered synonymous with policy learning. Policy learning refers to policy making as a learning process, and represents

"efforts by policy makers to learn and to apply the lessons of that learning" (Fiorino, 2001: 322).

CONSEQUENCES OF INNOVATIVENESS

Compared to the vast theoretical and empirical research on innovativeness antecedents, research on its consequences is scarce (Subramanian & Nilakanta, 1996). Most studies have focused on the effect of innovativeness and innovation adoption on organizational performance (Damanpour, 1991; Frambach & Schillewaert, 2002; Subramanian & Nilakanta, 1996), viewing it as a strategy for enhancing an organization's competitive edge. For example, Miles and Snow's (1978) "prospectors" were described as having high levels of innovativeness, creativity, and aggressiveness.

We distinguished between individual- and organizational-level outcomes. The former included four facets: organizational commitment, esprit-de-corps (Shoham & Rose, 2001; Rose & Shoham, 2002), job satisfaction, and job burnout. The first three facets should be enhanced by innovativeness and the fourth should be reduced by it. Jaworski and Kohli (1993) examined esprit-de-corps and organizational commitment as consequences of a market orientation. A market orientation provides a unifying focus and vision, which results in a sense of mission, belonging, and commitment to the organization (Kohli & Jaworski, 1990). By extension, innovativeness, an outcome of the three information components of a market orientation used here, should also benefit esprit-de-corps and organizational commitment. Grandey (2003) reported that job satisfaction reduces emotional exhaustion and employees' burnout. Thus, these two outcomes of innovativeness should also depend on innovation.

At the organizational level, our model recognizes general-organizational- and specific-innovativeness-based performance outcomes and posits that innovativeness

enhances both types of performance. This is in line with research about market orientation as an antecedent of innovativeness (Narver, Jacobson, & Slater, 1993; Pelham & Wilson, 1996).

METHOD

Data collection

Samples were collected in all countries participating in the PUBLIN project, with a goal of at least 100 respondents from each country for the manager/employee survey, and at least 50 for the end-user survey. Each country's research team chose which sector of the public sector – health or social services - to sample from for the manager/employee survey. Demographic information is presented in the country summaries in the report.

The qualitative part of this study focused on 163 in-depth interviews with public sector managers and frontline employees from all participating countries. The study used organizational theory, public administration and management theory, and innovation theory as the theoretical framework for analysis. Interviews were conducted in the countries' original languages, and focused on definitions and examples of innovation, entrepreneurship, drivers and barriers, networking and learning, politics, performance and the evaluation of innovation. Details regarding data collection are presented in the table below.

Data Collected - summary

Country	Sector	Managers / Employees	End Users	Interviews
Ireland	**Health**	**20/50**	**118/220**	**15**
Israel	**Health**	**139/221**	**103/140**	**15**
	Social Services	**137/160**		
Lithuania	**Social Services**	**221/300**	**68/120**	**15**
Netherlands	**Combination**	**51/390**	**20/150**	**38**
Norway	**Social Services**	**243/647**	**121/225**	**17**
Slovakia	**Social Services**	**204/295**	**81**	**18**
Spain	**Health**	**154/500**	**72/120**	**14**
Sweden	**Health**	**142/970**	**43/81**	**15**
UK	**Health**	**15/350**	**-**	**16**
Total		**1326/3883**	**626**	**163**

Measures of the Quantitative Studies

The following section gives background on the scales used in the manager/frontline employees and in the end-users surveys and their sources. All scales employed in the survey used 1-5 Likert scales with 1=definitely disagree and 5=definitely agree, unless otherwise indicated. Information regarding reliabilities and further results appear in the report itself. Since this was a pan-European project, the questionnaire was written in English, translated into the local language in each country, and then back-translated. The three versions were then compared and the translation and cultural accuracy were assessed before finalizing each country's version of the questionnaire.

Manager/Employee Survey

Antecedents

Information Generation – was taken from Jaworski and Kohli (1993). We used five of the original ten items in their scale, which tapped organization-wide generation of intelligence pertaining to current and future customer/user needs.

Information Dissemination – we used four of the eight items in Jaworski and Kohli's (1993) scale. This scale was designed to assess dissemination of the above-mentioned intelligence across departments.

Responsiveness – this scale included five of the seven items in Jaworski and Kohli's (1993) response design scale, which looks at the use of market intelligence to develop plans.

Internal Politics – was measured using three items from Kacmar and Carlson (1994).

Connectedness – was measured with a 4-item scale, taken from Jaworski and Kohli's (1993) seven-item scale which tapped notions of the extent to which individuals in a department were networked to various levels oh the hierarchy in other departments.

Centralization – this scale included four of the five items from Aiken and Hage's (1968) scale, as cited in Jaworski and Kohli (1993). It assessed the degree of hierarchal authority within the organization.

Outcomes

Innovations' Performance and Overall Performance – this four-item scale was taken from Caruana, Ramseshan and Ewing (1999), who based their scale on Dess and Robinson's (1984) work. We looked at performance in relation to three variables: three year plans, political leadership expectations, and perceived users' and citizen advocacy groups' expectations.

Commitment – was measured using four items from an abbreviated version of the scale developed by Porter, Strees, Mowday and Boulian (1974); the shorter version was taken from Vigoda (1995).

Work Satisfaction – was measured using Tsui, Egan and O'Reilly's (1992) scale; five of the six items in the scale were used.

Innovativeness

Organizational Openness to Change – was originally used by Siegel and Kaemmerer (1978), and by Anderson and West (1998) to measure enacted support for innovation and open minded approach to new ideas. Out of eight items we selected the four items with the highest loading.

Risk-Taking - Four items were selected out of Jaworski and Kohli's six item risk-aversion scale (1993). These items had the highest loading in previous studies using this scale (Shoham & Rose, 2001; Rose & Shoham, 2002). The scale reflects top management disposition towards pursuing uncertain and risky decisions.

Future Orientation - This four-item scale was based on Javidan and Waldman's vision dimension of charismatic leadership profile scale (2003). This original scale consisted

of seven items. We used the items with the highest loading to represent the extent to which top management has a clear sense of direction and shares it with employees.

Creativity - This four-item scale included items from existing scales (e.g., Siegel and Kaemmerer 1978; Tierney, Farmer, & Graen 1999). This scale assesses the creative thinking and behaviors of the organizations' top managers.

Pro-activeness – was based on Covin and Slevin's (1989) three-item scale, with an additional item added by the research teams. It was used to measure the degree to which managers possess a proactive orientation.

Innovativeness – we used a three-item scale taken from Covin and Slevin (1989), in which high innovativeness is characterized by frequent and extensive technological and product innovation.

Learning Orientation

Innovation – the research team constructed a six-item scale assessing the role of three groups in innovation: managers, employees, and external groups; the same six items appeared in relation to each group.

Learning Orientation – we used a seven-item scale which included 4 items from Hult, Nichols, Giunipero and Hurley (2000).

Learning – was measured using a seven-item scale developed by the research team, in relation to two factors: impact of learning, and what learning was geared toward accomplishing.

End-users Survey

Antecedents

Connectedness – was measured using a 2 item scale which taps accessibility to public officials and to administrative decision –makers as reported by the end-users. The scale was used by Vigoda (2000C) and Vigoda & Yuval (2003).

Employees' professionalism – was taken from Vigoda (2000C) and Vigoda & Yuval (2003). This is a 3-item scale measuring the quality and skills of public personnel as perceived by end-users.

Ethics and morality – A 3 item scale of end-users' view of the level of ethics and integrity of public personnel; it was taken from Vigoda (2000C) and Vigoda & Yuval (2003).

Internal Politics – was measured using a 3-item scale of end-user attitudes towards the level of political considerations in administrative work and decision-making. The original six-item scale was used by Kacmar and Carlson (1994).

Promoters of innovation – was based on Organizational Openness to Change in the employee & managers questionnaires, with one major difference: the questions refer to the Public Sector (Health or Social) and not to the organization itself. The scale was originally used by Siegel and Kaemmerer (1978), and by Anderson and West (1998) to measure enacted support for innovation and open minded approach to new ideas.

Public sector leadership/ vision – was measured using a 3-item scale designed to assess the quality, skills and vision of senior managers in the public service as perceived by the end-users. The original scale was suggested by Vigoda (2000C).

Responsiveness – A 3-item scale that measured the speed and quality of service delivery, as perceived by end-users, was used. The scale was taken from the work of Thomas and Palfrey (1996).

Outcomes

Image – was measured using a 3-item scale assessing the reputation and prestige of public bureaucracies in the eyes of end-users. The scale was originally used by Dutton and Dukerich (1991) and later by Oswald (1996).

Satisfaction from services – was measured using a 6-item scale which tapped citizens' satisfaction with various public services. This was based on an 18-item scale used by Vigoda (2000C).

Trust in institutions – was measured using an 8-item scale of citizens' trust in civil servants (such as public health system, policemen, etc). The scale was based on Mason, House and Martin (1985).

Innovativeness

Innovation – This 5-item scale assessing the level of entrepreneurship and incorporation of new ideas in bureaucracies, as perceived by end-users, was designed by the research team.

Innovativeness – A 2-item scale was designed by the research team to understand the level of change and flexibility in bureaucracies as perceived by end-users.

Organization characteristic

Main Function – the research team constructed a six-item scale assessing the main functions of the end-users' organization.

Aim of influence – a seven-item scale designed by the research team to understand what are the end-users' organization's main aims of influence.

Innovativeness – an eight-item scale designed by the research team to understand the orientation toward innovation and innovativeness at the end-users' organization.

Measures of the Qualitative Study

Interviews focused on definitions and examples of innovation, entrepreneurship, drivers and barriers of innovation, networking and learning, politics, performance and the evaluation of innovation. The project took into consideration the influence of cultural traits, politics, management, networks, learning and co-operation, entrepreneurship and evaluation on innovation. The following table illustrates the overall research questions side by side with the in-depth interview questions.

Research Questions	In-depth Interview Questions
1. Background	♦ How would you define "innovation"? ♦ In your opinion, how does innovation in the public sector differ from innovation in the private sector? [explain].
What does the innovating institution do to innovate? *Why* does the innovating institution innovate?	♦ Can you give examples of significant innovations, in this organization, in the past three years? ♦ What needs do these innovations address?
2. Initiation and Planning *How* does the innovating institution innovate? 1a. What is the source of innovative ideas in the public sector? 1b. Do innovative ideas come from the outside or are they internally generated with the help of others? 2. Does public sector innovation depend on policy entrepreneurs capable of managing different junctions?	♦ Who usually initiates innovations in this organization? ♦ What roles do they play in the process of innovations? ♦ Can you think of the *facilitating forces* and the *obstacles* that impact innovations in this organization?
3. Policy learning 3. Is policy learning necessary for public sector innovation and how does policy learning come about?	♦ Is there any infrastructure that facilitates organizational learning and on-going information gathering in place? How does the organization ensure competence development and lifelong learning? ♦ Does the organization ensure the development of networking and cooperation with other organizations regarding innovation? Please explain. ♦ Are employees at different levels of the organization encouraged to participate in meetings and conferences

	that aim at developing [or: building up] their competencies and [intra- or inter-] organizational networking?
4. Evaluation 4. What influence does politics (both external politics and internal politics) have on innovation outcomes? 5. What is the influence of evaluation and evaluators on public sector innovation?	♦ What criteria are used to measure innovation success in this organization? (Examples) ♦ What *expected* and *unexpected* [both negative and positive] consequences have these innovations achieved? ♦ Who are the main beneficiaries of these innovations?
5. Advice	♦ If you were asked to suggest an innovation to this organization, what would it be? ♦ If you were asked to give an advice to other public organizations about innovations, what would it be?

Data Analysis

The inductive content analysis followed two phases: *The first phase* of the interview answers was conducted by each of the country teams separately, in their own languages. Emerging themes accompanied by examples and leading quotations were identified and summary reports were prepared in English. Summary reports consisted of demographic information and the reported content. *The second phase* of analysis, a cross-sectional one, consisted of a 'cross-country' analysis of each of the research questions. Categories and sub-categories were identified and later re-assembled into main thematic areas. A highlighting color-coding system was devised to distinguish between categories and the thematic areas visually to facilitate the analysis process; these were later validated by WP3 researchers for reliability. Findings are presented in the four areas of questioning: (1) background of the study, (2) initiation and planning, (3) Policy learning, (4) Evaluation. Advice to managers concludes the findings. Additionally, quotations by interviewees are presented, followed by the name of the country (Names of the countries are abbreviated for convenience purposes, showing their three or four first letters only, i.e., Lithuania=Lith; Sweden=Swed, The Netherlands=Neth).

Manager/Front-line Employee Results

Combined Results

For all participating countries and all sectors

Distributed: 3883

Responses: 1326

Response rate: 34.2%

	# of items	*Mean*	*Sd*	*Reliability*	*Comments*
Antecedents					
Information generation	5	3.40	0.79	.68	Reverse 4,5
Information dissemination	4	3.50	0.94	.79	
Responsiveness	5	3.66	0.81	.75	Reverse 1-3
Team spirit	4	3.39	0.86	.81	
Internal politics	4	2.58	0.97	.82	
Connectedness	4	3.99	0.85	.77	
Centralization	4	2.52	1.00	.73	w/o 2
Outcomes					
Inno' performance - plans	4	3.49	0.82	.88	
Inno' performance - lead'	4	3.25	0.82	.90	
Inno' performance - users	4	3.28	0.89	.85	
Performance - plans	4	3.82	0.74	.87	
Performance - leadership	4	3.53	0.79	.90	
Performance - users	4	3.59	0.85	.92	
Commitment	4	3.99	0.84	.83	
Work satisfaction	5	3.52	0.74	.76	
Innovativeness					
Openness	4	3.55	0.92	.86	
Risk taking	4	2.91	0.90	.72	w/o 4
Future orientation	4	3.32	1.00	.89	
Creativity	5	3.76	0.85	.88	
Pro-activeness	4	3.45	0.82	.81	
Innovativeness	3	3.43	0.97	.67	w/o 1
Learning Orientation					
Innovations - managers	6	3.61	0.87	.91	
Innovations - employees	6	3.61	0.76	.82	
Innovations - external	6	3.29	0.95	.92	
Learning orientation	7	3.96	0.77	.81	w/o 7
Learn – geared towards	7	3.65	0.83	.86	
Learn - impact	7	3.82	0.83	.81	

Demographics

Gender: 69.4% Female
Position: 33.1% Manager, 45.2% front line employee, 21.7% other.
Sector: 42.1% Health, 57.9% Social Services.
Age: M= 41.68, s.d.= 11.04.
Education: M= 14.74, s.d.= 6.32.

Key Results

Reliabilities

All reliabilities presented in the table above were higher than the recommended .70 threshold (Nunnally, 1978), with two exceptions: reliability for the information generation scale was .68, and for innovativeness, .67. Results from these scales should thus be interpreted with caution.

Means

Among the antecedents, the mean for the connectedness exhibit the highest score scale (3.99), while the mean for centralization was the lowest (2.52). Of the outcome variables, the highest mean was on the commitment variable (3.99); the lowest was for innovation's performance - perceived leadership's expectations (3.25).

Of the innovativeness variables, creativity had the highest mean (3.76), and risk-taking the lowest (2.91). The highest mean score on the learning orientation variables was for the learning orientation scale (3.96) and the lowest for innovations - external (3.29).

Correlation matrix – Part A

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Information Generation	3.40	0.79	1												
2. Information Dissemination	3.50	0.94	.57**	1											
3. Responsiveness	3.66	0.81	.60**	.61**	1										
4. Team Spirit	3.39	0.86	.31**	.33**	.23**	1									
5. Internal Politics	2.58	0.97	-.34**	-.32**	-.44**	-.34**	1								
6. Connectedness	3.99	0.85	.37**	.41**	.40**	.38**	-.41**	1							
7. Centralization	2.52	1.00	-.24**	-.20**	-.37**	-.10**	.54**	-.33**	1						
8. Inno' performance - plans	3.49	0.82	.37**	.48**	.47**	.28**	-.31**	.38**	-.21**	1					
9. Inno' performance - lead'	3.25	0.82	.29**	.39**	.35**	.17**	-.24**	.26**	-.15**	.64**	1				
10. Inno' performance - users	3.28	0.89	.41**	.47**	.45**	.27**	-.32**	.36**	-.19**	.70**	.57**	1			
11.Performance – 3 year plans	3.82	0.74	.45**	.43**	.41**	.42**	-.36**	.44**	-.20**	.51**	.33**	.46**	1		
12. Performance – Pol. Leadership	3.53	0.79	.32**	.35**	.35**	.30**	-.29**	.35**	-.14**	.42**	.51**	.42**	.66**	1	
13. Performance - Clients	3.59	0.85	.42**	.41**	.39**	.43**	-.36**	.42**	-.18**	.46**	.35**	.57**	.72**	.63**	1

* $p \leq .05$

** $p \leq .01$

Correlation matrix– Part B

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
14. Commitment	3.99	0.84	.44**	.49**	.49**	.43**	-.40**	.51**	-.25**	.43**	.32**	.43**	.54**	.43**	.51**
15. Satisfaction	3.52	0.74	.41**	.42**	.42**	.43**	-.43**	.47**	-.29**	.40**	.33**	.41**	.50**	.43**	.49**
16. Openness	3.55	0.92	.51**	.60**	.54**	.43**	-.37**	.54**	-.26**	.54**	.38**	.51**	.56**	.43**	.52**
17. Risk-taking	2.91	0.90	.30**	.44**	.33**	.24**	-.16**	.27**	-.11**	.33**	.21**	.32**	.29**	.23**	.30**
18. Future Orientation	3.32	1.00	.43**	.62**	.53**	.38**	-.39**	.48**	-.23**	.50**	.39**	.48**	.44**	.38**	.43**
19. Creativity	3.76	0.85	.48**	.55**	.50**	.51**	-.45**	.56**	-.35**	.47**	.33**	.49**	.59**	.47**	.57**
20. Pro-activeness	3.45	0.82	.43**	.44**	.40**	.46**	-.27**	.40**	-.15**	.36**	.30**	.35**	.47**	.41**	.46**
21. Innovativeness	3.43	0.97	.37**	.39**	.40**	.27**	-.27**	.29**	-.17**	.37**	.26**	.35**	.42**	.31**	.37**
22. Innovations - Managers	3.61	0.87	.42**	.57**	.49**	.29**	-.33**	.49**	-.19**	.54**	.38**	.50**	.51**	.42**	.48**
23. Innovations – Employees	3.61	0.76	.33**	.43**	.38**	.30**	-.24**	.34**	-.15**	.41**	.29**	.40**	.48**	.36**	.46**
24. Innovations – Clients	3.29	0.95	.19**	.34**	.24**	.05	-.04	.23**	-.04	.34**	.31**	.31**	.25**	.25**	.25**
25. Learning orientation	3.96	0.77	.44**	.48**	.51**	.40**	-.42**	.53**	-.32**	.46**	.33**	.42**	.50**	.43**	.48**
26. Learning Aim	3.65	0.83	.39**	.50**	.40**	.33**	-.22**	.35**	-.09**	.44**	.35**	.42**	.43**	.33**	.41**
27. Learning Effectiveness	3.82	0.83	.04	.10**	.02	.01	.06*	.08**	.09**	.14**	.11**	.11**	.10**	.09**	.08**

* $p \leq .05$

** $p \leq .01$

Correlation matrix– Part C

Variable#	Mean	S.D.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14. Commitment	3.99	0.84	1													
15. Satisfaction	3.52	0.74	.60**	1												
16. Openness	3.55	0.92	.63**	.55**	1											
17. Risk-taking	2.91	0.90	.40**	.28**	.59**	1										
18. Future Orientation	3.32	1.00	.58**	.48**	.72**	.57**	1									
19. Creativity	3.76	0.85	.64**	.58**	.68**	.43**	.61**	1								
20. Pro-activeness	3.45	0.82	.51**	.43**	.55**	.42**	.48**	.65**	1							
21. Innovativeness	3.43	0.97	.34**	.33**	.47**	.26**	.35**	.44**	.51**	1						
22. Innovations - Managers	3.61	0.87	.52**	.51**	.68**	.45**	.65**	.58**	.49**	.44**	1					
23. Innovations – Employees	3.61	0.76	.40**	.36**	.50**	.29**	.41**	.49**	.44**	.38**	.54**	1				
24. Innovations – Clients	3.29	0.95	.23**	.23**	.39**	.31**	.37**	.26**	.21**	.24**	.50**	.42**	1			
25. Learning orientation	3.96	0.77	.59**	.55**	.62**	.39**	.57**	.69**	.54**	.42**	.58**	.45**	.26**	1		
26. Learning Aim	3.65	0.83	.48**	.44**	.57**	.41**	.56**	.51**	.45**	.38**	.58**	.45**	.38**	.53**	1	
27. Learning Effectiveness	3.82	0.83	.12**	.07*	.18**	.15**	.17**	.09**	.08**	.08**	.24**	.25**	.31**	.14**	.37**	1

* p≤.05

** p≤.01

Correlations

Antecedents and Innovativeness

Most of the associations between the antecedents and innovativeness were moderate (around .4 and .5). The main exception to this among the antecedents was centralization. While all of its correlations to innovativeness were significant, this was mostly due to the large size of the sample, as none was stronger than -.35 and several were less than -.20. Of the innovativeness variables, risk-taking and general innovativeness had weaker correlations with the antecedents, mostly .2 and .3; this pattern also appeared in many of the individual country samples. Internal politics and centralization were negatively related to innovativeness. Again, this was also the case in almost all the participating countries, indicating that high levels of internal politics and centralization most likely have an adverse effect on organizational innovativeness.

Innovativeness and Outcomes

Moderate relationships were common between innovativeness and the outcomes, with most correlations between .35 and .6. Creativity had the strongest relationships with most of the outcomes (all but one over .4), while risk-taking had the weakest (all but one under .4, and several under .3). From the other direction, commitment had stronger associations with innovativeness than the other outcomes; most of its correlations were of .5 or more.

Innovativeness and Learning

Innovativeness had moderate to strong relationships with most of the learning variables, particularly with “innovations – managers” and learning orientation (r =.42 to r =.69). The exceptions were “innovations – clients” (weak, .2-.3 correlations), and learning effectiveness, which had extremely weak correlations with innovativeness. There were no relationships higher than r =.2 between learning effectiveness and the innovativeness measures; these associations were significant only due to the large sample size, and were usually non-significant in the smaller, individual country samples. Openness was the

innovativeness variable with the strongest relationships to learning in most cases; the majority were around .5 and .6; general innovativeness and risk-taking were usually the one with the weakest correlations to learning. These two variables were also weaker in relation to outcomes and antecedents, which indicates that they may be less prominent than other innovativeness measures.

Ireland

Sector: Health

Distributed: 50

Responses: 20

Response Rate: 40%

	# of items	*Mean*	*Sd*	*Reliability*	*Comments*
Antecedents					
Information generation	5	3.38	.49	low	Reverse 4,5; .51 w/o 2
Information dissemination	4	3.76	.69	.51	.70 w/o 4
Responsiveness	5	3.94	.73	.66	Reverse 1-3
Team spirit	4	3.29	.90	.87	
Internal politics	4	2.41	1.06	.86	
Connectedness	4	4.13	.72	.64	w/o 4; .71 w/o1
Centralization	4	2.33	1.01	.84	w/o 2
Outcomes					
Inno' performance - plans	4	3.85	.77	.88	
Inno' performance - lead'	4	3.68	.84	.92	
Inno' performance - users	4	3.39	.92	.91	
Performance - plans	4	4.08	.57	.82	
Performance - leadership	4	3.80	.62	.85	
Performance - users	4	3.49	.86	.87	
Commitment	4	4.45	.78	.87	
Work satisfaction	5	3.74	1.24	.96	
Innovativeness					
Openness	4	3.70	1.05	.91	
Risk taking	4	2.70	1.05	.82	w/o 4
Future orientation	4	3.76	.74	.85	
Creativity	5	4.11	.77	.90	
Pro-activeness	4	4.03	.85	.90	
Innovativeness	3	3.70	.91	.38	w/o 1
Learning Orientation					
Innovations - managers	6	4.13	.57	.76	
Innovations - employees	6	3.79	.43	.60	.72 w/o 6
Innovations - external	6	3.84	.53	.74	.80 w/o 6
Learning orientation	7	4.22	.73	.85	w/o 7
Learn – geared towards	7	3.91	.82	.93	
Learn - impact	7	3.69	.83	.89	

Demographics

Gender: 70% Female.
Position: 75% Manager, 15% Front line employee, 10% other.
Age: M= 37.16, s.d.= 11.80.
Education: M= 18.95, s.d.= 3.03.

Key Results

Reliabilities

All reliabilities presented in the table above were higher than the recommended .70 threshold, with the following exceptions: information dissemination, responsiveness, connectedness, and innovations – employees, with reliabilities between .50 and .66. Results from these scales should thus be interpreted with caution. Reliabilities of the information generation scale and the satisfaction scale were non-significant. While this may appear to be a relatively high number of scales with lower than desired reliabilities, it should be noted that the Irish sample was relatively small, and this most likely hurt the reliabilities for some of the scales. In addition, omitting one item each from the innovations – employees (item 6) and connectedness (item 1) scales would bring the reliability above the .70 threshold.

Means

Among the antecedents, the mean score for the connectedness scale was relatively high (4.13), while the mean for centralization was relatively the lowest (2.33). Of the outcome variables, the highest mean was on the commitment variable (4.45); the lowest was for innovation's performance - perceived users' expectations (3.39).

Of the innovativeness variables, creativity had the highest mean (4.11), and risk-taking the lowest (2.70). The highest mean score on the learning orientation variables was for the learning orientation scale (4.22) and the lowest for learning impact (3.69).

Correlations

Due to the small size of this sample, we did not run a separate analysis of correlations for the Irish results.

Israel

Sector: Health

Distributed: 221

Responses: 139

Response Rate: 62.9%

Sector: Social services

Distributed: 160

Responses: 137

Response Rate: 85.6%

Health

	# of items	*Mean*	*Sd*	*Reliability*	*Comments*
Antecedents					
Information generation	5	3.23	.87	.74	Reverse 4,5
Information dissemination	4	3.65	.80	.71	
Responsiveness	5	3.40	.74	.67	Reverse 1-3
Team spirit	4	3.51	.72	.67	.74 w/o 2
Internal politics	4	3.07	.97	.81	
Connectedness	4	3.69	.93	.78	w/o 4
Centralization	4	3.06	1.01	.73	w/o 2
Outcomes					
Inno' performance - plans	4	3.69	.72	.86	
Inno' performance - lead'	4	3.56	.81	.90	
Inno' performance - users	4	3.53	.79	.86	
Performance - plans	4	3.82	.75	.86	
Performance - leadership	4	3.62	.74	.84	
Performance - users	4	3.60	.82	.87	
Commitment	4	3.91	.88	.83	
Work satisfaction	5	3.51	.70	.67	
Innovativeness					
Openness	4	3.53	.85	.88	
Risk taking	4	3.07	.97	.81	w/o 4
Future orientation	4	3.46	.96	.86	
Creativity	5	3.72	.75	.84	
Pro-activeness	4	3.43	.80	.83	
Innovativeness	3	3.26	.89	.41	w/o 1
Learning Orientation					
Innovations - managers	6	3.58	.87	.89	
Innovations - employees	6	3.71	.74	.87	
Innovations - external	6	3.49	.84	.90	
Learning orientation	7	3.78	.76	.74	w/o 7
Learn – geared towards	7	4.21	.76	.77	
Learn - impact	7	4.22	.71	.79	

Demographics

Gender: 66.9% Female.
Position: 16.7% Manager, 70.8% Front line employee, 12.5% other.
Age: M=40.26, s.d.=10.03.
Education: M=16.03, s.d.=3.51

Key Results

Reliabilities

All reliabilities presented in the table above were higher than the recommended .70 threshold, with the following exceptions: responsiveness, team spirit, and work satisfaction (.67 for all three), innovativeness (.41), and learning – geared towards (.62). Results from these scales should thus be interpreted with caution. In the case of tram spirit, dropping item # 2 from the scale would have improved its reliability to an acceptable .71.

Means

Among the antecedents, the mean score for the connectedness scale was relatively high (3.69), while the means for centralization and for internal politics were relatively low (3.06 and 3.07 respectively). Of the outcome variables, the highest mean was on the commitment variable (3.91); the lowest was for work satisfaction and innovations performance – perceived user's expectations (3.51 and 3.53 respectively).

Of the innovativeness variables, creativity had the highest mean (3.72), and risk-taking the lowest (3.07). The highest mean score of the learning orientation variables was on the learning impact and effectiveness scales (4.21 and 4.22, respectively) and the lowest for innovations- clients' expectations scale (3.49).

Correlation matrix – Part A

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Information Generation	3.23	.87	1												
2. Information Dissemination	3.65	.80	.50**	1											
3. Responsiveness	3.40	.74	61**	.51**	1										
4. Team Spirit	3.51	.72	.24**	.30**	.17	1									
5. Internal Politics	3.07	.97	-.16	.04	-.28**	-.12	1								
6. Connectedness	3.69	.93	.30**	.35**	.40**	.32**	-.25**	1							
7. Centralization	3.06	1.01	-.26**	-.10	-.45**	-.02	.54**	-.25**	1						
8. Inno' performance - plans	3.69	.72	.17	.40**	.32**	.38**	0	.25**	-.07	1					
9. Inno' performance - lead'	3.56	.81	.20*	.11	.35**	.24*	-.07	.21*	-.10	.55**	1				
10. Inno' performance - users	3.53	.79	.13	.21*	.36**	.28**	-.04	.08	-.05	.63**	.57**	1			
11.Performance – 3 year plans	3.82	.75	.24**	.41**	.25**	.48**	-.16	.44**	-.11	.45**	.21*	.31**	1		
12. Performance – Pol. Leadership	3.62	.74	.09	.26**	.25**	.37**	-.10	.38**	.02	.44**	.36**	.39**	.68**	1	
13. Performance - Clients	3.60	.82	.11	.15	.21*	.40**	-.18	.34**	-.08	.35**	.28**	.34**	.70**	.63**	1

* $p \leq .05$

** $p \leq .01$

Correlation matrix– Part B

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
14. Commitment	3.91	.88	.21*	.27**	.28**	.42**	-.22**	.43**	-.12	.37**	.24*	.22*	.52**	.32**	.44**
15. Satisfaction	3.51	.70	.17*	.38**	.33**	.33**	-.22**	.45**	-.17*	.24**	.29**	.15	.30**	.27**	.28**
16. Openness	3.53	.85	.38**	.51**	.40**	.40**	-.08	.39**	-.19*	.45**	.23*	.35**	.67**	.54**	.49**
17. Risk-taking	3.07	.97	.17*	.39**	.10	.37**	.05	.09	-.01	.30**	.07	.18	.33**	.35**	.23*
18. Future Orientation	3.46	.96	.30**	.49**	.36**	.48**	-.13	.37**	-.11	.39**	.24**	.35**	.58**	.41**	.43**
19. Creativity	3.72	.75	.33**	.46**	.44**	.42**	-.06	.45**	-.16	.46**	.27**	.31**	.50**	.45**	.37*
20. Pro-activeness	3.43	.80	.31**	.44**	.33**	.41**	-.04	.26**	-.05	.43**	.39**	.45**	.45**	.40**	.34**
21. Innovativeness	3.26	.89	.27**	.30**	.47**	.13	-.31**	.18*	-.34**	.28**	.25**	.36**	.37**	.34**	.24**
22. Innovations - Managers	3.58	.87	.28**	.46**	.35**	.40**	-.16	.42**	-.09	.41**	.32**	.37**	.48**	.48**	.39**
23. Innovations – Employees	3.71	.74	.44**	.42**	.40**	.49**	-.12	.39**	-.15	.47**	.35**	.45**	.42**	.30**	.30**
24. Innovations – Clients	3.49	.84	.35**	.32**	.42**	.34**	-.17	.29**	-.17	.35**	.44**	.44**	.32**	.41**	.45**
25. Learning orientation	3.78	.76	.40**	.21*	.37**	.35**	-.24**	.36**	-.26**	.30**	.29**	.14	.39**	.39**	.36**
26. Learning Aim	4.21	.76	.04	.15	.24*	.21*	.04	.17	-.06	.30**	.28**	.32**	.02	.14	.02
27. Learning Effectiveness	4.22	.71	-.07	-.01	.04	.08	-.10	.17	-.06	.31**	.16	.20	.06	.14	.07

* $p \leq .05$

** $p \leq .01$

Correlation matrix– Part C

Variable#	Mean	S.D.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14. Commitment	3.91	.88	1													
15. Satisfaction	3.51	.70	.53**	1												
16. Openness	3.53	.85	.48**	.36**	1											
17. Risk-taking	3.07	.97	.23**	.22*	.53**	1										
18. Future Orientation	3.46	.96	.50**	.30**	.68**	.51**	1									
19. Creativity	3.72	.75	.46**	.37**	.60**	.39**	.54**	1								
20. Pro-activeness	3.43	.80	.43**	.36**	.55**	.42**	.48**	.69**	1							
21. Innovativeness	3.26	.89	.17*	.18*	.41**	.13	.27**	.34**	.49**	1						
22. Innovations - Managers	3.58	.87	.35**	.41**	.55**	.32**	.54**	.48**	.62**	.34**	1					
23. Innovations – Employees	3.71	.74	.32**	.32**	.43**	.25**	.30**	.35**	.43**	.32**	.50**	1				
24. Innovations – Clients	3.49	.84	.33**	.44**	.39**	.30**	.39**	.44**	.37**	.17	.45**	.52**	1			
25. Learning orientation	3.78	.76	.38**	.31**	.46**	.19*	.40**	.53**	.39**	.29**	.47**	.28**	.37**	1		
26. Learning Aim	4.21	.76	.29**	.36**	.30**	.26**	.33**	.29**	.39**	.23*	.43**	.23*	.30**	.30**	1	
27. Learning Effectiveness	4.22	.71	.09	.05	.10	.11	-.03	.25*	.09	0	.04	.12	.13	.17	.37**	1

* p≤.05

** p≤.01

Correlations

Antecedents and Innovativeness

Information dissemination was for the most part the antecedent most related to the innovativeness variables, with correlations ranging from .39 to .51. Dissemination and information generation were the only antecedents with significant correlations to all of the innovativeness measures; internal politics was only related to general innovativeness, and centralization only to openness and general innovativeness (correlations were between -.19 and -.34). From the innovativeness direction, openness and creativity had the strongest associations with creativity, mostly between r= .3 and r =.5.

Innovativeness and Outcomes

Among the outcomes, performance (relative to three year plans) was generally most associated with the innovativeness measures (correlations from .33 to .67). Most of the relationships between the outcomes and innovativeness were between .25 and .45, and almost all were significant.

Innovativeness and Learning

For the most part, “innovations – managers” was the learning variable with the strongest relationships to innovativeness; with the exception of general innovativeness, all correlations were .48 or higher. Learning effectiveness was correlated only with creativity (r =.25); therefore, not surprisingly, creativity was the only innovativeness variable with significant associations to all of the learning measures. Relationships between most of the learning and innovativeness measures were between .25 and .45.

Social Services

	# of items	*Mean*	*Sd*	*Reliability*	*Comments*
Antecedents					
Information generation	5	3.32	0.72	.58	Reverse 4,5
Information dissemination	4	4.07	0.67	.53	w/o 4 .67
Responsiveness	5	3.84	0.71	.63	Reverse 1-3
Team spirit	4	3.71	0.79	.72	
Internal politics	4	2.48	0.99	.82	
Connectedness	4	4.30	0.68	.72	w/o 4
Centralization	4	2.70	1.08	.83	w/o 2
Outcomes					
Inno' performance - plans	4	3.75	0.67	.79	
Inno' performance - lead'	4	3.58	0.76	.86	
Inno' performance - users	4	3.72	.98	.82	w/o 3
Performance - plans	4	4.08	0.70	.86	
Performance - leadership	4	3.98	0.75	.92	
Performance - users	4	3.93	0.83	.93	
Commitment	4	4.25	0.76	.82	
Work satisfaction	5	3.64	0.70	.74	
Innovativeness					
Openness	4	3.90	0.77	.88	
Risk taking	4	3.19	0.77	.58	w/o 4
Future orientation	4	3.93	0.83	.83	
Creativity	5	4.25	0.65	.84	
Pro-activeness	4	3.76	0.82	.85	
Innovativeness	3	3.79	0.82	.60	w/o 1
Learning Orientation					
Innovations - managers	6	4.07	0.78	.91	
Innovations - employees	6	3.94	0.73	.89	
Innovations - external	6	3.74	0.82	.90	
Learning orientation	7	4.28	0.63	.79	w/o 7
Learn – geared towards	7	4.16	.84	.77	
Learn - impact	7	4.24	.81	.79	

Demographics

Gender: 97.7% Female
Position: 5.7% Manager, 74.8% front line employee, 19.5% other.
Age: M= 40.18, s.d.= 10.31.
Education: M= 16.19, s.d.= 2.40.

Key Results

Reliabilities

All reliabilities presented in the table above were higher than the recommended .70 threshold, with the following exceptions: information generation, information dissemination, responsiveness, innovativeness and risk-taking (reliabilities ranged from .53 to .63). Results from these scales should thus be interpreted cautiously.

Means

Among the antecedents, the mean score for the connectedness scale was relatively high (4.30), while the mean for internal politics was relatively the lowest (2.48). Of the outcome variables, the highest mean was on the commitment variable (4.25); the lowest was for innovation's performance - perceived leadership's expectations (3.58).

Of the innovativeness variables, creativity had the highest mean (4.25), and risk-taking the lowest (3.19). The highest mean score from the learning orientation variables was on the learning orientation scale (4.28) and the lowest for promotion of innovations – external (3.74).

Correlation matrix – Part A

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Information Generation	3.32	0.72	1												
2. Information Dissemination	4.07	0.67	.50**	1											
3. Responsiveness	3.84	0.71	.48**	.55**	1										
4. Team Spirit	3.71	0.79	.32**	.38**	.32**	1									
5. Internal Politics	2.48	0.99	-.21*	-.26**	-.38**	-.36**	1								
6. Connectedness	4.30	0.68	.27**	.32**	.34**	.45**	-.43**	1							
7. Centralization	2.70	1.08	-.01	-.15	-.19*	-.04	.39**	-.36**	1						
8. Inno' performance - plans	3.75	0.67	.30**	.39**	.44**	.49**	-.41**	.37**	-.11	1					
9. Inno' performance - lead'	3.58	0.76	.38**	.44**	.43**	.40**	-.42**	.43**	-.12	.79**	1				
10. Inno' performance - users	3.72	.98	.31**	.26**	.20*	.21*	-.26**	.22*	.03	.41**	.54**	1			
11.Performance – 3 year plans	4.08	0.70	.38**	.40**	.40**	.46**	-.41**	.46**	-.03	.58**	.61**	.41**	1		
12. Performance – Pol. Leadership	3.98	0.75	.33**	.44**	.40**	.46**	-.46**	.49**	-.10	.60**	.66**	.34**	.78**	1	
13. Performance - Clients	3.93	0.83	.33**	.40**	.43**	.53**	-.46**	.54**	-.12	.64**	.65**	.32**	.73**	.78**	1

* p≤.05

** p≤.01

Correlation matrix– Part B

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
14. Commitment	4.25	0.76	.32**	.30**	.39**	.55**	-.42**	.35**	-.10	.47**	.48**	.28**	.47**	.54**	.55**
15. Satisfaction	3.64	0.70	.23**	.28**	.23**	.39**	-.34**	.42**	-.17*	.46**	.52**	.25**	.47**	.51**	.56**
16. Openness	3.90	0.77	.38**	.44**	.50**	.49**	-.35**	.44**	-.18*	.44**	.45**	.23*	.65**	.55**	.58**
17. Risk-taking	3.19	0.77	.32**	.30**	.36**	.26**	-.05	.05	-.07	.24**	.33**	.04	.30**	.19*	.25**
18. Future Orientation	3.93	0.83	.35**	.46**	.51**	.61**	-.42**	.47**	-.20*	.54**	.53**	.30**	.57**	.49**	.49**
19. Creativity	4.25	0.65	.24**	.36**	.39**	.50**	-.34**	.56**	-.14	.39**	.41**	.36**	.59**	.50**	.57**
20. Pro-activeness	3.76	0.82	.22*	.34**	.29**	.42**	-.28**	.36**	-.08	.32**	.39**	.23*	.62**	.55**	.53**
21. Innovativeness	3.79	0.82	.08	.27**	.31**	.27**	-.27**	.44**	-.08	.21*	.28**	.15	.40**	.33**	.40**
22. Innovations - Managers	4.07	0.78	.30**	.43**	.35**	.53**	-.40**	.55**	-.13	.57**	.54**	.36**	.74**	.63**	.69**
23. Innovations – Employees	3.94	0.73	.23*	.43**	.44**	.42**	-.41**	.48**	-.12	.52**	.46**	.18	.64**	.61**	.71**
24. Innovations – Clients	3.74	0.82	.16	.23*	.33**	.27**	-.28**	.41**	-.03	.37**	.38**	.23*	.54**	.48**	.44**
25. Learning orientation	4.28	0.63	.10	.25**	.35**	.52**	-.41**	.51**	-.23**	.43**	.44**	.10	.46**	.56**	.45**
26. Learning Aim	4.16	.84	.32**	.25**	.28**	.40**	-.11	.19*	.10	.26**	.26**	.09	.39**	.40**	.45**
27. Learning Effectiveness	4.24	.81	.29**	.10	.03	.32**	-.05	.04	.15	-.04	0	-.10	.18	.26**	.23*

* $p \leq .05$

** $p \leq .01$

Correlation matrix– Part C

Variable#	Mean	S.D.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14. Commitment	4.25	0.76	1													
15. Satisfaction	3.64	0.70	.57**	1												
16. Openness	3.90	0.77	.48**	.49**	1											
17. Risk-taking	3.19	0.77	.25**	.26**	.45**	1										
18. Future Orientation	3.93	0.83	.50**	.42**	.66**	.43**	1									
19. Creativity	4.25	0.65	.54**	.47**	.56**	.17	.56**	1								
20. Pro-activeness	3.76	0.82	.39**	.37**	.53**	.31**	.55**	.65**	1							
21. Innovativeness	3.79	0.82	.30**	.23**	.40**	.05	.43**	.51**	.49**	1						
22. Innovations - Managers	4.07	0.78	.51**	.58**	.60**	.24**	.67**	.73**	.60**	.51**	1					
23. Innovations – Employees	3.94	0.73	.40**	.54**	.52**	.24**	.47**	.59**	.58**	.50**	.73**	1				
24. Innovations – Clients	3.74	0.82	.18	.38**	.44**	.19*	.40**	.39**	.46**	.41**	.56**	.60**	1			
25. Learning orientation	4.28	0.63	.52**	.47**	.44**	.17	.55**	.61**	.50**	.44**	.64**	.52**	.35**	1		
26. Learning Aim	4.16	.84	.39**	.40**	.45**	.29**	.41**	.35**	.25**	.27**	.41**	.39**	.19	.31**	1	
27. Learning Effectiveness	4.24	.81	.18	.26**	.23*	.20*	.17	.11	.05	.10	.21*	.30**	.09	.20*	.71**	1

* p≤.05

** p≤.01

Correlations

Antecedents and Innovativeness

While relationships between the antecedents and innovativeness were mostly significant and in the .25 to .5 range, only three antecedents were significantly correlated with all of the innovativeness variables: information dissemination, responsiveness, and team spirit. Internal politics and centralization were negatively related to innovativeness, though in the case of centralization, these correlations were weak or non-significant. Risk-taking and general innovativeness had the weakest associations with the antecedents – only one was stronger than .4 (general innovativeness and connectedness).

Innovativeness and Outcomes

As was the case in the Israel – Health sector sample, performance (relative to three year plans) was once again the outcome most related to the majority of the innovativeness variables. Correlations were between for .40 and .65 for this measure (with the exception of its relationship to risk-taking). There was a relatively wide variety of correlations, with quite a few around .2 and .3, but several in the .5-.6 range. From the innovativeness direction, risk-taking was again relatively weak, as it had no association stronger than .33 with any outcome.

Innovativeness and Learning

Relationships between innovativeness and learning were mostly moderate, between .4 and .6. The exception to this was learning effectiveness, which had only weak or non-significant correlations with the innovativeness variables (with none higher than .23). At the other end, innovations – managers had moderate to strong relationships (.5 - .73) with all but one of the innovativeness measures. Openness, pro-activeness and creativity were the most related to learning, and risk-taking the least.

Lithuania

Sector: Social Services

Distributed: 300

Responses: 221

Response Rate: 73.7%

	# of items	*Mean*	*Sd*	*Reliability*	*Comments*
Antecedents					
Information generation	5	3.53	.81	.73	Reverse 4,5
Information dissemination	4	3.47	.90	.76	
Responsiveness	5	3.71	.81	.75	Reverse 1-3
Team spirit	4	3.08	.91	.79	
Internal politics	4	2.83	1.02	.79	
Connectedness	4	4.07	.79	.65	w/o 4, .71 w/o 1
Centralization	4	2.86	.99	.71	w/o 2
Outcomes					
Inno' performance - plans	4	3.53	.73	.82	
Inno' performance - lead'	4	3.36	.71	.83	
Inno' performance - users	4	3.14	.77	.85	
Performance - plans	4	3.76	.68	.86	
Performance - leadership	4	3.54	.74	.88	
Performance - users	4	3.36	.77	.89	
Commitment	4	3.97	.81	.79	
Work satisfaction	5	3.56	.78	.81	
Innovativeness					
Openness	4	3.73	.89	.90	
Risk taking	4	2.94	.81	.61	w/o 4
Future orientation	4	3.37	.90	.85	
Creativity	5	3.42	1.00	.93	
Pro-activeness	4	3.37	.88	.85	
Innovativeness	3	3.38	1.00	.70	w/o 1
Learning Orientation					
Innovations - managers	6	3.87	.74	.88	
Innovations - employees	6	3.54	.88	.61	.86 w/o 2
Innovations - external	6	3.66	.87	.89	
Learning orientation	7	3.91	.78	.82	w/o 7
Learn – geared towards	7	3.83	.74	.88	
Learn - impact	7	4.07	.91	.62	

Demographics

Gender: 76.6% Female.
Position: 1.9% Manager, 19% front line employee, 1.9% other, 77.1% specialist.
Age: M=35.44, s.d.= 11.83
Education: 17.24

Key Results

Reliabilities

All reliabilities presented in the table above were higher than the recommended .70 threshold, with the following exceptions: connectedness, risk-taking, promotion of innovations – employees and learning impact (reliabilities between .61 and .65). Results from these scales should thus be interpreted cautiously. Reliabilities for the connectedness and the "innovations – employees" scales could be improved by removing one item from each scale: item # 1 for connectedness, and item #2 for innovation - employees.

Means

Among the antecedents, the mean score for the connectedness scale was relatively high (4.07), while the mean for internal politics was relatively the lowest (2.83). Of the outcome variables, the highest mean was on the commitment variable (3.97); the lowest was for innovation's performance - perceived users' expectations (3.14). Reliabilities of were all satisfactory.

Of the innovativeness variables, openness had the highest mean (3.73), and risk-taking the lowest (2.94). The highest mean score for the learning orientation variables was on the learning impact scale (4.07) and the lowest for promotion of innovations – employees (3.54).

Correlation matrix – Part A

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Information Generation	3.53	.81	1												
2. Information Dissemination	3.47	.90	.59**	1											
3. Responsiveness	3.71	.81	.63**	.49**	1										
4. Team Spirit	3.08	.91	.29**	.33**	.25**	1									
5. Internal Politics	2.83	1.02	-.29**	-.32**	-.40**	-.32**	1								
6. Connectedness	4.07	.79	.26**	.23**	.30**	.43**	-.36**	1							
7. Centralization	2.86	.99	-.33**	-.22**	-.31**	-.20**	.56**	-.39**	1						
8. Inno' performance - plans	3.53	.73	.43**	.43**	.39**	.36**	-.42**	.37**	-.30**	1					
9. Inno' performance - lead'	3.36	.71	.41**	.45**	.40**	.29**	-.29**	.28**	-.27**	.67**	1				
10. Inno' performance - users	3.14	.77	.40**	.36**	.39**	.32**	-.37**	.24**	-.27**	.71**	.59**	1			
11.Performance – 3 year plans	3.76	.68	.52**	.50**	.50**	.46**	-.41**	.37**	-.32**	.67**	.56**	.53**	1		
12. Performance – Pol. Leadership	3.54	.74	.42**	.34**	.45**	.34**	-.27**	.27**	-.21**	.46**	.57**	.42**	.75**	1	
13. Performance - Clients	3.36	.77	.40**	.35**	.32**	.42**	-.33**	.31**	-.20**	.52**	.46**	.61**	.70**	.63**	1

* $p \leq .05$

** $p \leq .01$

Correlation matrix– Part B

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
14. Commitment	3.97	.81	.48**	.44**	.46**	.52**	-.36**	.49**	-.32**	.36**	.38**	.34**	.49**	.44**	.39**
15. Satisfaction	3.56	.78	.39**	.39**	.44**	.54**	-.48**	.42**	-.41**	.44**	.40**	.35**	.56**	.47**	.40**
16. Openness	3.73	.89	.49**	.51**	.51**	.57**	-.46**	.45**	-.35**	.52**	.42**	.50**	.66**	.49**	.52**
17. Risk-taking	2.94	.81	.27**	.28**	.21**	.27**	-.16*	.13	-.18**	.23**	.11	.27**	.26**	.18*	.27**
18. Future Orientation	3.37	.90	.40**	.48**	.43**	.57**	-.42**	.38**	-.33**	.45**	.42**	.40**	.58**	.43**	.51**
19. Creativity	3.42	1.00	.47**	.47**	.43**	.55**	-.44**	.47**	-.43**	.46**	.41**	.38**	.59**	.51**	.47**
20. Pro-activeness	3.37	.88	.60**	.44**	.50**	.45**	-.35**	.36**	-.31**	.47**	.44**	.43**	.59**	.53**	.50**
21. Innovativeness	3.38	1.00	.35**	.34**	.38**	.29**	-.32**	.23**	-.24**	.40**	.41**	.36**	.47**	.39**	.35**
22. Innovations - Managers	3.87	.74	.28**	.43**	.28**	.28**	-.27**	.24**	-.18**	.36**	.28**	.32**	.51**	.38**	.47**
23. Innovations – Employees	3.54	.88	.31**	.36**	.22**	.20**	-.15*	.02	-.04	.28**	.19**	.27**	.39**	.30**	.30**
24. Innovations – Clients	3.66	.87	.18*	.22**	.13	.21**	0	0	.01	.12	.08	.01	.24**	.21**	.19**
25. Learning orientation	3.91	.78	.37**	.30**	.36**	.39**	-.32**	.33**	-.30**	.53**	.48**	.37**	.59**	.53**	.44**
26. Learning Aim	3.83	.74	.37**	.35**	.34**	.30**	-.27**	.20**	-.27**	.42**	.41**	.30**	.42**	.31**	.29**
27. Learning Effectiveness	4.07	.91	.09	.13	-.03	.10	-.11	.08	-.08	.14	.11	.05	.19**	.20**	.14*

* $p \leq .05$

** $p \leq .01$

Correlation matrix– Part C

Variable#	Mean	S.D.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14. Commitment	3.97	.81	1													
15. Satisfaction	3.56	.78	.67**	1												
16. Openness	3.73	.89	.62**	.58**	1											
17. Risk-taking	2.94	.81	.37**	.23**	.54**	1										
18. Future Orientation	3.37	.90	.56**	.52**	.72**	.41**	1									
19. Creativity	3.42	1.00	.65**	.64**	.71**	.46**	.68**	1								
20. Pro-activeness	3.37	.88	.60**	.52**	.63**	.39**	.57**	.74**	1							
21. Innovativeness	3.38	1.00	.35**	.32**	.47**	.29**	.34**	.37**	.48**	1						
22. Innovations - Managers	3.87	.74	.30**	.35**	.53**	.37**	.45**	.52**	.47**	.31**	1					
23. Innovations – Employees	3.54	.88	.21**	.16*	.48**	.20**	.33**	.38**	.38**	.29**	.49**	1				
24. Innovations – Clients	3.66	.87	.15*	.13	.20**	.05	.13	.21**	.22**	.18*	.33**	.31**	1			
25. Learning orientation	3.91	.78	.51**	.58**	.59**	.34**	.50**	.65**	.60**	.43**	.38**	.35**	.18*	1		
26. Learning Aim	3.83	.74	.41**	.40**	.49**	.28**	.43**	.50**	.50**	.35**	.33**	.34**	.22**	.57**	1	
27. Learning Effectiveness	4.07	.91	.12	.09	.25**	.12	.21**	.14*	.15*	.02	.28**	.28**	.23**	.21**	.31**	1

* p≤.05

** p≤.01

Correlations

Antecedents and Innovativeness

The relationships between the antecedents and the innovativeness variables were for the most part significant and moderate (between r =.4 and r= .6). The two exceptions were risk-taking and the general innovativeness measure, both of which had weaker correlations with the antecedents (in the .2-.3 range). Internal politics and centralization were negatively correlated with the innovativeness variables.

Innovativeness and Outcomes

Relationships were once again mostly significant and moderate. Commitment had stronger associations than the other outcomes with the majority of the innovativeness variables (correlations were between .35 and .65). The outcomes had relatively weak relationships with risk-taking – ranging from a high of .37 to non-significance.

Innovativeness and Learning

“Innovations – managers”, “learning orientation”, and “learning aim” all had significant and for the most part moderate relationships with the innovativeness variables (generally between .4 and .6). Risk taking was once again a relatively weak variable, with no association stronger than .34. The innovativeness measures had weaker correlations with “innovations – clients” and “learning effectiveness”, for which no relationship stronger than r =.25.

Netherlands

Sector: combination

Distributed: 390

Responses: 51

Response Rate: 13.1%

	# of items	*Mean*	*Sd*	*Reliability*	*Comments*
Antecedents					
Information generation	5	3.40	0.66	.65	Reverse 4, 5
Information dissemination	4	3.05	0.85	.74	
Responsiveness	5	3.33	0.80	.76	Reverse 1-3
Team spirit	4	2.81	0.89	.85	
Internal politics	4	2.38	0.73	.70	
Connectedness	4	3.88	0.85	.82	w/o 4
Centralization	4	2.12	0.84	.76	w/o 2
Outcomes					
Inno' performance - plans	4	3.18	0.73	.88	
Inno' performance - lead'	4	3.28	0.69	.92	
Inno' performance - users	4	3.13	.78	.93	
Performance - plans	4	3.46	0.65	.86	
Performance - leadership	4	3.34	0.69	.89	
Performance - users	4	3.20	0.81	.94	
Commitment	4	3.63	0.80	.81	
Work satisfaction	5	3.56	0.57	.62	
Innovativeness					
Openness	4	3.13	0.85	.85	
Risk taking	4	2.53	0.87	.79	w/o 4
Future orientation	4	2.95	0.89	.88	
Creativity	5	3.36	0.78	.86	
Pro-activeness	4	2.98	0.76	.80	
Innovativeness	3	3.10	0.86	.66	
Learning Orientation					
Innovations - managers	6	3.13	.83	.89	
Innovations - employees	6	3.03	0.82	.92	
Innovations - external	6	3.15	0.86	.92	
Learning orientation	7	3.69	.75	.83	
Learn – geared towards	7	3.12	.58	.79	
Learn - impact	7	3.46	.61	.80	

Demographics

Gender: 69.4% male
Position: 26.7% Manager, 60% front line employee, 13.3% other.
Age: M= 41.3, s.d.= 10.83.
Education: M= 17.15, s.d.= 3.73.

Key Results

Reliabilities

All reliabilities presented in the table above were higher than the recommended .70 threshold, with the following exceptions: information generation, work satisfaction, and innovativeness (reliabilities between .62 and .66). Results from these scales should thus be interpreted with a degree of caution.

Means

Among the antecedents, the mean score for the connectedness scale was relatively high (3.88), while the mean for centralization was the lowest (2.12). Of the outcome variables, the highest mean was on the commitment variable (3.63); the lowest was for innovation's performance - perceived user's expectations (3.13).

Of the innovativeness variables, creativity had the highest mean (3.36), and risk-taking the lowest (2.53). The highest mean score for the learning orientation variables was on the learning orientation scale (3.69) and the lowest for innovations – employees (3.03).

Correlation matrix – Part A

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Information Generation	3.40	0.66	1												
2. Information Dissemination	3.05	0.85	.61**	1											
3. Responsiveness	3.33	0.80	.68**	.71**	1										
4. Team Spirit	2.81	0.89	.35*	.61**	.53**	1									
5. Internal Politics	2.38	0.73	-.28*	-.24	-.33*	-.22	1								
6. Connectedness	3.88	0.85	.33*	.34*	.39**	.25	-.62**	1							
7. Centralization	2.12	0.84	-.32*	-.10	-.33*	.04	.58**	-.56**	1						
8. Inno' performance - plans	3.18	0.73	.43**	.47**	.70**	.45**	-.43**	.44**	-.27	1					
9. Inno' performance - lead'	3.28	0.69	.46**	.32*	.58**	.22	-.47**	.18	-.32*	.60**	1				
10. Inno' performance - users	3.13	.78	.50**	.57**	.75**	.36*	-.35*	.44**	-.30*	.83**	.61**	1			
11.Performance – 3 year plans	3.46	0.65	.51**	.52**	.58**	.36*	-.39**	.39**	-.40**	.48**	.47**	.47**	1		
12. Performance – Pol. Leadership	3.34	0.69	.36*	.50**	.61**	.29	-.50**	.49**	-.38*	.57**	.54**	.56**	.78**	1	
13. Performance - Clients	3.20	0.81	.46**	.53**	.68**	.41**	-.51**	.42**	-.47**	.53**	.53**	.69**	.72**	.76**	1

* p≤.05

** p≤.01

Correlation matrix– Part B

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
14. Commitment	3.63	0.80	.36*	.39**	.43**	.47**	-.39**	.51**	-.31*	.54**	.17	.31*	.35*	.43**	.32*
15. Satisfaction	3.56	0.57	.33*	.37**	.39**	.36**	-.54**	.60**	-.39**	.57**	.33*	.45**	.43**	.45**	.43**
16. Openness	3.13	0.85	.48**	.53**	.63**	.37**	-.53**	.56**	-.57**	.57**	.53**	.60**	.64**	.72**	.65**
17. Risk-taking	2.53	0.87	.49**	.38**	.49**	.20	-.33*	.37**	-.51**	.48**	.27	.55**	.39**	.42**	.50**
18. Future Orientation	2.95	0.89	.45**	.69**	.63**	.61**	-.28*	.45**	-.21	.45**	.37*	.31*	.56**	.51**	.34*
19. Creativity	3.36	0.78	.51**	.40**	.48**	.32*	-.54**	.48**	-.58**	.47**	.40**	.48**	.52**	.56**	.64**
20. Pro-activeness	2.98	0.76	.42**	.52**	.48**	.19	-.39**	.29*	-.40**	.33*	.48**	.46**	.50**	.53**	.59**
21. Innovativeness	3.10	0.86	.27	.43**	.37*	.25	-.24	.17	-.05	.14	.21	.19	.46**	.44**	.40**
22. Innovations - Managers	3.13	0.83	.46**	.69**	.69**	.58**	-.31*	.38*	-.35*	.52**	.28	.49**	.54**	.47**	.43**
23. Innovations – Employees	3.03	0.82	.46**	.41**	.57**	.28	-.37*	.29	-.39**	.16	.34*	.38*	.29	.30	.38*
24. Innovations – Clients	3.15	0.86	.55**	.50**	.53**	.35*	-.16	.25	.37*	.31	.28	.42*	.26	.27	.37*
25. Learning orientation	3.69	0.75	.63**	.54**	.68**	.41**	-.32*	.53**	-.39**	.60**	.38*	.61**	.54**	.53**	.52**
26. Learning Aim	3.12	0.58	.53**	.59**	.63**	.49**	-.16	.45**	-.26	.51**	.27	.54**	.38*	.45**	.43**
27. Learning Effectiveness	3.46	0.61	-.09	-.06	-.04	.17	.25	-.45**	.10	-.14	-.03	-.21	-.13	-.30	-.20

* $p \leq .05$

** $p \leq .01$

Correlation matrix– Part C

Variable#	Mean	S.D.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14. Commitment	3.63	0.80	1													
15. Satisfaction	3.56	0.57	.65**	1												
16. Openness	3.13	0.85	.52**	.55**	1											
17. Risk-taking	2.53	0.87	.43**	.43**	.64**	1										
18. Future Orientation	2.95	0.89	.64**	.50**	.52**	.36*	1									
19. Creativity	3.36	0.78	.60**	.47**	.69**	.60**	.41**	1								
20. Pro-activeness	2.98	0.76	.37**	.43**	.71**	.47**	.42**	.67**	1							
21. Innovativeness	3.10	0.86	.17	.21	.29*	.04	.42**	.14	.44**	1						
22. Innovations - Managers	3.13	0.83	.53**	.44**	.59**	.46**	.66**	.59**	.57**	.26	1					
23. Innovations – Employees	3.03	0.82	.17	.13	.42**	.37*	.41**	.46**	.46**	.20	.55**	1				
24. Innovations – Clients	3.15	0.86	.33*	.15	.59**	.51**	.37*	.47**	.46**	.26	.50**	.47**	1			
25. Learning orientation	3.69	0.75	.48**	.49**	.65**	.40**	.50**	.47**	.49**	.32*	.55**	.39**	.42**	1		
26. Learning Aim	3.12	0.58	.40**	.28	.41**	.31*	.50**	.37*	.39**	.36*	.59**	.35*	.51**	.60**	1	
27. Learning Effectiveness	3.46	0.61	-.09	-.31*	-.24	-.08	.07	-.08	-.02	-.22	.26	.27	.02	-.22	.09	1

* p≤.05

** p≤.01

Correlations

Antecedents and innovativeness

The antecedent variables had relationships of similar strength with the innovativeness variables, with moderate correlations in the .4-.5 range. The one exception in this respect was team spirit, which had several non-significant relationships, and only one that was higher than .4 (future orientation, at .61). The centralization and internal politics scales had negative or insignificant relationships with the innovativeness variables. The correlations between the antecedents and the innovativeness variables were stronger for the individual variables than for the general innovativeness measure; the general measure was correlated only with information dissemination and responsiveness (r =.43 and .37, respectively).

Innovativeness and outcomes

Turning to the relationships between innovativeness and the outcome variables, openness had the strongest correlations with most of the outcomes, ranging between r =.52 and r =.73. Innovativeness had the weakest associations with the outcomes, with several non-significant correlations and none higher than .46.

Innovativeness and learning

The relationships between the innovativeness and learning variables were for the most part significant. The one exception was the learning effectiveness scale, with which none of the innovativeness variables were correlated. The learning variable most strongly related to the innovativeness variables was “innovations – managers”, with correlations between .46 and .66.

Norway

Sector: Social Services

Distributed: 647

Responses: 243

Response Rate: 37.6%

	# of items	*Mean*	*Sd*	*Reliability*	*Comments*
Antecedents					
Information generation	5	3.58	.62	.58	Reverse 4, 5
Information dissemination	4	3.70	.64	.64	
Responsiveness	5	4.13	.56	.60	Reverse 1-3
Team spirit	4	3.52	.78	.88	
Internal politics	4	1.95	.75	.78	
Connectedness	4	4.14	.68	.72	w/o 4
Centralization	4	1.76	.71	.70	w/o 2
Outcomes					
Inno' performance - plans	4	3.56	.61	.83	
Inno' performance - lead'	4	3.34	.66	.89	
Inno' performance - users	4	3.37	.66	.90	
Performance - plans	4	3.95	.51	.72	
Performance - leadership	4	3.67	.63	.84	
Performance - users	4	3.73	.66	.88	
Commitment	4	4.33	.62	.82	
Work satisfaction	5	3.76	.58	.70	
Innovativeness					
Openness	4	3.56	.70	.82	
Risk taking	4	2.89	.75	.77	w/o 4
Future orientation	4	3.55	.75	.86	
Creativity	5	4.08	.63	.86	
Pro-activeness	4	3.45	.67	.78	
Innovativeness	3	3.28	.94	.73	
Learning Orientation					
Innovations - managers	6	3.62	.55	.83	
Innovations - employees	6	3.63	.51	.82	
Innovations - external	6	2.87	.79	.93	
Learning orientation	7	4.26	.55	.83	w/o 7
Learn – geared towards	7	3.60	.70	.70	
Learn - impact	7	3.40	.70	.83	

Demographics

Gender: 77.8% Female.
Position: 96.6% Manager, 0.9% Front line employee, 2.6 other.
Age: M= 47.33, s.d.= 8.11
Education: M= 17.38, s.d. =3.06

Key Results

Reliabilities

All reliabilities presented in the table above were higher than the recommended .70 threshold, with the following scales being the exception: information generation, information dissemination, and responsiveness (reliabilities between .58 and .64). Results from these scales should therefore be interpreted cautiously.

Means

Among the antecedents, the mean scores for the connectedness and the responsiveness scales were relatively high (4.14 and 4.13 respectively), while the mean for centralization was the lowest (1.76). Of the outcome variables, the highest mean was on the commitment variable (4.33); the lowest was for innovation's performance - perceived leadership's expectations (3.34).

Of the innovativeness variables, creativity had the highest mean (4.08), and risk-taking the lowest (2.89). The highest mean score for the learning orientation variables was on the learning orientation scale (4.26) and the lowest for innovations – external (2.87).

Correlation matrix – Part A

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Information Generation	3.40	0.66	1												
2. Information Dissemination	3.05	0.85	.54**	1											
3. Responsiveness	3.33	0.80	.48**	.49**	1										
4. Team Spirit	2.81	0.89	.26**	.39**	.22**	1									
5. Internal Politics	2.38	0.73	-.27**	-.33**	-.34**	-.49**	1								
6. Connectedness	3.88	0.85	.22**	.33**	.28**	.51**	-.40**	1							
7. Centralization	2.12	0.84	-.30**	-.27**	-.37**	-.29**	.46**	-.43**	1						
8. Inno' performance - plans	3.18	0.73	.38**	.44**	.31**	.44**	-.42**	.32**	-.30**	1					
9. Inno' performance - lead'	3.28	0.69	.24**	.43**	.28**	.35**	-.44**	.31**	-.22**	.61**	1				
10. Inno' performance - users	3.13	.78	.35**	.33**	.28**	.30**	-.37**	.25**	-.16*	.61**	.54**	1			
11.Performance – 3 year plans	3.46	0.65	.38**	.36**	.32**	.40**	-.39**	.41**	-.35**	.50**	.35**	.40**	1		
12. Performance – Pol. Leadership	3.34	0.69	.32**	.42**	.29**	.35**	-.42**	.32**	-.24**	.39**	.54**	.46**	.65**	1	
13. Performance - Clients	3.20	0.81	.34**	.35**	.30**	.34**	-.34**	.29**	-.24**	.36**	.41**	.57**	.58**	.60**	1

* $p \leq .05$

** $p \leq .01$

Correlation matrix– Part B

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
14. Commitment	3.63	0.80	.25**	.31**	.32**	.35**	-.32**	.36	-.39**	.30**	.28**	.24**	.32**	.34**	.35**
15. Satisfaction	3.56	0.57	.31**	.24**	.25**	.37**	-.36**	.39**	-.48**	.35**	.30**	.28**	.38**	.32**	.35**
16. Openness	3.13	0.85	.37**	.46**	.33**	.56**	-.41**	.44**	-.44**	.46**	.42**	.38**	.41**	.43**	.35**
17. Risk-taking	2.53	0.87	.26**	.29**	.14*	.40**	-.25**	.33**	-.20**	.34**	.31**	.27**	.29**	.29**	.30**
18. Future Orientation	2.95	0.89	.39**	.41**	.27**	.50**	-.44**	.50**	-.35**	.45**	.38**	.40**	.45**	.46**	.40**
19. Creativity	3.36	0.78	.41**	.45**	.39**	.47**	-.41**	.48**	-.48**	.37**	.31**	.31**	.47**	.39**	.43**
20. Pro-activeness	2.98	0.76	.30**	.35**	.27**	.44**	-.23**	.39**	-.31**	.33**	.23**	.27**	.36**	.35**	.31**
21. Innovativeness	3.10	0.86	.19**	.30**	.21**	.24**	-.16*	.22**	-.21**	.19**	.21**	.10	.20**	.16*	.09
22. Innovations - Managers	3.13	.83	.23**	.26**	.22**	.43**	-.35**	.42**	-.26**	.43**	.34**	.36**	.40**	.33**	.34**
23. Innovations – Employees	3.03	0.82	.20**	.25**	.19**	.31**	-.32**	.34**	-.24**	.36**	.35**	.36**	.42**	.39**	.47**
24. Innovations – Clients	3.15	0.86	.11	.16*	.02	.11	-.07	.14*	-.05	.16*	.22**	.19**	.16*	.22**	.18**
25. Learning orientation	3.69	.75	.33**	.37**	.36**	.37**	-.41**	.44**	-.40**	.32**	.26**	.25**	.36**	.32**	.42**
26. Learning Aim	3.12	.58	.30**	.26**	.22**	.33**	-.20**	.33**	-.20**	.24**	.16*	.29**	.30**	.26**	.33**
27. Learning Effectiveness	3.46	.61	-.07	-.11	-.07	-.08	.20**	-.07	.11	-.12	-.18**	-.10	-.12	-.13	-.06

* p≤.05

** p≤.01

Correlation matrix– Part C

Variable#	Mean	S.D.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14. Commitment	3.63	0.80	1													
15. Satisfaction	3.56	0.57	.43**	1												
16. Openness	3.13	0.85	.51**	.47**	1											
17. Risk-taking	2.53	0.87	.32**	.19**	.47**	1										
18. Future Orientation	2.95	0.89	.47**	.39**	.64**	.47**	1									
19. Creativity	3.36	0.78	.53**	.48**	.66**	.39**	.57**	1								
20. Pro-activeness	2.98	0.76	.43**	.25**	.54**	.54**	.50**	.60**	1							
21. Innovativeness	3.10	0.86	.21**	.21**	.34**	.24**	.24**	.32**	.41**	1						
22. Innovations - Managers	3.13	.83	.36**	.45**	.50**	.32**	.44**	.50**	.43**	.35**	1					
23. Innovations – Employees	3.03	0.82	.31**	.38**	.40**	.22**	.38**	.44**	.32**	.28**	.51**	1				
24. Innovations – Clients	3.15	0.86	.02	.19**	.16*	.12	.14*	.20**	.11	.16*	.28**	.34**	1			
25. Learning orientation	3.69	.75	.47**	.39**	.54**	.35**	.52**	.65**	.47**	.30**	.39**	.39**	.07	1		
26. Learning Aim	3.12	.58	.33**	.33**	.40**	.25**	.37**	.48**	.39**	.16*	.47**	.41**	.21**	.39**	1	
27. Learning Effectiveness	3.46	.61	-.09	-.07	-.15*	-.05	-.07	-.06	.06	-.10	-.03	-.02	.05	-.06	.26**	1

* p≤.05

** p≤.01

Correlations

Antecedents and Innovativeness

Among the antecedents, team spirit had the strongest associations with most of the innovativeness variables. Correlations for team spirit and these variables ranged between r =.4 and r =.56, with the exception of the general innovativeness measure. General innovativeness had much weaker relationships with the antecedents than the specific measures, with none that were stronger than r =.3. Creativity was most strongly related to the antecedents, with all correlations stronger than r =.39. Internal politics and centralizations were negatively correlated with the innovativeness measures.

Innovativeness and Outcomes

Commitment was the outcome with the strongest relationship to most of the innovativeness measures, mostly in the r =.4 – r =.5 range. As was the case for the antecedents, the general innovativeness measure had only weak associations with the outcomes (none higher than r =.21). Other than that, the majority of the correlations between the outcomes and the innovativeness variables were between .25 and .5.

Innovativeness and Learning

Of the learning variables, “innovations – clients” had fairly weak correlations with the innovativeness variables (none higher than .2); learning effectiveness did not have a significant relationship with any variable except for openness, were the relationship was negative (r = -.15). Of the innovativeness measures, creativity was the most strongly related to the learning variables, and had correlations between .43 and .65 (with the exception of “innovations – clients” and learning effectiveness).

Slovakia

Sector: Social Services

Distributed: 295

Responses: 204

Response Rate: 69.2%

	# of items	*Mean*	*Sd*	*Reliability*	*Comments*
Antecedents					
Information generation	5	3.87	.56	.56	Reverse 4,5
Information dissemination	4	4.10	.68	.69	.73 w/o 4
Responsiveness	5	4.07	.56	.60	R 1-3, .69 w/o 2
Team spirit	4	3.49	.78	.75	
Internal politics	4	2.33	.86	.81	
Connectedness	4	4.42	.68	.86	w/o 4
Centralization	4	2.96	.64	.76	w/o 2
Outcomes					
Inno' performance - plans	4	3.80	.93	.92	
Inno' performance - lead'	4	3.19	.88	.92	
Inno' performance - users	4	3.79	.89	.94	
Performance - plans	4	4.07	.69	.89	
Performance - leadership	4	3.46	.80	.95	
Performance - users	4	4.08	.72	.93	
Commitment	4	4.43	.51	.73	
Work satisfaction	5	3.74	.59	.77	
Innovativeness					
Openness	4	4.29	.62	.83	
Risk taking	4	3.47	.78	.61	w/o 4
Future orientation	4	3.89	.69	.80	
Creativity	5	4.21	.69	.91	
Pro-activeness	4	3.70	.78	.78	
Innovativeness	3	4.00	.81	.58	.63 w/o 1
Learning Orientation					
Innovations - managers	6	4.22	.63	.90	
Innovations - employees	6	3.96	.75	.94	
Innovations - external	6	3.74	.85	.94	
Learning orientation	7	4.21	.55	.86	w/o 7
Learn – geared towards	7	3.94	.64	.89	
Learn - impact	7	4.07	.77	.93	

Demographics

Gender: 77.3% Female
Position: 40.8% Manager, 47.8% Front line employee, 11.4% other.
Age: M= 40.17, s.d.= 9.77.
Education: M= 15.45, s.d.= 3.34.

Key Results

Reliabilities

All reliabilities presented in the table above were higher than the recommended .70 threshold, with the following scales being the exception: information generation, information dissemination, responsiveness, risk-taking, and innovativeness (reliabilities between .55 and .69). Results from these scales should therefore be interpreted with caution. The reliability of the information dissemination scale could be brought above .70 by removing item #4.

Means

Among the antecedents, the mean score for the connectedness scale was relatively high (4.42), while the mean for internal politics was the lowest (2.33). Of the outcome variables, the highest mean was on the commitment variable (4.43); the lowest was for innovation's performance - perceived leadership's expectations (3.19).

Of the innovativeness variables, openness had the highest mean (4.29), and risk-taking the lowest (3.47). The highest mean scores for the learning orientation variables were on the innovations – managers and the learning orientation scales (with means of 4.22 and 4.21, respectively) and the lowest for innovations – external (3.74).

Correlation matrix – Part A

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Information Generation	3.87	.56	1												
2. Information Dissemination	4.10	.68	.44**	1											
3. Responsiveness	4.07	.56	.58**	.48**	1										
4. Team Spirit	3.49	.78	.31**	.31**	.35**	1									
5. Internal Politics	2.33	.86	-.20**	-.44**	-.28**	-.47**	1								
6. Connectedness	4.42	.68	.28**	.45**	.38**	.37**	-.40**	1							
7. Centralization	2.96	.64	-.14*	-.24**	-.10	-.15*	.42**	-.36**	1						
8. Inno' performance - plans	3.80	.93	.39**	.29**	.41**	.16*	-.22**	.29**	-.24**	1					
9. Inno' performance - lead'	3.19	.88	.14	.12	.06	-.02	-.09	.13	-.11	.52**	1				
10. Inno' performance - users	3.79	.89	.48**	.32**	.46**	.16*	-.23**	.28**	-.31**	.75**	.49**	1			
11.Performance – 3 year plans	4.07	.69	.38**	.40**	.33**	.12	-.26**	.28**	-.22**	.56**	.26**	.42**	1		
12. Performance – Pol. Leadership	3.46	.80	.16*	.13	.16*	.02	-.19*	.27**	-.18*	.32**	.45**	.28**	.40**	1	
13. Performance - Clients	4.08	.72	.45**	.32**	.46**	.21**	-.18*	.31**	-.16*	.56**	.27**	.59**	.64**	.46**	1

* p≤.05

** p≤.01

Correlation matrix– Part B

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
14. Commitment	4.43	.51	.37**	.37**	.25**	.37**	-.34**	.43**	-.17*	.17*	.06	.23**	.28**	.11	.22**
15. Satisfaction	3.74	.59	.36**	.49**	.46**	.47**	-.49**	.48**	-.34**	.38**	.18*	.38**	.38**	.30**	,40**
16. Openness	4.29	.62	.46**	.44**	.50**	.35**	-.35**	.60**	-.40**	.42**	.18*	.41**	.42**	.23**	.43**
17. Risk-taking	3.47	.78	.26**	.38**	.29**	.37**	-.23**	.28**	-.03	-.02	-.10	.09	.14*	.15*	.19**
18. Future Orientation	3.89	.69	.40**	.57**	.47**	.58**	-.56**	.50**	-.22**	.18*	-.02	.24**	.25**	.18*	.28**
19. Creativity	4.21	.69	.46**	.60**	.53**	.43**	-.51**	.69**	-.48**	.44**	.18*	.46**	.41**	.28**	.49**
20. Pro-activeness	3.70	.78	.41**	.42**	.49**	.51**	-.36**	.50**	-.10	.24**	.07	.29**	.27**	.22**	.44**
21. Innovativeness	4.00	.81	.41**	.39**	.54**	.28**	-.30**	.30**	-.27**	.54**	.19*	.52**	.47**	.29**	.49**
22. Innovations - Managers	4.22	.63	.34**	.44**	.41**	.23**	-.31**	.52**	-.27**	.58**	.22**	.48**	.56**	.41**	.55**
23. Innovations – Employees	3.96	.75	.20**	.25**	.35**	.12	-.13	.30**	.28**	.50**	.18*	.41**	.48**	.27**	.47**
24. Innovations – Clients	3.74	.85	.15*	.15*	.15*	-.05	-.01	.24**	-.26**	.39**	.34**	.41**	.34**	.31**	.32**
25. Learning orientation	4.21	.55	.34**	.54**	.50**	.43**	-.37**	.61**	-.27**	.36**	.18*	.35**	.25**	.29**	.37**
26. Learning Aim	3.94	.64	.46**	.48**	.46**	.39**	-.30**	.41**	-.23**	.45**	.14	.43**	.40**	.20**	.47**
27. Learning Effectiveness	4.07	.77	.19**	.05	.09	.02	-.09	.11	-.24**	.23**	.30**	.26**	.10	.20**	.12

* p≤.05

** p≤.01

Correlation matrix– Part C

Variable#	Mean	S.D.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14. Commitment	4.43	.51	1													
15. Satisfaction	3.74	.59	.44**	1												
16. Openness	4.29	.62	.50**	.50**	1											
17. Risk-taking	3.47	.78	.41**	.31**	.50**	1										
18. Future Orientation	3.89	.69	.41**	.53**	.52**	.43**	1									
19. Creativity	4.21	.69	.50**	.62**	.69**	.38**	.57**	1								
20. Pro-activeness	3.70	.78	.45**	.52**	.49**	.53**	.52**	.62**	1							
21. Innovativeness	4.00	.81	.20**	.49**	.45**	.16*	.33**	.49**	.43**	1						
22. Innovations - Managers	4.22	.63	.36**	.53**	.53**	.18*	.41**	.61**	.45**	.51**	1					
23. Innovations – Employees	3.96	.75	.18*	.37**	.43**	.07	.18*	.37**	.21**	.39**	.52**	1				
24. Innovations – Clients	3.74	.85	.08	.31**	.30**	-.01	.05	.40**	.03	.32**	.44**	.46**	1			
25. Learning orientation	4.21	.55	.33**	.54**	.56**	.39**	.47**	.62**	.62**	.44**	.48**	.42**	.22**	1		
26. Learning Aim	3.94	.64	.33**	.51**	.51**	.34**	.38**	.59**	.52**	.53**	.46**	.35**	.21**	.52**	1	
27. Learning Effectiveness	4.07	.77	.11	.22**	.17*	-.12	.10	.19**	.07	.29**	.23**	.19*	.32**	.09	.13	1

* p≤.05

** p≤.01

Correlations

Antecedents and Innovativeness

Unlike other countries, were the antecedents had relatively weak relationships with general innovativeness, for the Slovakian sample, this was not the case (no correlation was weaker than -.27, and the strongest was .54). Centralization and internal politics were once again negatively associated with innovativeness, although the relationships were weak to non-significant in the case of centralization. The antecedents were only weakly related to risk-taking, with no correlation stronger than r =.38 and most being weaker than .3. Relationships between most of the antecedents and innovativeness variables were between .3 and .5.

Innovativeness and Outcomes

Future orientation and risk-taking were for the most part only weakly correlated with the outcomes. The exception to this was their associations with commitment and work satisfaction; it should be noted that both of these outcomes had significant and moderate relationships with most of the innovativeness measures (correlations were generally between .4 and .6). Performance innovation (relative to political leadership's expectations) was either weakly correlated or had non-significant relationships with the innovativeness variables (none of the relationships was stronger than .19).

Innovativeness and Learning

Generally speaking, the learning variables were most strongly correlated with creativity. Relationships between creativity and the learning variables ranged between .37 and .62 with the exception of learning effectiveness, which was a weak variable in relation to all the innovativeness measures (not association stronger than .3, with half the correlations non-significant).Learning orientation usually the variable with the strongest relationships to the innovativeness measures, with relationships between .39 and .62.

Spain

Sector: Health

Distributed: 500

Responses: 154

Response Rate: 28.8%

	# of items	*Mean*	*Sd*	*Reliability*	*Comments*
Antecedents					
Information generation	5	2.60	.58	.38	
Information dissemination	4	2.64	.80	.74	
Responsiveness	5	3.15	.63	.54	Reverse 1-3
Team spirit	4	2.76	.74	.78	
Internal politics	4	3.10	.81	.71	
Connectedness	4	3.34	.85	.73	w/o 4
Centralization	4	2.49	.78	.58	w/o 2
Outcomes					
Inno' performance - plans	4	3.14	.84	.89	
Inno' performance - lead'	4	2.92	.83	.88	
Inno' performance - users	4	2.60	.66	.82	
Performance - plans	4	3.17	.83	.85	
Performance - leadership	4	2.97	.81	.90	
Performance - users	4	2.81	.74	.85	
Commitment	4	3.15	.86	.76	
Work satisfaction	5	2.77	.66	.73	
Innovativeness					
Openness	4	2.71	.88	.85	
Risk taking	4	2.69	.88	.73	w/o 4
Future orientation	4	2.59	.88	.88	
Creativity	5	2.92	.70	.73	.78 w/o 2
Pro-activeness	4	3.03	.78	.75	
Innovativeness	3	2.89	.85	.55	w/o 1
Learning Orientation					
Innovations - managers	6	2.86	.78	.85	
Innovations - employees	6	3.21	.70	.85	
Innovations - external	6	3.14	.81	.89	
Learning orientation	7	3.27	.78	.77	w/o 7
Learn – geared towards	7	2.96	.80	.86	
Learn - impact	7	3.80	.69	.84	

Demographics

Gender: 52.6% Male.
Position: 9.8% Manager, 76.2% Front line employee, 14% other.
Age: M= 38.36, s.d.= 11.31.
Education: M= 14.47, s.d.= 9.51.

Key Results

Reliabilities

All reliabilities presented in the table above were higher than the recommended .70 threshold, with the following exceptions: information generation, responsiveness, centralization, and innovativeness (reliabilities ranging between .38 and .58). Results from these scales should therefore be interpreted with caution.

Means

Among the antecedents, the mean score for the connectedness scale was highest (3.34), while the mean for centralization was the lowest (2.49). Of the outcome variables, the highest means were on the innovation's performance – plans and the commitment variables (3.17 and 3.15 respectively); the lowest was for innovation's performance - perceived user's expectations (2.60).

Of the innovativeness variables, pro-activeness had the highest mean (2.99), and future orientation the lowest (2.59). The highest mean scores of the learning orientation variables were on learning impact scale (3.80) and the lowest for innovations – managers (2.86).

Correlation matrix – Part A

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Information Generation	2.60	.58	1												
2. Information Dissemination	2.64	.80	.42**	1											
3. Responsiveness	3.15	.63	.37**	.43**	1										
4. Team Spirit	2.76	.74	.19*	.26**	.23**	1									
5. Internal Politics	3.10	.81	-.22**	-.14	-.19*	-.32**	1								
6. Connectedness	3.34	.85	.11	.20*	.12	.29**	-.28**	1							
7. Centralization	2.49	.78	-.06	.01	-.11	-.26**	.41**	-.32**	1						
8. Inno' performance - plans	3.14	.84	.18*	.52**	.48**	.24**	-.14	.30**	-.02	1					
9. Inno' performance - lead'	2.92	.83	.32**	.45**	.38**	.02	-.05	.22**	-.10	.53**	1				
10. Inno' performance - users	2.60	.66	.30**	.36**	.29**	.19*	-.23**	.15	-.14	.50**	.52**	1			
11.Performance – 3 year plans	3.17	.83	.22**	.11	.24**	.35**	-.21**	.36**	-.08	.31**	.12	.31**	1		
12. Performance – Pol. Leadership	2.97	.81	.22**	.28**	.34**	.03	.01	.23**	-.20*	.36**	.61**	.49**	.45**	1	
13. Performance - Clients	2.81	.74	.22*	.21*	.28**	.25**	-.26**	.27**	-.23**	.30**	.38**	.52**	.59**	.69**	1

* p≤.05

** p≤.01

Correlation matrix– Part B

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
14. Commitment	3.15	.86	.21**	.35**	.27**	.31**	-.15	.46**	-.04	.50**	.36**	.42**	.58**	.49**	.53**
15. Satisfaction	2.77	.66	.29**	.29**	.30**	.31**	-.22**	.32**	-.11	.34**	.25**	.44**	.52**	.41**	.44**
16. Openness	2.71	.88	.38**	.56**	.31**	.52**	-.27**	.45**	-.13	.55**	.44**	.36**	.34**	.29**	.30**
17. Risk-taking	2.69	.88	.31**	.43**	.29**	.39**	-.13	.22**	.01	.37**	.29**	.27**	.33**	.24**	.32**
18. Future Orientation	2.59	.88	.41**	.64**	.39**	.37**	-.19*	.32**	-.02	.52**	.48**	.40**	.25**	.35**	.38**
19. Creativity	2.92	.70	.42**	.49**	.35**	.48**	-.28**	.46**	-.16*	.50**	.32**	.45**	.64**	.40**	.52**
20. Pro-activeness	3.03	.78	.34**	.42**	.24**	.32**	-.11	.38**	-.08	.30**	.32**	.14	.24**	.30**	.26**
21. Innovativeness	2.89	.85	.30**	.30**	.35**	.11	-.07	.09	0	.37**	.34**	.27**	.16*	.24**	.16
22. Innovations - Managers	2.86	.78	.33**	.49**	.33**	.35**	-.30**	.37**	-.25**	.45**	.45**	.40**	.28**	.31**	.36**
23. Innovations – Employees	3.21	.70	.09	.22**	.29**	.22**	-.26**	.33**	-.06	.13	.08	.16	.43**	.29**	.31**
24. Innovations – Clients	3.14	.81	.27**	.41**	30**	.23**	-.09	.18*	-.18*	.28**	.39**	.30**	.31**	.43**	.39**
25. Learning orientation	3.27	.78	.26**	.36**	.29**	.37**	-.13	.42**	-.27**	.36**	.17*	.23**	.46**	.26**	.29**
26. Learning Aim	2.96	.80	.33**	.41**	.19*	.47**	-.29**	.35**	-.21*	.32**	.28**	.34**	.43**	.27**	.51**
27. Learning Effectiveness	3.80	.69	-.07	-.21*	-.11	.02	.06	.22**	-.01	-.03	-.05	.04	.36**	.07	.10

* p≤.05

** p≤.01

Correlation matrix– Part C

Variable#	Mean	S.D.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14. Commitment			1													
15. Satisfaction			.55**	1												
16. Openness			.57**	.55**	1											
17. Risk-taking			.51**	.42**	.63**	1										
18. Future Orientation			.52**	.44**	.71**	.68**	1									
19. Creativity			.62**	.62**	.68**	.55**	.62**	1								
20. Pro-activeness			.52**	.37**	.51**	.53**	.54**	.53**	1							
21. Innovativeness			.32**	.30**	.40**	.43**	.40**	.40**	.38**	1						
22. Innovations - Managers			.42**	.48**	.62**	.43**	.59**	.59**	.36**	.36**	1					
23. Innovations – Employees			.52**	.36**	.34**	.31**	.28**	.48**	.39**	.16	.29**	1				
24. Innovations – Clients			.39**	.35**	.37**	.37**	.47**	.47**	.37**	.21*	.53**	.37**	1			
25. Learning orientation			.47**	.43**	.48**	.44**	.40**	.66**	.50**	.33**	.47**	.41**	-.40**	1		
26. Learning Aim			.42**	.44**	.53**	.50**	.55**	.62**	.44**	.28**	.59**	.34**	.46**	.54**	1	
27. Learning Effectiveness			.30**	.06	-.02	.10	-.11	.08	.06	-.07	-.03	.36**	.16	.25**	.21*	1

* p≤.05

** p≤.01

Correlations

Antecedents and Innovativeness

Information dissemination had the strongest relationships to most of the innovativeness variables. With the exception of general innovativeness, correlations were between .42 and .64. As was the case in many of the participating countries, general innovativeness had weak or non-significant relationships with the antecedents; the strongest was r =.35, with responsiveness. The internal politics scale was negatively related to the innovativeness variables, although not all the correlations were significant and none was stronger than -.28. Centralization did not have a significant association with any variable except creativity, and even that was very weak (-.16).

Innovativeness and Outcomes

Relationships between these groups of variables were not very high (mostly between .2 and .4). The main exception to this was commitment, which had relationships stronger than r =.5 with every innovativeness measure except for general innovativeness; and, from the other direction, creativity, with correlations of .40 to .64 with all outcomes except for performance innovation (relative to political leadership's expectations).

Innovativeness and Learning

Innovations (managers), learning orientation and learning aim all had moderate relationships with most of the innovativeness variables – mostly between .4 and .6, with several correlations stronger than that. From the innovativeness side, creativity was the most strongly related to the learning measures, with all but one correlation above .47; general innovativeness was the weakest, with no correlation higher than .36. Learning effectiveness was a problematic measure in the Spanish sample, as it had no significant associations with any of the innovativeness variables.

Sweden

Sector: Health

Distributed: 970

Collected: 142

Response Rate: 14.6%

	# of items	*Mean*	*Sd*	*Reliability*	*Comments*
Antecedents					
Information generation	5	3.34	.84	.71	Reverse 4, 5
Information dissemination	4	2.67	1.01	.82	
Responsiveness	5	2.89	.85	.80	Reverse 1-3
Team spirit	4	4.01	.59	.70	
Internal politics	4	2.81	.89	.79	
Connectedness	4	3.74	.90	.79	w/o 4
Centralization	4	3.04	.75	.18	w/o 2, .57 w/o 1
Outcomes					
Inno' performance - plans	4	2.87	.87	.85	
Inno' performance - lead'	4	2.75	.86	.87	
Inno' performance - users	4	2.74	.91	.89	
Performance - plans	4	3.86	.79	.83	
Performance - leadership	4	3.55	.86	.86	
Performance - users	4	3.67	.87	.89	
Commitment	4	3.63	.80	.70	
Work satisfaction	5	3.43	.65	.62	
Innovativeness					
Openness	4	2.96	.78	.69	.83 w/o 4
Risk taking	4	2.13	.83	.65	w/o 4.
Future orientation	4	2.21	.90	.86	
Creativity	5	3.65	.54	.65	Reverse 5
Pro-activeness	4	3.55	.80	.76	
Innovativeness	3	3.43	1.05	.79	w/o 1
Learning Orientation					
Innovations - managers	6	2.85	.80	.81	
Innovations - employees	6	3.35	.60	.70	
Innovations - external	6	2.34	.77	.78	
Learning orientation	7	3.66	.68	.69	w/o 7
Learn – geared towards	7	3.12	.84	.86	
Learn - impact	7	3.39	.65	.74	

Demographics

Gender: 57.1% Male.
Position: 19.2% Manager, 76.7% Front line employee, 4.2% other.
Age: M=49.87, s.d.=8.82.
Education: M=20.3, s.d.= 4.17

Key Results

Reliabilities

All reliabilities presented in the table above were higher than the recommended .70 threshold, with the following exceptions: work satisfaction, openness, risk-taking, creativity, and learning orientation (reliabilities ranging between .60 and .69). Results from these scales should therefore be interpreted with a degree of caution. The centralization scale's reliability was very low (.18), although it could be improved to .57 by the removal of one of the items. The reliability of the openness scale would rise to .83 if item #4 were to be omitted.

Means

Among the antecedents, the mean score for the team spirit scale was highest (4.01), while the mean for the internal politics scale was the lowest (2.81). Of the outcome variables, the highest mean was on the performance – plans variable (3.86); the lowest were for innovation's performance – perceived leadership's and user's expectations (2.75 and 2.74, respectively).

Of the innovativeness variables, creativity had the highest mean (3.65), and risk-taking the lowest (2.13). The highest mean scores for the learning orientation variables were on learning orientation scale (3.66) and the lowest for innovations – external (2.34).

Correlation matrix – Part A

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Information Generation	3.34	.84	1												
2. Information Dissemination	2.67	1.01	.64**	1											
3. Responsiveness	2.89	.85	.73**	.58**	1										
4. Team Spirit	4.01	.59	.35**	.27**	.38**	1									
5. Internal Politics	2.81	.89	-.46**	-.26**	-.47**	-.39**	1								
6. Connectedness	3.74	.90	.26**	.16	.24**	.31**	-.35**	1							
7. Centralization	3.04	.75	-.41**	-.29**	-.46**	-.18*	.35**	-.14	1						
8. Inno' performance - plans	2.87	.87	.43**	.19*	.38**	.22*	-.39**	.30**	-.29**	1					
9. Inno' performance - lead'	2.75	.86	.28**	.23**	.23**	.08	-.25**	.10	-.13	.71**	1				
10. Inno' performance - users	2.74	.91	.30**	.14	.34**	.16	-.32**	.36**	-.26**	.86**	.62**	1			
11.Performance – 3 year plans	3.86	.79	.38**	.27**	.39**	.34**	-.34**	.27**	-.30**	.36**	.19*	.31**	1		
12. Performance – Pol. Leadership	3.55	.86	.28**	.15	.33**	.18*	-.34**	.23**	-.14	.31**	.20*	.25**	.73**	1	
13. Performance - Clients	3.67	.87	.28**	.24**	.31**	.29**	-.33**	.28**	-.19*	.33**	.10	.37**	.81**	.59**	1

* p≤.05

** p≤.01

Correlation matrix– Part B

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
14. Commitment	3.63	.80	.31**	.21*	.43**	.42**	-.41**	.25**	-.24**	.25**	.14	.28**	.54**	.36**	.47**
15. Satisfaction	3.43	.65	.38**	.17*	.33**	.36**	-.48**	.31**	-.33**	.30**	.14	.28**	.45**	.27**	.38**
16. Openness	2.96	.78	.39**	.25**	.43**	.31**	-.42**	.27**	-.24**	.38**	.16	.35**	.40**	.35**	.34**
17. Risk-taking	2.13	.83	.16	.13	.09	-.04	-.12	.09	.05	.13	-.03	.11	.12	.18*	.11
18. Future Orientation	2.21	.90	.26**	.16	.17	-.04	-.30**	.19*	-.01	.32**	.16	.24**	.10	.16	.09
19. Creativity	3.65	.54	.39**	.25**	.49**	.21*	-.47**	.34**	-.29**	.35**	.20*	.41**	.44**	.36**	.36**
20. Pro-activeness	3.55	.80	.53**	.44**	.59**	.43**	-.33**	.27**	-.29**	.25**	.23**	.22*	.44**	.28**	.36**
21. Innovativeness	3.43	1.05	.41**	.26**	.47**	.29**	-.23**	.06	-.28**	.30**	.19*	.23**	.41**	.23**	.29**
22. Innovations - Managers	2.85	.80	.40**	.21*	.41**	.21*	-.40**	.19*	-.28**	.36**	.17	.32**	.36**	.36**	.24**
23. Innovations – Employees	3.35	.60	.30**	.35**	.41**	.36**	-.13	.16	-.19*	.18*	.22**	.14	.37**	.18*	.31**
24. Innovations – Clients	2.34	.77	-.02	0	-.14	.13	.01	.05	.11	.03	-.03	-.04	.04	0	.03
25. Learning orientation	3.66	.68	.36**	.22*	.40**	.25**	-.51**	.36**	.22**	.33**	.18*	.39**	.33**	.34**	.27**
26. Learning Aim	3.12	.84	.39**	.32**	.29**	.20*	-.26**	.15	-.06	.24**	.21*	.17	.38**	.26**	.32**
27. Learning Effectiveness	3.39	.65	-.05	-.13	-.19*	-.06	.07	-.02	.26**	-.15	-.05	-.15	-.13	.04	-.08

* p≤.05

** p≤.01

Correlation matrix– Part C

Variable#	Mean	S.D.	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14. Commitment	3.63	.80	1													
15. Satisfaction	3.43	.65	.46**	1												
16. Openness	2.96	.78	.57**	.45**	1											
17. Risk-taking	2.13	.83	.17*	.10	.45**	1										
18. Future Orientation	2.21	.90	.28**	.33**	.60**	.53**	1									
19. Creativity	3.65	.54	.52**	.41**	.47**	.22**	.22**	1								
20. Pro-activeness	3.55	.80	.44**	.31**	.30**	.08	.14	.47**	1							
21. Innovativeness	3.43	1.05	.31**	.24**	.24**	.09	.03	.36**	.61**	1						
22. Innovations - Managers	2.85	.80	.42**	.53**	.56**	.25**	.43**	.40**	.38**	.35**	1					
23. Innovations – Employees	3.35	.60	.37**	.23**	.32**	.11	.12	.30**	.57**	.40**	.24**	1				
24. Innovations – Clients	2.34	.77	.05	.05	.12	.21*	.17*	-.19*	-.03	-.13	.13	0	1			
25. Learning orientation	3.66	.68	.55**	.56**	.60**	.25**	.45**	.59**	.40**	.31**	.58**	.24**	.07	1		
26. Learning Aim	3.12	.84	.35**	.33**	.43**	.25**	.46**	.30**	.42**	.33**	.46**	.43**	.17*	.38**	1	
27. Learning Effectiveness	3.39	.65	.08	-.01	.07	.01	.18*	-.06	.03	-.03	.13	.08	-.02	.16	.24**	1

* p≤.05

** p≤.01

Correlations

Antecedents and Innovativeness

Relationships between antecedents and innovativeness were generally weaker in the Swedish sample than in other countries (mostly between .2 and .4). Pro-activeness was the only innovativeness measure that had moderate relationships with a majority of the antecedents (correlations ranged in strength from .27 to .59).Risk-taking was not significantly correlated with any of the antecedent variables. Future orientation also had only weak or non-significant relationships (none stronger than -.30). Internal politics and centralization were again correlated negatively with the innovativeness measures, though these relationships were for the most part weak or non-significant.

Innovativeness and Outcomes

As was the case before, the Swedish sample had fewer moderate to strong correlations than other countries, and the majority of relationships between outcomes and innovativeness were between .2 and .4. The only outcome significantly related to all the innovativeness variables was commitment, though there was a wide range of correlations (.17 for risk-taking to .57 for openness). Risk-taking had the weakest associations to the outcomes; most were non-significant, and the highest was r =.18.

Innovativeness and Learning

The pattern for these groups of variables was similar to other countries, with innovation – managers, learning orientation, and learning aims again the strongest in terms of their relationships to the innovativeness variables (mostly between .35 and .6). Innovations – clients and learning effectiveness were the weakest, with relatively few significant associations. Innovations – clients had a negative, albeit weak (-.19), correlation with creativity.

United Kingdom

Sector: Health

Distributed: 350

Collected: 15

Response Rate: 4.3%

	# of items	*Mean*	*Sd*	*Reliability*	*Comments*
Antecedents					
Information generation	5	3.04	.84	.78	Reverse 4,5
Information dissemination	4	3.10	.82	.78	
Responsiveness	5	3.37	.64	.81	Reverse 1,3
Team spirit	4	2.85	.47	.45	
Internal politics	4	2.64	.35	n.s.	
Connectedness	4	3.60	.89	.81	w/o 4
Centralization	4	2.60	.68	.44	w/o 2, .81 w/o 3
Outcomes					
Inno' performance - plans	4	3.46	.68	.87	
Inno' performance - lead'	4	3.33	.45	.63	.69 w/o 1
Inno' performance - users	4	3.06	.48	.77	
Performance - plans	4	3.54	.78	.89	
Performance - leadership	4	3.49	.88	.98	
Performance - users	4	3.35	.77	.95	
Commitment	4	3.62	.75	.81	
Work satisfaction	5	3.37	.69	.79	
Innovativeness					
Openness	4	3.32	.74	.87	
Risk taking	4	2.51	.63	.71	w/o 4
Future orientation	4	3.03	.63	.78	
Creativity	5	3.61	.66	.92	
Pro-activeness	4	3.22	.56	.69	.78 w/o 2
Innovativeness	3	3.54	.82	.92	
Learning Orientation					
Innovations - managers	6	3.58	.87	.97	
Innovations - employees	6	3.60	.72	.93	
Innovations - external	6	3.58	.70	.93	
Learning orientation	7	3.73	.71	.89	w/o 7
Learn – geared towards	7	3.32	.66	.89	
Learn - impact	7	3.78	.42	.79	

Demographics

Gender: 93.3% Male.
Position: 26.7% Manager, 73.3% Front line employee.
Age: M=42.47, s.d.=4.97
Education: M=16.7, s.d.= 3.13

Key Results

Reliabilities

All reliabilities presented in the table above were higher than the recommended .70 threshold, with the following exceptions: centralization, team spirit, innovation's performance –leadership's expectations, and pro-activeness (reliabilities ranging between .44 and .69). Results from these scales should therefore be interpreted with some caution. The internal politics scale's reliability was non-significant.

It should be noted that the UK sample was small, and this could have had a negative effect on the reliabilities. In addition, the reliabilities of the centralization and pro-activeness scales can be brought above .70 by removing item #3 from the centralization scale and item #2 from the pro-activeness scale.

Means

Among the antecedents, the mean score for the connectedness scale was highest (3.60), while the mean for centralization was the lowest (2.60). Of the outcome variables, the highest mean was on the commitment variable (3.62); the lowest was for innovation's performance –user's expectations (3.06).

Of the innovativeness variables, creativity had the highest mean (3.61), and risk-taking the lowest (2.51). The highest mean score among the learning orientation variables was on the learning impact scale (3.78) and the lowest was for learning – geared towards (3.32).

Correlations

Due to the small size of the UK sample, we did not perform a separate analysis of the correlations on this database.

End Users results

Combined Results

For all countries participating in the end-user survey

Responses: 626

Organization characteristic	Barely at all				To a very large extent
	Percent %				
Main Function	**1**	**2**	**3**	**4**	**5**
Promote awareness among the general public	6.5	11.7	27.2	29.9	24.7
Promote awareness among practitioners/ professionals/ policymakers	7.4	10.5	21.6	36.8	23.8
Support for users (or relatives etc.)	4.5	5.5	15.6	28.4	46.1
Pressure for the development of new or improved services	4.6	9.3	16.9	41.7	27.7
Fund and promote research	24.5	25.5	21.9	16.2	11.9
Aim of influence					
Policy-makers at government level	17.5	13.7	20.4	30.2	18.2
Policy-makers at social service operational level	6.3	10.5	17.7	44.3	21.2
Social sector professionals	4.2	11.3	21.2	41.0	22.4
Users, relatives and unpaid helpers	3.0	7.8	22.9	33.6	32.7
The general public	4.1	9.8	33.2	32.3	20.6
Specific sections of the public	8.6	10.6	23.4	34.0	23.4

	# of items	*Mean*	*Sd*	*Rel.*	*Comments*
Innovativeness at the organization	8	3.19	.71	.83	w/o 1,7,8

Evaluation of the Public Sector	*A*	*B*	*C*	*D*	*E*
Innovativeness	*Percent %*				
What is the major challenge for innovation in the public social sector? *(A) Personalized services. (B) Better communication. (C) Reduced costs (D) Better coordination and collaboration with other organizations. (E) Other*	21.3	22.5	9.7	43.9	2.6
What is the major barrier to innovation in the public social sector? *(A) Tight budgets. (B) Red tape. (C) Power of specialists. (D) Employees' lack of motivation (E) Other*	37.6	33.6	10.4	14.4	4.0

Key Results

Of the main functions listed, nearly half of the survey participants listed “support for users” as most prominent; the function most commonly listed as barely existent was “fund and promote research”, by close to one quarter of the participants. Of the aims of influence listed, the aim

most commonly cited as important was “Users, relatives and unpaid helpers”, cited by almost one third of survey participants, while “policy makers at government level” was indicated by about one sixth of the respondents to barely exist.

The most frequently cited challenge for innovation in the public sector was “better coordination and collaboration with other organizations” (close to 45%). “Reduced costs” was the least frequent reply (about 10%). The most frequently cited major barrier to innovation in the public social sector was “tight budgets” (over one third); “power of specialists” was the most infrequent (cited by about one tenth of the respondents).

Variables	***# of items***	***Mean***	***Sd***	***Rel.***	***Comments***
Antecedents					
Connectedness	2	2.87	.83	.62	
Employee's professionalism	2	3.49	.86	.77	
Ethics and morality	3	3.21	.89	.73	w/o 3
Internal Politics	3	3.04	1.03	.68	w/o 3
Promoters of innovation	8	3.26	.86	.90	
Public sector Leadership/ vision	2	2.87	.93	.80	
Responsiveness	3	2.52	1.03	.52	w/o 3 (with 3 =.58)
Innovation					
Innovation	2	2.58	.76	.15	Reverse 2
Innovativeness	5	2.80	.92	.68	w/o 2,4,5
Consequences					
Image	3	3.46	.95	.72	w/o 3
Satisfaction from Services	6	2.95	.57	.71	
Trust in Institutions	8	2.85	.60	.79	w/4

Gender: 64.3% Female
Age: M=45.48, s.d.=16.96
Education: M=15.64 s.d.=3.94
Sector Employee: 39.1% third sector, 60.9% Public Sector,
Income: 32.6% below average, 39.2% average income, 28.2% above average

Correlation matrix (Cronbach-Alpha in parentheses)

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11
1. Innovativeness (in the sector)	2.80	.92	(.67)										
2. Promoters of innovation	3.26	.86	.44**	(.90)									
3. Internal Politics	3.04	1.03	-.07	-.09*	(.68)								
4. Image	3.46	.95	.19**	.24**	.03	(.72)							
5. Employee's professionalism	3.49	.86	.10*	.17**	-.29**	.30**	(.77)						
6. Public sector Leadership/ vision	2.87	.93	.31**	.29**	-.12*	.37**	.35**	(.80)					
7. Responsiveness	2.52	1.03	.32**	.26**	-.12*	.30**	.27**	.40**	(.52)				
8. Ethics and morality	2.58	.76	.14**	.13*	-.25**	.25**	.52**	.41**	.30**	(.73)			
9. Connectedness	3.21	.89	.35**	.30**	-.16**	.31**	.38**	.45**	.43**	.45**	(.62)		
10. Satisfaction from Service	2.87	.83	.33**	.23**	-.18**	.28**	.38**	.43**	.37**	.38**	.44**	(.71)	
11. Trust in Institution	2.95	.57	.18**	.18**	-.24**	.30**	.45**	.39**	.32**	.47**	.39**	.70**	(.79)

N=592-620;

* $p \leq .05$

** $p \leq .01$

Key Results

Reliabilities of the innovativeness, internal politics, responsiveness, and connectedness were all somewhat low (between .52 and .68) and should be treated with caution; the reliability for the innovation scale was very low (.15). This scale had low reliabilities in almost every country that was surveyed, and it should be considered even more cautiously.

Of the variables measured, employee professionalism had the highest mean (3.49), and responsiveness the lowest (2.52). The antecedents most strongly related to innovativeness were connectedness and responsiveness (r =.35 and .32, respectively), as well as leadership and vision (r =.31). Weaker relationships were found for ethics and morality and employee professionalism. Of the three consequences, innovativeness was most strongly associated with satisfaction from service (r =.33).

Ireland

Distributed: 220

Collected: 118

Response Rate: 53.6%

Organization characteristic	Barely at all				To a very large extent
	Percent %				
Main Function	**1**	**2**	**3**	**4**	**5**
Promote awareness among the general public	1.7	12.8	44.4	27.4	13.7
Promote awareness among practitioners/ professionals/ policymakers	0	9.4	29.9	51.3	9.4
Support for users (or relatives etc.)	1.7	1.7	17.1	23.9	55.6
Pressure for the development of new or improved services	0	3.4	11.1	53.8	31.6
Fund and promote research	3.4	27.6	33.6	22.4	12.9
Aim of influence					
Policy-makers at government level	4.3	6.1	27.8	54.8	7.0
Policy-makers at social service operational level	0.9	7.0	12.2	71.3	8.7
Social sector professionals	0	3.4	19.8	65.5	11.2
Users, relatives and unpaid helpers	0	7.8	30.2	37.9	24.1
The general public	0.9	11.4	49.1	28.1	10.5
Specific sections of the public	1.7	6.0	12.1	62.1	18.1

	# of items	Mean	Sd	Rel.	Comments
Innovativeness at the organization	8	3.25	.47	.71	Reverse 1,8

Evaluation of the Public Sector	A	B	C	D	E
Innovativeness	Percent %				
What is the major challenge for innovation in the public social sector? *(A) Personalized services. (B) Better communication. (C) Reduced costs (D) Better coordination and collaboration with other organizations. (E). Other*	1.7	16.2	2.6	76.1	3.4
What is the major barrier to innovation in the public social sector? *(A) Tight budgets. (B) Red tape. (C) Power of specialists. (D) Employees' lack of motivation (E) Other*	14.9	43.9	14.9	15.8	10.5

Key Results

More than half of the survey participants listed "support for users" as the most characteristic main function of the organization; the function most commonly listed as barely existent was

"fund and promote research", by about 30% of the participants (most of whom indicated the second lowest rather than the lowest frequency). Of the aims of influence listed, the aim most commonly cited as important was "Users, relatives and unpaid helpers", in about one quarter of the cases, while "the general public" was chosen by over one third to be relatively non-existent in this respect (again, this refers to the two lowest frequencies).

Over three quarters of the sample indicated that the biggest challenge for innovation in the public sector was "Better coordination and collaboration with other organizations", making this the most frequent response; the least frequent was "personalized services" (cited by less than 2%). The most frequent major barrier to innovation in the public social sector was "red tape" (close to 50% of the respondents), with the least common responses being "tight budgets" and "power of specialists" at about 15% each.

Variables	***# of items***	***Mean***	***Sd***	***Rel.***	***Comments***
Antecedents					
Connectedness	2	2.83	.62	.62	
Employee's professionalism	2	3.73	.61	.85	
Ethics and morality	3	3.12	.69	.74	Reverse 3
Internal Politics	3	3.21	.64	.67	Reverse 3
Promoters of innovation	8	3.31	.67	.89	
Public sector Leadership/ vision	2	2.78	.70	.76	
Responsiveness	3	2.48	.56	.75	w/o 3
Innovation					
Innovation	2	2.49	.55	.07	Reverse 2
Innovativeness	5	2.76	.62	.65	w/o2,4,5
Consequences					
Image	3	3.34	.62	.70	w/o 3
Satisfaction from Services	6	2.89	.35	.53	
Trust in Institutions	8	2.83	.42	.80	

Gender: 79.7% Female
Age: M=36.9, s.d.=8.52
Education: M=19.1 s.d.=3.09
Sector Employee: 5.3% third sector, 94.7% Public Sector,
Income: 5.2% below average, 54.3% average income, 40.5% above average

Correlation matrix (Cronbach-Alpha in parentheses)

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11
1. Innovativeness (in the sector)	2.76	.62	(.65)										
2. Promoters of innovation	3.31	.67	.16	(.89)									
3. Internal Politics	3.21	.64	-.11	-.21*	(.67)								
4. Image	3.34	.62	.32**	.25*	-.36**	(.70)							
5. Employee's professionalism	3.73	.61	.18	.16	-.38**	.30**	(.85)						
6. Public sector Leadership/ vision	2.78	.70	.14	.18*	-.48**	.16	.23*	(.76)					
7. Responsiveness	2.48	.56	.34**	.06	-.15	.26*	.08	.12	(.75)				
8. Ethics and morality	3.12	.69	.04	.29*	-.32**	.51**	.43**	.35**	.07	(.74)			
9. Connectedness	2.83	.62	.12	.21*	-.36**	.29**	.30**	.33**	.11	.27*	(.62)		
10. Satisfaction from Service	2.89	.35	.38**	.28*	-.06	.39**	.22*	.32**	.16	.34**	.42**	(.53)	
11. Trust in Institution	2.83	.42	.21*	.37**	-.27*	.42**	.32**	.34**	.13	.59**	.45**	.53**	(.80)

N=118-113
* p≤.05
** p≤.01

Key Results

Reliabilities for the innovativeness, connectedness, and satisfaction from service scales were somewhat low (ranging between .53 and .67) and should be treated with caution; the reliability from the innovation scale was close to non-existent (.07).

Of the variables measured, employee professionalism had the highest mean (3.73), and responsiveness the lowest (2.48). Innovativeness was related to only one of the antecedents, responsiveness (r =.34), but was correlated with all three consequences: r =.38 for satisfaction from service, .21 for trust in institution, and .32 for image.

Israel

Distributed: 140

Responses: 103

Response Rate: 73.6%

Organization characteristic	*Barely at all*				*To a very large extent*
			Percent %		
Main Function	***1***	***2***	***3***	***4***	***5***
Promote awareness among the general public	8.9	11.9	8.9	41.6	28.7
Promote awareness among practitioners/ professionals/ policymakers	7.9	13.9	13.9	44.6	19.8
Support for users (or relatives etc.)	4.0	5.1	12.1	35.4	43.4
Pressure for the development of new or improved services	6.1	15.2	17.2	33.3	28.3
Fund and promote research	39.4	26.3	12.1	15.2	7.1
Aim of influence					
Policy-makers at government level	10.8	9.8	19.6	35.3	24.5
Policy-makers at social service operational level	2.9	6.9	9.8	44.1	36.3
Social sector professionals	5.9	14.7	13.7	33.3	32.4
Users, relatives and unpaid helpers	3.0	7.9	5.9	42.6	40.6
The general public	0	3.9	18.6	41.2	36.3
Specific sections of the public	9.6	9.6	24.5	22.3	34.0

	# of items	*Mean*	*Sd*	*Rel.*	*Comments*
Innovativeness at the organization	8	3.13	.63	.71	Reverse 8; w/o 1

Evaluation of the Public Sector	***A***	***B***	***C***	***D***	***E***
Innovativeness			*Percent %*		
What is the major challenge for innovation in the public social sector? *(A) Personalized services. (B) Better communication. (C) Reduced costs (D) Better coordination and collaboration with other organizations. (E) Other*	27.2	16.3	10.9	45.7	0
What is the major barrier to innovation in the public social sector? *(A) Tight budgets. (B) Red tape. (C) Power of specialists. (D) Employees' lack of motivation (E) Other*	54.3	19.1	4.3	21.3	1.1

Key Results

Of the main functions listed, more than 40% of the survey participants listed "support for users" as most prominent; the function most often listed as barely existent was "fund and

promote research", by close to 40% of the participants. Of the aims of influence listed, the aim most commonly cited as important was "Users, relatives and unpaid helpers", cited by about 40% of survey participants, while "policy makers at government level" was said to be barely existent by about one tenth of the respondents.

The most frequently cited challenge for innovation in the public sector was "better coordination and collaboration with other organizations" (by close to half of the respondents), while "reduced costs" was the least frequent (a little over 10%). The most frequently cited major barrier to innovation in the public social sector was "tight budgets" (more than half), while fewer than 5% cited "power of specialists".

Variables	*# of items*	*Mean*	*Sd*	*Rel.*	*Comments*
Antecedents					
Connectedness	2	2.94	.99	.71	
Employee's professionalism	2	3.03	.99	.83	
Ethics and morality	3	3.02	.93	.69	Reverse 3; .88 w/o 3
Internal Politics	3	3.22	1.07	.84	w/o 3
Promoters of innovation	8	3.48	.85	.93	
Public sector Leadership/ vision	2	2.73	.91	.84	
Responsiveness	3	2.70	.88	.84	
Innovation					
Innovation	2	2.56	.87	.32	
Innovativeness	5	2.92	.75	.68	Reverse 4; w/o 5
Consequences					
Image	3	3.15	.85	.67	
Satisfaction from Services	6	2.85	.70	.82	
Trust in Institutions	8	2.54	.63	.83	w/o 4

Gender: 62.1% Female
Age: M=37.15, s.d.=12.07
Education: M=14.76 s.d.=2.64
Sector Employee: 38.9% third sector, 61.1% Public Sector,
Income: 60.7% below average, 31.1% average income, 8.2% above average

Correlation matrix (Cronbach-Alpha in parentheses)

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11
1. Innovativeness (in the sector)	2.92	.75	(.68)										
2. Promoters of innovation	3.48	.85	.39**	(.93)									
3. Internal Politics	3.22	1.07	-.17	-.27*	(.84)								
4. Image	3.15	.85	.22*	.17	-12	(.67)							
5. Employee's professionalism	3.03	.99	.31**	.24*	-.40**	.53**	(.83)						
6. Public sector Leadership/ vision	2.73	.91	.21*	.14	-.29*	.39**	.56**	(.84)					
7. Responsiveness	2.70	.88	.41**	.14	-.29*	.35**	.59**	.52**	(.84)				
8. Ethics and morality	3.02	.93	.28*	.12	-.39*	.26*	.66**	.57**	.56**	(.88)			
9. Connectedness	2.94	.99	.35**	.32*	-.40*	.34*	.54**	.45**	.59**	.56**	(.71)		
10. Satisfaction from Service	2.85	.70	.16	-.09	-.25*	21*	.37**	.40**	.50**	.37**	.33**	(.82)	
11. Trust in Institution	2.54	.63	.30**	-.04	-.29**	.22*	.34**	.33*	.49**	.47**	.39**	.74**	(.83)

N=99-102;
* $p \leq .05$
** $p \leq .01$

Key Results

Reliabilities of the innovativeness, image, and ethics and morality scales were all somewhat low (between .67 and .69) and should be treated with caution; the reliability for the innovation scale was very low (.32) and it should be considered even more cautiously.

Of the variables measured, promoters of innovation had the highest mean (3.48), and trust in institution the lowest (2.54). Among the antecedents, connectedness and responsiveness both had moderate relationships with innovativeness (r =.35 and .41, respectively). Weaker correlation were found between innovativeness and several other antecedents, including employee professionalism ethics and morality, and leadership and vision. Innovativeness was linked to two of the consequences: trust in institution (r =.30) and image (r=.22).

Lithuania

Distributed: 120

Responses: 68

Response Rate: 56.7%

Organization characteristic	Barely at all				To a very large extent
	Percent %				
Main Function	**1**	**2**	**3**	**4**	**5**
Promote awareness among the general public	7.5	17.9	28.4	25.4	20.9
Promote awareness among practitioners/ professionals/ policymakers	23.4	14.1	25.0	17.2	20.3
Support for users (or relatives etc.)	11.9	13.4	11.9	31.3	31.3
Pressure for the development of new or improved services	6.2	13.8	21.5	36.9	21.5
Fund and promote research	18.5	29.2	15.4	23.1	13.8
Aim of influence					
Policy-makers at government level	33.2	22.7	18.2	13.6	12.1
Policy-makers at social service operational level	10.8	33.8	32.3	20.0	3.1
Social sector professionals	13.8	36.9	20.0	21.5	7.7
Users, relatives and unpaid helpers	10.8	16.9	29.2	18.5	24.6
The general public	4.5	13.6	28.8	34.8	18.2
Specific sections of the public	12.3	10.8	20.0	24.6	32.3

	# of items	*Mean*	*Sd*	*Rel.*	*Comments*
Innovativeness at the organization	8	3.10	.60	.73	w/o 1,8

Evaluation of the Public Sector	***A***	***B***	***C***	***D***	***E***
Innovativeness	***Percent %***				
What is the major challenge for innovation in the public social sector? *(A) Personalized services. (B) Better communication. (C) Reduced costs (D) Better coordination and collaboration with other organizations. (E). Other*	34.8	12.1	4.5	47.0	1.5
What is the major barrier to innovation in the public social sector? *(A) Tight budgets. (B) Red tape. (C) Power of specialists. (D) Employees' lack of motivation (E) Other*	30.8	36.9	7.7	23.1	1.5

Key Results

Of the main functions listed, nearly one third of the survey participants listed “support for users” as most prominent; the function most commonly listed as barely existent was “Promote

awareness among practitioners/ professionals/ policymakers", by about one quarter of the participants. Of the aims of influence listed, the aim most commonly cited as important was "Specific sections of the public", cited by almost one third of survey participants, while "policy makers at government level" was indicated by a similar percentage to barely exist.

Close to one half of the respondents cited "better coordination and collaboration with other organizations " as the biggest challenge for innovation in the public sector, while less than 5% indicated "reduced costs" as a challenge. The most frequently cited major barrier to innovation in the public social sector was "red tape" (over one third); the least frequent was "power of specialists" (less than one in ten).

Variables	***# of items***	***Mean***	***Sd***	***Rel.***	***Comments***
Antecedents					
Connectedness	2	2.99	.86	.66	
Employee's professionalism	2	3.20	.71	.60	
Ethics and morality	3	2.70	.82	.82	Reverse 3
Internal Politics	3	3.11	.85	.62	Reverse 3
Promoters of innovation	8	3.24	.68	.82	
Public sector leadership/ vision	2	2.99	.81	.73	
Responsiveness	3	2.82	1.58	.81	w/o 3
Innovation					
Innovation	2	2.75	.83	.67	Reverse 2
Innovativeness	5	3.41	.56	.69	w/o 4,5
Consequences					
Image	3	3.21	.74	.70	
Satisfaction from Services	6	2.97	.52	.68	
Trust in Institutions	8	2.84	.51	.71	

Gender: 67.2% Female.
Age: M=34.60, s.d.=12.83
Education: M=16.73 s.d.=2.18
Sector Employee: 79.4% public sector.
Income: 28.8% below average, 45.5% average income, 25.8% above average

Correlation matrix (Cronbach-Alpha in parentheses)

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11
1. Innovativeness (in the sector)	3.41	.56	(.69)										
2. Promoters of innovation	3.24	.68	.66**	(.82)									
3. Internal Politics	3.11	.85	-.02	.01	(.62)								
4. Image	3.21	.74	.49**	.38*	-.03	(.70)							
5. Employee's professionalism	3.20	.71	.30*	.35*	-.09	.39*	(.60)						
6. Public sector Leadership/ vision	2.99	.81	.23	.29*	-.35*	.35*	.44**	(.73)					
7. Responsiveness	2.82	1.58	.30*	.36*	-.43**	.32*	.56**	.66**	(.81)				
8. Ethics and morality	2.70	.82	.21	.11	-.27*	.10	.49**	.37**	.44**	(.82)			
9. Connectedness	2.99	.86	.29*	.38*	-.26*	.32**	.49**	.59**	.65**	.58**	(.66)		
10. Satisfaction from Service	2.97	.52	.15	.17	.13	.15	.39**	.38**	.49**	.24	.44**	(.68)	
11. Trust in Institution	2.84	.51	.06	.06	-.22	.19	.38**	.36**	.51**	.24	.47**	.70**	(.71)

N=63-67;
* $p \leq .05$
** $p \leq .01$

Key Results

Reliabilities of the innovativeness, internal politics, employees' professionalism, responsiveness, innovation, connectedness, and satisfaction from service scales were all somewhat low (between .60 and .69) and should be treated with caution.

Of the variables measured, innovativeness had the highest mean (3.41), and ethics and morality the lowest (2.70). Three of the antecedent variables were related to innovativeness: employee professionalism, responsiveness, and connectedness (r = .30 for the first two and .29 for the latter). Innovativeness was correlated with one of the consequences – image; the relationship was relatively strong (r =.49).

Netherlands

Distributed: 150

Collected: 20

Response Rate: 13.3%

Organization characteristic	Barely at all				To a very large extent
	Percent %				
Main Function	**1**	**2**	**3**	**4**	**5**
Promote awareness among the general public	0	12.5	43.8	37.5	6.3
Promote awareness among practitioners/ professionals/ policymakers	0	7.1	35.7	35.7	21.4
Support for users (or relatives etc.)	0	0	10.5	21.1	68.4
Pressure for the development of new or improved services	0	5.3	0	63.2	31.6
Fund and promote research	20.0	46.7	33.3	0	0
Aim of influence					
Policy-makers at government level	0	5.3	21.1	42.1	31.6
Policy-makers at social service operational level	0	5.3	26.3	52.6	15.8
Social sector professionals	12.5	6.3	31.3	43.8	6.3
Users, relatives and unpaid helpers	0	0	5.3	26.3	68.4
The general public	5.6	22.2	44.4	22.2	5.6
Specific sections of the public	13.3	20.0	33.3	20.0	13.3

	# of items	*Mean*	*Sd*	*Rel.*	*Comments*
Innovativeness at the organization	8	3.37	.61	.71	w/o 1,7,8

Evaluation of the Public Sector	*A*	*B*	*C*	*D*	*E*
Innovativeness	*Percent %*				
What is the major challenge for innovation in the public social sector? *(A) Personalized services. (B) Better communication. (C) Reduced costs (D) Better coordination and collaboration with other organizations. (E). Other*	64.3	21.4	0	7.1	7.1
What is the major barrier to innovation in the public social sector? *(A) Tight budgets. (B) Red tape. (C) Power of specialists. (D) Employees' lack of motivation (E) Other*	7.1	50.0	14.3	7.1	21.4

Key Results

About 70% of the survey participants listed “support for users” as the most characteristic main function of the organization; the function most commonly listed as barely existent was

"fund and promote research", by about 20% of the participants. Of the aims of influence listed, the aim most commonly cited as important was "Users, relatives and unpaid helpers", in about two thirds of the cases, while "specific sections of the public" were chosen by over one third to be relatively non-existent in this respect.

Over 60% of the sample indicated that the biggest challenge for innovation in the public sector was "personalized services", making this the most frequent response; the least frequent was "reduced costs", which was not cited at all. The most frequent major barrier to innovation in the public social sector was "red tape" (chosen by 50% of the respondents), with the least common responses being "tight budgets" and "employees' lack of motivation" at about 7% each.

Variables	***# of items***	***Mean***	***Sd***	***Rel.***	***Comments***
Antecedents					
Connectedness	2	2.58	.75	.55	
Employee's professionalism	2	3.28	1.01	.81	
Ethics and morality	3	3.46	.89	.71	
Internal Politics	3	3.16	.87	.60	w/o 3
Promoters of innovation	8	2.69	.88	.90	
Public sector Leadership/ vision	2	2.75	.84	.91	
Responsiveness	3	2.11	.74	.79	
Innovation					
Innovation	2	2.25	.73	.60	
Innovativeness	5	2.57	.71	.78	Reverse 4; w/o 5
Consequences					
Image	3	3.86	.72	.88	w/o 3
Satisfaction from Services	6	2.71	.51	.66	w/o 2
Trust in Institutions	8	2.76	.44	.62	w/o 3

Gender: 21.1% Female
Age: M=50.94, s.d.=9.78
Education: M=18.21 s.d.=2.01
Sector Employee: 36.8% third sector, 63.2% Public Sector,
Income: 16.7% below average, 11.1% average income, 72.2% above average

Key Results

Of the variables measured, image had the highest mean (3.86), and responsiveness the lowest (2.11). Reliabilities for the innovation, internal politics, connectedness, trust in institution and satisfaction from service scales were somewhat low (ranging between .55 and .62) and should be treated with caution.

Due to the small sample size, we did not perform a separate analysis of correlations for the Netherlands.

Norway

Distributed: 225

Responses: 121

Response Rate: 53.8%

Organization characteristic	Barely at all				To a very large extent
	Percent %				
Main Function	**1**	**2**	**3**	**4**	**5**
Promote awareness among the general public	8.8	9.8	28.4	31.4	21.6
Promote awareness among practitioners/ professionals/ policymakers	9.4	4.7	15.1	44.3	26.4
Support for users (or relatives etc.)	6.6	7.5	26.4	32.1	27.4
Pressure for the development of new or improved services	9.7	13.6	26.2	33.0	17.5
Fund and promote research	41.1	26.3	14.7	10.5	7.4
Aim of influence					
Policy-makers at government level	29.7	15.8	17.8	17.8	18.8
Policy-makers at social service operational level	2.8	3.7	18.7	42.1	32.7
Social sector professionals	2.9	4.9	30.1	36.9	25.2
Users, relatives and unpaid helpers	13.3	0	27.6	31.4	27.6
The general public	10.0	13.0	33.0	25.0	19.0
Specific sections of the public	13.1	8.3	31.0	27.4	20.2

	# of items	*Mean*	*Sd*	*Rel.*	*Comments*
Innovativeness at the organization	8	2.98	.85	.81	Reverse 8

Evaluation of the Public Sector	*A*	*B*	*C*	*D*	*E*
Innovativeness	*Percent %*				
What is the major challenge for innovation in the public social sector? *(A) Personalized services. (B) Better communication. (C) Reduced costs (D) Better coordination and collaboration with other organizations. (E) Other*	14.3	33.0	21.4	28.6	2.7
What is the major barrier to innovation in the public social sector? *(A) Tight budgets. (B) Red tape. (C) Power of specialists. (D) Employees' lack of motivation (E) Other*	56.4	24.5	15.5	2.7	0.9

Key Results

Of the main functions listed, more than one quarter of the survey participants listed “support for users” as most characteristic of the organization, with a similar percentage responding that to

"Promote awareness among practitioners/ professionals/ policymakers" was most important; the function most commonly listed as barely existent was "fund and promote research", by about 40% of the participants. Of the aims of influence listed, the most commonly cited as important was "Policy-makers at social service operational level", by almost one third of survey participants. "Policy makers at government level" was indicated by about 30% to barely exist.

Approximately one third of the respondents indicated that the biggest challenge for innovation in the public sector was "better communication", making it the most frequent reply; the least frequent was "personalized services" (about 15%). The most frequently cited major barrier to innovation in the public social sector was "tight budgets" (over one half), with the least common response being "employees lack of motivation" at less than 3%.

Variables	*# of items*	*Mean*	*Sd*	*Rel.*	*Comments*
Antecedents					
Connectedness	2	3.18	.91	.77	
Employee's professionalism	2	3.91	.78	.68	
Ethics and morality	3	3.70	.93	.70	Reverse 3
Internal Politics	3	2.84	.93	.68	w/o 3
Promoters of innovation	8	3.37	.89	.82	
Public sector Leadership/ vision	2	3.32	.91	.73	
Responsiveness	3	2.85	.88	.84	
Innovation					
Innovation	2	2.76	.90	.49	Reverse 2
Innovativeness	5	3.00	.73	.75	Reverse 4; w/o 5
Consequences					
Image	3	3.56	.83	.76	
Satisfaction from Services	6	3.28	.55	.72	
Trust in Institutions	8	3.30	.60	.79	

Gender: 47.1% Female
Age: M=71.45, s.d.=7.29
Education: M=12.18 s.d.=10
Sector Employee: no response
Income: 57.9% below average, 30.7% average income, 11.4% above average.

Correlation matrix (Cronbach-Alpha in parentheses)

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11
1. Innovativeness (in the sector)	3.00	.73	(.75)										
2. Promoters of innovation	3.37	.89	.29*	(.82)									
3. Internal Politics	2.84	.93	-.20*	-.16	(.68)								
4. Image	3.56	.83	.13	.28*	-.12	(.76)							
5. Employee's professionalism	3.91	.78	.12	.32*	-.19*	.36**	(.68)						
6. Public sector Leadership/ vision	3.32	.91	.35**	.28*	-.31**	.44**	.29**	(.73)					
7. Responsiveness	2.85	.88	.46**	.34*	-.31**	.26*	.27*	.50**	(.84)				
8. Ethics and morality	2.76	.90	.30*	.20*	-.20*	.13	.34**	.42**	.35**	(.70)			
9. Connectedness	3.70	.93	.50**	.27*	-.16	.34**	.36**	.34**	.57**	.36**	(.77)		
10. Satisfaction from Service	3.18	.91	.48**	.37**	-.16	.39**	.26*	.41**	.56**	.40**	.57**	(.72)	
11. Trust in Institution	3.28	.55	.23*	.37**	-.29*	.31**	.35**	.44**	.41**	.49**	.34**	.62**	(.79)

N=118-96
* p≤.05
** p≤.01

Key Results

Reliabilities for the internal politics and employees' professionalism scales were somewhat low (.68 in both cases) and should be treated with caution; the innovation scale had a reliability of .49.

Of the variables measured, connectedness had the highest mean (3.70), and ethics and morality the lowest (2.76). As was the case in most of the other countries, both connectedness and responsiveness had the strongest association to innovativeness, and in Norway, these relationships were stronger than in other countries: r =.50 for connectedness and .46 for responsiveness. Perception of an ethical and moral public sector was also related to innovativeness, as was leadership and vision (r =.30 and .35, respectively). Innovativeness was linked to two of the consequences. It was moderately correlated with satisfaction from service (r =.48) and had a weaker relationship with trust in institution (r =.23).

Slovakia

Distributed:

Responses: 81

Response Rate: %

Organization characteristic	Barely at all				To a very large extent
	Percent %				
Main Function	**1**	**2**	**3**	**4**	**5**
Promote awareness among the general public	1.3	7.5	20.0	37.5	33.8
Promote awareness among practitioners/ professionals/ policymakers	3.7	9.9	19.8	40.7	25.9
Support for users (or relatives etc.)	1.2	7.4	12.3	32.1	46.9
Pressure for the development of new or improved services	0	3.8	12.5	48.8	35.0
Fund and promote research	21.3	30.0	17.5	16.3	15.0
Aim of influence					
Policy-makers at government level	13.8	25.0	28.8	26.3	6.3
Policy-makers at social service operational level	12.3	12.3	18.5	44.4	12.3
Social sector professionals	3.7	8.6	17.3	43.2	27.2
Users, relatives and unpaid helpers	2.5	1.3	17.7	45.6	32.9
The general public	1.2	8.6	33.3	40.7	16.0
Specific sections of the public	6.4	9.0	21.8	35.9	26.9

	# of items	*Mean*	*Sd*	*Rel.*	*Comments*
Innovativeness at the organization	8	3.36	.66	.78	Reverse 8

Evaluation of the Public Sector	*A*	*B*	*C*	*D*	*E*
Innovativeness	*Percent %*				
What is the major challenge for innovation in the public social sector? *(A) Personalized services. (B) Better communication. (C) Reduced costs (D) Better coordination and collaboration with other organizations. (E) Other*	26.3	32.5	6.3	33.8	1.3
What is the major barrier to innovation in the public social sector? *(A) Tight budgets. (B) Red tape. (C) Power of specialists. (D) Employees' lack of motivation (E) Other*	33.8	45.5	7.8	11.7	1.3

Key Results

Of the main functions listed, close to half of the survey participants listed “support for users” as most characteristic of the organization; the function most commonly listed as barely existent

was “fund and promote research”, by about 20% of the participants. Of the aims of influence listed, the aim most commonly cited as important was “Users, relatives and unpaid helpers”, by almost one third of survey participants, while “policy makers at government level” were indicated by about one in seven to barely exist.

Approximately one third of the respondents marked “Better coordination and collaboration with other organizations” as the biggest challenge for innovation in the public sector, with a similar percentage choosing “better communication”, making these the most frequent responses; the least frequent was “personalized services” (about 6%). The most frequently cited major barrier to innovation in the public social sector was “red tape” (by nearly one half of the respondents), with the least common response being “employees lack of motivation” at less than 10%.

Variables	***# of items***	***Mean***	***Sd***	***Rel.***	***Comments***
Antecedents					
Connectedness	2	2.75	.72	.61	
Employee's professionalism	2	3.03	.65	.72	
Ethics and morality	3	2.85	.65	.69	w/o 3
Internal Politics	3	3.00	.64	.70	Reverse 3
Promoters of innovation	8	3.40	.94	.94	
Public sector Leadership/ vision	2	2.82	.70	.78	
Responsiveness	3	2.10	.68	.85	
Innovation					
Innovation	2	2.48	.52	.33	Reverse 2
Innovativeness	5	3.44	.73	.77	Reverse 4
Consequences					
Image	3	2.96	.77	.76	w/o 3
Satisfaction from Services	6	2.83	.63	.85	
Trust in Institutions	8	2.59	.55	.82	

Gender: 65.3% Female
Age: M=36.1, s.d.=11.14
Education: M=16.53 s.d.=3.06
Sector Employee: no response
Income: 19.8% below average, 46.9% average income, 33.3% above average.

Correlation matrix (Cronbach-Alpha in parentheses)

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11
1. Innovativeness (in the sector)	3.44	.73	(.77)										
2. Promoters of innovation	3.40	.94	.70**	(.94)									
3. Internal Politics	3.00	.64	-.50**	-.41**	(.70)								
4. Image	2.96	.77	.33*	.44**	-.19	(.76)							
5. Employee's professionalism	3.03	.65	.53**	.43**	-.35**	.26*	(.72)						
6. Public sector Leadership/ vision	2.82	.70	.55**	.42**	-.51**	.32*	.66**	(.78)					
7. Responsiveness	2.10	.68	.30*	.30*	-.10	.31*	.47**	.53**	(.85)				
8. Ethics and morality	2.85	.65	.37**	.32*	-.28*	.45**	.51**	.47**	.51**	(.69)			
9. Connectedness	2.75	.72	.46**	.32*	-.11	.41**	.39**	.43**	.31*	.46**	(.61)		
10. Satisfaction from Service	2.83	.63	.76**	.60*	-.50**	.25*	.59**	.54**	.20	.43**	.49**	(.85)	
11. Trust in Institution	2.59	.55	.61**	.43**	-.44**	.25*	.55**	.39**	28**	.48**	.49**	.78**	(.82)

N=592-620;
* p≤.05
** p≤.01

Key Results

Reliabilities for the ethics and morality and employee professionalism scales were somewhat low (.68 in both cases) and should be treated with caution; the innovation scale, with a reliability of .33, should be treated even more so.

Of the variables measured, innovativeness had the highest mean (3.44), and responsiveness the lowest (2.10). Unlike other countries, in the Slovakian sample, employee professionalism and leadership/vision were the antecedents most strongly associated with innovativeness (r =.53 for the first, and .55 for the second). Internal politics had a fairly strong negative relationship to innovativeness compared to other countries: r =-.50. Innovativeness was linked to all three consequences; its relationship with satisfaction from service was especially strong (r =.76); it also had a correlation of .61 with trust in institution.

Spain

Distributed: 120

Responses: 72

Response Rate: 60%

Organization characteristic	Barely at all				To a very large extent
	Percent %				
Main Function	**1**	**2**	**3**	**4**	**5**
Promote awareness among the general public	18.6	18.6	34.3	20.0	8.6
Promote awareness among practitioners/ professionals/ policymakers	11.8	20.6	32.4	20.6	14.7
Support for users (or relatives etc.)	5.6	4.2	14.1	26.8	49.3
Pressure for the development of new or improved services	9.0	11.9	22.4	41.8	14.9
Fund and promote research	40.3	14.9	28.4	11.9	4.5
Aim of influence					
Policy-makers at government level	37.3	14.9	17.9	22.4	7.5
Policy-makers at social service operational level	19.1	13.2	20.6	33.8	13.2
Social sector professionals	1.4	11.6	21.7	44.9	20.3
Users, relatives and unpaid helpers	7.0	2.8	32.4	28.2	29.6
The general public	10.3	8.8	36.8	35.3	8.8
Specific sections of the public	10.9	20.3	35.9	31.3	1.6

	# of items	Mean	Sd	Rel.	Comments
Innovativeness at the organization	8	2.89	.54	.74	w/o 7,8

Evaluation of the Public Sector	A	B	C	D	E
Innovativeness	Percent %				
What is the major challenge for innovation in the public social sector? *(A) Personalized services. (B) Better communication. (C) Reduced costs (D) Better coordination and collaboration with other organizations. (E) Other*	27.3	28.8	18.2	24.2	1.5
What is the major barrier to innovation in the public social sector? *(A) Tight budgets. (B) Red tape. (C) Power of specialists. (D) Employees' lack of motivation (E) Other*	31.1	34.4	4.9	27.9	1.6

Key Results

Of the main functions listed, close to half of the survey participants listed “support for users” as most characteristic of the organization; the function most commonly listed as barely existent was “fund and promote research”, by about 40% of the participants. Of the aims of influence

listed, the aim most commonly cited as important was “Users, relatives and unpaid helpers”, in about 30% of cases, while “Policy-makers at government level” were indicated by over one third to barely exist in this respect.

Nearly 30% of the respondents chose “Better communication” as being the biggest challenge for innovation in the public sector, with a similar percentage choosing “personalized services”, making these the most frequent responses; the least frequent was “reduced costs” (cited by about one fifth). The most frequently chosen major barrier to innovation in the public social sector was “red tape” (over one third of the respondents), and the least common response was “power of specialists” with less than 5%.

Variables	***# of items***	***Mean***	***Sd***	***Rel.***	***Comments***
Antecedents					
Connectedness	2	2.70	.82	.71	
Employee's professionalism	2	3.56	.81	.64	
Ethics and morality	3	3.44	.64	.54	w/o 3
Internal Politics	3	3.00	.61	.64	Reverse 3
Promoters of innovation	5	2.95	.94	.93	
Public sector Leadership/ vision	2	2.95	.98	.71	
Responsiveness	3	2.37	.80	.76	
Innovation					
Innovation	2	2.73	.54	.29	Reverse 2
Innovativeness	5	2.97	.59	.77	Reverse 4
Consequences					
Image	3	3.49	.75	.64	
Satisfaction from Services	6	2.90	.49	.48	.66 w/o 1-4
Trust in Institutions	8	2.74	.58	.67	

Gender: 80.3% Female
Age: M=44.28, s.d.=9.34
Education: M=15.24 s.d.=4.38
Sector Employee: no response
Income: 33.8% below average, 4 9.3% average income, 16.9% above average

Correlation matrix (Cronbach-Alpha in parentheses)

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10
1. Innovativeness (in the sector)	2.97	.59	(.77)									
2. Promoters of innovation	2.95	.94	.55**	(.93)								
3. Internal Politics	3.00	.61	.11	-.02	(.64)							
4. Image	3.49	.75	.16	.24*	.12	(.64)						
5. Employee's professionalism	3.56	.81	.13	.14	-.33*	.18	(.64)					
6. Public sector Leadership/ vision	2.95	.98	.60**	.61**	-.01	.28*	.35*	(.71)				
7. Responsiveness	2.37	.80	.34*	.49**	-.01	.18	.15	.50**	(.76)			
8. Ethics and morality	3.44	.64	.28*	.22	-.25*	.24*	.47*	.30*	.31*	(.53)		
9. Connectedness	2.70	.82	.28*	.50**	-.03	.27*	.35*	.54**	.48*	.43**	(.71)	
10. Trust in Institution	2.74	.58	.19	.11	-.06	.27*	.49*	.28*	.27*	.37**	.32*	(.67)

N=67-72;
* $p \leq .05$
** $p \leq .01$

Key Results

Reliabilities for the ethics and morality, internal politics, image, trust in institution and employee professionalism scales were somewhat low (ranging between .53 and .67) and should be treated with caution; this is even more true for the innovation scale, with a reliability of .29, and the satisfaction from service scale at .48.

Of the variables measured, employee professionalism had the highest mean (3.56), and responsiveness the lowest (2.37). Public sector leadership and vision was the antecedent with the strongest relationship to innovativeness (r =.60). Responsiveness, connectedness, and ethics and morality were also linked to innovativeness, though these relationships were weaker (in the .28-.34 range). Innovativeness was not related to any of the consequences in the Spanish survey.

Sweden

Distributed: 81

Collected: 43

Response Rate: 53.1%

Organization characteristic	Barely at all				To a very large extent
	Percent %				
Main Function	**1**	**2**	**3**	**4**	**5**
Promote awareness among the general public	0	0	14.0	11.6	74.4
Promote awareness among practitioners/ professionals/ policymakers	0	0	9.5	7.1	83.3
Support for users (or relatives etc.)	0	2.3	9.3	9.3	79.1
Pressure for the development of new or improved services	2.3	2.3	9.3	32.6	53.5
Fund and promote research	2.3	11.6	32.6	16.3	37.2
Aim of influence					
Policy-makers at government level	0	0	4.7	20.9	74.4
Policy-makers at social service operational level	2.3	4.7	16.3	27.9	48.8
Social sector professionals	2.3	7.0	25.6	20.9	44.2
Users, relatives and unpaid helpers	2.3	4.7	23.3	18.6	51.2
The general public	2.4	4.8	21.4	19.0	52.4
Specific sections of the public	9.3	14.0	23.3	16.3	37.2

	# of items	*Mean*	*Sd*	*Rel.*	*Comments*
Innovativeness at the organization	8	3.36	.77	.78	w/o 1,8

Evaluation of the Public Sector	*A*	*B*	*C*	*D*	*E*
Innovativeness	*Percent %*				
What is the major challenge for innovation in the public social sector? *(A) Personalized services. (B) Better communication. (C) Reduced costs (D) Better coordination and collaboration with other organizations. (E). Other*	28.9	13.2	50	0	7.9
What is the major barrier to innovation in the public social sector? *(A) Tight budgets. (B) Red tape. (C) Power of specialists. (D) Employees' lack of motivation (E) Other*	50.0	27.5	15	0	7.5

Key Results

Of the main functions listed, more than 80% of the survey participants listed “promote awareness among practitioners/ professionals/ policymakers” as characteristic of the organization

to the largest extent; the function most commonly listed as relatively less existent was “fund and promote research”, by about 15% of the participants (who marked the *two* lowest frequencies in the survey). Of the aims of influence listed, the aim most commonly cited as important was “Policy-makers at government level”, by about three quarters of survey participants, while “specific sections of the public” was indicated by about 10% to barely exist in this respect.

Approximately 30% of the respondents indicated that the biggest challenge for innovation in the public sector was “personalized services”, making it the most frequent reply; the least frequent was “better coordination and collaboration with other organizations” (no cases). The most frequently cited major barrier to innovation in the public social sector was “tight budgets” (50%), with the least common response being “employee lack of motivation” with no cases.

Variables	***# of items***	***Mean***	***Sd***	***Rel.***	***Comments***
Antecedents					
Connectedness	2	2.62	.91	.69	
Employee's professionalism	2	4.06	.70	.81	
Ethics and morality	3	3.48	1.15	.77	Reverse 3
Internal Politics	3	1.95	1.61	.75	w/o 3
Promoters of innovation	8	2.84	.89	.87	
Public sector Leadership/ vision	2	2.15	1.41	.83	
Responsiveness	3	1.86	.86	.65	
Innovation					
Innovation	2	2.12	.97	.34	
Innovativeness	5	2.47	1.06	.76	Reverse 4; w/o 5
Consequences					
Image	3	2.19	.93	.60	
Satisfaction from Services	6	2.84	.57	.74	
Trust in Institutions	8	2.87	.77	.86	

Gender: 61% Female
Age: M=48.2, s.d.=9.11
Education: M=14.82 s.d.=2.22
Sector Employee: missing data
Income: 19.1% below average, 11.9% average income, 69% above average

Correlation matrix (Cronbach-Alpha in parentheses)

Variable#	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11
1. Innovativeness (in the sector)	2.47	1.06	(.76)										
2. Promoters of innovation	2.84	.89	.27	(.87)									
3. Internal Politics	1.95	1.61	-.02	.22	(.75)								
4. Image	2.19	.93	.14	-.04	-.14	(.60)							
5. Employee's professionalism	4.06	.70	-.18	-.22	-.11	.09	(.81)						
6. Public sector Leadership/ vision	2.15	1.41	.11	.15	.05	.23	.14	(.83)					
7. Responsiveness	1.86	.86	.29	.26	.03	.30	.22	.30	(.65)				
8. Ethics and morality	3.48	1.15	.05	-.08	-.03	.09	.59**	.31*	.31*	(.77)			
9. Connectedness	2.62	.91	.32*	-.17	-.09	.19	.31*	.18	.38*	.37*	(.69)		
10. Satisfaction from Service	2.84	.57	.14	-.05	-.10	.32*	.18	.41*	.42*	.36*	.15	(.74)	
11. Trust in Institution	2.87	.77	.01	-.03	-.21	.34*	.27	.42*	.27	.38*	.17	.74**	(.86)

N=38-42
* p≤.05
** p≤.01

Key Results

Reliabilities for the image, responsiveness, and connectedness scales were somewhat low (between .60 and .69) and should therefore be treated with caution; the innovation scale had a reliability of .34.

Of the variables measured, employee professionalism had the highest mean (4.06), and responsiveness the lowest (1.86). There were fewer significant relationships in the Swedish sample than in other participating countries, and only connectedness was significantly correlated with innovativeness (r =.32).

Variable Index

Variables	*# of items*	*Reverse*	*Israel*	*Lithuania*	*Norway*	*Slovakia*	*Spain*	*Sweden*	*Ireland*	*Total # of items*	*No.*
Innovativeness (at the organization)	8	1,8	1	1,8			7,8	1,8		5	2,3,4,5,6
Innovativeness	5	4	5	4,5	5		4	5	2,4,5	2	1,3
Promoters of innovation	8									8	
Internal Politics	3	3	3		3			3		2	1,2
Image	3					3			3	2	1,2
Employee's professionalism	2									2	
Public sector Leadership/ vision	2									2	
Responsiveness	3			3					3	2	1,2
Innovation	2	2								2	
Ethics and morality	3	3				3	3			2	1,2
Connectedness	2									2	
Satisfaction from Service	6						NS			6	
Trust in Institution	8		4							7	1,2,3,5 ,6,7,8

Interview Results

The following findings (results) follow the four research question areas: (1) background to innovation, (2) initiation and planning, (3) policy learning, (4) evaluation.

1. BACKGROUND

1.1 Definitions of innovation in the public sector

Two main areas of innovation emerged through interviewees' definitions of "innovation": newness, and change, with a strong emphasis on implementation and improvement. Public organizations engage in new thinking, actions and change predominantly in order to improve organizational performance and to achieve the organizational goals. Innovation is a process that translates new ideas into actions.

Newness

Expressions of innovation as newness are: new things; new ideas; renewal; new ways to do things; new and revolutionary things; new value; new and more efficient; invigoration; renovation; creation of something new; breakthroughs; new processes; new measures, initiatives; diffusion of new ideas; newness; leading new ways.

Quoting from the interviewees:

- “New things which were implemented in science, industry, technologies; “Implementation of new method of doing things, or new technique”;” [Lith].
- “Innovation means new ways of doing things; “Innovation is something new”, “Innovation is something revolutionary not improvements in products, services and institutions” [Sw]
- “New measures”, “initiatives”, “field trails”, “education” and “diffusion of new ideas” to characterize their activities [Nor]
- "Breakthough in medical technology" [The Netherlands (Neth)]
- "Develop new strategies for subjects that exist already" [Isr]

Change

Expressions of innovation as change included: change; change of delivery systems; processes; systemic change; a process of ethical, organizational, perceptual and

conceptual change; small changes; organizational changes towards greater flexibility; reform; change and renewal; change of systemic parameters.

Quoting from the interviewees:

- “Innovation means change and it usually occurs in small steps” [Sw]
- "changes of the health care system at large"; "system changes prescribed by the government" [The Neth.]
- "changes and reforms [that] should “change the parameters in the system and increase the efficiency"; “something that changes routine agenda and goes beyond visible framework” [Slov.]
- "Take existing modules and recreate them, give them a new spirit and create something new"; "Innovation is based on existing things with a new vision" [Isr]
- "Innovation viewed as small changes"; "An organizational change towards greater flexibility and participation." [UK]

Additional Purposes:

Improvement appears as a major purpose of innovation at its different phases. It has been referred to as a change made in small steps; a small incremental improvement; and a continuous process of systemic change.

Additional purposes of innovation are: efficiency; simplifying work procedures; increasing the quality of service; promoting something the manager believes in; restructuring; developing methods of achieving goal; processes of service improvement; problem solving; flexibility; participation.

Quoting from the interviewees:

- “Innovation has to do with new and more efficient ways of doing things" [Sw]
- "…not about change for change sake but about delivery better efficiency, better quality, better values"; "innovation goes hand and hand with efficiency, value for money, all the time looking at what we can do better" [Ireland]
- “reaction to current situation and the process of improvement” [Slov.]
- "innovation is usually described as ‘improvement" [UK]

Innovation in the public sector is predominantly prescribed by the government, by politicians and by national bureaucrats nationally and regionally.

Examples of additional words used to describe innovation are: social act; novelty; improvemen; revolutionary; efficiency; value; invigoration; breakthrough; non-routine; continuous; client-directed; process-directed; financial; human; technological; simplifying work procedures; new inspiration; paradigm shift; acting from a personal belief; adaptation to top-down guidelines; complementary; modernization; cultural; replication of ideas developed elsewhere; opposite of daily routine and tradition [Slov]; looking "outside the box" [Israel].

It is important, however, to note that some of the interviewees were not familiar with the concept of "innovation" but related to it in different terms, such as: "new measures", "initiatives", etc. [the UK, Norway].

Quoting from the interviewees:

- "[the interviewee] Understands the concept, but the term “innovation” is not used for the activities they pursue. Instead, they use terms such as “new measures”, “initiatives”, “field trails”, “education” and “diffusion of new ideas” to characterize their activities [Norway]

1.2 Public sector innovation, as derived from the comparison with the private sector

It is the assumption of this study that innovation is ubiquitous in the public sector, be it organizational, technological or strategic. The following questions examined innovation in the public sector through managers' perceptions of innovation in the private sector: Is innovation in the public and the private sectors alike? What do we learn of public innovation as high-lighted by the comparison with innovation in the private sector?

The majority of the interviewees reported differences between innovation in the public and in the private sectors. A few indicated that they were not knowledgeable or familiar enough with the private sector. Most surprising, some interviewees claimed that there were no differences between innovation in the public and the private sectors. Similarities in innovation between both sectors included the need of budget allocation and market orientation. The following quotes are presented in two sections: Section A - expresses no differences and unfamiliarity with the private sector; and Section B - expresses differences between innovation in the public and in the private sectors.

Quoting from the interviewees:

A. 1. There is no difference between innovation in the public and private sectors.

- "No clear explanation was given except for claming that budget is the driver of both" [Isr]
- "Some of them [the interviewees] expressed the opinion that it probably is no significant difference between the two" [Swed]
- "In principle identical, and policy should introduce contestability (competition) in order to make these identical (i.e. abolish barriers to market based service provision of public services)"
- "Private and public sector are perceived as similar – and should be characterized as such by using market (private sector) terminology such as “our customers”, “supply”, “offer”, to designate activities." [Nor]
- "In principle, no difference between public and private sector. The core of innovation is finding new ways to exploit inputs – and the management of this." [Nor]

- "Both sectors are concerned with economic efficiencies" [Ireland]
- "Size and scope of organisation is as important as whether it is in the public or private sector" [Ire]

A. 2. Have no knowledge or familiarity with the private sector.

A small portion of the interviewees claimed that are not familiar with the private sector at all; others had little or no familiarity with it.

- "Most of the interviewees did not have any experience of the private sector and they were reluctant to give an answer to the question" [Swed]
- "They were not familiar with the private sector and had only vague idea how private sector operates" [Slov]
- "No knowledge" [Israel]

B. Differences between innovation in the public sector and in the private sector.

We start with a quotation from a Norwegian interviewee who said that innovation in the public and the private sector are "Completely different (as day and night) because of systemic and cultural differences." Differences between the public and private innovation were related to the sector orientation, i.e., being service oriented and policy driven in the public sector. Special emphasis is put on the role played by time and budget considerations in the public sector, as well as the role of accountability and risk.

Below are examples of interviewees' thoughts, followed by some of their quotes.

B. 1. Policy and "externally" driven innovation

Innovation in the public sector is driven by policy and external forces. It satisfies political schemes and interests and emphasizes political aspects of the public sector.

- “Innovations in public sector are more oriented towards schemes of management than towards environmental changes” [Lith]
- “more often in private sector than in public one innovation is natural/unforced phenomenon”, “congruous with organizational growth”.[Lith]
- “In the public health sector innovation is to some extent generated by politicians. Improving the care of patients does not motivate such innovations. Changing majorities cause them” [Swed]
- “The accountability system between the two sectors is different. While in the private sector the internal accountability is profit making, in the public sector only external accountability exists: parliament, media and public”. [Slov]
- "They [public, media and parliament] need to be discussed when policy innovations are to be legitimate and this takes a lot of time, effort and different skills, such as communication and negotiation” [Slov]
- “more often in private sector than in public one innovation is natural/unforced phenomenon”, “congruous with organizational growth”.[Lith]
- "Drivers for innovation in the public sector are connected pre-eminently with (policy-related) imposed targets relating to efficiency, equality, and improvement in service provision." [UK]
- "Public sector strongly regulated – restrained by legislation and regulations (11) [Ire].
- “Inner organizational needs – in private sector, external forces – in public sector”; innovative persons (“generators” of new ideas”), individual ambitions, entrepreneur’s attitudes – in private sector, state programs, contests, requirements and demands from EU institutions, offers or proposals from international partners – in public sector." [Lith]

B. 2. Service oriented

Public sector innovation is service-oriented, unlike the private sector, where it is profit-oriented. Being non-profit and less 'pressured' by competitive forces might affect the public sector differently than the private sector in terms of innovation.

- “Innovations in private sector oriented to expand request and profit; in public sector – to satisfy needs of community (not always, but more often)”. [Lith]
- “The goal of private hospitals is to generate profit while the goal of public hospitals is to cure the patient. This difference ought to have consequences for the content of innovation.” [Swed]
- "…Is service oriented and free of profit orientation" {Isr]
- "Public institutions are obliged to maintain the provision of public services with their innovations regardless of their profitability, while private institutions would not provide a service if they lose funds. [Spain]

- "The public sector is still lacking competition elements (although some are being introduced at this moment, particularly with decentralization) [Slov]
- “Demand is bigger than supply in the social services and thus we are not pushed into innovations” or “public sector has only few competition elements” [Slov]
- "Private sector is driven by profits" unlike in the public sector… Public sector does not deliver products, but rather, services" [Ire]
- "Exploitation of innovation - Health Service workers are highly patient-focused and are concerned primarily with ‘making a difference’ to patient care: few pay sufficient attention to the financial implications of innovation (i.e., they fail to recognise that financial benefits can be gained from invention)" UK

B. 3. Bureaucratic Characteristics: Sluggishness, inflexibility, and inefficiency.

Time plays an important role in public innovation, and may be related to public organizations' inflexibility and inefficiency. Innovation is slower than in the private sector because it "travels" through bureaucratic organizational layers; innovation might also require longer periods of adjustment than in the private sector, due to the size and complexity of public organizations. Furthermore, the pursuit of innovation goals might imply that managers have insufficient time to reflect on needs, challenges and novel solutions in the public sector. In addition, innovation in the public sector has less freedom and more restraints than in the private sector, and is not as autonomous as in the private sector, because of the complex and stagnated public system. Although it seems like having more time available would imply longer periods of development, it is also believed that the public sector might block people's creativity.

- "Implementation of innovations in Public sector is slower (“thanks to departmentalism, bureaucracy, determinate order and procedures”; “governmental structures interfere with interaction between service producer and costumer”). [Lith]
- “mature adults don’t want to fall again into the womb of time”, etc.). [Lith]
- “A difference between innovation in the public (and private) health care compared to private manufacturing and services is that the process of innovation in health is more sluggish due to the fact that health innovation involves experiments with humans. Organisational change and innovation in public health care is also characterised by sluggishness compared to private enterprises (also private hospitals) due the extremely “democratic” decision process in the public sector. All categories of employees are involved in decisions of change” [Swed]

- "…more complex, more difficult and taking more time" for implementing innovations than private sector (all of the respondents) [Slov].
- Also—"the length of the innovation implementation in public sector is caused by the fact that "while introducing innovations in the public sector the continuity of service provisions has to be preserved although the reforms change the overall concept and philosophy and thus adjustment period is necessary" and "transition country has accumulated a number of problems that have to be dealt with simultaneously". [Slov]
- "The public system is traditional and complex"… "It is not as automatic as in the private sector" [Isr}
- There is a difference because firms in private sector have a higher degree of freedom; public sector has severe restrains in terms of creating novel solutions [Nor]
- "Private institutions are often "cherry-picking": doing the most-easy cases in an efficient way. However, only few respondents have personal experience in this regard. [Neth]
- "Targets can act as a significant barrier to innovation (paradoxically?). Pursuit of targets implies that managers have insufficient time to reflect on needs, challenges and novel solutions: it is often easier to implement prescribed changes (or adapt these to local circumstances) than to devise creative and innovative solutions" [UK]

B. 4. Budget constraints.

The public sector suffers from limited financial resources and fewer investments directed at innovation. Interviewees reported an impact of budget constraints on innovation, and related it to organizational accountability and risk-aversion.

a. Budget, time and independence

- "Time and money interrelated: "clear and prompt in case of success and failure – in private sector ("additional money – in case of success, damage – in case of failure"), unspecified – in public sector". [Lith]
- "It is difficult to set aside time to reflect on how to improve things, how to innovate. In the private sector there appears to be the opportunity for people to be more creative because there are more time and resources around that [UK]
- "Cost"/expense [1]: implementation of innovation is more expensive in public sector ("it uptakes more efforts, time and money"; "third party" pays for service"). [Lith]
- 'Going off spending millions on a brand new project is never easily done or rarely happens in public sector.'; Public sector works on fixed annual budgets and is regulated by law (8) [Ire]
- "Very restricted resources that the public sector has to innovate (except for the pharmaceutical industry) compared to the private sector." [Spain]
- Budget constraints [Isr]

- Lack of investment in innovation in the public sector. In the private sector innovation forms part of the mainstream organisation and budget allocation. [UK]
- "Very limited resource with which to stimulate or sponsor innovation – however, there is evidence that some (especially Acute Trusts) are attempting to innovate in the ways that clinical research is managed: networking and collaboration-based innovation is increasingly important. [UK]
- "More freedom and independence in the Public sector, as it is not outcome-based."… "the public sector has some advantages with respect to the private sector, because workers (low level) have a higher independence, while in the private sector they depend more on the results" [Spain]
- "if doesn't stay in budget then the (public) CEO is in trouble' [Ire]
- …'one of biggest barriers to innovation within the public sector is the way our funding is limited and restricted so that if you have some innovative model …can't implement it unless you have proven already that it works.' [Ireland]

b. Risk aversion

- innovativeness in public sector is less risky ("usually there is no firsthand or individual responsibility for failure in public organizations"; **"**traditionally, the formal leader is responsible for failure in public organization [Lith]
- The public sector is more risk averse. In the NHS failure is heavily punished (the chief exec normally gets sacked), and therefore innovation is not encouraged.
- Differences in public and private reflect differences in risk-taking… "Public sector more reluctant to take risks with public funding." [Ire]
- "Cultures of public organisations trained to be less risk oriented" [Ire]

c. Accountability

- "Accountability: "People pay us with their taxes, it makes us responsible to them, whereas the private sector is not held to such accountability" [Ire].

B. 5. General comments

In this section we bring important statements that were not as dominant, but can shed light on the differences between innovation in the public and in the private sectors.

In Norway, for example, there was an indication that not only do differences exist between the public and the private sectors, but also within the public sector. This view was voiced by several interviewees from other countries as well. "National bureaucrats seem to be more concern of the differences within the public sector, between municipalities and the state." [Nor].

As explained by the Slovakian research team, in Slovakia, the introduction of the first market elements began after 1990, with privatization and liberalization. Only a few respondents had direct or even indirect experience with management in private sector, and perceptions of the private sector varied from fear, to distrust and misperceptions of its mode of operation. Four respondents had some exposure to private sector: one, from the policy level, studied economy in the UK and was the director of a think-tank which operates in a nearly private sector manner; two from the policy level and one from the service level were employed in a private firm in the early nineties; however, one of them admitted that "*in those years it was still not a real private sector in the country*". In addition, some saw a difference in the character of the innovation outcomes and benefits - which in public sector are less tangible, measurable and definable. [Slov]

1.3 Examples of Public Sector Innovation

There are different types of innovation. Interviewees were requested to speak of examples of innovations. In this section, we present examples of innovations as emerged from the findings. Innovations represent the following areas: new service; improved service, process; administrative; conceptual; philosophical; systemic and structural; technology-related; professional – referring to training and learning, which could also be viewed as complementary to the process of innovation; complementary; policy and legally-driven; cultural; attitude; and grass-root.

	Examples of innovation
1. New service	♦ New projects regarding State Programs, social and community services, private pensions funds, home care services, [Lith]. ♦ Pain alleviation in connection to the taking of specimens and lesser operations at other clinics; spatial separation of planned and emergency surgical operations; [Swe] ♦ Developing a new provider role for home based nursing services, [Nor], ♦ New ways of management for the surgery rooms [Spain], ♦ A new type of social service, e.g. rehabilitation [Slov], ♦ New ways of delivery health services, e.g. General Practitioner Cooperatives to support understaffed doctors in rural areas [Ireland] ♦ New emphasis on involving voluntary sector in decision-making
2. Improved service	♦ The "Initiative for care of elderly" [Handlingsplan for eldreomsorg] is a large, national program for improving service provision and housing for elderly [Nor]. ♦ Centralised management in residential care to improve use of resources, adding committees to guide activities in various areas, improve accountability [Ire], ♦ Improvement of the management of the primary process in health care, but rather unpopular among the professionals.
3. Process	♦ The sequence of actions required to cure patients; the sequence of change of a system, change the process of the health-care. directed at an improvement of the management of the primary

	process in health care, but rather unpopular among the professionals. might indicate differences in ownership of the innovation process. [The Neth]] ♦ Area of Reanimation, innovations that improve the quality of the work for the physician and shorten the waiting lists. [Spain], ♦ Shortened diagnosing time through new working routines. Before the innovation the process was that the patient got a note of admission to the clinic from a medical practitioner. [Swe], ♦ Development of administrative-economic system and routines related to this introduction, specifically involved in the process introduction of "financing [reimbursement] according to inputs". [Nor],
4. Administrative	♦ Shortened diagnosing time through new working routines [Swe] ♦ Educational scheme for home care providers, to increase their awareness of signs of dementia among their clients – and development of a report system ("report of concern") to authorities in the local administration. [Nor] ♦ New time schedules of shifts that have been implemented for nurses[Spain] ♦ Redistribution of functions and responsibility (in some Divisions of Ministry of Social Security and Labour), separation of administrative functions and managerial ones in Municipalities, transferring management and control mechanisms to local authorities. [lith] ♦ Develop routines for communication within the "purchaser-provider"-model so that purchasers do not become too detached from the suffering and demand for care of elderly clients; Development of administrative-economic system and routines related to this introduction, specifically development of criteria for quality and decision making for the purchaser role. [Nor].
5. Conceptual, philosophical,	♦ New concepts/attitudes were claimed and introduced in social services practice: "family must be treated and supported as unit", "services must be "easy of approach", "prevention is cheaper than struggle", etc. [Lith] ♦ A new concept of the "natural delivery"; "paradigmatic shift in perceiving of clients in the center" [Israel]. ♦ Decentralization (substantive responsibilities and financing system) as the biggest innovation currently influencing both service and policy levels [Slov],
6. Systemic and	♦ Development of a report system ("report of concern") to authorities in the local administration; The "Initiative for care

structural	of elderly" [Handlingsplan for eldreomsorg] is a large, national program for improving service provision and housing for elderly. [Nor], ♦ A change in the accounting system and also mention how the surgery rooms are open more hours a day with the innovation in their management.[Spain], ♦ Decentralization (substantive responsibilities and financing system [Slov], financing according to the number and type of service operation rather than number of clients in the facility [Slov] ♦ New governance structures in the organisation and delivery of health care and social services, Devolution of accountability to the level of service closest to the user [Ireland],
7. Technology-related	♦ Computerization of workplaces (in Parliament, Ministries, Service Centers) [Lith] ♦ E-government initiatives in county government for paying traffic fines and citizen interaction [Ire] ♦ "Champion"-role for introduction and implementation of purchaser-provider model, central node in the "Efficiency network". Further development of the "SmartWalk" MIS (Management Information System). Coordination of a number of initiatives related to introduction of purchaser-provider-model in municipalities, within Oslo and outside Oslo [Nor] ♦ Change in the Accounting system and also mention how the surgery rooms are open more hours a day with the innovation in their management [Spain], ♦ Electronic patient records system – huge scale, clear benefits (and professional risk perception), New system for assessing mentally ill patients in response to new service requirements for shorter waiting times. [UK],
8. Professional [training & learning] can also be viewed as complementary]	♦ Emloyees' professional training, Increasing involvement by staff in developing and applying their knowledge [Ire], ♦ Prepared and implemented many new projects regarding State Programs (the Program for the Development of Infrastructure of Social Services; the Program of Professional Training for the Long-time Jobless, the Program of Development of Community Services, the Program of Child Care, etc.). [Lith], ♦ Cooperation between local district administrations on implementation of the "purchaser-provider"-model – networks of learning. [Nor],
9. Complementary	♦ Implementation of policy initiatives has resulted in significant complementary innovation – the inception of new forms of working and new delivery channels/styles has required the development of bespoke training programmes, polyvalent skilling, and accommodation to new IT systems etc. Training

	is often designed in collaboration with external providers (HEIs) and new and innovative delivery mechanisms/channels (online, JIT, open access) are in the process of roll-out; Policy initiatives must be adapted to meet local circumstances – this can be a trigger for innovation: implementation of policy edicts frequently requires application of creative thought. [UK] ♦ Organizational change to facilitate innovation [Ire]
10. Policy and legally driven	♦ The Ministry intends to put into the new Law on Social Services a completely new philosophy where instead of enumerating types of social facilities there will be a list of social services and the facilities can combine them in the way they prefer]; The Ministry intends to put into the new Law on Social Services a completely new philosophy where instead of enumerating types of social facilities there will be a list of social services and the facilities can combine them in the way they prefer] [Slov] ♦ Development of a policy ("the Security Deal") that guarantees various types of services and levels to senior citizens according to their needs and capabilities, in cooperation with local NGOs and the local Volunteers' Association; Generally, a policy-shift by introducing the "purchaser-provider"-model into the organization of nurse service provision; this model was ordered by politicians – also because it would allow private sector to bid for services. [Nor]
Cultural	♦ Some cultural innovation has been required in order to facilitate the introduction of new forms of (and improved) service delivery – consultation-based and inclusive decision-making are in the ascendant: NHS personnel at all levels are encouraged to consider re-shaping service delivery to ensure that it is responsive to local needs (and congruent with the UK Government's 'modernisation' agenda for delivering improved care to patients) [UK]
Attitudinal	♦ Change in the attitude of life quality. [Israel], ♦ New concepts/attitudes were claimed and introduced in social services practice: "family must be treated and supported as unit", "services must be "easy of approach", "prevention is cheaper than struggle", etc.[Lith],
Grass-root	♦ Grass-root innovation might deal with: the intake procedures, cooperation between intra- and extramural care, the introduction of nurse practitioners, and so on. [the Neth],

1.4 Needs that Innovations Address

The public sector, in its nature, aims to provide services to the citizens. The question of "what needs" triggered reports of a variety of needs that relate both to the people involved, as well as to work-engagement needs.

The following table presents the findings in two sections that refer to the following emerging questions: (a) “Whose needs do innovations address?” and (b) “What needs do innovations address?” The findings show that innovation addresses more than one need, is directed at more than one group of people, or has more than one purpose, as follows.

A. *Whose needs?-*

1. the clients
2. administration/managers
3. employees
4. organization

B. What needs? –

1. Improve the service / Enhance performance
2. Save efforts / increase efficiency
3. Enhance employee's competence and involvement
4. Stay within budget framework / save money
5. Follow global changes
6. Solve a problem

Live in a better society

A. Whose Needs?	
1. clients	♦ Patient complaints over long "waiting time":[Swe] ♦ Internal communication among employees because of lack of a common language., Elderly (many examples -- 8 interviews almost identical justification: Implementation and development of administration and organization of local welfare services provision to the elderly - introduction of purchaser-provider model, to ensure more equitable distribution of home based services to elderly – need for new management tools & routines for this, hence innovation activities focused on this [Nor] ♦ Combination of social services and new type of social services: "individual approach to client", "we want to give facilities freedom to decide what services they want to provide"; Record keeping on type of service operation for each client: "review the work with clients (care) and guarantee minimal standard for everyone; collect evidence when we receive complaints from relatives; evaluation of employees" [Slov] ♦ Inclusion of people with special needs into society [Isr]
2. Administration /managers	♦ The need to concentrate care in order to increase productivity and to cut costs. [Lith], ♦ The need to reduce the administrative workload of physicians and to cut costs; [employee-managers- Physicians regarded working at the ER as awful. They hade their posts at other clinics and were only on duty at the ER for some period of time. The duty took them from their "real" job at their "home clinic".[Swe], ♦ New ways of management; a change in the accounting system [for management], [Spain], ♦ Improvement of decision making based on better information from the field. [Israel]
3. employees	♦ "Better inner communication", "rise in career", "expanded experience", "new networks" [Lith]. ♦ The need to reduce the administrative workload of physicians [Swe], Improve quality of work of the physicians and shorten the waiting lists [Spain]. ♦ Professional support for employees [Israel]
4. the organization	♦ "better inner and outside communication", "more well-running procedures, more effective job", "increased personal responsibility", "widen opportunities for individual initiatives", "better image", "attraction for specialists and new personnel", "new "lessons" [Lith], Changing the process of the health-care; Improving the management of the primary process of health-care. [Neth],

B. What needs?

1. Improve the service / Enhance performance, i.e., quality standards; taking better care of clients- addressing their needs/ better responsiveness; specific work objectives**.**

Quoting from the interviewees:

- Provision of welfare (care services) to the elderly [Swed], Increasing efficiency of public service provision (irrespective of provider) – executive implementation of various organizational and administrative systems – these needs have been generated by political decisions (right wing majority of Oslo city) employee training, professional support—seeking a more professional employee.)[Nor],
- A need for pain alleviation in connection to the taking of specimens and lesser operations. [Swed],
- Increasing welfare – higher quality and equality of service provision to elderly – giving elderly "security" and ensuring the legitimacy of the welfare society – also increasing efficiency,[Nor],
- "Avoid pure health care approach and focus on client's quality of life", "if I want something to run, it has to be defined and clear to everyone", "establishing minimal standards for services which would be guaranted by state" [slov],
- Combination of social and health services: merge health and social aspects of long term care, new type of financing, so that health insurance agencies cover a complex system., cooperation among employees; improve performance [Israel],
- Consultation-based and inclusive decision-making are in the ascendant: NHS personnel at all levels are encouraged to consider re-shaping service delivery to ensure that it is responsive to local needs (and congruent with the UK Government's 'modernisation' agenda for delivering improved care to patients) UK],

2. Save efforts / increase efficiency, i.e., decreasing risky procedures; cooperation with other organizations / outsourcing; new technologies.

Quoting from the interviewees:

- Reducing the number of risky and expensive amniotic fluid tests [Swe],
- Increasing efficiency (reduction of cost and bureaucratic waste) of service provision, for the benefit of recipients – but ultimately for reduction of public costs (tax reduction) + "giving freedom to individual citizens" [Nor],
- Contracting out services (e.g. catering, cleaning, some types of social services such as rehabilitation)
- Specific work objectives; same budget; organized and safe documentation [Israel]

- Technology saves time.
- Service delivery efficiencies and economies, the need for structural changes [Ireland]
- Communication among employees within the organization [Israel]

3. Enhance employees' competence and involvement

Quoting from the interviewees:

- The need to increase the skills of physicians [Swed],
- New time schedules for nurses [Spain],
- Regular education and communication skills training for facility staff: „in order to learn how to deal with difficult clients, family members, what to expect in certain situations", „increase motivation of the staff", also: new course on university level for social caretaker and senior social caretaker: lack of social service specializations and inadequate education possibilities for the staff. [Slov]
- Organization—shared responsibility for the implementation of theprogrma/ innovation, knowledge sharing among staff [Israel]
- Staff support [Ireland]
- Decrease risky procedures [Israel]

4. Stay within budget framework / save money

Quoting from interviewees:

- Inefficient use of resources (operating rooms and operating teams [Swe], decrease in cost and time needed for the innovation. [Spain] Inefficiency, cost-problems and overall financing system in public sector was and still is wrongly defined" [slov.],
- Inner-organization learning that accompanies new technology, i.e., medicine provision that saves money. [Nor?]

5. Follow global changes

Quoting from the interviewees:

- Performance measurement helps to multiply success in the organization; having a more satisfied employees (i.e., nurses) [Israel], target-driven environment and top-down imposition of a raft of 'improvement & modernisation' policy initiatives has required major re-organisation of systems, processes, working practices and service delivery mechanisms [UK],
- Accountability through devolution; Greater flexibility for managers; More involvement by users and greater sensitivity to needs of users [Ireland]

6. Solve problems, i.e., budget cuts; clients complaints etc.

Quoting from interviewees:

- Inefficient use of resources (operating rooms and operating teams) and patient complaints, Patient complaints over long “waiting time”, [Swe], UK,
- Responsiveness to employee and client complaints [Israel]

7. Live in a better society

Quoting from interviewees:

- “Ensuring fulfilling life for our clients, not only by providing accommodation or basic hygiene and catering but by introducing activities into their lives, such as poetry club, crafts, etc.“ [Slov]

2. INITIATION AND PLANNING OF INNOVATION

2.1 Who usually initiates innovation in this organization?

All of the participants can be initiators of innovation; however, managers, professionals and politicians were found to be more so than others. Following are findings from the interviews in the priority represented in the interviews:

1. Managers and front-line employees
2. Employees, personnel and professionals
3. Government and politicians
4. End-users/clients and the need from the field
5. EU and external organizations

A note: it is sometimes difficult to determine the difference between management, professionals and employees, as these roles intersect, and people 'belong' to more than one category. Questions arise as to whether or not professionals are also part of the management, which is not always clear. Furthermore, sometimes it is difficult to determine if "managers" refers to governmental organizations or NGOs. Findings can thus be open for discussion.

1. management and front-line personnel	♦ Front-line managers and leaders of NGO's were mentioned the most often [Lith] ♦ The management of the hospital [Swe] ♦ Leaders and managers in the public sector play a role as implementers and executives responsible for carrying out the new ideas , i.e., Entrepreneurial leader (SS), working in a team of professionals (physician, nurse, social worker, etc.) with experience from working with dementia and elderly; Entrepreneurial leader (GH) with extensive network within and outside the local community [Nor] ♦ The initiative might be coming from the service management [Neth] ♦ On the service level the chief initiators of innovations are directors of the facilities regardless whether the source/idea comes from inside or outside**:** "I get inspiration from the needs I see around. There are things I can see which I don't agree with and I don't want them to stay like that".; Many times it is the directors who are active in looking for external ideas and actively contact or react to external contact from partner organizations, NGOs or professional bodies

	[Slov] ♦ The Management of the Hospital. Sometimes, the public hospital has to reach objectives designed by political reasons and communicated directly from the Presidency of the Comunidad de Madrid. Then, the Area of Management has to obey and innovate in order to prioritise those aims, affecting to different services of the hospital depending on the political aim. [Spain]
2. employees/ personnel and professionals	♦ "In general the source of ideas to innovations is the personnel. Their driving force is probably self-interest, i.e. climbing the career ladder"; "Usually enthusiastic individuals who put the needs of patients before their own career initiate innovations"; "Often personnel initiate change. Especially the newly employed see possibilities."; "The robot was used in many hospitals abroad. A surgeon took initiative to buy the first robot". [Swed]. ♦ The senior doctors (consultants) to keep their unit up to date; the professionals take the initiative for the introduction of *functional* innovation..; The initiative might be coming from the service management. In that case "management-like" wording is often used to advocate change. [Neth] ♦ Some of the interviewees only refer to professionals as those initialising the innovation process; professionals (physicians and nurses) are the first agents realizing about the needs of the patients and therefore, they are who first detect the problems..[Spain] ♦ Frontline employees who returned from training, they come up, and suggest new ideas; professionals who are committed to the issue, who want to promote a certain area [Isr]
3. Government and politicians	♦ "Politicians better than others perceive importance of innovations on policy level and in management"; "politicians "feel the pulse" through direct contacts with electorate", "they push and block-up venally" Lith] ♦ *System innovations* are mostly initiated by the government. Other important stakeholders like politicians, unions, insurance firms, regulators, advocacy organizations, patient organizations and professional associations play also an important role [Neth] ♦ Government supervisory relaying on needs from the field; legislation, supreme court decision; Politicians through the mayor or the governmental office [Israel] ♦ Government targets important [UK] ♦ The innovations are highly policy-driven, i.e. initiated by politicians, i.e., Because of the current right-wing majority holding power in the political system both at national level and in the City of Oslo, this translates into introduction of NPM-type of initiatives. However, implementation and introduction of this is delegated to the local

	districts of Oslo where socialists hold power in the local district of Østensjø. Because socialists hold power in some local districts on Oslo, they have initiated "counter-NPM-innovations" in a few cases;. Also, socialists in a coalition with the centrist politicians in the Norwegian parliament have taken initiative for increased allocation of resources to a major reform of the system of care to the elderly. This has also provided means for innovation activities [Nor] ♦ … Several managers described environments in which decision-making still filtered down from the top. [Ireland]
4. End-users/clients and the need from the field	♦ Citizen or service user activity regarding innovation can be evaluated as low, their reaction to innovation – as passive enough [Lith] ♦ Patients initiate innovations to a lesser degree by their questions and complaints. [Swed] ♦ Some interviewees also think of the patients as agents that complain when things work in a wrong manner[Spain=no.3 [after professionals and mgt). ♦ In means of responding to clients' demands, i.e., it was citizens who brought about to the innovative legislature; it was parents who brought the issue of children with special needs to the Supreme Court, it was also the client who demanded better treatment to the disabled. [Isr] ♦ Directors often receive the input from both their staff and clients and the innovations try to solve the needs of both groups [Slov]
5. EU and other external organizations (i.e., partner and donor organizations, and NGOs	♦ A new EU-standard generated the development of the dress [Swed] ♦ Most of these functional innovations originate from the outside world: teaching hospitals, universities, suppliers of medical technology [Neth] ♦ On the policy level, a very important source of ideas is the legislation and practice of other countries, particularly EU and Czech Republic… Some of the respondents on policy level, however, said that they use the reference to other countries for negotiations and persuasion rather than source of inspiration [Slovakia] ♦ Important source of ideas for innovations are partner organizations abroad and at home; Another important source of ideas and transfers are pilot projects initiated by donor organizations such as Canadian pilot project on community based social services where health and social services are provided in natural setting [Slov] ♦ Like politicians, unions, insurance firms, regulators, advocacy organizations, patient organizations and professional associations play also an important role [Neth]. ♦ …Key actors in innovation are suppliers external to the organisation, such as the motor industry and telecomm companies; Dedicated R&D

	departments are rare but some 'progressive' Trusts have been allowed to establish R&D functions (often with the aim that they should cascade knowledge and harvested 'bottom-up' innovation to neighbours in their Trust cluster); Most clinical R&D or innovation effort is initiated by academic departments (within HCTs) or by specialists and consultants within Acute Trusts… However, Primary Care Trusts (especially R&D divisions within such Trusts) can play a critical complementary role*;* **NGO**s focusing on social services are not only an important source of ideas but an extremely important provider of trainings, seminars and informal networking. [UK]

2.2 Roles of initiators and actors in the innovation process

The following list is a compilation of interviewees' views of the roles of initiators. The list of roles matches the list of initiators in section 2.1. (the previous section).

1. Management [department/clinic heads] **In Norway, politicians and management go together.**	♦ Create, receive and transmit ideas, promote, organize the process of implementation, control and monitor the process, respond for failure, search for partners, analyze and evaluate experience, etc. [Lith], proposes the innovation, [Swed] ♦ Professional (management):) who has been instrumental in implementing new ideas generated by the political system (NPM); seemed to have a completely bureaucratic mindset; instrumental in implementation of reforms (innovation [Nor] ♦ Initiation, supervision, leadership, piloting and testing of new ideas; Directors often receive the input from both their staff and clients and the innovations try to solve the needs of both groups; directors who are active in looking for external ideas and actively contact or react to external contact from partner organizations, NGOs or professional bodies [Slovakia] ♦ Establish a "thinking" team, vision, lead, attract people, recruit supporters, push the change process, lobby, solve problems from the field, cope with resistance, be determined, identify the need, restructure knowledge for change, construct evaluation tools, construct training plan, accompany the process. [Israel],
2. Employees	♦ Bring ideas, argue, prepare projects, exercise functions, resist, etc. [Lith] ♦ Suggestions for improvement, assessment of how well have innovations been implemented, involved in brainstorming on how to improve things, bring ideas, report problems to be solved, respond to the change, accept [or resist] the extraworkload. [Israel]; ♦ Employees in service facilities: suggestions for improvement,

	assessment of how well have innovations been implemented, involved in brainstorming on how to improve things [Slov]
3. Professionals	♦ The surgeon took the initiative; professionals at the clinic—searched for new and efficient administrative and care routines. [Swed], ♦ Instrumental in implementing new ideas generated by the political system (NPM) [Nor], senior doctors -- keep their unit up to date [Neth], ♦ Realize about the needs of the patient, but not only that but also the needs of new materials or techniques. Then they have to give the first step in trying to solve the problem by communicating the needs to the Management of the Area of the Hospital, or if it is a minor need, to coordinate efforts with other professionals to ameliorate the situation; Professional needs direct guide the innovation [Spain]
4. Politicians and policy makers	♦ "Translate" ideas, declare them, prepare juridical basis, block-up, push ("politicians better than others perceive importance of innovations on policy level and in management"; "politicians "feel the pulse" through direct contacts with electorate", "they push and block-up venally", etc}; preparation of legislative framework for large scale implementation, overview of practice in / outside of the country and subsequent initiation of ideas; policy makers: preparation of legislative framework for large scale implementation, overview of practice in / outside of the country and subsequent initiation of ideas [Slov] ♦ Allocation of public funds and instructions to the local executive branch [Nor] ♦ Create awareness to the topic [Israel],
5. End-users, clients, consumers, citizens	♦ "…Give feed-back, complaint", "inform about needs, reclaim". [Lith] feedback and perceptions of changes [Solv], ♦ Respond to the change, complain about the existing state of affairs, serve as an interest group.
6. EU and external organizations	♦ EU and other countries: ideas, supervision, know-how transfer, reference for political negotiations ♦ Generated the development [Swed], ♦ Partner organizations: ideas, supervision, know-how transfer, reference for political negotiations; ideas and know how transfer, best practice, trainings and seminars, supervision [Slov] ♦ Research and development: However, Primary Care Trusts (especially R&D divisions within such Trusts) can play a critical

	complementary role in (a) identifying populations for testing, (b) providing advice on acceptability of solutions or interventions, and (c) supplying evidence in relation to patient and clinical needs.[UK]
	♦ Donor organization: ideas, know how transfer, financing of pilot projects, supervision [Slov]
	♦ NGOs: pressure, trainings, seminars, consulting, lobbying [Slov]

2.3 Facilitators and Drivers of Innovation

Facilitating forces of innovation emerged as both internal and external to the organization. The majority are internal-organization forces, such as the organizational leadership and management, supportive culture, supportive people and funding.

External facilitators include intra-organizational information, learning and networking, organizational culture and technological progress. It is interesting to note that reward to employees is quite rare. Additionally, sometimes facilitating forces become obstacles to innovation as will be demonstrated in section 2.4.

Internal facilitating forces

Internal forces are presented according to the areas identified, as follows:

1. Leadership and management of innovation. (i.e., personal traits of leaders, visionary and creative leadership, facilitative leadership).
2. Supportive culture of change (i.e. the right climate for innovation, changing mindset, organizational needs).
3. Human resources (i.e., supportive and motivated employees, learning environment, communication and networking).
4. Funding.

Internal Facilitating Forces

Leadership and Management	
Personal traits of leaders	♦ Personal traits of managers and of employees [5]: "competence, creativeness, openness", "enthusiasm of youth", etc. [Lith]. ♦ Activity and creativity of directors of facilities [perceived by policy level respondents] [slov]
Visionary leadership	♦ Belief, vision of one person or of the organization; a shift of perception, i.e., perceiving the disabled as part of society. [Isr]
Leadership and management	♦ Leadership and commitment [Ire] ♦ Innovative activities are being institutionalised. There is a department for improvements and clinics have created teams (physicians and nurses) with the aim of proposing changes in routines, i.e., "The hospitals leadership culture stimulates change and renewal." [Swed] ♦ Management tools (in the "purchaser-provider"-model) that make planning and implementation of new modes of work and roles feasible [??][Nor] ♦ Encouraging entrepreneurship in the organization, i.e., financial assistance to entrepreneurs; A leader who adopts the idea [Isr]
A supportive culture of change	
Changing mindset	♦ Changing mindset and provision of a 21st Century service –

towards modernization	patients and users are less deferential than hitherto (demographic change is reinforcing this) – the public demands service and care that is of a similar quality to that found in the private sector (or other high-quality public services). Political discourse is stimulating and reinforcing change in public attitudes – as politicians speak of investment and modernisation, so public expectations are raised [UK] ♦ Promotion of New Management in public organizations [Lith] ♦ The introducing of the concept of more "user choice" (empowering the recipients of services) has given the "purchase-provider"-model more legitimacy. This has also motivated people working in public sector to focus more on users (i.e. customers) and user needs. ♦ Innovation and modernisation have been placed at the head on the NHS agenda [UK] ♦ "Today the need of patient is in centre" ♦ "A change of attitude has happened in Sweden during the last 10-15 years that has meant putting the needs of patients in the centre. [Swe]
The right climate for innovation	♦ Political legitimacy for introducing the "purchaser-provider"-model + the "input-based financing [reimbursement]; Introduction of "purchaser-provider"-model is generally beneficial – this will encourage more creativity [Nor] ♦ Organizational culture, openness to changes in the environment [3], promotion rewards, support, personnel screening [2]. Lith] ♦ Having a ‚change agent', „in charge of designing of the plan for reform should be someone who did not experience routinne of the old system"; success in innovative efforts „it is very satisfactory and motivates me to think more" [Slov] ♦ Belief that shift to competitive framework (Foundation hospitals) will: ♦ Incentivise staff (and management) ♦ Improve patient choice and drive resources (as money follows patients) [UK] ♦ Multi-team working (initiated by clinicians) is leading to better patient care, [UK]
Organizational needs	♦ The need to improve and progress, The need of problem solving, i.e., the need to accept more clients for same budget [Isr] ♦ There is a recognition in the NHS that the current situation (re funding and service delivery is unsustainable – demographic change (especially ageing), emerging challenges (obesity and

	chronic illness), and recruitment problems (caused by attacks on staff, poor morale, low pay, perceptions relating to working conditions, failures, MSRA, bad publicity etc.) imply that improvement and change are required urgently. There is also a recognition that innovation should benefit both service users and staff ♦ Psychological contract – there is a feeling in the NHS that it has lost some confidence and respect among users – service managers and staff are eager to rebuild reputation and profile by providing enhanced service [UK] ♦ The need improve patient care, i.e. making the patients' experience better UK] ♦ The need to meet the targets, coming from the DoH via the SHA. "That forces us to innovate" (MHT). [UK] ♦ DoH Targets are the primary driver of innovation – new initiatives (e.g., 'Shifting the Balance of Power', 'Shift and Lift') imply that [UK] ♦ The need to be economically viable (AS), Advances in technology, particularly in vehicles and IT technologies (AS) [UK]
Human resources	
Supportive and motivated employees	♦ Rather many of the employees have a will to improvement and are prepared to break rules if necessary, i.e. they are inventive. "No one forbids you to experiment and to test new ways of doing things." Also several interviewees pointed to the fact that individuals often test improvements "in secrecy" before proposing them to clinic managers. [Swed] ♦ Finding committed members of staff and working with them on motivation of the rest of the staff, it is perceived that this enables to overcome the resistance of the rest [Slov] ♦ Employee who are willing to help; assistance in thinking and implementing; people committed to the idea; people's good will [Isr] ♦ Basic attitude: Most people have some assets or ideas that have interesting potentials [Nor]
Learning environment	
	♦ Economic skills and capabilities of people who work within the "purchaser-provider"-model. [Nor], The learning environment is most stimulating for functional innovation, taking place within the domains of the medical disciplines. [Neth] ♦ One of the facilitating forces is the qualification of the skilled workers, physicians and specialists overall. [Spain]

	♦ Knowledge, Education, academics exposed to research [Isr]
Communication and networking	♦ High level of communication, very important at the horizontal level, that is taking place in the Hospital among the professionals. Spain] ♦ Trust and showing respect to every employee and client - regular staff meetings (every month) to discuss objectives, new procedures, what needs to be tackled and improved: „listen carefully, collect ideas, and requirements regularly and solve problems around the table“ ♦ Visits to partner institutions where “we can observe how they deal with problems” [Slov] ♦ Close supervision „spend more time on explaining advantages and disadvantages of every reform/innovation“ [slov] ♦ A new worker who contributes of his/her world-knowledge; [Isr]
Funding	♦ Funding sources and the ability to raise resources [Isr] ♦ Allocation of major resources – biggest IT programme (recognition that change requires resources [UK]

External facilitating forces

External facilitating forces affect the planning and the implementation of the innovation process by outside 'players'. We present the external forces in two sections:

1. EU, legislature, national initiatives, politicians and other organizations.
2. Information, learning and networking, progress, technology.

External Facilitating Forces	
EU, legislature, national initiatives, politicians and other organizations	♦ EU integration processes (Parliament during current year has made about 1500 amendments to national Laws, most of them regarding EU integration). [Lith] ♦ Various national initiatives have provided increased funding towards elderly…; Clear policy objectives in terms of goals and standards of quality for ensuring security to the elderly. Funding. Career planning for personnel. [Nor] ♦ Cooperation and contribution from NGOs and volunteers[Nor] ♦ "Our own initiative" to visit / invite politicians, lobby, introduce ideas which "are illegal but need to be tested" [perceived by service level respondents] [Slov] ♦ Support of political parties / politicians when iniciating new laws [Slov] ♦ Legislative laws; supportive supervisory; [Isr] ♦ Strong political push: (a) Improvement of standards, greater patient choice, better services delivery (b) Target setting – mixed support (disruptive policy making) [UK] ♦ MA looking at external sources for "directed creativity" and organisational innovation [UK]examples[UK]
Information, learning and networking, progress, technology	♦ External information and networking, participation in conferences and meetings:[Lith] ♦ Networks and alliances for political support and sources of ideas/solutions; the role of communication and networks and an altruistic perspective as facilitating force – no response pattern. However, the fourth response are mostly given by the local bureaucrats/service level introduced by NPM in the shape of "purchaser-provider"-model [Nor] ♦ Communication / negotiation skills towards politicians, media, public: "make members of city council be interested and take part in solving the problem", ♦ Meetings with all stakeholders „Informal meetings and communication is absolutely crucial, especially with other Ministries (particularly of Finance)", "be ready to compromise, to have basic term of reference with other Ministries", [Slov] ♦ Tech innovation often driven by suppliers (vehicles, devices, telecommunications) [UK].

2.4 Obstacles / Barriers to Innovation

Barriers to innovation are predominantly internal to the organization. They relate to the following areas:

1. Leadership and management (i.e., budget cuts and constraints, lack of leadership).
2. Traditional regulations and work routines of bureaucratic organizations.
3. Employee resistance (i.e., negative attitudes and behaviors due to conservative organizational cultures, fear of loss, older people's difficulty in accepting change, or employees who feel that they already know everything they need to know).
4. Internal and external politics.
5. Poor learning environment, networking and team spirit.
6. End users' resistance to the innovation.

Following are interviewees' quotes as characteristic of the countries:

1. Leadership and Management	
Budget cuts and constraints	♦ "There is no special State investment for developing innovations" [Lith] ♦ "Lack of resources, especially lack of personnel, is an obstacle to testing new methods etc.; "Budget cuts are obstacles to innovation"; "Development money" is lacking at the hospital"; "Budget cuts are not only a driver of innovation but also an obstacle. There is simply no money for innovative activities." [Swed] ♦ "Time and resources to implement new ideas are lacking. If personnel are removed from care activities to implement change the safety of patients are compromised. This means that it takes a rather long time to implement new routines." [Swed] ♦ Funding and limitation of resources; Funding – inadequate and arbitrary. Use of "external" expertise (consultants) instead of internal resources in development for innovations (important for sense of identity & commitment) [Norway] ♦ …Economic problems very restricted by binding budget constraints [Spain] ♦ Lack of dedicated budgets for innovation at Trust level"; "Some areas (mental health) not high profile priority for investment" (cf. surgery); Balancing the books is the key aim for senior officials – innovation is inherently risky and can affect the 'bottom-line'

	[UK]
Lack of leadership	♦ Fluctuation of top managers: “every new broom sweeps in his own manner" [Lith] ♦ Inactivity of directors: “some directors only wait for more money from the government …we want them to be more active and not just sit and wait what government will do” [Slovakia] ♦ Lack of leadership [Isr] ♦ Unsuitable manager (lack of motivation and skills) in implementing new organizational principles, i.e. inadequate leadership [Norway]
2. Traditional-organizational regulations and work routines	
	♦ “The budget system impedes innovations. A budget surplus one year may not be transferred to the next year. Thus the clinic cannot accumulate resources for innovation.” ♦ “The way the income of the hospital is calculated steer innovations away form some areas since some types of innovations results in decreasing hospital incomes” (regulations) [Sweden] ♦ “The problem and challenge to health care and hospitals is to reduce the time for a patient to go through the “chain of care”, i.e. from note of admission (medical practitioner) over diagnosing and treatment to release from hospital. Today each step in the chain has different responsible persons (several clinics are involved) but no one have responsibility for the whole chain. This hinders an effective utilization of resources and shortening the time it takes to go through the chain of care.” (structure) [Sweden] ♦ Public sector system rigidity, traditionalism: ♦ “Tradition”, i.e. existing rigidity of systems (Surprisingly, some informants pointed to normative factors as being important in the resistance to NPM-type of renewals; Existing systems: rigid, works in isolation of users needs, lack of communication & interaction with users and other parts of system)" [Norway] ♦ Structural factors such as size of municipality: Small scale municipalities are more innovative than large cities, etc. Introduction of NPM-policies has fragmented management of service provision and taken away strategic leadership perspectives on innovation development. [Norway] ♦ "The walls between the many health care disciplines, and in- and outpatient services" [Holland] ♦ "Bureaucratic problems and the rigidity in some parts of the public system, in which it is not easy to jump one level in vertical relationships [Spain]

	♦ System's rigidity [Israel] ♦ "Heritage and legacy, entrenched practice and procedures" [UK] ♦ "Very complex organisation – composed of multiple tiered interlinked systems with Huge staff numbers"; "Many occupations, many organisational arrangements, many service processes", "Lack of “patient information connectivity” between actors in system [UK] ♦ Heritage and legacy systems, resulting in the IT field from an earlier policy to devolve decision-making (in part simply to support multiple suppliers and create a market) ♦ "VERY complex ublicizing[?] with very large numbers of staff, occupations, arrangements, and service processes. (In many ways what is underway is a whole series of BPR-type analyses and actions)"; "Blame culture, problems of litigation and accountability"; "The “quasi-military” nature of the Ambulance Service. It is a very command-and-control structure, which does not induce innovation, because you just do what you are told." ♦ Recruitment – NHS managers recruit in their own image and it is unusual to find managers with ‘creative’, entrepreneurial or private sector backgrounds (despite major initiatives to attract such individuals in the 1980s and ‘90s) – there is a tendency in the NHS towards self-reinforcement of behaviour and thinking"; Culture and conservatism – these remain as barriers but are being eroded [UK] ♦ Hesitancy, fear in public sector (4) [Ireland] ♦ Everyday routine (one does not have time to think “what if”) [Slovakia] ♦ "When the innovation confronts routine order, or systemic existing needs (i.e., when the innovation confronts routine practices of the management) [Isr]. ♦ "The number of competing priorities for people working in the NHS, and the volume of things that are required to deliver. This doesn’t allow space and time to innovate. [UK]

3. Human resources: Employee resistance to innovation	
Conservative culture Older employees and those who feel at stake, or feeling they already know it all.	♦ Negative attitudes towards innovators: “innovation disturbs heaven of functionaries”, “status quo is better than uncertainty” [Lith]. ♦ Poor presentation of innovations (of social services) to society, to the media [Li] ♦ “A degree of academic snobbism and to some extent of self-righteousness impede the testing of new ideas and focusing on the needs of patients"; The older generation is to a large part content with how things work and most of the younger generation strives to satisfy their own needs.” ♦ “An important obstacle is attitudes among a large part of employees, i.e. unwillingness to change”; “The hospital world is very conservative culture, which hinders renewal and innovation. However, this culture is slowly disappearing.” [Sweden] ♦ "Some workers are reluctant to changes" [Spain] ♦ "‘Professionalised’ resistance – i.e., e.g. clinicians, ambulance service form “disconnected hierarchy” latter “quasi-military”; command and control structures; established roles, politics, “empires”; lack of commitment to consumer orientation"; non-ownership problems – IP issues" [UK] ♦ Resistance to ‘out of the box’ thinking plus risk aversion ♦ Clinical practitioners guarding their own autonomy, within a dual management structure (“disconnected hierarchy”); more general issues of established occupational roles and turf wars; lack of commitment to customer-orientation and non-ownership of several initiatives"; "Health care sector being risk-averse, reluctance to innovate due to the “no failure” culture (AS) [UK] ♦ "Resistance to change" (9/15) [Ireland] ♦ "People who fear for their jobs or the amount of their jobs resulting from the change"; "Hindering force in the employee's feeling that he/she 'already know', has already learned a lot, had enough training, 'how come do we come with more issues, programs, proposals that the employee had already learned"'? [Isr]
Lack of employee motivation due to personal traits and work overload	♦ Large amount of job [9]: “innovation – additional job to direct duties”. [Lith] ♦ Personal traits of employee: "low inner motivation, laziness, fear of failure, etc" [Lith] ♦ "Low motivation for innovation among people who work with home based services (change-fatigue). High rate of employee absence (sickness) and turn-over." [Norway]

	♦ High rate of turnover among personnel; they do not want to work in shifts. Also, introduction of innovations require inputs and feedback from personnel, this is not taken care of. [Norway] ♦ "Older nurses- no chance, they won't be willing to learn, they have no desire… "; "When the innovation demands a dear fee of the employee, the need to free space for change made it difficult for the regular staff". [Isr].
4. Internal and external politics	
Internal politics	♦ "An obstacle to innovation is the rivalry between physicians and between clinics, which tends to result in status quo i.e. no innovations"; [Swed] ♦ "It is a cultural issue and the hospital and its clinics suffer from the "not invented here" syndrome. Prestige and rivalry between individuals and between clinics also hinders innovation" [Swed] ♦ "Change means that some personnel groups win and other loose. This fact creates resistance to change" ♦ "Old ingrained opinions among personnel, rivalry between clinics and between categories of personnel all impede innovation." [Sweden] ♦ "Almost impenetrable ceilings between the basic system levels: the ceilings between medical and service management, and between service management and policy-makers". [Neth] ♦ The political component of the management in the public hospital, since there is a high priority for the last political goal and that works as a constraint for how other professionals act" [Spain] ♦ "Intrigues – if the project is the manager's 'baby', fail it. When you want it [him?] to succeed, help." [Isr] ♦ "High public/political profile plus blame culture, accountability and risk of litigation (but c.f. US)" [UK]
External politics	♦ "Some change has been 'pushed through' via political pressure. This can cause resentment and resistance – politicians raise expectations among the public with respect to specific improvements in delivery, and then ring-fence funding for associated projects/implementation. However, the priorities of policy-makers are often at odds with those of clinicians – the latter often oppose the allocation of funding for 'cosmetic', 'superficial' or 'service' improvements, when resources for the development of treatments with 'real clinical gain' are limited [UK] ♦ "Uncomplimentary/negative attitudes of some policy makers and some part of society towards some groups of customers of social support: "investment into social support – loosing bargain"; "beggars can't/mustn't be choosers"; "risk groups – small part of

	electorate", etc." [Lith] ♦ "Political decision in the city hall stopped the process.(why?). Also, politics make long-range planning difficult. A number of rules and regulations are in conflict, hampering development of innovations" [Norway] ♦ "System incompatibility with other Management Information Systems related to care of elderly [Norway]" ♦ "Fear of outside competition" [Isr]
5. Poor organizational learning, networking and team spirit.	
	♦ "The gap in collaboration among practitioners, politicians and academicians, the lack of applied researches"; poor communication among divisions and institutions [Li] ♦ "Lack of team spirit" [Norway] ♦ "Absence of a network, every home for elderly takes care of its own problems [Slovakia] ♦ "Lack of dissemination activity – there is much health innovation at the operational level but some practitioners and clinicians are not good at disseminating ideas or publicizing their work. Some practitioners believe that their colleagues will have had similar 'good ideas' and therefore fail to publicise their own successes (reducing opportunities for further iterative innovation, and removing the stimulus to innovation that stems from success stories)." [UK] ♦ "(Recognised) absence of structures and mechanisms for organisational learning" [UK] ♦ Initiatives to diffuse good practice seen as "short-lived" – reorganisations promote lack of corporate memory [UK] ♦ "Lack of system of continuous education, seminars, trainings „we need specialisation at schools – continual education and more specializations, such as senior assistant)" [Slovakia]
6. End users' resistance to innovation	
	♦ "Conservatism among elderly represents a barrier for introducing new services and service delivery modes." [Norway] ♦ "Lack of openness of the end-user: customers are not willing to accept the "wow" [Isr] ♦ Public resistance to reorganisation but public also very open to new ways of operating [UK]

7. Additional obstacles and hindering forces	
Management and intellectual property rights	♦ "Pace and scale of change (NHS in particular) – shifting targets and absence of opportunity to reflect/asses consequences" [UK] ♦ "Inadequate or dated technology -- Managers are directed to facilitate innovation and learning, but are not given the time or resources to do so. [Ireland] ♦ "Intellectual property rights. The AS works closely with manufacturers to develop vehicles. But this is done in an informal way, nothing is ever patented and intellectual property rights often get lost" [UK]

3. POLICY LEARNING

Learning emerged as an integral part of innovation. The study examined three areas of learning:

3.1 Infrastructure that facilitates organizational learning.

3.2 Networking and cooperation with other organizations regarding innovation.

3.3 The development of competencies and organizational networking through employee participation in meetings and conferences.

Findings are presented accordingly.

3.1. Infrastructure that facilitates organizational learning

Organizational learning is referred to in interviewees' responses from two perspectives: (a) competence development and lifelong learning, and (b) information and intelligence gathering.

Competence development and learning refers to the training of individuals in the organization. As it appears, public sector organizations designate some [limited] funding to assess the needs in the field and provide internal and external organizational courses to employees. Competence training is achieved through seminars and training courses, or through staff's collaborative working group meetings.

Information and intelligence gathering refers to the organizational mechanism that supports information gathering for individual needs and for the needs of the innovation.

a. Examples of competence development and learning:

- "Typically personnel division of public organization is responsible for competence development of its employee"… "It investigates needs of employee, gathers and spreads external information about possibilities and offers of participating in different trainings or courses outside organization, or arranges them inside organization inviting specialists. [Lith].
- "All categories of employees have formalised plans for enhancement of their competence. At the individual level there are competence plans including courses, conferences, visiting hospitals etc." … "All employees at the clinic have 4 hours per month for competence development. It is an obligation to develop once competence; "Individual competence development is a goal."; "Every clinic has a person responsible for competence development of personnel. (Swe). "All employees at the clinic have 4 hours per month for competence development" (Swe).
- " Lifelong learning and competence development is more on ad hoc basis, though majority of facilities encourage their staff to participate in any relevant educational seminars or trainings organized by NGOs, municipality or Ministry (there are only few).(Slov).
- Learning focuses on foreign language and computing skills [Lith];
- How to computerized patient journals, or how to use new instruments, many of which are technological [Swed]
- Complementary learning that accompanies all levels of the innovations [Nor]
- Different programs of education for professionals—that promotes management, physicians and nurse training [Spain]
- "..Though majority of facilities encourage their staff to participate in any relevant educational seminars or trainings organized by NGOs, municipality or Ministry (there are only few" [Slov]
- "Mentorship, training, and conferences ourside of the education institution [Israel]
- "The internet/intranet/on-line support" [Ire].

b. Examples of information gathering:

- "There is minimum done in systematic information gathering. Few facilities have a deliberate system of sharing information, mostly as a part of regular staff meeting", However, "*explaining to others makes the person understand better and others gain some information too*" (Slov).
- But a common answer to all of them is the existence of an Agency (XX) belonging to the Govern of the Comunidad de Madrid (public agency) whose aim is the organization of formation courses, or Masters programs for physicians, nurses and managers who want to know more on (Spain)

- "There have been a lot of attempts to gather intelligence on ‘good practices’, but they never seem to last very long. They seem to be very short-lived so there is no infrastructure in the NHS where these can develop" (UK).

3.2 Networking and cooperation for innovation

Networking and cooperation exist to some extent in every organization. The following table provides a look at organizational cooperation. The table addresses the parties that network and cooperate for innovation, and explains the essence of this networking and cooperation per each of the countries

	Cooperate		***Little cooperation only***	
country	**Who cooperates**	**In what**	**Who doesn't**	**why**
Lith	Parliament -Little cooperation with other organizations,; Cooperation is in progress such as the newly established committee for expanding governmental information. Often proactive during the innovation planning.		Parliament	A "closed" organization; cooperation is not purposeful regarding innovation Cooperation among departments is associated with unhealthy competition.
Swed	Most cooperation – between clinics within the hospital, not much intra-hospital cooperation, except for with foreign hospitals.			
Nor	Politicians who initiated some reform; networks and cooperation with the political system, party and through alliances with other parties, interest groups and associations. Some learning cooperation within the framework of the Norwegian Association of Local and Regional authorities- of managers and executives. The format of projects they work on allows cooperation, some of which become work-routine.			

NL	Respondents favored systemic changes that improve the mutual cooperation of health care service. These could happen at three levels: the team (for example: patient education, case management), the health care service (clinical pathways, patient information systems, re-engineering), and the region (management of patient flows cross health care services		
Spain		Rare contacts between professionals of different hospitals in order to innovate. Networking that does occur is frequently on an informal basis.	
Slovakia	Partially exists-- Vertically, on the policy-service levels, they all see importance in the two-way communication (bottom-up and top–down) and complain about the nonexistence of a system that would enhance such communication	Horizontally, there is little networking, except when managers create informal network, where they share ideas, information and mutually prepare seminars.	
Israel	The majority of the committees or meetings consist of caregivers who support the client. Transfer of knowledge is done on a personal or professional basis. There is some contact with public organizations when wishing to start some project, as well as academic cooperation.		
UK	Networking with the private sector – also with the NGOs; "We work closely together with industry. I think the ambulance service has more partnerships with the private sector than anyone else; It is about looking outside and being more imaginative ourselves. And that is important for our board, and particularly for the chief executive." "The SHA's remit includes the aim to get organisations under its responsibility working collectively and to encourage Chief Executives of the various trusts to "buy in" to the strategic themes and agenda for the local NHS. STPCT is a centre for innovation and research		

	and works closely with (a) academic departments, and (b) hospital specialists and departments in the North West and beyond (see above). The Trust also has close links with TrusTECH (the North West health innovation hub), and thus is able to provide a range of services to individual researchers and innovators across the region. GMAS is embedded in the key emergency care professional networks and works closely with neighbouring healthcare Trusts on the development of integrated solutions to health delivery problems in Greater Manchester.		
Ireland	"Usually by individuals, sometimes at officer level" "Small organisations must network on the outside"		

3.3. The development of competencies and organizational networking through employee participation in meetings and conferences

Interviewees were asked to report about the encouragement of employees' to participate in meetings and conferences. Their responses are presented by country.

Lithuania	Not enough	Employee learning **does not receive a priority** in organizations, although this varies. Although information gathering and participation in conferences is of main concern to front-line managers, they tend to view competence development as a "private business" and a "right but not an obligation" There is a “lack of purposeful and anticipating future needs in organizational learning”
Sweden	Yes	**Yes—employees are encouraged**… especially physicians, who are encouraged to participate in scientific conferences and through the physicians association; there is budget, the goal is that every employee will participate.. Individual knowledge diffusion is done within the clinic.
Norway	Yes	**Participation in conferences and organizational networking concerned the top level organizations**, who took part in career planning, professional and reform training – which was considered important for success—where the desire was to

		establish autonomous working groups and increasing the quality of employee output. Examples- i.e., participation in the introduction and implementation of new service provision model based on the "provider-purchaser"-model (NPM-type) gave interviewers much valuable experience and opportunities to establish "learning networks" with colleagues in other local administrations who had pioneered this. In a similar vein, some informants stated that working in projects gave them valuable experience and opportunities for networking with others outside their organization, e.g. with other organizations.
Spain	Minimal	**Minimal** incentives to participate, given that the Public Administration does not finance those meetings regularly. However, all professionals have a maximum of 9 days per year for going to conferences, but this is an internal agreement in the hospital, and does not come from the Administration.
Slovakia	No system in place	**Not such a system in place neither on policy nor on service levels.** However, all of the respondents felt that seminars, meetings, conferences, etc. are extremely important for both networking and staff development and majority encourage their staff to participate.
Israel	Yes	Recommend and convince; encourage employees to participate in conferences—there is not monetary reward, although in-service training is usually free or for a minimal cost, and there is a small financial reward attached to it in means of some very minimal benefit that accumulates towards pension. **Learning and conferences are viewed as part of the employees' obligations**, there is an effort to have the training relevant to the needs of the trainees, some groups meet on a regular basis, such as in meetings with the supervisory, or with support staff.
UK	Yes	"Employees are encouraged to undertake training and 'skills building' (and to contribute to learning resources on the basis of their own knowledge and experience). Research-led and reflective practice is encouraged, as is the sharing of experience-based learning"… However, JB caution that if Ambulance Crews are to become highly-skilled ECPs, significant investment in bespoke training (i.e., complementary innovation) will be required."
Ireland	Yes, but	In-service programmes but limited by resources – some are sporadic

4. EVALUATION OF INNOVATION (CRITERIA AND METHODOLOGIES)

4.1 Criteria used to measure innovation success

Measuring the success of innovations emerged as a complicated matter. Interviewees' views on this subject ranged from mentions of structured and routine measures to a lack overall criteria. The need for measuring success is recognized as crucial to the innovation planning and implementation, and it appears to be non-explicit. The following is an example from the Netherlands:

- Knowledge is essential in process innovation. “Innovation in health care without measurement in the primary process does not exist. It remains rhetorics”, said a director and senior consultant of a psychiatric hospital. [Neth]
- However, it is very important to know WHY we are making all these reforms. We can assess the results of the reform only after certain period when reforms will be more settled” [?!]

Measuring innovation is not always explicit, as explained by the Norwegian team:

> "…receiving little explicit operational focus response is surprising because measuring the success of the innovation "is perhaps the most important justification for introduction of NPM-models in Oslo. More disturbing is the fact that some highly politicized ex-ante evaluations undertaken by the City of Oslo have attempted to “prove” that NPM has been effective, but provided inconclusive data insofar that they show insignificant economic gains (i.e., one study even showed that outsourcing operation of homes for elderly to private sector firms has been more costly than comparable homes run by public entities)" [Nor]

Following, are interviewees' views on measurement of innovation in the following areas:

A. Quantitative scientific measures.

B. Qualitative measures of success.

C. The extent of measurement.

D. Difficulties with measuring innovation.

E. Institutes of Evaluation and Measurement.

A. Quantitative Scientific Measures of innovation, such as the use of questionnaires are more common than qualitative tools; however, the success of innovation is often based on impressions and 'soft-information', gathered using non-scientific measures.

Examples of what is to be measured:

- Number of consumers and citizen complaints, the level of decrease in negative phenomena v.s. the increase in positive phenomena that results of the innovation, etc. [Lith].
- …Measures of innovation consist of quality, safety, satisfaction and efficiency [Swed],
- Waiting lists, hospitalization duration, productivity, medical faults, complaints, costs per treatment, effects of treatments [Neth],
- Waiting list time, economic impact (i.e., in the area of Medicine [Spain].
- Percentage of clients who are sent for treatment, achievement, increase in the demand of service or of training, as well as in management's entrepreneurship [Isr]
- In Norway, important criteria for success in terms of implementation of the "purchaser-provider"-model and "benchmark" criteria have been set, but ex-post measurement was non-existent. Measurement focused on the reputation and visibility of usefulness and progress reports and follow-up of budgets.
- More specifically, success is measured at the client and at the personnel levels: ***Patients –*** degree of satisfaction with services; Personnel — about working conditions (Swe).

B. Qualitative Measures of Success *consist of, but are not limited to****:*** client satisfaction; managers' evaluation after field observation; reports of performance and progress; professionals' "gut" feeling.

C. Extent of Measurement

Interviewees' reports showed that all of the countries reflect the belief that measuring the success of innovation is important; however, a structured evaluation system is not always in place, and in some cases, there is little evaluation or even no measurement criteria at all. The following are some examples:

- "Some of the interviewees claimed that they were not aware of clear criteria of the innovation, and that it has not been examined scientifically". [Israel]
- "Uncertainty was generally expressed over existing standards of performance. All the interviewees said that performance evaluation for innovation or for current programmes is in a state of development with some agencies being deeply involved in establishing standards whiles others were still only marginally involved." [Ireland]
- Slovakia is still in process of building up criteria measures. "Barely any of the respondents was using criteria to measure innovation success" [Slovakia]

D. Difficulties with measuring innovation

Even when measurement is done, there are difficulties and obstacles to measuring innovations' success. These difficulties can be manifested as managerial constraints, political forces or situational circumstances, as follows:

- ""Information is hardly linked to the primary process of care and cure"… and "does not contribute to the controllability of the main care processes; "scarce tools to measure the quality of the innovation that are implemented… they are not able to evaluate how good the innovations are, and sometimes, even they start projects of some minor innovations without studying seriously the consequences". [Spain].
- "All reforms take place at the same time (economic reform, tax reform, social system reform, etc.) so there is an element of unpredictability."[Slovakia]
- "Some problems in evaluation related to access to patient data"… especially in emergency care where it is difficult to get outcome data once we have left the patient. And we only have them for a very brief period of time, so that is very difficult for us to evaluate". Getting the data, which it is sometimes hard for us, because we work across many organisations and one of the big problems in the health services is that lack of sharing of data, which makes evaluation difficult at times. Because it is patient data, there is a privacy and confidentiality issue, and it is very hard to get a hold on patient data for a different organisation. That is very difficult, and very difficult to get over at the moment. Rules on information have got perhaps a bit too tight." [UK]

E. Institutes of Evaluation and Measurement

Performance measures are set to follow innovation objectives. Some of the interviewees reported working in collaboration with institutes or departments of evaluation and measurement. The following are some examples:

- The Measurement and Evaluation department [usually] set measurement criteria in conjunction with professionals of the department where innovation takes place; specifically here, measures have not been set yet, but there are plans. [Israel].
- Departments of Audit and Quality are increasing in the public landscape in Ireland in line with national initiative on performance quality**.** Some agencies have formalised criteria, while others were being introduced to evaluation standards [Ireland]
- In Spain, views vary too, i.e., informants of the Area of Nursery being satisfied with their evaluation system; and EFQM (European Foundation Quality Management) that finds a way of measuring the quality of the management, and also give some criteria for evaluating, with the output of a ranking of hospitals.

4.2. Implications and consequences of innovation (<u>expected/intended – positive and negative</u>)

Most of the expected/intended implications are generally positive, not surprising when considering that the purpose of innovation is to change and provide an improved service. Still, there are a few drawbacks as well.

It is important to note, however, as mentioned by the British team,

> Clinical (and other health-related service) changes are often speculative. The spread of good practice amongst the service cannot always be clearly linked to discernible improvements in performance. This has made the assessment of the effects of innovation problematic in some cases. [UK]…
>
> Additionally**,**
> Whilst the consequences of innovation are generally positive (and beneficial for patients and the NHS as a whole), it is not always possible to map or model implications across the entirety of a very large and complex system (especially one in which there are many competing interests and parties). [UK]

Finally, it is interesting that only few interviewees mentioned consequences related to learning, or the learning process. Implications of learning do, however, relate to professionalism.

The following expected and intended implications of innovations are presented in relation to:

1. Improvement of the service and performance
2. Management and administration
3. Professionalism and work conditions

Positive implications are presented first, followed by negative implications.

Positive, intended implications

1. Expected consequences in relation to the improvement of service and performance service improvement:

- Expected that the innovations directed at making elderly able to live at home would provide a more systematic approach to mapping demand for services among the elderly – and more equitable allocation of services; the ultimate expectation is: Innovations in service provision (increasing quality and scope) may enable elderly to live at home much longer – this is good for the elderly and inexpensive for the public; System to be more responsive and make proper priorities, i.e. greater efficiency and more systematic approach to distribution of welfare goods. [Nor]
- Increased use of computers to transfer information for those who have the technology. [Ireland]
- Improved the quality of care and medical safety [Swed]
- Innovation objectives, i.e., treatment for the disabled, and special programs, was met and implemented. [Israel]

Implications for clients:

- Patient **satisfaction** (i.e., no cancelled operations, shortened waiting time) [A prerequisite for this innovation has been a change of attitude at hospital. Today the need and satisfaction of the patient is in focus as compared for 10-15 years ago when the attitude was that the patient should be glad to get treatment at the hospital [??]
- The patient can leave the hospital much earlier after surgery [Swed]

- Increase in client **involvement** (i.e., parents of disabled children), client satisfaction and emotional reward.
- End-users satisfaction --94% of those served expressed satisfaction with the service [Ireland].

2. Expected consequences in relation to management and administration

Efficient use of recourses and productivity

- Decrease in the time of the medical processes after the innovation of the new surgical procedures [Spain]
- Time saving- if it takes an ambulance two minutes less to get to you then can make a difference between life and death [UK]
- Time management (i.e., wait time management-- if a patient didn't show up, physician had to wait and do nothing), [solution was to expand the wait time from 1-2 days to 3-4 days for more flexibility—and full patient occupancy] [??]
- Shortened “care time” [??]
- Saves time and resources since searching for lost journals is history (paper journals were seldom updated instantly but now they are), lost prescriptions are history; Saves time and resources [Swed]
- Increased productivity; shorter care periods and simplified administrative routines (less paper work); Clinic was able to use all 36 beds [Swed]
- Budget control. “When the government announces new budget and compensation measures we have to get the figures in balance again (a unit manager).” Many professionals complain about the unintended consequences of this kind of financial system changes Holand].
- Negative
- Since fiscal decentralization did not take place simultaneously with decentralisation of competencies, an expected negative consequence was that founder (municipality or territorial self-government) did not have enough money to fund new services they received as part of decentralisation package. [Slovakia]

Safety and economic

- Increased medical safety since falsification of
- Prescriptions are much harder. [Swed]
- Safety of patient increases since lost/not updated journals is history [Swed].
- Medical safety and work-environment [Swed].
- Increase in patient safety [Israel].
- Reduces medical risks and costs; more time for patients; reduces medical risks and costs, saves lives.
- Almost no bleeding during surgery and no scar [Swed].

Flexibility

- Increased flexibility for patients since they can have their pharmaceuticals in any pharmacy in Stockholm [Swed].
- *Despite many problems with it [decentralization] we are much more flexible in introducing pilot projects and pursuing new ideas" [Slov]*.

3. Expected consequences in relation to professionalism and work conditions

- Therapeutics are at the same level as all others in the multi-professional teams; increased skills of physicians; Change of work content for surgery nurses; Better work conditions [Swed]
- Desire to professionalize [partially achieved) [Israel]
- More useful job performance.[Lith]
- It's just fascinating…' Interviewee goes on to explain how much more balanced the workload is for GPs (general practitioners) and how stress levels have been reduced. [Ireland]
- …Make health and social care personnel more aware of special needs of elderly with dementia – improved ability to communicate with other professionals and provide help. [Nor]
- Adjustments of their [employees'] work to local conditions (legally they became independent entities). [Slov]
- Trainers feel more professional [Israel]
- Exposure to and from other- common experience. [Israel

Perceptual change

- A change in the state of mind of personnel from only seeing problems to seeing possibilities [Swed]
- Increase in public awareness to problem that the innovation aimed at solving, increase in awareness of professionalism, a more serious reaction to inclusion. [??]

Negative intended consequences

- Some of the patients had to travel more miles than before to get treatment [Swed]
- Loss of competencies, i.e. some nurses left the clinic because they did not like the new routines [Swed]**.**
- Increased workload for same salary [Lith],
- Basis of rivalries among departments who experienced, or did not experience innovation. [Isr]

- Most formal or organised innovation is undertaken with some ‘intended’ to meet a recognised clinical or organisational need. … consequences of innovation tend to spill over the boundaries of the areas/fields that they were intended to address. [UK]
- Increase in workload with no additional salary [??]
- ‘Some people feel left behind or feel that their contribution is not valued.’ [Ireland]
- Clients felt **some concern** regarding "deserting their own doctor, and that was a bit distressing to them" [Ireland].
- ‘No real improvement in waiting lists and service delivery at hospitals’ [Ireland]
- Service delivery costs increase because on-line services must still be duplicated in areas were internet not available, or when users prefer a face to face contact. [Ireland]

4.3. Implications and consequences of innovation (<u>unintended – positive and negative</u>)

Positive and negative unintended consequences are presented jointly, negative consequences are identified by an astrerisk (*). These are followed by examples in which positive implications can also be negative ones.

Success in service provision, performance reputation, and enlightenment	♦ Success of the innovation beyond expectation ♦ Beyond expected Success in providing skills to the needy; also succeeded more than expected with the treatment to sever disabled. [Isr]l ♦ Innovation was planned for one population but succeeded on a larger scale. Distance learning of children as a result of distance learning of parents; an unexpected collaboration from the field [Isr] ♦ Didn't expect the increase in number of operations should be so big [Swe] ♦ The standing of the clinic within the hospital has increased; ♦ A surprise was that the change was such a success; increase demand for practitioners' increase research; ♦ It was unexpected that the improvements should come as fast as they came. [Swed]. ♦ Discovered/confirmed real needs in some service [Lith] (counseling for men, Day Centre for the elderly, etc.
Administration	♦ The clinic has become a more attractive place to work and it has attracted more qualified and curious individuals [Swed] ♦ But the pace of change is getting quicker and the consequent disruption requires significant management effort and commitment of resources (time).
Networking and support	♦ The new nets, proposals for charity and support from persons, private sponsors. [Lith]
More busy work/workload	♦ * It takes more time to fill in the journals compared to earlier because is necessary to use new coding of diagnoses. In general administration is increasing as a result of the new computerised system. [Swed] ♦ Increase in workload [several times]; workload leads to

	resistance by some of the staff, which causes political struggles.; difficulty of the worker to perform a different work [Israel] ♦ Work in shifts for care personnel. This caused increase in the turn-over rate of personnel (nurses, caretakers), forcing management to hire temporary people to fill the vacancies, which was considered negative. [Nor]
Resistance from citizens and employees	♦ * Negative or passive reactions from citizens [Lith] ♦ Less resistance than expected from employees. ♦ * Surprising resistance or conflict with some of the workers that do not like changes [Spain]. ♦ Resistance to move to the new organization; imposing the innovation top-down created resistance; resistance because of the workload [Israel]
Competition among innovation actors	♦ * Facts of "unhealthy" competition among actors of innovation, especially on the level of subdivisions [lith] ♦ * A negative effect for a shorter period of time was that the innovation created tensions between clinics within the department due to a new distribution of resources [Swed]
Interdisciplinary work **Global trends**	♦ A benefit is that occupational therapeutics has been visible for physicians. Physicians are made aware of the therapeutics contribute with in the treatment of patients. [Swed]
Risk/threat	♦ * Physicians in other clinics risk loosing the breadth of competence [Swed]
Solution varieties	♦ Great variety of solutions in different local communities
Identified needs and inefficiencies	♦ Identified the inefficiency of the old system. New mode of thinking in terms of resource allocation. Positive attitude towards new modes of work. [Nor]
Impetus to further innovation	♦ In the course of innovation oriented project work, other ideas of innovations emerge [Nor] ♦ New innovations focusing on efficiency – contracting out of services[Slovakia ♦ There are major ongoing IT introduction programmes and procurement exercises which require organisational responses. This drives the need to focus and to prioritise on new issues. [UK]

Usage	♦ * Decrease in the stays and the need of beds in the Service of Cardiology. [Spain]
Communication	♦ After decentralization of competencies the system of information flow collapsed. This unintended consequence cut off Ministry from the practice, the new founders (municipalities and territorial self-governments) do not provide feedback and it is difficult to gather data for new laws. [Slovakia]
Learning	♦ 'Learning'. An innovation in one field of activity can often be replicated in others (for example, 'telephone monitoring' initially designed to assist diabetes sufferers in Salford was extended and modified for use as a tool to address the general health needs of elderly members of the Asian community). [UK]

Examples of implications that can be both positive and negative:

Examples of implications that are both positive and negative: Requires re-organisation: High demand that cannot be met and leads to org hesitation and citizen's complaints	♦ A. The demand for the service is so large that it cannot be covered by the pain alleviation clinic (personnel from the clinic must administer the pain alleviation). This has meant that other clinics are hesitant to use the service since not all patients can be alleviated, since patients that cant get alleviation may complain [Swed]
Budget/economy	♦ The new outfits are *more expensive than earlier outfits ♦ New mode of thinking in terms of resource allocation.[Nor] ♦ Positive assets in the informal economy of the community became apparent [Nor] ♦ Additional resources to the organization—relocating organizational functions increases income.
Employees/personnel	♦ Personnel *get fungus infections from using the dress. ♦ Positive attitude towards new modes of work; More meaningful work for people providing services[Nor] ♦ [Nor] ♦ A dynamic job; Increase in employee' satisfaction [Israel]

Administration	♦ Overall administration has grown: new occupations have been created that just or for the most part have administrative tasks. In a sense the change has meant creating more ways of doing careers in the hospital. The number of bureaucrats has increased at the expense of physicians, nurses etc. In general the number of contacts with patients has decreased. *Increased admin-decrease contact with patients [swe]

* = Negative

4.4 Beneficiaries of innovations

Innovation is aimed at providing improved services to clients. Driven by forces of modernization and globalization, clients have become the center of service provision, and are the primary beneficiaries of innovation. However, clients are not the only beneficiaries; practitioners and employees can be beneficiaries, too.

Staff [i.e., of health clinics] benefit from improved working practices that might lead to psychological rewards and satisfaction. These derive both from the knowledge that patients receive a better care, and from working with innovative or 'state of the art' and equipment or programs.

Public managers (and the health service generally) also benefit from innovation insofar as it frequently results in enhancement in the allocation and utilization of (scarce) health service resources.

The following is a quote from an interviewee who expresses this notion:

> "Ultimately, the principal beneficiaries of innovation should be service users and patients. However, new working practices and approaches to emergency care are benefiting ambulance service employees. Tax payers and the government also benefit via improved use of resources. [UK]

> And, as a Slovakian interviewee stated:

> "Innovations should have an impact on everyone, employees, management and clients and their families, but also society at large should benefit from it... otherwise it is not an innovation" [Slov]

Additional examples and quotes:

- Innovations should improve quality, lower costs, reduce waiting lists, shorten hospitalization length and heighten satisfaction of patients and workers {Neth].
- The question of who benefits more of innovation appears to be a mixed one. On the one hand, there is a wide agreement that clients and end-users ought to be main beneficiaries of innovation, on the other hand, findings show that all of the constituents benefit of innovations, with the clients being the prime beneficiaries followed by the management and employees and the organization at large. [??]
- Patients benefit, for example, of the shorter care time, the elimination of fear of losing report journals, increased flexibility, increased medical safety [Swe]
- "The elderly in need for help are the main beneficiaries of the innovations. All the interviews were explicit on this point" (Nor);
- ”…That new expensive technology might improve care for the very ill, but often doesn’t result in lower costs" (Neth)
- "…Clients of the social services as the prime beneficiary of the innovations as the innovations influence their quality of life… Also, the relatives of the clients are influenced by some innovations as they are able to monitor what is happening and appreciate the work done by the staff. (Slovakia).
- "Ultimately, the principal beneficiaries of innovation should be service users and patients. However, new working practices and approaches to emergency care are benefiting ambulance service employees" [UK].
- "Beneficiaries are staff, managers and users" [Ireland].
- However, employees, staff, professionals and management benefit of innovation too, and it is hard sometimes to determine who is the primary beneficiary of the innovation, as interviewees' response is divided here [Lith]
- "…Innovation creates preconditions for organizational learning, they can help to improve management, to expend resources, to increase efficiency, also to improve image, to become more attractive for young employee" (Lith). Spanish interviewees perceive professionals as main beneficiaries of small innovations "since they are basically who realize about the needs and what can be done to improve, and therefore, they do this small innovations with the aim of providing better care but in a more comfortable way" However, patients are main beneficiary because the quality of the health care improves, and big technological innovations, mostly benefit the patients, who enjoy of a health service with a lower waiting time and with lower secondary effects [Lith]
- Views were split half and half between who benefits more: clients or management. [Isr]
- "Staff gains from the innovations particularly as effectiveness is being introduced that helps in their everyday work and brings bigger satisfaction and motivation"; Innovation enables staff and management to renew themselves and thus to prevent burnout, it increases employees' work satisfaction, provides new tools for employees and practitioners and enables the system to carry a better quality control and effective documentation [Slov]

- "Innovations should improve quality, lower costs, reduce waiting lists, shorten hospitalization length and heighten satisfaction of patients and workers. That remains a noble ambition, but too many examples are being given about situations in which different professional groups tried to defend their own interests in the innovation process" (Neth).
- Patients are very clearly intended to be the main beneficiaries of innovation; Patients, innovators, the public purse; Patients, and also health practitioners and NHS employees; most innovations are designed to benefit end-users of healthcare services. However, some benefits accrue to health-service staff [UK]

PUBLIN –Summary and Discussion

Work Package 3 of the PUBLIN project was designed to develop a theoretical and methodological framework that will allow an attitudinal-behavioral analysis of innovation in countries represented by PUBLIN teams. Another goal was to reach a better understanding of patterns of innovation that are under used today, and may also encourage greater collaboration between the government and its operative-administrative branches, its citizens, and the business and private sectors.

Innovativeness is perceived in contemporary literature as a desirable trait because it energizes organizations and enhances their probability of survival and continued success (Gopalakrishnan & Damanpour 1997; Hult, Hurley, & Knight 2004; Subramanian 1996). Innovations involve 'something new', be it a new idea, product, method, or service, which form the end result of the innovation process (e.g. Gopalakrishnan & Damanpour, 1997; Hult et al., 2004; Hurley & Hult, 1998; Rogers, 1995; Subramanian & Nilakanta, 1996).

Lumpkin and Dess (1996, p. 142) defined innovativeness as reflecting "the firm's tendency to engage in and support new ideas, novelty experimentation and creative processes that may result in new products, services, or technological processes". As such, innovativeness is not tied to specific product innovations; rather, it reflects an organizational trait and the willingness to pursue new opportunities. Hurley and Hult (1998) distinguish between innovativeness and the capacity to innovate. In their conceptualization, innovativeness is part of an organization's culture, whereas innovative capacity is an organizational outcome.

According to the conceptualization used in the PUBLIN studies, innovation results from innovativeness – an organization's being innovative. Organizations in which

innovativeness is prized are more likely to implement or adopt innovations. Based on the extant literature, we identified five components of innovativeness that were incorporated into the theoretical model. This model also included antecedents of innovativeness and expected outcomes of organizational innovativeness.

The theoretical model underlying the PUBLIN research project includes the following antecedents of innovativeness: three components of a Market Orientation (Information Generation, Information Dissemination, and Responsiveness), Team Spirit, Internal Politics, Connectedness, and Centralization. These constructs were expected to impact Organization Innovativeness, conceptualized as a five-component construct that includes Openness, Risk Taking, Future Orientation, Creativity, and Pro-activeness.

We distinguish between two types of outcomes of innovativeness – an individual level of outcomes and an organizational level of outcomes. At the individual, behavioral level, Organization Innovativeness was expected to have an impact on Commitment and Work Satisfaction. At the organizational level, we expected Innovativeness to have an impact on Innovation Performance (benchmarked against Plans, Leaders' Expectations, and Users' Expectations), Organizational Performance (benchmarked against Plans, Leaders' Expectations, and Users' Expectations), and Organizational Learning (a six-dimensional concept).

In reviewing the results of this facet of PUBLIN, we are mindful that we examined pairs of related constructs in isolation. We expected the set of antecedents to have a strong overall impact on innovativeness and its sub-dimensions. Similarly, the set of innovativeness sub-dimensions was expected to have a strong impact on the various outcomes studied.

The data provided strong support for the theoretical model, both when assessed at the combined (multi-sample) level, as well as when assessed for each country separately (with a few minor exceptions and differences). Specifically, most of the antecedents of

innovativeness, in isolation, had correlations with the five components of innovativeness varying between 0.40 and 0.50. In other words, the impact of each, considered on its own, explains 15-25% of the variance in the relevant components of innovativeness. Therefore, even assuming some conceptual and empirical overlap among these antecedents, a much higher proportion of the variance in the components of innovativeness should be explained by the full set in combination.

Similarly, the five dimensions of innovativeness affected all outcome variables. While a few had a weak correlation with some outcomes (most notably for Organizational Learning), the general pattern was encouraging. Innovativeness was correlated with the outcomes mostly at a level of 0.35-0.60. Thus, even in isolation, innovativeness' components provide an explanation for 10-35% of the variance in these outcomes (except for Organizational Learning). Here, too, even if the five innovativeness components overlap empirically to some extent, a much higher portion of the variance in outcomes should be explainable by these components.

The end-users model was developed to explain public sector performance using a series of attitudinal and perceptional variables representing users' views of public sector innovation. We expected the perception of the public sector as innovative to lead to higher levels of trust in public sector organizations and increased satisfaction from such organizations among citizens. Satisfaction from public institutions, a positive image of public service organizations, and trust in them are all vital in a democratic society (Chanley, Rudolph & Rahn, 2000).

The model for end-users was originally developed to parallel the one for managers and frontline employees. However, we made two major changes before the commencement of data collection. First, we replaced some constructs and changed a number of others (generally by reducing the number of items used to operationalize them) to fit the specific context of this second survey. Secondly, data was collected from managers in third-sector

organizations that advocate and promote citizens' interests, rather than from citizens themselves as originally planned. The surveying of such managers is advantageous in that they know more about the phenomena studied, making them more accurate sources of information. Its major disadvantage is that the participants answered as managers, making them less representative than the population-at-large as sources of data.

Antecedents to perceived innovativeness of the public sector included Connectedness, Employees' Professionalism, Ethics and Morality, Internal Politics, Promoters of Innovation, Public Sector Leadership/Vision, and Responsiveness. A key point to note is that the data in this area reflected the perceptions of the participants. A two-dimensional approach was used to measure innovativeness (Innovation and Innovativeness). The three outcomes (referred to as consequences in the results) were Image, Satisfaction with Provided Services, and Trust in Institutions.

Findings indicated that end-users do not consider the public sector highly innovative – the mean innovativeness score for the entire sample was 2.8 out of 5. Relationships within this second study (end-users) were for the most part weaker than for the first study (managerial/frontline employees). It should be noted, however, that this was not true for all the variables, and that in some of the countries, moderate to strong relationships were found in certain cases. Still, while explained variance should improve with the inclusion of multiple predictors, we expect the full set of antecedents to explain much less of the variance in innovativeness than the set for the managerial/frontline employees survey did.

The strongest predictor of innovativeness, connectedness, had a correlation of 0.35 with it. In isolation, therefore, this strongest predictor explained only about 12% of the variance. The other antecedents that had some sort of association were Leadership, Responsiveness and Connectedness. These latter two reflect the public sector's ability to understand and address the public's needs in a quick and efficient manner. Public

organizations that accomplish this goal are viewed as open to changes and new technologies, and are thus seen as innovative. Meanwhile, Internal Politics, which is normally considered a hindering factor for public sector innovation (Borins, 2000; 2001), was not perceived as such by the end-users in our study.

As was the case with its relationships with the antecedent variables, innovativeness, however it was measured, was a fairly weak predictor of the outcomes studied. The highest correlation was for Innovativeness and Satisfaction with Services, which reached 0.33. Accordingly, Innovativeness, in isolation, accounts for about 11% of the variance in Satisfaction. Here, too, improvements should result from the inclusion of a fuller set of predictors, but the set of outcomes would be explainable by Innovativeness to a lesser degree than in the first survey.

We note several reasons for the weaker results of the second study. First, some of the constructs in the first survey were excluded from the second. Second, for variables included in both surveys, there were fewer items in the second, increasing potential measurement errors. Third, whereas managers/frontline employees should be knowledgeable about their organizations, managers in third-sector organizations should not be as knowledgeable, again increasing measurement errors.

In sum, we believe that the model was generally supported by the data in both studies. This conclusion holds at the complete sample level as well as for each country separately (although, not surprising, there are minor differences across countries).

There are numerous practical implications arising from the two studies. First and foremost, given its positive and strong impact on Organizational and Innovativeness Performance, public sector organizations should encourage and build organization-level Innovativeness. In this respect, although all components of Innovativeness contributed to Performance and should be emphasized to some extent, some components of innovativeness are more crucial than others and deserve special attention from top

management. However, given limited resources, of the five, Creativity should be singled out, as it had the strongest impact on measures of Performance. In contrast, Risk-Taking can be de-emphasized, as it had the weakest impact on Performance.

Since Innovativeness contributed to Performance, how can we encourage it in public sector organizations? Both Internal Politics and, to a lesser extent, Centralization reduced organizational innovativeness. Thus, both should be managed to reduce their pervasiveness in organizations seeking to increase their Innovativeness. Market Orientation (Information Generation, Information Dissemination, and Responsiveness), Team Spirit, and Connectedness all contributed to Organizational Innovativeness. Consequently, public sector organizations should consider ways to enhance these antecedents.

Our findings are based on research in the public sector (first-sector organizations) and our recommendations therefore refer to these types of organizations. However, we believe that our theoretical model and findings may be applicable for other non-profit organizations (third-sector). This could be an interesting avenue to explore in future research.

The Qualitative Study

Analysis of the international managers' and front-line in-depth interviews shows that innovation is a ubiquitous phenomenon in the public sector. Although, as previously noted, some of the interviewees were not familiar with the term "innovation", they used synonymous words to describe innovation, and there was no question about the need for innovation, and its existence in the public sector. Innovation reflects newness and change, and is closely allied with organizational and policy learning.

While innovation in the public sector may share some similar general characteristics with innovation in the private sector, major differences account for the unique features of the public sector. Innovation in the latter is predominantly policy driven, fed by external forces, and service oriented. However, innovation often suffers from limited budget allocations, and is perceived as reflective of the traditional, bureaucratic public system.

Examples of innovation in the public sector are new and improved services, processes, and administrative needs. Some are philosophical and conceptual and others are more practical. Innovation can be local or systemic.

Innovation addresses the needs of the end-users, followed by the administration or the managers, the employees, or the organization at large. Innovation seeks to improve service and enhance performance, reduce effort and increase efficiency, enhance employee competence and involvement, stay within the budget framework, follow global changes, and solve problems.

Managers and front-line employees are the primary initiators of innovation, followed by employees, other organizational personnel and professionals, government and politicians, end-users and external organizations. While the majority of innovations in the public sector are top-down and policy-driven, findings show that interviewees

generally see the organization's management or political parties rather than external organizations or the EU as the initiators of new approaches. In their role as innovators, managers and department heads are believed to be the ones who create, plan, and promote the innovation. Employees are viewed as the ones who provide the service: they bring ideas, argue, report problems, and implement the innovation. The end-users respond to the changes, give feedback and complain.

Innovation would not occur without facilitating and hindering forces. Facilitators of innovation are predominantly internal, organizational forces that include the leadership and management, cultures open to change, supportive personnel and proper funding. External facilitators include the EU, the legislature, or national initiatives, as well as information, learning, and networking.

Obstacles to innovation are predominantly internal to the organization as well. Findings show that interviewees perceive barriers to innovation as deriving from public service's leadership and management (i.e., budget cuts or poor allocation of budget funds, and poor leadership). Additional obstacles are the traditional regulations and work routines, employee resistance, internal and external politics, poor learning environment, and end users' resistance.

Organizational learning and policy learning emerge as an integral part of innovation, and are reflected through the infrastructures that facilitate organizational learning, networking and cooperation with other organizations, and the development of competencies and networking. Internal and external organizational networking emerged as important for the success of innovations.

There was broad agreement as to the importance of the measurement criteria of innovation success. These range from routine measures to a lack of overall criteria. Quantitative scientific measures and qualitative measures are used to evaluate innovation. Quantitative measures often consist of observed criteria such as number of people served,

duration of hospitalization, medical malpractice, percentage of clients who are referred or complete the service, etc. Qualitative measures consist of measures such as general notions of client satisfaction and the reasons for it, managers' evaluations, and performance progress. Some of the measures, however, rely on “gut feelings” rather than on scientific methods. Interviewees seemed uncomfortable with this question, and some interviewees reported being unaware of any clear method for measuring innovation. Difficulties with measurement criteria include information that is not linked to primary processes of innovation, scarcity of measurement tools, lack of time or resources, or difficulty in accessing clients' or other sensitive data. The importance that interviewees placed on innovation combined with the lack of clear measures suggests that this area needs some attention.

Expected and unexpected implications followed. Expected and intended implications, positive or negative, emerged in relation to the improvement of service provision and performance, management and administration, professionalism and work conditions. Examples of intended implications include safety, economic changes and aspects of innovation flexibility. Unintended implications and consequences of innovation, both positive and negative, emerged in the areas of service provision, performance reputation, administration, networking and support. Additional unintended consequences were heavier workloads (i.e. paperwork), end-users' and employees' resistance to innovation, competition from interest groups, and innovation serving as an impetus to further additional innovations. Some implications are both positive and negative simultaneously, when directed at different goals or players.

The primary beneficiaries of innovation according to the interviewees are the end-users ("clients"); however, practitioners and employees also benefit from innovation.

In sum, findings show that innovation is ubiquitous in the public sector. It is aimed at improving the provision of service, involves a variety of stakeholders, is linked to

organizational learning, and benefits end users, practitioners and managers. While there are indications of successful innovations, not much is known about unsuccessful innovations, their characteristics, or why they fail. Managers should be attentive to obstacles that hinder innovation and negative consequences as much as to positive consequences of innovations and success stories.

Recommendations to innovators reflect the interviewees' major comments in descending order - from the most frequent, to the least, as follows:

1. Develop quality leadership that creates the right climate for change (Swed), "walk the talk" (Neth) and institute "cultural change" (UK, Slov, Isr, Norway).

2. Involve employees and get their support and commitment (Swed, Ireland, Neth, UK), encourage personnel to take initiative (Swed), make people feel 'it's their project' (Neth), provide feedback (Ire), 'buy in' a full range of stakeholders for commitment (Ire) and cultural change (UK).

3. Develop inter and intra- organizational networking, coordination and cooperation at all levels (Lith, Norway, Spain, Israel),

4. Plan ahead, assess the situation and evaluate (Lith, Israel, UK) while remembering the goal of improving the provision of services (Lith, Neth); "Innovation must be based on evidence… (a) "studying future demands", and (b) "developing creative service/delivery solutions could yield substantial savings in the mid to longer-term." [UK]

5. Be open and creative, think "outside of the box", listen to new people, use research, admit mistakes, and take risks (Ire, Lith, Isr, UK).

Managers must take all aspects and consequences of innovation into consideration when they plan an innovation, and never "rest on their laurels".

REFERENCES

Aiken, M. and Hage, J. (1968). Organizational Independence and Intra-organizational Structure. *American Sociological Review, 33*, 912-930.

Anderson, N.R. and West, M.A. (1998). Measuring climate for work group innovation: development and validation of the team climate inventory. *Journal of Organizational Behavior, 19,* 235-258.

Argyris, C. (1977). Double loop learning in organizations. *Harvard Business Review*, 55 (September/October), 115-25.

Bennis, W. G. and Nanus, B. (1985). *Leaders: The Strategies for Taking Charge*. New York: Harper and Row.

Borins, S. (2000). Loose Cannons and Rule Breakers, or Enterprising Leader?

Some Evidence about Innovative Public Managers. *Public Administration Review, 60*, 498-507.

Borins, S. (2001). Innovation, success and failure in public management research: some methodological reflections. *Public Management Review, 3* (1), 3-18.

Bozeman, D. P. et. al. (1996). An examination of reactions to perceptions of organizational politics. *Paper presented at the 1996 Southern Management Association Meetings, New Orleans*.

Caruana, A., Ramaseshan, B., and Ewing, M.T. (1999). Market Orientation and Performance in the Public Sector: The Role of Organizational Commitment. *Journal of Global Marketing, 12* (3), 59-79.

Caruana, A., Ewing, M.T. and Ramasehan, B. (2002) Effects of some environmental challenges and centralization on the entrepreneurial orientation and performance of public sector entities. *The Service Industries Journal***,** *22 (2),* 43-58.

Chanley, V. A., Rudolph, T. J. & Rahn, W. M. (2000). The origins and consequences of public trust in government: A time series analysis. *The Public Opinion Quarterly*, 64 (3), 239-256.

Conger, J. A., and Kanungo, R. A. (1998). *Charismatic Leadership in Organizations*. Thousands Oaks, CA: Sage.

Costa P.T., Jr., and McCrae R.R. (1992). *NEO PI-R Professional*. Manual. Odessa, FL: psychological Assessment Resources.

Damanpour, F. (1991). Organizational innovation: a meta-analysis of effects of determinants and moderators. *Academy of Management Journal* 34 (3): 555-90.

Damanpour, F and Gopalakrishnan, S. (1998). Theories of organizational structure and innovation adoption: the role of environmental change. *Journal of Engineering and Technology Management* 15 (1): 1-24.

Deshpande, R. and Farley, J. U. (1998). Measuring Market Orientation: Generalization and Synthesis. *Journal of Market Focused Management* 2, 213-32.

Deshpande, R., Farley, J. U and Webster, F. E., Jr. (1997). Factors Affecting Organizational Performance: A Five-country Comparison. *Marketing Science Institute Working Paper* Report, 97-108.

Deshpande, R., Farley, J. U and Webster, F. E., Jr. (1993). Corporate Culture Customer Orientation, and Innovativeness in Japanese Firms: A Quadrad Analysis. *Journal of Marketing* 57(1), 23-7.

Deshpande, R. and Zaltman, G. (1982). Factors affecting the use of market research information: A path analysis. *Journal of Marketing Research,* 19 (February), 14-31.

Dess, G.G. and Robinson, R.B. (1984). Measuring Organizational Performance in the Absence of Objective Measures: the Case of the Privately-held Firm and Conglomerate Business Unit. *Strategic Management Journal, 5,* (July-September), 265-273.

Dess, G. G., Lumpkin, G. T., & Covin, J. G. (1997). Entrepreneurial strategy making and firm performance: Tests of contingency and configurational models. *Strategic Management Journal, 18*(9), 677-695.

Diamantopoulos, A. & Cadogan, J. W. (1996). Internationalizing the market orientation construct: an in-depth interview approach. *Journal of Strategic Marketing* 4, 23-52.

Diamantopoulos, A & Hart, S. (1993). Linking market orientation and company performance: preliminary evidence on Kohli and Jaworski's framework. *Journal of Strategic Marketing,* 1, 93-121.

Dunham, R.B. and Pierce, J.L. (1989) *Management*. Glenview, IL: Scott, Foresman and Co.

Dutton, J. E., & Dukerich, J.M. (1991). Keeping an eye on the mirror: Image and identity in organizational adaptation. *Academy of Management Journal,* 34, 517-554.

Ferris, G.R., Russ, G.S., & Fandt, P.M. (1989). Politics in organizations. In R.A. Giacalone & P. Rosenfeld (Eds.), *Impression Management in the Organization* (p.143-170). Hillsdale, NJ: Lawrence Erlbaum.

Ferris, G.R and Kacmar, K. M. (1992). Perceptions of organizational politics. *Journal of Management,* 18, 93-116.

Fiorino, D. J. (2001). Environmental policy as learning: A view of an old landscape. *Public Administration Review, 61*(3): 322-335.

Folger, R., Konovsky, M.A., & Cropanzano, R. (1992). A due process metaphor for performance appraisal. In L.L. Cummings & B.M. Staw (Eds.), *Research in Organizational Behavior, 14,* (p. 129-177). Greenwich, CT: JAI Press.

Ford, C. M. (2002). The futurity of decisions as a facilitator of organizational creativity and change. *Journal of Organizational Change Management* 15(6), 635-646.

Frambach, R. and Schillewaert, N. (2003). Organizational Innovation Adoption: A Multi-level Framework of Determinants and Opportunities for Future Research. *Journal of Business Research,* 55, 163 - 176.

Gavetti, Gi. and Levinthal, D. (2000). Looking forward and looking backward: Cognitive and experiential search. *Administrative Science Quarterly* 45(1), 113-137.

Golden, P. A., Doney, P. M., Johnson, D. M., & Smith, J. R. (1995). The dynamics of a marketing orientation in transition economies: a study of Russian firms. *Journal of International Marketing,* 3 (2), 29-49.

Golembiewski, R.T., & Vigoda, E. (2000). Organizational Innovation and the Science/Craft of Management, In M. A. Rahim, R.T. Golembiewski, & K.D. Mackenzie (Eds.). *Current Topics in Management, Vol. 5,* Greenwich, CT: JAI Press, *263-280*.

Gopalarakrishnan, S. and Damanpour, F. (1997). A review of innovation research in economics, sociology and technology management. *Omega, International Journal of Management Science, 25* (1), 15-29.

Grandey, A. (2003). When 'the show must go on': surface acting and deep acting as determinants of emotional exhaustion and peer-rated service delivery. *Academy of Management Journal* 46(1), 86-96.

Green, L. Howells, J. and Miles, I. (2001). *Services and Innovation: Dynamics of Service Innovation in the European Union*, Final Report December 2001 PREST and CRIC University of Manchester

Greenley, G. E. (1995). Market orientation and company performance: empirical evidence from UK companies. *British Journal of Management* 6, 1-13.

Hult, G.T.M., Nichols, E.L. Jr., Ginuipero, L.C. and Hurley, R.F. (2000). Global Organizational Learning in the Supply Chain: A Low versus a High Learning Study. *Journal of International Marketing, 8* (3), 61-83.

Hult, G.T.M., Hurley, R.F. and Knight. G.A. (2004). Innovativeness: Its antecedents and impact on business performance. *Industrial Marketing Management, 33(5),* 429-438.

Hurley, R.F. and Hult, G.T.M. (1998). Innovation, market orientation, and organizational learning: integration and empirical examination. *Journal of Marketing, 62* (3), 42-54.

Javidan, M. and Waldman, D.A. (2003). Exploring Charismatic Leadership in the Public Sector: Measurement and Consequences. *Public Administration Review, 63 (2),* 229-242.

Jaworski, B. J. and Kohli, A. K. (1993). Market Orientation: Antecedents and Consequences. *Journal of Marketing* 57(3), 53-70.

Kacmar K.M. & Carlson D.S., (1994). Further Validation of perceptions of politics scale (POPS): A multiple sample investigation. *Paper Presented at annual meeting of Academy of Management, Dallas, Texas.*

Kacmar, K.M., & Ferris, G.R. (1991). Perceptions of organizational politics scale (POPS): Development and construct validation. *Educational and Psychological Measurement,* 51, 193-205.

King N. (1990). Innovation at work: the research literature. In: M. A. West and J. L. Farr (eds.), *Innovation and Creativity at Work.* England: Wiley publications.

Kipnis, D., Schmidt, S.M., & Wilkinson, I. (1980). Intraorganizational influence tactics: Exploration in getting one's way. *Journal of Applied Psychology 65*, 440-452.

Knight, G.A. (1997). Cross-cultural reliability and validity of a scale to measure firm entrepreneurial orientation, *Journal of Business Venturing. 12 (3),* 213-225.

Kohli, A. K. and Jaworski, B.J. (1990). Market Orientation: The Construct, Research Propositions, and Managerial Implications. *Journal of Marketing* 54(2), 1-18.

Kohli, A. K., Jaworski, B.J. and Kumar, A. (1993). MARKOR: A Measure of Market Orientation. *Journal of Marketing Research* 30(4), 467-77.

Kreiser, P.M., Marino, L.D. and Weaver, K.M. (2002). Assessing the psychometric properties of the entrepreneurial orientation scale: A multi-country analysis. *Entrepreneurship Theory and Practice, 26 (4),* 71-94.

Lumpkin, G. T. and Dess, G. G (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management journal* 21(1), 135-172.

Lumpkin, G. T. and Dess, G. G (2001). Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing, 16(5),* 429-451.

Lynn, G., Morone, J. and Paulson, A. (1996). Marketing and discontinuous innovation: the probe and learn process. *California Management Review, 38,* 8-37.

March, J.G. and Simon, H.A. (1958). *Organizations*. New York: John Wiley.

Mason, W. M., House, J. S., & Martin, S.S. (1985). On the dimensions of political alienation in America. *Sociological Methodology*, 15, 111-151.

McCrae, R.R (1987). Creativity, Divergent Thinking, and Openness to Experience. *Journal of Personality and Social Psychology, 52,* (6), 1258-1265.

Miles, R. E., & Snow, C. C. (1978). *Organizational strategy, structure, and process*. New York: McGraw-Hill.

Morgan, R.E. and Strong, C.A. (2003). Business performance and dimensions of strategic orientation. *Journal of Business Research, 56,* 163-176.

Morris, M.H. and Paul, G.W. (1987). The Relationship Between Entrepreneurship and Marketing in Established Firms**.** *Journal of Business Venturing, 2(3),* 247-259**.**

Muczyk, J.P. and Reinmann, B.C. (1987). The case for directive leadership. *Academy of Management Executive* 1, 301-311.

Mumford, M. D., Scott, G. M., Gaddis, B. and Strange, J. M. (2002). Leading creative people: Orchestrating expertise and relationships. *The Leadership Quarterly* 13(6), 705-750.

Narver, J.C. and Slater, S. F. (1990). The Effect of a Market Orientation on Business Profitability. *Journal of Marketing* 54(4), 20-35.

Narver, J.C., Jacobson, R., and Slater, S. F. (1993). Market Orientation and Business Performance: An Analysis of Panel Data. *Marketing Science Institute Working Paper* Report Number, 93-121.

Nelson, R.R., Winter, S.G (1982). The Schumpeterian Tradeoff Revisited. *The American Economic Review. 72 (1),* 114-132.

Nunnally, J.C. (1978). *Psychometric Theory (2nd edition).* NY: McGraw-Hill.

Oswald, J. (1996). Human resources, scientist, and internal reputation: The role of climate and job satisfaction. *Human Relations,* 49, 269-294.

Pelham, A.M. and Wilson, D.T. (1996). A Longitudinal Study of the Impact of Market Structure, Firm Structure, Strategy, and Market Orientation Culture on Dimensions of Small-Firm Performance. *Journal of the Academy of Marketing Science* 24(1), 27-43.

Porter L.W, Strees R.M, Mowday R.T., & Boulian P.V., (1974) Organization commitment, job satisfaction and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59, 603-60.

Rogers, E. M. (1995). *Diffusion of innovations. 4th ed.* New-York: The Free Press.

Rose, G. M. & Shoham, A. (2002). Export performance and market orientation: establishing an empirical link. *Journal of Business Research* 55(3), 217-25.

Rosenfeld, R. and Servo, J. C. (1990). Facilitating innovations in large organizations. In: M. A. West and J. L. Farr (eds.), *Innovation and Creativity at Work*. England: Wiley publications.

Ruekert, R. W. & Walker, O. C. Jr. (1987). Marketing's interaction with other functional units: a conceptual framework and empirical evidence. *Journal of Marketing* 51(1), 1-19.

Sandford, B. (2002). Leadership and innovation in the public sector. *Leadership and organization development journal*, 23(8), 467-476.

Scott, S. G., and Bruce, R. A. (1994). Determinates of innovative behavior: a path model of individual innovation in the workplace. *Academy of Management journal* 37(3), 580-607.

Selnes, F., Jaworski, B.J., and Kohli, A. K. (1996). Market Orientation in United States and Scandinavian Companies: A Cross-Cultural Study. *Scandinavian Journal of Management* 12(2), 139-57.

Senge, P. M. (1990). *The fifth discipline*, New York: Doubleday.

Shoham, A. & Rose, G. M. (2001). Marketing orientation: a replication and extension. *Journal of Global Marketing* 14(4), 2-25

Siegel, S.M. and Kaemmerer, W.F. (1978). Measuring the Perceived Support for Innovation in Organizations. *Journal of Applied Psychology, 63* (5), 553-562.

Simon, H.A. (1955). A Behavioral Model of Rational Choice. *Quarterly Journal of Economics*, 69, 99-118.

Sitkin, S.B.; Pablo, A.L. (1992). Reconceptualizing the Determinants of Risk Behavior. *Academy of Management: The Academy of Management Review***,** *17(1),* 9-38.

Slater, S. F. and Narver, J. C. (1994). Does Competitive Environment Moderate the Market Orientation—Performance Relationship? *Journal of Marketing* 58(1), 46-55.

Slater, S. F. and Narver, J. C. (1995). Market Orientation and the Learning organization. *Journal of Marketing* 59(3), 63-74.

Slater, S. F. and Narver, J. C. (1996). Competitive Strategy in the Market-Focused Business. *Journal of Market Focused Management* 1(2), 159-74.

Stevenson, H.H. and Jarillo, J.C. (1990). A Paradigm of Entrepreneurship: Entrepreneurial Management**.** *Strategic Management Journal.* 11, 17-27.

Stewart. W. H. & Roth, P. L. 2001. Risk propensity differences between entrepreneurs and managers: a meta-analytic review. *Journal of Applied Psychology* 86(1), 145-53.

Strange, J. M. and Mumford, M. D. (2002). The origins of vision: Charismatic versus ideological leadership. *The Leadership Quarterly* 13(4), 343-377.

Subramanian, A. (1996). An Explanation of Splaying. *J. Algorithms 20*(3), 512-525.

Subramanian, A. and Nilakanta, S. (1996). Organizational Innovativeness: Exploring the Relationship Between Organizational Determinant of Innovation, Types of Innovations, and Measures of Organizational Performance. *Omega, International Journal of Management Science, 24(6),* 631-647.

Taggar, S. (2002). Individual creativity and group ability to utilize individual creative resources: A multilevel model. *Academy of Management Journal, 45 (*2), 315-330.

Thomas, P. & Palfrey, C. (1996). Evaluation: Stakeholder-focused Criteria. *Social Policy and Administration*, 30, 25 – 42.

Tierny, P., Farmer, S.M., and Graen, G.B. (1999). An Examination of Leadership and Employee Creativity: the Relevance of Traits and Relationships. *Personnel Psychology, 52 (3),* 591-620.

Tsui, A.S., Egan, T.D., and O'Reilly, C.A. III. Being different: Relational demography and organizational attachment. *Administrative Science Quarterly*, .37(4); 549-579.

Tversky, A. and Kahneman, D. (1986). Rational Choice and the Framing of Decisions. *Journal of Business*, 59, S251-S278.

Van de Ven, A.H. (1986). Central Problems in the Management of Innovation. *Management Science. 32 (5),* 590-607.

Venkatmaran, N. (1989). Strategic Orientation of Business Enterprises: the Construct, Dimensionality, and Measurement. *Management Science, 35 (8),* 942-962.

Vigoda, E. (2000A). Internal politics in public administration systems: An empirical examination of its relationship with job congruence, organizational citizenship behavior and in-role performances. *Public Personnel Management 26,* 185-210.

Vigoda, E. (2000B). The relationship between organizational politics, job attitudes, and work outcomes: Exploration and implications for the public sector. *Journal of Vocational Behavior* 57, 326-347.

Vigoda, E. (2000C). Are you being served? The responsiveness of public administration to citizens' demands: An empirical examination in Israel. *Public Administration* 78(1), 165-191.

Vigoda-Gadot, E. & Yuval, F. (2003). Managerial Quality, Administrative Performance and Trust in Governance Revisited: a Follow-Up Study of Causality. *The International Journal of Public Sector Management* 16(7), 502-522.

Vigoda-Gadot, E., Shoham, A., Schwabsky, N. and Ruvio, A. (2005). Public sector innovation for the managerial and the post-managerial era: Promises and realities in a globalizing public administration. *International Public Management Journal*, 8(1), 57-81.

Webster, F. E., Jr. (1988). Rediscovering the marketing concept. *Business Horizons* 31(May-June), 29-39.

Zaltman, G., Duncan, R. and Holbek, J. (1973). *Innovations and Organizations*. New York: John Wiley & Sons.