

COEXISTENCE OF THE HIGH-QUALITY HUMAN RESOURCES AND POOR ORGANISATIONAL CAPABILITIES

Why do Post-socialist countries lag behind the EU-15 in public sector innovation?

Csaba Makó¹, Miklós Illéssy²

Abstract

The paper focuses on the under-researched dimension of the public service innovation at European level and especially in the New Member States in Central and Eastern Europe. In this relation, the authors stress the importance of the innovation in general (e.g. implementation of the various tools of e-governance) and of the non-technological innovation in particular. The introductory section calls attention to its often neglected positive impacts both on the organisational performance and the employment. The section dealing with the innovation in the public service is presenting the empirical results of the first pan-European pilot survey which has been carried out recently. Identifying and assessing the importance of the key factors shaping innovation performance in the public sector, the authors indicate the drivers, capabilities and results of innovation. Analysing and assessing the European survey data, the authors pay special attention to the factors responsible for the innovation performance of the Hungarian public service organisation.

Keywords: good state, forms of innovation, public sector, institutions, employee participation.

1. Introduction: The role of innovation in the employment growth and in the organisational performance

There is a growing consent between the practitioners and academics on the importance of non-technological (e.g. workplace) innovations in generating sustainable competitiveness of the national economies and in opening new road of both economic and social development. Systematically collected experiences on the diffusion of various types of innovation indicate that – in the long run – the higher employment rate is one of the visible outcomes [Nielsen, 2006]. The World Bank's research institute carried out the most comprehensive and methodologically well founded research on the employment impacts of innovative or non-innovative firms. The survey covered 26,000 firms in 71 countries. According to their results, innovative firms generate significantly greater employment growth and this growth is much more inclusive than previously expected [Dutz et. al. 2011:4]. In addition, according to the recent review of some sixty American papers on the workplace innovation indicates that the efficiency effects of workplace innovation on performance premiums range between 15% and 30%. [Appelbaum et. al. 2011, in: Dortmund Position Paper, 20012:9.]

¹ Professor Csaba Makó, Faculty of International and European Studies, National University of Public Service (NUPS), 1083 Budapest, Ludovika tér 2., E-mail: Mako.Csaba@tk.mta.hu

² Researcher, Institute of Sociology – Centre for Social Sciences – Hungarian Academy of Sciences, 1014 Budapest, Országház u. 30. Hungary, E-mail: Illussy.Miklos@tk.mta.hu

In spite favourable performance outcomes of the workplace innovation, the mainstream innovation streams are stressing the importance of the technological (i.e. product and process) innovations and are neglecting the roles of such non-technological innovation as new models of work organisations, new working and employment practices, new business models and marketing methods etc. For example, according to such emblematic figure of the so-called open innovation system as Chesbrough [2006, p. 43, quoted by Karo-Kattel, 2010:14]: ‘There is no inherent value in a technology per se. The value is determined by the business model used to bring it to market. The same technology taken to the market through two different business models will yield different amounts of values. An inferior technology with better business model will often trump a better technology commercialized through inferior business model.’

The so-called Dortmund Position Paper elaborated by the European Network for Workplace Innovation (EUWIN) and other experts of non-technological innovation stresses that although social innovation is a pre-condition for the successful implementation of new technologies cannot be implemented successfully without the necessary organisational adjustments and innovations, the share of organisation investing in workplace innovation is low. Stakeholders and decision makers often lack the adequate information and knowledge resources and consequently they are rarely aware of the importance of workplace innovation. Organisational and workplace innovations represent a hidden resource for whole Europe to become more competitive, especially in South and Eastern Europe [Dortmund Position Paper, 2012:1]

Beside the visible inequalities in the share of workplace innovation investment within the country groups of the European Union, both theoretical experts and practitioners often underestimate the important role of the social (collective) and organisational learning necessary for the successful implementation of the innovations – especially in the case of their radical forms. For example, the potentials of the use of such generic or integrative technologies as the Information and Communication Technology (ICT) are un-exploited or under-utilised due to these shortcomings. In this relation it is worth quoting Lundvall [2004: 2-3.] who stressed that ‘... firms that introduced ICT without combining it with investments in the training of employees, with change in management and with work organisation got a negative effect on productivity growth that lasted several years. What is at stake is the capacity of people, organisations, networks and regions to learn. Learning to cope with the full potential of the new technologies is, in a sense, to transform them from being new to being old.’

This analysis has the following sections. The following section discusses the theoretical and methodological foundations of innovation in the public sector. The second section outlines the results of an European pilot-survey on the innovation performance of the organisation in the public administration. In this analysis the authors – in presenting the 2013 European Public Service Innovation Scoreboard (EPSIS) – discuss role of drivers, capabilities and results of the EPSIS by such country groups: Post-Socialist, Continental, Nordic, Anglo-Saxon and Mediterranean. The last section outlines both main conclusions and the future research challenges on the role of innovation in creating and sustaining the ‘good state’.

2. Innovation in the Public Sector: Theoretical and Methodological Foundations

After the 2nd World War, until the end of 1970’s, the mainstream international innovation surveys have been focusing and collecting data on Research and Development (R&D) activities in the private sector. These analyses were able to describe the innovation potential of mainly manufacturing (and other industrial) firms operating in the private sector, while the innovation

activity of the service sector and in particular the organisations of the public administration were omitted. Following more than a decade-long preparation, the OECD did initiate pilot studies on the innovation – in private and manufacturing sectors – in the Nordic countries. The lessons from these surveys were summarized in the Oslo Manual [1992]. This manual served as a theoretical and methodological guideline for the various waves of the Community Innovation Surveys (CIS) which are carried out by the National Statistical Offices (NSO) within the European Union. The first edition of Oslo Manual essentially aimed to measure or map not only the R&D activities in their strict sense but the diffusion of technological (product + process) innovation as well.

In this relation it is worth mentioning that the original questionnaire elaborated in the first edition of the manual and used in the following surveys was not able to measure the innovation in the fast growing service sector. The modified version of the questionnaire published in the second edition of the Oslo Manual [1997] is suitable to measure innovation in both manufacturing and service sector. However, only the third edition of this Manual [2005] covers such type of non-technological innovations as marketing or new business and organisational practices. According to this Manual: ‘... innovation represents a new or significantly developed product (services) or process, new marketing methods, or the implementation of the new management-organisational methods in the business or workplace practices and in the external relations of the organisation.’ [Szunyogh, 2010:494]

There is a rather new research agenda having the ambition to compare and identify the similarities and differences of organisational innovation characterising the private and the public sectors. Before presenting the empirical results of the pilot international comparative survey called European Public Sector Innovation Scoreboard – EPSIS in 2013, it is worth comparing the characteristics of the innovation between the private and the public sectors. Hollanders et al. [2013] summarized the similarities and differences of innovations by sectors in the Table 1. (The Annex 1 describes the content of the various types of innovation.)

Private sector	Public sector
• Product innovation	• Service innovation
• Process innovation	• Process innovation
• Organisational innovation	• Organisational innovation
• Marketing innovation	• Communication innovation

Table 1 Differences between Private and Public Sector Innovation

Source: European Commission, EPSIS, 2013:9.

The Table 1 indicates well both similarities and differences of innovation activities in the two sectors. For example, similarities are dominating in the fields of process and organisational innovation. However service innovation instead of product innovation and communication innovation instead of market innovation characterise the public sector in comparison with the private one.

3. Innovation Performance of the public sector: a European comparison. (Descriptive statistical analysis of the first European public sector survey)

This section reviews the results of the European Public Sector Innovation Scoreboard (EPSIS–2013) following the three core dimensions of the research. The *first dimension* covers such *enablers (incentives) of the innovation* in the organisations of the public administration as the human

resources and quality of public service. The *second dimension* deals with the great number of factors explaining the *innovation capability* and among the enablers and constraints of innovation it focuses only on the growing role of the employees' involvement. Finally among the *innovation outcomes* – the third dimension – the analysis reviews the share of the new services for the market and the improving (quality) services delivered to the business community.

3.1. Enablers and inhibitors of innovation in organisation of public service: country groups and cross country differences

In the EPSIS-2013 survey, the enablers or incentives of innovation in the public service organisation were identified by the available human resources and the quality of public service. The share of creative occupations³ and employees having university degree⁴ were the constitutive elements of the human resources. The quality of public service was measured by the following five factors:

- a) efficiency of the governance,
- b) quality of regulation,
- c) efficient government service based on the use of ICT,
- d) on-line availability of the public service,
- e) E-governance development index (EGDI)⁵

The results of the EPSIS-2013 survey will be presented by country groups representing the institutional variety of the European Union's member states.⁶ Among the great number of approaches we adopt the method of the Belgian economist [Sapir, 2005] who made distinction by participation rate in the labour market (employment rate) and avoidance of the risk of poverty between the following country groups⁷:

- I. *Continental country group*: Austria, Belgium, Germany, France and Luxemburg.
- II. *Nordic country group*: Denmark, Finland, Netherlands and Sweden.

³ Creative occupations are belonging into the categories of ISCO (Eurostat Standard Classification of Occupation) 88, 1 and 2 classes.

⁴ Share of the diplomas in 'science and engineering'. These types of diplomas were surveyed in spite of the fact that the majority of tasks in the public services could be executed efficiently by other diplomas. The rationale behind prioritising diplomas in "science and engineering" was the following: smooth use of ICT and solving technology related issues in public service require such types of knowledge.

⁵ Content of the 'E-Government Development (EGDI) index: $1/3 \times \text{on-line service index} + 1/3 \times \text{telecommunication index} + 1/3 \times \text{human capital}$. See in details: UPAN, E-Government Development, http://www2.unpan.org/egovernment_overview/readiness.htm

⁶ The EPSIS is a first attempt to measure public sector institutions' innovation performance. The methodology and the indicators used in this essay are obviously contestable. However, in this paper we do not intend to analyse the methodological strengths and weaknesses of the analysis, despite of all difficulties we assume that the results of this first scoreboard are a good starting point for further analysis and are especially susceptible to demonstrate country cluster differences across the EU member states.

⁷ The variety of capitalism (VoC) theoretical and methodological school became extremely popular in last quarter of century. One of the most comprehensive review of these approaches was done by Wolfgang Streeck [2010]

III. *Anglo-Saxon country group*: Ireland and United Kingdom.

IV. *Mediterranean country group*: Greece, Italy, Malta, Portugal and Spain.

In our analysis, the country-classification elaborated by Sapir [2005] was completed by the category of the country group of the post-socialist countries. Our attempt represents a partial solution because the post-socialist country group – similarly to the case of the EU-15 countries – does not represent homogeneous-identical institutional-welfare systems because the quarter of century history of the emerging capitalism in these countries generated various path of socio-economic development. However, we need further, theoretically and empirically founded research employing the approach of international comparative analysis to elaborate a well-founded country grouping suitable for the case of the post-socialist economies, too [Bohle – Greskovits, 2012; Farkas– Makó – Illéssy – Csizmadia; 2012, Martin, 2008.].⁸

Countries	Human resources		Quality of public services				
	Creative occupations (%)	University degree (8)	Efficiency of the government (-2.5 - +2.5)	Quality of regulation (-2.5 - +2.5)	Efficiency improvement (ICT) (1 - 7)	Availability of e-service (%)	E-governance (0 - 1)
Bulgaria	30.0	57.0	1.01	0.61	3.8	70.0	0.61
Czech Republic	18.2	16.1	1.01	1.14	4.00	73.8	0.65
Estonia	35.4	64.4	1.22	1.45	5.6	93.8	0.80
Lithuania	48.3	55.5	0.70	0.98	3.8	93.3	0.66
Latvia	48.5	45.9	0.72	0.97	4.8	71.7	0.73
Hungary	21.2	15.8	0.69	1.05	4.0	65.8	0.72
Poland	31.8	56.2	0.71	0.97	3.5	78.8	0.64
Romania	26.3	51.2	-0.14	0.66	3.3	60.0	0.61
Slovenia	42.8	37.9	1.03	0.75	4.3	95.0	0.75
Slovakia	18.2	32.6	0.85	1.05	3.6	62.5	0.63
EU-27 average	23.1	29.6	1.18	1.26	4.6	84.3	0.75

Table 2 Enablers of Innovation in the Public Sector: Post-Socialist Countries⁹

⁸ On the extensive debate on the Hall – Soskice [2001] model of capitalist variety (VoC), Streeck [2010] indicates at least the following four critical aspects: 1). Methodological nationalism, 2). Functionalism, 3). Economism, 4). Static comparativism. In relation with the last critical issue, Streeck [2010:27-28.] rightly stresses that the “static comparativism of an approach to capitalism that assigns only secondary significance to origin, history, agency, conflict, and change ...” Thus the notion of capitalism, originally inseparably associated with conflicts and crisis, becomes not just technocratically sterilized but also de-historicized, as the conceptual schema of capitalism-as-market economy has no systematic place for the possibility of capitalism-as-political-economy reaching historical limits to its sustainability.’

⁹ In the following tables, we are using descriptive statistical analysis of the EPSIS-2013 survey – 22 variables - done by Hollander et. al. [2013], however the presentation and evaluation of the statistical data by country groups is the work of the authors.

Country groups	Human resources		Quality of public services				
	Creative occupations (%)	University degree (8)	Efficiency of the government (-2.5 - +2.5)	Quality of regulation (-2.5 - +2.5)	Efficiency improvement (ICT) (1 - 7)	Availability of e-service (%)	E-governance (0 - 1)
I. Continental countries							
Austria	14.8	6.0	1.89	1.52	-	100.0	0.78
Belgium	29.8	16.8	1.59	1.30	4.4	78.8	0.77
Germany	25.3	8.6	1.55	1.58	4.6	94.7	0.81
France	15.7	13.6	1.44	1.34	4.4	95.0	0.78
Luxemburg	26.3	36.2	1.71	1.69	5.1	72.4	0.80
II. Nordic countries							
Denmark	26.0	29.8	2.17	1.90	5.3	94.7	0.81
Finland	37.3	25.8	2.24	1.84	5.2	95.0	0.85
Netherlands	39.1	16.3	1.73	1.79	5.0	94.7	0.91
Sweden	39.3	56.0	2.02	1.72	5.9	100.0	0.86
III. Anglo - Saxon countries							
Ireland	19.7	32.1	1.31	1.65	5.1	85.0	0.86
U.K.	15.4	35.9	1.56	1.75	4.9	98.3	0.90
IV. Mediterranean countries							
Greece	16.3	23.2	0.52	0.65	4.7	100.0	0.71
Italy	14.2	9.7	0.52	0.85	3.9	100.0	0.72
Portugal	14.8	29.5	1.04	0.82	5.5	100.0	0.72
Spain	20.4	45.0	0.98	1.19	3.8	47.5	0.69
EU-27 average	23.1	29.6	1.18	1.26	4.6	84.3	0.75

Table 3 Enablers of Innovation in the Public Sector: EU-15 Countries

Tables 2 and 3 are indicating that in the case of the *creative occupations* Nordic country group has the leading position but followed the Post-socialist, Continental and the Anglo-Saxon country groups having almost the same share. The last position is occupied by the Mediterranean country group. The share of those holding a *university degree* indicates another country group distribution: first position is occupied by the Anglo-Saxon countries, second in ranking order is the Post-socialist country group (where the share of employees with university degree is higher than the EU-average in seven countries out of the ten-member country group). These countries are followed by the Nordic, Mediterranean and by the Continental countries, which are in the weakest position.

Comparing five variables measuring the *quality of public services*, the Nordic and the Anglo-Saxon country groups are in the leading position having higher than EU-average performance in the case of each variable. Comparing the weakest performer, that is the Post-socialist and the Mediterranean country groups, we may say that the post-socialist countries are performing better. Mediterranean countries are showing a rather unbalanced picture, for example they under-perform in such fields as *efficiency of governance*, *quality of regulation* and *E-governance*. However, 100% *availability of e-services* is characterising the public administration in Greece, in Italy and in Portugal.

Besides the country group comparison it is necessary to call attention – in both dimensions of *quality of human resources* and *quality of public service* – to the *countries having leading edge position*. With the exception of the countries in the Mediterranean region, the following countries are the leaders (owning ‘benchmark’ position), in which both the indicators of the *human resources* and *quality of public services* are over European average:

- Estonia from the Post-socialist country group;
- Luxemburg from the Continental country group;
- Denmark from the Nordic country group;
- United Kingdom from the Anglo-Saxon country group

3.2. Innovation Capability in the Public Service

Innovation capability and enablers or constraints of innovation are playing key role in the public sector organisations. Innovation capability is the result of the service and process innovation developed in-house. Enablers and constraints of innovation are measured by the following five variables: internal and external constraints, active involvement of management in innovation, need for external knowledge and employee's involvement in the development of innovation. Due to its growing importance, we are focusing on the role of employees' involvement – as group participation – in initiating innovation among these variables (see in details the Tables 4 and 5).

Countries	Innovation capability		
	Developing 'service' innovation "in-house" ¹⁰ (%)	Developing 'process' innovation "in-house" ¹¹ (%)	Employees' group involvement in the developing innovation (%)
Bulgaria	59.6	70.2	25.1
Czech Republic	53.3	61.9	15.7
Estonia	55.8	71.2	28.8
Lithuania	60.4	84.9	19.4
Latvia	42.0	58.0	28.7
Hungary	23.0	41.0	6.8
Poland	66.0	83.4	19.9
Romania	58.8	81.4	29.4
Slovenia	70.0	86.0	27.9
Slovakia	66.7	76.5	24.8
EU-27 average	63.5	75.5	22.9

Table 4 Innovation Capacity of Public Service Organisation: Post-Socialist Countries

¹⁰ Share of organisation having "in-house" developed service innovation.

¹¹ Share of organisation having "in-house" developed process innovation.

Countries	Innovation capability		Enablers/constraints of innovation
	Developing 'service' innovation "in-house" ¹² (%)	Developing 'process' innovation "in-house" ¹³ (%)	Employees' group involvement in the developing innovation (%)
I. Continental countries			
Austria	50.0	63.0	19.2
Belgium	76.0	74.0	21.4
Germany	47.8	65.8	16.5
France	43.3	48.4	15.6
Luxemburg	60.0	80.0	29.0
II. Nordic countries			
Denmark	66.0	100.0	26.2
Finland	56.4	80.2	27.4
Netherlands	83.0	95.0	25.7
Sweden	58.4	79.2	52.1
III. Anglo – Saxon countries			
Ireland	80.0	90.0	34.1
United Kingdom	74.8	88.5	34.9
IV. Mediterranean countries			
Greece	60.0	68.0	15.4
Italy	70.5	80.3	13.5
Portugal	78.2	77.2	30.5
Spain	88.8	91.5	26.6
EU-27 average	63.5	75.5	22.9

Table 5 Innovation Capacity of Public Service Organisation: EU-15 Countries

Comparing the share of in-house developed service and process innovation identified as *innovation capability* of the *country groups* participating in the EPSIS-2013 survey, the Anglo-Saxon country group is the leader. This country group followed by the Nordic, Mediterranean and by the Post-socialist countries. Surprisingly enough, the Continental country group is in the "trailing edge" position.

The increasing role of employees (Employee Driven Innovation – EDI) in the recent literature of innovation is based on the following calculation: significant part of the value creation process of human resources – one fifth according certain estimation – attributed to the initiatives and creativity of employees [Hamel, 2007, in: Alasoini, 2013.] In this field - according to our expectations – Nordic countries have the leading position, followed by the Anglo-Saxon, Post-socialist and Mediterranean countries. Again, surprisingly enough, the employees' group involvement in developing innovation is the weakest in the Continental country group.

Turning our attention to the *cross-country comparison* it is worth mentioning the extremely high level of involvement of the Swedish public sector's employees in the innovation generating process: every second employee (52.7%) participates in the innovation activities. Within the EU-27 countries Hungary has the so-called "trailing-edge" position: less than 10% (6.8%) of employees as a group is involved in innovation developing processes. This is the lowest level of employee involvement even within the Post-socialist country cluster.

¹² Share of organisation having "in-house" developed service innovation.

¹³ Share of organisation having "in-house" developed process innovation.

Countries having outstanding position (i.e. higher share than the EU-27 average) in the field of employees involvement in the innovation activities are the followings:

- Slovenia and Slovakia from the Post-Socialist country group;
- Denmark and Netherlands from the Nordic country group;
- Ireland and United Kingdom from the Anglo-Saxon country group;
- Portugal and Spain from the Mediterranean country group;

3.3. Outcomes of Innovation

Outcomes of the innovation taken place within the organisations of the European public service sector were measured on the following fields: 1) types of innovation and productivity, 2) impact of innovation on business activity, 3) role of innovation in government procurement. The following part of the analysis is focusing on the first two fields, that is on the share of service, communication, process innovations and on the share of new services in the market, improving quality of services for the business community in the organisation of the public services.

According to our preliminary expectations, in the various forms innovations (e.g. service, communication, marketing and organisational) the Nordic and the Anglo-Saxon country groups have the leading position. In ranking order, they are followed by the Mediterranean and the Post-socialist countries and surprisingly again, the Continental country group occupies the last position. (However, it is worth mentioning that within the Post-socialist country group one single country (Lithuania) was able to perform on all items of innovation outcomes better than the EU-27 average and the worst performer was the Hungarian public service.)

Comparing the forms of services, we may say that the share of new service for the market was the highest – again – in the Nordic and in the Anglo-Saxon country groups. They were followed by the Mediterranean, Continental and finally by the Post-socialist countries. The earlier pattern of distribution was identified: one single Continental country performed better than the EU-27 average. Similar pattern was found in the Post-socialist countries, where the share of new services for the market was higher than the EU average only in the case of Lithuanian public service organisations.

In the field of services offered to the business community – in contrast with the previous patterns – Continental country group has a leading position and followed by the Nordic and Post-socialist countries. In the ranking order of the countries the Anglo-Saxon and Mediterranean country groups occupy the last positions. (See in details the 6th and 7th tables.)

Countries	Types of Innovation		Impact on business activity
	Service, communication, process and organisational innovations	Share of new service innovation for the market within all services	
Bulgaria	88.5	30.3	33.2
Czech Republic	88.6	26.0	18.3
Estonia	92.3	15.2	36.8
Lithuania	100.0	26.2	36.0
Latvia	76.0	12.5	39.2
Hungary	68.0	6.3	27.6
Poland	93.6	12.3	20.5
Romania	94.1	15.4	33.9
Slovenia	94.0	31.6	18.5
Slovakia	93.1	40.3	16.6
EU-27 average	89.2	26.1	20.1

Table 6: Outcomes of Innovation in the Public Service Organisation: The Case of Post Socialist Countries (%)

Countries	Types of Innovation		Impact on business activity
	Service, communication, process and organisational innovations	Share of new service innovation for the market within all services	Involvement of 'employee groups' in developing innovation
I. Continental countries			
Austria	85.0	28.6	18.9
Belgium	91.0	29.1	32.5
Germany	84.0	21.1	23.3
France	72.8	12.2	30.9
Luxemburg	90.0	33.3	36.4
II. Nordic countries			
Denmark	100.0	48.5	31.1
Finland	93.1	26.2	17.4
Netherlands	99.9	27.0	24.4
Sweden	95.0	30.6	31.1
III. Anglo-Saxon countries			
Ireland	98.0	39.0	21.8
United Kingdom	93.0	28.2	19.1
IV. Mediterranean countries			
Greece	93.0	16.1	19.7
Italy	89.8	30.4	13.7
Portugal	86.1	37.8	46.6
Spain	97.3	35.7	22.5
EU-average	89.2	26.1	20.1

Table 7: Outcomes of Innovation in the Public Service Organisation: EU-16 Countries (%)

The cross-country comparison indicates the "best performer" nations within the five country groups:

- Lithuania from the Post-socialist country group;
- Belgium and Luxemburg from the Continental country group;
- Denmark, Netherlands and Sweden from the Nordic country group;

- Ireland from the Anglo-Saxon country group;
- Spain from the Mediterranean country group.

4. Concluding Remarks and the Future Research Challenges

Until the second millennium, in the innovation research the technology focused approach (i.e. product and process innovation) was dominant. Only in the last decade we assist the emergence of the new school of thought stressing the important contribution of the non-technological innovation to the GDP growth at macro-level and to the higher firm's performance at micro-level. (Appelbaum – Hoffer – Leana, 2011). In the EU, the systematic analysis of technological and non-technological innovation has a decade-long tradition in the manufacturing sector. Unfortunately the innovation centred research activities – with the exception of some Nordic countries – was missing in the public sector organisations in the last decade. The European Public Sector Innovation Scoreboard 2013 results presented in this paper was the first pan-European attempt to overcome this shortcoming. The research experiences – similarly to the innovation survey carried out in the manufacturing sector – call attention to the visible country group differences both in the factors shaping innovations and their outcomes.

Among the most important lessons learned from the EPSIS-2013 pilot survey the followings are worth mentioning. In the case of the *human resources* enabling or inhibiting innovation, the Nordic and Anglo-Saxon country groups have the leading edge position. These countries are followed by the Post-socialist country group. This result indicates that the Post-socialist country group globally has the required quality of human resources necessary to improve innovation in the organisations of public service. However, in the practice to exploit these human resources, that is in the field of the *quality of public service* the position of the Post-Socialist countries is less satisfactory. In this field, again, the Nordic and Anglo-Saxon country groups are in leading position and the weakest performers are the Post-socialist and Mediterranean countries. The only exception is the on-line availability of the public services. In this field Greek, Italian and the Portugal public sector organisations are the leaders with unrestricted (i.e. 100 %) on-line access.

In the field of *innovation capability* and *employees (group) involvement* in innovation developing activities, the Anglo-Saxon and the Nordic country groups are the leaders. The situation is similar in the case of the *innovation outcomes* (i.e. implementation of various forms of innovation, share of new services for the market): Nordic and Anglo-Saxon countries are the best performers within the EU-27. Whereas, in the case of *quality service for the business sector*, Continental country group has a leading position and followed by the Nordic and Post-socialist country groups. Surprisingly enough, the most unfavourable position in the order of rank are the Anglo-Saxon and the Mediterranean country groups.

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Annex 1 Types of Innovation

Product innovation	“A product innovation is the introduction of a service or good that is new or significantly improved compared to existing services or goods in your organisation. This includes significant improvements in the service or good’s characteristics, in customer access or in how it is used.’ (Hollanders et. al. 2013:9)
Service innovation	“New or significantly improved process or organisational methods include: new or improved methods of providing services or interacting with users; new or improved delivery or logistics systems for an organisational inputs; new or improved supporting activities such as maintenance systems, purchasing, accounting of computing systems; new or improved management systems; or new or improved methods of organising work responsibilities or decision making’. (Hollanders et. al. 2013:9)
Process innovation	“... such new or significantly improved production or transport methods. Covering significant changes in technology, equipment and/or software’. (Szunyogh, 2010:495)
Organisational innovation	“... new organisational methods in the business practice, organising work and external relations.’ (Szunyogh, 2010: 495)
Marketing innovation	“Marketing innovation represents new marketing methods aimed to produce significant changes in product design, packing, introduction into the market, in publicity and price formation.’ (Szunyogh, 2010: 495)
Communication innovation	“...is the implementation of a new method of promoting the organisation or its services and goods, or new methods to influence the behaviour of individuals or others. These must differ significantly from existing communication methods in your organisation’ (Hollanders et. al. 2013:9)