From public innovation to social innovation in the public sector:

a literature review of relevant drivers and barriers[1]

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[1] This paper is based on the integrative framework that has been developed for the LIPSE project, which aims to identify relevant drivers and barriers behind social innovation in the public sector.

1   Introduction

Innovation is a recurring issue in public administration. In doing so it can be considered as a 'magic concept' (cfr. Pollitt & Hupe, 2011) that is been used to frame the necessary transformation of the public sector in order to improve not only its effectiveness and efficiency but also its legitimacy (Bekkers, Edelenbos & Steijn, 2011[2]). Innovation is a concept that inspires people and policy makers because it offers the promise of radical change. As such the desire to innovate the public sector has a long history which is sometimes linked to reform programs in order to meet budget cutbacks, to meet the introduction of new management and governance ideologies (like New Public Management or Open Government) or to meet the introduction of new information and communication technologies (like e-government).

At this moment the innovation journey on which the public sector in many countries have embarked, sails under the flag of 'social innovation'. The British prime-minister Cameron incorporated social innovation in his view on the so-called 'Big Society', in which he embraces the idea of social entrepreneurship and social innovation as an alternative for traditional governing. In his view local communities need to have more power and people have to encouraged to play an active role in these communities in order to set up co-operations, charities, mutual and other social enterprises that deal with the local and concrete needs that citizens encounter (The Guardian, 2010). Also the European Commission has embraced social innovation as a relevant topic on her reform agenda. On their website they state that social innovation is "*about new ideas that work to address unmet needs. We simply describe it as innovations that are both social in their ends and in their means"* (European Commission, 2013). Social innovation seems to be an inspiring concept because it stimulates people, politicians and policy makers to explore and implement new ideas about the way how a society deals with a number of challenges that is vital for the functioning for this society as a political community; like the growing ageing of the population, the budgetary crises, the quality of our educational system or the regeneration of socially and economically deprived cities and regions (Mulgan, 2009).

Social innovation is weakly conceptualized, due to the dominance of rather grey, policy-oriented literature (Mulgan, 2009; Goldenberg et al, 2009; Howalt & Schwarz, 2010; Mair, 2010; Cels et al. 2012; Bates 2012). However, four elements seem to be recurring. First, Social innovation aims to produce long lasting outcomes that are relevant for (parts of) society, given the needs and challenges with which (groups in) society wrestling. In doing so it is to look beyond technological innovations and to see how social innovations create and add to public values that are considered important (Howalt & Schwarz, 2010; p. 18; Hartely, 2005; Moore, 1995). Secondly, social innovations aims, in a

fundamental way, to change the social relationships and the 'playing rules' between the involved stakeholders. In doing so a transformative discontinuity with existing practices is pursued (Osborne & Brown, 2005), which is in general the essence of innovation. In doing a process of 'roundaboutness' (Majone, 1998; p. 97) or 'institutional conversion' (Thelen 2002; p. 224) is being aimed for. In doing so a social innovation tries to act as a 'game changer', thereby breaking through 'path dependencies'. As a result the governance capacity of a society in order to deal with these pressing new demands and challenges is being enhanced (European Commission, 2011; p. 33). Thirdly, in order to produce outcomes that really matter, it is important that relevant stakeholders are involved in the design, implementation or adoption of an innovation. Hence, social innovation also refers to the idea of participation of and collaboration with relevant stakeholders that cross organizational boundaries and jurisdictions (Bason, 2010; Sörensen & Torfing, 2011). This corresponds with the notion of 'open innovation' (Chesbrough, 2003, 2006; Von Hippel, 2005, 2007). Relevant stakeholders should be able to bring in their knowledge, information, experiences and resources so that they can be shared in order to produce outcomes that are relevant to them. This presupposes that these stakeholders are able to co-create innovations that really matter to them, given their needs. Moreover, special attention should be paid to the needs of end-users. Fourth, social innovation refers not only to the production of new outcomes but also to the process of innovation. This process can be seen as a learning and reflection process (Albury, 2005). This learning process is not an isolated instance, that can be attributed to capacities and capabilities of a specific person (the entrepreneur as Schumpeter [1942] presumed), or a systematic process of research and development that is been institutionalized in laboratory or a R & D department (like Drucker, (1985) assumed). Innovation processes require the ability and willingness of the relevant actors to cooperate and to link and share ideas, as well as to exchange vital resources such as staff. It refers to the rather free and interactive exchanges of knowledge, information and experiences, in which new ideas and concepts are discussed in intra- and inter-organizational networks (Chesbrough, 2003, 2006; Von Hippel, 1976, 2005, 2007). However, this open innovation process is an embedded process, which takes place in a specific local and institutional context (Bekkers, Edelenbos & Steijn, 2011[1]). This implies that it is important to recognize the specific environment in which innovation processes take place. That is why Castells (1996:3) mentions 'innovation milieus'. It can, thus, be argued that innovation processes should be studied from an ecological perspective (Bekkers & Homburg, 2007; Bason, 2010; Osborne & Brown, 2011[2]).

The research question which lays behind this paper can framed stated as follows: *What factors (in terms of drivers and barriers) influence the process of social innovation in the public sector*? In order to answer this research question we made an inventory of relevant publications in the public

administration literature. In doing so, we especially looked at refereed journal articles which sometimes were complemented with relevant books. When studying the material we especially looked at the influence of factors for which empirical evidence was put forward in order to obtain an 'evidence based' overview (Pawson, 2006). Sometimes, but with great caution, we used literature from the private sector literature, mostly to underline or to elaborate on a specific argument that was also made in the public sector innovation literature. The reason to be cautious in adopting private sector innovation literature is that it is important to acknowledge the unique institutional nature of the public sector environment. Although liberalization and marketization has also been introduced in public sector environments as ways to ensure efficiency based forms of innovation, the main driver for public innovation is to create public value, which is more than sheer efficiency (Moore & Hartley, 2008). Public sector innovations deal with several values, which may conflict or reinforce each other, and thus have to be balanced in any assessment (Moore,1995; Bason, 2010). As such, an innovation that is able to meet the actual wishes of citizens and companies may contribute to the 'publicness' of the public sector, thereby improving its legitimacy (Newman & Clark, 2009).

This inventory has led to a variety of relevant factors which we grouped as follows. First, it is important to make a distinction between the process of innovation and the diffusion and adoption of innovations. This distinction can also be followed in the literature, although it can be said that both processes are closely intertwined. The reason is that in the adoption process very often a process of re-innovation occurs in order to adjust the innovation to the specific context in which it is implemented (Damanpour, 1991; see also Damanpour & Schneider, 2009; Salge & Vera, 2012). Secondly, by adapting a more ecological perspective on innovation it is possible to make a distinction between factors that relate the innovation process itself and factors that relate to specific characteristics of the (institutional and inter-organizational network) environment in which the innovation and adoption process is embedded. Based on this perspective we will sketch in section two an overview of drivers and barriers that relate to the innovation environment, in section three we present an overview of factors that deal with the innovation process while in section four a sketch is given of factors that influence the diffusion and adoption process. In section five we organize these factors into a conceptual framework which can help us to understand, which factors stimulate or frustrate the possible processes of social innovation in the public sector.

2 Drivers and barriers related to the innovation environment

Our starting point for studying social innovations in the public sector is that social innovations take place in a specific environment in which different actors can be distinguished. These actors collaborate with each other in terms of sharing relevant resources in order to develop and implement new ideas, new ways of working or new ways of organizing. This implies that characteristics of the environment can be seen as a relevant drivers and barriers. These characteristics can either function as a trigger for innovation while at the same time they can also function as relevant constraints. Based on an analysis of the literature, we have found that the following aspects of the environment could function as important drivers and barriers of innovation:

- The social and political complexity of the environment in which public organizations operate which leads to specific demands that function as an external 'trigger' for innovation
- The characteristics and degree of the legal culture in a country or policy sector
- The type of governance and state tradition in the country or policy sector
- The allocation of resources, resource dependency and the quality of relationships within the networks among the involved stakeholders

2.1 Political and administrative triggers from the public administration environment

According to Schumpeter (1942) the absence of market competition explains to some extent the limited innovation within the public sector (Sörensen & Torfing, 2011). However, there are suggestions that there are other drivers and mechanisms that may create competition-like elements and give the public sector a specific kind of complexity and dynamic that explains why there is public sector innovation (Kelman, 2008; Pollitt, 2011). In the literature the following relevant mechanisms are distinguished:

a) Challenges related to the <u>environment</u> of public administration – such as globalization, individualization, fragmentation and computerization (Osborne & Brown, 2005) – as well as the <u>political and administrative problems</u> that emerge from them can be a trigger for public sector innovations (Walker, 2006). In several studies these political problems are related to a discussion about the actual performance of specific public organizations compared to citizen needs (Damanpour & Evans, 1984; Walker, 2006; Fernandez & Wise, 2010:993; Borins, 2000; Vigoda-Gadot et al, 2008; Salge & Vera, 2012). This has also been framed in terms of a

'performance deficit' that does not only refer to possible shortfalls in the efficiency and effectiveness of the internal operating of the involved innovating organizations. It also refers to the way this deficit questions the legitimacy of these organizations (Fernandez & Wise, 2010:993; Borins, 2000; Salge, 2010; Salge & Vera, 2012).

b) The pressure to innovate and to look for new combinations is also triggered by the <u>multi-rationality of public administration</u>, which generates a competition between values that have to be reconciled. Policy problems can be understood in terms of a permanent struggle between different rationalities and values (Snellen, 1987; Moore, 1995). The emerging tensions can create a dialectical process in which compromises between these values are reached on a higher level, thereby creating new combinations of problem definitions and problem-solving strategies (Stone, 2003; Hartley, 2005).

c) There is also a trend in which the <u>competition</u> within the public sector is increasing, although its nature differs to some extent from the market-driven competition in the private sector. If we look at the competition-like element which might stimulate innovation, the next considerations are put forward in literature.

- Due to the privatization and liberalization within specific service domains, public services have to increasingly compete with private initiatives. Public procurement programmes have stimulated this and, as a result, citizens are increasingly perceived as consumers that also act as consumers in terms of having growing customer expectations especially if they have a choice (Windrum & Koch, 2008; Tummers, Jilke & Van de Walle, 2013).

- Given the increased role for benchmarking and other performance management systems that make the quality and outcomes of public services transparent, government organizations are increasingly compared to each other. In many cases, this acts as an incentive for service improvements (Dorsch & Yasin, 1998; Folz, 2004).

- There is increased competition between regions and cities in terms of being an attractive place to work, live or visit. In order to be attractive, local and regional governments, and also national governments, often use the quality of services as a source of competitive advantage (Berry & Berry, 2007; Walker, 2006; Bailey, 2011; Sörensen & Torfing, 2011). This highlights the importance of looking at the geography of public innovation practices and the presence of so-called regional innovation systems (Cooke et al., 1997; Asheim & Gertler, 2005). For instance, it is

interesting to note that, in the public sector, innovations repeatedly occur in the same cities and regions. Why is this the case? What does this tell us about the local environment or the geography of public innovation (Gloor, 2005)?

d) Fourthly, there is increased <u>political competition</u> for the consent of citizens, who are increasingly becoming - in an electoral sense – footloose, and who have increasingly higher expectations and demands (Walker, 2006; Bekkers, Edelenbos & Steijn, 2011). The desire to improve the quality of public services, in combination with the desire to cut red tape, has increasingly become a political issue and is an incentive for the public sector to innovate.

2.2   The legal culture of the public sector

In the literature, it is argued that the dominance of a legal culture can be seen as constraint for the willingness of the public sector to innovate. Hence, a strong legal culture can act as a barrier for innovation. Very often this legal culture also influences the way in which civil servants in general think and act (Kickert, 2007). Based on the idea of this legal culture, three elements seem particularly important.

First, a strong legal culture can result in stressing <u>standardization and formalization</u> practices. Standardization and formalization also refer to the 'Rechtsstaat' in which the rule of law, providing legal security and equality before the law, is considered paramount (Damanpour, 1991; Borins, 2001; Kelman, 2008; Sörensen & Torfing, 2011). Standardization and formalization foster these values because they add to stability and predictability. On the other hand, they discourage initiative, creativity and risk-taking (Schumpeter, 1942; Burns & Stalker, 1961; Damanpour, 1991; Scott, 1998; Walker, 2007). More mechanistic, rule driven organizations seem to favour incremental innovations instead of transformative innovations (Damanpour, 1991). Although standardization and formalization are often viewed as barriers to innovation, they also guarantee universal free and equitable access.

Related to this, standardization and formalization generate a lot of 'rules', which are translated in procedures, routines and systems and other grown practices that are taken for granted (March & Olsen, 1989). In doing so specific <u>rule-driven 'path dependencies'</u> may emerge which limit the way in which new concepts, methods, technologies as well as handling processes are accepted (Pierson, 2000; Bernier & Hafsi, 2007). The self-evidence of these 'Rechtstaat' based 'rules' are often being challenged, if new ideas, concepts and methods are being introduced, which may result in resistance to change (Hofstede, 1980; Deal & Kennedy, 1982; Handy, 1985; Schein, 2005; Bernier & Hafsi, 2007).

The willingness to share resources, experiences, knowledge and information is very often frustrated by the use that the involved stakeholders, especially government agencies, make of their <u>legal mandate and their jurisdictions</u> (Feller, 1981; Kelman, 2008; Matthews et al., 2009). Innovations that cross these jurisdictions and mandates are more difficult to get adopted (Feller, 1981; Matthews et al., 2009). At the same time, there is evidence that inter-organizational innovations ('joined up innovation', Huijboom, 2010) do take place, crossing jurisdictions.

2.3   State, governance and civil service traditions

In the private sector innovation literature, a relationship is being put forward between the competiveness of a country and the presence of national innovation regimes. The specific structuring and interactions in these regimes, especially between business, education, research and development to some extent the national innovation capacity of a country (Cantwell, 2006; see also Berry & Berry, 2007). This idea can also be translated to the public sector by connecting state and governance traditions of a country to social innovations.

Innovation in the public sector is dependent on the discretion that public sector organizations have to explore and implement new ideas, to get involved in a process of 'trial and error'. It can be argued that the <u>state and governance traditions</u> in a country, or even in a policy sector, influence the degree in which these organizations have the willingness, the capacity and capabilities to embark on an innovation journey. In line with this argument it can also be argued that the <u>dominant civil service culture</u> in a country or even in a policy sector echoes the dominant state and governance tradition. For instance, Kickert (2007) talks about the influence to the so-called 'Napoleontic state model' on the dominant civil service culture and its willingness to change and innovate in France and Italy, while, for instance, in Spain the introduction of a more Rechtstaat c.q. Napolentic oriented state model was seen as a way of coping with the negative effects of the long lasting influence of the Franco regime on the Spanish bureaucracy.

The state and governance tradition of a country reflects to some extent the dominance of specific assumptions regarding the capacities of government in dealing with societal and political challenges vis à vis the self-regulating capacities that are present in society (Bouckaert & Pollitt, 2011). These governance capacities relate to the availability of resources that are needed to successfully cope with societal and political challenges (Scharpf, 1997; Kattel et al, 2011). For instance, Scott (1998; see also Van Gunsteren, 1976; Schön 1971) has argued that the dominance of a state-dominated, central rule-approach, based on the premises of authoritarian high modernism, often destroys the local intelligence and practical knowledge, and thus local learning processes, which are needed to develop

tailor-made approaches that address citizens' needs. Moreover, it can also be argued - given the idea that social innovations requires the sharing of relevant resources between stakeholders that operate in different (public and private) domains and at different levels - that a governance tradition in which collaboration is being embraced as relevant asset in order to deal with specific societal and political challenges, will stimulate the emergence of social innovation practices. At the same time such governance tradition will also stress different values, knowledge, skills and competences of the civil service than a governance tradition that is more hierarchical and rule-oriented.

Hence, specific state and governance traditions as the dominant civil service culture could influence the shaping and outcomes of social innovation. However, it is important to notice that these traditions are not mutually exclusive. In some countries, a combination of different styles can be found. A number of traditions can be distinguished, shown in Table 1.

Table 1 State and governance traditions and their first links to innovation capacity (based on Loughlin & Peters, 1997; Pollitt & Bouckaert, 2011). Note: not mutually exclusive.

Type of state and governance tradition	Characteristics	Examples
Strong central and unitary state	- Strong command and control regime where rules and regulations are considered an important policy instrument - Government is seen as a unity, where relation between units and layers are top-down and mechanistic - Political system often based on majoritarian rule - Unity is seen as paramount to protect 'public interest' - Possibly positive for radical innovations led from the top	The United Kingdom, France, Rumania, Slovakia, Estonia
Decentralized structure with strong local/regional governments	- In a more decentralized, it is also necessary that the central and local/regional or federal levels have to co-operate which each other - Often federal structure - Political system often based on consensus-making: Central and local/regional or federal levels have to co-operate which each other, which also leads to all kinds of coordination, collaboration and consensus-seeking practices in which negotiation and exchange processes take place. - Possibly positive for innovation which meet local needs and wishes	Belgium, Denmark, Germany, The Netherlands
Corporatist tradition	- Lots of collaboration and consensus-processes between employer organizations, trade unions, labour unions and governments - Possibly positive for innovation which need a lot of support and effort from various stakeholders	Belgium, The Netherlands, Germany, Spain
Market driven tradition	- Strong belief that market driven incentives based on liberalization and public procurement, generates more effective, more efficient and more innovative services - Government intervention based on the creation of 'level playing field' which facilitate markets or quasi-markets - Possibly positive for innovation, if real markets would appear and the price mechanism would lead to new products and markets.	United Kingdom, Estonia
Legalistic tradition	- Government intervention based on administrative law. Rules and regulations are being considered as the most important set of policy instruments - Related to command and control governance - Possibly negatively influencing innovations, given the focus on standardization and formalization	Belgium, France, Germany, Italy, Spain
Strong civil society	- Strong non-governmental organizations and (third-sector) institutions that manifest interests and will of citizens, such as churches, voluntary organizations and grass-root movements - Strong social entrepreneurship - Possibly positive for 'bottom-up' innovations, started at the grass roots where citizens develop innovations	Italy, Germany, The Netherlands, United Kingdom

2.4 Resources and resource dependency within organizations and networks

Next to discussing the broader legal culture and state and governance traditions, it is also important to analyse the role of <u>organizations and inter-organizational networks</u> in the innovation environment. It has been argued that such networks can be important drivers for innovation. That is why in the literature people speak about 'collaborative innovation networks' (Gloor, 2005; Sörensen & Torfing, 2011). Collaboration in these networks can facilitate the exchange and sharing of resources which may trigger innovations. Through collaboration the resources that are embedded in these networks can be made accessible (Ling, 2002).

First, and when talking about these resources, it seems important to consider the capacities of an organization (e.g. people, money, time, competences, information, knowledge, political support and contacts), in terms of '<u>slack</u>' that can be devoted to support innovation activities (Newman et al., 2000; Downe et al., 2004; Hartley, 2005; Schein, 2005; Sörensen & Thorfing, 2011; Maranto & Wolf, 2012; Salge, 2012). Walker (2006; see also Damanpour 1991; Berry, 1994, Rogers, 2003) argues that the larger an organization is, the more 'slack' this organization has, because it has more opportunities for the cross fertilization of ideas as well as a larger variety of relevant skills that can be exploited (Fernandez & Wise, 2010; Bhatti et al, 2011; Maranto & Wolf, 2012).

Secondly, <u>cultural diversity,</u> as an aspect of slack, which also stresses openness, can be seen as an important asset and a capacity that an organization can bring in (Foldy, 2004; Van Buuren & Loorbach, 2009). Cultural and staff diversity can stimulate innovation because they contribute to functional diversity through which alternative perspectives are mobilized and new ideas opened up.

A third important factor relating to organizational environment is <u>the customer and learning orientation within the organization</u>. Research has shown that an organization with a culture of strong customer orientation will give high priority to continuously findings ways to provide superior customer value. In doing so these organizations want to be engaged in meeting customers in order to learn from them (Han, Kim & Srivastava, 1998). Such organizations are more involved in innovation generating process to develop new service products, services and processes. Next to this, they are also more easily convinced of adopting innovations that have been developed elsewhere, thereby conversing new knowledge (Salge & Vera, 2012). In such organizations a culture exists in which people are willing to learn from the actual state of the service provision and the needs of service users. Learning is as a valuable asset (Zhao & Olivera, 2006; Salge & Vera, 2012). This also implies that organizations that embrace customer orientation in combination with an open attitude towards learning are more likely to bring in time and other resources in innovation activities that improve public service quality (Salge & Vera, 2012).

Fourthly, Bernier and Hafsi (2007) argue that the innovation capacity of an organization, defined as public entrepreneurship, seems to depend on the age of the public organization. Entrepreneurship seems to disappear when organizations grow mature, as the main preoccupation becomes making it operate like a machine. As a result, innovation is stifled in bureaucratic rigidities, while the innovations that are being pursuit have a more incremental nature, thereby focussing to improve existing practices, routines and processes. This requires a form of systematic entrepreneurship. More heroic, individual and rather forceful forms of public entrepreneurship are more likely to occur, when newly created organizations are involved that have to deal with new problems and new activities, which generated more transformative innovations. Hence, we can argue that the age of an organization, as a relevant capacity, seems to negatively influence the degree of innovation.

Next to organizational factors, it is important to take into account factors that influence the exchange and sharing of resources within networks, such as public-private partnerships (Koppenjan, 2005). An interesting question is how the allocation of organizational capacities influence the innovation ability of networks. Literature on network management and network strategies (e.g. Koppenjan & Klijn, 2004; Sörensen & Torfing, 2011) shows that the recognition of mutual dependency is a vital factor. Recognition of interdependency implies that the involved actors are able and willing to explore, if their interests can support each other instead of compete with each other, thereby enhancing collaboration (Van Buuren & Lohrbach, 2009). Moreover, interdependency recognition supports the sharing of resources, capacities and capabilities across boundaries (Koppenjan & Klijn, 2004).

Mutual dependency tell us something about the connectedness of the actors in a network: the positions that these actors take in the network and the 'ties' that connect them. This issue has also been addressed in terms of 'strong' and 'weak' ties. On the one hand it is argued, especially in the private sector literature, that strong and close ties imply that actors know each other very well, which can generate trust. Trust is seen as a necessary condition for the exchange and sharing of resources. In the literature trust and social capital within and between organizations is therefore also mentioned as a relevant factor which can influence innovation (Walker, 2008; Lewis, 2010; Lewis et al., 2011). Trust is an asset of a network, and it can be seen as a necessary condition for innovation. However, in many cases, it is absent in the beginning and has to be developed. The notion of trust is related to the social capital which is present within organization and networks. Innovation networks, which operate as free and informal spaces in which ideas are exchanged, can only be shaped if social capital is present within a specific sector, or can be developed. Furthermore, the coming together of people at the periphery and even in the centre of a network does not occur automatically but have to be organized. On the other hand it is argued that 'weak ties' can facilitate innovation, because

trying to link up and strengthening the ties with these loosely coupled people or even organizations may create an opportunity to bring in new perspectives, new ideas and other resources (Granovetter,1973; Powell & Grodall, 2005). Although weak ties are 'thinner' and less durable, they may provide access to more non-redundant information. Closely related to this idea of 'weak ties' is that is important to create bridges between parties that lack ties and do not know each other, so that weak ties are created. Burt (1992) has deepened this argument by pointing out specific collaboration arrangement in networks that are focussed to link specific 'structural holes' in the network to the more central positions of actors in a network, might create opportunities for innovation. At the same time it is not clear as to whether strong or weak ties, or bridges or structural holes offer greater opportunities for innovation (Powell & Grodall, 2005). Ahuja (2000) argues in an influential study that the variation in network structures is associated with different content in personal relationships, which leads to the preliminary conclusion that the relationship between innovation capacity and network structure is rather contingent. Moreover, what constitutes an enabling social structure for one specific type of action may well be disabling for others. Thus, the form taken by social capital is likely to be contingent on what actors seek to enable through it (Ahuja: 2000:452).

Do these arguments also apply to the public sector? Lewis et al (2011) state that a social network analysis based approach has been seldom applied to address innovation in the public sector. The research that has been carried out by Lewis et al (2011; Considine & Lewis, 2007) show that informal networks contribute to an explanation of innovation inside government. The results clearly show that how you conceive an innovation, what position you hold and who you communicate to are all significant in shaping whether you are regarded as an innovator. However, network relationships are the most important predictors of innovation status. Although network centrality is related to hierarchical seniority, Lewis et al. (2011) show that innovators who are more adept at working through relationships outside formal structures, get more things done. Being a central person in more strategic information networks seems to more important in being perceived as an innovator than being a central person in advice networks (Considine & Lewis, 2007). Also Mintrom & Vergari (1998) argue that policy networks are important resources where successful policy entrepreneurs draw upon for developing and diffusing new ideal. External policy network involvement facilitates the generation of new ideas and the diffusion of existing innovative policies, while internal policy involvement is crucial for gaining attention for an innovation. Huijboom (2010) has shown in a cross-country case-analysis of the innovation in electronic identification data management systems, and based on a combination of social capital and advocacy coalition framework theories, that the characteristics of the actors involved (e.g expertise and position), their ties (strength and levels of trust) and the networks (closure, heterogeneity and broker position) generate certain network

dynamics (e,g, negotiations, coalition formation, consensus building and agreement) which affect the innovation strategy, decision, output and impact. All cases point at the fact that in the initiation and development phases social capital factors (e.g. ties, trust and brokers positions) are more important than in latter phases. Moreover, Huijboom (2010) shows that it is not the limited access to new ideas, but the limited access to the demands of end-users (service providers and citizens) - as being in a rather 'structural whole' position or being considered as a 'weak or absent tie' - that hampered the innovation processes.

Furthermore, innovation is alleged to emerge in environments where there is high openness and variety. However, openness and diversity are hard to manage, while at the same time, diversity might also be hard to achieve within an organization or an organizational network that is rather homogeneous (Rogers, 2003; Mulgan, 2009; Bason, 2010; Koppenjan & Klijn, 2004). Hence, the management of openness and diversity, as an important aspect of managing innovation. This is especially related to the creation of safe havens and grey informal spaces. Openness refers to the absence of boundaries and the free flow of ideas, knowledge and experiences. Openness also refers to the availability of a variety of perspectives that can be utilized and challenged. It refers to a free and informal space in which there are few restrictions on developing new and creative ideas and concepts (Foldy, 2004). Innovation often takes place in the 'grey, informal' area between formal structures, in the informal settings where managers of public governmental bodies meet with private and societal organizations, without the burden of formal responsibilities, positions, rules and power plays (Nooteboom, 2006; Considine et al., 2009; Lewis et al.,2011; Van der Voort, 2011; Voets & Rynck, 2008). These 'grey informal areas can be seen as 'safe havens' (Edelenbos, 2005; Van Buuren & Loorbach, 2009). Moreover, it requires the existence of an open culture and a safe context in which 'trial and error', 'reflection' and 'learning' can take place without penalty for 'mistakes' or for not realizing immediate results (Hartley, 2005; Cooke et al., 1997; Bason, 2010).

Last, research indicates that a relevant factor is the degree in which the involved actors are able to find a somewhat equal distribution of costs and benefits – quantitative as well as qualitative – among the relevant stakeholders (Edelenbos & Klijn, 2006; Bekkers, 2007). And, if this is not the case, it is important that they are able to find ways of compensation.

Now that we looked at drivers and barriers that tell us something about the possible influence of the environment on the public innovation process, the next step is to see what factors influence the shaping, content and outcomes of the innovation process itself.

3   Drivers and barriers related to innovation process

The innovation process is an embedded process, and embedded in a specific innovation 'milieu', or environment (Castells, 1996; 2009). Hence, in order to understand innovation as a learning process, one has to understand the nature of this learning process as well as the conditions under which this learning process can take place. Sometimes these conditions are related to the environment of the innovation (as described in the previous section). Other times, the conditions are related to the innovation process itself. In this section, we will discuss the following conditions of the innovation process:

- The linking nature of the leadership involved
- Support of and co-creation with end-users
- Risk management and innovations
- The role of ICT and social media

3.1   The role of linking administrative and political leadership

The literature on public sector innovation and change management stresses the importance of leadership (Hartley, 2005; Bason, 2010; Osborne, 2011[1]; Kuipers et al., 2013). In relation to public sector innovation it is important to make distinction between administrative and political leadership. Administrative leadership relates to the leadership of public managers like head of departments, while political leadership relates to the leadership that is executed by politically appointed leaders like ministers or city managers. Looking at the literature, for innovation important characteristics can be linked to both types of leaders. Borins (2000; 2001) shows that the individuals who drive innovations (as innovation champions) very often act as informal leaders. In doing so they proactively try to solve problems before they become crisis, by taking opposition seriously and attempting to deal with it forthrightly trough persuasion or accommodation, rather than through power politics; by developing a clear vision of an innovation and staying focussed on that vision and by objectively an innovation to see if it is working (Borins, 2000:506). In doing so, politicians and senior management as relevant public leaders can create an organizational climate that will either stifle or support innovation. Important in the creation of this climate is also the question how the involved political and administrative leaders define a possible innovation as risky, given the fact that innovation presupposes trial and error, and thus that mistakes can be made, while at the same time well-established practices, which create stability and predictability, are being fundamentally discussed.

Hence, the perception of risk and risk taking behaviour is also an aspect of leadership that should be taken into consideration. However, this aspect is broader than just being an aspect of leadership. Therefore we will address this issue separately.

Looking at a number of public innovation studies, Bekkers, Edelenbos and Steijn (2011) argue that, in the public sector, leadership typically deploys a linking structure for innovation. This 'linking leadership' involves various aspects. First, linking leadership refers to boundary spanning (Williams, 2002). Boundary spanning leaders reach across organizations and borders to build relationships, interconnections and interdependencies. This is required to link people, ideas and resources, also in relation to idea of try to bring in the knowledge, expertise, information and perspectives of weakly or non-involved actors (Voets & De Rynck, 2008). Secondly, linking leadership also refers to connecting the political realm with the innovation project. This can increase the legitimacy of the project and mobilize the necessary resources, like the acquisition of new or the protection of already allocated budgets (Considine et al., 2008; 2009; Voets & De Rynck, 2008). Thirdly, different values need to be linked and balanced, such as values related to the logic of consequence (efficiency, effectiveness, compliance) and values referring to logic of appropriateness (such as trust, support and legitimacy) (Fugslang & Pedersen, 2011; Van der Voort et al., 2011; Van der Scheer et al., 2011). Linking leadership is focussed on linking these values, and very often the interests and claims of stakeholders that are closely related to these values. Lastly, linking leadership is related to the notion of innovation champions. As noted, openness is important in innovation. It also refers to the idea that innovations are often the result of a process in which developments in different types of environment co-evolve, and merge together locally. An important question is how, and under what circumstances, these changes will link to each other (Nardi & O'Day, 1999; Dunleavy et al., 2005; Bekkers & Homburg, 2005; Bason, 2010; Fernandez & Wise, 2010). Policy entrepreneurs or 'innovation champions' play an important role in coupling these changes, thereby giving space for specific innovations as potential answers to problems. As such, the management of innovations also refers to the possibility of managing the political agenda and acting as a policy broker that make use of relevant policy windows and triggering events, as well as being able to ensure relevant support for a specific type of framing in which problem definitions and possible new solutions are coupled to each other (Kingdon, 2003; Horne, 2008).

3.2 Support of and co-creation with end-users

The second relevant driver during the innovation process refers to the involvement of end-users, given the emphasis on the 'social aspect' of public sector innovation. Given the supply-oriented nature of many public services it is the question, if these voices are really heard. In the literature it is

argued that new, innovative ideas come from actors who are not at the centre of a network. It can be noted that relative outsiders, who are only loosely connected with the key players in the network, are more often a source of innovation, than the actors who are closely linked with each other. Actors who know each other quite well are not surprised by each other's ideas and insights. Actors who do not know each nother very well, often represent new insights, ideas and perspectives (Powell & Grodal, 2005). Public sector innovation research shows that new insights stem from taking into account the ideas, insights and experiences of groups of end-users which voices are often 'weakly institutionalized voices', like:

- Citizens as end-users (Davenport, 1993; Oudshoorn & Pinch, 2003; Alam, 2006; Von Hippel, 2007; Vigoda-Gadot et al, 2008),
- Middle management of public organizations (Behn, 1995; Borins, 2001; Fuglsang & Pedersen, 2011),
- Civil servants who are engaged on a daily basis in rendering services to society, known as 'street level bureaucrats' or 'street level professionals', like police officers, teachers, doctors, nurses and social workers (Borins, 2001; Alam, 2006; Fuglsang & Pedersen, 2011; Tummers, Steijn & Bekkers, 2012).

In order to take account of insights from various groups, the literature talks about the importance of seeing innovation as a process of co-creation with these end-users (Oudshoorn & Pinch, 2003; Von Hippel, 2007). The involvement of end-users can range from passive to active (Lowndes et al, 2001; Bekkers, 2012). Passive involvement of end-users implies that information is gathered about the wishes and characteristics of end-users, for instance through the use of data mining methods thereby combining existing but different data sources and data or through the use of surveys. In such a case end-users are considered as a source of information which can be exploited to develop new services or improve existing service. Active involvement of end-users implies that end-users are seen as a source of knowledge, experience and ideas that can be exploited by given them a participatory position in the (re-)design of services (Mulgan, 2009).

Next to this, it has been noted that the support of end-users is a critical factor in determining the success of an innovation. However, to date, many innovations – such as new policies – are not readily accepted by end-users, especially public professionals who need to implement these innovations. In the literature, this is discussed using the notion of policy alienation (Tummers, Bekkers & Steijn, 2009). Policy alienation is described as a feeling of psychological disconnection from the policy (or innovation). When end-users feel that their views are not taken into account (in other words, when

they feel powerless) or when they feel that the innovation has no substantial value (in other words, when they feel that the innovation is meaningless), they will most often be resisting the innovation. Studies have indeed shown that many professionals cannot identify with innovations as they feel that they do not add value to society in general, such as delivering more security on the streets or better healthcare (Tummers, 2011). Furthermore, many resist because they feel that their autonomy is diminished to an extent that they cannot tailor the innovation to the needs of the client (Tummers, 2011). Next to implementing professionals being alienated from the policy, it can also be the case that either managers or citizens experience policy alienation, for instance because they feel that an innovation does not match their specific circumstances.

Hence, it seems important to increase the support of end-users. One of the most powerful levers to gain support is to let end-users participate in the design of the innovation (Judson, 1991). A number of possible factors can influence the participation of end-users (Boyle & Harris, 2009). Here, we focus especially on citizens as end-users, given their often neglected role, and given the importance that the social innovation literature adds to their role.

The first factor relates to the expectations that end-users have of the possible outcomes of their participation, also given the limited number of time they have and the transaction costs that are involved (Berman, 1997; Pestoff, 2012). This is also known as the performance expectancy, which has been shown to indeed influence behaviour very strongly (Venkatesh et al., 2003). Citizens are often cynical about the degree in which they think that governments are actually prepared to address the needs and wishes that citizens bring forward (Berman,1997). If it can be made very explicitly, that participation in the innovation process generates outcomes that are really in the interest of citizens, then they are more willing to participate (Alford, 2009). These outcomes do not really have to refer to the self-interest of citizens, they can also refer to intrinsic motivations and rewards that refer to social values that motive people. Moreover, citizens that participate, also acquire more attention and approval, which also stimulates participation as being a relevant democratic value (Alford, 2009). Schudson (1998) argues that citizens, who in general have a rather passive attitude, are actually willing to mobilize themselves in order to participate if vital interests are being threatened. Vigoda-Gadot et al. (2008) argue that the image of a sector also influences the willingness to participate. This depends on the trust in the governance of the sector as well as on the perceived satisfaction of the possible innovations that might be generated.

The second factor relates to the effort needed to participate. This is known as effort expectancy (Venkatesh et al., 2003). End-users need information, knowledge, skills and competences to participate. This is also dependent of the complexity of the innovation and the outcomes that are

being pursued (Bovaird & Löffler, 2011, Nesta, 2008). The growing role of (social) media is relevant in this regard. The omnipresence of modern (mobile) information and communication technology, especially internet and social media, provide a network-like infrastructure which enhances the easiness to exchange scattered or loosely coupled experiences, ideas and knowledge in terms of (open) access (Bekkers, 2004; 2012; Benkler, 2006). As a result new innovation models appear in which participation and open access are embraced as relevant values, like crowd sourcing and open idea banks (Mulgan, 2009).

Third, next to focusing on the role of the citizens, it is also important to recognize that citizen participation can be linked to institutionalized policy practices. Interactive governance research shows that politicians and policy makers have difficulty to link outcomes of public debates to the internal policy debate and the policy processes that lay behind these debates (Edelenbos, 2005; Lowndes et al, 2001). This also relates to the idea that policy makers, public managers and politicians are afraid to lose control and to lose status (Bovaird & Löffler, 2011).

The fourth factor refers to the representativeness of the citizen voices. Interactive governance research shows that citizens who already participate and who are already involved, make use of the extra opportunities that are offered to get involved (Bekkers, 2004). The issue of representativeness also relates to the role that intermediary parties play. They very often claim to have the position, the knowledge and the skills and competences, in formulating end-users needs. This may be caused by the fact, that once an intermediary organization have been erected, more internal goals and personal motives may replace the original representation goals. In this way, goal displacement (Merton, 1949) may take place, where the goals of the intermediary organizations (which should be means to voice the concerns of their supporters) become the ultimate goals. Such developments can also occur with public professionals who have to implement policies. It has been found that influence of professional associations does not by definition heighten the support of the professionals themselves (Tummers, 2011). This non-significant influence can be an indication of the re-stratification thesis, stating that 'everyday' professionals are different and disconnected from the elite representing them in their associations (Freidson, 2001).

3.3   Risk definition and management

Innovation, as has been discussed, depends on the addition of new ideas, in which trial and error is important. However, this can be risky. Innovation in itself is a risky process, because a commitment is required regarding a process and regarding unknown outcomes (Brown & Osborne, 2013). Given the fact that innovation is an open process in which different stakeholders participate, it is important to

understand how these stakeholders, their representatives and their leaders, define the risk fullness of an innovation process.

Risk taking is not always favoured. First of all, in the public sector there is a negative attitude towards risk and risk-taking (Feller, 1981; Brown, 2005; Bernier & Hafsi, 2007; Matthews et al., 2009; Osborne & Brown, 2011[2]). Bureaucratic and political cultures are perceived as risk-avoiding, including in relation to accountability issues (Borins, 2008; Kelman, 2008; Albury, 2005). Secondly, the short-term orientation of politicians increases delivery pressures and forces them to not be very risk-taking (Van Gunsteren, 1976; Albury, 2005). Politics is characterized by short-termism, focused on winning the hearts of potential voters and interest groups through 'quick wins'. The possibility of increased media coverage, especially in relation to possible failures, tends to increase this (Borins, 2001; Sörensen & Torfing, 2011). Drucker (1985) stressed the importance of 'systematic innovation and entrepreneurship', implying that organizations should develop a long-term, goal-oriented and systematic perspective on how to mobilize resources - such as knowledge, people and funds - in order to look for 'new combinations', thereby creating fruitful conditions for innovation. Investments in research and development and the setting up of research & development departments are examples of systematic innovation. Thirdly, the dominance of performance management systems in public administration could also influence the degree in which public sector organizations and their management are willing to take risks. It has been shown that the proliferation of performance indicators can stymie innovation (Newman et al, 2000; Sörensen & Torfing, 2011).

3.4   The role of ICT and social media

The fourth factor we identify relates to the role of information & communication technology (ICT), including social media. Two roles are important. First, it can be argued that ICT and social media are important sources of innovation, given the fact that technology in general is an important source of innovation because technological innovations are very often give birth to all kinds of innovations. In doing so ICT and social media are important drivers for innovation, which become even more important if we acknowledge information and communication are vital resources in rendering specific services, in developing and implementing policy programmes as well as in monitoring and enforcing the outcomes of these programmes. The innovative potential of ICT and social media refers to a number of characteristics that are embedded in these technologies like the ability to process large amounts of data in more sophisticated way, the ability to improve the access of relevant information and knowledge across all kinds of functional, geographical boundaries, the power to improve the transparency of all kinds of processes, behavior and organizations, the ability to monitor and control these processes and behaviors as well as the potential to communicate, to visualize and

to facilitate all kinds of interactions (Bekkers & Homburg, 2007; Bekkers, 2012). In case of the internet and social media especially the ability to link the communications, the information, experiences, knowledge and contacts of people, groups and organizations is a vital source of innovation (Fountain, 2001; Benkler, 2006). Within the public sector many ICT driven innovations are closely related to the creation of electronic government. The interesting part is that these characteristics facilitate the emergence of new policy and service delivery processes, new organizational and governance practices which has the potential to fundamentally change the course and contents of processes, relations and positions. However, in order to understand the innovation potential of ICT it is important to understand the social and political shaping of technology, which are also influenced by the co-evolution of specific developments and changing value propositions different environments (political, technological, socio-cultural and organization environment) that merge with each other, given the specific interaction between relevant stakeholders that play a role in the development and implementation of these new technologies (Dunleavy et al, 2005; Bekkers & Homburg, 2007). Moreover, ICT innovations very often tend to reinforce existing biases, interests, positions and relations, because ICT is often used as powerful resource (Kraemer & King, 1986; 2006; Kumar & Van Dissel, 1996).

The second role that ICT and social media can play in innovation is that it can operate as <u>an open information exchange and communication infrastructure</u> in order to support the exchange of ideas, knowledge as well as learning. Especially its ability to explore and link different people and various sources of knowledge and information, implies that new knowledge can be created and mobilized (Benkler, 2006; Meijer, 2011). This is why concepts like crowd sourcing, and open source software and communities can support innovation processes (Surowiecki, 2004; Europa Innova, 2011). Depending on various circumstances, ICT can either support or stymie innovation practices. Often these circumstances also refer to the factors that influence the success and failure of innovations in general (as they are described in this paper). Important questions relate, for instance, to the variety and the quality of the people that are engaged in virtual collaborative ways of innovation and the knowledge, experiences and competences that they bring in, as well as how this new knowledge can be linked (or not) to existing routines and practices within well-established public organizations (Keen, 2007; Bekkers, 2012).

4 Drivers and barriers related to the adoption of innovations

After discussing the drivers and barriers related to the innovation environment and the innovation process, we will shortly discuss the drivers and barriers related to the adoption of innovations. Successful innovation in the public sector also depends on the diffusion, adoption and upscaling of innovations by other organizations. This can be considered as a process which is only loosely coupled with the innovation process itself. That is why Damanpour and Schneider (2009) argue that in essence two types of processes can be discerned: innovation generating activities and innovation adopting activities. Although the previous factors also play a role in the adoption of an innovation, the adopting process itself is also influenced by specific drivers and barriers.

We must note that, although diffusion and adoption is a recurring issue in the private sector, hardly any systematic attention has been paid to this critical aspect of innovation in the public sector (Greenhalgh et al., 2004) . Most public innovation diffusion studies focus on the first stages of diffusion. Hardly any attention has been paid to the latter stages in the diffusion and adoption process. Furthermore, the emphasis lies primarily on the early adopters, with hardly any attention being paid to the followers, late adopters and 'laggers'. As such, the up scaling process has not been sufficiently investigated (Albury, 2005).

Based on the limited research that exists we are able to distil a number of relevant drivers and barriers. The following factors can be put forward:

- The allocation of resources and the characteristics of the adopting organizations
- The role of opinion leaders, innovation champions and knowledge intermediaries
- Characteristics of diffusion and adoption considered as a learning process
- The influence of wanted to look alike: isomorphism

4.1 The allocation of resources and the characteristics of organizations

It has been found that the adoption of the innovation seems to be depend on organizational wealth and capacity in terms of slack resources that can be used by managers, for instance like having a professional staff or being able to control personnel policies (Walker, 1969; Fernandez & Wise, 2010; Bhatti et al, 2011; Maranto & Wolf, 2012). To some extent this also being influenced by the size of an organization (Walker, 2006): the larger an organization the greater the opportunities are for cross fertilization of ideas and necessary skills (Damanpour, 1991; Berry, 1994) Bhatti et al (2011) go even one step further and argue that the more professional a public organization is, the higher the

likelihood of adopting an innovation, like citizen service centres. Professionalism matters, because professionals, especially as they come from outside the organization, bring in new knowledge, new incentives and new norms. In doing so they do not only push change by demonstrating their value to the organization, but they also reduce uncertainty regarding the unknown effects of an innovation (Bhatti et al, 2011).

4.2 The role of opinion leaders, innovation champions and knowledge intermediaries

Next to this, it has been noted that the people (very often professionals), and organizations that promote an innovation are often crucial for the innovation process. People can act as innovation champions because they influence relevant opinions . In this way, leaders can foster change, by actively and enthusiastically promoting an idea, building support, reducing resistance to change; marshalling the necessary resources; and ensuring the effective implementation of an idea (Fernandez & Wise, 2010). Secondly, people can act as knowledge intermediaries. Here, people link innovations, organizations and others (Greenhalgh et al, 2004; Korteland & Bekkers, 2008; Behn, 2008; Bhatti et al, 2011).

4.3 Characteristics of diffusion and adoption considered as a learning process

A number of factors are especially relevant for the innovation diffusion and adoption process. First of all, Hartley (2008) notes that diffusion and adoption is about inter-organizational learning and that prizes and awards, by creating attention, play an important role in diffusion and adoption. Next to this, some authors argued (Greenhalgh et al., 2004; Korteland & Bekkers, 2008) showed that it is important to pay attention to the particular characteristics of the diffusion strategy that the original innovator or intermediaries pursued in order to promote an innovation, which also depends on the availability of resources (time, money) to support these promotion activities. This diffusion strategy should pay sufficient attention to codify the (tacit) knowledge and experiences that were gained during the innovation processes (Greenhalgh et al. 2004; Korteland & Bekkers, 2008). The codification of knowledge makes it easier to convince possible adopters of the added value of an innovation. Moreover, diffusion strategies which are only focused on presenting the advantages of an innovation – using brochures, websites etc. – will not be that successful. It seems important that potential adopters have the possibility to learn from each other's experiences. Learning refers to 'trial and error', to experimenting, triability, and to re-invention as well as to the concrete visibility of an innovation's relative advantages, especially in relation to satisfy the needs (Greenhalgh et al. 2004; Korteland & Bekkers, 2008; Bhatti et. al, 2011). Research also shows that an innovation that can be moulded, in order to fit with the specific circumstances and local practices that are relevant

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for a possible adopter, has a greater chance of being adopted (Rogers, 2003; Greenhalgh et al, 2004; Korteland & Bekkers, 2008).

4.4   The influence of looking-alike: isomorphism

A last factor to be taken into consideration stems for the idea of 'isomorphism' , which tries to explain why organizations that work in a specific sector or branch look similar. Meyer & Rowan (RW.ERROR - Unable to find reference:1937) argued that institutional environments influenced all organizations in modern societies, making them more isomorphic; that is, more identical towards each other. DiMaggio & Powell (RW.ERROR - Unable to find reference:1938) nuanced this general assertion and noted that isomorphic tendencies were bounded to organizational fields: organization in the same field (such as healthcare or education) became more alike. This can also be linked to the adoption of innovations, as most organizations tend to conform themselves to new ways of working, new methods, new ideas, and thus also to new innovations (Meyer & Rowan, 1977; DiMaggio & Powell, 1991). Adoption is seen as a way of trying to ensure the legitimacy of organization by showing that an organization is able to integrate the values and norms that are embedded in an innovation and which are also considered to be significant by the environment of this organization into their own practices. Greenhalgh et al. (2004) define this process as a process of assimilation. Conformity can be achieved through the adoption of specific rules and regulations in which in obligatory way changes have to be implemented (coercive isomorphism), through the adoption of specific values and norms that are pushed forward by relevant peers and professional organizations (normative isomorphism) and through copying and mimicking (mimic isomorphism). A number of scholars (Smullen, 2007; Pollitt & Bouckaert, 2011; Roy & Seguin, 2000) showed that New Public Management based innovations have spread in the public sector in different countries in which mimicking seems to be an important driver for the adoption process.

5   Conclusion

In previous sections, we identified a number of potential drivers and barriers for public sector innovation. The next step is to understand how these factors influence each other. In Figure 1, this coherence is shown schematically. This figure can be used as a theoretical framework for analyzing innovations. We acknowledge that public innovations are embedded in a specific context, such as a policy sector within a specific country. Not all barriers and drivers are relevant in each instance. However, the figure can be used as a heuristic to analyze the potential role of various drivers and barriers on various dimensions.
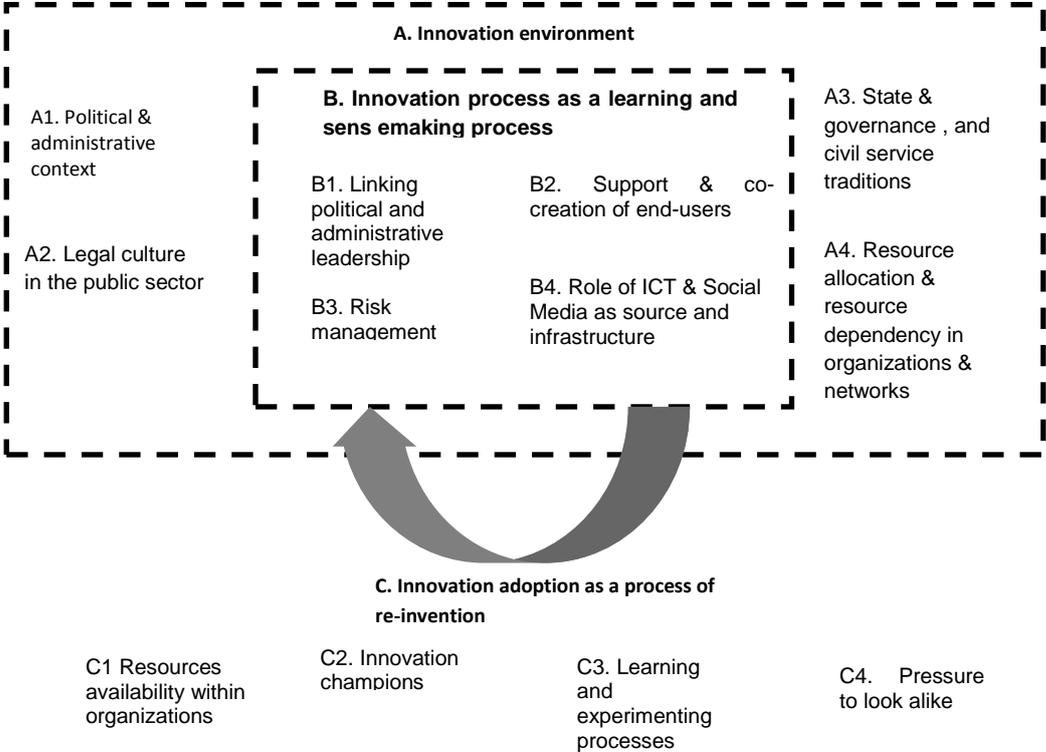
A. Innovation environment

A1. Political & administrative context

A2. Legal culture in the public sector

B. Innovation process as a learning and sens emaking process

B1. Linking political and administrative leadership

B2. Support & co-creation of end-users

B3. Risk management

B4. Role of ICT & Social Media as source and infrastructure

A3. State & governance , and civil service traditions

A4. Resource allocation & resource dependency in organizations & networks

C. Innovation adoption as a process of re-invention

C1 Resources availability within organizations

C2. Innovation champions

C3. Learning and experimenting processes

C4.   Pressure to look alike

Figure 1 Framework of potential drivers and barriers for social innovation in the public sector

Table 2 describes the identified factors more in detail, by also looking at relevant subdimensions. Moreover we tried to qualify these factors in terms of possible driver and barrier. At the same time it can be argued that a factor can be a driver and barriers at the same time, but the specific context determines to a large extent if it is a driver or a barrier.

Dimension	Sub-dimension	Driver/barrier	Expected influence on public sector innovation
A. Innovation environment	1. Political and administrative triggers from the public administration environment	Political and administrative problems	+
		Multi-rationality of public administration	+
		Introducing market like competition	+
		Political competition for voters	+
	2. Legal culture of the public sector	Strong formalization and standardization	-
		Rule-driven 'path dependencies'	-
		Innovations crossing legal jurisdictions	-
	3. State, governance and civil service traditions	Strong central and unitary state	- (especially for radical innovations)
		Decentralized structure with strong local/regional governments	+ (especially bottom-up innovations)
		Corporatist tradition	+ (especially for innovations which need lots of support)
		Market tradition	+ (if real markets can develop)
		Legalistic tradition	-
		Strong civil society	+ (especially bottom-up innovations)
	4. Resources and resource dependency in organizations and networks	Slack (money, time, people) available	+
		Cultural diversity	+
		Customer & learning orientation	+
		Age of the organization	-
		Recognition of mutual dependency within networks	+
		Trust and social capital	+
		Weak ties and structural holes	+/- (depending on situation)
		Openness and variety within organizations & networks	+
		Equal distribution of costs and benefits within organizations & networks	+
B. Innovation	1. Linking	Boundary spanning and scanning activities of leaders	+

Dimension	Sub-dimension	Driver/barrier	Expected influence on public sector innovation
process as a learning	administrative and political leadership		
		Connecting political realm with innovations	+
		Linking and balancing contradicting values	+
		Acting as an innovation champion	+
	2. Support of and co-creation with end-users	End-user perspective brings in new information, knowledge and experiences (weak ties)	+
		Performance and effort expectancy of end-users for the innovation (ease, salience, powerfulness and meaningfulness)	+/-
		Representativeness of involved end-users	+/-
		Compatibility with internal routines, procedures, systems and other grown practices	-
	3. Risk management and innovations	Risk-avoidant political and/or administrative culture	-
		Short-term orientation of politicians	-
		Dominant performance management structures	-
	4. ICT & social media	ICT as source of innovations provided new capabilities and thus new ideas	+/- (depending on situation)
		Degree of openness of ICT as an infrastructure that facilitates the exchange of information, knowledge and communication across borders	+
C. Innovation adoption	1. Allocation of resources and the characteristics of the organizations	Slack (money, time, people) available	+
		Customer & learning orientation	+
		Professionalization of organization	+
	2. Innovation champions & knowledge intermediaries	Acting as an innovation champion	+
		Acting as a knowledge intermediary	+
	3. Diffusion and adoption as a learning process	Prizes and awards	+
		Codifying (tacit) knowledge	+
		Possibility of moulding innovation and to show visible and concrete outcomes (triability, visibility)	+
	4. The influence of looking-alike: isomorphism	Many organizations using innovation which generates peer pressure to conform	+

Table 2 Detailed list of potential drivers and barriers for public sector innovation

The aim of this paper was to provide an integrative framework of relevant factors that influence the process of social innovation in the public sector. We hope that it will prove to be a useful background study for future studies analyzing public sector innovation.

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