

# Innovation in the Public Sector

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On the differences  
between public  
and private sector  
innovation

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By Thomas Halvorsen, Johan Hauknes, Ian Miles and Rannveig Røste

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# Introduction

*By Per Koch, PUBLIN coordinator*

As PUBLIN grew out of research on innovation in the private sector, the research teams have been acutely aware of the problems following from using methods and theory for studies on private innovation on public sector organizations.

Although there are state owned companies that run like regular private companies, the majority of public institutions are still operating within a different social, cultural and regulative context. There are different incentive structures and different rules of the game.

This report contains papers written throughout the PUBLIN period, some as preparatory exercises helping the researchers in their case study work and one including findings from PUBLIN itself.

And yes, we have definitely found that there are important differences between much of the innovation taking place in public institutions as opposed to private ones.

It should be noted, however, that innovation basically is a matter of making use of learning, i.e. using your competence base as the foundation for finding new ways of doing things in a manner that improves the quality and efficiency of the services provided. And being a learning activity, innovation in the public sector has actually much in common with what takes place in a firm.

One question that arises from this is whether our newfound insights into public sector innovation may throw new light on the innovative practices of company employees. The idea that any innovator or entrepreneur is solely driven by the urge for profit is clearly too simple and naïve. Both public and private employees are driven by much more complex motivations than that.

# On innovation in the public sector

By Thomas Halvorsen, STEP

*This chapter was written at the beginning of the PUBLIN three year research period.*

## Part 1: Public sector innovation

Innovation literature is directed at understanding and establishing a consistent and general basis for understanding the main processes underlying social and economic change in modern economies. Hence, it is something of a paradox that the innovation literature has almost completely neglected studies of innovation in the public sector.

The public sector is vast. What happens in this part of the economy has major implications for the economy as a whole. The public sector has traditionally played a crucial role as an enabler of research in academia and in the private sector, but public sector has historically often played a more direct role when public research programs have pioneered the development of major new technologies. Public sector is likely to continue to play this role, and the story of technical revolutions and administrative innovations cannot be anything like complete without studying innovation in the public sector.

### What is innovation?

The term “innovation” can be defined most generally as changes in behaviour. Efforts to produce more specific definitions of the term have resulted in many good, but no single authoritative definition. An important reason for this is that the meaning of innovation has been under constant evolution. Early definitions of innovation, like Schumpeter’s (1934), restricted themselves to novel products and processes finding a commercial application in the private sector. Later definitions have broadened their scope, also including social innovations (e.g. organizational, institutional and political innovations), innovations in services, and innovations in the public sector as well.

Studying innovation in the public sector, one has by the outset removed oneself from the narrowest interpretations of innovation. PUBLIN is designed to cover several dimensions that are associated with a broad definition of innovation. These include:

- innovations involving *changes in characteristics and design of service products and production processes* – including development, use and adaptation of relevant technologies,
- *delivery innovations* – involving new or altered ways of solving tasks, delivering services or otherwise interacting with clients for the purpose of supplying specific services,
- *administrative and organizational innovations* – involving new or altered ways of organizing activities within the supplier organization,
- *conceptual innovations* – in the sense of introducing new missions, new worldviews, objectives, strategies and rationales. These innovations are particularly important to institutions operating under social or public objectives as they furnish a link between the social objectives of the policy and institution and the operational and economic goals and functions of the agency



in question. This type of innovation includes major parts of the impacts of the process we denote *policy learning*,

- *system interaction innovations* – new or improved ways of interacting with other organisations and knowledge bases.

## How are innovations generated in – or introduced into – the public sector?

From a narrow definition of innovation one could be led to believe that innovations would have to be transferred from the private to the public sector in one way or the other. This may be the case in many instances, but obviously, when broadening the understanding of what an innovation can be, innovations are also generated within the public sector itself.

### Technology procurement

Procurement is one way innovations could be introduced into the public sector.

Public procurement will normally account for 10-15% of GNP in industrialized countries (Geroski 1990). This publicly created demand is of tremendous importance for the national economies.

The greater part of what is procured is ordinary commodities, and these are not necessarily innovative as such. Even though only a part of public procurement involves new technologies, this is still a major contributor to the introduction of innovations in the public sector. Moreover, if a public institution starts using a commodity, it is innovation seen from the perspective of this institution, even if the product or service is known in the market.

Technology procurement is important for the public sector because it introduces better technologies in the production of public services and goods. But what may be equally important from an innovation perspective is that the transfer of the technology to the public sector often entails some form of technology development, or at least some adaptation to the requirements of the end-users of the technology. In other words: technology procurement engages public sector employees in innovative processes when the technology is to be integrated into the context-specific requirements of its application.

Another related aspect is the public organizations need for an absorptive capacity in connection with the technology procurement. Absorptive capacity concerns the receivers' ability to assimilate and make use of the transferring technology.

“[T]he development of an organization's absorptive capacity will build on prior investment in the development of its constituent, individual absorptive capacities, and, like individuals' absorptive capacities, organizational absorptive capacity will tend to develop cumulatively”

(Cohen and Levintahl 1996: 544)

The process of innovation will frequently begin before the actual procurement because the organizations need specialized skills in order to integrate the transferred technology.

## Technology development

There is of course a substantial amount of technology development also taking place within the public sector itself, but -- as noticed before -- what you find depends on what you are looking for. "Technology development" (like the concept of innovation) does not have a single interpretation or definition. In this context, however, technology development is understood as the development of new or improved artefacts, production processes, and new or improved forms of work organization on both an individual and a systemic level.

From an economic point of view the rationale for the public sector as a whole is that it supplies the society with the services which a pure market solution does not produce in a sufficient quantity. Many of these services involve technological challenges where the solutions cannot simply be imported from the private sector. This includes problems in connection with city planning, traffic solutions, congestion, pollution, defence, collection of taxes, exploration of space etc.

A number of public agencies, technical- and planning- sections and departments at nearly all levels of the bureaucracy are engaged in technology development. In addition to this comes the technological development done in other public organizations, like hospitals, national railway-companies, schools and universities.

## Bureaucratic and organizational reform

It follows from an extended interpretation of innovation that reforms also constitute innovations. Bureaucratic and organizational reform could involve *administrative and organizational innovations*, *conceptual innovations* and *system interaction innovations*.

The reforms tied to what has become known as New Public Management (NPM) serves as a good illustration (although one needs to keep in mind that not all innovations necessarily are positive):

- An example of a *conceptual innovation* was the implementation of *privatization* as a principle for the downsizing of the public sector.
- The reforms of NPM also introduced *administrative and organizational innovations*. Examples of this are the introduction of "managerialism" (entrepreneurial- and strategic management, management by objectives, team management, etc.) and the introduction of new systems for budgeting and accounting.
- NPM could also be said to involve *system interaction innovations* to the extent that the reforms resulted in a strengthened interaction between the public and the private sector.

## New policies

New policy and reform are related concepts, but while reform means changing something into an improved condition, "new policy" is a more open-ended concept in that it allows for the introduction of something totally different. The decisions to take

man to the moon or to create a European Economic Community do not constitute reforms, but new policies involving a broad range of innovations with deep impacts on both the public and private sector.

Most new policies are much less epoch-making than the above-cited. Still – new policies are often the basis for innovations in the public sector. An example is PUBLIN’s own cases on home care for elderly. The political decision to – for instance – prioritize home care for elderly in Norway does not only imply innovations in how care for elderly is organized and how staff interacts with the clients. The policy also involves the development and implementation of new technical aids and innovations in how the staff co-operates with other care-givers (relatives).

## A typology of innovations in the public sector

Innovation in the public sector can be divided into several types:

- a new or improved service  
(for example health care at home)
- process innovation  
(a change in the manufacturing of a service or product)
- administrative innovation  
(for example the use of a new policy instrument, which may be a result of policy change)
- system innovation  
(a new system or a fundamental change of an existing system, for instance by the establishment of new organisations or new patterns of co-operation and interaction)
- conceptual innovation  
(a change in the outlook of actors; such changes are accompanied by the use of new concepts, for example integrated water management or mobility leasing)
- radical change of rationality  
(meaning that the world view or the mental matrix of the employees of an organisation is shifting)

The first two types of innovation can be subsumed under product innovation.

The innovations can be labelled in the following ways:

- Incremental innovations—radical innovations  
(denoting the degree of novelty, in industry most innovations can be considered incremental improvements of already existing products, processes or services)
- Top-down innovations—bottom-up innovations  
(denoting who has initiated the process leading to behavioural changes, “the top” – meaning management or organisations or institutions higher up in the hierarchy – or “the bottom” – meaning “workers on the factory floor”, in this case public employees, civil servants and mid-level policy makers)
- Needs-led innovations and efficiency-led innovation  
(denoting whether the innovation process has been initiated to solve a

specific problem or in order to make already existing products, services or procedures more efficient)

## Why do innovations spread in the public sector?

Why do innovations spread in the public sector when the pecuniary interests of individuals or groups of stockholders are missing? Several explanations can be offered to answer this question.

One group of explanations can be related to factors that creates a top-down or external innovation push. The other can be related to factors or circumstances, within the public sector itself, creating an innovation pull.

### Push for innovations

#### **Policies and political targets**

Democratic countries have elections at fixed intervals. The electoral institution has many functions; one of them is to ensure the vitality and revitalization of the policies that govern the countries. So at least around the time of elections there usually is an outburst of political creativity and innovation. This creativity and innovativeness expresses itself in the form party programs (which the constituency is tempted with), but also routinely as a renewed willingness of the incumbent government to innovate in order to muster political support.

This is not to say that there is no political innovation between elections. The continuing political discourse will result in new, innovative initiatives between elections too. The point is that governments and other political bodies have political ambitions, set political targets, and work to get these realized through the democratic channel. Making use of the bureaucracy to implement the political will throughout the public and private sector and in so doing creating a push for change and innovation.

#### **Popular opinion**

Popular opinion can also create a push for innovations in the public sector, especially when media catches on to the popular sentiments, bringing these to attention, amplifying and politicizing them. Push from popular opinion is often comes from dissatisfaction with the service level, e.g. the treatment queues at hospitals, dissatisfaction with the infrastructure of schools, the quality of roads, etc. Citizens (especially in welfare states) have expectations to the quality and extent of almost all public services, and when services do not live up to expectations popular discontent often results. While the response at the service-level often is a request for more money, the reaction of politicians is more often to push for new policies or reforms.

The public opinion thus creates feedback loops into the process of innovation in the public sector. The feedback loop is, however, somewhat biased towards feedback of a negative character. A relatively weaker feedback of positive responses to innovations is a problem if this leads to underdevelopment or underutilization of innovations to which the public is positively inclined.

#### **International agreements, laws, regulations and standards**

One very important aspect of globalization is the increased influence of supranational bodies on the domestic policy of individual states. This is driven by the continuing development of the corpus of laws and regulations of organizations like WTO, EU

and IMF and the gradual ratification of these agreements in the form of national law. For example: an agreement on marketable quotas on  $\text{CO}_2$ - emissions would require each country to set up a monitoring system for the industry, thus creating a push for innovation in the public sector of the countries.

## **Technological and scientific developments**

To state that the general technological and scientific development creates a push for innovation in public sector (like other parts of the society) is almost superfluous. The challenge is to understand the profoundness of this impact.

Not only does this development create a push given that technologies are interdependent (e.g. the development and spread of broadband creates the need for better hardware and software in servers and terminals, different network- and web-solutions; i.e. innovations in the user-producer interface of public services); it also creates a push in the sense that it has a major impact on the opportunities, priorities and agenda of politicians, civil servants and the general public.

A study of U.S. public programs awarded as innovative in 1993 revealed that almost one third were making use of information systems representing cutting-edge technologies, and because of the newness of the technology, these programs would not have been possible only a decade earlier (Libbey 1994). This does not necessarily imply that these technologies have exerted a great push as such, but rather a window of opportunity that has enabled the use of them as a basic part in a public sector innovation.

## **Other societal developments**

A number of other developments or incidents can also create an external push for innovation in the public sector. The demographical development of a country is one of the factors that can create a push for innovation in the public sector. Already mentioned is the home-care policy of the Norwegian government. This policy is to a large extent a response to the growing number of older people in need of care.

Increased migration also creates a push for innovation in the public sector. This does not only relate to border control, but a whole range of services that need to be tailored to people with a different language and cultural background to ensure their welfare and integration into society.

Economic developments, growth and crisis, can also create a need for modernization of the public sector. An example that has underlying political causes (but is currently of great concern) is the process of integration of the economies of many former communist countries into the larger Western economy. This process is creating enormous pressures for innovation at almost all levels in the public as well as the private sector of these countries.

There are a number of other factors that can create pressure for innovation in the public sector. Natural catastrophes are one such factor. They can for example expose weaknesses in the emergency preparedness of a country. War or the perceived threat of war is another factor that historically has spurred innovation in the public sector of countries.

## Factors creating a pull for innovation

### **User needs and preferences**

Some critics question the responsiveness of public sector, claiming it is insulated to user needs and preferences. Although this claim may have some merit in some contexts and in some instances, there is nothing that indicates that this is as widespread and as chronic as sometimes portrayed (by private sector employees).

To the contrary, evidence suggests that the public sector reacts to user needs and preferences, bottom-up, through the day-to-day interaction with citizens at the service level, and, top-down, through the democratic channel

### **Organizational overstretch or frustration with status quo**

Both citizens and employees may feel frustrated by the inability of a public institution to provide the services that is expected. This may lead to a public outcry. Press and media may spur policy makers “to do something” about the problem, which may ultimately force the leaders of the institution to implement reform.

Employers may also be the source of innovation, especially in an organization that encourages learning and innovation. Employers may initiate reform for a wide variety of reasons:

- They may be ideologically inclined to do so, i.e. they have a world view or a rationality that makes them believe that change is necessary.
- They may be idealists or altruists. They have found work in the public sector because they “want to make a change”.
- By proposing innovations they may further their own careers. It is certainly true that organizations may oppose radical changes, but it may nevertheless appreciate “fixers” and “doers” that are able to get the leaders out of a tight spot.
- They may be intellectually curious or they may find the need for change an interesting challenge. The fact that the public sector in European countries employ a large number of academically trained personnel makes this more likely.

### **Lobbyism**

Both public as well as private sector organizations may decide to follow up on user dissatisfaction, and make it a rallying cause for their members.

### **Technological interdependencies**

The innovator frequently needs “complementary assets” to pull the innovation through, particularly if other agents are trying to introduce similar innovations or even quite dissimilar ways of addressing the same problems. Such assets can involve control of complementary innovations (that enhance the value of the innovation to users), of marketing and distribution channels, and intangible assets like brand names and intellectual property rights. Credit for the innovation may not go to the original innovator and the dominant design may not be the first design.

## Barriers to innovation

The public sector is often described as “bureaucratic” – in a negative sense. It is often considered a slow moving, rigid, hierarchically organized system, with specialized departments that are directed towards concrete targets and having ambiguous defined limits of authority at the same time. This “bureaucratic” system is by some perceived as time-consuming, oversized and expensive, and a waste of taxpayers’ money.

We will leave the discussion on whether the public sector is more or less “bureaucratic” than its private counterparts, but start with the hypothesis that public sector organisations may in some instances be “bureaucratic” in the negative sense of the word. If this is the case the main problem seems to be the structure of the organization. Administrative innovation will then be the solution; as it may create better structures for absorbing policy learning and technical innovation.

Organizational structures might be understood as chosen, and change as guided by human intention. The development of a structure follows a strategy (Chandler 1962), where the major functions of a structure is to direct attention and action toward the accomplishment of pre-determined goals. Various structural forms are chosen on the basis of their ability to facilitate this goal-accomplishment (Child 1972; Scott 1992).

However, is it possible to choose the best way to organize the public sector? And, is it possible to reorganize the public sector into this one “best” structure?

The hierarchical organization of the public sector is based on a democratic principle; it is ultimately ruled by a Parliament and a Government that are constituted through elections. The political party or parties in power might have other perspectives on what is the best way to organize the public sector than the minority. Such political perspectives might have been considered in the elections, and the existing organization structures might therefore be understood as the democratic will of the population.

However, one may question whether the representative government truly reflects the opinion of the people. At the same time it is hard to foresee whether the public opinion will change during the election period, or whether the constitution of the Parliament and Government will be significantly changed in the next election period. Hence, there are not one but several views on how to organize the public sector to consider.

What is considered the best model is therefore changing – partly as a result of democratic will. However, in many cases one will find that the voters and the media are not so much concerned with the *organisation* of public sector institutions, but with their ability to deliver services as promised. This means that it is up to the politicians and the civil servants to come up with the right model.

Politicians and policy makers do not have perfect knowledge of the issues at hand. Moreover, the goals are conflicting and it is hard to choose the best solutions for all parties in every issues. Decisions are rather the results of negotiations, bargains and compromises – with other public institutions and civil interest groups.

These decisions are almost always influenced by competition for funding and a lack of resources. One decision is therefore normally made at the sacrifice of other interests. Who loses often depends on who has the power to negotiate, bargain and make compromises. This power does not only depend on what might be the most

rational choice, but also on the number of members, influence, competences in the relevant field and financial and human resources. What might appear as the absence of political will to change society might just as well be the absence of bargaining power.

Also, it has been claimed that the “bureaucratic” system might be institutionalized in the “organizational way of doing things” (e.g. Zucker 1983; March and Olsen 1984, 1989; Powell and DiMaggio 1991; Olsen 1992). And that the organizational way of doing things – i.e. a specific way of running an activity – might in itself be a barrier to innovation.

Institutions are not static, but transformed through continual processes of interpretation and adaptation. Certain structures and processes evolve historically through selective experience and become the basis of self-organization. Institutions develop considerable robustness against changes in the environment and explicit reform efforts through this institutional autonomy and internal dynamics.

Hence, although institutions are the result of human activity, they are not necessarily products of conscious design. The preferred models are rather taken for granted, assuming that “actors associate certain actions with certain situations by rules of appropriateness (March and Olsen 1984:741)” through socialization, educations, on-the-job learning or acquiescence to convention (Lærgreid and Olsen 1978; March and Olsen 1989; Powell and DiMaggio 1991; Olsen 1992).

In that way the incentives for changes are rather institutional than political-rational. The participants enter the organization with individually shaped ideas, expectations and agendas, different values, interests and abilities. The institution absorb some of these individually interests and establish criteria by which people discover their preferences. If the participants do not agree in these preferences they might choose to exit the organization. In that way the institution get further institutionalized instead of radically changed.

Because of this innovation in the public sector is often perceived as something that is forced upon the organisation from the outside. Political change is often associated with policy entrepreneurs, political interventions and technical innovation with innovation champions.

However, personal incentives as power, status, improved promotional prospects and salary might as well stimulate to such innovate activity within the public sector as well as in the private sector. This means that any study of public sector innovation must also take internal processes into consideration.

One should also keep in mind that innovation in the private sector is also often forced upon companies or business units from “the outside”. In larger companies this “outside force” may be the top management or the top management. Moreover, all companies face a demanding market, as both customers and suppliers may force a company to change tactics.

## The role of policy

### **Democratic intervention**

In the public sector the objectives for innovation are manifold, not clearly ranked and subject to change. In the private sector objectives are manifold too, but once a decision has been made to embark on an innovation project one tends to stick to the



objectives until the plan has been finalized or aborted. In the public sector objectives are more unclear and tend to be reformulated all the time – also after the decision has been made.

The procedures in both sectors are about decision making, but the processes leading to decisions in the public sector are often (but not always) political. For obvious reasons the main focus of public sector innovation will not be sales and profits. Public institutions operate under other regulatory and social rules than companies.

Public institutions must act in accordance with constitutional principles of governance that define the basic standards for public activity: who can legitimately and reasonably decide what, when and how?

Interestingly these principles appear as reasonable when considered in isolation, but may seem problematic and even contradictory if seen in context. These principles and their contradicting relations must therefore be considered when studying innovation in the public sector, and if possible hierarchically arranged and prioritized on the basis of the innovation studied (Christensen and Egeberg 1992).

## Decision-making processes or how political agendas come into being

The role of policy on innovation in the public sector is most visible in concrete political decisions. In general, studies of policy are aimed at understanding why decisions are made as they are.

Decision-making processes are defined in political systems, in political goals and in specialized departments. However, political goals are complex, and it is not possible to subsume everything into the political system as such. The studies of public policy must therefore be of the political processes involved in decision-making processes. In PUBLIN it is first of all important to understand the processes involved in framing new policy agendas.

New policy agendas might be understood as introduced by entrepreneurs. This could be “political entrepreneurs” or “business entrepreneurs”. In any case we are talking of persons with such entrepreneurial qualities as Schumpeter (1934) writes about; with the creative powers and strategic capabilities needed to carry through changes. Their motivation is more often the joy of creating and succeeding than the search for profit.

In that way, new policy agendas might be understood as come into being by the initiative of political entrepreneurs, and accomplished because of their interests and motivation in changing the political agenda. At the same time, business entrepreneurs might influence on policy making processes by lobbying for the production and market conditions for their invention. In addition, public procurement of such a technical invention might lead to new policy agendas – both as technical and administrative innovation.

As mentioned above regarding the principle of parties, interest groups are often heard in decision-making processes. This might happen in a sort of corporative model with established connections between the government and some selected interest groups. Interest groups might also influence on political decisions under more open and pluralistic conditions, through lobbying, demonstrations and by giving their statements in media.

No matter how closed or open the process is, there must always be some kind of selection processes where new political ideas, technological inventions and interest groups are considered. Why does some have influence on political decisions and others not?

Selection processes might occur as negotiations between competing business entrepreneurs, political entrepreneurs and interest groups, both among them and between them. Their bargain strength depend on i.e. how influential they are, their number of membership, money supply, their competence on the concrete issue and their negotiations skills.

Their ability to convince the decision-makers of their technological invention, political ideas or interests might be a part of their negotiation skills. Their ability to convince is however not only decided by the invention, idea or interest alone. Rather their ability to convince depends on their ability to carry out tactical operations that convince other actors, i.e. their ability to build actor networks (Latour and Woolgar 1979; Callon 1980; Latour 1987; Callon 1995). Whether they succeed does not depend on the tactical operations alone, but the scenario they represent. Meaning, whether their idea of the future and on what must be done in order to reach this state of affairs, corresponds to the scenario of the decision-makers.

However, employees may also influence the decision making process by chance, or – rather – outside the formal line of command. Decision-making involves substantial elements of ambiguity. Decisions can be understood as in the Garbage-can model (March and Olsen 1976), as an outcome of several relatively independent “streams” within an organization. In such a situation, influence depends on who is participating and which problems, solutions and choice opportunities that are considered.

Moreover, many innovations lay outside the realm of political or even formal decisions. Employers innovate by implementing small improvements to the way they are accomplishing their tasks, whether this is by making small changes to routines, implementing a new macro in their word processing software, finding a new cleaning utensil, establishing new ways of learning etc.

## Policy as horizontal and systemic co-ordination of innovating capacities

Policy can be used constructively to co-ordinate horizontally distributive elements of the science- technology- and innovation related functions of governments.

From a systemic perspective co-ordination means that the parts of the system “work together more effectively, more smoothly or more harmoniously than if no co-ordination took place” (Metcalf 1994: 278). The drive for stronger integration of policy, often implying the joint efforts of a number of ministries and other state and non-state agencies, makes governmental co-ordination and governance in general an increasingly difficult task.

In the classical Weberian bureaucracy co-ordination is ideally done through fixed relationships among positions in a hierarchy with strong central control, not being reliant on more informal interpersonal networks. At the other end of the scale, co-ordination can be conceived of as a process of voluntary co-operation among more flexibly bound individuals and organisations without a intervening central co-ordinator (Metcalf 1994: 279).

Most of the literature on co-ordination has the single organisation as a frame of reference. Having modern government in mind, it makes less sense taking on this point of view. The involvement of both public and private partners as well as quasi-governmental organisations in constituting broad-based policy calls for an interpretation of governmental co-ordination within an expanded framework. This position is reinforced by the varying degree of interdependence to be found between the parts involved. Governmental co-ordination involves co-existing “spheres” of both high and low interdependence, where differing mandates to a certain degree also determine the level of interdependence within and between these “spheres”.

Relatively early insights from network theory argue the importance of weak linkages in co-ordination of individuals and institutions not subject to hierarchies or any central co-ordinating agency. Strength of linkages being interpreted as a function of the time spent together, emotional intensity, intimacy, and the degree of reciprocity characterising the relations.

The importance of the weak linkages derives from the assumption that groups characterised only by strong ties insulate these groups from inducement external to the group. Weak linkages, i.e. personal, although not strong bonds, can function as “bridges” between the more socially cohesive groups. Thus, creating the necessary condition for co-ordinated action among these groups (Granovetter 1975). As such, these insights from network theory adheres to the loose interpretation of co-ordination mentioned above, an interpretation that seems highly relevant for co-ordination in the compounded landscape of modern government.

## Part 2: How does public sector innovation compare with innovation in the private sector?

### Incentive-structures

The lack of direct alignment of incentive structures at operational and strategic level implies the need of considering a wider concept of “production system” than in market-based activities. The required system concept must also include the formation and operationalisation of objectives, policies and regulation.

Hence, special attention will be given in this project to innovation and learning processes in both policy organisations, as ministries and policy agencies, in various regulation authorities, and in public organisations providing a range of services for the public. This is in addition to the functional system aspects, such as production related value chains, to be expected from ‘traditional’ innovation research.

A factor that seriously complicates any study of the dynamics of innovation in the public institutions considered in this project is the lack of simple and clear cut relations between the private objectives of the organisation and its owners and incentives for and rewards from innovation. The differences in these respects implies the need of caution in analysing change and innovation, they may lead to a different innovation dynamics. In particular we hypothesise that the lack of a direct link of the socially oriented, strategic and functional objectives and the operational and economic goals of the individual organisation may lead to a new category of innovations – denoted conceptual innovations.

<p>Incentives for innovation in the public sector /Individuals</p> <ul style="list-style-type: none"> <li>○ Prestige</li> <li>○ Self-fulfilment</li> <li>○ Professional recognition</li> <li>○ Potential for spin-off business</li> <li>○ Idealism</li> <li>○ Career</li> <li>○ Power</li> <li>○ Money (salary)</li> </ul>	<p>Incentives for innovation in the private sector /Individuals</p> <ul style="list-style-type: none"> <li>○ Prestige</li> <li>○ Self-fulfilment</li> <li>○ Idealism</li> <li>○ Career</li> <li>○ Power</li> <li>○ Money (salary, profits, bonuses)</li> <li>○ Job security via enhanced company competitiveness and profitability</li> <li>○ Imposed requirement</li> </ul>
<p>Incentives for innovation in the public sector /Organisations</p> <ul style="list-style-type: none"> <li>○ Problem solving (in order to reach objectives)</li> <li>○ Increased funding</li> <li>○ The propagation of a policy, idea or rationality</li> <li>○ More staff</li> <li>○ Public relations</li> </ul>	<p>Incentives for innovation in the public sector /Organisations</p> <ul style="list-style-type: none"> <li>○ Problem solving (in order to reach objectives)</li> <li>○ Profits</li> <li>○ Market-shares</li> <li>○ Pre-empt competition</li> <li>○ Growth (in size)</li> <li>○ Public relations</li> </ul>

## Public sector in flux; the introduction of market incentives

A fundamental public sector development following neo-Taylorian principles is the replacement of hierarchical contracts with market contracts in the public sector. This development is realized partly by pushing for focused and specialized units that offer a limited number of services, services that are offered in quasi-market arrangements within the public sector, with clear separation between contractor and provider, between buyer and seller (Vanebo 2001).

Thus a market-based financing of public organizations becomes a supplement or alternative to the traditional budget-financing, and in line with the creation of more economically autonomous units in public sector, more is expected of head of departments etc. with respect to economic control and reporting.

Another expression of the substitution of hierarchical contracts with market contracts is the shift from the state as the monopolist provider of public services, all public services being produced within the public sector, to the use of private providers of public services. Use of outsourcing is an example of this, but also state support of private institutions (schools, hospitals, nursing homes, etc), and the privatization of state owned companies (like railways, telephone providers and electrical plants).

Privatisation is a broad term, embracing everything from the replacement of public ownership with private ownership to the introduction of private management techniques into the public sector. Privatisation is generally understood to mean the

substitution of publicly-planned provision of services for market provision. The term privatisation is often used to describe situations in which public services are exposed to competition, although there is a difference between exposing public services to competition - contracting out - and a situation in which consumers pay for services themselves according to their own needs and willingness to pay.

If a public organisation exposes services to competition those services are still in public administration; the public sector still sets the standards, and controls the service provision. Of course this situation can be more or less favourable - according to the established supplier/controller (user/producer) relationship standard - depending on the contractual relationship and trust between the administration/user and the producer<sup>1</sup>.

The point here is simply that the term 'privatisation' can have different meanings, and that a great deal of the recent changes within – for instance – Scandinavian welfare systems are not pure forms of privatisation, but rather a process of establishing new contractual relationships, and of increased differentiation and interaction among the various parts of the public sector and private sector, and within public sector itself.

In Norway, abolition of state monopolies and de-regulation of various sectors has taken place during the 1990s. Examples of this are telecommunications, postal services, grain supply, civil aviation, wholesale of pharmaceutical products and the distribution of wine and spirits. In most of these cases corporatisation has been the organisational response, often paralleled by the establishment of regulatory bodies for the newly-created market. In other cases the regulatory bodies have their origin in the former public enterprise, or in other ministries; in some instances they were formed as new parts of existing agencies

Privatisation or the exposure to competition of formerly public activities has created a need for new regulations and new organisations to enforce them. It also calls for reformed regulation following the deregulation of certain financial processes, for instance with the increased level of establishment of public-owned corporations. There is an overall need to develop the appropriate combination of economic instruments and regulation to meet the development of an expanded and integrated economic system. A great proportion of the instruments of institutional innovation in the public sector relate to the development of different kinds of contracting, both short- and long-term<sup>2</sup>.

## New forms of collaboration with the private sector

### Public-private partnerships

An alternative, to clean-cut outsourcing, which let government retain a higher degree of control in the production, is *public/private partnerships*. Also within the area of research and development is the use of public/private partnerships getting more frequent.

“In the area of technology policy, the term ‘public/private partnership’ can be defined as any innovation-based relationship whereby public and private actors jointly

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<sup>1</sup> Economic theory based on principal-agent theory, transaction-costs theory and property rights theory and aimed at understanding how economic agents behave in organised markets.

<sup>2</sup> See Bogen & Nyen (1998), Klausen & Ståhlberg (1998)(chap. 4.)

contribute financial, research, human and infrastructure resources, either directly or in kind” (OECD 1999)

Ensuring a larger degree of public control is a benefit additional to the “official” rationale for promoting such partnerships which relates to i) the traditional correction of an undersupply in the market (of R&D), and ii) improving the efficiency of public support (for R&D) (ibid.).

Collaborations between both public and private actors and between private service providers are seen as strategies in creating better and more effective public services than what could be achieved through traditional hierarchies. The major task of modern government thus becomes to administer networks rather than hierarchies.

Efficient network administration is accomplished by the integration of interdependent providers in such a way that a continuous and consistent array of services is created. In the world of competitive contracting network administration would consist of writing, negotiation, monitoring and enforcing contracts among a number of providers (Milward and Provan 2003). There is, however, an implicit incoherency in the wish for both collaborative arrangements and competitive contracting. This relates to the assumption that competition depresses collaboration and thwarts performance. The answer would seem to be to create incentives for cooperation in the contracts. Still there are indications that efforts to create competition between service providers has led to instability in the level and quality of the services provided

### **Self-governing networks**

*Self-organizing networks* (i.e. autonomous *self-governing networks*) is not restricted to influencing policy; the act of governing is actually the co-ordination of *self-organizing networks*<sup>3</sup>. Since self organizing networks is a blend of various forms of relationships (hierarchical contracts, market contracts, relational contracts) the co-ordination and co-operation within these networks is potentially hampered by the accountability problems identified in the public choice and principal-agent literature.

Because of the interdependence between the members of the network, rules of conduct and control mechanisms are, rather than chosen and adopted by central government, a subject of negotiation. It is ‘games about rule’ rather than ‘games under rule’ (Stoker 1998). So there can also be an accountability deficit because of dissatisfaction with the network arrangements among the members of the constituent groups and a lack of channels to efficiently voice the dissatisfaction. And, as self-organizing networks is especially restrictive with respect to membership, there is an accountability problem in the exclusion of some interests groups.

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<sup>3</sup> Stoker (1998) notes that in other branches within political science studies the concept of *regimes* relates closely to the concept of *self-organizing networks*. In urban politics the concept of regime usually refers to a formation of elite actors drawn from public and private sectors, defined as “an informal yet relatively stable group with access to institutional resources that enable it to have a sustained role in making governing decisions” (Stone 1989: 4 cited in Stoker 1998:23). In international relations studies the concept of regimes is used to describe how self-governing networks are formed to manage common interest among participating states.

## Introducing a private-market vocabulary

The adoption of terms such as ‘customers’ instead of for instance ‘citizen’ to describe the users of public services is one of the main features of the new movement towards characterising the public sector in terms of the market. The term ‘customer’ indicates freedom of choice in buying services in a market and implies effective market relationships between buyers and sellers.

Adopting the ‘customer’ perspective in public administration might cause a re-think about the foundations of the public sector’s role. However, it might be argued that the use of such terms is mainly symbolic. The concept of ‘customers’ has been adopted in many areas of public administration for which it is inappropriate and does not make sense at all. When, for example, public agencies allocate funding to regional development projects, these actors cannot be described as customers. Moreover, the relationship between the public authority and the other actors is not a price-regulated relationship.

There are many examples of terms from the private sector being adopted in order to imply effectiveness and efficiency, rather than to accurately describe the relationships involved. When approaching the process of innovation in the public sector from an economic perspective, it becomes particularly important to be cautious when adopting and using concepts generally used to describe the development of market-oriented organisations. Understanding the underlying dynamics of change within this type of non-profit organisation also requires shifting focus away from traditional economic assumptions about economic behaviour and incentives. The connection between the public and private sectors in the economy can not be reduced to inter-active forms of allocation mechanisms and corrections of market failure<sup>4</sup>; this problem will be discussed later in this paper.

## Limitations to adapting the incentives-structure of the private market in the public sector

Privatization and the adaptation of an incentives-structure from the private sector do, however, have its’ limitations. Most importantly this relates to the fundamental characteristics of the democracy as a governing principle (as noted earlier).

The critics of privatization laments that the lack of state control in the production of public services contributes to the ‘hollowing out of the state’<sup>5</sup> and that the loss of the day to day administration of public services in effect also means that the civil services loses the ability to govern. The argument levelled against this critique is that it is better to “steer rather than row”. The responsibility of the public is not to *produce*, but to know *what* to contract, *who* to contract, and post production, be able to evaluate *what* is purchased (Greve and Ejersbo 2001).

The above arguments are mainly concerned with the loss of democratic control and the erosion of the democratic institution. Another set of arguments has an economically based rationale. These arguments seek to explain how pure market solutions produce an undersupply of certain services, and that the development of bureaucracies (and the public sector) in a historic context can be interpreted as a

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<sup>4</sup> For further critical arguments on the economics explaining the function of the public sector see for example Gretschnann (1991) or Majone (1991) on the policy making approach.

<sup>5</sup> Politically controlled devolution of (fringe) government authority to private initiatives (Milward and Provan 2003)

response to this market failure. A well known historical example is how the bureaucracy came in to being when the kings of medieval Europe began to claim taxes from citizens in order to finance their military aspirations. The military is still one of the publicly provided services that arguably cannot be privatized.

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# Differences between public and private sector innovation

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## Introduction

This chapter aims to build an understanding of the characteristics and the differences between public and private sector innovation. Studies of innovation dynamics in private companies and industries have proliferated over recent decades. They have given vital insights into innovation, and have played a major role in social and economic change in modern economies. The question of public sector innovation has been rising to the surface in political debates, as the capacity of health, education and social services to deal with the challenges of the twenty first century has been called into question. It is often assumed that public sector is necessarily less innovative than the private sector, lacking the spur provided by market competition (e.g. Tan, 2004), but this is an assertion that needs to be examined carefully.

By using the tools and concepts from the innovation literature we can improve our understanding of public sector innovation. However, how far are the concepts and results coming from the innovation literature applicable to public sector innovation? Since the public sector differs in important aspects from private industry, there may be a need to adapt tools and concepts, and we may reach some different conclusions concerning the dynamics of innovation.

The innovation literature is large and diverse (for a recent overview, see Fagerberg et al. 2004). One generalisation, however, is that its focus has tended to shift from historical accounts of specific innovations, and accounts of the struggles of heroic individual inventors, towards an analysis of *innovation systems*. Different varieties of innovation research use different terminologies here – “networks”, “constituencies”, “milieu”, “clusters” among other terms – but the point is clear. Innovations are created, modified, diffused and put into practice, within a structured, interconnected, and evolving social world. Formal and informal institutions shape innovation processes. These influences involve, for example: the development and use of knowledge, skills, and complementary technologies, the access to venture capital and other sources of finance, the state of markets and the perceptions of market potential and relevant marketing strategies, the legal and regulatory systems, links and interaction between various actors like for example users, suppliers and collaborating partners (e.g. Lundvall 1992; Nelson 1993; Saxenian 1994; Carlsson and Stankiewicz 1995; Edquist 1997; Braczyk, Cooke and Heidenreich 1998; Malerba 2002).

“Systems of innovation” approaches will be used in this chapter to examine innovation in public and its relation to that in the private sector. The approaches will lead us to ask such questions as: which actors and institutions frame innovative activity? What are the initiatives to innovation and where do they come from? What knowledge, competences and technology exist in various parts of the system? What is the relation between innovative organisations and their markets?

## The policy system and the innovation system

Private firms vary enormously – from small and micro-enterprises run as a family business, to huge trans-nationals governed by a complex corporate structure; from firms that undertake their own R&D and have huge allocations of resources to innovation, to “supplier-driven” companies whose main method of technological change is to adopt new products and processes generated by other firms. The innovation system of a particular sector of the market economy involves the way these different sorts of firm interrelate among themselves, and with other suppliers of relevant knowledge about technologies, organisations, and markets, to create, apply, and share knowledge of innovations.

The overall dynamic in private sector companies is generally understood to be the pursuit of profit, achieved through competition in selling of products and services to (industrial and private) customers. In practice, managers of private companies vary in how they go about pursuing profits, however. Large firms are often aggressively pitted against each other to gain the largest share of the market, and continuous growth is seen as the ultimate goal; while many small businesses are run by people who simply want to make enough money to live a comfortable and secure lifestyle. Some firms operate in turbulent markets, some are near-monopolists, some occupy relatively sheltered niches where there are few new entrants. Some sectors are technologically dynamic with high levels of innovation and strong connections to the science base: others are far more traditional. Managers are faced with different challenges, then. Their freedom of action in striving to meet these challenges can be constrained in different ways – while a small firm may have difficulties in raising funds for a new venture, for example, the senior management of a large firm may have to contend with shareholders who disagree with them about strategies.

The public sector appears on the surface to be a much more homogeneous and in many ways placid environment. Large and bureaucratic organisations appear to be long-established and more or less monopolistic suppliers of services – not to “markets”, but to society in general. Rather than pursuing profits, they are implementing policies that are usually presented as aiming to benefit society as a whole, not least by providing basic services for citizens that private market provision is liable to fail to provide efficiently or equitably.

The need for the public sector to act in more or less politically legitimate ways makes for specific constraints and incentives for the management of public services. Even more than the managers of private businesses, the senior managers of public organisations do not have overall control over their own activities; their aims are defined and changed by political will. Overall control and decision-making is to a greater or lesser extent placed outside of the individual public organisation.

In Western –style parliamentary democracies, the executive leadership in the public sector is held by politicians - democratically elected representatives in Parliamentary institutions, the Government and in regional and local bodies. The leadership is monitored closely: it is under continuous external pressure and it may be changed at the end of each election period (if not sooner, as when there is a crisis of confidence in the leadership). If the election results in a radically new political constellation, the aims of the public sector might change dramatically.

Usually, the time of elections is an outburst of innovative ideas, political creativity, and new policy. This is not to say that there is no vitality and revitalization in the policy between elections; new ideas are initiated all the time. However, an election

provides an important chance to bring forward policy ideas that can win the support of voters, enabling the proponents of these ideas to get into power and implement new policies.

Elections are not the only channels for influencing policies. In many democratic countries a number of interest groups are formally involved in the decision-making processes through “corporatist” arrangements, for example presenting evidence to enquiries, committees, consultations sitting on policy review boards and steering committees. The political power of some interest groups (especially employers, sometimes also trade unions and other groups) is institutionalised in the political system. These, and other, interest groups also use more informal contacts with policymakers and methods like lobbying, and organising demonstrations, petitions and other means of influence. For most interest groups, mass media form important channels of communication, where it is possible to display and promote their ideas and perspectives to politicians and to those who might influence them. Mass media themselves often play a role in framing the political agenda. They may give a voice to perspectives that are underrepresented in other political channels. They chart, as well as echo and articulate views of citizens about the government, for example with public opinion polls that are meant to show popular views of politicians and policies.

Decisions are shaped, then, through complex series of interactions. These can take diverse forms, depending on the policy issue concerned, and what the overall political context is; and on the actors and institutions involved, and their problems, and solutions and priorities, their resources of power and bargaining capabilities.

The state raises revenue from taxes and other means, and with this it funds public sector activity: to cover the costs of wages, communications, equipment and buildings, and so on. The national budget makes public sector activity possible, and its allocation defines the boundaries for public sector activities.

Public organisations depend on revenues that are based on political decisions rather than market performance. The link between revenues and services delivered is often obscure. Gretschnann (1990) notes that when the goals and objectives of public sector organisations are ambiguous and multiple ones, or are subject to frequent change, then will become hard to fully specify which input relates to which output. It is therefore questionable whether the incentive structures of public organisations can be viewed in purely economic terms. The organisations function under more formal legal conditions and typically need to respond to a diverse group of interests and users of public services.

Indeed, some public services seem to be in a vicious circle, in that achieving social benefits (for instance longer life expectancy) merely occasions further social demands and associated costs (e.g. care for the increasing numbers of elderly). For the private sector, the creation of new demands is a welcome market opportunity: for public services it is a political challenge.

But the content of these public sector activities is far from being fully defined in the state budget, which typically does not specify in detail how the funds allocated to different government departments and agencies are to be used. Some devolution of power has always been in place, and has been further enshrined in most Western countries in recent years in the framework known as “New Public Management” (NPM). Recognising that the central organisations have to delegate operational

activities to agencies, NPM budgetary systems require that, in exchange for money transfers to the individual public organisations, these organisations report the achievements back to the centre through defined performance indicators. Hence, the budgetary systems are directed at results rather than procedure. They may also introduce principles of competition as the way to improve standards and lower costs in the public sector – and potentially to spur innovation here too.

However, the use of performance indicators might place quite stringent demands on the public organisation. Having to meet specified goals might not leave sufficient time to pursue new directions – new goals, or really new ways of achieving old goals.

Similarly, stringent limits in the budget might boost innovation by forcing the public organisation to consider new ways to carry out the public activity. But again, a strong focus on economic efficiency does not necessarily give the best quality in the public sector. The simplest way to save economic costs might for example be to fire staff and to remove activities from the agenda.

The private sector generally features competition between different firms to supply the same markets. If we disregard the use of anticompetitive practices, we can say that firms can compete by supplying the goods or services more cheaply or with higher quality, by introducing new goods or services that may substitute for established ones or create new markets.

The public sector is a different world altogether. Public organisations are typically the primary supplier of services and are not competing in order to maximise profits. This lack of competition is widely held to mean a lack of incentives to improvement. However, the notion that the connection between a firm's behaviour and economic reward is the central dynamic of economic rationale and the development of innovation can be seen as rather simplistic. Frost and Egri (1991) consider that there is a "rational myth of innovation" that portrays organisations as goal-directed<sup>6</sup>. Although they do not address public-sector innovation as such, they do question the role of profitability as criterion for the development of innovations. There is often competition for resources among different individuals and projects *within* a firm, and the strategies that secure victory here are multifaceted – for instance, being able to affect who assesses costs and benefits, and how this is done, is rather important.

Table 1 highlights many of the main differences between public and private sector organisations that are relevant to innovation. It does so in a necessarily exaggerated way – the contrasts made are sometimes rather extreme ones – to underline the points of difference. Some private sector organisations are more like public sector ones (especially, but not only, parts of the not-for-profit sector), and some public sector organisations more like private ones (especially some semi-autonomous quasi-governmental organisations – *quangos* in the UK – or agencies that are given considerable freedom to pursue their objectives, and – of course – state owned companies). The Table does attempt, however, to capture some of the major changes that have been underway in public sector management. While not a thorough mapping of the systems of innovation in the public and private worlds, it does contain enough material on elements of these systems to demonstrate that they appear to vary considerably across the sectors. Accordingly, we would anticipate differences in the

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<sup>6</sup> Frost and Egri argue that the process of innovation is "...a multiplicative model of social dynamics, where innovation is a function of an interaction among the motivation to innovate, the strength of obstacles against innovation, and the availability of resources for overcoming such obstacles" (Frost & Egri, 1991, pp. 234).

motivation for innovation, the selection processes that shape innovations, the ways in which the innovation process is constricted and the effects that it has.

That being said, we must not underestimate the diversity of public services. Universities are not very much like military bases, for instance, and even within a sector like the health service there are immense differences between, say, the ambulance service and dental surgeries. Nor should we draw too sharp a distinction between “competitive” private markets and “bureaucratic” public hierarchies. Some public services are only one player in areas where markets also exist for private provision – e.g. education and health in many countries. There are non-market forms of competition, such as the international competition experienced in the military arena<sup>7</sup>. The military institutions are a very unusual form of public service, but all public sectors exist in a global environment, and can learn from the experience of other countries as well as that of other sectors. There is scope for selection based on what is seen to succeed and fail elsewhere – which is not completely dissimilar from the situation encountered by many firms.

Still, the role of external competition for public organisations is distinctive, since they are typically not competing for defined areas of the market or market shares. Aiming to provide products and services to all members of some specified population, the public sector does not have the same possibilities (or imperatives) to expand as do private firms.

*Table 1 Archetypal Features of Private and Public Sectors and their possible relations to the Propensity and Direction of Innovation*

	<b>Private Sector</b>	<b>Public Sector</b>
<b>Organising Principles</b>	<p>Pursuit of Profit, of Stability or of Growth of Revenues.</p> <p>– <i>Changing market conditions may require innovations to enhance perceived value for money or generate new products. Market as a selection process for innovations: business cycles create periods of relative austerity and prosperity for many firms, and can be related to investor willingness to support innovative sectors and start-ups.</i></p>	<p>Enactment of Public Policies.</p> <p>- <i>New and Changing Policies may require Innovations of many kinds Often the problems with which these policies are meant to contend are highly complex, not always well-understood, and policies may thus have contradictory effects. The political cycle as a selection process debates alternative policy directions, and opportunities to restructure public organisations.</i></p>
<b>Organisational Structures</b>	<p>Firms of many sizes, with options for new entrants.</p> <p>– <i>Large firms can have dedicated innovation budgets; new entrants</i></p>	<p>Complex system of organisations with various (and to some extent conflicting) tasks</p> <p>- <i>Many innovations have to be fitted into a massive complex of</i></p>

<sup>7</sup> Mary Kaldor’s classic *The Baroque Arsenal* argues that while military systems innovate in order to gain advantage in the next war, long periods where confrontations are few means that their innovations follow particular tracks, becoming very baroque, until they are finally tested. Disruptive innovations – new ideas about fighting wars – are liable to undermine the whole edifice.



	<i>may be forged around innovative products; different firms may experiment with innovations of different kinds.</i>	<i>organisational structures, and “rolled out” in a politically acceptable way given concerns about social equity and economic efficiency.</i>
<b>Performance Metrics</b>	<p>Return on Investment</p> <p><i>– While some innovations are hard to cost-justify (e.g. IT infrastructure), many can be quantified in terms of increased sales, profits etc.</i></p>	<p>Multiple performance indicators and targets</p> <p><i>- These often relate to streamlining organisational structures and achieving best practice in the terms decided and implemented as top-down policy. Benefits of innovations are often hard to quantify, or those achievements that are apparent are hard to value in strictly financial and budgetary terms.</i></p>
<b>Management Issues</b>	<p>Some managers have considerable autonomy, others constrained by shareholders, corporate governance, or financial stringency. Successful managers liable to be rewarded with substantial material benefits and promotion.</p> <p><i>– Variation among firms in ability to innovate and take risks in general. Managers liable to pursue innovations that they believe will be successful in meeting company objectives – and thus in furthering their own careers. One of the most substantiated results in the innovation literature is that successful innovations typically require product champions who are prepared to take risks and continue to support innovations through the difficult periods often encountered in early phases of development and/or implementation.</i></p>	<p>While there are efforts to emulate private sector management practice, managers are typically under high levels of political scrutiny. Successful managers likely to receive lower material benefits than comparable private sector managers.</p> <p><i>– Major innovations are likely to require approval of political masters – or even to be demanded and/or specified by them. The role of championing an innovation may be thrust upon a manager – though proactive managers can also promote major innovations to their political superiors, and may be able to proceed with less visible innovations with little interference. Managers motivated not only by aims of furthering their own careers through being associated with successful innovations, but also by pursuit of public service objectives.</i></p>
<b>Relations with: ~ End-Users</b>	<p>Markets may be consumer or industrial ones, and firms vary in the intimacy of their links with the end-users of their products, but typically market feedback provides the verdict on innovation.</p> <p><i>– Innovation often motivated by</i></p>	<p>End-users are the general public, traditionally seen as citizens, though recently there have been efforts to introduce market-type principles and move to see them as customers or consumers.</p> <p><i>– “Customer relations” have often</i></p>

	<p><i>need to maintain or increase market share, and one of the most substantiated results in the innovation literature relates success in innovation to understanding of end user requirements.</i></p>	<p><i>been underdeveloped, with an assumption that public servants know best about what services are required, and thus about relevant innovations. The customer side on the relationship is somewhat different from in private sector: price is not necessarily a market feedback mechanisms; the customers often pay a stipulated sum and the state the rest (often the difference in costs between various actors) The marketing strategies are different: the public sector is not an eager seller, the customer role require active information seeking citizens. The services/products “sold” has more far-reaching personal consequences in medical, health, social, educational effects etc than most of the products/services in the private sector.</i></p>
<p><b>~ Supply Chains</b></p>	<p>Most firms are parts of one or more supply chains, with larger firms tending to organise these chains.</p> <p><i>- Smaller firms may find their innovation trajectories shaped by the ways in which large players in supply chains seek to specify details of their products and production processes, their stockholding, delivery, order management and transactional procedures (e.g. use of ecommerce systems)</i></p>	<p>Public sector is typically dependent on private suppliers for much of its equipment, and is a very important market for many firms.</p> <p><i>– Scope for public procurement to impose standards and other features on suppliers; scope for suppliers to introduce innovations into the public sector (e.g. new computer equipment, pharmaceuticals).</i></p>
<p><b>~ Employees</b></p>	<p>Nature of workforce varies considerably, and relations between employees and management range from fractious to harmonious. Efforts are made in some firms to instil company loyalty and/or a customer-centric approach, but employee motivations are often mainly economic ones of securing a reasonable income.</p> <p><i>– Employees rarely consulted about technological and organisational change, though</i></p>	<p>Public sector employees are typically highly unionised (economists and social scientists in the central administration and health- and social professionals as nurses, social workers, child-care workers, teachers etc in the public services). Many are also professional workers organised through professional associations. While usual concerns about status and salary are experienced, many workers enter public service with idealistic motivations.</p> <p><i>- Workforce may be able to use</i></p>

	<p><i>they may be encouraged to make suggestions as to how to improve the company's products.</i></p>	<p><i>industrial action to oppose innovations seen as threatening quantity or quality of jobs or services. Professional workforce may bring innovation-related knowledge from their associations and networks – but are also relatively well-placed to try to adapt innovations so as to maintain professional status and working conditions. Conflicts among professionals might facilitate and restrain innovations. Workforce may seek to introduce and influence innovations in order to improve quality of public services.</i></p>
<p><b>~ Sources of Knowledge</b></p>	<p>Companies have considerable flexibility in sourcing innovation-related information from consultants, trade associations, and public sector researchers, but many smaller firms have limited resources to do so.</p> <p><i>– Much knowledge is generated privately and efforts to retain intellectual property may constrain the diffusion of certain innovations and underpinning knowledge. There is believed to be considerable variation across different sectors in terms of the extent to which systems of innovation give firms access to relevant knowledge of new technical and other developments..</i></p>	<p>Despite large resources, parts of the public sector may be constrained from using private sources of knowledge (other than those of suppliers). Public sector sources of knowledge (e.g. Universities) may be highly oriented to other parts of the public sector</p> <p><i>– The public sector is able to make use of a wide range of sources of innovation-relevant information and knowledge. Recently efforts are being made to make public sector organisations more aware of intellectual property issues: while this is intended to enhance innovation efforts, this result is by no means guaranteed.</i></p>
<p><b>Time Horizon</b></p>	<p>Short-term in many sectors, though utilities and infrastructural services may have very long horizons</p> <p><i>- Innovations typically need to pay off in the shorter term, though some firms do invest strategically in the hope of major long-term advantages.</i></p>	<p>Often long-term (this means that responsible decision-makers may have moved on by the time that results are achieved) though many decisions do have shorter horizons.</p> <p><i>- It may be difficult to assess the consequences of innovation in the short term. Major investments may need to be sustained over long periods.</i></p>

Source: (further elaborated version) based on Ian Miles (2004) – see also Tan (2004) for a less elaborate view.

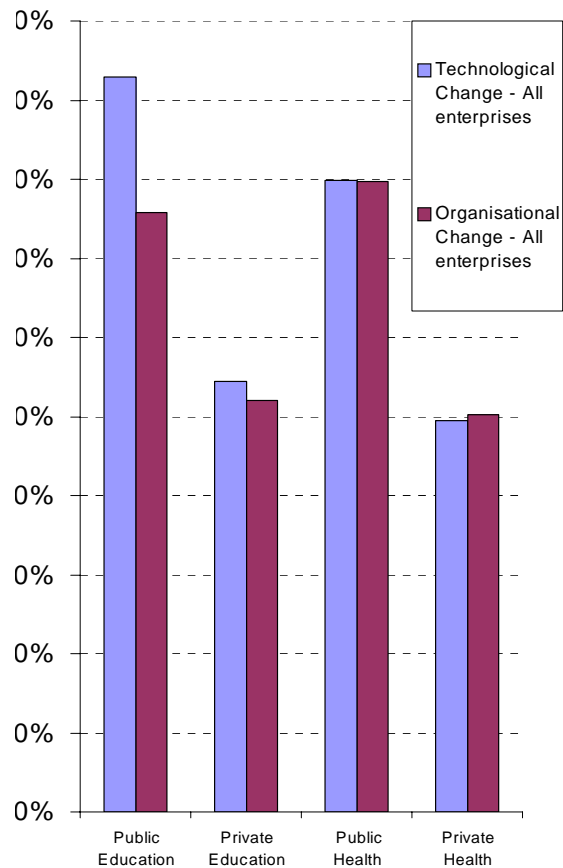
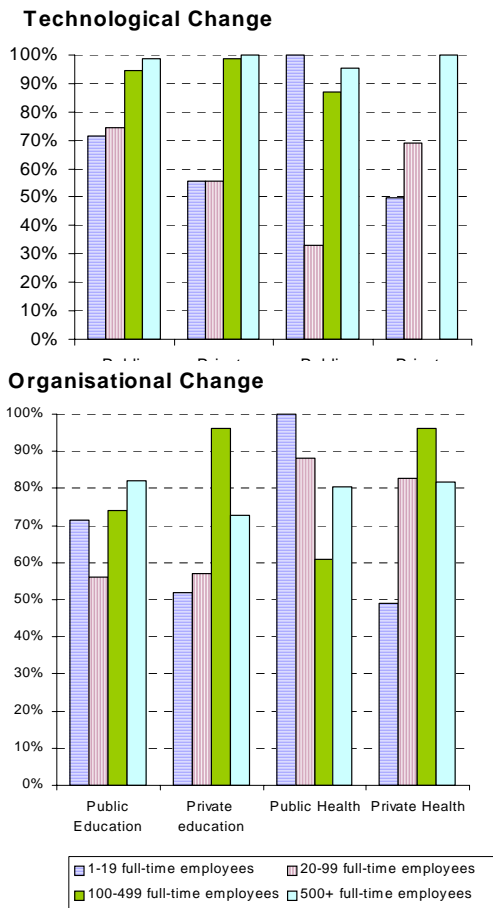
There are few studies that have explicitly contrasted innovation in public and private sectors, and fewer still that have been able to draw on systematic survey studies spanning the two sectors. In one of the rare attempts to compare innovation across public and private sector organisations, using survey methodology, Louise Earl (2002; see also Earl 2004) investigated Canadian organisations' propensities to engage in technological and organisational innovations in the period 1998-2000.

She found that around 80% of the public sector organisations had introduced significantly improved organisational structures or management techniques – twice the rate recorded by the private sector (38%). Both sectors reported higher levels of technological change, but still the public sector led in the introduction of significantly improved technologies: 85% versus 44% for the private sector. However, much of this difference reflected differences in scale of public and private organisations. Small private firms have low adoption rates. Among larger firms and organisations (at least 100 employees) the rates of introduction of technological change did not vary much across the private and public sectors.

In the public sector the rates of introduction of change was *higher* for the smallest administrations – and practically all (98%) of the smallest administrations (1-19 full-time employees) recorded some organisational change (as compared to 80% for administrations with 500+ full-time employees). Earl speculates that this may be larger organisations having more difficulty in effecting such change – and such change may be imposed from on high on the public sector.

Figure 1 portrays the more specific data from a comparison of public organisations and private firms operating in the same service areas - education and health care. Overall, the public sector institutions were more likely than the private firms to have undertaken technological and organisational change. Organisational size was again an important issue here, with little difference in adoption rates among public and private sector organisations with more than 500 employees.

**Figure 1 Canadian Public and Private Services Compared: Introduction of Technological and Organisational Changes**



Note: data not available for technological change in private health firms of 100-499 employees; warnings on data reliability not reproduced.

Source: data from Earl (2002)

## The innovation process in the public sector

There is a limited literature explicitly addressing public sector innovation *per se*, though there are huge bodies of relevant material about the management of change in various specific public services. This section of the chapter will draw on these literatures, and on PUBLIN studies, to consider how innovations are initiated and developed in the public sector, and how this may differ from the processes apparent in the private sector.

Innovation is usually conceived of in terms of producers providing goods and services in a market context that provides a commercial incentive to innovate that public institutions lack. We have already suggested that even in the private sector, it is not sufficient to portray innovation as being rationally based on the dynamics of markets. The existence of a long history of public sector innovation – just to take one example: the pioneering users of computers were almost entirely public sector bodies – is evidence enough that market competition is not the only wellspring of innovation. Earl’s Canadian data showed that in some areas, at least, public sector organisations can be more innovative than private firms. Why should public organisations innovate, when they are not challenged by competition in the market or confront a need to expand in order to survive in the market?

Two classes of reasons can be fruitfully introduced here. First, there are *political* reasons. The public sector does not face the test of competitive markets, but

politicians and political parties in Western democracies face the test of competitive electoral politics. Political support and votes are gained through being seen to perform better than opposing political actors, and the provision, delivery, and cost of public services is an important domain for competition between claims of effective (potential) performance.

Second, there are more *personal* reasons. Public sector managers and workers (and indeed, at least some politicians!) gain satisfaction – and status among their peers – from seeing their knowledge applied to achieve higher levels of service. As well as the laboratories and research departments of public organisations, and the ideas for change that are introduced by senior management (and often, too, by external consultants and suppliers of equipment and materials), there are many “bottom up” innovations introduced by professional and lower-status workers in most public services.

### **The Political Level: Politicians as Entrepreneurs**

Most political actors have many ideas of what society should be like. It might even be claimed to be the fundamental nature of political actors to have ideas of how society is best changed through policy. This is not, of course, to suggest that most of these ideas are particularly original ones.

Schumpeter (1934) related innovation to entrepreneurial activity. He described entrepreneurs as having the talent of coming up with creative ideas, and the strategic capability to carry the idea through development into the innovation. An entrepreneur may not necessarily have all the information and competence to carry out the innovation by him or herself - but should have the strategic ability to establish relations with the actors and institutions who are capable of developing the idea. Schumpeter pointed out the operation of personal, as well as economic motives: entrepreneurs often pursue the joy of creating, rather than a quest for profit. (This seems to be particularly true for engineers and others pursuing radical innovations, who often seem driven by the desire to achieve aesthetically and technically pleasing designs.) Equipped with a strong motivation, the entrepreneur is a product champion who manages to maintain the belief in the idea even during set-backs and mistakes in the development process. Hence, the entrepreneur is the driving force for the innovation-process to start up and result in a successful innovation.

Political actors might be regarded as having some of the same personal qualities as are attributed to entrepreneurs. They may be driven to try to realise a particular vision of how society should work – including, for example, notions of when and how public services should be helping people achieve their aspirations and secure their quality of life. Some politicians are concerned about state interference in everyday life, others about its failure to achieve complete equity and to abolish persistent social problems. Major innovations in public services are often championed, and sometimes originated, by politicians. E-government is a whole complex of innovations, affecting wide swathes of the public sector, that is now championed by some of the political leadership in most Western countries (and more widely). In the PUBLIN research, the case of NHS Direct – a telephone helpline for health services in the UK – was promoted by high levels of government.

Are politicians likely to promote really innovative ideas for public services? Admittedly, they will rarely have an in-depth understanding of new technological potentials, nor of management theorising. But they are often highly committed to improving social welfare or achieving particular outcomes from public services. They

may thus seek innovative solutions, consulting with various sources of policy advice. In the course of PUBLIN studies, it has been suggested that some politicians are prone to promote very radical changes in public services, since they can see the chance to make their mark – and, it is further suggested, they will probably have moved on to other fields if the particular innovation proves to have been a failure.

The ability to convince other strategic actors is central for political actors as well as for economic entrepreneurs. In innovation studies there has been much focus on the actor networks and sociotechnical constituencies required to develop and push through major innovations (the rather different traditions here are represented by, for example, on the one hand Callon 1980, 1995; Latour 1987; Latour and Woolgar 1979; and on the other by Molina). A rather similar literature exists on policy networks.

If the political entrepreneurial activity turns out to be successful, the result is often seen in the form of political plans. These are more often directed at general political goals, rather than specifying details of certain public organisations. Implementation of the details is often handed over to the institution concerned – which may not simply be a result of the need for more detailed competence on special issues. It may also be part of a strategy to involve those who work in the relevant public sector, since reforms are seen to be more successful when the relevant actors are involved in the process (Brunsson and Olsen 1993).

It is one thing to mandate a policy – it is another to see it implemented. Some commentators see implementation as at the end of a chain of processes – implementation is the carrying out of a political decision following the making of a political decision by politicians (Pressman and Wildavsky 1973; Van Meter and Van Horne 1975). This approach was labelled the “top-down” perspective, by commentators promoting a “bottom-up” view of implementation as a continuous process without a beginning or an end (Elmore 1980; Barrett and Hill 1984; Offerdal 1984, 1992), and in which the bureaucrats and the service personnel are highly influential.

In contradiction to Weber’s (1994) ideal bureaucracy, with a clear-cut dividing line between the hierarchical subordinated bureaucrats to the political leadership, the bureaucrats or civil servants play often important roles in the decision-making processes (e.g. Niskanen 1991; Jacobsen 1994; Egeberg 1995). Given the size and the heterogeneity of public sector, no politician is able to obtain deep insight into all policy areas. Politicians often specialise in one or some few policy areas, but are not able to gain the professionalism of the bureaucrats. Bureaucrats have professional education and qualification, are full-time employed and have also often lifetime careers within their specialized field of the bureaucratic system. Politicians rarely have the same background, or the opportunities to explore policy areas in such depth.

Thus, bureaucrats might both a source to innovation and hamper innovation. Their professional background and insight into the policy area might give them quite other views than the ones held by the government in power. Bureaucrats might argue that the new policy will not work, based on their own gained experience of the system, and might actively try to influence on the decision making process with their knowledge of how the policy should be best be framed. Usually, their views are of course also infiltrated with political ideologies, and their ideas and effort to change the system is also as political actors in the policy driven systems of innovation in the public sector. The reason why they are not more involved in the decision-making processes might be because their traditional role in the public system has been as mere

service providers and producers – hierarchical subordinated the political leadership and the bureaucracy.

At the same time the entrepreneurial activity might be restricted by the role expectations in the public system. Traditionally, the role of the public employees has been to be hierarchical subordinated the political leadership and the bureaucracy. The public employees have not been expected to come up with good ideas of how to change the public services, but rather to deliver the public services framed by the political actors. Thus, it seems to have been a demarcation line between those actors who believe that their role is to make new political decision and those who believe that their role is to implement political decisions. Partly, this demarcation line is institutionalized in the structure of the public sector; in the “decision-making culture” of the political actors and in the “carrying out culture” of the public employees.

It has been claimed that the public services and the bureaucracy are institutionalized in the “organizational way of doing things” (e.g. Zucker 1983; March and Olsen 1984, 1989; Powell and DiMaggio 1991; Olsen 1992), and that the organizational way of doing things – i.e. a specific way of running an activity – might in itself be a barrier to innovation.

Although institutions are the result of human activity, they are not necessarily products of conscious design. The preferred models are rather taken for granted, assuming that “actors associate certain actions with certain situations by rules of appropriateness (March and Olsen 1984: pp.741)” through socialization, educations, on-the-job learning or acquiescence to convention (Lærgreid and Olsen 1978; March and Olsen 1989; Powell and DiMaggio 1991; Olsen 1992).

Hence, even though the role of the public employees now are under some kind of change in many developed countries, the public employees will still find it hard to be innovative because their role in the public system as mere service providers and producers is institutionalised. Moreover, the institutionalised role might be hard to change because the public system still demand the production and providing of specific described public services, described and controlled through the state budget system. For that reason, it might be hard to find opportunity space from the demanded tasks to be innovative. Thus, the resources, in capital, time and manpower might restrain the entrepreneurial activity.

Incentives for change might therefore be institutionally grounded rather than political-rational. However, institutions are not static, but transformed through continual processes of interpretation and adaptation. Certain structures and processes evolve historically through selective experience and become the basis of self-organization. Institutions develop considerable robustness against changes in the environment, including explicit reform efforts. The members enter the organization with individually shaped ideas, expectations, agendas, values, interests and abilities. Members who do not agree to the institutionalized norms and preferences will often find few if any venues to voice the incongruence between personal and institutional preferences, the result being either a exit from the organization or a reevaluation of own preferences. This selection mechanism leads to a further institutionalization of existing practices.

At the same time, political processes involve substantial elements of ambiguity. Decisions can be understood as in the Garbage-can model (March and Olsen 1976), as an outcome of several relatively independent “streams” within an organization. In such situations, influence depends on who is participating and which problems,



solutions and choice opportunities that are considered. Thus, opening up for innovation to occur as bottom-up processes, meaning that the initiation to change comes from the public services, triggered by their own experiences of how the services are working and how their experiences tell them that it might work better.

However, such activity in public organisations seems to be dependent on the encouragement of learning and innovation in the organisation and of entrepreneurial spirit among the public employees. Such entrepreneurial spirit among the public employees might be slightly similar to the politician entrepreneurs:

- They may be ideologically inclined to do so, i.e. they have a world view or a rationality that makes them believe that change is necessary.
- They may be idealists or altruists. They have found work in the public sector because they “want to make a change”.
- By proposing innovations they may further their own careers. It is certainly true that organizations may oppose radical changes, but it may nevertheless appreciate “fixers” and “doers” that are able to get the leaders out of a tight spot.
- They may be intellectually curious or they may find the need for change an interesting challenge. The fact that the public sector in European countries employs a large number of academically trained personnel makes this more likely.

## An opportunity to innovate

The rationalization of the activities of the organization provides a basis for the determination of the potential range and scope of permissible innovation. The rationalization might for example have been seen to have changed with the increasing focus on quality within most service activities in the public sector. As market principles are adopted, the satisfaction of consumers becomes central to measure cost-efficiency.

A cultural shift away from rules and regulations towards a more adaptive, responsive, client-oriented culture is apparent in most public organisations today. Public administrations are developing a “service-culture”, with citizens treated as customers or clients. Perhaps this shift will involve more public employees in innovation processes?

However, competition based organisation and production and providing of services have been introduced in most developed countries by the NPM related changes in the public sector. What has the introduction of NPM meant for the facilitating and restraining of innovation in the public sector?

Clearly, the NPM related changes have transformed the role of the public sector. Attention has been drawn towards the outputs and results of public sector activity. Efficiency measures and expenditure control inspired by private sector activity has played the core elements. Profit and economic rationality has become prominent parts of the strategies in the public sector. The individual public organisations are held responsible and accountable for the achievement of certain targets. The state budgetary system acts as controlling and rewarding mechanism of the public sector activity through established performance measures. Hence, the performance based money transfer system is intended to act as strategic and operational planning guidelines.

Neo-classical economics still dominates the theoretical background to public-sector resource allocation. Market failure is an often used explanation in describing the lack of economic profit in the public sector. When approaching the process of innovation in the public sector from an economic perspective, it becomes particularly important to be cautious when adopting and using concepts generally used to describe the development of market-oriented organisations. The understanding of the underlying dynamics of change within these types of non-profit organisations requires a shift in focus away from traditional economic assumptions about economic behaviour and incentives. The connection between the public and private sectors in the economy can not be reduced to interactive forms of allocation mechanisms and corrections of market failure (Gretschman 1991; Malone 1991).

The adoption of terms such as “customer” instead of “citizen” to describe the users of public services is one of the main features of the new movement towards characterising the public sector in terms of the market. The term “customer” indicates freedom of choice in buying services in a market and implies effective market relationships between buyers and sellers.

Adopting the “customer” perspective in public administration might cause a re-examination of the foundations of the public sector. On the other hand, it might be argued that the use of such terms is mainly symbolic as a type of euphemism. The concept of “customers” has been adopted in many areas of public administration, and in many applications it might be out of place. In other situations the choice and buy situation of the customer role is more apparent. In most developed countries, the public health and social service sectors are full of examples of customer based services. Public, private and non-governmental organisations provide hospitals, kindergartens and elderly homes etc, and it is – apparently – a free choice situation.

On the other hand, the “customer”-side of the relationship is quite different from the customer-relations in the private sector. In the private market, the correlation between price and quality is considered to play the important role for the choices of the customers.

However, in the public health and social service market the end-user does not pay the whole cost, rather a stipulated part while the state pays the rest of the bill – and the differences in cost between various actors.

Moreover, the choices of public health and social services have often far more serious and far-reaching consequences than many of the customer choices in the private market. Needless to say, the choice of one special elderly home requires more considerations than buying a new sweater. Of course, some purchases of items in the ordinary private market are also more far-reaching, like for example when buying a new car. However, the public and the private market seem to be quite different in the information and marketing strategies of the products and services. In the public sector the information seem to be somewhat asymmetrical between the customer and the service provider, full information of the product is first acquired by the customer after the relationship with the service provider has been established.

Certainly, customers in the private market have not necessary all information, or the right information, of the product they are considering to buy. However, in general the seller tries to marketing the product or service by offering information. In the public sector the access to information of products and services is to a large extent handed over to the end-user. Gathering information and assessment of, for example the specialization and competence of different hospitals, take time and energy. The

central question remains therefore to be whether the customer is capable and interested in spending time and energy on doing a well-considered choice, or if the choice rather is based on more practical and random factors like for example the hospital that is most easily reached by the local bus or the hospital that is newly decorated and therefore seem to offer the best stay and so on.

However, undoubtedly, the adaptation of the private-marked vocabulary of “customer” is a part of the changed thinking of the role of the state. The customer concept might create new expectations of the role of the state. The actual choice situation between public, private and non-governmental service delivers in for example many health and social services show also that the providing of service has changed. However, the choice situation do not necessarily indicate that the customer role act as a feedback-mechanism, but rather the choices might be made according to practical and random factors.

Nonetheless, the rise of new service delivers in the public sector is an important extension of the innovation system in the public sector, opening up for new and improved ways of interacting with other organisations and knowledge bases than before. Thus, the systems of innovation in the public sector are enhanced from the earlier situation with only publicly owned providers of public services. Although, the new service delivers might not immediately change the condition for innovation in the public sector it is reasonable to presume that the new relationships might change the conditions over time.

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# Some thoughts about innovation in the public and private sector compared

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*This paper was written in 2003, as an introductory discussion on the topic.*

## Introduction

Why is it interesting and important to study the nature of public sector innovation?

The public sector has a tremendous impact on the lives of most people. It is the foundation of society and creates the framework in which we develop. The public sector acts as administrator for a considerable proportion of a society's resources. Public organisations use these resources to provide fundamental services, implement laws and regulations, and to ensure democracy and control over resources. Changes and enhancements in the performance of these tasks are clearly of great importance for most people. The public sector constitutes a system of public institutions which if properly used for the making, implementation and administration of policy is as important to a nation's development as its economic resources.

In most advanced western nations the public sector employs on average around 20% of the population and produces around 15% of the country's material goods every year<sup>8</sup>. In Norway, the public sector employed around 30% of the total working population in 1993<sup>9</sup>. The public sector also plays a particularly dominant role in the employment of highly educated people<sup>10</sup> in Norway. Parts of the public sector are among the most knowledge-intensive in the economy, and the sector plays a central role in the creation and distribution of knowledge in the society.

In studying innovation processes in the public sector it becomes important to focus not only on the role which the public sector plays for other sectors of the economy, for example in the diffusion of knowledge, but on the specific characteristics of change in the public sector.

The process of innovation - meaning qualitative changes in products, processes and organisations<sup>11</sup> - is a key element in describing and understanding economic growth and the performance of society. A study of innovation of the public sector requires an understanding of the relationship between public sector performance and the overall performance of the economy. This represents a new perspective on the role of the public sector in the economy, which sees the public sector as an integrated part of the economy, and an important element of the functional development of the economy.

Research within innovation studies has in recent years focused on describing national innovation systems (NIS), attempting to map the characteristics of learning and innovative activity in a society, and to discover the conditions in which the allocation

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<sup>8</sup> Dalpé (1992)

<sup>9</sup> Statskonsult (1993)

<sup>10</sup> In UK 1993; "The public sector accounts for some 40 per cent of GNP, some 20 per cent of the total employment and, perhaps, some 30 per cent of the professional-level employment" (McKevitt & Lawton, 1994, p. 2)

<sup>11</sup> Innovation also means social processes of change whereby new artefacts, methods or ideas penetrate a social system (Van de Ven (1989)) – we shall return to a more full discussion of the definition of innovation later in the paper.

of resources results in innovation. In relation to the public sector, these studies have mainly drawn attention to the important roles that a range of public institutions play in the creation and distribution of knowledge in society. The central concern has been to analyse the effects and impact of public institutions.

An institutional approach to describing innovation has developed from this perspective, although much of the literature is still quite new and far from standardised or theory-generating (see, for example, B. Johnson and C. Edquist). The actual process of innovation in the public sector itself seems to be left out; it is not described in either the institutional approach or the studies of NSI (except in studies of policy development or the development of technological product innovations by the state).

A system-orientated perspective to understanding the evolution of the economy, such as the NIS perspective<sup>12</sup>, must also include the distribution and implementation of produced knowledge in all public organisations and businesses, through innovation. When mapping and describing innovation activity in the economy, it seems misleading to ignore interactive processes of knowledge and innovation in a great part of the public sector itself, considering the size of the public sector and the role that it plays in the economy as a whole.

Applying the concept of innovation to describing the development of the public sector therefore becomes a central starting point. To apply private sector innovation strategies, such as IT strategies, to the public sector may not be appropriate without a clear understanding of the differences between the dynamics of change and development in the public and private sectors. For this reason it is important to identify the main differences between the public and private sectors, and acknowledge these differences when developing a framework for understanding the dynamics of innovation in the public sector.

## Public sector innovation

Innovation – the continual reconfiguration and development of the range of activities man is involved in – is an anthropological constant. Changes in and attempts to improve what we as humans do, for what purposes, and how we do them, has over the course of human history revolutionized the level and quality of our lives as human beings in this world. Through innovation the drivers of these changes have been drivers for dramatic increases in the level and scope of socio-economic welfare and quality of life.

Innovation as usually conceived is a concept of commercial innovation – and more specifically of innovation by producers providing goods and services in a market context, based on private ownership of economic resources and simple basic objective of the related actors of seeking to make the best for themselves within the constraints set by the economic framework. Though this methodologically individualistic axiom underpinning most of present innovation theories and micro-based theories of socio-economic change is a fertile starting point in its macro-level repercussions, it is our view that it is basically a limited perspective of understanding the role played by innovation as change generating processes in our societies.

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<sup>12</sup> National systems of innovation (NSI), National innovation systems (NIS)

Over the last decade the study of economic innovation and its implications for socio-economic change has been expanded to include a range of different service activities – see f.i. Boden and Miles (2001), Gallouj and Gallouj (1998), Hauknes (1998).

These developments have stressed the need of reassessing the basis for conceptualizing and analyzing innovation in a market context, far beyond service markets, for a discussion of some related issues, see Hauknes (2003). A contextual focus of innovation on service markets and in service organizations have contributed to a reappraisal of innovation concepts and the understanding of the role of innovation in generating economic change.

A fundamental insight forming the basis of this reassessment is the intimate link forged between the structure of the perceived incentive structure facing innovating actors and the nature and other characteristics of the innovation these actors generate.

The present paper is an attempt to outline an approach to the *problematique* of the relation between incentive structures and functional, operational and strategic change processes in organizations within the context of the European PUBLIN project. There is a wide range of relevant analysis of change in organizations as these – from the perspective of political science and organization theory, analysis from sociological perspectives, as well as socio-economic studies and analysis.

The PUBLIN project is based on a strong conviction that bringing together these and other perspectives on innovation and its impact on operational efficiency, on attainment of social and effectiveness objectives will form the basis of an improved understanding of significant elements of our modern societies and of how they change and contribute to the improvement of socio-economic welfare. To achieve this requires a broad and open-minded trans-disciplinary approach.

Approaching innovation in public organizations or otherwise publicly regulated activities require us to broaden the scope substantially from the economic basis that forms the basis for most of present innovation theories. ....

This paper focus the relation between the organizations' and actors' perceptions of the incentive structure they are facing at the organizational level. We are not concerned here with incentive structures at individual level. Rather we are concerned with the alignment of objectives and goals of the organization, the incentives to change and improve functional and operational characteristics of its activities or to alter the conceptualization of its goals – and with the characteristics of the change processes – of innovation.

Basically we hypothesize a dynamic relation of incentives to innovate – to endogenously generated change – to innovation characteristics within overall goals and objectives set for the organization by its regulators or owners. But these strategic constraints are not sufficient conditions to determine the functional and operational characteristics of the organization. It sets, as it were, a leeway for tactical and strategic responses within the organization not just to improve on its activities, but also to reconceptualize the characteristics of its activities.

The culturized rationalization of the activities of the organization – the development of local theories or mental maps of the why's and how's of its tasks and activities within a wide range of governance constraints, furnishes a basis for the determination of the potential range and scope of permissible innovation.



In this paper we will set out some major dimensions of issues as these, providing a ground for further work in this area over the period of the PUBLIN project. This work has two core sets of objectives – one positive and one normative. Firstly, the goal is to contribute to expanded and improved theories of innovation, applicable to a wider range of functional and governance characteristics. We believe this may contribute to our understanding of innovation theories in a market-based context as well as the understanding of innovation and change in activities provided by or on the basis of non-market relations between provider and user structured by public regulatory systems.

Secondly, it is our aim to contribute to the understanding of what generates improvement and change in public organizations and how governance systems may be organized to achieve socio-economic objectives and impacts. This will provide ground for a wider understanding of issues relating to the organizational and operational efficacy of public organizations, as well as give contributions to the relation between innovation performance on the one hand and governance structures on the other.

### Public organizations and innovation

As outlined below, there are two general approaches to the role of public institutions and organizations in innovation performance that may be discerned in the literature,

- Innovation in market-based activities and the role of the public sector in this, based on established economic and sociological theories of innovation,
- Innovation and change in political and public systems and organizations, mostly from the perspective of political sciences and organization theory

The first of these approaches does not directly confront issues relating to innovation in public organizations, but has a stronger focus on public regulation and public use of goods and services provided by the market sector. The main focus in this literature is on technological innovation, with innovation in public organizations generally seen as a reflection of the import of technological solutions provided by private firms and commercial technology providers. Broadly we may distinguish the following issues in this literature.

#### *1. The public sector as a generator of significant innovations*

This deals with the historical role played by government in the development of major technologies. A basic argument here is that public sector agencies have played a very significant role in innovation, and that there are in fact very few radical technologies which have not had some kind of public sector involvement. Prominent here are studies of the development of new technologies, particularly ICT technologies, see in particular David Mowery's work on the role of the US Federal government in the development of high-technology industries.

#### *2. What roles does the public sector play in innovation?*

Here some of the different roles which public sector agencies play in innovation are clarified. A key argument here is that the public sector is a major user of innovations, and in this capacity it plays a very important role in shaping how technologies evolve. The following dimensions of public sector activity have been discussed here:

- The public sector as a prime user for key (radical) technologies.

- The role of public procurement and the public sector as a partner in user-producer interactions
- The public sector as a supplier of infrastructures for technologies
- The public sector as an owner – public ownership and its effect on innovation
- The public sector as a regulator

### 3. *What can the public sector do which the private sector cannot do?*

Why it is that the public sector has played such a crucial role in innovation in the advanced economies? The basic argument is that the public sector has a number of advantages which permits it to undertake important innovation tasks which are closed to private firms. This section will discuss

- Risk bearing – the public sector's ability to cope with uncertainty
- Scale – the ability of the public sector to carry out very large-scale project, and its ability to mobilize large resources
- Multiple technology paths – the ability of the public sector to explore a range of possible innovation paths

### 4. *What does the public sector do?*

The public sector is not a homogenous entity – on the contrary it consists of a very heterogeneous group of agencies, often pulling in different directions and with more or less serious internal conflicts. This section will look at the public sector by agency, looking at relevant innovation across different part of the public sector. It will cover

- Military (weapons, logistics, and process technologies)
- Health (medical technologies, instrumentation, pharmaceuticals)
- Administrasjon (IT systems)
- Transport (high speed trains, civil aircraft, infrastructures)
- Education (knowledge infrastructures)
- Telecommunications (space-based communications, mobile telephony, the Internet, Minitel)
- Social Services (IT systems, care and assistive technologies)

## Overall objectives

The core objective of innovation analysis and research is to establish a consistent and general basis of understanding the main processes underlying social and economic change in modern economies. Hence, it is something of a paradox that *the innovation literature* has almost completely neglected what is a major aspect of all European economies.

All EU member states, as well as all other European countries with market-based economies, have based production of a range of social services on public provision or organisation. By the neglect of innovation in, of and through public sector activities the innovation literature misses major dimensions of the processes that shape the economic systems, as well as wider welfare generation of these countries. The PUBLIN project is designed to correct for this.

The overall aim of PUBLIN is to get a better understanding of innovation and policy learning in public sectors. It is our hypothesis that innovation, whether technological, organisational or strategic, is ubiquitous in public organisations.

Furthermore, we contend that by transforming the tools and concepts from the innovation literature in a way that reflects the governance and incentive systems facing public organisations, we can improve our understanding of public sector innovation and the interactions between public and private sector innovations substantially.

Specifically we claim that without a serious understanding of functional innovation in public sectors, any innovation theory purporting to explain innovation dynamics and associated welfare generation is genuinely incomplete.

Developing a broader understanding of innovation in non-market based production of services, and in regulating and policy making institutions goes far beyond understanding the impact of public policy, regulation and procurement on private sector innovation.

At the same time innovation in public organisations cannot be fully understood without being seen in the wider social context in which they are embedded, including the interaction with and dependencies of innovation in private, market-based organisations, and the structure of incentives for these institutions to innovate.

More specifically, any understanding and social theories of functional innovation require the need of apprehending the systemic dimensions of innovation performance. For any organisation this requires an understanding of related governance systems, of value chains or production systems and so on.

The lack of direct alignment of incentive structures at operational and strategic level implies the need of considering a wider concept of “production system” than in market-based activities. The required system concept must also include the formation and operationalisation of objectives, policies and regulation. Hence, special attention will be given in this project to innovation and learning processes in both policy organisations, as ministries and policy agencies, in various regulation authorities, and in public organisations providing a range of services for the public. This is in addition to the functional system aspects, such as production related value chains, to be expected from ‘traditional’ innovation research.

PUBLIN will examine the influence politics, management, evaluations, cultural traits and entrepreneurship has on public sector innovation and learning performance, i.e. on a range of behavioural and administrative changes in public organisations.

In doing this the project will analyse networks, knowledge flows and sources and drivers of innovations in public organisations. Moreover, PUBLIN will study how and by what means innovation is managed in public organisations.

Irrespective of whether we consider private or public organisations, innovation is generally defined as deliberate changes of behaviour at the level of agents or institutions. For market-based activities this translates into Joseph Schumpeter’s core definition of innovation as “new ways of doing things in the way of economic life” – i.e. to changes in (techno-)economic behaviour.

For other types of activities, as the ones we consider in the PUBLIN project, this definition must be adapted to reflect the different incentive and governance systems facing these organisations.

Whichever way we delineate innovation in public organisations, the PUBLIN project will primarily focus what we term *functional* innovation, corresponding broadly to product and process innovations and related organisational and strategic changes in market-based activities. Broadly these types of innovation may be delineated by considering

- *what* the innovating institution does,
- *how* it does it, and
- *why* it does it – considering its rationale and general objectives.

A factor that seriously complicates any study of the dynamics of innovation in the public institutions considered in this project is the lack of simple and clear cut relations between the private objectives of the organisation and its owners and incentives for and rewards from innovation.

The differences in these respects implies the need of caution in analysing change and innovation, they may lead to a different innovation dynamics. In particular we hypothesise that the lack of a direct link of the socially oriented, strategic and functional objectives and the operational and economic goals of the individual organisation may lead to a new category of innovations – denoted conceptual innovations below.

In mapping and analysing these dynamics we will utilise the general approaches and results of analysing innovation in and through service functions. Former EU Framework programmes have supported this line of research through several projects, providing a basis that will be utilised extensively in this project, see in particular Boden and Miles (2001), Hauknes (1998), Hauknes (2001) and the literature cited therein.

The table below, taken from this service literature, distinguishes five loci of innovation, may be taken as a departure point for outlining features and loci of innovation in publicly organised or owned activities.

**Table 1 Five loci of innovation (adapted from Hauknes 1998)**

1	<b>Product characteristics</b>	What?
<i>Innovation locus</i>	Capabilities and competencies involved in the design and production of service products	
2	<b>Production and acquisition</b>	How?
<i>Innovation locus</i>	Capabilities and competencies involved in the design and operation of production and acquisition processes	
3	<b>Distribution and delivery</b>	
<i>Innovation locus</i>	Capabilities and competencies involved in the design and operation of distribution and delivery processes	
4	<b>Administration process</b>	Why?
<i>Innovation locus</i>	Capabilities and competencies involved in the design and operation of information and coordinating processes	
5	<b>Relations management</b>	
<i>Innovation locus</i>	Business intelligence and related research. Relations to and interaction with stakeholders.	
6	<b>Strategy and objectives</b>	

<i>Innovation locus</i>	Capabilities and competencies involved in objectives and strategy formation and interpretation, knowledge management and competitive transformation of firms	
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PUBLIN will primarily focus on five types of innovation,

- innovations involving *changes in characteristics and design of service products and production processes* – including development, use and adaptation of relevant technologies,
- *delivery innovations* – involving new or altered ways of solving tasks, delivering services or otherwise interacting with clients for the purpose of supplying specific services,
- *administrative and organisational innovations* – involving new or altered ways of organising activities within the supplier organisation,
- *conceptual innovations* – in the sense of introducing new missions, new worldviews, objectives, strategies and rationales. These innovations are particularly important to institutions operating under social or public objectives as they furnish a link between the social objectives of the policy and institution and the operational and economic goals and functions of the agency in question. This type of innovation includes major parts of the impacts of the process we denote *policy learning*,
- *system interaction innovations* – new or improved ways of interacting with other organisations and knowledge bases.

*PUBLIN will address several hypotheses about innovation in public organisations and sectors:*

1. Public sector innovation requires a change in the functional problem space, or a deficient alignment of problems to be solved and the operations in place to solve them – i.e. public sector innovation is basically about specific problem solving.
2. The adopted innovative solution is often developed elsewhere and may already be in use in other organisations. Or, public sector innovation is mainly about imitation.
3. Both the choice and features of innovations are heavily influenced by internal politics and the organisation’s values, belief systems and underlying mentalities or paradigms<sup>13</sup>.
4. Explicit performance measurement is an important precursor, driver and facilitator of policy learning and public sector innovation.

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<sup>13</sup> The mentalities of policy practice have emerged at specific periods in history, in the form of relatively coherent and explicit clusters of policy positions and practical measures. They may be interpreted as “genres”, “paradigms” or as ideal models of industry. Mentalities persist, or have inertia. They continue to operate after the period during which they originated and are embedded in institutional structures and arrangements (Koch and Hauknes 2000, Hauknes and Wicken 2001). The term “mentality” will have to be an ambiguous one, given that a lot of the attitudes and opinions that follow are not necessarily the result of systematic reflection. In this respect it has a lot in common with Thomas Kuhn’s “paradigms” (Kuhn 1996), Michel Foucault’s “mentalities” (Foucault 1972) and the “life worlds” of philosophical hermeneutics (Gadamer 1989).

5. Top-down innovations, innovations initiated with changes in governance related frameworks and regulation, are often oriented towards greater efficiency in the supply of existing services, whereas innovations that expand functional and utility characteristics of supplied services or that enhance utility of individual service products tend to come about in a bottom-up manner.
6. Potential innovations depending on intergovernmental coordination for implementation require direct political intervention, instruction or a crisis to be implemented.
7. Major innovations in the public sector require an organisational environment that encourages networking, competence building and alternative thinking. A surrounding environment that support, or at least accept, behavioural change is also needed. This applies to owner organisations, political authorities and the cultural context.
8. Development of public governance systems and in public service provision does not rest on passive adaptation or realisation of specific R&D-based findings or other specific and acknowledged opportunities for new or altered operation of public service supply. Rather, innovation in public activities rest but on complex and systemic processes, depending on the available human resources, organisational mentalities of policy makers and agencies, and their detailed interaction with their wider innovation system.

## Major structural changes influencing the re-organisation of the public sector

The 1980s and 1990s saw an overall change in the economic and administrative structures of the public sector – changes often described as the ‘modernisation of the state’ – towards a better-organised public system<sup>14</sup>. The reorganisation movement has led to major institutional innovations in the public sector, which reflected a range of changes – political, technical and institutional - in the world economy and society as a whole.

On the basis of the literature surveyed for this study it is possible to identify five major processes of change influencing the re-organisation and development of public sector.

Firstly, re-organisation in the public sector can be related to symptoms of an overall **economic stagnation** (or limited economic growth) within the western world and the questioning of the justification for the welfare state in the 1980s. Governments became increasingly aware of the link between public sector performance and the overall performance of national economy. This led to initiatives to generate better economic performance in a period of low economic growth and increased social problems.

Closely connected to this first process is the overall **political and administrative shift**<sup>15</sup> that has taken place in the western economies, questioning the legitimacy and foundation of the welfare state. This shift can be seen partly as a symptom of western economies going from extensive to intensive growth in mature sectors, leading to criticisms of the expenditure and size of the public sector in most countries during the 1980s.

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<sup>14</sup> Strømsnes (1995)

<sup>15</sup> Klausen & Ståhlberg (1998), OECD (1990), OECD (1998)

Thirdly, an **increasing internationalisation and globalisation** meant further integration and led to new demands of national policy-makers and the public administration. Inter-departmental integration and co-operation are increasingly required as the economic and political systems are integrated to an ever-expanding degree.

These new demands and changes are closely connected to the fourth important development, which consists of innovations in **information and communication technologies**<sup>16</sup>. The development of information, transportation and communication technologies has facilitated new methods of administrating, controlling and producing goods and services in the public sector. This has also led to changes in the role that the public sector plays in generating growth in other sectors.

Finally it is possible to identify a shift in the structure of the economy as the services industries have come to play an increasingly important role in the productivity and employment of most western economies. These structural shifts towards today's **service economy**<sup>17</sup> are influencing changes in the public sector, with the emphasis on health care and other services increasing. As public services are sub-contracted to private firms, new market segments are developing for traditional public service activities. In some countries, the USA in particular, this process has led to major changes in the structure of the economy as a third sector of non-profit organisations has increased rapidly.

## Changes in the legitimacy of the public sector

Literature on the changes in the public sector tends to emphasise the increasing fragmentation of the public sector, arguing that the welfare state today lacks a core theoretical basis and identity, a situation which some describe as a *crisis of the welfare state*<sup>18</sup>.

Even in countries in which collective, community politics have dominated and the state bureaucracy has had a solid position, the legitimacy of the civil service has been questioned, and the need for a leaner and more effective public administration is increasingly accepted.

As the public sector has moved into mature intensive growth sectors with expenditure rising steadily, questions have been raised about the optimum size for the public sector in terms of efficiency and quality of services. There has been increasing pressure to legitimise public investments by showing intensive growth performance, along with demands for evaluations and greater focus on the priorities of the public. Greater discipline in the use of resources is required, with cost-efficiency and cost cuts – and consequently increased pressure on budgets - both central concepts in the modern reshaping of public organisations.

This has meant that the development of quality-indicators in areas that are difficult to quantify and measure has become an important new task for the public sector. The resultant indicators have become major tools for controlling public resource allocation and the government has developed several different allocation methods using these mechanisms.

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<sup>16</sup> Edquist (1996), Byrne (1997), Malone & Rockart (1994), Statskonsult (store statslige IT-projekter)

<sup>17</sup> Haukness (1998), Osborne (1998), Weisbrod (1997), Golden (1990)

<sup>18</sup> Jane (1995), Naschold (1996), Christensen & Læg Reid (1998)

Neo-classical economics still dominates the theoretical background to public-sector resource allocation. Market failure, additionality, and externalities are concepts that are often used in discussion of the economics of the public sector.

From an abstract economic perspective there are two fundamental mechanisms for the co-ordination of human interaction: the state, and the market. When, for one reason or another – externalities, economies of scale, incomplete information – the markets fail, government intervenes. The state may complement the market either by providing goods and services itself or by regulating the market. The essential problem for government is to construct allocative and regulatory institutions that provide an efficient outcome. Simple, abstract models are used to recommend - and estimate the effects of - public activity.

These models make sense only in theoretical frameworks which are based on standard, stationary assumptions, and which are far from the complex process-orientated developments of the real economy.

## Decentralisation of management authority and decision-making

In most welfare-state countries the 1970s were a period which saw a strong trend of decentralisation in public administration, with greater expansion of local government. The 1980s represented an attempt in most of these countries to implement a more active administrative policy as authorities at lower levels assumed responsibility for a number of tasks which had previously been in the domain of the state.

In the course of this decentralisation, governments proposed comprehensive reform programmes incorporating business and management ideas. Devolution and “freedom to manage” have been core concepts in reforming public sector authorities, and in the process of segregating traditional bureaucratic organisations into separate agencies.

Expenditure control is a core part of reforming the public sector as is the introduction of performance management (introduced by Peter Drucker in the 1950s); public organisations are held responsible and accountable for the achievement of certain targets.

Attention has therefore been drawn towards the outputs and results of public sector activity, as incentives have been changed with the aim of creating more market-oriented thinking within the public sector. In more concrete terms, the performance management reforms have been closely related to the reorganisation of the state budget system, tasks associated with operational planning in public administration, and reforms in the state salary system<sup>19</sup>.

## New Public Management

Whether the re-organisation of the public sector represents a full-scale reform wave commonly called New Public Management (NPM)<sup>20</sup>, or simply implementations of different elements of the NPM ideology, is an ongoing discussion in the literature<sup>21</sup>. Without getting into a discussion of the consistencies between the NPM approach and the re-organisation of the public sector, a short presentation of the principal ideas of

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<sup>19</sup> See Christensen & Lægheid (1996) for further discussion of reforms in performance management.

<sup>20</sup> From a managerial point of view, NPM seems to be a rather consistent and successful reform wave, primarily generated in OECD and some Anglo-American countries.

<sup>21</sup> Dystad (1989), Christensen & Lægheid (1998), McKeivitt & Lawton (1994) among others.



NPM is now appropriate, as a central element of the changes in the public sector during the 1980s and 1990s was the move towards adopting strategically integrated approaches to management.

One of the most significant changes was the adoption of performance management or management by objectives (MBO), as mentioned above. In Norway MBO principles were introduced to the public sector in 1988, when Statskonsult formally introduced performance management and business planning in public organisation. The new public management movement – which, according to much of the literature, has so far only had limited effects on the organisation of welfare states in Scandinavia - can be summarised in terms of these key elements of the reorganisation of public service provision<sup>22</sup>:

- Segregation of a range of functions to semi-contractual or semi-market status by establishing user-producer relationships. Changing centralised planning and procedures, through decentralisation, privatisation, subcontracting, etc.
- Introduction of competition in the supply of services between public organisations, private firms and non-profit-making organisations, allowing consumers (the public) to choose the optimal allocation of resources in terms of price and quality.
- Introduction of market controls as opposed to democratic controls, by separating the political and administrative decision-making and control from the actual producers of public services.

In the internal organisation and management of the public sector, there has been a move towards result/output orientation, by linking budgets and expenditures to output in terms of quantitative indicators. Organisations are viewed in the context of a range of low-trust principal-agent relationships (as opposed to trust-based systems), with a network of contracts, which combine (personal) incentives with the performance characteristics of the individual employees, linking motivation with economic rewards via, for instance, salary differentiation and reward systems.

As NPM to some extent can be seen as a loose collection of ideas and reform elements, often difficult to define, and there will always be a coupling of ongoing change processes with new reform ideas, one of the central concepts used in describing reform in the public sector is that of privatisation.

## The process of privatisation

Privatisation is a broad term, embracing everything from the replacement of public ownership with private ownership to the introduction of private management techniques into the public sector. Privatisation is generally understood to mean the substitution of publicly-planned provision of services for market provision. The term privatisation is often used to describe situations in which public services are exposed to competition, although there is a difference between exposing public services to competition - contracting out - and a situation in which consumers pay for services themselves according to their own needs and willingness to pay.

If a public organisation exposes services to competition those services are still in public administration; the public sector still sets the standards, and controls the service provision. Of course this situation can be more or less favourable - according to the established supplier/controller (user/producer) relationship standard - depending

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<sup>22</sup> See Klausen & Ståhlberg(1998), OECD(1990), Lane(1995), Strømsnes(1992), Christensen & Læg Reid (1998), among others.

on the contractual relationship and trust between the administration/user and the producer<sup>23</sup>.

The point here is simply that the term 'privatisation' can have different meanings, and that a great deal of the recent changes within Scandinavian welfare systems are not pure forms of privatisation, but rather a process of establishing new contractual relationships, and of increased differentiation and interaction among the various parts of the public sector and private sector, and within public sector itself.

In Norway, abolition of state monopolies and de-regulation of various sectors has taken place during the 1990s. Examples of this are telecommunications, postal services, grain supply, civil aviation, wholesale of pharmaceutical products and the distribution of wine and spirits. In most of these cases corporatisation has been the organisational response, often paralleled by the establishment of regulatory bodies for the newly-created market. In other cases the regulatory bodies have their origin in the former public enterprise, or in other ministries; in some instances they were formed as new parts of existing agencies<sup>24</sup>.

Privatisation or the exposure to competition of formerly public activities has created a need for new regulations and new organisations to enforce them. It also calls for reformed regulation following the deregulation of certain financial processes, for instance with the increased level of establishment of public-owned corporations. There is an overall need to develop the appropriate combination of economic instruments and regulation to meet the development of an expanded and integrated economic system. A great proportion of the instruments of institutional innovation in the public sector relate to the development of different kinds of contracting, both short- and long-term<sup>25</sup>.

## Towards a strategic orientation of public activities

As new economic instruments are used in the administration and production of public goods and services, a need has arisen for a more strategic perspective. As some public sector activities move from a monopolistic structure to inter-agency competition or to competition among private sub-contractors on private sector principles, strategic competition in different forms is seen in the operations of the public sector. Andersen, Belardo and Dawes (1994, pp. 340) describe this strategic orientation in terms of five distinguishing features:

- i) It is concerned with mission-critical activities.
- ii) Its time dimension is long range.
- iii) It looks outward, beyond organisational boundaries, often with a special emphasis on customers and other important stakeholders.
- iv) It seeks maximum return on investments rather than minimum economic costs.
- v) It places a high value on technological, human, and information resources.

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<sup>23</sup> Economic theory based on principal-agent theory, transaction-costs theory and property rights theory and aimed at understanding how economic agents behave in organised markets.

<sup>24</sup> See OECD (1998)

<sup>25</sup> See Bogen & Nyen (1998), Klausen & Ståhlberg (1998)(chap. 4.)

Without going into further detail about the characteristics of strategic competition strategies, it is a fact that most public organisations are in a process of adopting strategically orientated perspectives in their production areas. A great deal of literature, mainly from the United States, deals with implementation problems for public organisations adopting strategic management<sup>26</sup>.

## Quality of public services

There is an increasing focus on quality within most service activities in the public sector; as market principles are adopted, the satisfaction of consumers becomes central to measuring cost-efficiency<sup>27</sup>.

A cultural shift away from rules and regulations towards a more adaptive, responsive, client-oriented culture is apparent in most public organisations today. Public administrations are developing a 'service-culture', with citizens treated as customers or clients.

A key question and concern for the public sector today is whether the movement towards sub-contracting and the privatisation of services actually has implications for the quality of public services<sup>28</sup>. The relationship between economic efficiency and consumer satisfaction within public services is a core area of discussion. Often the discussion is based on economic models which have limited relevance when applied to public services and goods, as it can be difficult to find meaningful ways of measuring the value of public services and goods<sup>29</sup>.

## Problematic use of concepts in adapting market characteristics to the public sector

The adoption of terms such as 'customers' to describe the users of public services is one of the main features of the new movement towards characterising the public sector in terms of the market. The term 'customer' indicates freedom of choice in buying services in a market and implies effective market relationships between buyers and sellers. Adopting the 'customer' perspective in public administration might cause a re-think about the foundations of the public sector's role.

However, it might be argued that the use of such terms is mainly symbolic. The concept of 'customers' has been adopted in many areas of public administration for which it is inappropriate and does not make sense at all. When, for example, public agencies allocate funding to regional development projects, these actors cannot be described as customers. The relationship between the public authority and the other actors is not a price-regulated relationship. There are many examples of terms from the private sector being adopted in order to imply effectiveness and efficiency, rather than to accurately describe the relationships involved. When approaching the process of innovation in the public sector from an economic perspective, it becomes particularly important to be cautious when adopting and using concepts generally used to describe the development of market-oriented organisations.

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<sup>26</sup> In the article by Andersen, Belardo, Dawes several studies are mentioned on page 340 and some of the literature listed in this paper relates to the same theme.

<sup>27</sup> See Statskonsult

<sup>28</sup> Hanne Bogen from Fafo is researching quality and efficiency in the public services of Norwegian municipalities.

<sup>29</sup> See for example Kari Wærness debate in *Social Økonomen* nr. 1 1999 on efficiency in the Norwegian healthcare sector.

Understanding the underlying dynamics of change within this type of non-profit organisation also requires shifting focus away from traditional economic assumptions about economic behaviour and incentives. The connection between the public and private sectors in the economy can not be reduced to inter-active forms of allocation mechanisms and corrections of market failure<sup>30</sup>; this problem will be discussed later in this paper.

## How radical are the changes in the public sector?

Just how these quite radical structural changes, based on new ideas and concepts regarding the organisation of the public sector, have developed and spread from a more analytical perspective is difficult to say.

Many of the more technical or managerial traditions were first developed in the United States, and were later diffused to countries in Europe. Furthermore, a great deal of literature on this subject argues that the reforms in the public sector in Scandinavia are the natural effects of tendencies in the development of the state; when, for example, decentralisation of budgets and management responsibility is introduced, it creates a greater need for management development, which in turn necessitates the reorganisation of public administrations and the development of human resources and competencies.

In other countries such as England, changes have been more closely connected to new policies (for instance, Thatcherism and new liberalism). The public policy view on the recent changes in the public sector is, however, only one of many approaches to describing the development of public organisations and administration. A more interdisciplinary approach to the recent structural changes in the public sector might broaden our ways of describing the overall dynamics of change.

## Literature addressing aspects of innovation in the public sector and the differences between the public and private sectors

As noted above, literature which approaches the nature of innovation in the public sector from a techno-economic perspective is almost non-existent. A great deal of the work for this paper has therefore consisted of attempting to gain an overview of the general literature on major changes within the public sector. This literature comes from a variety of research traditions within the fields of social and political science and management studies. The research therefore represents a variety of theoretical perspectives and angles, each with different areas of emphasis.

One of our tasks has been to take a systematic overview of the different contributions. Not all approaches and theoretical angles are of interest for the purposes of this survey, and for this reason it is important to judge the relevance of the literature to an understanding the nature of innovation in the public sector. In doing so, the matrix below has been helpful in distinguishing the character of the theoretical contributions and their areas of emphasis:

	Organisation/structures	Individuals(actors)
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<sup>30</sup> For further critical arguments on the economics explaining the function of the public sector see for example Gretschnann (1991) or Majone (1991) on the policy making approach.

Behaviour	1	3
Strategy	2	4

(1. Could, for instance, relate to the techno-economic approach to explaining innovation from an evolutionary perspective (macro-level). 2. Could relate to policy generation theories affecting innovation policies (macro-level). 3. Theories that attempt to explain the patterns of innovative behaviour among individuals or groups. 4. Theories that are based on strategies for innovation, mainly from a management perspective.)

On a systematic level these different approaches all contribute to a broader understanding of recent changes in the public sector. For the purposes of this study, it is the theories which relate to the structural and organisational aspects of public sector innovation, and the behavioural changes within individual public organisations (1 & 3 in the table above) that are of most interest.

There is a wide range of literature discussing changes in public organisations from these theoretical perspectives, but very little of this literature makes any attempt to define this innovation in relation to the existing theories of innovation. Case studies analysing the diffusion of innovation in public organisations do exist, though these describe the processes of innovation from more sociological and political perspectives. These studies often concentrate on the adoption of strategic planning in public organisations.

The research of the Minnesota Innovation Research Programme by Bryson and Roering (1988) offers one very good model of how innovation in public organisations can be studied. Furthermore this article raises several approaches to the differences between privately- and publicly-managed organisations, which are also included in this presentation. Moreover, this research provides a conceptual basis for studying administrative processes of innovation. This makes the research exceptional amongst the literature of case studies on innovation in the public sector, since most studies focus on the impact of innovation and do not address the nature of the innovation process within public organisations.

The following section will survey different areas which are of relevance for addressing the nature of innovation in the public sector (see footnotes for references to the literature).

## The public sector from an economic perspective

In the literature on public sector economics, economists have highlighted several distinguishing features of the public sector which contradict the basic assumptions of the optimised market economy. This has led to some theoretical discussion centred on the issues of incomplete markets and incomplete information, public goods, externalities, increasing return to scale, and redistribution<sup>31</sup>. According to Gretschmann (1990, p.53) the generic problems of analysing public sector activities from an economic perspective can be summarised as:

- Disjunction between costs and revenues

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<sup>31</sup> See Brown & Jackson (1986), Starrett (1988) or Gretschmann (1991)

- Absence of competition
- Tenure and salary structures
- Difficulties in defining and measuring outputs
- Multiplicity of objectives and ambiguous technology
- Derived externalities
- Agency problems and asymmetry of information

For the purposes of this study some insight into the economics of the public sector is useful, but not absolutely central to approaching the nature of the public sector innovation processes. This paper will argue that the economic perspective on innovation does have some theoretical implications, an argument which we shall discuss more fully below.

### **The reform perspective on changes within public sector**

Some of the literature which approaches the public sector from this perspective has already been mentioned above, on recent changes in the public sector, as much of this literature tends to focus on recent active reforms in the public sector. This literature makes a major contribution to the understanding and analysis of processes of change and innovation in the public sector.

The literature is mainly concerned with ensuring efficient democratic control of the public sector, and therefore it evaluates reforms in the public sector from this angle. For this reason the values, interests, competencies and power structures of the public sector are highlighted in these studies<sup>32</sup>.

In general, studies of change within this area seem to be divided into those which focus on formal and structural change, and those which focus on behavioural change. The research also analyses some of the different organisational forms of public activity and administration, and provides case studies that are useful in characterising differences among the functional aspects of public organisations.

A central issue in the literature on public administration is the problem of separating management and democratic control in public organisations. Recent administrative solutions emphasising political and administrative “accountability” reflect this central problem.

Part of the literature emphasising administrative reform derives from organisational studies and theories such as new institutionalism<sup>33</sup>, which aims at an institutional analysis of organisational changes in public administration<sup>34</sup>. This perspective assumes that formal organisations act mainly according to routines and experience-based standard processes, and is closely connected to the evolutionary approach to understanding change in organisations<sup>35</sup>. According to this approach it is the routines of an organisation which shape the pattern of action and decision-making.

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<sup>32</sup> Strømsnes (1995) provides a good overview of the literature on reforms in the public sector in a Norwegian context; the research mentioned in this reference more or less constitutes the core of this research in Norway (pers.com. Tom Christensen).

<sup>33</sup> Institutions are not the same as organisations (although they can be) but are in general defined as a set of behaviours or rules.

<sup>34</sup> See March & Olsen (1993)

<sup>35</sup> See Van de Ven and Poole (1995)

A central concern of this perspective is to explain the ways in which organisational and institutional frameworks<sup>36</sup> influence decision-making processes, and the ways in which political decision-making processes and reforms develop institutions over time. Lane (1990) refers to Olsen's (1988) suggestion of five factors that are central to an understanding what institutions do and how they develop.

These are: physical structure, demographic structure, historical development, the development of personal networks, and temporal structure (decision points in time). It is questionable whether these factors fully explain the dynamics of institutions, but they are mentioned here to provide an example of the kinds of analysis undertaken by the (new) institutional approach to change in public institutions.

These factors - and the institutional approach in general - fail to differentiate between the various kinds of institutions; political, economic and social. Generally speaking, the literature focussing on institutional theory (according to S.P. Osborne there are four main areas or approaches within institutional theory) found by this study tends to highlight the details of public organisations' actions – both enabled and constrained – but does not directly address the issue of innovation capacity.

## Studies of innovation in non-profit organisations

In order to explore further the nature of innovation processes in non-competitive environments, literature on voluntary and non-profit organisations may contribute to the development of an analytical framework. The literature found on innovation in the non-profit sector tends to analyse the innovative capacity of non-profit organisations from an organisational perspective. The literature highlights in particular some of the general incentives for non-profit organisations to innovate<sup>37</sup>, some of which may be shared by organisations in the public sector.

In order to develop further our exploration and discussion of the characteristics of public sector innovation, we must now turn to the literature analysing the differences between the public and the private sector.

## Studies analysing differences between the public and private sectors

What is actually *public* about the public sector? The term “public interest” is a good example of a concept that needs to be put in context before it really becomes meaningful. In order to pinpoint research areas for the study of innovation processes in the public sector, it is important that we understand the core concepts involved in thinking about public organisations and the development of the public sector.

The literature found in our survey offers a range of examples of differences between the public and private sectors, and these will be summarised below. Parts of the literature highlight the fact that neither public administration theory nor organisational theories recognise any essential differences between public and private institutions. As much of the literature on business administration sees administration as a field outside the sphere of politics, administrative questions are not regarded as political questions<sup>38</sup>.

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<sup>36</sup> Osborne (1998) mentions the following dimensions in relation to the characteristic of organisations: *dependency* (of one organisation upon others), *specialisation* (of organisational tasks), *formalisation* (of organisational roles), *autonomy* (of organisational decision making), and *workforce integration* (of organisational tasks).

<sup>37</sup> Osborne (1998), Perri 6 (1992), Weisbrod (1997), Oster (1995), Osborne (1996)

<sup>38</sup> Heffron (1989)

However, one of the clearest characteristics of public administrations and organisations is their political connection. Distinguishing between administration and policy development in this way is clearly not useful for any analysis of the development of public organisations.

On the other hand, it is important to note that some of the literature also stresses that describing the differences between the public and private sectors does not necessarily imply any great differences between the two sectors on an empirical level. Parts of the literature on the development of the public sector state that the distinction is rather a question of normative definition (as discussed above in the section on the demarcation of the public sector). This is why much of the literature on public organisations focuses on the differences and similarities between the private and public sectors as a way of describing the characteristics of the public sector<sup>39</sup>.

Naschold (1996) summarises the public and private-sector model as follows:

<b><u>Private sector model</u></b>	<b><u>Public sector model</u></b>
Individual choice in the market	Collective choice in the polity
Demand and Price	Need for resources
Closure for private action	Openness for public action
The equity of the market	The equity for need
The search for market satisfaction	The search for justice
Customer sovereignty	Citizenship
Competition as the instrument of the market instrument of	Collective action as the the polity
Exit as the stimulus	Voice as the condition

A number of significant hypotheses, statements and facts related to defining the differences between the public and private sectors have been developed in the literature (and collated from the literature in this study), including these:

- The public sector can mobilise big resources and projects.
- The public sector is an exponent of numerous technological trajectories.
- The public sector provides a system of democracy.
- It is more difficult to identify customers in the public sector .
- There are more limitations on public-sector managers due to statutes and regulations.
- The public sector works within fixed budgets; little leeway in budget strategy.
- No clear reward for activities, and no clearly-defined bottom-lines.
- The main focus is on inputs and budgets, rather than outputs and productivity measures.
- Activities and employees are subject to extensive external forces; there are often multiple and conflicting inputs and interests.
- Public sector organisations are “mission-driven”, as opposed to profit –driven.

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<sup>39</sup> As, for instance, many evolutionary theories have based their arguments on a critical review of neo-classical economic theory, and the differences between their approaches to understanding the development of technological and economic change.



- Public sector tasks are organised on a continuous, rule-governed basis.
- Public sector organisations have multiple stakeholders who often have competing goals.
- The public sector is accountable to the public.
- Equity, accountability, openness, and correctly following procedures are rewarded more than risk-taking and innovation.
- Many ideas have to be implemented full view, or on a less experimental basis.
- There are more external, inter-agency and intra-agency linkages between public sector programmes and agencies.
- Changes in leadership and leadership interests are more frequent in the public sector.
- Most public organisations face considerable risks in long-term budget proposals.
- Uncertainty about the size and availability of future resources makes it difficult to plan strategically for the future in the public sector.
- Procurement processes – regulations around bidding processes limit the discretion of public-sector managers.

Overall, the most important differences are those outlined by Heffron (1989):

i) Environmental factors.

The fact that public organisations are less market-orientated and therefore have lower incentives for efficiency. Public organisations depend on revenues that are based on political decisions rather than market performance. Public organisations function under more formal legal conditions and respond to a more diverse group of ‘clients’ and interests.

ii) Internal structures and processes.

Public organisations often have multiple goals that are difficult to measure and that can conflict with each other. Authority is likely to be fragmented and weak in terms of quick decision-making – decisions are to some extent characterised by caution, with innovations therefore less frequent.

iii) Personnel.

The nature of public-sector goals makes it more difficult to measure the performance of employees. Public employees may have a stronger need for flexibility according to the nature of the task. Top executives in the public sector have shorter tenures, and therefore more limited time-perspectives.

While highlighting these differences it is important to note that it is difficult to identify characteristics of a ‘typical’ public or private organisation. Public organisations vary enormously according to their management goals, budgets and political status (as discussed above). Some organisations have quite specific and measurable goals (for instance, fire services), some organisations are highly innovative from a hard-component perspective (applied research institutes, aerospace-science etc.), while other organisations function within a market environment (state owned companies).

## Functional and relational differences

Some of the main differences between the structures of public and private organisations on a functional level (according to the list above) lie within the areas of budgeting, regulated procurement, performance measures, organisational patterns, and differences in customers (citizens or stakeholders).

Approaching the differences between public and private-sector activities on a micro-level (or actor-level) of analysis consists of defining the economic or social relationships between actors within the system. How can we understand and describe the relationship between actors in the public sector?

When explaining actions within public organisations the main issue often becomes one of politics and power-relations, mechanisms that are complex and difficult to include within a normative approach. In explaining actions within private organisations the main issue from an economic perspective is usually one of strategy and market position (or market power).

As discussed earlier, some public-sector activities fit very well into a market model, whereas other activities are less transferable. This means that we find in the public sector a range of different economic frameworks and interactive relationships between public organisations, which influence the dynamics and the spread of innovation. The functional and relational characteristics of public organisations can play a more or less dominant role in helping us to understand the major dynamics of change within different public organisations.

## Questioning the economic approach to innovation

Why should government or public organisations choose to innovate in the absence of competition? The overall challenge of this study is to facilitate the discussion of innovation in an environment in which (market) competition is not the norm. Studying the nature of innovation in the public sector creates a need for developing tools and concepts for use in this kind of analysis. However, such a conceptual framework is non-existent in the research tradition of economic innovation theory.

Neo-classical economic theory assumes the existence of perfect solutions, or optimal allocations of resources as a result of the market<sup>40</sup>. As public organisations do not allocate resources via traditional market interactions, we cannot assume the possibility of perfect resource allocation, perfect information or situations of equilibrium.

It could furthermore be argued from a historical perspective that state 'intervention' is itself an example of the limitations of market-oriented solutions to resource-allocation. By way of economic, financial and social policies, and through taxation, expenditure, loans and subsidies, public-sector agencies shape economic conditions in many different ways.

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<sup>40</sup> Arrow under following (1986) among others have proved conclusively that a pure markets system can bring about optimal allocation of resources only under these conditions: (1) For all economic activities there must be markets (universalism). (2) No single demander or supplier may have significant influence on prices (perfect competition). (3) All agents must have costless access to relevant information (full transparency). (4) All markets must be able to reach a competitive equilibrium. If conditions (1)-(3) are not fulfilled, the state may have to take over allocative responsibility; if (4) is not fulfilled, macroeconomics or stabilisation policies may be required.

## Incentives and economic rationality

According to economic theory, private-sector firms are assumed to intentionally behave according to economic rationality – improving performance, exploiting market opportunities, and responding to the challenges met in the selection environment, represented by the market. The connection between a firm’s behaviour and economic reward is considered to be the central dynamic of economic rationale and the development of innovation. This economic approach to understanding innovation is a product of what Frost and Egri (1991) call the “rational myth of innovation” – where organisations are seen as goal-directed, orderly enterprises<sup>41</sup>.

The economic approach to incentives, and the rationality of organisations and agents, is more often questioned when the public sector is discussed. Gretschnann (1990) writes that if the goals and objectives of public-sector organisations are not known, or if the organisations have multiple objectives, or if those objectives are frequently changed, then the production function which relates inputs to outputs will not be fully specified. If this is accepted, one might argue that there are considerable barriers to the conscious adoption of process changes within public-sector organisations.

Although Frost and Egri (1991) do not address public-sector innovation in their article, they do question profitability as criteria for the development of innovations, and furthermore ask who is making the assessment of the utility or benefits. These questions they raise could be central for developing and understanding the dynamics of change in the public sector from a theoretical perspective.

Most public organisations exist within an area of the public domain in which they build up competencies to fulfil expectations of various kinds. In a private organisation the core expectation would be to be profitable in order to survive in the market. For public organisations the picture is more complex. Success mechanisms are based on explaining how and under what conditions the interplay of various organisations might lead to a satisfactory performance in terms of programme implementation, policy decisions, resource-allocation, and effective satisfaction.

In other words survival and success for public organisations are not directly linked to specific market indicators and price-regulated interactions. It is therefore questionable whether we can view the incentive structures of public organisations in purely economic terms. An insight in the “nature of the needs” in relation to the public organisation’s specific success criteria or objectives (effective satisfaction) therefore becomes central to an understanding of the dynamics of the process of innovation in the public sector.

Some of the literature on public organisations focuses on the central role which *co-ordination*<sup>42</sup> - and the fulfilment of different objectives and concerns - plays in public organisations<sup>43</sup>. The modes of co-ordination seem to play a profound role in effective satisfaction. According to Kaufmann (1991) there are three dimensions of the co-ordination problem within the public sector: guidance, control and evaluation. The difference between co-ordination by markets and by plans is grounded in the fact that “the market mechanism links the function of guidance, control, and performance

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<sup>41</sup> Frost and Egri (1991) and Mohr (1969) argue that the process of innovation is “...a multiplicative model of social dynamics, where innovation is a function of an interaction among the motivation to innovate, the strength of obstacles against innovation, and the availability of resources for overcoming such obstacles” (Frost & Egri, 1991, pp. 234).

<sup>42</sup> In sociology, theory distinguishes between two basic forms of social co-ordination: Co-ordination by a configuration of rules (institutional co-ordination) and co-ordination by interaction (operational co-ordination)

<sup>43</sup> see Kaufmann (1991)

evaluation in the same process of price-regulated interactions among concerned actors, and that it is compatible with a high degree of autonomy of particular actors and establishes chains of actions at minimal costs.

By contrast, co-ordination by planning needs separate devices for guidance, control, and performance evaluation<sup>44</sup>. Huxham and Vangen (1996) have developed and used the terms “collaborative capabilities” and “collaborative advantage” in analysing developments in public organisations. The article argues that it is particularly important for public organisations to possess collaborative capabilities as the main task for public organisations is to get things done through their own or through other institutions. ‘Collaborative capabilities’ describe the capacity and readiness of an organisation to collaborate and succeed within a strategy.

Hence every organisation is confronted with the double tasks of maintaining their internal order and providing outputs for third parties (customers, clients, other organisations, etc.), and it could be argued that the incentives to innovate (or develop) in the public sector are less uniform than those in the private sector. Innovation in public organisations may come as a response to a variety of variables and incentives: personal satisfaction and power, maximising subsidies, budgets or output, and so on, variables that probably influence the process of innovation in private organisations also.

The central argument here is that generalisations and assumptions made on the basis of the economic dynamics of private organisations are not directly transferable to an analysis of development in the public sector. We must replace assumptions of intentional rational behaviour of agents and assume that behaviour is guided largely by norms, and that different norms apply to consumers, voters and bureaucrats. Even within the economic perspective there is a perceived need to broaden the one-dimensional picture and take behavioural, functional and structural differences into account when analysing dynamic developments and evolutionary change<sup>45</sup>.

## Defining the concept of innovation in a study of innovation in the public sector

As previously noted, the public sector is not a homogenous sector. Parts of the public sector show similarities to traditional manufacturing production systems, while other activities in the public sector would be classified as pure service activities. Most public-sector activities are a mixture of the two.

In recent studies of innovation in the different service sectors, different modes of innovation<sup>46</sup> have been identified, related to changes in some of the different sectors which make up the service sector as a whole. A similar approach to describing innovation in the public sector might be developed over time. Over time it may be possible to characterise innovation in terms of functional characteristics - such as the nature of production and products - and behavioural characteristics (the economic relationships, incentives and interactions between the actors of the public sector).

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<sup>44</sup> Kaufmann, 1991, pp. 225

<sup>45</sup> The literature found in this survey has contributed to a view of innovation from a variety of perspectives and from different research traditions – the thoughts highlighted here represent some overall questions which do not originate from any particular source.

<sup>46</sup> See Hauknes (1998)

As a starting point in addressing the nature of public-sector innovation this study, which is based on a survey of the literature, suggests a study of the differences in incentive structures between public- and private-sector organisations. This analysis should focus mainly on the incentives to exploit opportunities for change in the public sector. However, as discussed, there are problems inherent in adopting the economic approach to understanding incentives and rational economic behaviour.

In a further study it would be of little interest to define innovation merely in terms of technological innovation. A broader a more open approach is suggested. Frost and Egri (1991) and Daft (1983) point out that "...change or innovation can take place in areas of technology (new techniques for making products or services), products (modifications of existing products or development of new product lines), administration (changes in organizational structures, goal, information and other systems) or people (changes in leadership abilities, communication, problem solving skills and so forth).

Fundamental to the notion of innovation is the element of change which it initiates in the material and/or social world as part of a process of renewal which often involves the alteration of relationships and prior ways of doing things"<sup>47</sup>. This broader categorisation of innovation is worth bearing in mind when approaching innovation in the public sector. In approaching case studies of innovation processes in the public sector, an instrumental perspective on innovation is suggested. Innovation must therefore be defined as: implementation of a conscious process of change to gain certain effects or results. According to discussions of the problems of adopting an economic perspective in understanding innovation, the effect or result does not have to be directly connected to an economic out-put or have commercial relevance in traditional market terms.

An example of using different approaches to innovation in an analysis of innovation in the public sector

In an example of the inherent complexity of studying innovation processes of the public sector, Dyrstad (1989) has studied processes of administrative innovation in the Norwegian municipalities in the 1980s. The analysis is a survey of the spread of a new administrative procedures. The degree and year of implementation is the basic data of the analysis. The research is based on quantitative methods, and contains various approaches and attempts to describe the reasons why some municipalities adopted a new set of administrative procedures before others. The theoretical basis of the study originates from a variety of research perspectives and definitions of innovation. The study is therefore a good example of the difficulty in addressing and explaining processes of change within public administrations.

Dyrstad (1989) identifies five hypotheses to explain why municipalities changed their administrative structure:

- The administrative innovation was a result of **structural changes** in the municipality (the size of the municipality, industry structure, density of population).
- The administrative innovation was a result of the degree to which the municipality was confronted with internal problems of the municipality and problems in the surroundings, leading to **rational problem solving** in relation to administrative problems.

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<sup>47</sup> Frost & Egri (1991, pp. 233)

- The administrative innovation was a result of the **capacity of management and leadership** which the municipalities possessed, this capacity being measured by formal education and experience.
- The administrative innovation was a result of **political factors** such as the political party dominating the municipality, the degree of political turbulence, and the effects of political decision-making.
- The administrative innovation was a result of **processes of diffusion and imitation** of other municipalities and from the central organisation of the municipalities (NNS).

The study focuses on the statistical correlation between the implementation of the administrative innovation (time and degree of implementation) and the factors above. The quantitative methods used have certain limitations, and for this reason some of the research lacks focus. The conclusion drawn, although perhaps questionable, highlights a strong correlation between the capacity of the leaders (education, age, experience) and the adoption of the administrative innovation. Dystad's study is an example of how the process of change in public organisations can be examined from different angles and theoretical perspectives by focussing on a single process of innovation.

## Summary

This literature survey has found that literature approaching the nature of innovation in the public sector is very limited in quantity. This fact does not in any way make it a less interesting or relevant area of research. A range of literature originating from a variety of research traditions does present interesting insights into understanding some of the dynamics of change within the public sector.

However, any theoretical understanding of the characteristics of innovation processes in the public sector is at a very early state. Whether this reflects the quality of existing theories of innovation or the fact that the research area is a new one is difficult to say. Techno-economic research on innovation has focused on innovation as a market phenomenon.

Most public organisations do not function in a traditional market environment, but more of a socio-political environment. Examining innovation processes in the public sector therefore creates a need for focusing on innovation from a socio-political perspective. This requires a broader perspective and a questioning of the traditional economic approach to economic development and incentive structures for organisations and single actors<sup>48</sup>.

## Bibliography

As very little literature on innovation in the public sector exists, the literature survey has consisted of researching within range of different research traditions. A system of judging the value and relevance of the literature to the study of innovation in the public sector has been employed, with references given a value on a scale of 1-5, with 5 the most valuable and 1 somewhat far from the subject but interesting literature nonetheless. Literature which did not contribute to the writing of this paper was omitted.

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<sup>48</sup> Jensen (1998)

See also the PUBLIN report “Studies of innovation in the public sector, a literature review” PUBLIN Delivery 8.

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Bogen, H. & T. Nyen (1998). “Privatisering og konkurranseutsetting i norske kommuner”, Fafo-rapport 254. (Looks at economic and administrative reforms in six municipalities of Norway, with a focus on the processes of privatisation and contracting out services; quite case-specific – scale 3)

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