## Innovation systems and innovation policy

Response to questions for the third Loc Nis workshop by Peter Nielsen, Aalborg University

Since the broader definition of the NSI-concept includes aspects concerning interaction and coordination between several policy areas, it is important to discuss how to deal with different policy structures, processes and actors related to the different policy sectors. The problem is that policy making in the labour market, social, education, environment, science &technology and industrial sectors are path dependent, context dependent and often very difficult to coordinate. It is important which sector is responsible for the coordination function. Some policy sectors are stronger and have more political prestige at the government level than others. A few sectors have a sort of overhead function. The Ministry of Finance is one example. The ministry of Industry has experienced a rather turbulent role up through the nineties. From a tradition for liberal laissezfaire policy an offensive strategy supporting the industrial restructuring process towards a knowledge based economy was formulated in the later part of the nineties. This policy was inspired by Porter's work on the competitive advantages of nations, and it involved coordination between all policies and policy actors having to do directly or indirectly with business performance (Torfing 2000). Jacob Torfing's analysis shows how the industrial policy has moved to a more central role, promoting dynamic efficiency through future oriented and socio-economic interventions improving the framework conditions of important business areas and the diffusion of new technology. This policy renewal has in a way introduced the concept of "policy governance in networks" as an instrument in Danish politics at the national, regional and local level becoming more and more important. From the approach of top down government, with obvious division between subject and object, a new approach of governing in network, involving private-, semi-official- and official actors in the policy process was introduced at the political scene at all levels. I is a governing style promoting "negotiating" government, partly blurring the boundaries between and within the public and private sector, where even the aims of the policy becomes dynamic designed in the process (Stoker 1998). Of cause this new policy tool demands knowledge, resources and skills from its actors, but it may very well represent an important way to break down the barriers of political sectors or segments which is necessary considering the broader definition of the NSI-concept.

The more traditional procedure for policy design may be illustrated by the Labour-market reform in 1993. The policy process was initiated by the national parliament in 1991, where a commission was appointed in order to consider the structural problems of the labour market. The commission gave report one year later in 1992, just before a new government came into office. The commission

recommended changes in the Job- and Education-offer schemes and in the financing of the unemployment insurance system. The qualifications of the unemployed should be strengthened by means of individual development plans, and the organizations should finance a greater part of the unemployment benefits. These recommendations, formulated in the so-called Zeuten report, became input for a labor market reform in 1993. Together with the reports from the Social Commission and the Welfare Commission this report became the discursive foundation of the changes in the Danish model from welfare to workfare. If we add the above mentioned changes in industrial policy, the development may be characterised as going towards a "Scumpeterian workfare state" (Torfing 2000, se also Jessop 1995 for the development in Britain).

Policy measures supporting the broader definition of the NSI-concept should include a "competition policy", which put pressures on the sectors where innovation is hampered by lack of competition. It should be done in such a way that unemployment problems caused by the competition policy is prevented or solved.

Also there is a need for broadening the scope of training- and qualification policy in a way which includes what we could call a competence-approach. This means that developing and learning conditions inside firms, between individual firms and between firms and supporting institutions must be considered political. Such a "Competence policy" may promote new concepts of organizations, management practices, work environment, employment systems and interorganizational networks which in a balanced way promote learning, innovation and knowledge mobility. Considering the function of the labor market it is important to support the positive and integrative elements of the employments systems approaching from the new organization forms and hamper the negative elements. Among other things this means facilitating more continuous learning for unskilled and other groups who are unfamiliar with learning. In such a policy it is necessary to cooperate with the firms and coordinate internal learning conditions with external learning institutions. It is also evident, that such policies have to be implemented by "governance in networks".

Also the small and medium sized firms must be included in such policy measures. Our research has shown, that innovation activity is more frequent among larger firms and so are new organization forms which promote learning and knowledge development. This means innovation and learning processes as "joint ventures" in networks becomes even more relevant and important among such firms, com- pared to larger firms or groups. It also means that traditional employment systems and -personnel profiles of the small and medium sized firms may have dysfunctional elements in relation to the promotion of innovation and learning processes. Higher educated employees have proved to

be creative and efficient "liaison officers" between knowledge institutions and firms. A policy facilitating this "liaison" function in small and medium sized firms would be optimal in the present situation with increasing unemployment for young higher educated candidates in Denmark.

## Litt:

Torfing, J. (2000): Towards a Schumpeterian Workfare Postnational Regime? CARMA, AaU

Jessop, B. (1995): Towards a Schumpeterian Workfare Postnational Regime in Britain? Environment and Planning, 27 (11): 1613-26

Stoker, G. (1998): Governance as Theory: five propositions. ISSJ 155/1998