

Biotechnology Sector in the Context of National Innovation System: The Case of Norway

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Abstract : Norway, similar to many other countries, has set the focus of its policies in creating new strong and highly innovative sectors in recent years, as the oil and gas sector profitability is declining. Biotechnology sector in Norway has a great potential, especially in marine-biotech and cancer medicine. However, Norway being a periphery faces especial challenges in the path of creating internationally well-known biotech sector and an international knowledge hub. The aim of this article is to analyze the progress of the Norwegian biotechnology industry, its pathway to build up an innovation network and conduct collaborative innovation based on its initial conditions and its own advantage and disadvantages. The findings have important implications not only for politicians and academic in understanding the infrastructure of biotechnology sector in the country, but it has important lessons for other periphery countries or regions aiming in creating strong biotechnology sector and catching up with the strong internationally-recognized regions. Data and methodology: To achieve the main goal of this study, information has been collected via secondary resources such as web pages and annual reports published by the officials and mass media along with interviews were used. The data were collected with the goal to shed light on a brief history and current status of Norway biotechnology sector, as well as geographic distribution of biotech industry, followed by the role of academic and industry collaboration and public policies in Norway biotech. As knowledge is the key input in innovation, knowledge perspective of the system such as knowledge flow in the sector regarding the national and regional innovation system has been studied. Primary results: The internationalization has been an important element in development of periphery regions' innovativeness enabling them to overcome their weakness while putting more weight on the importance of regional policies. Following such findings, suggestions on policy decision and international collaboration, regarding national and regional system of innovation, has been offered as means of promoting strong innovative sector.

Keywords : biotechnology sector, knowledge-based industry, national innovation system, regional innovation system

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