

He Invented a National Innovation Economy



Prof. Bengt-Ake Lundvall – Professor of Economics in the Department of Business Studies, Aalborg University, and Special Invited Professor at the International MPA-program at Sciences Politiques, Paris. In the eighties in collaboration with Christopher Freeman Prof. Lundvall developed the idea of ‘innovation as an interactive process’ and the concept of ‘national system of innovation’.

In the 1980-s, together with Christopher Freeman, you have developed the concept of National Innovation System, a term that is widely used today and defined differently. What made you research this particular topic at first place?

Most important was the analysis of innovation process at micro-level where we found that innovation is an interactive process. For instance, we illustrated this by the interaction between producers and users of product innovation. At the more aggregate level, we found that national economies with investment in science were not necessarily innovative. Such paradoxes could be explained by the fact that innovation involves interaction and communication with feedbacks. ‘The quality of relationships’ between agents and organizations is crucial for the performance of the system. It is not sufficient to enhance effort or performance of the single elements if the interaction does not work well.

What is innovation system to you? How do you define it?

I sometimes operate with two different definitions: a core and a wider setting. The core includes the firms, their mutual interaction and their interactions with the knowledge infrastructure. The wider setting includes education and training, access to finance and the public sector, including regulations and welfare state. If you want to understand the impact on economic growth you need to take the wider

setting into account. Actually we find that labour markets and education systems are more diverse across countries than are the science systems.

You regard innovation as an interactive process. In what way is it “interactive”?

Almost no innovation comes out of individual effort, and empirical data show that it is exceptional that a firm develops a new product without some kind of interaction with suppliers, users or knowledge institutions. Within firms successful innovation depends upon close interaction between departments for production, sales and R&D.

According to the Lisbon declaration 2000 Europe was to become the most innovative and competitive region of the world with social cohesion. Today, 10 years later, what has changed?

My own opinion is that the policy developed was far from ambitious enough. The first priority should have been to lift the weakest parts of Europe (Greece, Portugal, Italy and Spain) through investments and a more rapid modernization of institutions. The current financial problems that slow down growth demonstrate that the regional inequality within Europe is its Achilles’ heel. The idea that a single market and a common currency was sufficient for economic progress was wrong. The focus on lifting R&D-efforts also reflected a too narrow interpretation of the innovation process. Modernizing education and labor markets should have been given more attention.

What are the latest changes to innovation policy in the world? What do think about the given changes?

The most recent changes are reflected in OECD’s innovation strategy and in the new European strategy EU2020. On the one hand, there is a general trend to broaden the policy to take into account organisational, institutional and demand side factors. On the other hand, the core analysis is based upon narrow economic models such as production functions, and it is assumed that the rate of ‘total productivity’ growth gives a meaningful indicator of innovation.

To your mind, what should be done to improve the innovation policy and foster innovations?

I think that there is a need in general to give more attention to the organisation of work. The involvement of employees of all categories in processes of change enhances both the capacity of firms to develop new products and processes and their capacity to absorb new technology developed elsewhere. This requires reforms in labour markets and education systems. Flexicurity in the labour market and broad and egalitarian access to education and training are factors pointing in the right direction.

What would you call the best and the worst examples of governments' innovation policies?

In Europe I think that Finland is a good case and that the UK is a rather awful one. Finland has a pragmatic approach where the public and private sector interacts and develops a common strategy, while the very negative attitude to the public sector in the UK and the bad industrial relations there hamper the development of balanced solutions.

Could you please give your opinion on innovation policies of the countries you are familiar with?

I have studied China's innovation strategy for some years. China benefits from a rather pragmatic approach, where regional experimentation is allowed and where 'good practice' is diffused through 'policy learning'.

workplace. There has been some successful transformation away from traditional manufacturing toward some high tech sectors. But especially there has been a strong growth in the service economy. I have a feeling that the UK has been more successful in developing new 'business models' in the financial sector than in implementing ICT-solutions in the real production sector.

What research and developments may assure a technological breakthrough in the nearest future? Do you think that such a breakthrough will happen?

Biotechnology is an obvious candidate. But I do not expect it to have as wide and deep impact as ICT. ICT has still a big potential for raising living standards and solve problem - a potential that has not yet been exploited. The most promising

breakthrough could come in relation to low-carbon technologies. But here a common global effort and strong national government intervention may be necessary to trigger and foster a new techno-economic trajectory. This is not different from earlier breakthroughs - it is a rule rather than exception that governments have played a major role for such breakthroughs. This last

option is especially interesting for economic transformation in countries such as Norway and Russia, where the current economy is dependent on the continued use of carbon technologies.

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Over the last couple of years I have collaborated with innovation policy makers in Sweden and Norway. I think that the Swedish innovation policy is too narrowly focused upon the transformation of academic research into innovation and that too little attention is given to the important role of work organisation in connection with absorption of innovation. Norway has recently developed a promising collaboration between trade unions and employer associations regarding a national competence strategy.

What are your thoughts on Russian innovation policy?

I think that the most important weaknesses of the Russian innovation system has to do with 'institutions' defined as norms, rules and relationships in the economy. Lack of trust and irregularities in economic life undermines the capacity of the system to learn and innovate. A strong effort to fight corruption and crime and to establish a new type of collective solidarity is a major task where government needs support from all layers of civil society. There is also a need for a change in the incentive system so that creativity is stimulated among employees as well as among entrepreneurs. Easy access to profit from financial speculation may undermine innovative efforts. Without such changes increased investments in science and technology may not be very helpful.

What are the peculiarities of the innovation system in Britain?

I have nothing original to offer here. In most innovation surveys the UK looks weak and the same is true when you look at the frequency of 'organisational learning' at the