

National Systems of Innovation. Towards a Theory of Innovation and Interactive Learning edited by Bengt-Ake Lundvall (Pinter Publishers, London, 1992) pp. xiii + 342, £45, ISBN 1-85567-063-1.

Voltaire, referring to an early supranational institution, described the Holy Roman Catholic Empire as neither Holy, nor Roman, nor an Empire. In the same spirit one might ask why national systems of innovation have emerged as an object of study in an era when globalisation and the decline of long standing economic institutions cause innovation to appear as neither national nor systematic. The contributors to this volume deal with this challenge skilfully, pointing to the system as a framework for learning and the nation state as an environment which still plays an important role in supporting and directing processes of learning.

It is significant that this book is a collective output from the IKE group of Aalborg University in Denmark and friends. The authors concede that their background in a small, culturally homogenous and socio-coherent system gives them an archetype of a nation against which to assess broader trends. They set themselves the objective of contributing to a theoretical understanding of interactive learning and innovation, taking the perspective of innovation as a process within which interactive forms of learning make a key contribution. In turn, the national environment provides what the authors term, 'idiosyncrasies' in features which are characteristic of it.

These differing features provide the basis for Part II of the book, which follows the broader discussion of NSI with specific chapters on work organisation, inter firm relations, the role of the public sector as user of innovations, the relationship between finance and innovation, and the R&D system. In each case the chapter serves to whet the appetite rather to provide a comprehensive treatment of a series of large topics.

Part III, in recognition of the limitations of national analysis, shifts the focus to the topic of the extent to which national systems of innovation are open, with contributions on export specialisation, home market theory, and an evolutionary approach to the study of economic integration. It concludes by moving from examining foreign trade to a consideration of foreign direct investment, through a historically oriented analysis of the globalisation of multinational enterprises.

The volume is concluded by a discussion of the implications for public policy in a learning society. The role of government in each dimension of learning is examined. In some ways the arguments for and against intervention in other spheres are echoed here, with the authors cautioning against a *dirigiste* approach. Rather they favour intervention which provides the institutional framework for self-organised learning and which also prompts sufficient social constraint on unbounded economic liberalism to maintain innovative capability.

Overall, this book makes an important contribution by giving substance to the NSI concept, which, like many before it, has become a policy buzzword before a common meaning is accepted. As with all edited volumes, some chapters stray from the central message, but the common institutional origin of most of the contributors, together with skilful editing and clear introductory and concluding sections, make this volume very helpful for both researchers and policymakers.

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