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Elias G. Carayannis • David F. J. Campbell

Smart Quintuple Helix Innovation Systems

How Social Ecology and Environmental
Protection are Driving Innovation,
Sustainable Development and Economic
Growth

 Springer

Elias G. Carayannis
School of Business
George Washington University
Washington, DC, USA

David F. J. Campbell
Center for Educational Management
and Higher Education Development
Department for Continuing Education
Research and Educational Management
Danube University Krems
Krems, Austria

Unit for Quality Enhancement/UQE
University for Applied Arts Vienna
Vienna, Austria

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About the Authors

Elias G. Carayannis is full professor of science, technology, innovation, and entrepreneurship; co-founder and co-director of the Global and Entrepreneurial Finance Research Institute (GEFRI); and director of research on science, technology, innovation, and entrepreneurship, European Union Research Center (EURC), at the School of Business of the George Washington University in Washington, D.C. His teaching and research activities focus on the areas of strategic government-university-industry R&D partnerships, technology road-mapping, technology transfer and commercialization, international science and technology policy, technological entrepreneurship, and regional economic development.

David F. J. Campbell is associate professor (Privatdozent) in the Department of Political Science at the University of Vienna; a faculty member at the Center for Educational Management and Higher Education Development, Department for Continuing Education Research and Educational Management, at Danube University Krems; a quality expert at the University of Applied Arts in Vienna; and a researcher (Senior Scientist) with the Alpen-Adria-University of Klagenfurt.

Abstract

The starting point for analysis is the key relationship between ecology and innovation and economic development, as it is being postulated and suggested by the principles of the Quintuple Helix innovation systems: “Within the framework of the Quintuple Helix innovation model, the natural environments of society and the economy also should be seen as drivers for knowledge production and innovation, therefore defining opportunities for the knowledge economy. ... The Quintuple Helix supports here the formation of a win-win situation between ecology, knowledge and innovation, creating synergies between economy, society, and democracy. Global warming represents an area of ecological concern, to which the Quintuple Helix innovation model can be applied with greater potential” (Carayannis, Barth and Campbell, 2012, p. 1, <http://link.springer.com/article/10.1186/2192-5372-1-2>). Recent empirical evidence suggests further that there is (by tendency) a decoupling of economic growth from a further increase of energy sector emissions: “Private-sector incentives help drive decoupling of emissions and economic growth. ... The importance of this trend cannot be understated. This ‘decoupling’ of energy sector emissions and economic growth should put to rest the argument that combatting climate change requires accepting lower growth or a lower standard of living” (Obama, 2017, p. 1, <http://science.sciencemag.org/content/early/2017/01/06/science.aam6284.full>). Finally, toward the end of analysis, key features for a program of Smart Quintuple Helix Innovation Systems are being presented for discussion.