Special Session Proposal

Complex Networks in Economics and Innovation

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Abstract

Economic convergence occurs when developing economies increase their productivity faster than developed economies. Society has a moral imperative to promote economic convergence because it is the most reliable path to lift people out of poverty and achieve decent standards of living. However, today's global and regional economies are characterized by a high degree of complexity. Thus, economic convergence is best supported by improved understanding of the ecosystem of complementary actors, knowhow, and capital comprising various economic activities. Thus, productivity may be conceptualized as an emerging property of a complex system made by simpler interacting parts. Complex systems are notoriously difficult to control but quantifying these interactions can identify the bottlenecks to growth and inform policy to bolster economic convergence. Using tools from economics, complex systems, and network science, we seek crucial insights that enable economic convergence. This special session will collect contributions using complex network analysis to model economic systems and to gain insights into economic development. Recent results on economic complexity, the principle of relatedness, and on the automation of workplace activities have shown how network analysis can uncover the pathways for innovation and economic development while highlighting potential issues.