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Functions of innovation systems: A new approach for analysing technological change

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Abstract

The central idea of this paper is that innovation systems are a very important determinant of technological change. We describe that the emergence of a new innovation system and changes in existing innovation systems co-evolve with the process of technological change. Therefore, it is necessary to create more insight in the dynamics of innovation systems. Traditional methods of innovation system analysis that mainly focus on the structure of innovation systems have proven to be insufficient. Therefore, we propose a framework that focuses on a number of processes that are highly important for well performing innovation systems. These processes are labeled as "functions of innovation systems"™. After explaining this framework and embedding it in existing literature, we propose a method for systematically mapping those processes taking place in innovation systems and resulting in technological change. This method can be characterized as a process analysis or history event analysis. Clarifying

examples are taken from the empirical field of Sustainable Technology Development.



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Keywords

Transition management; Innovation system dynamics

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