

Tracing technological opportunities, patterns of innovation and competence requirements through micro data¹

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Abstract

A key issue within the economics of technological change concerns the trade-offs between the nature and organization of innovation and the broader context wherein firms innovate. In theoretical jargon this translates into a discussion of the relationships between technological regimes and opportunities, sectoral patterns of innovation and related competences. Nonetheless, the more precise contents of these relationships remain more or less unspecified both in theoretical and empirical work. One reason is the lack of micro data that would cater to the diversity of different types of opportunities and innovations. The purpose of this paper is to identify and trace the distribution of different types of technological opportunities across sectors and industries, as well as their interrelationships with different types of innovations. The novelty of the paper is to approach the issue through descriptive and multivariate analysis of a new and unique data on innovation outputs in the context of Finnish industries. The results suggest the prevalence of both distinct and diverse sectoral patterns. Moreover different types of opportunities are associated with different types of innovations. This is taken to reflect some more fundamental differences in the nature of absorptive capabilities to absorb and adapt external knowledge.

Keywords: technological opportunities, innovations, sectoral patterns, absorptive capabilities

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