

A Cross-national Comparative Analysis of Industrial Policy and Competitive Advantage

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Abstract

While many schools of thought in economic planning agree that innovation constitutes the driving force behind the competitive performance of nations, the efficiency of its supporting industrial policy is still subject to debate. This paper applies the performance framework in competitive advantage issues associated with the data envelopment analysis (DEA) method to evaluate the relative efficiency of industrial technology investments across countries. Each country's annual research and development (R&D) expenditures are treated as input while patents and academic publications, indexed by Science Citation Index (SCI) and Engineering Index (EI), are considered as outputs. Three of the ten countries studied were the most efficient: China, Singapore and Taiwan. The latter two are members of 'the East Asian Tigers'. Further, Malmquist Index (MI) analysis indicates that the total observed countries achieved higher efficiency in 2003 compared with 2002. Technological change contributed more to the improvement of MI than did technical efficiency change.

Keyword : competitive advantage; data envelope analysis; industrial policy