

## Interrelationship between Innovation, Productivity, Growth, and Unemployment: Literature Review and Methodological Insights

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### Abstract

Innovation, productivity, growth and unemployment are all closely related economic phenomena. Innovation improves products, services and processes, thereby increasing productivity and enabling the production of more goods and services at lower cost. As the economy grows, unemployment decreases. However, in the short term, innovation can displace workers. In the long term, however, growth usually creates new industries and jobs that offset these losses. Analyzing the relationship between these economic phenomena is necessary to create an economic policy that stimulates innovation and growth while ensuring labour market stability.

A number of studies have analyzed innovation, growth, productivity and unemployment. However, it is worth noting that most of these focus primarily on total factor productivity, as well as two or three of the aforementioned phenomena, but not all four. This study analyzes labour and capital productivity. Notably, capital productivity is rarely analyzed in the scientific literature.

This study also provides methodological insights into analyzing the interrelationships between innovation, growth, productivity, and unemployment. Since the literature review revealed that innovation, productivity, growth and unemployment affect each other and are affected by many other factors, the study proposes constructing several separate models, each with control factors. The study also suggests an appropriate method of empirical analysis based on the interrelationships between the economic phenomena of interest.

