

# The Direction of Technological Changes in Labor-surplus Economy --The Study of Information and Communication Technology Manufacturing Industry in China

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## 1 目的

Recent theories and data show that the long-run trend of a mature economy grows with labor-augmenting technological change, and the factor shares in GDP is constant. This study investigates whether technological change is also bias toward labor-saving innovations in China, a developing and labor-surplus economy.

## 2 方法

This paper empirically examines the direction of technological change in the manufacturing industries of ICT and other high technologies in China. The empirical analysis adopts the seminal formulation of Kennedy (1964), Hicks-neutral technological progress (1932), Solow-neutral technological progress (1959), and Harrod-neutral technological progress (1942) theories to analyze the data of high technology manufacturing industries over the period from 1995 to 2016.

## 3 結果

The estimated results show that the long-run directions of technological changes are labor-augmenting ones, while there are capital-augmenting technological changes and factor shares changes in short-term.

## 4 結論

Technological change is bias toward labor-saving innovations in China as well. The findings suggest that the rise of labor costs drives the direction of labor-saving innovations, and the directed technical change in developing countries is essential as well.

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