

A micro-economic foundation of modelling the occupational structure of economic sectors

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In this paper we analyse changes in the occupational structure of each industry separately. We use a non-homothetic production function that takes account of capital-skill complementarities, skill-biased technological change and the interaction between labour demand and supply. We develop a new model to explain the occupational structure of economic sectors. The goals of the paper are twofold. First, to provide a micro-economic foundation for forecasting the occupational structure. The explanatory variables in the micro-economic model are the change of the production level, the investment in physical capital, the investment in research and development, and the change of the wage sum. Moreover, the past employment trend is included in the error correction mechanism of the econometric specification. Second, to improve the prediction of employment growth by occupation. Most studies on the driving forces behind the occupational upgrading only carry out empirical tests for selected sectors of industry. Furthermore, the occupational structure is often only based on the distinction between non-production and production workers. In this study we will cover the whole spectrum of occupations and sectors of industry to explain changes in the occupational structure on the Dutch labour market. The paper shows that the ex post prediction of employment shares fit very well to the Dutch data of the period between 1987 and 2002.

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