

## What can post-Keynesian input-output models tell us about social sustainability?

Topic: Classical-Keynesian input-output models

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Sustainable development is a multi-dimensional concept. According to the 'three pillars model', a distinction is made between environmental, economic, and social sustainability. Historically, most empirical models have focussed on environmental and economic aspects, while the social dimension has been somewhat marginalised. As social tensions are currently increasing in many countries, model-based studies should pay more attention to questions of social sustainability.

We argue in this paper that post-Keynesian input-output models are particularly well suited for studying certain aspects of social sustainability, notably unemployment, the distribution of income, and fiscal sustainability (i.e. public debt). From a theoretical viewpoint, our conclusion is not surprising, because the main goal of the early post-Keynesians was to understand the complex relationships between unemployment, income distribution and GDP growth. Since Keynes had highlighted the special role of government expenditure in aggregate demand, there was also a close link with fiscal policy. Moreover, post-Keynesian theory (or at least its 'Sraffian' stream) has always acknowledged the importance of structural change, leading to a preference for multisectoral input-output models over highly aggregated 'macro' models. Therefore, an empirical input-output model based on post-Keynesian theory can be a useful tool for understanding certain aspects of sustainability.

In order to illustrate this argument, we construct a post-Keynesian input-output model for the German economy and use it to analyse policy measures from a sustainability perspective. The model involves a highly disaggregated input-output structure of the German economy and a full representation of the circular flow of income between households, firms, the state and the foreign sector. In line with post-Keynesian theory, final demand consists of autonomous and induced components. In the household sector, two types of households are distinguished according to their main income source (labour or capital income). Investment is modelled as depending on capacity utilisation, giving rise to a sort of 'supermultiplier'.

The model is then used to explore the effects of two policy measures that are frequently suggested in the sustainability debate. The first is a shift from material consumption (industrial products) to immaterial consumption (services). The second is a massive investment programme in energy-saving technologies financed by the federal government. The model suggests that these policy measures do not generally improve all indicators of sustainability. In the first case, unemployment is reduced, but the income share of capital rises at the expense of labour. While the increase in employment is beneficial, the altered distribution of income may be problematic for social sustainability. Such findings provide further support for adopting a multi-dimensional approach to sustainability. Post-Keynesian input-output models can make a useful contribution to studying important aspects of social sustainability, especially those involving structural change in the distribution of consumption expenditure and income.