

Mitigating Baumol's cost disease in a stock-flow consistent framework

Topic: Recent Developments in Stock-Flow Consistent Input-Output Modelling - I

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Baumol's cost disease (or the "Baumol effect") is an economic theory explaining the price divergence between high- and low-labour productivity growth sectors (the fast and slow sector, respectively). The Baumol effect is the result of wage growth in the fast sector transferring to the slow sector where it results in higher labour costs and therefore higher prices, which raises potential problems for a post-growth economy. This paper seeks to explore whether Baumol's cost disease presents a barrier to the stability of a post-growth economy. Specifically, we explore whether policy intervention can be used to mitigate the impacts of the cost disease in a post-growth context.

In order to explore the dynamics and mutability of the cost disease effect in a post-growth context, we have developed a Stock-Flow Consistent Input-Output (SFC-IO) model FALSTAFF 2.B as presented in Jackson, Gallant and Mair (2023). The model has been partially parameterised to approximate the UK economy by Gallant (2022) using data from the UK national accounts and EU KLEMS database. The input-output component of the model, which was introduced through the authors previous work (Gallant, 2022; Jackson, Gallant and Mair, 2023), represents a novel addition to the cost disease literature.

We evaluate three potential mitigation policies, the most successful of which is a sales tax that we name the Cost Disease Tax (CDT). The CDT is a hypothetical sales tax levied on high labour productivity growth industries, the proceeds of which are used to subsidise low labour productivity growth industries. Within the conceptual modelling framework, the CDT is able to fully eliminate the cost disease effect in several different post-growth scenarios. This paper contributes to the ecological and post-Keynesian economics literatures as well as the existing body of work exploring Baumol's cost disease. The CDT is the first attempt to test the mutability of the cost disease effect and has implications for a range of sustainability challenges including: environmental taxation (Hardt et al., 2021), post-growth economics (Jackson, 2017) and pro-environmental consumption practices (Baumol et al., 2012).

Baumol, W.J. et al. (2012) *The Cost Disease: Why Computers Get Cheaper and Health Care Doesn't*. Yale University Press.

Gallant, B. N. (2022). *Working Fast and Slow: Modelling Baumol's Cost Disease for a Post-Growth Economy*. University of Surrey.

Hardt, L. et al. (2020) "Structural Change for a Post-Growth Economy: Investigating the Relationship between Embodied Energy Intensity and Labour Productivity", *Sustainability*, 12(3), p. 962. Available at: <https://doi.org/10.3390/su12030962>.

Jackson, T. (2017) *Prosperity without Growth Foundations for the Economy of Tomorrow*. 2nd edn. Oxon: Routledge.

Jackson, T., Gallant, B. and Mair, S. (2023) *Towards a model of Baumol's Cost Disease in a Post Growth Economy - developments of the FALSTAFF stock-flow consistent (SFC) model.*, CUSP Working Paper. 37. Guildford. Available at: <https://cusp.ac.uk/wp37/>