

The Rise of Public Service Employment and Welfare-Maximizing Tax Rate under Baumol's Cost Disease

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Abstract

This study investigates structural change in industries, particularly exploring the expansion of public services such as education and medical services. More specifically, it develops a three-sector growth model with manufacturing, private services, and public services, and addresses three questions: (1) Why do public services expand? (2) Does the tax burden increase as they expand? and (3) How does the expansion of public services affect economic growth? The following results are obtained.

1. The employment share of public services increases in the long run but approaches a certain level.
2. There is a tax rate that maximizes instantaneous utility, changes over time, but converges to a certain level.
3. A tax rate that maximizes government tax revenue approaches unity.
4. There is a tax rate that maximizes lifetime utility.
5. The growth rate of per capita real GDP continues to decrease or increase and approaches a certain level.
6. The tax rate is positively or negatively correlated with the growth rate of per capita real GDP.

Consequently, even if a government can control the income tax rate to maximize welfare, the optimal tax rate does not necessarily increase indefinitely. Moreover, the tax rate that maximizes lifetime utility is constant even though the productivities of all sectors continue to increase over time. The sustainability of the welfare state is not necessarily in danger under an optimal tax rate that maximizes the lifetime utility of the representative agent.

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