

Simulation of Endogenous Growth of Iran's Economy (Oniki–Uzawa approach)

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Abstract

In this study, we simulated the effect of trade on Iran's economic growth by using a combination of econometric methods and system dynamics. Through the design of a conceptual framework, an attempt has been made to expand the Ozawa (1965) -Lucas (1988) growth pattern by expanding the Oniki-Ozawa (2015) model. Entering the role of trade through trade volume and foreign investment in the model, we simulated and predicted the effect of these two factors on the trend of production of goods and knowledge production, human capital index, and innovation index for the period of 1359 to 1409 (Solar Year). We used business data from Malaysia and Turkey to analyze a shock and compare the result with Iran's data. The results show that the effect of technology resulting from trade (in the sense of foreign investment) only affects the technology function, and the growth of technology has a positive effect on the knowledge production function. In addition, trade has not a positive effect on the commodity production function. Besides, following Malaysia's trend of foreign investment to simulate Iran's situation is better working than the model of Turkey and current Iran's model. Finally, the result of forecast for economic growth for the period of 1399 to 1409 indicates a situation of economic recession. With continuing this situation and sanction, a worst situation is expected.

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