

Jorgenson (1984): The Role of Energy in Productivity Growth

- What are the disparate trends of energy intensity and productivity growth during the period studied (1920-1980) by Jorgenson (1984)?
- Jorgenson highlighted the concept of electricity-using productivity growth. What does it mean? Use it to explain to following table.

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If you would like to view the table that was on this page, please visit pg. 19 of the following article

"Energy and Economic Development: An Assessment of the State of Knowledge"
by Michael Toman and Barbora Jemelkova

- Could you explain how the fall and then rise in the real prices of energy from 1920-1980 led to decreased energy efficiency but increased productivity growth?

Kauffmann (2005): Energy and Poverty in Africa

- What contributes to the problem of energy deficits in Africa? What are the solutions suggested by the report? Do you agree with the solutions?
- Look at the graph below which posits the relationships between access to energy and economic, social and political development. How does the report conceptualize the role of energy? Do you know of examples that fit into this framework? Do you know some cases which the framework cannot capture?

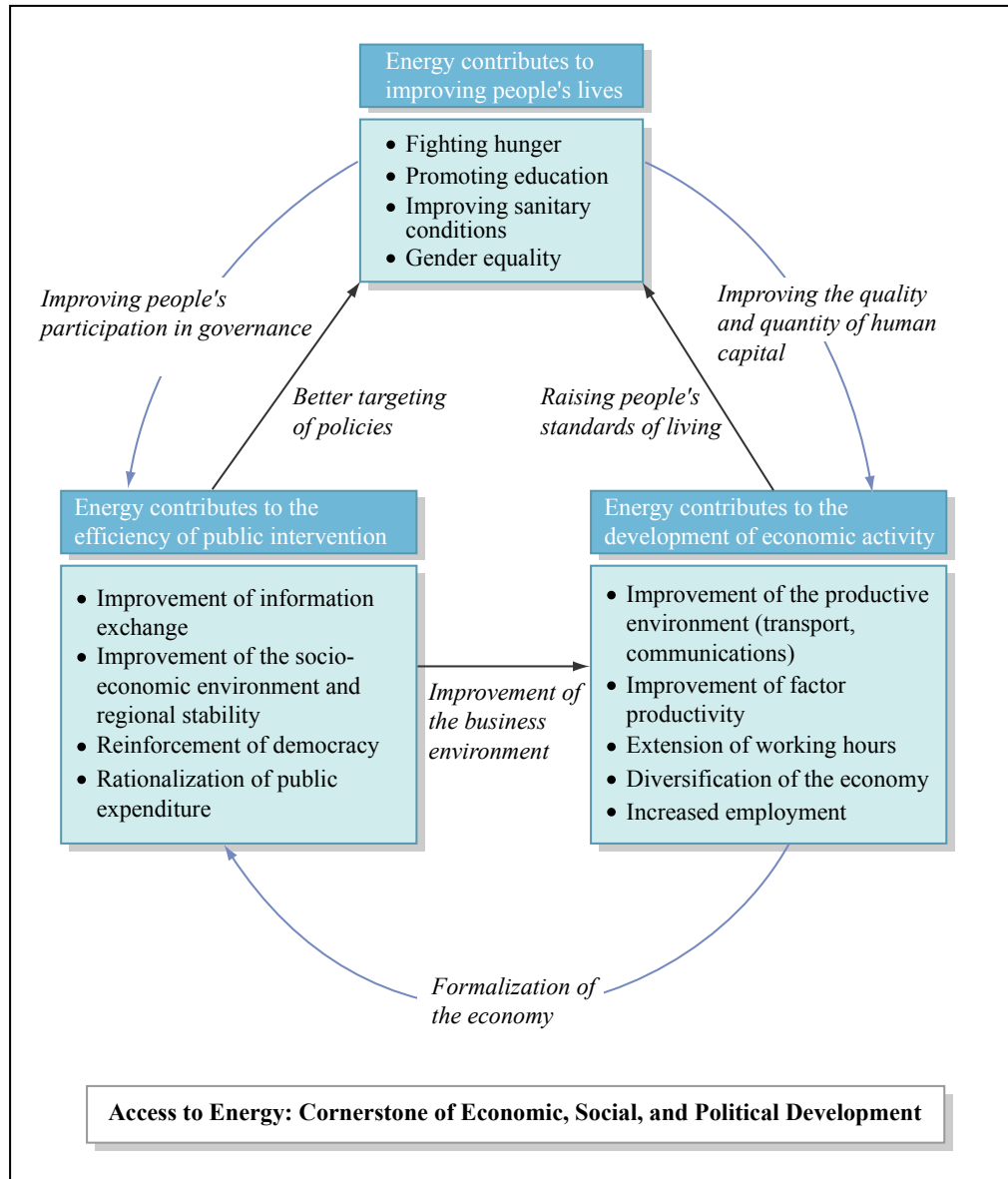


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Toman and Jemelkova (2002): Energy and Economic Development

- In general, through what channels could increased energy availability disproportionately affect economic development (i. e. having increased returns)?
- The authors noted how the link between energy and economic development differs for economies at different stages of development. Can you explain how it works in industrialized countries, and how it works in developing countries? For which type of countries the link between energy and economic development is especially crucial?
- How does increased energy service reliability contribute to productivity growth?

In General

- What are the differences and similarities across the readings in terms of framing the contribution of energy to economic growth?
- Have the readings made a convincing case for the contribution of energy to economic development? Why is it relatively hard to prove this connection? What data would be needed? What other relations need to be tested?
- Do you have other comments on these pieces and today's topic?

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