

Session 16: Energy and Economic Development

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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- 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 illustrates the relationships between access to energy and economic, social and political development. How does the report conceptualize the role of energy? Provide some examples that fit into this framework? Give one or more cases that the framework cannot capture.

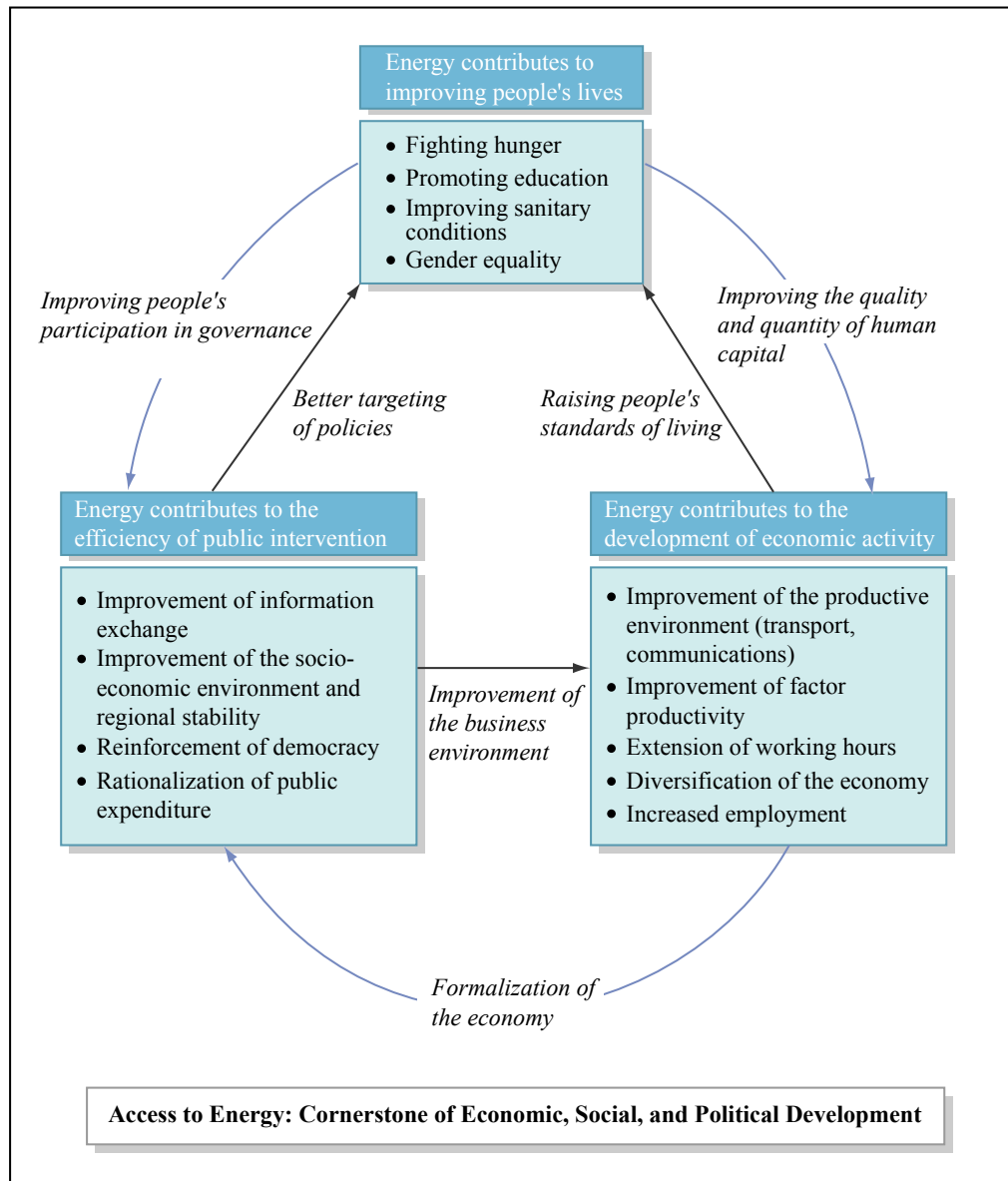


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Toman and Jemelkova (2002): Energy and Economic Development

- 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. Explain how it works in industrialized countries, and how it works in developing countries. For which type of countries is the link between energy and economic development 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 readings and today's topic?

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