ENTREPRENEURSHIP AND THE ENERGY-ECONOMIC GROWTH NEXUS (SUMMARY)

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ENVIRONMENT

SUMMARY

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Principal Topic

The availability of energy is important for the creation of new businesses (Winzer 2012). Thus, we expect a significant relationship to exist between energy usage and new business creation. We argue that the importance of this relationship differs between developed and developing countries. Furthermore, we argue that this difference may depend on whether energy is produced via large public plants (centralized energy), or via small privately owned methods (distributed energy). In fact, the reliability and costs associated with these two types of energy generation technologies have been shown to differ (Stern, 2011). Our rationale is that while in developed countries, large plants allow for the exploitation of economies of scale, in developing countries smaller scale methods deliver energy more reliably.

Method

We test our hypotheses using a random effect model, with corrections for potential heteroskedasticity and autocorrelation, on an unbalanced panel for 31 countries. The dependent variable, total early-stage entrepreneurial activity, was obtained from the Global Entrepreneurship Monitor (GEM) database. The independent variables total energy use per capita within a country, and countries’ centralized energy infrastructure – the ratio of public to self-owned electricity generation plants – were both obtained using United Nations Statistics Division data. We include controls for gross domestic product (GDP) per capita, unemployment, inflation, income taxes, the level of economic freedom, and a dummy for developing (see: Arin et al., 2014).

Results and Implications

Findings support our arguments and suggest that 1) increased energy use is negatively related to new venture creation; 2) this effect is negatively moderated by countries’ use of centralized energy generation technologies; and 3) the effect of centralized energy generation constrains new venture creation in developing economies. While the first result is consistent with the negative relationship observed between new business creation and per capita GDP, the second and third result contradict standard wisdom according to which, by exploiting economies of scale, a centralized system of energy distribution delivers energy in a more effective fashion. Indeed, our findings suggest that the promotion of more decentralized forms of energy production, as opposed to centralized energy generation technologies, may be more sustainable for both the environment and new business creation.

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