

ON IMPACTS OF ECONOMIC GROWTH

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DECLARATION

A version of the material in Chapter 3 co-authored with Professor Andrew Leigh is forthcoming in the *American Economic Journal: Macroeconomics*. My contribution to the material in Chapter 3 is 80 percent. Otherwise, this thesis is my own work.

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ABSTRACT

This thesis presents four papers on impacts of economic growth. The results indicate that faster economic growth improves the short-run political survival prospects of national leaders in both democracies and autocracies, and reduces the short-run likelihood of democratic change. Results also indicate that long-run economic growth sees countries climb an “electricity ladder”, substituting away from hydroelectricity and oil-fired electricity and toward electricity generated using coal and natural gas, and finally to nuclear power and modern renewables such as wind power. The extent to which countries climb the electricity ladder as they develop is a function of indigenous energy resources: countries with large endowments of hydro potential or fossil fuels are less likely to adopt nuclear power and modern renewables than otherwise similar countries. Countries that climb to the upper rungs of the electricity ladder are far more likely to experience environmental Kuznets curve-type downturns in carbon dioxide emissions. The results have important implications for actors who wish to encourage political change, and for climate change mitigation action.

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LIST OF ABBREVIATIONS

C	Celsius
CDIAC	Carbon Dioxide Information Analysis Center
CIRI	Cingranelli-Richards
CO ₂	Carbon dioxide
DRI	Development Research Institute
EIA	Energy Information Administration
EKC	Environmental Kuznets curve
F1	Fuller 1
GDI	Gross domestic income
GDP	Gross domestic product
I\$	International dollars
IEA	International Energy Agency
IFS	International Financial Statistics
IV	Instrumental variable
LPM	Linear probability model
MWh	Megawatt hours
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary least squares
OPEC	Organisation of the Petroleum Exporting Countries
PhD	Doctor of Philosophy
PPP	Purchasing power parity
REGTRANS	Regime transition variable
St. dv.	Standard deviation
t	Tonnes
tt	Thousand tonnes
ttoe	Thousand tonnes of oil equivalent
US	United States