
Technology Diffusion and the International System

Abstract

Does world politics affect the diffusion of technology? States overwhelmingly rely on technology invented abroad, and their differential intensity of technology use accounts for much of their differences in economic development. Some international relations scholarship suggests that the international system make states adopt new technology, as they seek to avoid vulnerability to attack or coercion by more developed neighbors. We develop these claims and examine them systematically by considering states' adoption of technology over the past 200 years. The structure of the international system affects the level of competition among states which in turn affects leaders' willingness to enact policies that speed technology adoption. We find that countries adopted new technologies faster when the international system was less concentrated and accelerated their adoption when system-changing events diffused power. A more competitive international system may be an important incentive for technological change, and an important contributing factor to global "technology waves."

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