

# The Effect of Infant Industry Protection on Technology Diffusion and Industrial Development

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## Abstract

It is now well-known that even firms that compete directly with one another cooperate with one another by sharing technical know-how (Saxenian, 1994; Morosini, 2004). In early stages of industrial development incentives to do so can be particularly strong (Chen and Puttitanun, 2005; Braguinsky and Rose, 2009). Since technological diffusion hastens industrial development and sharing technical know-how hastens technological diffusion, an important policy question is whether incentives to share technical know-how might be affected by infant industry protection. We present a dynamic model of industrial development that links industry protection from foreign competition to the rate of technology diffusion within a given infant industry. Our model suggests that infant industry protection substantially alters the industrial life-cycle. We show that innovating firms in an unprotected industry will switch from sharing to concealing technical know-how from other firms in the local industry only after the industry becomes large relative to the world market (Braguinsky, Gabdrakhmanov, and Ohyama, 2007). Under protection from foreign competition, however, the concealment of technical know-how begins much earlier in the process of industrial development. It follows that protectionism is likely to backfire especially in those industries in which new technologies constantly change production methods. In such industries especially, a policy meant to spur industrial development actually risks thwarting it, producing industries that never fully realizes their potential and that remain unable to compete in the world market without protection from foreign competition *ad infinitum*.