

# Clusters, Agglomeration, and Economic Development Potential: Empirical Evidence Based on the Advent of Slab Casting by U.S. Steel Minimills

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*Ten new steel plants were constructed in the United States from 1989 to 2001, each taking advantage of new steel slab casting technologies that gave scrap-based minimills access to the flat-products market. This market had been served previously exclusively by ore-based integrated mills. Some of the new minimills were built in established steel industry agglomerations. Others were built in greenfield locations with little or no prior steelmaking activity. This research, based on direct observation and plant visits, brings new evidence to bear on the nature and importance of agglomeration economies associated with steel production by analyzing industry clusters related to the advent of slab casting by steel minimills. The authors find that industry clusters can play an important role in the process of market entry; however, certain product and firm characteristics can shape the nature of industry agglomerations and their effect on firms and regions.*

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Interest in industry clusters as a basis for firm competitiveness and regional economic development is well founded in academic literature. Although high-tech industries have been the primary cluster research and policy focus (e.g., Audretsch & Feldman, 1996; Newlands, 2003; Porter, 1998, 2000; Romer, 1986; Saxenian, 1994; Storper 1993), not all regions are well positioned to succeed in the competition for information technology, biotechnology, pharmaceuticals, research and development, and similar industries with associated occupations. Although much recent research about clustering has emphasized the synergistic and especially nontraded interactions associated with high-tech clustering, the more commonly recognized benefits of agglomeration in traditional industry clusters remain (Cella, 1984; Czamanski, 1971; Glaeser, Kallal, Sheinkman, & Shleifer, 1992; Gordon & McCann, 2000; Henderson, 1986; Isard, Schooler, & Vietoricz, 1959; Marshall, 1890; Moomaw, 1981; Weber, 1929). Hence, the promotion of traditional industrial clusters and agglomeration continues to be an important economic development strategy. However, our research reveals that the success of such strategies can turn on specific

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