

Investment in Infrastructure and Trade: The Case of Ports

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Abstract :

Ports are the gateway to international trade; with more than 80% of trade carried by ships, as well as the advent of global sourcing, it is crucial that they operate efficiently. Yet ports are susceptible to disruptions, causing costly delays. With enormous budgets spent on infrastructure to alleviate these costs, a natural question is what are the associated welfare gains. To address this question, we construct a framework of port technology based on queueing theory, as well as demand for port services capturing rich spillover patterns across ports. We collect a number of novel datasets on port outputs (service and queueing times), inputs (infrastructure, labor, capital), prices, and costs and use them to estimate the above primitives. Our analysis unveils three policy-relevant messages: (i) returns to investment can be substantial, but vary considerably over both time and space, becoming higher when and where ports are congested; (ii) there are sizeable, both positive and negative, spillovers across ports suggesting that the current decentralized decision making may not be optimal; (iii) returns change radically at different levels of perceived demand volatility.