

fueling TRADE

Logistics clusters redraw the transportation map

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Interview by Alison Buckholtz

In your new book, you write that governments can support logistics clusters through investment, regulation, and trade policy. Is this true in every case?

The role of government, most of all, is development of the infrastructure. Then there's a question of attracting businesses, and the theory is that to get this flywheel moving they provide tax and regulatory relief. Of course, there are all kinds of logistics clusters, and some of them just need government to get out of the way. But in general, governments that have more accommodating trade policy, governments that don't raise all kinds of tariff and non tariff barriers, will promote and support trade. Everything governments do to support trade will in turn impact the flow of goods in and out of the country. And once the cluster starts growing, it feeds on itself. This is true of every kind of cluster, but

it's especially true for logistics clusters. It's an ecosystem based on a positive feedback loop: The more it grows, the more it's beneficial to all of its residents, and as a result it grows even more.

How important are public-private partnerships?

These partnerships are at the crux of a logistics cluster. The main difference between a cluster that's successful and a cluster that's not is this alignment of the public and private sectors. We're not talking about just one public sector: I'm referring to city, county, state, and regional governments, labor unions, chambers of commerce, etc. When interests are aligned, logistics clusters flourish. For example, in Memphis, the mayor and the governor will drop everything to help FedEx bring new business in. Zaragoza, Spain, is an even more striking example. It started as a brownfield and is now the largest logistics park in Europe. It was extremely suc-

successful because the government got everybody involved: national, state, and city government, opposition parties, labor unions, and all elements of civil society. This is a striking case of everybody working together and it's a huge success.

Are logistics clusters always, necessarily, transportation hubs?

Yes, because a lot of freight is coming in and out of the cluster. As the cluster grows, transportation companies have high utilization of the equipment, and they can use bigger trucks, or long trains that are very efficient. This is due to two phenomena in the economics of transportation. The cost of moving a conveyance, say, a truck, really depends on how much the truck is loaded, so of course if it's fully loaded and the utilization is high, it costs less per pound to move the freight. That's true in almost every mode of transportation. In addition, the cost of moving a conveyance does not grow linearly with the conveyance size. If the truck is twice as big, it doesn't cost twice as much to move it. So it is a lot more efficient to move larger conveyances. The result is that the more flow that comes in and out of a cluster, the lower the transportation costs.

How does this affect service?

Service improves tremendously with efficient transportation because you get more frequent departures and arrivals, and no one has to wait as long. Since the costs are lower, and the service is better, this attracts even more companies. Furthermore, the more freight is available in the

clusters, more destinations are serviced directly, improving the service even more. This is part of the positive feedback loop that's unique to the growth of logistics clusters.

What else makes logistics clusters different from industrial clusters?

In general, logistics clusters exist in mode-changing places: when you go from ship to airport, rail or ship to truck, airplane to truck. So intermodal yards are very important for logistics clusters. Intermodal yards exist in almost all the big logistics clusters. This has to do with the economics of transportation: when you move long distances, you want to move in very large conveyances like a mile-long train or a huge ship. But then you have to distribute the shipments. You can't bring a mile-long train into the heart of a city—you need trucks, sometimes small trucks. So you want to position your distribution centers as close to the urban areas and the retail stores as much as you can. Intermodal yards can get the full container from the ship to the heartland, close to urban centers. If your intermodal yard is located strategically like this, then within one day of trucking from some of the U.S. logistics clusters in the South and Midwest you can get to tens of millions of consumers. Within two days you can get to more than 100 million consumers from most of these clusters.

How are logistics clusters mitigating their environmental impact?

Some of the best logistics clusters, like Los Angeles, Singapore, and Rotterdam, have become hubs

of environmental sustainability and innovation. They use hybrid and electric trucks and all kinds of other means to reduce the impact of logistics activity on the environment around them. Singapore and Rotterdam are centers for alternative fuel. Precisely because these areas have a concentration of possible pollutants from noise and congestion, they have become hubs for environmental innovation. Now, some of the most promising trends in environmental sustainability are coming from the logistics clusters. After all, one of the challenges for a logistics cluster is to be a good neighbor, to do all it can to reduce the carbon footprint of the operation.

Which areas are on the cusp of becoming successful logistics clusters?

China is investing mightily in logistics clusters as well as lots of transportation infrastructure, and in Asia, Singapore has always invested in logistics clusters. In Europe, Holland, Belgium, and the Ruhr area of northern Germany near the Dutch border are all significant logistics clusters. In fact, the German government is now investing in logistics clusters alongside the usual high profile areas such as biotechnology and nanotechnology. Germany wants to be a center of logistics for all of Europe, so the German government put logistics at the same level of all these new, sexy industries. The important point here is that logistics clusters, by offering low transportation and distribution costs as well as high level of service, are becoming crucial nodes in the global supply chain.

THE *WHAT* AND *WHERE* OF LOGISTICS CLUSTERS

WHAT?

A logistics cluster is a geographical agglomeration of logistics-intensive operations. It includes mainly three types of companies: (i) logistics services providers, such as transportation carriers, warehousemen, and forwarders, (ii) the logistics operations of industrial firms, such as the distribution operations of retailers, and after-market parts suppliers, and (iii) manufacturing and headquarters activities of companies with logistics-intensive operations. In addition, such clusters include supply chain management facilitators such as customs brokers, and specialized consulting and IT providers, as well as academic and research institutions dedicated to logistics.

WHERE?

Logistics clusters are located strategically to enable efficient transportation and delivery services to large populations. Typically, they are positioned in mode-changing locations such as busy seaports (Rotterdam, Shanghai, Los Angeles), airport hubs (Hong Kong, Seoul, Memphis) and major intermodal yards where freight shipments transfer from railcars to trucks (Chicago, Dallas, and Kansas City). Some of the world's largest logistics hubs, including Singapore, São Paulo, and Memphis, bring together multiple elements at once: mode-changing services, distribution to nearby populations, and transshipment services.