Regional Considerations on Managing Global Logistics

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Abstract. As companies expand globally to lower production cost, reduce material costs or to serve international customers there are logistics considerations that must be understood. The quickest route to failure is the assumptions that experience in one market will translate to another. On the ground, unexpected gaps in infrastructure, commercial law and business expertise in the country can foil the equation. This paper is intended to help logistics and supply chain professionals understand what area to review to insure successful operations around the world. These are considerations both for tactical operations as well as long-term strategic planning.
A. Infrastructure
B. Logistics Talent
C. Information Technology Capability
D. Regulations
E. Trade Agreements
F. Culture
G. Macro Economics

The Importance Of Logistics. Logistics costs are an important factor affecting the competitiveness of both firms and countries. With international trade growing relative to GDP, the value of exports and imports combined is equivalent to 28% of GDP in the United States, 68% in Mexico, 21% in Brazil and 66% in China. The efficiency of logistics services impacts the prices and quality of products and overall competitiveness. Logistics is a powerful economic enabler, a fundamental building block of external and internal trade. Logistics as a % of GDP is an indication of logistics efficiency which effects competitiveness. In United States logistics runs around 10.1% of GDP, while China is 22.3%, India 17.0% and Brazil 20.0%. Infrastructure, geography and regulations affect these costs. Noted below are the areas to review and implications to logistics network and supply chain.

Infrastructure. Transportation infrastructure includes the density, breadth and capability of airport, port and road infrastructure.

A. Airports. Air freight may be the planned mode or a contingency option for unexpected circumstances. Are the airports sufficient to handle the demand? Review the number of airports and acceptance of international flights, if air cargo is handled separately or on passenger flights, alternative options and security. Need to understand the risks and costs if there are capacity issues, weather issues, or security procedures that will impact the flow of goods increasing transit times and inventory safety stocks.

B. Ports. Waterways are typically an economical means of transport. Influencing efficiency are factors such as depth of ports and size of vessels that can be accommodated, number of providers calling on port, port fees, and efficient linkage to rail and road networks.

C. Road. Review breadth of highway system and expansion plans, toll roads, congestion, and security. Unreliable transit times and security risks come with a price tag in the form of higher costs as trucks are less efficient in terms of fuel economy, conveyance and driver utilization, need for additional inventory, packaging and insurance. Packaging that may be suitable for one region or country, may not be robust enough in some countries to due rough roads, humidity, or need for extra protection to minimize theft.

Logistics Talent. The knowledge, capability, and capacity of logistics talent and government leadership effects logistics cost and management in a country.

A. Carriers. There are several areas to review when consider service providers. First is to review their capability. Service provider capability varies significantly by country and often a function of economy of size, exposure to lean principals, and outside competitive pressures. In countries which have limited foreign investment in transportation providers, such as China until recently, global customers will find the need for greater supplier development activities. As countries open their policy for foreign participation in logistics companies, we will see more global providers enter the market and mergers/acquisitions that accelerate lean knowledge. Second is the need to research financial health of service providers. It is important that providers have financial strength to operate as volumes fluctuate, credit tightens and to invest for future growth. A look at their truck fleet can indicate if they work to maintain efficiency and invest. Third, review options and ensure there are multiple and overlapping carriers for primarily lanes. Forth, insure contractual language in service agreements for lead time notification if carrier decides to stop servicing <u>and</u> understand likely behavior. In some countries, despite contractual lead-time for notification of business changes, abrupt and threatening situations are the norm.

B. Qualification of internal staff. The capability of external providers will influence the structure and needs of your internal staff and management. Level of experience and skill sets will influence the cost for management oversight, training and development programs on everything from the basics, to lean principals, to analysis and design, to negotiations.

Information Technology Capability. Information Technology Capability assists with minimizing risk, improving accuracy, throughput, security and cost reduction.

A. Customs Clearance. Do local customs use electronic information or is there heavy reliance on paper copies and duplicate entries? The latter driving extra cost, time and opportunity for errors.

B. Visibility to freight movement insures proactive reaction to events and reduction in inventory. Is detailed information on freight status available or is it full of “black holes”? How is it tracked? Is communication part of the local practices? Use of cell phones for check points or GPS?

C. Freight Invoices. can these be submitted electronically or are paper copies required.

Regulations/Policy. Every country has regulations and the trend is headed to more regulations and hopefully some degree of commonality across countries and regions. It is not only the published regulations that have an impact on logistics costs and operations; it is the implementation and enforcement of these regulations.

A. Safety regulations and environmental compliance. Without enforcement of regulations, one sees older fleets, running beyond weight limits. This keeps *prices* down as there is no depreciation amortized in pricing and greater utilization, but there is no incentive to modernize to improve <u>*value stream costs*</u>. Safety and damage can become issues. Modernization of vehicles improves total costs with more fuel efficient vehicles, dependability, move toward standard equipment, and less damage.

B. Security. After September 11, 2001 there has been lots of attention on securing supply chains from terrorist attacks; laws and regulations enacted, private initiatives started and new technologies introduced. Understanding the legislation and regulation cost trends is only one piece of the equation for competitive supply chain. Besides terrorists, supply chains are always confronted by crime. With the transportation of high valued products, weak penalties for shipment thefts and growing supply chains; "low risk/high reward" cargo theft is becoming more prevalent. Stolen cargo usually is products from high value industries such as pharmaceutical, high tech, and auto but more cargo theft is occurring in all industries. An assessment in the layers of security and practices are important to understand in design and manage logistics costs.

C. Tax structure within a country and between. In many countries state and provincial government tax structures add state states based on the value of goods which leads to fragmentation in material flow and often providers due to licenses. Understanding these may influence warehousing and material flow options to minimize cost and lead-time implications.

D. Fuel. Fuel is a significant cost in logistics and control of pricing and taxes varies significantly across the globe. Understanding the situation is essential to understand the risks, understand indexes, fuel surcharge programs, forecasting future trends, and impact on sourcing decisions when there are options between near by countries, such as in Europe.

E. Payment terms. France for example has regulations that transport providers must be paid with 30 day terms. It is important to understand this requirement as it can impact cash flow and may lead to other network design options such as delivered incoterms.

Trade Agreements. Free Trade Agreements are agreements or treaties between countries or multiple countries to remove trade barriers such as customs duties and quotas to stimulate trade. As companies design logistics networks it is important to understand opportunities to utilize and maximize the benefits of free trade agreements. Do goods need to move in bond between one country to another? Are bonded carriers readily available? Would changing the transportation flow facilitate taking advantage of a Free Trade Agreement? Would change in the purchase order incoterms facilitate use of Free Trade

Agreement? With customs fees often in the range of 3-15%, these considerations can add up to million of dollars of savings opportunity.

Culture. The knowledge and values shared by a society influence the efficiency and effectiveness of logistics. In China for example, guanxi and relationship are very important to develop and establish smooth operations. The acceptability of corruption and unsafe practices are part of some cultures and viewed as just part of doing business. Companies need to be aware of these to avoid surprises and understand how work gets done.

Macro Economics. With a global economy and expanding international trade, understanding macro economics is essential to manage and design logistics networks. Currency and foreign exchange trends may influence which providers are sourced and incoterms with material suppliers to take advantage of favorable exchange.

Conclusion and Summary. To operate in a global environment there will be differences between countries and regions. It is the understanding and planning for these differences that will separate successful companies from those that struggle. These understandings extend beyond tactical execution to helping influence and formulate long-term strategies. Logistics professionals can contribute to decisions on sourcing, incoterms with suppliers and footprint plans and help organizations migrate to a supply chain focus.

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