AN INLAND PORT IN A STORM

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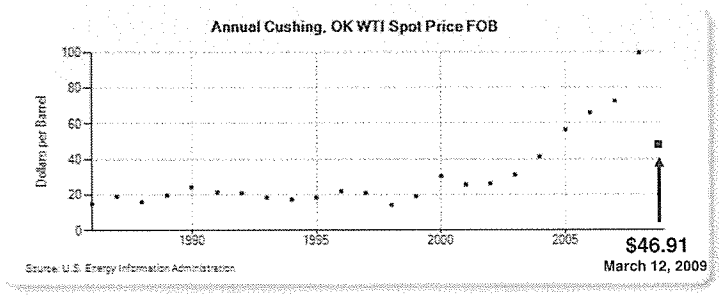
Welcome to the Storm!

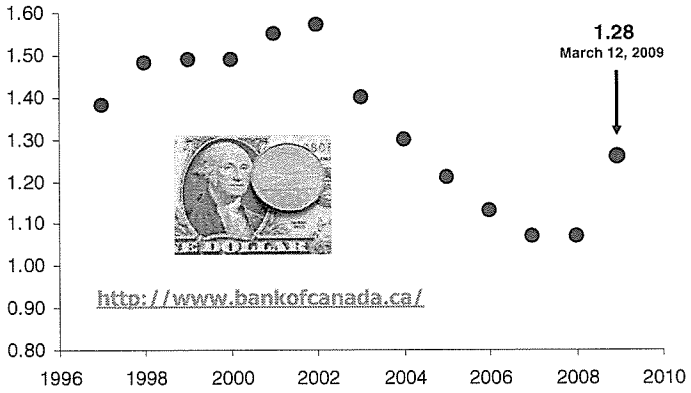
Turmoil in the global economy is changing the logistics total cost function. Risk is rising! There is tremendous uncertainty about oil prices, currency rates, and labour cost/availability. Exhibits 1 and 2 track recent volatility in oil prices and currency rates, respectively. These volatile conditions are linked, in complex and reciprocal ways, to shifting global transportation and trade flows. Some enlightened companies and jurisdictions look at this as an opportunity for supply chain re-design and infrastructure investment.

Exhibit 1. Oil Prices (US$/barrel), 1986 – 2008



In re-designing their supply chains, many companies are rethinking their low-cost country sourcing strategies, considering opportunities to postpone processing or movement of material, and consolidating inventories at centralised locations.

Exhibit 2. Currency Rates (Canadian $/US $)



The next section of the paper draws on literature to define the term *inland port*. This is followed by descriptions and discussions of a sample of North American inland ports, with a special section devoted to CentrePort in Winnipeg. The paper closes with a research agenda, covering issues of relevance to inland ports.

What is an Inland Port?

According to Wikipedia, "the term *inland port* is used in two different related ways to mean either a port on an inland waterway or an inland site carrying out some functions of a seaport." While the U.S. Army Corps of Engineers defines inland ports as ports located on rivers that do not handle deep draft ship traffic, the term is also used to describe a site linked to an airport or land border crossing rather than a seaport. Inland Ports tend to be involved in the transfer of containers between different modes of transportation and handling of international trade (see http://en.wikipedia.org/wiki/Inland_port).

Richard S. Allen, founder and chief executive of The Allen Group, drawing on Heitman, the real estate management firm, suggests there are seven key attributes of an inland port. The seven attributes are:

(1) access to a major container seaport; (2) intermodal transportation facilities served by a Class I railroad; (3) 1,000 or more acres of land; (4) foreign/free trade zone status; (5) access to a local metropolitan market; (6) accessibility to major interstate highways; and (7) access to a strong local labor pool (Allen 2008).

Focusing on provision of various supply chain services, Walter and Poist (2004) define an inland port as an "intermodal port that would facilitate international and domestic commerce, as well as provide support for export and import opportunities by consolidating at a single source all services related to trade, licensing, loading, storage, light assembly and bonding."

Like the North American Inland Port Network (NAIPN), we adopt a definition from the University of Texas Center for Transportation Research: "An Inland Port is a site located away from traditional land, air and coastal borders with the vision to facilitate and process international trade through strategic investment in multi-modal transportation assets and by promoting value-added services as goods move through the supply chain."

A Sample of Inland Ports

Ness (1993) traces the origin of the term *inland port* back to an article published by *Norfolk & Western Magazine* in its January 1930 issue. He offers Columbus, Ohio as an example of a successful inland port. From 1985 to 1993, over $240 million was invested in Rickenbacker International Airport—75 percent of this was spent by private firms. In addition to the all-cargo airport and foreign trade zone industrial park, the Columbus area had service from three major railroads, over 100 trucking firms, and 100 million square feet of warehousing space.

According to Ness (1993), "inland ports grow best when they grow naturally. When a particular location offers both market proximity and access to major land, rail, air, and water lanes, it begins to attract big shippers, who, in building their own facilities, create the critical mass of activity that spurs growth."

Walter and Poist (2004) studied a variety of active and inactive inland ports, including: Alliance Airport, near Fort Worth, Texas; Greater Columbus (Ohio) Inland Port Commission; Huntsville, Alabama; and Global TransPark (GTP) in North Carolina (http://www.ncgtp.com/). These researchers concluded: "The more active inland ports appeared to have major private investors, large populations nearby, and air transportation facilities. The lack of one or more of these attributes would seem to make inland port development a more risky venture without considerable evidence otherwise of strong demand for its services."

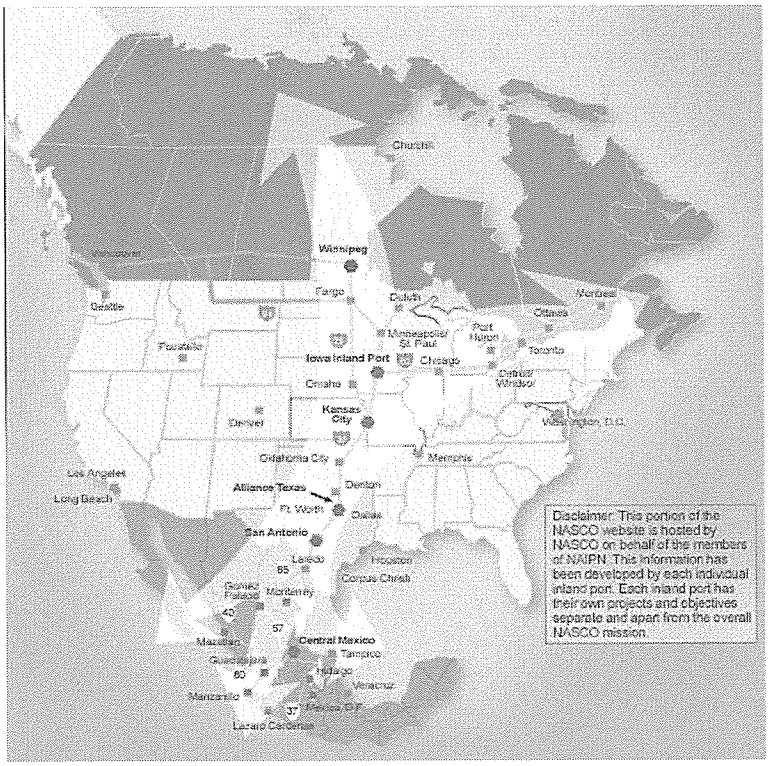
Stockton, California is the planned location of another inland port. The site is adjacent to intermodal (rail) terminals and connected to the major north-south highways in California. In general, Little (2008) suggests inland ports need efficient access to transport infrastructure, logistics services, and consumer markets. For customs clearance and warehousing, inland ports are natural foreign trade zone locations.

Sowinski (2008) profiles several inland ports, including the Roanoke Region Intermodal Facility, the San Antonio Intermodal Terminal, Logistics Park—Kansas City, and www.alliancetexas.com.

AllianceTexas is spread along 17,000 acres north of Fort Worth. Its economic impact from 1990 to 2007 is estimated to be $33.8 billion. This inland port has created 28,300 direct jobs and 68,165 indirect jobs. It is noteworthy that 94.5 percent of the total funds invested in Alliance between 1990 and 2007, i.e. 94.5 percent of $6,853,431,958 billion, have come from private (rather than public) sources. While Fort Worth is the 17th largest city in the United States, its neighbor Dallas is much larger.

Kansas City's SmartPort has a two-fold mission: (1) attracting firms involved in transport and logistics to Kansas City; and (2) making it cheaper, faster, and more secure for firms to move goods into, from, and through the Kansas City area (http://www.kcsmartport.com/).

Exhibit 3. Inland Ports along the NASCO corridor



A number of features make Kansas City an excellent logistics hub and inland port. It is the largest rail center in the United States in terms of tonnage, and offers more Foreign Trade Zone (FTZ) space than any other American city. It is also at the intersection of three interstate highways (I-35, I-70, and I-29). In addition, the area offers air cargo service (Kansas City International Airport); a navigable inland waterway (Missouri/Mississippi River system); and excellent east-west and north-south (NAFTA) rail connections.

Exhibit 3 shows a map of the NASCO corridor, from Winnipeg down through Kansas City and Fort Worth, and on into Mexico.

Why Winnipeg?

Winnipeg is situated at the cross-roads; the intersection of the Trans-Canada Highway and the mid-continent (or NASCO) corridor. It is a traditional transportation and distribution hub. Winnipeg is 100 km. north of western Canada's busiest border crossing, at Pembina, North Dakota. The City features a 24-hour international airport, with the most dedicated cargo flights in Canada, and it is served by three Class I North American railroads. Winnipeg also enjoys direct road and rail access to Canada's western seaports in Vancouver and Prince Rupert.

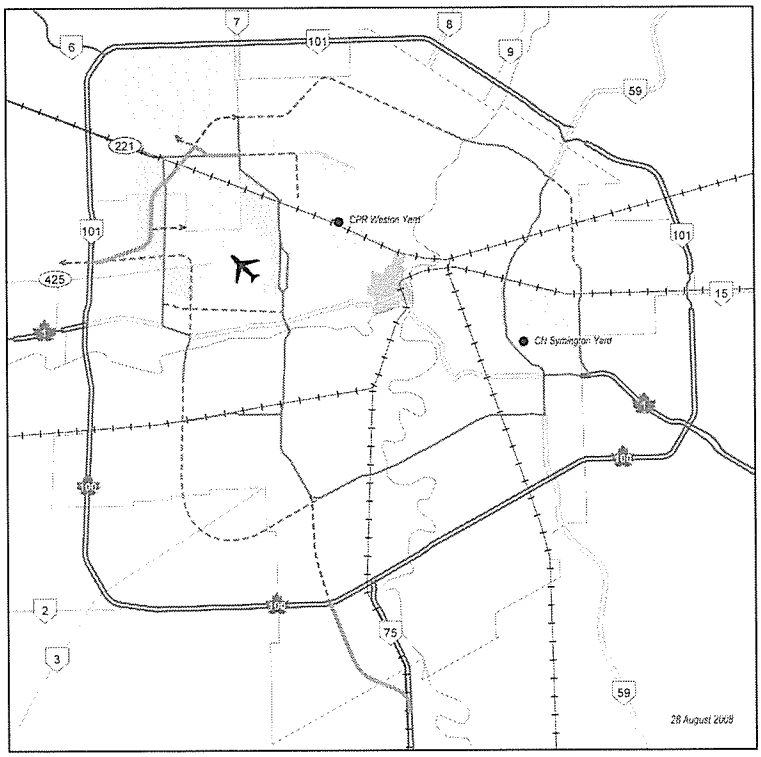
On December 22, 2008, Manitoba Premier Gary Does announced the first board of directors for CentrePort Canada Inc. The inland port is 20,000 acres anchored at Winnipeg's James Armstrong Richardson International Airport (see Exhibit 4). CentrePort Canada was created in October by Manitoba's provincial government (Anonymous 2009). The inland port is a critical component of the Manitoba International Gateway Strategy (MIGS) and the positioning of Manitoba as "the Hub Province" (Spacek 2008).

Research Agenda

There are important issues regarding inland ports in general that beg for further study. In addition, there are unique issues for each existing or potential inland port.

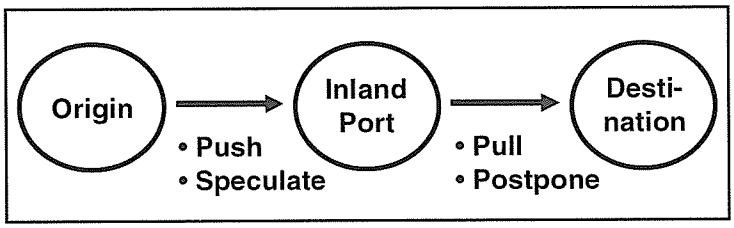
Building on the previous studies and reports, such as Allen (2008) and Walter and Poist (2004), future research should identify and verify the critical success factors of inland ports. What makes some inland ports fabulously successful (e.g. AllianceTexas), while others remain under-utilized (e.g. GTP)? What are the critical success factors for inland ports? How should public-private partnerships be structured to ensure inland port success? Are inland ports along a trade corridor, such as NASCO, collaborators or competitors? How should inland ports be promoted to their customers, i.e. to shippers and carriers of freight?

Exhibit 4. CentrePort in Winnipeg



As companies re-design their supply chains, as they consider stock consolidation and postponement strategies, they may look to inland ports for supporting logistics services. Postponement strategies are inspired by the push-pull boundary, as shown in Exhibit 5. The push-bull boundary is theoretically an excellent position for an inland port; firms forward deploy or "push" material up to the boundary, and then postpone further processing or movement until their customers "pull" material downstream. Logistically, the focus is to be lean upstream from the boundary and agile (in response to customer requirements) downstream.

Exhibit 5. The Push-Pull Boundary



Research is needed to clarify the role of the push-pull boundary as a location for an inland port—and the role of the port as a facilitator of postponement logistics. What logistics services must be offered to meet the needs of a postponement strategy? How can the inland port enable relationships and make available information technology for supply chain integration? What can an inland port do for a company using postponement as an element of mass customization?

There are many questions that any given (existing or future) inland port should ask—and answer. For instance, how many inland ports can western Canada support? From Prince George to Edmonton to Regina to Winnipeg, there is talk (and action) these days in the area of inland ports. Are these ports collaborators or competitors? Who are the customers of inland ports, and what do they expect in terms of logistics and transportation services?

Can we anticipate future shifts in global trade flows, based on today's economic situation (e.g. oil prices, currency rates, labour availability, and low-cost country sourcing)? What do such shifts mean for the inland port? What is the social impact of an inland port within our community? What about the environmental impact? How many jobs will the inland port bring to town?

Since all logistics activity is based on derived demand, communities should look at the present and possible future commodities flowing from, to, and through them. Here are the opportunities to add value to the supply chain; by moving the goods faster, better and cheaper than ever before.

References

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