

Will Soaring Transport Costs Reverse Globalization?

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Globalization is reversible. Higher energy prices are impacting transport costs at an unprecedented rate. So much so, that the cost of moving goods, not the cost of tariffs, is the largest barrier to global trade today. In fact, in tariff-equivalent terms, the explosion in global transport costs has effectively offset all the trade liberalization efforts of the last three decades. Not only does this suggest a major slowdown in the growth of world trade, but also a fundamental realignment in trade patterns.

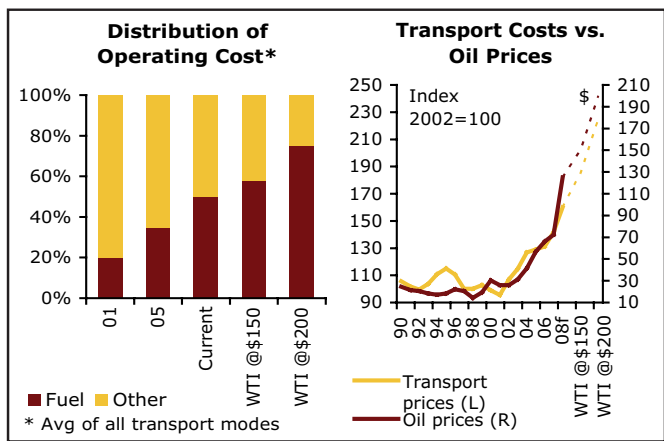
Soaring Transport Costs

Recent changes in transportation have led to increased sensitivity to higher energy prices. Most notable of these changes is the massive trend towards containerization that effectively makes shipping costs more vulnerable to swings in fuel costs. Container ships can be unloaded much faster than break cargos so they spend much more time at sea than in ports.

Another factor is speed. The shift to container ships has increased the importance of ship speed. Over the past two decades, container ships were built to go faster than bulk ships and since container ships were steadily gaining share, the world's fleet speed picked up. But greater speed requires greater energy, as it does in all other modes of transport. In global shipping, the increase in ship speed over the last fifteen years has doubled fuel consumption per unit of freight.

Chart 1

Transport Costs Highly Sensitive to Oil Prices



Source: RMT, CIBCWM

With oil prices now accounting for almost half of total freight costs, it should come as no surprise that soaring oil prices have translated directly into soaring transport costs (Chart 1). Over the last three years, every one dollar rise in world oil prices has fed directly into a 1% rise in transport costs.

Transport Costs and the Link to Trade

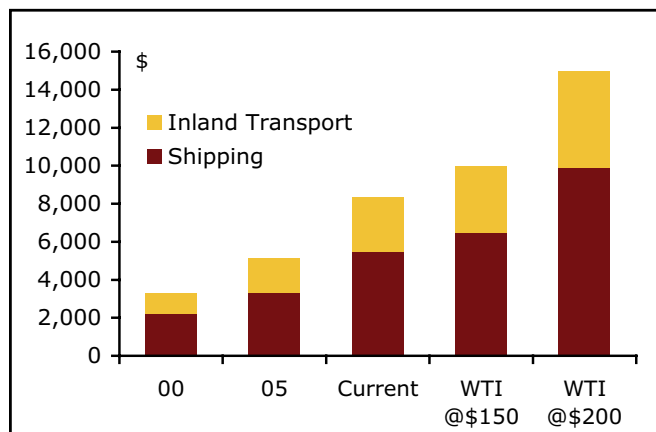
The last thirty years have seen an unprecedented growth in world trade—a phenomenon widely credited with providing the catalyst for the rapid industrialization of economies like China and India. In turn, the reduction in tariffs and non-tariff barriers over decades of multilateral trade negotiations was facilitated by the surge in global trade volumes. But in a world of triple-digit oil prices, soaring transport costs, not tariff barriers, pose the greatest challenge to trade.

Converting transport costs into tariff-equivalent rates provides a poignant perspective on just how trade-disrupting soaring energy costs have become. Even back at a \$100 per barrel oil price, transport costs outweigh the impact of tariffs for all of America's trading partners, including even its neighbours, Canada and Mexico. Back in 2000, when oil prices were \$20 per barrel, transport costs were the equivalent of a 3% US tariff rate. Currently, transport costs are equivalent to an average tariff rate of more than 9%. At \$150 per barrel, the tariff-equivalent rate is 11%, going back to the average tariff rates of the 1970s. And at \$200 per barrel, we are back at "tariff" rates not seen since prior to the Kennedy Round GATT negotiations of the mid-1960s.

Higher energy costs translate directly into higher shipping costs. At today's oil prices, every 10% increase in trip distance translates into a 4.5% increase in transport costs. The duration of a typical sea voyage from China to North America is four weeks. Including inland costs, shipping a standard 40-foot container from Shanghai to the US eastern seaboard now costs \$8,000. In 2000, when oil prices were \$20 per barrel, it cost only \$3,000 to ship the same container. But at \$200 per barrel, it will soon cost \$15,000 in transport costs to ship from China to the US eastern seaboard (Chart 2).

Chart 2

Total Cost of Transporting a 40' Container From Shanghai to US East Coast



Soaring transport costs suggest trade should be both dampened and diverted as markets seek shorter, and hence, less costly supply lines. And that's precisely what we have witnessed in response to past OPEC oil shocks.

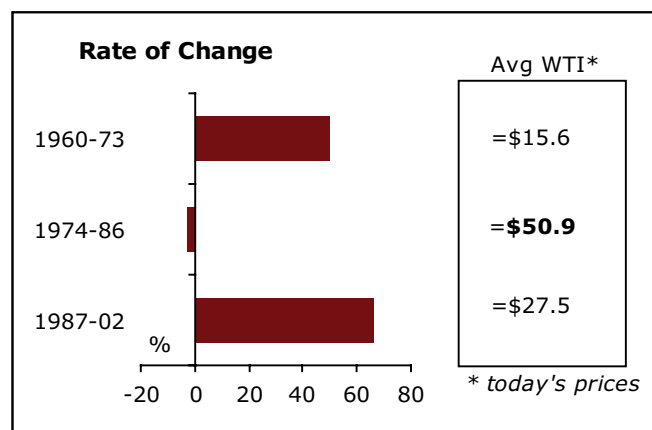
Between 1960 and 1973, exports as a share of world GDP rose by over 50%, a function of both falling trade barriers and cheap transport costs when oil prices averaged less than \$16 per barrel (in today's prices). Similarly 1987-2002 saw another quantum leap in world trade, spurred not only by a 30% drop in tariffs but by still relatively cheap transport costs grounded by an average \$27 (constant dollars) per barrel oil. In sharp contrast, exports as a share of world GDP went absolutely nowhere between the first OPEC shock and the aftermath of the second, despite a 25% reduction in global tariffs (Chart 3).

No doubt the 1974 and 1981/82 recessions dampened trade, but trade should have rebounded strongly on the back of healthy recoveries from those recessions. Annual world GDP growth averaged 3.5%, roughly the same rate as from 1987-2002 which saw world trade grow by leaps and bounds. Trade failed to respond to a pick-up in global growth because transport costs were exploding due to soaring oil prices.

Trade not only failed to grow as a share of global GDP but it also diverted along increasingly regional lines. With the cost of trans-oceanic freight surging following the 1973 OPEC shock and into the early 1980s, the share of non-petroleum US imports from Europe and Asia fell by a stunning 6 percentage points in little over a half decade,

Chart 3

World Exports as a Share of Global GDP: Highly Sensitive to Oil Prices



while the share of imports from the Caribbean and Latin America rose by a comparable amount (Chart 4).

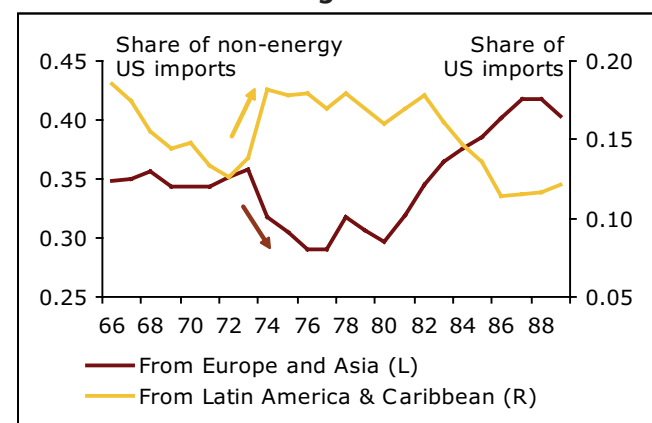
It's relatively easy to see why American importers shifted to regional trading. Trans-oceanic transport costs literally exploded during the two OPEC oil price shocks. The cost of shipping a standard cargo load overseas almost tripled, just as it did over the past few years. Ultimately soaring transport costs were borne by consumers, and markets responded accordingly, substituting goods that could be sourced from closer locations than half-way around the world carrying hugely inflated freight costs.

Advantage US

To what extent will astronomical increases in transport costs alter the huge (but shrinking) wage differential

Chart 4

Trade Diversion During the OPEC Oil Shocks



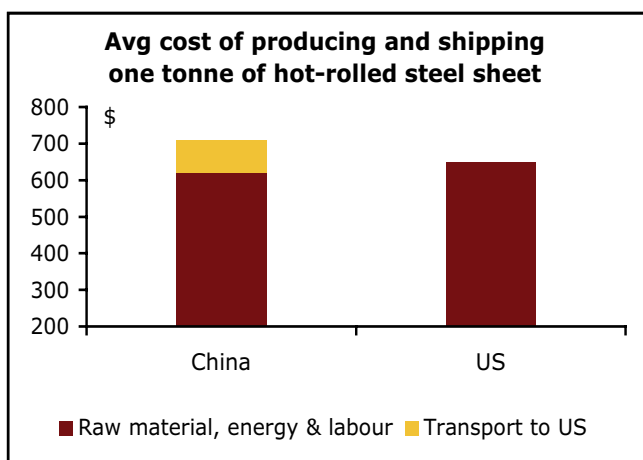
between Chinese labor and North American labor remains to be seen. But we are already starting to see some change in capital-intensive manufacturing whose products carry a high ratio of freight costs to final selling prices.

Take the steel sector for example. With little over an hour and a half of labor time embodied in the production of a ton of steel, and relatively high freight costs, the global cost curve of the steel sector is changing rapidly. Given that most parts of China (and Asia in general) are short iron ore, getting the raw materials to the steel mill (mainly from Australia and Brazil) adds an additional and growing cost not typically incurred by US steel producers. Add to it the \$90 freight cost of shipping a ton of hot-rolled steel sheet from China to the US, and the transport component is large enough to turn the global steel cost curve on its head. Even at today's oil prices, rising transport costs have already more than offset China's otherwise slim cost advantage, giving US steel a competitive advantage in its own market for the first time in over a decade (Chart 5).

The rapidly changing economics of steel is already reflected in the trade statistics. China's steel exports to the US are now falling by more than 20% on a year-over-year basis—the worst performance in almost a decade. While many might attribute this decline to the slowdown in the US economy, it is noteworthy that US domestic steel production has risen by almost 10% during the same period (Chart 6).

Chart 5

US Steel Producers Now Have a Cost Advantage Over China



Source: IRST, AISI, JP Morgan, CIBCWM

Mexico—Another Chance at Bat?

Exactly how much trade, soaring transport costs divert from China (or for that matter anywhere else) depends ultimately on how important those costs are in total costs. Goods that have a high value to freight ratio carry implicitly small transport costs, while goods with low value to freight ratios typically carry significant moving costs.

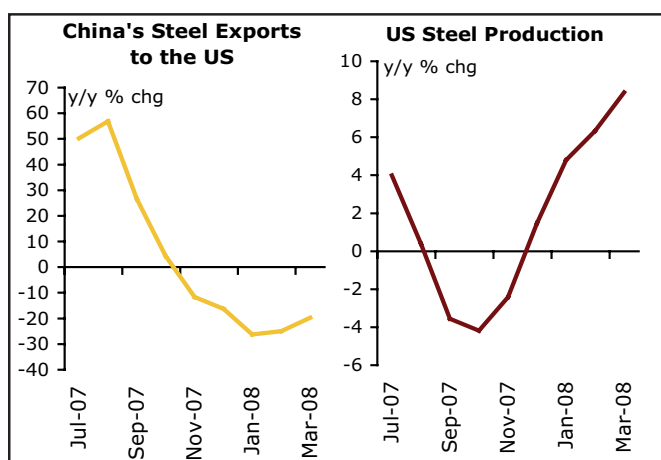
A surprisingly high percentage of Chinese exports to the US fall in the later category. Furniture apparel, footwear, metal manufacturing, and industrial machinery—all typical Chinese exports, incur relatively high transport costs.

And there is already evidence that Chinese exports of freight-intensive goods are already beginning to slow under the pressure of rapidly rising transport costs.

While there has been a general slowdown in export growth to the US over the past year, it is notable that the slowdown is far more pronounced in goods that carry relatively high freight costs compared to those that do not. On a year-over-year basis, this category is now falling for the first time in more than 10 years (Chart 7, left). Freight-sensitive Chinese exports to the US now account for 42% of total exports—down from 52% in 2004. In fact, we estimate that if it were not for the dramatic increase in transport costs, growth in Chinese exports to the US since 2004 would have been 30% stronger than the actual tally (Chart 7, right).

Chart 6

China's Steel Exports to US Fall While US Steel Production Rises



Source: US Census Bureau, CIBCWM

How much of Chinese manufacturing production will be coming home remains to be seen. But there is certainly no reason why we should not expect to see at least comparable if not greater trade diversion than we saw during the OPEC oil shocks of the 1970s.

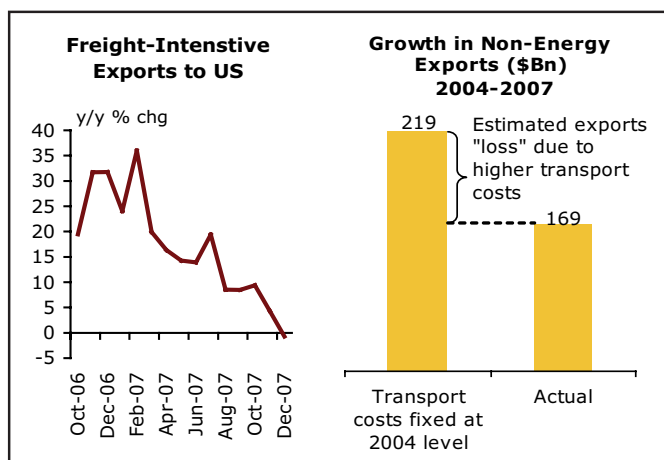
While there remains a strong imperative in the world economy to arbitrage wage costs, the arbitrage will increasingly take place within the constraints imposed by soaring transport costs. Instead of finding cheap labor half-way around the world, the key will be to find the cheapest labor force within reasonable shipping distance to your market.

In that type of world, look for Mexico's maquiladora plants to get another chance at bat when it comes to supplying the North American market. In a world where oil will soon cost over \$200 per barrel, Mexico's proximity to the rest of North America gives its costs a huge advantage.

Compare, for example, how relative transport costs have recently changed between the Pacific Rim and Mexico. If in 2000 American importers paid 90% more to ship goods from East Asia to the US east coast, today they pay 150% more, and when oil prices reach \$200 per barrel, they will pay three times the amount it costs to ship the same container from Mexico (Chart 8). To put things in perspective, today's extra shipping cost from East Asia is the equivalent of imposing a 9% tariff on East Asian goods entering the US. And at oil prices of \$200, the tariff-equivalent rate will rise to 15%.

Chart 7

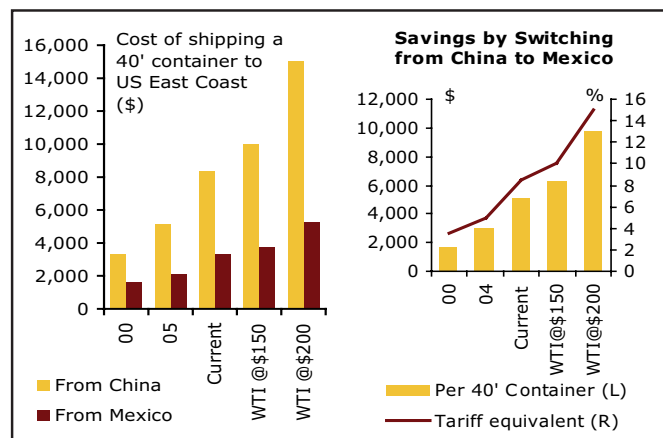
Elevated Freight Rates Are Already Impacting China's Trade with US



Source: US Census Bureau, Golisticsmgnt, De 2007, CIBCWM

Chart 8

Relative Shipping Costs to the US East Coast: Mexico versus East Asia

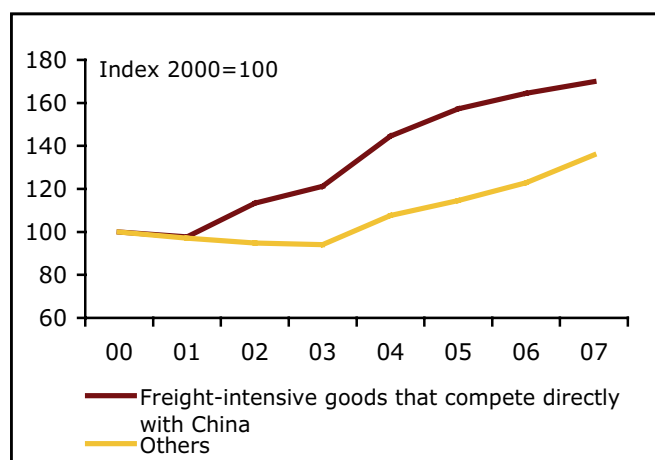


It seems that American importers are starting to do the math and already shifting some business from China to Mexico. While the pace of shipments from China to the US is slowing—mainly among freight-intensive goods, even non-energy Mexican exports to the US are still rising at a healthy annual rate of more than 7%. And interestingly, the goods that have seen the fastest growth are the ones that, on average, are more freight-intensive and directly compete with China, such as furniture, iron and steel, rubber and paper products (Chart 9).

In a world of triple-digit oil prices, distance costs money. And while trade liberalization and technology may have flattened the world, rising transport prices will once again make it rounder.

Chart 9

Mexico's Non-Energy Exports to the US



Source: US Census Bureau, CIBCWM