

Trend # 8 – Hard infrastructure becomes a priority

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Whereas companies have scaled up in size and scope across the world, the next bottleneck has become the infrastructure of the country. Examples include the port of Long Beach, which is at 95% utilization and often peaks to 100%. Ports around the country and in the world are becoming more congested. Carriers have no more capacity and are barely able to keep up with the global demand. Transportation cost is rising and utilization is at peak levels. As globalization increases, more significant investments will be required to expand lanes, canals, roads, ports, and associated resources. As countries are loathe to invest in this sector, it will be up to companies to create alliances and pick up the tab – expect some big numbers or some innovative solutions such as increased regionalization (vs. concentration). We are already seeing venture capital come into play here, with more dollars being used in more inventive ways to convert non-competitive and stagnating public sector investments into dynamic, money-making ventures through the use of new money, new technology, business model innovation, and the escalating levels of collaboration between government and business.

The Bottom Line

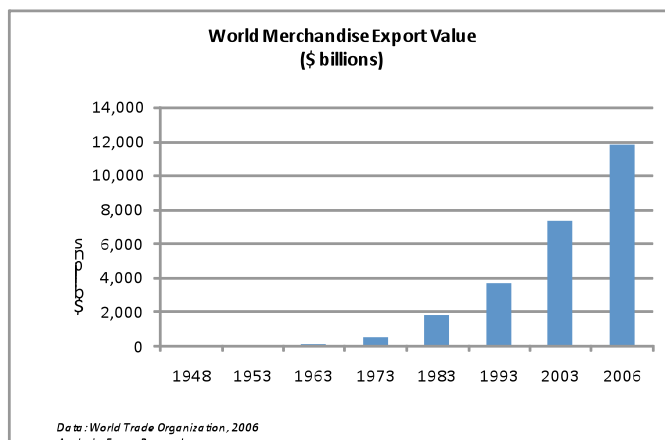
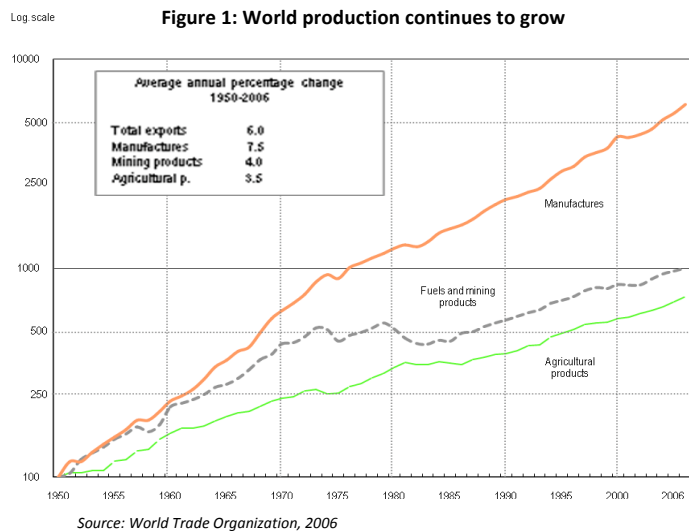
We can generally derive the following conclusions from our research, discussions, and observations:

- Global trade has driven logistics infrastructure to its limits
- Carriers have peaked their utilization
- Countries are hesitant to spend on infrastructure improvements
- Private capital is stepping in and more deals are being struck for infrastructure projects
- Innovative solutions are necessary to solve the congestion and capacity problem

We see the solution being driven from the problems at hand in terms of infrastructure, with the result being not just additional infrastructure but also interesting and new intelligent solutions to stave off the issue to begin with.

Globalization in Trade on the Rise

Globalization is not a new phenomenon; it has been occurring consistently over the last half century. Over the last half century, as we see in the Figure 1 below, using 1950 as a base, the annual growth rate in Manufacturing has been 7.5%, mining products 4%, and agriculture 3.5%. The important thing to understand is that during the last 2 decades, even though the rate of increase in manufacturing has not changed (still 7.5%), the base has shifted from being more domestic or regional to more global in nature. We see evidence of this in the dramatic rise in global merchandise exports between 1948 and 2006, where the rise has been exponential during the last half-century.



uate carrier capacity, handling capacity, and infrastructure across the globe.

Figure 2: Trade is becoming more global in nature

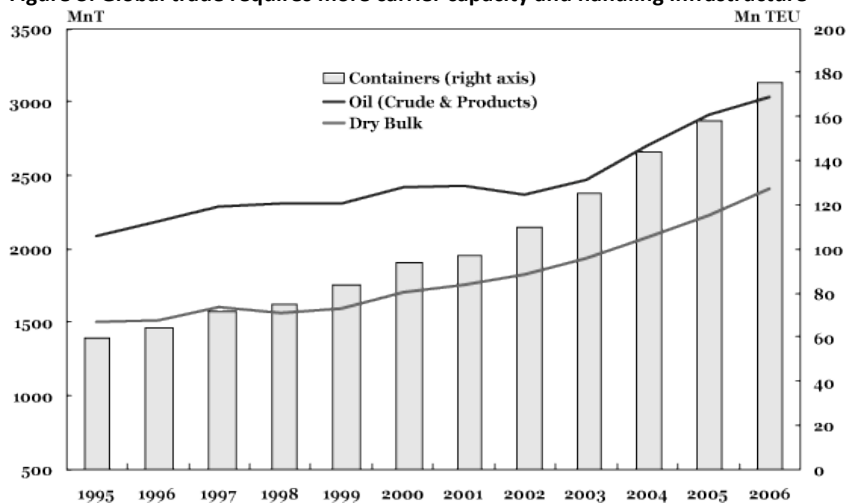
As we mentioned in our June 2007 American Shipper column titled "Hawkish on Ports and Terminals", manufacturers may have all the

capacity in the world or may be busy investing in increasing their global capacity, but if ports, terminals, railroads, roads, and other relevant distribution / transportation infrastructure does not keep up, there will be even more congestion on lanes and inadequate bandwidth to handle all this trade, evident in the long wait times in ports like Long Beach, CA and Newark, NJ.

Demand for Infrastructure is Escalating

During the last decade, trade traffic has increased consistently, Figure 3 below, represented by container traffic, from 60 million TEU to about 180 million TEU, a compounded annual growth rate (CAGR) of about 11%. Similarly, Oil shipments have risen by 50%, as has Dry Bulk trade. Whereas this growth may not seem earth-shattering, bear in mind, India and China are only just about getting started. Both countries have a burgeoning economy not in terms of being the manufacturers of products but on a larger scale, the consumption of products. The increased consumption (fully incremental to current global consumption) will subsequently drive greater manufacturing, which in turn, will drive an even greater an accelerated need for logistics infrastructure to more remote parts of each of these countries, where the economies are flourishing and coming into full bloom.

Figure 3: Global trade requires more carrier capacity and handling infrastructure



Source: MSI

Note: Containerized trade includes primary port-to-port and transshipment. Drybulk includes iron ore, coal, grain and minor bulks
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What Type of Infrastructure is Needed

As major ports become more congested, shippers will look for alternate means or innovative solutions to the infrastructure problem. Roads and rail too are long-standing infrastructure issues as well. Insufficient roads in the emerging economies continue to hinder the growth factor. Rail is highly developed in countries such as India, which have a colonial legacy. The Indian railway system is one of the largest if not the largest system in the world, and most heavily utilized for both passenger and commercial traffic. However, it is unreliable and overburdened, with no minimal upgrades or development in the last decade. Rail in the US could be a significant means of freight for shippers if it were more time-sensitive and were more widespread. Even in developed nations such as the UK, constraints exist at the channel tunnel entrance, where trucks can be lined up for as much as 8 to 10 hours to get across to France because the feeder highways are constrained. In addition, bigger ships (e.g. post-Panamax), widening of

canals (e.g. Panama), larger aircraft (e.g. Airbus A380), and widening of highways are all project that are already underway, but by the time they are ready, the need for more will surpass the current capacity. Aside from the core infrastructure requirements, there are the support industries which maintain them, make them accessible, workable, and efficient. The metal industry, oil industry, chemical industry, cement / concrete industry, power generation industry, etc. are some of the supporting industries that are needed along with the growth of infrastructure projects.

The question becomes, how does one pay for all this incremental infrastructure.

Private Capital is Stepping In

McKinsey & Company published some excellent findings last month regarding this topic in the McKinsey Quarterly: “During the past two years, the flood of money into infrastructure funds has been astonishing: the world’s 20 largest now have nearly \$130 billion under management, 77 percent of it raised in 2006 and 2007 and about 63 percent from new entrants. Taking into account leverage, a billion dollars of equity funding could, in some situations, pay for up to \$10 billion in projects.

Where will all the money go? The value of infrastructure buyout deals has already grown from roughly \$20 billion in both 2003 and 2004 to \$106 billion last year. The volume of the developed world’s remaining traditional brownfield opportunities—those in existing infrastructure, such as owning and operating a toll road—won’t satisfy investor demand over the next three to four years. Bidding for these deals is already intense, which has pushed up price-to-earnings multiples. The multiple of 9 achieved by Italy’s Aeroporti di Roma when it was sold in 2002, for example, is dwarfed by the multiple of 27 that investors paid for the UK’s London City Airport in early 2007; in the ports sector, the multiple of 9 paid for Hesse-Noord Natie in 2002 was less than half the multiple of 20 achieved by Orient Overseas in 2006. Meanwhile, in North America the competition for road projects has become increasingly heated—as seen in the multiples commanded by the Indiana Toll Road and Chicago Skyway deals. High valuations mean that funds must work much harder to generate satisfactory returns.

Investors hoping to avoid these sky-high valuations can target more attractive deals if they are willing to look beyond existing infrastructure in developed economies and consider the following:

- Projects in emerging markets—which, we estimate, will require more than \$1 trillion in capital over the next ten years
- Complex brownfield deals, which typically have a substantial construction element because of the upgrade and refurbishment work involved
- Wholly private infrastructure opportunities, such as private industrial rail lines and power plants or the full privatization of infrastructure providers”

The Need for Innovative Solutions

The good news is that more money is available now than ever before for infrastructure projects. The bad news is that these projects take a long time to implement, and the benefits are not realized in the short term. Hence, as global trade continues, there is an urgent need to develop ‘quick win’ solutions such as develop brownfield sites like feeder-ports, alternate routes on busy highway systems, more efficient means of transport, quicker loading and unloading through better use of technology, robotics, and other simpler and cheaper solutions.

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