

Forecasting Intermodal Markets from a Manufacturer's Perspective

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The forecasting of intermodal markets is a difficult process. The complex factors associated with bringing new products to market, developing standards across the different modes, and changing government regulations create a process that cannot be modeled with traditional trend analysis tools. In my opinion, however, it is vital that we do undertake such an effort.

To understand why I believe this to be necessary, I would like to take a few minutes to describe the problems we see in developing the intermodal system. As many of you know, Eaton is not an intermodal transport company. In fact, we are not in the shipping business at all. Instead, we are one of the companies that manufactures products for the freight industry. Our products range from transmissions to logistical systems, primarily for heavy trucks.

The point of view I am presenting, therefore, comes from that of a manufacturer trying to supply products that will be needed to make the intermodal movement of freight actually work. Accordingly, let us look at a few of the things that might hinder us from bringing such products to the U.S. market.

One of the problem areas is the lack of standards. The establishment of appropriate standards is crucial for creating a viable market in intermodal equipment. I know some may think it stifles creativity, but a look at such examples as the computer world can quickly show the validity of my statement. The explosion of the personal computer industry can be directly traced to the establishment of standards for hardware, thus ensuring compatibility between the products of an entire industry.

We need for something like this to happen in the intermodal world. Unfortunately, right now we seem to be moving in the opposite direction. The U.S. Department of Transportation (DOT), U.S. Department of Defense (DOD), and various states are looking at their own systems. On top of it all, the Intelligent Transportation System (ITS) effort seems to frequently go off in its own direction; and none of these systems is necessarily compatible with the other.

As an example of how this impacts the industry, consider the situation of one of our customers who recently described the problems associated with taking his truck across the country. Because of the different systems he may encounter along the way (depending on the

route), he has had to place as many as 12 different highway tags on his containers and trailers. For someone operating at the typical small profit margin, this represents an unacceptable cost. The most likely result is that this shipper will avoid intermodal solutions.

A second major problem area is product liability. We have heard a great deal about this in relation to other industries such as airplanes, but it really does filter down to our industry as well. As we have recently seen in the courts, it is quite possible to be sued for not putting a piece of equipment on a vehicle even though it was not required.

Consider, for example, the impact this ruling can have on a company thinking of developing a new braking system for trains or trucks. By undertaking the development of such a system, the company is potentially assuming the burden of liability for future accidents regardless of whether the product is actually deployed. This is a serious impediment to future safety-related R&D and needs to be discussed and resolved.

The final problem area I wish to discuss, and the one I consider most important, is the lack of an adequate intermodal system definition. What we as an industry need is a set of requirements for the freight system as an entirety. This is something we have never had; the industry has instead developed in kind of a hit-or-miss manner. Continuing in our current process will, however, make establishment of a true intermodal system difficult if not impossible.

Consider, for example, the latest introduction of the mega-sized container ship. This is a ship that can handle a large number of containers. However, many ports do not have the facilities to load and unload such a ship. In addition, many of our ports are already bottlenecks in the intermodal system. Throwing more containers into them may well slow down the overall movement of freight across the country.

What I would suggest is that we take some time and actually develop an intermodal system plan for the country. There are a number of ways this can be done, but I would like to recommend a process (known commonly as "reg-neg") that has proven reasonably effective in the environmental arena. The process consists of the following steps.

- Government meets with industry, academia, and various trade organizations (for example, the Society of Automotive Engineers) to define the overall system requirements. In this case, we would want to establish reasonable objectives for things such as the time it takes to transfer a container between modes, how well we need to know the location and contents of a container, how many containers we expect the system to handle, etc.
- Industry and the trade organizations take the lead in developing a consensus on how we might meet these objectives. This invariably will require some trade-off between the different factions. For example, some modification of existing railcar design may have to be traded for similar adjustments to the standard truck trailer, with both sides bearing some of the cost of making the system work. Proposals for development of prototype systems can then be submitted to industry and government for funding, with final demonstrations scheduled for an agreed upon set time.
- Finally, we bring all the parties back together and define a set of standards for the various system elements (for example, truck-rail transfer systems). This provides the stability necessary to ensure an active market and provides a mechanism for companies to introduce new technology into the system with some assurance that it can operate effectively.

How then do we take that first step and begin defining the requirements for a national intermodal system? Ideally, we would like to develop a model of the national freight system. This is a difficult proposition, as I am sure many of you realize. The system is a highly complex one, and cannot be considered in isolation—the international aspects of freight continue to grow and must be considered. In addition, many of the factors involved in such a model are not really numerical. For example, the preferences a shipper places on use of truck versus rail, or on the relative value of time versus contents, are better expressed in less precise terms.

We do, however, believe that this might represent a good first step to resolving the key problem facing development of a national intermodal freight system. Some of us in the fore-

casting business have investigated the potential of various probabilistic modeling schemes that may be applicable to this problem. We would welcome the opportunity to share that experience as desired.

In summary, I would like to reiterate that development of the intermodal system is, in my opinion, "not" primarily a technological problem. It is the lack of an adequate system definition that is constraining the growth of the system. Meeting that need should be the primary (and urgent) goal for all of us interested in this industry.