



# Making Truck-Rail Intermodal More Competitive

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# Making Truck-Rail Intermodal More Competitive

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## ABSTRACT

Truck-rail intermodal freight is a technique that can gain much of the benefit of truck service and rail efficiency. Despite the attraction of the mode choice and its benefit in reducing emissions and highway congestion, the mode typically is used only over long distances. While a number of environmental factors, such as the price of fuel and labor, are combining to make intermodal more attractive, the question remains as to what measures public policymakers might employ to speed the adoption of intermodal. To gain insight into this question, professionals from the logistics industries were interviewed.



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### **Introduction and Summary**

Under most circumstances, rail transport uses less fuel, produces fewer emissions and can reduce highway congestion when compared to trucking. Truck-rail intermodal is a method of combining the features of trucking and rail that can most easily increase the amount of product moved by rail. Yet the typical rule-of-thumb in the industry is that a haul must be over 700 miles in length for rail to be considered as a part of that movement. While that number has been decreasing, with some truck-rail intermodal managers now suggesting 400 to 500 miles as the minimum, the question remains: What can be done to make shorter haul truck rail intermodal competitive? In an effort to answer this question, sixteen professionals in the shipper and carrier community were interviewed. Their experiences and ideas offer some insights into the future of intermodal freight movement and some thoughts on actions that public policy makers might take to encourage the greater use of this modal choice.

Cost and service are agreed to be the two factors that determine modal choice. Intermodal is measured on these two factors against trucking. If service is comparable to trucking, the cost differential will favor intermodal. If the cost differential is great, some reduction in service might be accepted.

The density and balance of specific corridors impact both service and cost. With high density, frequent and dependable service can be offered. With balance the cost and environmental impacts of moving empty cars or containers can be reduced or eliminated.

Many things influence cost. The most obvious are the direct inputs: fuel and labor. Less obvious are issues of capacity, productivity, indirection, business strategy and government regulation. Service is determined by the time and reliability of transit times, accessibility and the condition of the delivered product. It is also conditioned by the preconceptions that shippers have of those factors and the performance of the modes.

Public policy directly influences costs. Energy policy such as carbon taxes could significantly change the price of fuels. Tax policy could change the competitive playing field by changing the cost structure of trucking or by encouraging added rail investments. Regulatory policy could make trucking more or less productive. Regulatory policy could also encourage rail companies to provide service to additional markets. Public investment could reduce indirection or increase productivity in the transfer of intermodal product between truck and rail or between and among rail carriers.

These many policy options have to be evaluated within the context of the current environment and direction of the industry. Most environmental factors seem to be pushing in the direction of a boarder use of truck rail intermodal. Constrained trucking industry capacity as the economy emerges from recession will join with



driver shortages and fuel prices to increase the cost of trucking. Completion of an expanded Panama Canal will likely move some container traffic from West Coast to East Coast ports, reducing the demand for rail capacity in the LA to Chicago corridors, making Western railroads more eager to compete for intermodal traffic. In the longer term, energy and climate policy, with their emphasis on clean and renewable energy sources, may dampen the demand for Western coal, again making rail companies more interested in competing for new markets. The public policy maker's challenge will be to find policy tools that guide and speed the environmental factors that are already in play.

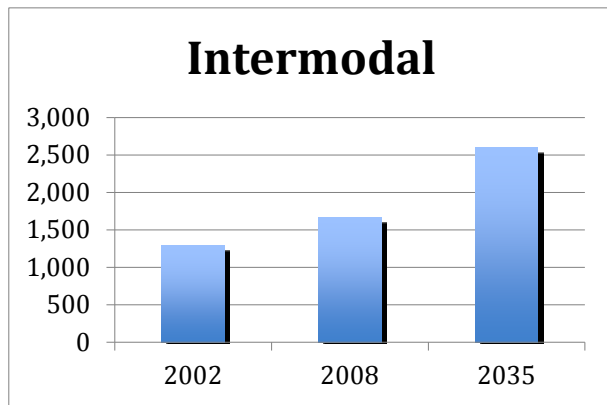
### Methodology

To gain insight into the challenges of intermodal freight, sixteen professionals from the rail, trucking, third party logistics, manufacturing, agricultural, and retail industries were interviewed. A listing of the interviewees and the firms they represent is given in Attachment I. Interviews were both in person and telephonic. An interview guide was developed to assist in ensuring that relevant topics were covered. A copy of the guide is provided in Attachment II. In many cases, the guide provided only a starting point, with the interviewees moving well beyond the topics of the guide.

The results of the interviews were compared and synthesized, with this paper as the result.

### Findings

Cost and service are the two factors that determine mode choice. Each is made up of



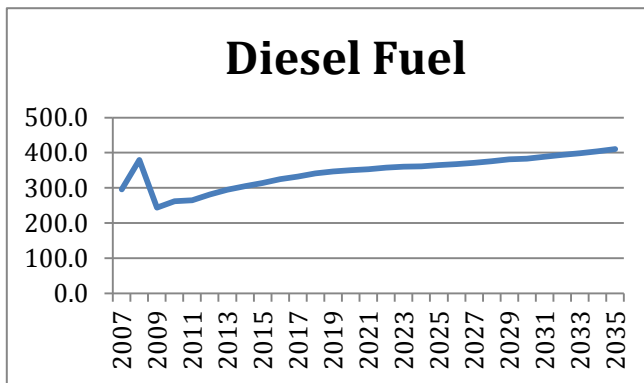
several parts that deserve specific comment. Nearly all are aligned to produce an increase in intermodal at the expense of long haul trucking. This is in keeping with the reduction in the rule of thumb from 700 miles to 400 to 500 miles before rail is considered. It is also supported by the forecasts of the Federal Highway Administration for an increase in intermodal, see Figure 1.

**Figure 1 Intermodal in millions of tons**  
Source: Federal Highway Administration, Freight analysis Framework

**Cost**

The relative cost of trucking and truck rail intermodal will have a significant impact on the choices shippers make. Fuel and labor prices are the two major factors that determine relative costs. Industry capacity, productivity, indirection, business strategy, government regulation and broader competitive forces also have impacts. All of these factors seem pointed to make the cost of trucking increase at a significantly greater speed than intermodal.

**Fuel prices** can be expected to increase. None of our interviewees saw any reason to expect fuel prices to remain constant or to decline. The US Energy Information Administration also predicts a steady increase in the price of fuel over the next twenty-five years, see Figure 2. While this forecast cannot predict any major



**Figure 2 Diesel Fuel Prices**  
Source: US Energy Information Administration

disruptions of supply, it clearly sees current prices as a trough, with a steady rise back to 2007 levels. Since fuel is the first or second largest cost in trucking, either following or leading labor, the cost of trucking can be expected to rise for the foreseeable future.

**Labor** costs can also be expected to increase in the trucking industry for a number of reasons.

Several interviewees pointed to demographics as a reason to expect a shortage of drivers. The existing driver workforce is aging. During the economic downturn many of drivers were furloughed. Some opted to retire and will not be returning to work as the economy recovers. As they continue to age, more drivers can be expected to retire in the near future.

As existing drivers leave the workforce, it will be difficult to replace them. Several industry people explained this problem with a question: Are your kids going to be truck drivers? It is not a job of choice. Even with national unemployment rates near ten percent, a driver shortage now exists. This problem may be made worse by the fact that some of the largest trucking firms closed or downsized their training facilities during the recession. They are now relying on technical school training facilities, which will make entry into the field of driving more difficult.

Many trucking firm officials also pointed to the Federal Motor Carrier Safety Administration’s revised Comprehensive Safety Analysis (CSA 2010) as another force that will reduce driver availability. While none of the truckers interviewed argued with the goal of CSA 2010, increased safety, they noted that it will eliminate marginal drivers from the field. It will also effectively reduce the hours of service for

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drivers. Finally, it may establish physical fitness standards for drivers, which would also have the effect of reducing driver availability.

The result of all of these factors is that the wages paid to drivers will have to increase to attract people to the field. Since labor is now the number one cost in trucking, this will increase the cost of freight moved by truck.

**Industry capacity** was lost during the recession. While it is difficult to exactly quantify the impact, some industry experts say that on the order of 2,000 trucking firms went out of business during the recession. A similar number are likely to leave the field before the recovery is complete. One third-party logistics provider noted that this capacity was not simply idled. It was lost. Equipment was sold overseas or scrapped. He went on to say that several years will be required for the industry to restore capacity. This observation is supported by the actions of one of the major national trucking firms that currently has no plans to add capacity. An official of that firm noted that they were waiting to be sure that demand was really there before they invested in additional capacity. He also noted that they expect to meet revenue targets through increased prices. While many companies are hiring, little of that hiring is related to expansion. Most seems related to normal turnover in the driver ranks. Prices will rise simply because capacity will fall short of demand for trucking.

Railroads dealt with the recession by idling capacity, rather than reducing it. Rail cars were parked on sidings all across the nation. Power units were mothballed. For this reason, rail company officials are very optimistic that they will be able to restore capacity and meet post-recession demands very quickly. The rail industry will have the continuing challenge of raising sufficient capital to maintain and expand its track and other infrastructure capacity. In the long-term, this could be problematic.

The relative positions of the two industries in capacity will tend to raise trucking prices relative to rail and thus increase the demand for truck rail intermodal.

**Productivity**, as the term is used here, is a euphemism for truck size. Increases in truck size and weight tend to make trucking more productive and, therefore, more attractive to shippers relative to rail. A short line railroad operator told of two experiences in two different states. Both raised truck weights to 100,000 pounds gross weight. One managed to secure Congressional approval to have the higher weights apply to the Interstate system within the state. In each case, the short line railroad lost bulk goods business to trucking. The added 20,000 pounds of gross capacity of the truck made the combination of improved service and only marginally greater costs more attractive to the shippers. This will be felt in those commodities that are high in weight, such as grains or timber. Many others will cube out before they exceed weight limits.

No one knows if larger, heavier trucks are in the future of the nation's highway system. We do know that a bill has been introduced in Congress to raise the

permitted limit to 97,000 pounds on the Interstate system. Individual states would have to take action to actually raise the limits. We also know that many industry groups, both representing shippers and carriers, have been actively pursuing the 97,000 limit. Finally, highway industry groups seem to be less strenuously opposed than they have in the past. Therefore, it seems a reasonable guess that some adjustment will be made in the reasonably near future.

If truck weight limits are increased, it will run counter to other forces. It will favor trucking over truck rail intermodal, at least for heavier commodities that will exceed existing weight maximums.

**Indirection** is a fact of life when dealing with fixed route systems like rail. A five hundred mile haul may not be a five hundred mile haul when the location of the intermodal terminals and tracks are considered. Figure 3 illustrates this point. In it two terminals are shown along with three points of origin and two points of destination. To use intermodal, the load must pass through terminals A and B. If it is starting at origin points C or E, the drayage haul will be in the direction of the overall trip. If it's starting at origin D, the drayage will move in the opposite direction of the overall movement. It will have to move West before going East. Similarly, if the destination is F, the final drayage will be in the overall direction of the haul, but if the destination is G, the drayage will be in the opposite direction. Clearly, the freight manager would have to carefully evaluate both the cost and the service involved in these potential intermodal movements.

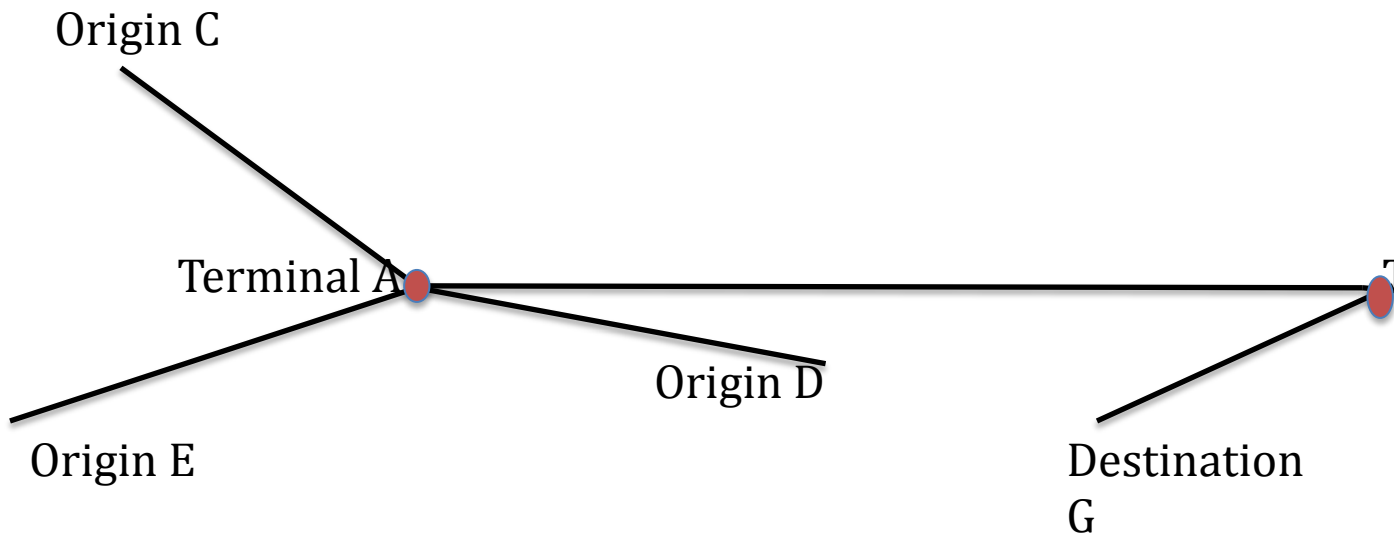


Figure 3 Terminal placement and indirection

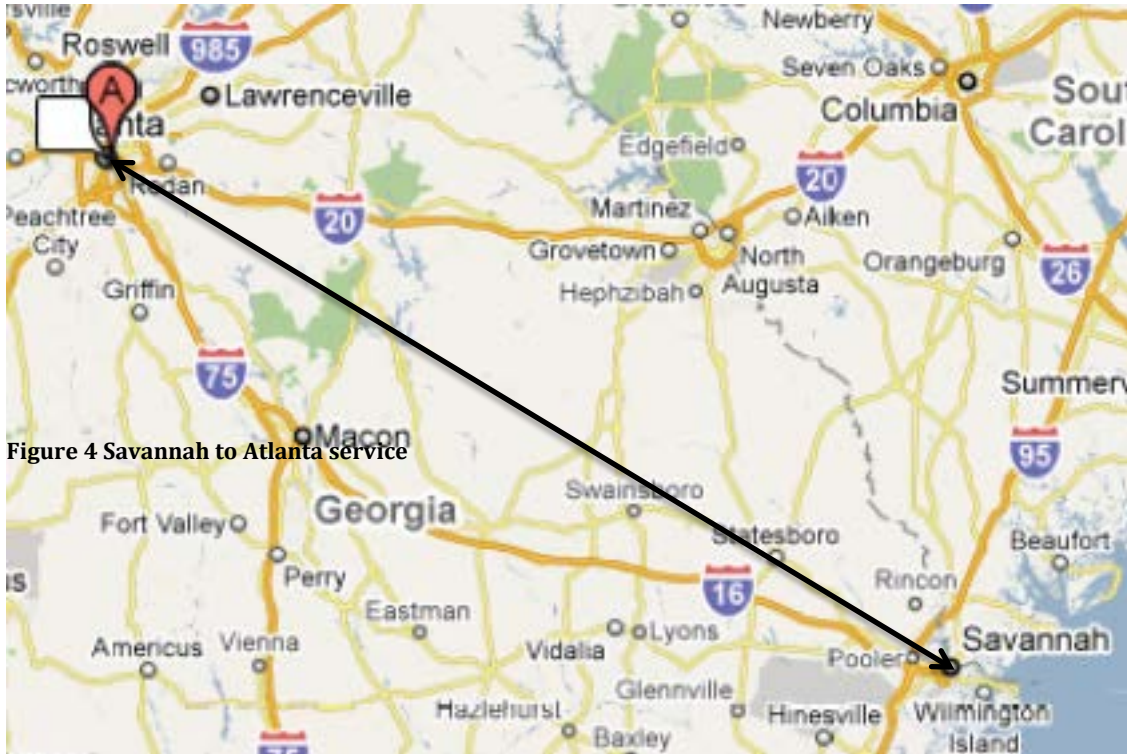
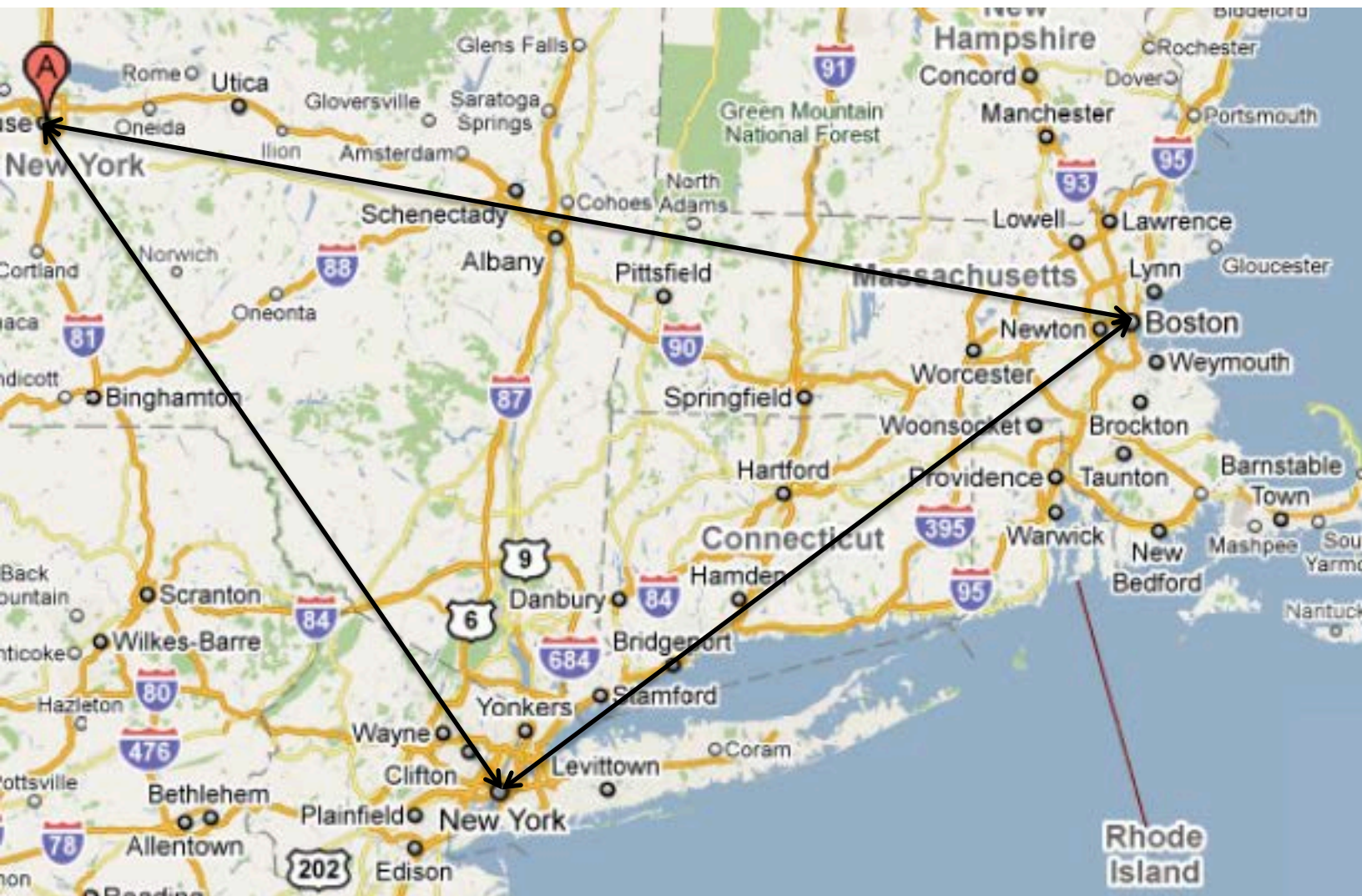


Figure 4 Savannah to Atlanta service

Another type of indirection is illustrated in Figures 4 and 5. Figure 4 is a successful intermodal service between Savannah and Atlanta. While the distance is fairly short, less than 250 miles, the corridor has sufficient density and balance that it supports frequent arrivals and departures and leaves equipment well positioned.

This can be contrasted with the service illustrated in Figure 5. It is a less successful service of only slightly less length in an equally dense corridor, New York to Boston. It is less successful because it follows the rail corridor through Syracuse (A), a distance more than twice as long as a more direct route from origin to destination. In this corridor service is less reliable and more time consuming. The consequence of a missed train could be several days of transit time.





**Business strategy** suggests a deliberate planned action to bring about a desired result. In this context actions may fall into this category, but they may also be the result of fumbling and bumbling.

Dealing with the deliberate approach first: A railroad is a for-profit company with limited capital and a range of investments it might make. If it is rational, it will select the investment options that make the highest rate of return. Freight railroads are most productive when they move long trains over long distances. The LA to Chicago corridor or the Wyoming coalfields to the Midwest corridor most easily illustrate this. If tracks, equipment and labor can be kept busy with these long and productive hauls, companies would be silly to mess it up with less profitable shorter haul service. Intermodal services to Denver or Omaha might be examples of such shorter haul services. Particularly, if establishing shorter haul service will require a capital investment that competes with investments that benefit the more profitable long corridors, that company will likely

Figure 5 New York to Boston via Syracuse

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pass on providing the new service. The result of this rational decision-making is a relatively low level of intermodal service over large parts of the country.

The bumbling aspect of business strategy deals with how some rail companies calculate costs and prices. A short line rail executive, who once offered profitable, low cost, moderate volume intermodal service, characterized his approach to setting prices as covering marginal costs and returning something to his bottom line. In his specific case, the intermodal service involved a low-cost ramp to move trailers to flatbeds and a rail corridor that had sufficient capacity. The trains were light, so they did little damage to the track. The company overhead was covered from its other operations. The service had only to cover marginal costs and return a little more for it to be profitable. Moreover, he saw it as a service to his customer base that was good for his overall business. He contrasted this with what he called the usual class one costing model in which all costs have to be fully allocated. Had a fully allocated cost model been used in the case of this intermodal service, it would not have been profitable, at least at the start. Not being profitable, it would not have been started. His point, and the source of bumbling, is that companies need to really understand their costs and the cost of their competitors. Not fully understanding these costs, and blindly following a fully allocated cost-plus model, companies sometimes charge too much and sometimes too little. They rarely invest in a new market to build the traffic. While not all companies practice this bumbling approach, it does exist and does deter new services.

Both aspects of business strategy are at work today and tend to operate against expanded intermodal service into new markets.

**Government regulation** can have various impacts on the cost of moving freight and on the competitive balance within the industry. One aspect of regulation is enforcing existing rules. For example, truck size and weight rules, when not enforced can have a greater affect on competitive position than increasing legal loads. The failure to enforce truck weight laws effects the competitive position of trucking companies. Those who cheat put those who comply at a disadvantage and tend to lower the prices of all trucked goods. This, in turn, tends to make intermodal less attractive.

An intermodal manager who operates in California cited the clean air rules that that state has adopted. His firm complies with those rules and suffers costs as a result. Too many other firms risk the fine and tend to put his company at a disadvantage.

The probable impact of CSA 2010 has already been discussed. Any number of tax and energy policies could also affect the competitive balance in the industry. Some of these will be discussed later under conclusions.

**Broader competitive forces** could include dozens of things. For the purposes of this discussion, the focus will be on two: Panama Canal expansion and near-sourcing, or on-shoring.

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The Panama Canal is being expanded to accommodate larger vessels. When it is completed in 2014, it will make the East Coast ports of North America more competitive for some international trade coming from the Pacific Rim. Not only will this make the West Coast ports of LA/Long Beach and Seattle/Tacoma more competitive, it may also make the railroads that currently serve those ports more competitive. Those companies have a huge investment in infrastructure and rolling stock predicated on serving traffic over the land bridge. If the volume moving over the land bridge is even marginally reduced, those companies can be expected to take steps to protect their business. Reduced pricing is an obvious step they might take. Reduced pricing will help to retain traffic into West coast ports. It will also make other services and businesses more attractive for the rail companies. Just as BNSF once embraced J.B. Hunt as an intermodal partner when economic times were difficult in the past, signing a very favorable long term contract, both the UP and BNSF might look more favorably upon intermodal when faced with greater competition for their core businesses.

As used here, the terms near-sourcing or on-shoring really mean a resurgence of manufacturing in North America. When fuel prices spiked in 2007, pundits around the world predicted that more manufacturing would move closer to the point of consumption, North America. Most saw this as a probable growth in Mexican and US production. Figure 2 points to a return to 2007 fuel price levels over time. Greater economic prosperity in China and other emerging economies is raising the cost of production in those countries. It is reasonable to expect some growth—or return—of manufacturing in North American over the next decades. This in turn could force a shift in the freight corridors. In some cases that shift may be from East-West to North-South. In others it may produce shorter corridors from production to markets. In any case, the established corridors and the services that now operate in those corridors will likely be disrupted to some degree. Disruption will force a more competitive environment as companies reevaluate their business models. This will likely help rail-truck intermodal.

### **Service**

Service is comprised of two, equally important, aspects: Actual service provided and the perception of service provided.

Since perception defines the reality of the customer making the mode selection choice, perception is reality. The widely held perception of rail service is that it is bad. One logistics manager summed it up this way: Railroads are just hard to work with. A class one railroad executive admitted that: We don't make it easy for people to do business with us. At least one of the class one railroads sees the problem as so significant that they have defined a senior management position with a charge to change how the company is viewed. An intermodal freight manager suggested that a useful government action would be to conduct a public relations campaign aimed at dispelling the notion of railroads providing bad service.



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Several of the intermodal managers interviewed argued that this perception is based on 1980's performance and that the rail companies have changed in recent years, which is probably correct; but so long as many shippers and carriers view rail as a bad service partner, the perception will continue to be a barrier to the broader use of intermodal.

Actual service is defined by transit times, reliability, accessibility and the condition of the delivered product. On most of these counts, intermodal does fairly well. For example, Triple Crown, the Norfolk Southern subsidiary that runs trailers on rail service, takes great pride in providing near truck service at reduced prices. Triple Crown is usually ranked very high among the intermodal service providers. Their technology allows trains to be assembled and disassembled very quickly, improving the overall transit times.

Another frequently cited success story is the BNSF's "UPS train" that provides very fast scheduled service to meet the needs of the package delivery service. Other intermodal providers have attached their loads to this train for timely service. In particular, a provider of refrigerated cargo service cited this train as one of the reasons that their service was successful.

Clearly, the rail companies can and do provide fast and dependable services, but they do not provide it everywhere. Corridor density and balance are key factors in determining where service will be provided. These factors define how accessible a service will be. Figure 6 is a map of the US. It indicates with arrows a few corridors in which services are provided. In the West, the distances are so great and the



Figure 6 The impact of corridor density

population so small that little service is possible. Essentially services are limited to the Coast to Chicago or from the major Texas cities to Chicago. Even a major population center like Denver is not well served because the loads are not balanced. Denver is a consuming center rather than a producing center. If an intermodal provider served Denver, trains would have to stop, reducing the efficiency of the long haul Coast to Chicago corridor. In addition, empty cargo containers would have to be repositioned to the Coast, adding cost to the service and increasing fuel consumption and emissions. Therefore, service is limited.

This can be contrasted with the situation in the East where density makes service from Chicago to Cleveland and Columbus, with continuing service to Norfolk, viable. Those cities contain enough demand and produce enough products that stops to reconfigure trains, delivering and accepting cargo, make economic sense. These are only two of the destinations in the East where density and balance allow services to be provided.

Cargo damage is another consideration. Rail tends to require more attention to packaging to avoid damage to cargo. The shifting motion of the trains tends to move cargo in transit. One shipper cited potential damage as a significant deterrent to the use of rail. He noted that repairs were often required at the port. While this was not

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necessarily the determining factor in his selection of mode, when taken with other service issues, it pushed him from rail.

A third-party logistics provider agreed that cargo damage was a consideration for many shippers, but it was an issue that could be overcome with improved packaging. The question was if the savings was great enough to warrant the effort.

Most interviewees downplayed the importance inventory management strategies, like just-in-time delivery, as drivers of high service requirements. As one put it: Few products really are that time sensitive. Another logistics manager said that shippers could be worked with to overcome issues related to inventory management.

Many of the service characteristics discussed tend to push against the expanded use of intermodal. The fact that much good service is now provided does not seem to outweigh the impression held by many that rail equals bad service. Moreover, the facts of geography will dictate limited service for much of the country. The densities and balance simply do not exist for intermodal to be used without a major reduction in service.

### **Conclusions**

A number of factors currently in play are combining to increase the use of truck rail intermodal. Fuel and labor costs are the two most significant of these factors. In the short to mid-term, we can expect fuel prices to rise and driver shortages to force an increase in the cost of labor in the trucking industry. This increased costs coupled with limited trucking capacity will force many shippers to reevaluate the options available, giving a boost to intermodal. In the longer-term, broader competitive issues, such as the expansion of the Panama Canal may force some rail companies to become more competitive in a broader range of markets. Geographic factors will tend to limit access to intermodal services to those traffic lanes with freight density and balance. The perception of poor rail service will continue to keep some shippers away from intermodal.

The challenge for public policymakers who would speed the adoption of intermodal as a tool to reduce energy use, greenhouse gases and highway congestion is to find policies that accent those factors that are already moving the market toward intermodal and to diminish those forces that tend to hinder its adoption. Possible actions can be categorized into tax and energy policy, direct investment, regulatory policy and public relations.

## **Tax and Energy Policy**

Tax and energy are so inter-related that they must be considered as one. Essentially, any actions that drive up the cost of trucking or reduce the cost of rails will benefit truck-rail intermodal. The following might be considered:

1. Carbon taxes of various types have been discussed to reduce greenhouse gas emissions and energy consumption. A broad carbon tax would have two impacts that would move more cargo to intermodal. First it would increase the cost of diesel fuel, directly increasing the cost of trucking. Second, if combined with clean fuel initiatives, it might reduce the demand for western coal, forcing rail companies that currently move that coal to seek other markets. This would have the effect of reducing the cost of rail and making intermodal more attractive.
2. Highway user taxes, motor fuel taxes and heavy vehicle taxes, if increased would increase the cost of trucking. Such increases can be justified based on the need to increase investments in the national highway network. They could also be justified, certainly in the minds of rail company officials, as a way of leveling the playing field between the modes. Rail officials nearly all argued that trucks are heavily subsidized. How much more does it cost to build a highway to accommodate trucks, rather than automobiles, asked one rail official. His question missed the point that highways have to be built to handle drayage and local delivery, even if rail is used to a maximum degree. Another rail executive noted that truckers can expense highway user fees, but rail company investments in their infrastructure must be depreciated. The objective of both is investment in infrastructure. The issue of who is subsidized tends to depend on who is doing the analysis, but, regardless of the reason for raising highway taxes, such an increase will have the effect of moving some additional freight to intermodal.
3. Rail investment tax credits are another instrument that will tend to increase rail capacity and, perhaps, reduce rail costs. Class two and three rail companies have had the ability to gain tax credits for a portion of their investments in infrastructure. While the authority for those credits has now lapsed, Congress is considering new legislation that would restore the class two and three program and extend it to class one companies.
4. Extending tax-exempt bonding authority similar to that enjoyed by public sector, and some private sector, highway authorities to rail companies for investments in infrastructure would have the same impact as the tax credit proposal for a limited range of rail investments.

## Direct Investment

Rail companies are for-profit businesses. They make rational decisions on where capital should be expended, and they live within capital budgets. The result is that they may not choose to make investments that might serve larger public goals such as emission reduction or highway congestion relief. Some selected public investments might help to achieve those public goals without harming rail company margins.

5. Public-private partnerships such as those employed for the Crescent Corridor, the Heartland Corridor or CREATE were cited by many rail company officials as the type of public involvement that they would welcome and that would benefit the rail industry. Each of the projects mentioned will improve rail service and reduce emissions, making rail more attractive to all customers. Finding other opportunities for such partnerships could improve the climate for intermodal freight.
6. Research and development of items like lower weight containers was another investment opportunity recommended by some. Specifically, research on lower weight refrigerated containers was suggested as a way that that segment of the industry could move to containers—as opposed to trailer on flatbed—as the balance of the industry is moving.
7. Another research effort could involve looking at the various operations involved in intermodal freight movement to determine the optimal vehicle configuration that should be used in each. For example, could power units used in drayage be powered by liquid or compressed natural gas to reduce emissions in critical urban areas?
8. Direct provision of facilities was discussed by some, but cautiously. For example, the type of intermodal hub now nearing completion at New Baltimore, OH is seen as a great benefit to intermodal service. More of those types of hubs, correctly located might make intermodal more attractive. Rail officials were very cautious in this area, citing existing publicly supported facilities that are not properly located. One rail executive pointed to a specific publicly sponsored terminal that “...is on a cul-de-sac, not a crossroads.”
9. Several rail officials mentioned planning and related infrastructure support as a useful role for the public sector. When a major new rail facility is built, it will place major strains on existing highway infrastructure and on local land use plans and restrictions. Helping to plan for the local impacts of such facilities and to ensure adequate highway capacity was seen as one method of providing useful support so that the benefit of those investments can be

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maximized.

10. Grants or low interest loans for rolling stock purchases was mentioned by some short line operators as another role for the public sector. The high cost of purchasing replacement cars and locomotives will be a major challenge for the viability of short line and regional rail companies. As locomotives have to meet stricter emission standards, this is increasingly problematic.

### **Regulatory Measures**

A number of regulatory actions that could or are being taken by public agencies have a significant impact on the viability of intermodal traffic.

11. Enforcing existing laws is a topic that was discussed previously. Weight laws that are not enforced penalize those truckers who comply and have the effect of reducing overall trucking costs, making a rail option less attractive. The same can be said for other rules such as California's clean air requirements.
12. Under federal law international containers can be treated as either divisible loads or non-divisible loads for permitting purposes. A grain dealer explained that moving a container of grain out of Wisconsin, Iowa or Indiana added about \$400 to his cost when compared to Illinois. This is because Illinois is the only one of the states that will issue an overweight permit to move a full container. In the other states, the container cannot be completely filled. The result is that his company does little containerized grain business outside of Illinois.
13. Raising truck weight limits will have the effect of making trucking more competitive in some commodity markets. While there may be compelling public policy reasons for raising those limits, policymakers should consider the range of impacts that will follow.
14. Allowing additional weights for trucks draying cargo to intermodal facilities might provide some attraction for potential intermodal shippers. For example, allowing a 97,000-pound load, with added axles and braking, in drayage over a range of 50 or 100 miles of a terminal for an intermodal move might tip the decision in favor of such a move. This idea is not without complications. It would make enforcement somewhat more complex, since legality would depend not on the load but the destination. This complication might be reduced, if loads in drayage were treated as permitted overweight loads, rather than normally allowed loads.
15. Safety regulation can also have unforeseen consequences. While no one disagrees with the objectives of CSA 2010, it will likely have the result of lost



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trucker productivity and higher trucking costs, which will benefit intermodal movements. Similarly, the requirements that rail companies install positive train control systems is a tool to reach a laudable goal, improved safety, but it may divert capital that might have added track capacity or terminal facilities. As with point #13, the issue is whether policymakers have considered the range of probable impacts and weighed alternative methods for reaching the desired goals.

### **Public Relations**

A well-defined public relations effort might benefit intermodal in two ways.

16. Rail service has a bad reputation in the minds of many potential users. One intermodal manager suggested that the government take some steps to help mend that reputation. Statements from the USDOT in the form of published performance data or from the EPA in the form of information of the climatic impacts of rail versus truck could better inform and convince potential customers that the rail industries self-serving adds.
17. Using less fuel and causing fewer emissions should be seen as the right thing to do. Not since President Ford's WIN campaign of the 1970's has the government made a real effort to convince the American people that something was good for them. That effort failed dismally, but perhaps the climate is now right, with the slow climb from the depths of the Great Recession and a growing awareness our global vulnerability, for another effort to convince Americans that driving smaller cars and moving freight by more efficient modes is a good thing.

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**Attachment I**

**Interviewees**

Mark Wegner, President Twin Cities and Western
Paul Nowicki, Assistant Vice President, BNSF
Bill Harris, Vice President Norfolk Southern
Chris Luebbers, Intermodal Manager, Norfolk Southern
Carl Warren, Director Strategic Infrastructure, CSX
Ed Burkhardt, President Rail World
Matt McPhearson, Intermodal Manager, Marten Trucking
Bill Mathison, Vice President for Intermodal Operations, Schneider National
Eric Ervin, Senior Managing Director, Integrated Management Sciences JB Hunt
Dan Federspiel, Operations Manager, Triple Crown
Mark Wagner, Consultant Schneider Logistics
Rich Murphy, President Murphy Warehouse
Jon Peebles, Logistics Manager, John Deere
Bo DeLong, President DeLong Companies
Larry Alsom, President Alsom Produce
Al Tresvante, North American Logistics Manager, Target



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**Attachment II**

**Truck-Rail Intermodal  
Interview Guide**

We are taking part in a study of factors and policies that might tend to make truck-rail intermodal a more attractive shipping option for shorter hauls, say in the 300 to 600 mile range. University researchers have looked at the few examples that exist of shorter hauls and at past studies of the subject. Our effort is to solicit the views of practitioners—railroaders, truckers, Third-party providers and others—on their perspectives and experiences.

**Background**

1. Name and Title: \_\_\_\_\_
2. Company: \_\_\_\_\_
3. What is the nature of your company?
  - a. Class I RR
  - b. Class II or III RR
  - c. Trucking Company
  - d. Third Party Provider
  - e. Timber producer
  - f. Ag producer
  - g. Heavy manufacturer
  - h. Other \_\_\_\_\_

**Company Practices**

4. To what extent does your company now use (manage or handle) intermodal freight? \_\_\_\_\_  
\_\_\_\_\_
5. Has this pattern changed in the period 2005 to the present? If so, how and to what extent? \_\_\_\_\_  
\_\_\_\_\_
6. Are your intermodal shipments typically containerized? \_\_\_\_ Truck on flatbed? \_\_\_\_\_ Other? \_\_\_\_\_
7. What factors enter the decision to containerize? \_\_\_\_\_  
\_\_\_\_\_
8. If you make extensive use of intermodal, how would you describe your business model that allows you to use it successfully? \_\_\_\_\_  
\_\_\_\_\_
9. Do technologies exist that make intermodal more attractive? \_\_\_\_\_  
What are they? \_\_\_\_\_

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10. Is there a potential public sector role in fostering the use of those technologies? \_\_\_\_\_

11. Are there market or environmental factors that tend to make intermodal more viable? What are they? \_\_\_\_\_

12. Is there a public sector role in fostering those conditions? \_\_\_\_\_

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13. To the extent that you do not use (manage or handle) intermodal, or if you use of it is limited, what market or service factors might make it more attractive? \_\_\_\_\_

14. What is the impact of logistics and inventory management strategies on the viability of intermodal (e.g., shifting locations of distribution centers)? Can areas or commodities be found that are less impacted by the service requirements of JIT and similar management approaches? \_\_\_\_\_

15. What strategies can be developed to overcome shipper service concerns? \_\_\_\_\_

16. To what degree, if any, does consistency and predictability overcome speed in-transit? Commodity specific? \_\_\_\_\_

17. What advice would you give to policy makers in the Congress or the USDOT who might want to promote a greater use of intermodal freight? \_\_\_\_\_





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