Should the Federal Government Allow the States to Increase Truck-Size Limits?

Yes: Allow *All* States to Set Truck Standards

Robert E. Farris

There is a battle raging in America about the expanded use of longer combination vehicles (LCVs) on U.S. highways. The battle is not over yet; no winner has been declared. But depending on the outcome, there could be many losers, especially American freight shippers and ultimately American consumers.

The Need to Enhance U.S. Productivity

In the 1990s the U.S. economy faces a number of pressing challenges, and our responses to them will to a large degree determine both the nation's status as a world political and economic power and the standards of living enjoyed by Americans far into the next century. Among these challenges is the need to increase the productivity of the service industries. The manufacturing sectors of our economy have substantially recovered whatever productivity losses we may have suffered relative to foreign producers, but the story is very different—and much more disturbing—in the area of services.

In the service sector, which is becoming increasingly dominant, productivity growth has been slow, if not stagnant. If Americans are to prosper here at home and to compete successfully abroad, we cannot be satisfied with the status quo. The freight transportation sector is only one of the service areas in which improved productivity is essential, but it is an area of particular importance to America's ability to compete. Our national geography makes this so. Goods manufactured in the United States must generally travel greater distances than is the case in most other countries. In addition, the production and distribution of a good for export involve many more freight movements than are needed to bring an import from port to market. Unless our freight transportation system continues to be substantially more efficient than those of our economic rivals,

Robert E. Farris is the vice president for policy at the American Trucking Associations.

our ability to compete with goods produced abroad will be seriously impaired.

The U.S. Motor Carrier Industry

In the United States freight is overwhelmingly transported over highways by motor carriers. Fully 78 percent of America's annual freight bill is attributable to services rendered by motor carriers—and this figure grows to 90 percent if surface transportation alone is considered. Motor carriers employ 7.6 million Americans who earn $169 billion a year in wages. All told, trucking accounts for nearly 5 percent of the gross national product.

We at the American Trucking Associations are fond of saying, "If you got it, a truck brought it." Trucks haul virtually everything the American consumer eats, wears, buys, or uses. Trucks serve every U.S. community, no matter how small or remote. Indeed, most communities are served solely by motor carriers. We also like to say, "Without trucks, America stops." The fact is that nearly all shipments of time-sensitive or high-value goods—the goods most essential for U.S. manufactures and exports—are handled by truck.

America's preference for truck transportation is not happenstance. No other mode of transportation can compete with trucks' flexibility, efficiency, and service. Obviously, if this nation is to enhance the productivity of its freight transportation sector, a large part of the effort must be focused on improved motor carrier productivity.

Much has been done in this area over the past decade. Trucking was largely deregulated at the federal level in 1980. Although deregulation has not been without its problems, it is estimated that trucking deregulation may have saved the U.S. economy $30 billion during the 1980s in the form of lowered inventory costs for manufacturers and increased logistical efficiencies. Little if any of these savings have remained with the motor carrier industry, however. Profits today are well below those reported before 1980.

Further gains are possible. The U.S. economy could reduce transportation-related costs by an additional $4 billion per year by increasing the use of larger and heavier trucks. These savings to America's freight shippers and consumers would represent an additional productivity improvement similar to that which accrued from motor carrier deregulation. But this opportunity is currently threatened by the reluctance of the railroads to see their profits endangered by more efficient motor carriers.

What Are LCVs?

The term *longer combination vehicles* commonly refers to one of three types of vehicles: a truck tractor pulling three 28- or 28.5-foot trailers ("triples"), tractor-trailer combinations involving two 48-foot or 45-foot trailers ("turnpike doubles" or "double 48s"), or tractor-trailer combinations involving one 48-foot or 45-foot trailer and one 28-foot or 29-foot trailer ("Rocky Mountain doubles").

The expanded use of these vehicles could add substantially to America's transportation productivity. Not all motor carriers could or would employ these vehicles. They are not suitable for all operations

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or for all kinds of freight. But these configurations confer on certain types of trucking operations an additional flexibility and efficiency in the use of equipment that is impossible to achieve with conventional tractor-trailer combinations.

Unfortunately, most motor carriers are currently prevented from operating LCVs nationally. They are thus unable to maximize their productivity. A brief discussion of federal regulation of motor vehicle sizes and weights is necessary to understand why.

The term *longer combination vehicles* begs a question: longer than what? The answer is longer than the standard minimum required by federal law. Since 1982, federal law has required that states allow truck tractors pulling one 48-foot trailer ("48s") or truck tractors pulling two 28.5-foot trailers ("doubles") free access to the interstate highway system and the so-called national truck network, a portion of the federal-aid primary highway system. Individual states are free to allow longer vehicles on interstates and the national network, but they must permit vehicles of at least this length. Oddly enough, given their name, more widespread use of LCVs is currently limited, not by statutory limits on length, but by a federal limit on overall vehicle weight.

There are two federal weight laws for highway

motor vehicles. The first, known as the "bridge formula," requires vehicles to adhere to certain spacing of axles and limits axle weights. This prevents a vehicle from putting excessive stress on highway bridges. All motor vehicles traveling the interstate system must conform to the federal bridge formula. The second relevant federal law on weight prescribes a limit on gross vehicle weight of 80,000 pounds for motor vehicles operating on the interstate system.

The federal law that prescribes a limit on gross vehicle weight of 80,000 pounds for motor vehicles operating on the interstate highway system effectively prevents the broader use of LCVs.

It is this second limit on gross vehicle weight that effectively prevents the broader use of LCVs on the nation's interstate highways. LCVs, as described above, can easily conform to the federal bridge formula; they cannot, however, operate economically at weights at or below 80,000 pounds. Nor can they operate effectively if they are banned from interstate highways.

Yet LCVs are operated widely in this country, in the West and on certain eastern toll roads. They are allowed to operate by reason of a set of grandfather exceptions to federal size and weight laws.

Table 1: Operations of Longer Combination Vehicles (January 1991)

State	Triples	Turnpike Doubles	Rocky Mountain Doubles
AK (summer only)	X	X	X
AZ (I-15 only)	X	X	X
CO	X	X	X
FL (turnpike only)		X	
ID	X	X	X
IN (toll road only)	X	X	X
KS (doubles turnpike only; triples I-70 only)	X	X	X
MA (turnpike only)		X	
MT	X	X	X
NV	X	X	X
NY (thruway only)		X	
ND	X	X	X
OH (turnpike only)	X	X	
OK	X	X	X
OR	X		X
SD	X	X	X
UT	X	X	X
WA			X
WY			X

When Congress authorized the funding and construction of the interstate highway system in 1956, rules for operations on the new highways were also developed. These included, for the first time, federal limits on axle weights and gross vehicle weight. The limit on gross weight, originally 73,280 pounds (later raised to 80,000 pounds), represented a compromise among the various states. It was higher than the weight limits in some states and, more to the point, lower than others. So a grandfather clause was enacted to preserve state gross weight and axle-weight limits that exceeded the new federal restrictions.

It is under these grandfather provisions that LCVs are able to operate today in some states. Those states with weight limits above 80,000 pounds in 1956 are allowed to choose whether LCVs can operate on their highways, while states that had lower limits 35 years ago do not have this choice.

LCVs operate today in fourteen western and Great Plains states and on five eastern toll roads. (See Table 1.) In some of these jurisdictions, LCVs have been running for more than 30 years.

In none of these states, however, are LCVs allowed to travel without restriction. Everywhere they run, LCVs operate only under permits issued to individual trucking companies that are allowed to use the longer vehicles only under specified conditions, on specified routes, and by drivers with specified training. Violation of the terms of these permits results in their revocation. The extraordinary safety record of LCVs may be attributed in large part to the restrictions under which they are operated.

Given the successful use of these vehicles in some states, should all the states not have the right to decide for themselves whether LCVs are appropriate for their roads and their economies?

The Transportation Research Board Study

In 1987, as part of the Surface Transportation and Uniform Relocation Assistance Act, Congress directed the Transportation Research Board of the National Academy of Sciences to study a number of proposals for changing the federal vehicle weight restrictions. In June 1990 the board issued the results of its study and its recommendations for congressional action. In *Truck Weight Limits: Issues and Options* the board recommended: "Congress should broaden the process for exemptions so that it would not be necessary for states to claim grandfather exemptions in order to permit vehicles to operate over the federal

gross weight limit of 80,000 lbs. Rather, all states should be allowed to establish permit programs for heavier vehicles, provided that such programs included provisions to control the characteristics and operations of permit vehicles. Key features of the special permit programs would be designated routes, maximum weights, fee structures, and safety restrictions for permit vehicles." Although the board's study did not directly examine issues concerning vehicle length, this recommendation implies that Congress should give all states the option to allow LCVs and other heavier vehicles to travel their highways under restrictions designed to ensure safe operations.

The TRB report justifies its conclusion in part by providing data on the increased productivity and transportation efficiency that the more widespread use of heavier vehicles would bring to the U.S. economy. If LCVs were introduced in all fifty states, the Transportation Research Board concluded, the U.S. transportation system would save $5.2 billion annually. The costs of needed upgrades and repairs on some bridges on the interstate system (pavement costs would actually be lower) would reduce the net savings to the economy to about $4.3 billion per year.

A study conducted by the Trucking Research Institute (TRI) of the ATA Foundation arrived at a similar conclusion. Were LCVs permitted to operate on the interstate and primary federal-aid highway systems—where these roads are adequate to handle the longer vehicles—TRI estimates net savings to the economy of $4.4 billion a year.

There is no doubt that LCVs offer the potential for enormous productivity improvements for the U.S. transportation sector. Why then is there such opposition to their increased use?

The Railroads' Opposition

During the nineteenth century, the railroad industry was America's premier mode of transportation. That is no longer true. Today's railroad industry is a mere shadow of its former self.

The tonnage hauled by U.S. railroads has increased hardly at all in the past 60 years. Only about 10 percent of the country's freight measured by value, some $30 billion a year, is carried by rail. Furthermore, rail shipments are often low-cost, bulky commodities such as coal, grain, and minerals. Railroads employ fewer than 250,000 people. The rails are a small industry compared with motor carriers, which haul nine times more freight. But

"Directives from the Government, meetings with the Union, disputes with shippers—it's getting more and more difficult to haul yak fat these days."

the strong opposition of the railroad industry to LCVs threatens to stymie the adoption of this new and more productive transportation technology.

The railroads and the front groups they sponsor have raised several arguments in an attempt to counter the apparent economic value of LCVs. These arguments generally fall into three categories—productivity, safety, and environmental concerns.

A National Academy of Sciences study concluded that all states should be allowed to establish permit programs for heavier vehicles that would include designated routes, maximum weights, fee structures, and safety restrictions for permit vehicles.

The Real Story

Productivity. The railroads claim that LCVs would divert so much freight from the rail system that the railroads would be left destitute. The Association of American Railroads (AAR), the prime railroad trade association, warns that the railroads stand to lose up to 52 percent of their profits.

This is plainly nonsense. Only that freight that is currently the most competitive between the two modes—intermodal container traffic, for example—is likely to be diverted to LCVs. The AAR estimates that this most competitive freight accounts for some 14 percent of the industry's ton-miles. This is far higher than the TRI's estimate. Furthermore, *most competitive* implies least profitable. How can a small proportion of highly competitive freight generate more than half the rail industry's profits? Clearly, it cannot. The railroads' most profitable business is the carriage of commodities such as coal, where shippers have little choice but rail. Moreover, the AAR has admitted that the damage estimates implicitly assume that the railroads will take no actions to protect their traffic by adjusting rates or improving service.

The method of LCV operation—under restricted permit, on the best highways, under safe weather conditions, and by the safest, often specially trained drivers—undoubtedly accounts for their safety records.

The Transportation Research Board estimates that lifting the 80,000-pound federal weight limit through a more permissive state permitting system might reduce rail ton-miles by 2.5 percent annually. The TRI finds that the increased use of LCVs would divert $200 million worth of rail freight to LCVs and would cause the rails to reduce rates on LCV-competitive freight by another $400 million. This seems rather a paltry adjustment when we consider the productivity benefits provided by longer combination vehicles to shippers and the public.

Safety. The AAR and its front group CRASH (Citizens for Reliable and Safe Highways) have loudly decried the safety record of LCVs. But when pressed, railroad interests admit that the supposed safety issue is only a useful emotional smokescreen for the railroads' real economic objections to LCVs. The public obviously does not care about railroad profits, but people might be fooled by slick media campaigns into believing that LCVs are unsafe.

In fact, however, LCVs have established a sterling record of safety wherever they have operated. For example, during 1989, the last year for which information is available, LCVs operated some 500 million miles on U.S. highways and were involved in just four fatal accidents. During that same year, twice as many people (eight) were killed in skiing accidents, and over 800 individuals were killed in accidents at railroad grade crossings.

The TRI's study of longer combination vehicles found that safety officials in all the jurisdictions that allow LCVs believe them to be as safe as or safer than any other class of vehicles on the road. Moreover, no jurisdiction that has allowed LCVs to operate extensively has ever cancelled its LCV permit program. The method of LCV operation—under restricted permit, on the best highways, under safe weather conditions, and by the safest, often specially trained drivers—undoubtedly accounts for their safety records. This is the only manner, the ATA submits, in which LCVs should ever be operated.

What is more, one of the key findings of both the TRB and TRI studies is that the use of larger, more efficient truck configurations would result in fewer miles traveled by trucks on the highways—some 2.3 billion fewer miles and some 25,000 fewer vehicles. As a welcome corollary, the Transportation Research Board found that there would consequently be some 40 fewer fatal highway accidents each year. Since train-miles would also be reduced a moderate amount, we must assume that rail deaths would also decrease. In other words, we can have both productivity *and* safety.

The Environment. The railroads' argument that the use of LCVs would lead to greater vehicle-fuel consumption, more highway congestion, and more air pollution overlooks the fact that the wider use of LCVs would mean fewer trucks on the road, not more. With an estimated 25,000 fewer trucks on the road, fuel savings could ultimately reach some 320 million gallons of diesel fuel annually. Air pollution would be reduced in two ways—directly through a reduction in the numbers of vehicles on the road and indirectly because of reduced congestion.

The Real Story: The Railroads

The real opposition to the broader use of longer combination vehicles stems from their real productivity advantages. For more than half a century, the railroads have fought every increase in the productivity of motor carriers, just as they have sought to increase motor carrier costs. The reason is easy to find. If trucks become more productive, railroads must reduce their rates to compete. If motor carriers' costs go up, railroad rates can rise more freely, and railroad profits can rise with them.

This year's media battle over LCVs is not really about safety, despite the safety rhetoric. It is about the efficiency of America's freight distribution system, and ultimately it is about U.S. competitiveness abroad and the standard of living of U.S. citizens here at home. Are railroad company profits so important that we must throw all that away?

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Should the Federal Government Allow the States to Increase Truck-Size Limits?

No: Allow Longer Trucks *Only* If Fees Are Increased

L. Lee Lane

The "market revolution" begun in the 1980s must be complete. The Berlin Wall is down, McDonald's is in Moscow, and highway managers are talking as if they were private-sector businessmen. For example, one highway official recently proclaimed, "Truckers are our best customers." Unfortunately, highway managers appear to have mastered market rhetoric without market principles. They are still inclined to run their highways as old-fashioned bureaucracies.

The gap between rhetoric and practice may be about to lead to a major strategic mistake—allowing bigger and heavier trucks on the nation's road system. The trucking industry is exploiting market-oriented rhetoric to persuade highway officials to accept any kind of vehicle the truckers can operate profitably, including so-called longer combination vehicles (LCVs), which include twin 48-foot tractor-trailers and double 28-foot combinations.

Highway managers are susceptible to the truckers' rhetoric because as managers they have yet to define their market. The market in which highway managers operate is very different from the one in which truckers function. When truckers say "the market," they mean the market for freight transportation services. For highway managers, though, "the market" should mean the market for highways.

Because highways have almost always been operated by governments, little thought has been given to how highways would operate in a real market—in other words, how a for-profit business would run the highway system. As a test case, let us consider whether a for-profit highway company would allow LCVs.

Answering this question is not just an amusing academic exercise. Powerful forces are already making traditional highway management obsolete. This suggests that it may be time for highway

L. Lee Lane is executive director of the Intermodal Policy Division of the Association of American Railroads.

managers to adopt attitudes and strategies closer to those of the for-profit sector.

The highway system faces a problem of declining "profitability." Because the system is aging at the same time that demand, driven by population growth and changes in living and working patterns, is growing, the costs of maintaining the highways are rising faster than the revenues that highway agencies receive in fuel taxes and other user fees. (The fact that most highway funds come from users means that highway "customers" are already paying a "price" for highway services. The problem, as we shall see, is that the price is usually wrong.) If highway agencies are to keep pace with growing demand, they need to widen the gap between the user-charge revenues generated by traffic and the costs of serving it. They must, in effect, improve their "profit margin."

Highway agencies can no longer look to the traditional, statist solution of simply legislating higher taxes, however. Tax rate increases are not going to keep pace with the system's rising costs. Governments have an excessive number of other fiscal problems, and the public believes that it is taxed enough. As an alternative, highway managers should consider a private-sector approach to increasing profits—strategic marketing. Strategic marketing amounts to no more than determining the answers to three basic questions: Who are the customers? What is the product? And at what price will it be sold?

Answers to these questions exist for every economic enterprise. So every enterprise, including the highway system, has a marketing strategy whether its managers have ever consciously or explicitly defined that strategy. What, then, is the highway system's marketing strategy?

The answer to the question can be summarized by the phrase, "Y'all come." The highway system's current customer base includes freight and passenger, long-haul and short-haul, truckload and less-than-truckload, general freight and specialized commodities, commutation and household errands, recreation and intercity business. The highway system strains to be all things to all customers.

The product provided to these customers is "fairly good highways—considering." *Considering* is the key word. The range of demands implied by the broad spectrum of customers the system has decided to serve (without ever really thinking about it) makes it difficult to keep the roads in top condition all the time.

Clearly the price at which highway services are provided is "cheap." Profit margins are worse than anemic—they are negative. Total user-charge revenues are insufficient to cover total costs (the difference is made up by a subsidy from nonusers), and substantial segments of the customer base cost the highway system *much* more money than they contribute. The worst offender, of course, is heavy trucking.

It may be symptomatic of the growing crisis in highway management that asking the same three strategic questions in the private sector would produce very different answers. Private managers are moving toward limited customer bases, differentiated services, and prices that vary sharply among a number of clearly defined market niches. These trends are evident in industries as diverse as trucking, retailing, steel, magazines, financial services, telecommunications, and computers. Given the prevalence of these private-sector trends, a hypothetical for-profit highway system's marketing strategy would probably be very different from the implicit strategy employed by today's highway managers.

First, highways, as any other business, must understand how one customer class affects other customers. Such considerations often lead businesses to reject whole classes of customers who, from a narrow accounting standpoint, might appear to be profitable. Consider some examples: many truckers refuse to haul particular commodities (solid waste, for instance); some firms ignore profitable sales in South Africa to protect even more profitable markets elsewhere; and a number of railroads eschew direct customer sales efforts to avoid offending third-party agents.

If highway agencies are to keep pace with growing demand, they need to widen the gap between the user-charge revenues generated by traffic and the costs of serving it.

In these examples firms voluntarily reject an entire customer class because serving those customers would offend even more valuable customers or would otherwise conflict with a "core" business. These choices illustrate the extreme importance for-profit businesses place on avoiding possible conflicts that can arise in serving different groups of customers.

Such a clash among customers is very real in the highway business. Combination trucks increase auto

operating costs and degrade perceived highway service quality. The road is a more expensive and far less pleasant place because automobile drivers must share it with trucks.

The impact of combination trucks on autos is very large, certainly over $7 billion a year and probably much more than that. According to the Federal Highway Administration, heavy trucks increase the operating costs of other drivers by $2.3 billion annually on interstate highways alone because of the damage that trucks do to pavements. (The increased costs include poorer fuel economy and higher repair bills, for example.) Results of a national public opinion survey sponsored by the Association of American Railroads indicates that automobile drivers would be willing to pay $5.4 billion a year more to operate on truck-free interstate highways. To put the issue another way, trucks make driving $5.4 billion a year less bearable for automobile drivers. No highway manager in the real market would so readily impose these costs on the overwhelming majority of his customers.

This is especially true because automobiles are far more profitable to highway operators than trucks. Automobile users pay all the highway costs that they impose directly and they pay most of highway users' contribution to the 50 to 80 percent of "overhead costs," that is, those highway system costs not directly attributable to any given vehicle class. A 1982 Highway Cost Allocation Study conducted by the Federal Highway Administration and research by numerous state highway departments have all reached similar conclusions in this area.

Combination trucks are high-cost, low-revenue customers for highways and are offensive to automobile drivers, who really pay for the highway system. Long-haul freight business could fairly readily be handled by rail.

In contrast, combination trucks are net money losers for the highway system. According to the Federal Highway Administration, the user charges paid by combination trucks fail to cover even their own direct cost responsibility. They contribute nothing to the highway system's big profit problem, its overhead. A market-based highway system would almost certainly be shedding truck traffic, not adding to it.

This tremendous disparity in relative profitability suggests that highways have a serious, but common, business problem. They are the wrong size. This problem, which is particularly prevalent in the public sector, is described in Peter Drucker's classic work, *Management.*

In the case of highways, it is not the physical plant that is inordinately large or inadequate; rather the customer base is excessively broad. Specifically, highway system involvement in the long-haul freight business is a major strategic blunder.

Think of highways as a business and long-haul freight as one prominent activity. Then consider Drucker's observation: "While the causes of being the wrong size may be obscure, the diagnosis is simple. The symptoms are clear and are always the same. In a business that is the wrong size, there is always one area, activity, function, or effort—or at most a very few—which is out of all proportion and hypertrophied. This area has to be so big, requires so much effort, and imposes so much cost on the business as to make economic performance and results impossible. No matter how much revenue the business can produce, the hypertrophied area will always absorb more. It is of a magnitude, weight, or complexity out of all proportion to any achievable results." This description fits the highway system's commitment to long-haul freight perfectly.

Combination trucks are extremely unappealing customers for highways. They are high-cost, low-revenue, and offensive to the autos, which really pay for the system. Hence, the fewer of these heavy truck customers the highways have, the better off they are.

Drucker argues that the best solution is "sale, divestment, or systematic shrinkage, a strategy managements as a rule find so distasteful that they rarely even consider it. Yet it is by all odds the one most likely to succeed. Wherever applicable, it should be adopted."

In the specific case of the highways, the system is probably stuck with the large volume of short-haul traffic that it currently serves, but the long-haul freight business could fairly readily be handled by rail. At least that part of the problem could be cured if highway managers would muster the will to face the problem. All too often, though, management rejects downsizing. Instead, the common tendency is to reinforce failure. Drucker has observed: "[Revenue] is therefore never adequate to support the business of the wrong size. The hypertrophied function, while absolutely necessary—or so it always seems—constitutes a permanent drain on the business. It saps its energies and deprives it of resources.

And, like a cancer, it is insatiable and always demands more. This makes being the wrong size a degenerative disease. Radical action is needed to cure it and to recreate a business that is of the right size, a business in which attainable revenues can support the needed activities."

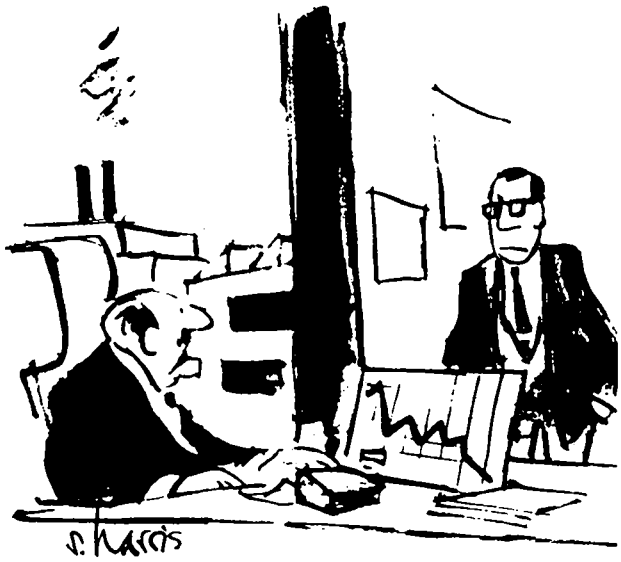
This tendency to expand the commitment to failure is apparent in today's highway policy. Its manifestation is the LCV concept.

LCVs would amplify all the undesirable characteristics of current combination trucks. For example, they would further reduce the highway system's already negative profit margin on its freight business. They would divert rail freight and would flood the highways with torrents of freight, all of which costs more than it pays. And public opinion research shows that LCVs are even more obnoxious to the average motorist than conventional combination trucks. A noted authority on U.S. transportation recently summarized the situation very accurately, "I don't argue," said Tom Donohue, "that there is anybody in America who wants larger trucks anywhere on any highway." Tom Donohue is head of the American Trucking Associations.

Without truly radical changes in user-charge rates, no for-profit highway business would want LCVs as customers (any more than it would continue voluntarily to lose money on its current truck traffic). For highways, passenger business is inherently more profitable than long-haul freight, and the conflicts between the two kinds of business—severe enough with the present system—become simply unmanageable with LCVs. If the truckers got their market test, LCVs would flunk.

This suggests an alternative strategy for pro-LCV truckers. Instead of encouraging a market test, they might fall back to the more traditional approach of attempting to exploit alleged infrastructure deterioration as a justification for higher tax rates. The trucking industry has done well in the past with this strategy. Trucks bear relatively little of the fuel tax burden and derive huge benefits from highway spending, so they have often supported fuel tax increases. And highway authorities have often been willing to purchase truckers' support by making concessions on truck size and weight limits.

A political deal where the truckers get bigger trucks and the politicians get higher fuel taxes is likely to degrade highway service quality rather than improve it, however. The unprecedented increase in truck productivity gains that would result from the increased use of LCVs would ensure that the highways would be inundated with freight now being carried on railroads. As a result, the real and perceived quality of the driving environment would deteriorate.



"Don't we have *anyone* who took business administration?"

A second alternative to a "strategic marketing" approach is the pricing strategy. This strategy, long advocated by many highway officials, would entail a nationwide system of federal and state weight-distance taxes imposed on heavy trucks. (Weight-distance taxes—taxes assessed on each mile of truck travel and graduated by vehicle weight—are the only type of highway tax that can accurately reflect truck cost responsibility.) The economic logic behind such a tax dictates that, at a minimum, it be set high enough to cover the direct cost imposed by heavy trucks on both highways and automobile drivers.

LCVs would amplify all the undesirable characteristics of current combination trucks. They would further reduce the highway system's already negative profit margin on its freight business and would divert rail freight.

As a practical matter, this option is unfortunately not available. The existing user charges for heavy trucks are as low as they are because highway agencies are politically ill-equipped to battle the trucking industry on taxation. As a consequence, highway agencies are actually losing ground in the

effort to assess adequate highway user charges on combination trucks.

In the most unlikely event that highway policymakers could launch a concerted effort to reverse that trend, history suggests that the result would probably be a new tax just large enough to serve as a pretext for legalizing LCVs. Thus, the tax increases would be inadequate to make LCVs a profit-making proposition for highways.

That leaves only the strategic marketing alternative. Fortunately, some favorable trends may make this a workable strategy. About 25 percent of all combination trucks are rail-competitive. The diversion of any significant portion of this traffic would produce a noticeable improvement in highway conditions.

The railroads, and particularly rail intermodal, could turn money-losing highway moves into money-making rail moves.

Some rail diversion of truck traffic began in the late 1980s. A new technology, rail doublestack (two containers, one atop the other), diverted significant volumes of truck traffic in long-haul, high density corridors. At the same time, another technology, RoadRailer (a container with both rubber-tires and steel wheels), began capturing highway freight on shorter hauls. New technologies now being developed offer the prospect for still more diversion, and organizational innovation is paralleling the advance of technology. The railroads, and particularly rail intermodal, could turn money-losing highway moves into money-making rail moves. And the railroad industry continues to make vast investments to accomplish this goal.

Railroads do not want government money for intermodal investment. And despite the merits of the case, they do not actually expect that the government will eliminate the subsidies to their trucking industry competitors. Railroads do hope that highway managers will hold the line against LCVs, however. Without that defensive action, railroads will lose traffic rather than gain it. Thus, the choice between a rail strategy and an LCV strategy is unavoidable.

If highway policymakers are seeking the biggest possible highway program whatever the price, perhaps LCVs will meet their needs. If, however, they want a highway program that best serves their profitable customers, they should take Peter Drucker's advice and begin to exit the long-haul freight market. In that way they will be acting as the private-sector businessmen they profess to admire. They will have made the strategic choice to get out of the money-losing freight business. They will be maximizing their profits with high-revenue, low-cost automobile traffic. And even the voters might like it.

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