Time to Revisit Trucking Regulations

A number of reports have explored ways to improve transportation efficiency by increasing the length of less than truckload (LTL) twin trailers from 28 feet to 33 feet, while not increasing truck weight. This ConsumerGram reviews the empirical evidence of the proposal, and finds that increasing trailer length would not only significantly lower transportation costs, but it would also improve road safety and reduce fuel costs and greenhouse gas emissions. We estimate the proposal would produce annual economic benefits in excess of $20 billion.

Evaluating the Evidence

The idea of improving highway efficiency by altering truck length is not new. The concept was embraced in a Transportation Research Board report in 2002, which concluded that larger trucks could yield more efficient road use.[1] Similar ideas to improve commercial vehicle road efficiency have been explored in a number of countries in recent years. According to an OECD report, "higher capacity vehicles have potential to improve fuel efficiency and reduce emissions," as well as yield fewer miles, fewer trucks on the road, lower transportation costs and higher productivity.[2] This, in turn, would improve road efficiency and utilization, as well as extend the life of our aging roads and bridge infrastructure.

A study by Woodrooffe and De Pont evaluated the effects of increasing the twin 28-foot trailers to 33 feet without increasing trailer weight.[3] Because adding 5 feet to each trailer would permit two more pallets to each twin trailer, there would be an 18% increase in capacity and shipping volume before meeting current weight limitations.[4] This would mean a direct increase in productivity, which would drive down per unit costs, lower shipping fees to customers and merchants, and ultimately lower consumer prices for retail goods.

Using simulated tests, Woodrooffe and De Pont found the twin 33-foot trailers to meet or exceed the safety performance of twin 28-foot trailers. Their tests showed that the larger

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[1] "Regulation of Weights, Lengths, and Widths of Commercial Motor Vehicles," Transportation Research Board of the National Academies, Special Report 267, 2002, available at http://www.internationaltransportforum.org/jtrc/infrastructure/heavyveh/TrucksSum.pdf.

[2] "Moving Freight with Better Trucks," International Transport Forum, OECD, 2010, at http://www.internationaltransportforum.org/jtrc/infrastructure/heavyveh/TrucksSum.pdf.

[3] John Woodrooffe and John De Pont, "Comparative Performance Evaluation of Proposed 33 ft Double Trailers Combinations with Existing 28 ft Double Trailers, Woodroofe Dynamics LLC, April 11, 2011.

[4] Karen Kerrigan, "A Small Change to Make Trucking More Efficient," *Real Clear Policy*, February 20, 1015, at http://www.realclearpolicy.com/blog/2015/02/20/a_small_change_to_make_trucking_more_efficient_1211.html.

trailers do not increase the risk of rollovers, yielded an 11% improvement in load transfer, and improved rearward amplification by 20%. In addition, with more capacity available in each trailer, fewer trucks and trips would be necessary, thereby reducing traffic, congestion and accidents by roughly 18%. In fact, according to an industry estimate, the result would yield 1.3 billion fewer miles driven.[5] Because less fuel would be required, the study estimated a 16% reduction in less greenhouse gas emissions by shifting to larger trailers. Therefore, in review of the empirical evidence, these trailers were found to be significantly safer than the 28-foot trailers that are on the road today; and, if widely used, the change would yield fewer trucks on the road, less diesel fuel consumed, and fewer highway accidents and deaths.[6]

Regulatory Reforms Have Benefited Consumers

Historically, regulatory reforms in the transportation sector have been very beneficial for consumers, and this explains why such reforms deserve consideration. More than 35 years ago, U.S. transportation sector was heavily regulated. Railroads were nearly bankrupt because they could not abandon unprofitable segments and had restrictions on what could be transported; airlines were steeped in costly requirements for cross-subsidization and serving smaller airports; and the Interstate Commerce Commission imposed onerous regulatory rules on truckers that effected entry and often required trucks to return with empty loads. These regulations produced huge waste, gross inefficiency and inhibited competition that kept cost and consumer prices high.

Regulatory reform changed all of that. As the Federal Trade Commission once noted, benefits from trucking deregulation account for roughly $20 billion in annual benefits for consumers due to lower priced goods resulting from lower transportation costs.[7] In fact, the regulatory reforms that took place in the 1980s yielded significantly lower consumer prices immediate after reforms, as shown below, and today produce nearly $100 billion in consumer welfare benefits each year. [8]

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[5] According to the Coalition for Efficient & responsible Trucking at http://efficientandresponsible.org/infographic-improving-highway-safety-sustainability-economic-security/.

[6] Tom Berg, "Twin 22s Would be Safer than 28s, U of Michigan Research Says," *Truckinginfo*, April 23, 2014, at http://www.truckinginfo.com/blog/trailer-talk/story/2014/04/twin-33s-would-be-safer-than-28s-u-of-michigan-researcher-says.aspx.

[7] See http://www.ftc.gov/sites/default/files/attachments/us-submissions-oecd-and-other-international-competition-fora/ibero-trucking.pdf. Figure is in 1996 (constant) dollars.

[8] See Steve Pociask, "Time to Revisit Trucking Regulations," Daily Caller, January 21, 2015, at http://www.ftc.gov/sites/default/files/attachments/us-submissions-oecd-and-other-international-competition-fora/ibero-trucking.pdf. Studies of the consumer benefits from regulatory reform are too numerous to list here, but a sampling may include: Curtis Grimm and Clifford Winston, "Competition in the Deregulated Railroad Industry: Robert Crandall and Jerry Ellig, "Economic Deregulation and Customer Choice: Lessons for the Electric Industry," Mercatus Center, George Mason University, 1997; Clifford Winston, et. al., *The Economic Effects of Surface Freight Deregulation*, Brookings, 1990; Elizabeth E. Bailey, "Price and Productivity Change Following Deregulation: The U.S. Experience," *The Economic Journal*, March 1986, pp. 4-5; and Paul W. MacAvoy, *The Natural Gas Market: Sixty Years of Regulation and Deregulation,* Yale University Press, New Haven 2000.

Regulatory Reforms Produced Lower Industry and Consumer Prices

Industry	Price Decline in 2 Years	Price Decline in 5 Years	Price Decline in 10 Years
Gas	10-38%	23-45%	25-57%
LD	5-16%	23-41%	40-47%
Airlines	13%	12%	29%
Trucking	Not Avail.	3-17%	28-56%
Railroads	4%	20%	44%

Sources: Crandall, Ellig, Morrison, Winston, et. al.

Summary of Benefits

An evaluation of the empirical evidence shows there is no obvious downside to the proposal, while increasing trailer length would produce several significant benefits. Among these are:

1. **Improved Safety**

   By increasing a 28 foot trailer by 5 feet, the capacity of each trailer would increase by 18%, which would mean 18% fewer trucks and trips to carry the same amount of goods when compared with current size limits. That reduction, in turn, would decrease highway traffic volume and congestion, as well as reduce traffic accidents and fatalities. In 2012, large trucks were involved in 253,000 crashes with injuries and 2,802 crashes with fatalities.[9] Applying the NHTSA's ratio of crashes per large truck vehicle mile, a 1.3 billion mile reduction would decrease fatal crashes by 18, crashes with injuries by 377, and crashes with only property damage by 1,222.[10] Billions can be saved by reducing truck crashes, which cost $60,000 per accident and, more significantly, affect quality of life.

2. **Less Fuel**

   Since these longer twin trailer trucks would mean fewer trucks on the road, greenhouse gas emissions would decrease by 16%. Using a model that estimates greenhouse gas emissions, we estimate the total annual reduction in emissions to be roughly 4.2 billion pounds, a figure similar to some industry estimates.[11] According to a report by INRIX and the Centre for Economics and Business, annual traffic congestion costs Americans

[9] "Traffic Safety Facts: 2012" NHTSA, Department of Transportation, Table 3.
[10] Ibid. The factors are 1.42, 29 and 94 per 100 million miles of travel, respectively.
[11] The model deployed is from a telecommuting study by Steve Pociask and Joseph Fuhr, "Broadband Services" Economic and Environmental Benefits, American Consumer Institute, Oct. 31, 2007. The resulting figures are consistent to an industry estimate of 4.4 billion pounds. For these alternative metrics, see http://efficientandresponsible.org/infographic-improving-highway-safety-sustainability-economic-security/.

$124 billion.[12] Therefore a modest reduction in congestion would yield billions of dollars more in economic benefits.

3. **Less Wear on Public Infrastructure**
   Current spending on U.S. infrastructure tops $200 million per year, and some lawmakers are advocating passage of a $1 trillion spending bill to significantly improve the transportation network.[13] With fewer trucks on the road and the distribution of weight over a larger surface area, we expect less wear on infrastructure as a result of regulatory reform. Even a small reduction in highway and bridge "wear and tear" would produce massive economic benefits.
4. **Lower Shipping Costs**
   We estimate the reduction in in fuel to yield nearly $4 billion in additional cost savings, based on the average U.S. retail diesel price.[14] In addition, we estimate a modest reduction in force would generate several billion in additional savings. As noted earlier, because each trailer could accommodate additional pallets, 18% more volume could be shipped.[15] This means higher productivity, lower shipping costs and, ultimately, lower consumer prices for goods.

With modest assumptions, described above, we estimate the direct benefits from extending trailer length to be over $11 billion per year. If we include indirect benefits and induced effects, the total annual economic benefit from the change will total over $20 billion.[16] This should be considered a first glimpse and a conservatively low estimate of the potential benefits. Further research is needed to expand this analysis, update assumptions, and refine measurements.

Summary: Reform is Needed

The empirical evidence finds twin 33-foot trailers to be significantly safer than the 28-foot trailers that are on the road today; and, if widely used, the change would yield fewer trucks on the road, less diesel fuel consumed and fewer highway accidents.[17] Just like when deregulation drove down prices some decades ago, better utilization of the roads and improved safety should bring lower transportation costs. That, in turn, would mean lower retail prices for consumers. We estimate the annual economic benefits of this reform to exceed $20 billion. Now Congress has a unique opportunity to make a policy change that will result in energy conservation, improve road safety, provide help for our aging roads and bridge infrastructure, and lower consumer costs – and do so without imposing any new costs on taxpayers.

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[12] Federico Guerrini, "Traffic Congestion Costs Americans $124 Billion a Year, Report Says," *Forbes*, Oct. 14, 2014.
[13] Keith Laing, "Sen. Sanders Files $1T Infrastructure Bill," *The Hill*, January 27, 2015.
[14] The January 19, 2015 diesel (on-highway) was reported to be 2.933, according to the U.S. Department of Energy, U.S. Energy Information Administration, at http://efficientandresponsible.org/infographic-improving-highway-safety-sustainability-economic-security/.
[15] Karen Kerrigan, "A Small Change to Make Trucking More Efficient," *Real Clear Policy*, February 20, 1015.
[16] We roughly estimate the savings in wages and salaries, fuel, trucks, congestion and accident costs. We then used the 2012 Bureau of Economic Analysis RIMS II multipliers for trucking transportation (final demand). Induced effects are benefits when consumers spend their savings and further stimulate economic activity.
[17] Tom Berg, "Twin 33s Would be Safer than 28s, U of Michigan Research Says," *Truckinginfo*, April 23, 2014.