POLICY BRIEF | INSTITUTE OF TRANSPORTATION STUDIES

Public-Private Partnerships Show Promise for Shifting Export of California Produce from Truck to Rail

Joshua Seeherman, Juan Caicedo, Jae Esther Jung, and Mark Hansen
University of California, Berkeley

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Issue

California is one of the largest producers of perishable produce in the world; producing about 25 million tons of fruits and vegetables each year. This sector supports a large transportation industry that handles the exports of these goods. Starting from the 1950's, the export of produce has gradually shifted modes from rail to trucks. Currently, only 3% of California's produce is being exported by rail. However, this share has begun to increase due to efforts in private industry to monetize this space, with total rail tonnage exceeding one million for the first time in decades starting in 2012. See Figure 1. Much of this increase is due to the modest success of companies in the San Joaquin Valley aggregating crop exports onto rail unit trains.

While utilizing trucking may be cheaper for growers, shippers, and buyers, it has generated a number of negative externalities, including impacts to the environment, public health and public roads (e.g., pavement damage). Encouraging a shift from transporting produce by trucks to rail could help reduce these negative externalities.

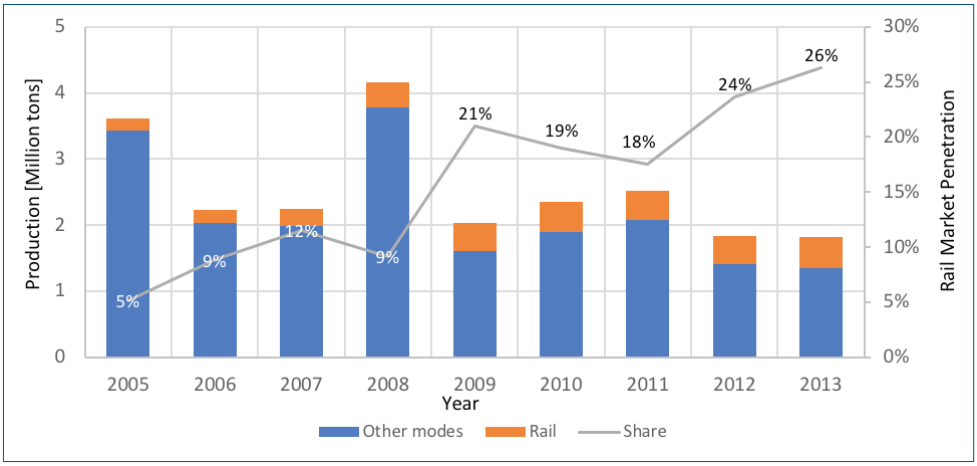

Figure 1. Rail market penetration in the San Joaquin Valley- Vegetables.
Source: NASS and STB Carload waybill sample.

Research Findings

Negative externalities associated with exporting produce by trucks amounts to over $30 million dollars per year. Negative externalities used for this analysis are grouped into four categories: greenhouse gases, air pollutants, crashes, and pavement damage. Increased greenhouse gases, valued by the current rate set in the California cap-and-trade market, was the largest contributor at $14 million, followed by reduced cost of truck crashes at $12 million. These costs were derived using peer-reviewed research and based on shifting produce transport to a 10% rail mode share.

There is significant potential for shifting the transport of California produce from truck to rail. Most perishable produce in California that utilizes rail originates in the San Joaquin and Imperial Valleys. Mixed vegetables and oranges have had one of the largest shifts towards rail since the opening of a private Kern County dedicated rail terminal in 2008. In this growing region, penetration for rail jumped from 9% to 21% for vegetables in 2009 alone. Similarly, rail share for oranges has increased from 2% to over 9% from 2007 to 2011.

Monterey County produces over five million tons of perishables per year (with lettuce accounting for about half of this amount), and almost all of these perishables are transported on trucks. Two of the primary barriers for shifting the transport of green vegetables, such as lettuce, from trucks to rail are physical damages and spoilage. However, as

Research Findings (continued)

demonstrated in the San Joaquin Valley, there is an opportunity for the Salinas Valley to shift some produce exports from trucks to trains. If Monterey County reached the same rail market penetration for vegetables as the San Joaquin Valley, then Monterey County could transport over a million tons of perishables on rail.

Public private partnerships (PPP) are a contractual method that can help public agencies nudge private industry to move more produce by rail. Within California there have been large scale projects that have had varying levels of success using PPPs. For example, the Colton Crossing project in the Inland Empire eliminated a very congested at-grade rail junction. This project has had significant positive effects in terms of reduced delays to vehicles and trains, in turn creating emissions reductions. The project also was completed under budget and on time. PPPs do face a variety of issues and challenges between public and private entities due to a project's inherent risks and uncertainties. However, the role of government is crucial in helping to resolve some of these issues in cooperation with the railroads and other stakeholders.

Further Reading

This policy brief is drawn from the research report "Encouraging Mode Shift from Truck to Rail for California Produce" prepared by Joshua Seeherman, PhD PE; Juan Caicedo; Jae Esther Jung; and Mark Hansen, PhD, with the Institute of Transportation Studies at the University of California, Berkeley. The full report can be found here: https://escholarship.org/uc/item/4625q4ts.

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