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The California Sustainable Freight Action Plan Requires Consideration of Economic Competitiveness of the Freight Sector

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Issue

The METRANS Transportation Center is working with Caltrans, the Governor's Office of Business and Economic Development (GO-Biz), and the California Air Resources Board (CARB) to implement the economic competitiveness provisions of the California Sustainable Freight Action Plan (CSFAP).

The CSFAP aims to reduce greenhouse gas emissions (GHGs) by establishing targets for freight efficiency and the transition to zero emission trucks by 2030. The freight efficiency target is: "Improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030." The truck target is: "Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize near-zero emission freight vehicles and equipment powered by renewable energy by 2030."

The CSFAP also calls for improving the economic competitiveness of the freight sector. It requires that an industry stakeholder group be convened to establish metrics and targets for economic competitiveness. METRANS has been providing research support to this stakeholder group. The first phase of the work was to establish a framework for measuring economic competitiveness and establishing a 2030 target. METRANS has taken a deliberate approach in order to achieve consensus among the stakeholders and assure that the process would result in meaningful metrics.

The first stakeholder group meeting, held in January 2017, sought to articulate the issues that need to be addressed in order to develop the economic competitiveness target and metrics as required by the CSFAP.

The meeting ended with a "homework assignment" to working group members to respond to the series of questions presented at the meeting. The second meeting, in March 2017, was an all-day workshop organized to 1) develop and agree upon definitions required to establish metrics, and 2) introduce options for generating metrics. This process proved challenging due to the size and complexity of the freight sector, the need for definitions that could be operationalized with available data, and the various perspectives of stakeholders. A third meeting took place in June 2017, at which definitions were agreed upon.

Key Research Findings

Defining the "freight sector" is surprisingly complicated. How the freight sector is defined determines what will be measured with regard to economic competitiveness. A broad definition includes all transportation-based and transportation-dependent businesses, from freight service providers to manufacturing and retail. A narrow definition focuses on those who move freight: trucking, rail, couriers, etc. A utilitarian definition is based on data: the sectors included in NAICS codes 48–49. The stakeholder group decided on a broad definition:

The freight sector constitutes all transportation-based and transportation-dependent enterprises involved in the supply chain from point of origin to point of consumption. It includes: all carriers; all transportation service providers involved in moving, handling, managing, or planning the flow of cargo; all transportation-dependent activities; all cargo owners or intermediaries; reverse logistics chains; and transportation infrastructure.

This broad definition is illustrated in Figure 1.

Defining “economic competitiveness” is also complicated.

Economic competitiveness relates to industry productivity relative to competitors, as well as the institutional and regulatory environment that may provide support or impose constraints. The stakeholder group developed the following definition:

The California freight sector’s ability to 1) successfully compete with freight sectors in other states as measured by using existing comparable metrics, and 2) increase the productivity of freight and related sectors and contribute to the growth of California’s economy. Economic competitiveness is affected by policies, institutions, and investments that influence the freight sector’s productivity.

This definition leads to a requirement for multiple economic competitiveness metrics, rather than one composite metric. The next phase of the research is to operationalize the freight sector definitions via available data sources and generate example metrics by freight industry sector.

Next Steps

This work will continue under the support of Caltrans and GO-Biz. Next steps include:

- Identifying specific metrics that measure freight industry financial performance, labor performance, and economic productivity
- Identifying sources for state level annual data to be used for computing performance metrics
- Identifying an economic competitiveness 2030 target for inclusion in the CSFAP

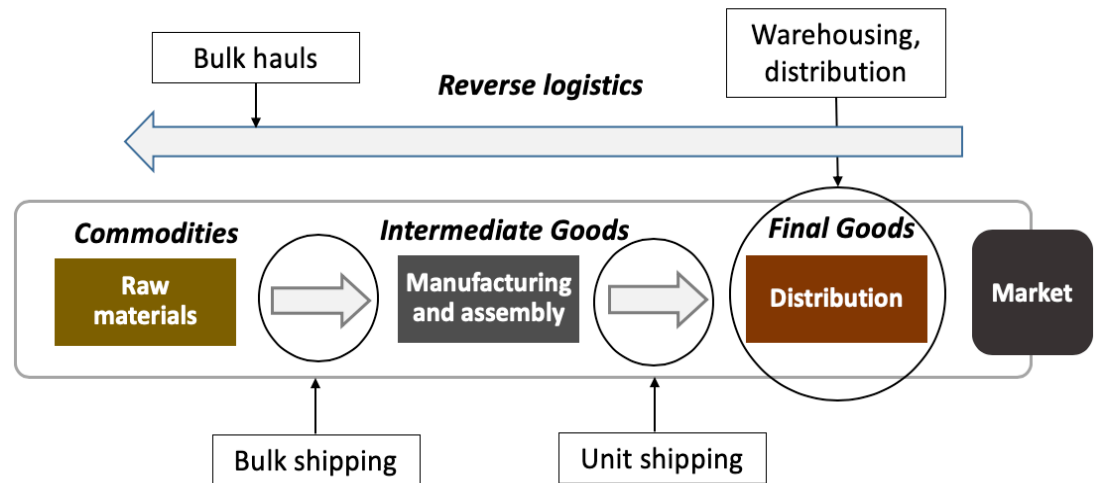


Figure 1. A broad definition of the freight sector includes all transportation-based and transportation-dependent businesses, as shown in this supply chain illustration. Adapted from JP Rodrigue, by permission.

More Information

This policy brief is drawn from the research report, “Framework for Developing Economic Competitiveness Measures for the California Sustainable Freight Action Plan,” from the National Center for Sustainable Transportation (NCST) authored by Genevieve Giuliano of the University of Southern California. The full report can be found on the NCST website at <https://ncst.ucdavis.edu/project/framework-for-developing-economic-competitiveness-measures-for-the-california-sustainable-freight-action-plan/>.

For more information about the findings presented in this brief, please contact Genevieve Giuliano at giuliano@usc.edu.

Further Reading

Giuliano, G. and M. Hassan (2018) Economic Competitiveness, Definition and Metrics. Final Report, Task Order 020, METTRANS Transportation Center. Available at: <https://www.mettrans.org/sites/default/files/research-project/17-15%20Final%20Report.pdf>.

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