



# Benchmarking the Business of Agriculture

A joint program by the Agriculture and Environmental Services (AES) and Global Indicators and Analysis Department (GIA)

**The World Bank Group's Benchmarking the Business of Agriculture Advisory Meeting  
June 11, 2013**

**IFC Headquarters  
Washington, D.C.**

## **Snapshot - Transporting Agricultural Goods**

### **Transporting agricultural goods: relevance and main constraints**

Commercialized agriculture depends significantly on the ability to efficiently transport agricultural goods. High transport costs increase the price farmers pay for inputs and decrease the price they receive for their products, thereby decreasing the incentive to invest in farms and increase productivity.

Access to efficient transportation is especially important for farmers to be able to participate in modern value chains. Rising urban incomes are increasing demand for high-value products in many developing countries, and participating in supply chains that meet this demand can substantially increase farmer income. But access to transport, roads, and vehicles are needed for farmers to participate in such modern value chains.

The importance of transportation for agriculture is growing in developed economies as well as in the developing world. Increasing access to transportation is especially important for smallholder farmers (who tend to be geographically dispersed) and in underdeveloped regions (where physical access to markets is limited).

Supply chain analysis identifies two key logistical aspects of the movement of agricultural goods: infrastructure, such as roads, rail, ports, and storage facilities; and private logistics services, such as transportation services provided by trucking companies. A supply chain approach highlights the need for both adequate infrastructure and efficient transport services, not just one or the other. For agriculture, data show that the significant majority of produce is transported on roads via trucks, in both developed and developing economies. Poor roads and infrequent high-cost trucking services are cited as the greatest logistics risks for farmers in developing countries.

Limited access to quality roads is a significant constraint to commercialized agriculture. Lack of access to all-season rural roads results in substantial costs for the first mile of transport, inhibiting farmers' market access. Poor-quality rural roads are a significant source of post-harvest losses. Farms with greater travel times to urban markets have lower productivity and hire less agricultural labor. Public investment in physical infrastructure in rural areas is needed to link farmers to markets.

Poor regulation can constrain access to efficient transportation services, as the regulatory framework has a significant impact on the availability of competitive services and on the reliability and safety of the services. Quantitative restrictions such as price controls or quotas on the number of trucking firms can keep prices uncompetitively high. Restrictions on the import of certain vehicles and inappropriate regulation of mixed passenger-freight transport can prevent access to transportation in rural areas.

Specific regulatory constraints or infrastructure needs will vary across economies, as well as between the local/rural and national/cross-border contexts of a given economy. National or cross-border logistics tends to be large-scale and regulated. Formal trucking firms likely transport the agricultural goods, and public infrastructure investment favors

main trunk roads. Local transportation for agriculture is very different. Market failures are prevalent due to the geographic dispersion of farms and the seasonal nature of production. Rural roads are often of poor quality, and rural transport prices very high, resulting in high costs and waste generated by transport over the first mile from the farm gate. Improved local transport is needed to enable small rural producers to commercialize and participate in modern value chains.

### Proposed focus of the Transporting Agricultural Goods (TAG) indicators

Given the importance of transportation for agriculture and considering the main constraints identified above, the TAG indicators will focus on two types of issues:

- Access to quality roads. Research has shown numerous benefits of improved access to quality roads in terms of increased agricultural productivity and lower marketing costs. Public investment in rural, secondary, and trunk roads is necessary to increase access to and maintain quality of the roads. TAG will measure the access to and quality of roads; the public financing of roads; and the resultant proximity in time to urban markets.
- Regulation of trucking services. The removal of restrictions to the provision of trucking services has been shown to increase access to services that could lead to competitive transport prices. Appropriate regulation can enable different modes of transportation that are relevant in the rural context. TAG will measure the regulatory framework for the provision of transport services and the resulting transport prices.

The Doing Business in Agriculture indicators will annually measure the regulatory frameworks for the transportation of agricultural goods. The Deep Dives will provide occasional supplementary assessments of broader transportation policy issues and outcome indicators.

Given the difference in constraints at the local level, the TAG indicators are structured in two sub-categories:

- Sub-category a: Increasing rural access to roads and transportation for agriculture
- Sub-category b: Improving national and cross-border transportation for agriculture

#### Sub category a. Increasing rural access to roads and transportation for agriculture

##### Doing Business in Agriculture regulatory indicators

- **Licensing of trucking operations**, measuring how freely trucking licenses/ permits are granted, and if own-account licenses are required to transport agricultural goods.
- **Regulation of mixed transport**, measuring whether there is a legal framework for the combined transport of passengers and freight, with appropriate safety regulations in place.
- **Accessing appropriate vehicles**, measuring tariffs, other taxes, or other restrictions on the import of vehicles or spare parts for intermediate modes of transport (such as motorcycles or small rural motorized vehicles).
- **Legislative framework for rural road financing**,

##### Deep Dive topic areas and indicators

- **Access to rural roads**, measured by the density of rural roads in agricultural areas (km of roads in a district per the square km area of the district).
- **Quality of rural roads**, measured as the percentage of the rural road network classified as good, fair, or poor condition per international standards.
- **Public expenditure on rural road maintenance**, measuring the percentage of annual government road sector budget for maintenance of rural and secondary roads.
- **Proximity to urban markets**, an outcome indicator measuring the percentage of the rural population within a certain number of hours of a major city.
- **Transport prices in rural areas**, an outcome indicator

<p>measuring whether legal responsibility is clearly assigned (and to which governmental level) for the financing and maintenance of rural roads.</p>	<p>measured as the US\$ trucking price per ton of agricultural freight per km in rural areas of a major agricultural region.</p>
<p><b>Sub category b. Improving national and cross-border transportation for agriculture</b></p>	
<p><b>Doing Business in Agriculture regulatory indicators</b></p> <ul style="list-style-type: none"> <li>• <b>Regulation of domestic transport competition</b>, expanding on the indicator of trucking licensing to measure how trucking prices are set and freight is allocated, such as via direct contracting or an institutional mechanism.</li> <li>• <b>Restrictions on foreign transport competition</b>, measuring the number of restrictions established on cross-border trucking services provided</li> </ul>	<p><b>Deep Dive topic areas and indicators</b></p> <ul style="list-style-type: none"> <li>• <b>Quality of secondary and trunk roads</b>, measured as the percentage of such roads classified as good, fair, or poor condition per international standards.</li> <li>• <b>Public expenditure on secondary and trunk road maintenance</b>, measuring the percentage of annual government road sector budget for maintenance of secondary and trunk roads.</li> <li>• <b>Competition in transportation services</b>, measured by the number of trucking firms registered, their market shares, and public versus private ownership of the main trucking companies.</li> <li>• <b>Transport prices on secondary and trunk roads</b>, an outcome indicator measured as the US\$ trucking price per ton of agricultural freight per km along secondary and trunk roads.</li> </ul>