Price Dynamics and Market Structure in Transportation: For-Hire Grain Trucking Along the Alberta-Saskatchewan Border

Andrew R. Laing and James F. Nolan
Dept. of Bioresource Policy, Business and Economics (BPE)
University of Saskatchewan

Abstract
While the trucking industry across Canada is essentially fully de-regulated, markets for truck movements are diverse enough that competition in truck transportation almost certainly varies across space, commodities and even time. For example, there is anecdotal evidence that grain trucking in certain regions in Western Canada is characterized by considerable market power for a few large firms. This research examines the short-run price dynamics of the medium-to-long haul grain trucking industry in West-Central Alberta and East-Central Saskatchewan with the objective of evaluating the level of market power within this regional trucking sector. Our unique data consist of a spatial time series record of trucking rates charged to farmers for delivery to a common destination (Lloydminster) from numerous dispersed origins (farms) in the region.

To frame the unique spatial aspects of this issue, we use geographic information systems (GIS) software to develop freight rate contours for grain trucking through time and space. In this light, we develop a set of novel assumptions regarding the potential shape of these iso-rates in relation to transportation market structure. Subsequently, a subset of the data is used to conduct a formal econometric estimation of short-run freight rate dynamics. We use these estimates to test for evidence of non-competitive transportation pricing. Market power in grain trucking is not persistent within the sector, but we found that at certain times of the year uncompetitive behavior could play an unexpectedly important role.