



A statistical study of intrastate vs. interstate regulatory reforms

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Abstract

Significant steps toward deregulation and re-regulation of the transportation industry have occurred in the past decades. It is essential to anticipate and to monitor the effect of such reforms. In this study, we use a data-set from the Pacific Northwest—a region blessed with rich agricultural products. Essentially 100% of the dry peas and lentils produced in the United States are grown in eastern Washington, northern Idaho, and northeastern Oregon. This region is also noted for the variety of modal choice—including trucking, rail, and inland waterways—to ship bean products overseas. Bean products can be exported through ports in the West, Gulf or the East. The full choice of *intrastate* modes to Seattle/Portland (West) has led to a meticulous regulatory-policy *within* Washington State to face *interstate* modal-competition. Such *intrastate* policies may be more favorable toward Washington State, when interstate-regulation was rigid. We trace the modal choice before and after the deregulation of interstate road and rail transport for the period 1978–1982. A statistical study using a multinomial logit-model suggests that regulation had a major influence on modal choice. While intrastate transport was still regulated after interstate deregulation, shipments to overseas markets favored interstate routes over intrastate routes. This relationship should have significant bearing upon future regulatory reforms. © 2004 Elsevier Ltd. All rights reserved.

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1. Background

The past two-and-a-half decades have seen many countries deregulate their transportation industries. In the United States, two legislative acts—the Motor Carrier Act (MCA) and the Staggers Act—deregulated the interstate trucking and rail industries, respectively (ICC, 1983). However, intrastate regulation of transport did exist in some states for a period after the MCA and Staggers Act took effect (Kahai and Ford, 1997). To appreciate the impacts of these regulatory reforms it is useful to study the decisions of shippers who could choose between regulated and deregulated transportation markets (Hay and Chan, 1981; Cardell et al., 1995). This paper examines such a case, the movement of dry peas and lentils from an area known as the Palouse Region in the northwest United States to export ports on the West, East, and Gulf coasts.

The area of eastern Washington, northern Idaho, and northeastern Oregon produces the world's largest supply

of dry peas and lentils. Production of these bean products involves five major growing centers: Spokane, North Palouse, South Palouse, River, and sections of Oregon and Idaho (Fig. 1). From these centers—collectively called the Palouse Region—product is exported overseas.

Farmers have a complete choice of transportation modes to export peas and lentils to overseas markets. Seattle-Tacoma and Portland in Washington State are the major export ports in the West, accessible by rail, truck, and barge (Casavant et al., 1982). New Orleans and Mobile to the South and New York/Baltimore to the East are mainly reached by rail and truck (Fig. 2). The traffic to the West is predominantly *intrastate* movement, while those to the South and East are *interstate* haulage. The full choices of intrastate modes to Seattle/Portland—rail, truck, barge—produced a meticulous state regulatory-policy over the years. This was designed to face interstate-shipment competition. After deregulation of interstate commerce, such intrastate policies—carried over from the past—are perceived to have been more restrictive than the now free interstate-market (USDOT/ICC, 1981). One can readily see that this area offers an ideal case-study of the effect of intrastate and interstate transport policies.

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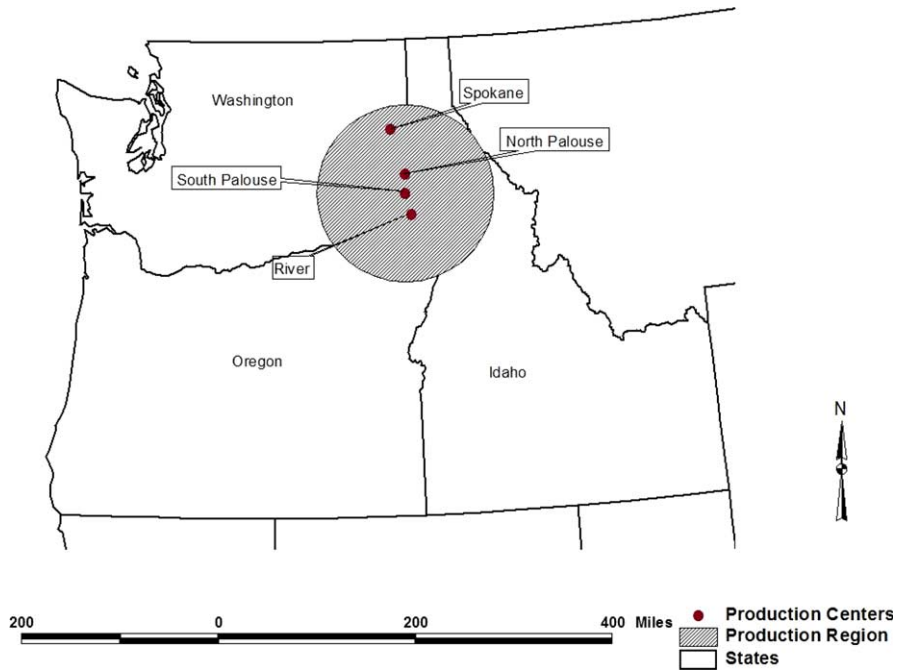


Fig. 1. The Palouse Region.

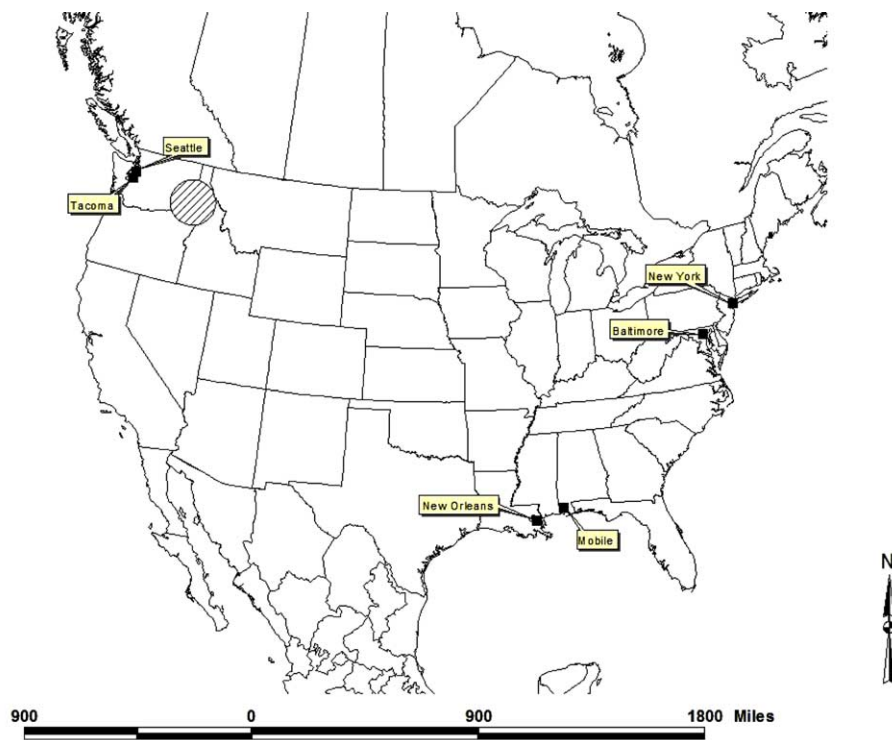


Fig. 2. The major export ports to the west, south, and north.

2. Case study

Using dry-bean-product transport as the case study, we focus the study time-window around the MCA and Staggers Act in 1980. By so doing, we hope to isolate changes due exclusively to deregulation. In the 2 years

immediately after deregulation, our analysis discerns the interaction between intrastate and interstate regulations—to see if there were any unexpected fallouts of the MCA and Staggers Act. In the database collected in the mid-1980s, there are 933 shipment entries covering the period from 1978 through 1982. The shipments were

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