

## TR-69

### An Interindustry Model of El Paso and Hudspeth Counties, Texas

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This report describes the economic structure of El Paso and Hudspeth Counties of Texas in an input-output (interindustry) framework. The report comprises a portion of a larger study designed to investigate the economic consequences of alternative allocations of surface and groundwater, under full consumptive use, in the reach of the Rio Grande River stretching from Elephant Butte Reservoir in southern New Mexico to Fort Quitman, Texas. El Paso and Hudspeth Counties in Texas and Dona Anna and Sierra Counties in New Mexico encompass the irrigated agricultural region of the U.S. portion of this reach of the Rio Grande. The input-output model reported herein provides the base data on the economic structure of the Texas subregion for the larger study.

In this report the transaction table for the two counties in Texas is presented as well as the direct requirements and the direct and indirect requirements tables. Basically, the transaction table provides information concerning the dollar amount of goods and services required by each sector from every other sector of the economy to produce its output and how this output is then distributed among sectors. The direct requirements table shows the direct purchases per dollar of output of each sector from every other sector. This table shows only the direct or "first round" effects. The direct and indirect requirements (interdependence) table shows the total effect of an increase of one dollar output in a sector. This includes the "ripple effect" caused by the first round requirements.

In addition to the basic transaction, direct requirements and direct and indirect requirements tables, output, income and employment multipliers for the various sectors of the regional economy are presented. Output multipliers reflect the change in total regional output resulting from a dollar change in output in a particular sector. Output multipliers ranged from 1.32 for petroleum to 2.89 for the trucking and warehousing sector.

The income multipliers, which measure the change in total regional income resulting from a dollar change in income

in a particular sector, ranged from 1.4 for mining to 2.8 for fruits, nuts and other irrigated crops. The highest income multipliers were found for the agricultural sectors. This is due to the fact that most agricultural inputs are purchased locally and that a considerable portion of agricultural products are processed locally.

Similarly, employment multipliers, which measure the total change in man-years of employment in the economy resulting from a change of one man-year of labor in a particular sector, ranged from 1.02 for gas service stations to 3.1 for petroleum. Highest employment multipliers were associated with manufacturing sectors.

The reader should be cautioned in the interpretation and use of these multipliers for policy and decision-making purposes. While these multipliers should be informative in this context, they should not be the sole criterion or information on which local decision-makers should judge the desirability of efforts to maintain, encourage or discourage economic activity in various sectors. In some instances the resources and market conditions necessary to expand the existing level of economic activity in a particular sector can be an overriding consideration. For example, the relative scarcity of water and abundance of labor in the region must be taken into account. Also, expected conditions of supply and demand for the output of the various sectors of the region is of paramount importance. For example, while the multipliers associated with tourism might be relatively high, it might be easy to oversaturate the market.

Multipliers are useful tools in planning but by no means should they be the only consideration. Multipliers measure direct and indirect impacts of expanded or reduced economic activity in a particular sector. Direct impacts are often of equal or greater importance in making wise choices in allocating scarce resources in a local situation. For example, if increasing employment is a goal of local decision-makers, then seeking industries that are labor rather than capital intensive may be of greater consequence than seeking an industry with a high employment multiplier.

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