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RURAL ECONOMIC DEVELOPMENT: ALTERNATIVES IN THE NEW
COMPETITIVE ENVIRONMENT

OBJECTIVES: OBJECTIVE 3 Identify changing public policy initiatives and relationships and their impacts on rural economies and governments and investigate the effectiveness of alternative policy instruments to affect rural economic and fiscal viability and structure.

APPROACH: 1. Use a dynamic simulation model to examine the effects of job training programs on a state economy. 2. Use spatial econometric models to investigate the potential of preserving open space as an economic development strategy. 3.

PROGRESS: 2001/01 TO 2001/12

A dynamic economic simulation model was developed and applied to Oregon data to assess the potential for job readiness programs to reduce household poverty at the state level. Job readiness programs bring unemployed persons into the labor force. For individuals, participation in these programs tends to increase their earnings, but when the programs are administered to large numbers of persons, we find that the aggregate effect in the labor market is to increase the supply of labor and lower wages slightly. While wage decline is not good for the currently employed, lower wages reduce the cost of production and may stimulate exports to the rest of the nation and the rest of the world - an effect which increases the demand for labor and leads to an increase in wages. The simulation model is used to assess the strength of these competing influences on the poverty rate at the state level. The net effect on poverty depends on the number of new workers brought into the labor force, the responsiveness of exports to changes in the cost of production, and the responsiveness of the poverty rate to changes in the wage rate. In another line of research, several different models were estimated to investigate the potential of preserving open space as an economic development strategy in rural-urban communities. One set of models uses data from housing sales in an exurban region of Maryland to estimate a hedonic pricing model to test whether different types of open space have significantly different marginal effects on the value of neighboring residential properties. The identification problems that arise due to endogenous land use spillovers and unobserved spatial correlation are addressed using instrumental variables estimation on a randomly drawn subset of the data that omits nearest neighbors. The results show that there is a premium associated with permanently preserved open space relative to developable agricultural and forested lands and provide evidence that open space is most valued for providing an absence of development, rather than for providing a particular bundle of open space amenities. Another set of models uses conjoint data from a survey of Franklin County, Ohio homeowners to examine how households value open space

around them and how willing they are to trade-off surrounding open space for accessibility to employment and other amenities. Results from this analysis show that households are willing to pay roughly equally for preservation of open space as permanent cropland within their immediate neighborhood and marginal improvements in school quality.

Impact: 2001/01 TO 2001/12

The dynamic simulation model was presented to officials of the Oregon State government, including the Oregon Progress Board and the state's human resources agency. The Progress Board is charged with setting targets for evaluating state policy, and this is one of the first attempts of the Board to forecast the effect of state policies on socio-economic targets. The results on the value of open space were presented at an Extension workshop attended by public officials, planners, Extension agents and others involved in environmental management issues within the State of Ohio.

PUBLICATIONS: 2001/01 TO 2001/12

1. Bashaasha, B., Kraybill, D.S., and Southgate D.D. 2001. Land use impacts of agricultural intensification and fuelwood taxation in Uganda. *Land Economics*, 77: 241-249.
2. Irwin, E.G. and J. Geoghegan. 2001. Theory, data, methods: developing spatially-explicit economic models of land use change. *J. Agri. Ecosystems and Environ.*, 85(1-3): 7-24.
3. Irwin, E.G. and N.E. Bockstael. 2001. The problem of identifying land use spillovers: measuring the effects of open space on residential property values. *Amer. J. of Agri. Econ.*, 83(3): 698-704.
4. Kraybill, D.S. and Lobao, L. 2001. County government survey: changes and challenges in the new millennium. Rural County Governance Center, Research Report No. 1, National Association of Counties.
5. Seung, C. and D.S. Kraybill. 2001. The effects of infrastructure investment: a two-sector dynamic computable general equilibrium analysis for Ohio. *Internat. Reg. Sc. Rev.*, 24: 261-281.