



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

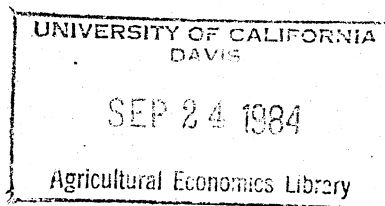
*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

1984

IMPACTS OF CONSUMPTIVE DEMAND ON RURAL LAND VALUES

C. Arden Pope III

H. L. Goodwin



Invited paper to be presented in a joint AERE-AAEA session at the summer meetings of the American Agricultural Economics Association, Ithaca, New York, August 6-8, 1984.

Authors are Assistant Professors, Department of Agricultural Economics, Texas A&M University. The authors are grateful for the helpful suggestions and comments provided by David Bessler, Richard Conner, Rod Martin, Jack McEowen, and Richard Shumway.

Texas Agricultural Experiment Station Technical Article No. 19850.

IMPACTS OF CONSUMPTIVE DEMAND ON RURAL LAND VALUES

Over the last several decades it has become increasingly apparent that the market value of much rural land in the U.S. cannot be justified based solely on returns to agricultural production. An extensive body of literature has arisen to explain the discrepancy between the agricultural productive and market values of rural land. Various explanations have been offered. Some authors have emphasized effects of government tax, credit, and income and price support programs on land values (Reinsel and Reinsel; Harris; Boehlje and Griffin). Others have proposed that high rural land values may be explained partly by expectations of increases in commodity prices or annual net returns to land (Klinefelter; Chavas and Shumway). Melichar suggested that expected capital gains in addition to net returns from agricultural production should be considered, and Castle and Hoch point out that "capitalized rent explains only about half of real estate values both in the 1970s and over the longer 1920-78 period. The remainder can be explained by the capitalization of capital gains, including real gains or losses from price level changes" (p. 8). Brown and Brown recently proposed that it is "optimal for each seller to have a reservation price in excess of the value he attaches to the future stream of income attributable to owning the land if he thinks that some potential buyers may be more optimistic than he" (p. 164).

Although the above explanations account for much of the discrepancy between the agricultural productive and market value of rural land, this paper concentrates on the proposition that land is not only an input into

agricultural production but is also an important argument in many individuals' utility functions. There is a consumptive value associated with ownership of rural land, reflecting innate desires to own land, live in a rural environment, obtain or maintain the lifestyle of a farmer or rancher, engage in outdoor recreation, get back to nature, and partake of any other real or perceived benefits of rural land ownership. Many investors seek an investment they can touch, feel, experience, and enjoy. They may also expect to be able to sell the land to other investors who have similar feelings for the land.

In addition to the productive and speculative components, there is a consumptive demand component of rural land values. The consumptive component of rural land values is often ignored or given only brief mention in many land valuation studies. In some areas of the country this component may be relatively unimportant. To some researchers this value may be so obvious that it deserves only passing mention. Others, who do not feel or understand the "draw of the land," often do not believe that it could play an important role in determining land prices. Still others recognize that consumptive demand for rural land is real and plays a significant role in its valuation but find this component of value so complex and elusive as to restrict useful or serious research. This component of value, however, is often too important to be ignored entirely.

Keynes notes that there is a "craving for the ownership of land independent of its yield" (p. 358). Schofield points out that "land has associated with it strong elements of tradition, social values, and beliefs as to its intrinsic 'goodness'" (p. 1500). Gale states that "millions of young men and women are acclimated by environment and education to farming

as a way of life as well as a business . . . and they are likely to be quite competitive in their efforts to obtain title to a farm" (p. 17).

Kliebensten et al. conclude that income was only one of the important benefits motivating Missouri farmers. Smith and Martin suggest that ranches in the West are purchased as a resource for personal consumption as well as for agricultural production. Musser et al. broaden Veblen's concepts of conspicuous consumption and characterize cow-calf enterprises in Georgia as a case study in "conspicuous production."

Recent Trends in Land Values

Between 1970 and 1980 the per acre value of farm real estate in the contiguous 48 states grew by an average of 245 percent (U.S. Department of Agriculture). Inflation over the same period, as measured by the GNP implicit price deflator, was 195 percent (U.S. Department of Commerce, 1970-1983). Gains in land values helped give rural land a reputation as a good investment or hedge against inflation. In the early 1980s, however, lower inflation rates, higher real interest rates, and relatively low profitability in agriculture resulted in actual decreases in land values through most of the U.S. Between February 1, 1981 and April 1, 1984 the average per acre value of farm real estate declined by approximately 7 percent. This general downturn reminded investors that capital gains in rural land are not automatic but dependent on market factors. This downturn in land prices was not uniform across the U.S. As seen in Figure 1, the largest decreases occurred in the Corn Belt. Increases (most in the range of 1 to 13%) were limited primarily to the Western and Atlantic Seaboard states. Texas was the only state with a substantial increase in real values (31%).

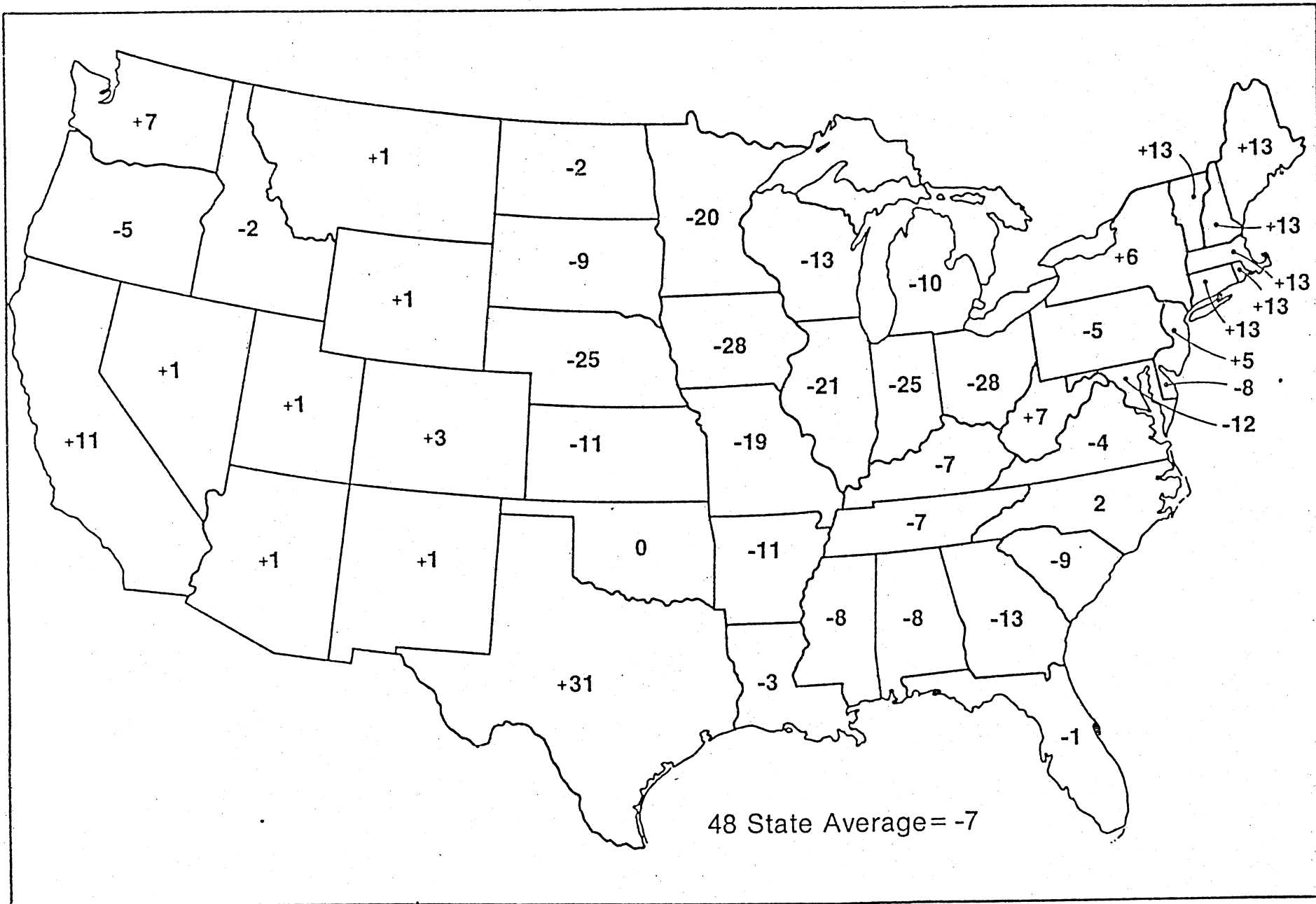


Figure 1. Percentage change in average value per acre of farm real estate by State between February 1981 and April 1984.

Role of Consumptive Demand in Texas

Adkins and Graeber estimated that on the average, agricultural productive value accounts for only 25 percent of the total market value of rural land in Texas. Pope found that population density, proximity to major metropolitan centers, quality of deer hunting, and aesthetic differences across the state explained the majority of differences in rural land values and only about 22 percent of the total market value of rural land in Texas could be statistically explained by its productive value. This percentage differed dramatically across different regions of the state. For example, in the scenic Hill country of Texas, productive value accounted for only about 10 percent of the market value, but in the High Plains productive value accounted for nearly 50 percent. Between 1981 and 1984 land values generally rose in the Hill country but fell or remained nearly the same in the High Plains.

In a related study, Pope and Goodwin conducted a survey of Texas land brokers' perceptions of motivations of purchasers of rural land in Texas. Outside the High and Rolling Plains areas, brokers generally agreed that more people buy land primarily for an investment, a homesite, or outdoor recreation than for agricultural purposes. The brokers pointed out that investors in rural land often look for a country retreat, rural homesite, place to hunt or fish, or they simply desire the pride of ownership or prestige of owning rural land. Brokers identified location or accessibility; trees, brush, topography, scenery, and/or attractiveness; and price and financing terms as more important to prospective buyers than agricultural productivity in most areas of Texas.

Uvacek and Schmedemann suggested that those purchasing rural land in

Texas to farm and ranch often have recreation as a prime motive. Many fancy the thought of owning a farm or ranch that provides a lifestyle they desire or romanticize about or serves as a status symbol or source of pride. The size of the land parcel purchased is often more dependent on the income and wealth of the purchaser than productive efficiency. Also, many rural land owners have a great desire to keep land in the family. Because the rural land market is relatively thin, i.e. only a small percentage of rural land is actually bought and sold each year, its market value is highly influenced by consumptive buyers.

Figure 2 plots relative increases in average per acre value of grazing land, dry cropland, and irrigated cropland in Texas with the GNP implicit price deflator. This figure illustrates that increases since 1967 in the market value of irrigated cropland have lagged slightly behind inflation. Market value of dry cropland has increased more rapidly than inflation, and the value of grazing land has increased most rapidly. Increases in production costs, weakening beef prices, and recent drouth conditions have combined to produce depressed economic conditions in the Texas livestock industry. Yet, activity in cow-calf production and rangeland values have remained surprisingly strong.

That consumptive demand for rural land seems to be playing an increasingly important role in the Texas rural land market can be attributed to a combination of factors. 1) Texas has a large, rapidly growing population. 2) Imbedded in U.S. culture are strong desires to own land; these seem particularly strong in Texas. Texas historian T. R. Fehrenback wrote, "The Texan's attitudes, his inherent chauvinism and the seeds of his belligerence, sprouted from his conscious effort to take and hold his land"

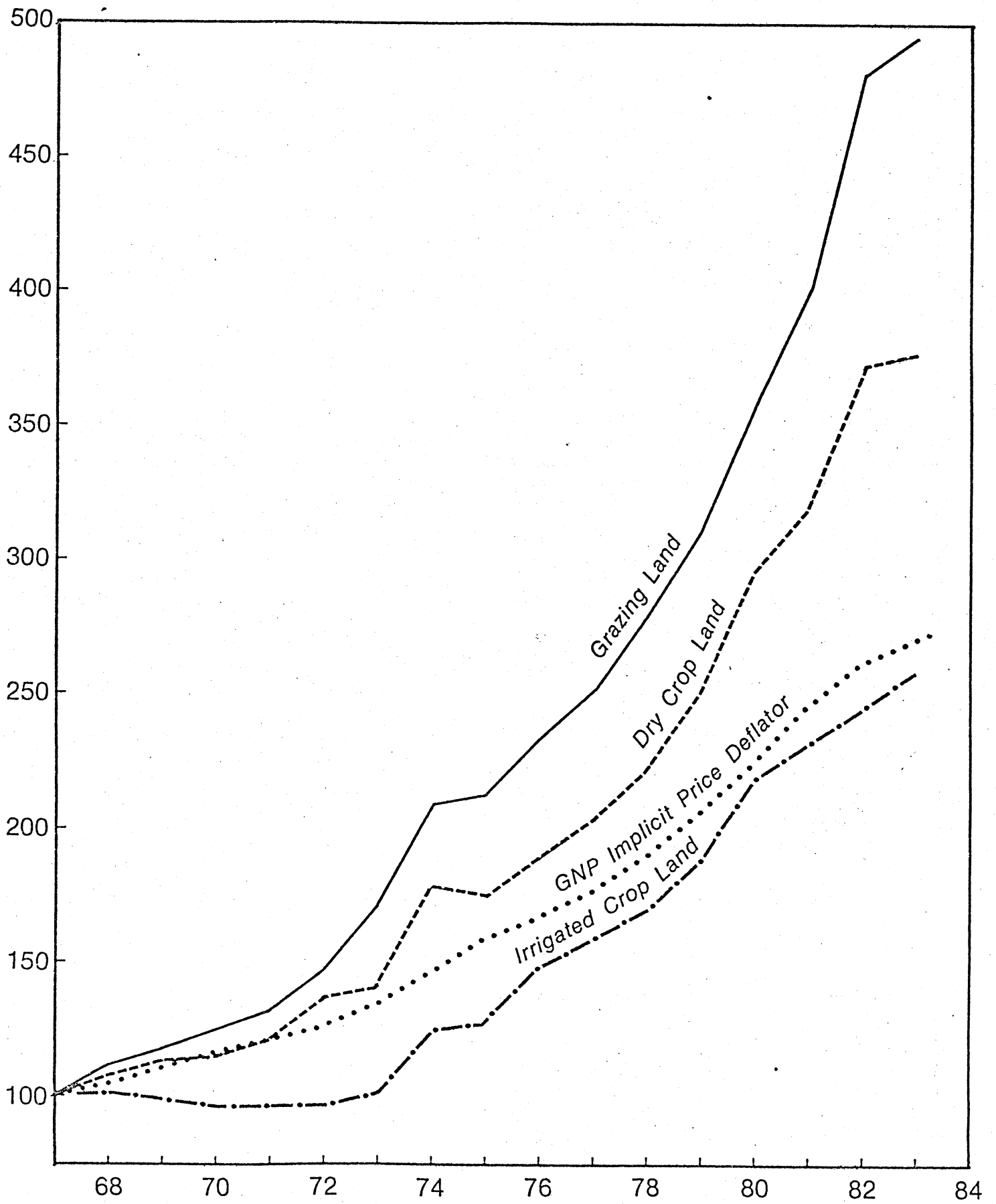


Figure 2. Value of farm real estate indexes for irrigated cropland, dry cropland, and grazing land in Texas (Base 1967 = 100).

(p. 257). Sewell and Rogers state that "the near mystical reverence for being Texan sprang from the terribly difficult struggle for land itself" (p. 23). 3) Nearly all land in Texas is privately owned with relatively few opportunities for outdoor recreation on public land. 4) Land in Texas is largely unproductive. The same absolute level of consumptive value makes up a much higher percentage of land values in Texas than in Iowa. In fact, between 1981 and 1984 the drop in average market prices per acre in Iowa was nearly equal to the total market value per acre in Texas.

Implications of Consumptive Demand

Expected implications of consumptive demand for rural land were illustrated in an earlier paper (Pope). Productive and consumptive components of land values impose opposite forces with respect to farm size. The productive component demands relatively large parcels of land for productive efficiency. The consumptive component demands smaller farms and ranches or ranchettes with on-farm income supplemented by off-farm sources. If consumptive demand is relatively small, its impact will also be small. If consumptive demand is relatively large, there may be a trend toward a bimodal distribution of farm size with many small farms and ranchettes situated near metropolitan areas and in areas of high recreational, aesthetic or romantic appeal.

The growing impact of consumptive demand is reflected in trends in farm structure in Texas. Average farm size declined by 8 percent between 1974 and 1978 while the number of farms with less than 70 acres increased by almost 40 percent (U.S. Department of Commerce, 1978). Between 1978 and 1982 farm size continued to decline while the total number of farms

increased by approximately 5.5 percent. The percentage of farms less than 50 acres rose from 17 to 24 percent (U.S. Department of Commerce, 1982). Approximately 72 percent of Texas cattle operations have less than 50 head and just over 2 percent have over 500 head (Texas Crop and Livestock Reporting Service). Many ranches in Texas are largely private hunting and recreational reserves. In many areas, White-tailed deer contribute more to land values than livestock production (Pope et al.).

Over half of all farm and ranch operators in Texas report 150 or more days off-farm employment (U.S. Department of Commerce, 1978). Farmers and ranchers who own land and recognize its consumptive value are willing to incur the opportunity cost of not selling the land even at market prices above its productive value. If net cash flows from production do not meet family needs, seeking off-farm supplemental income is often preferred to selling the land. Some agricultural enterprises seem more popular than others, partly because off-farm employment poses labor and management constraints, and partly because individuals seek enterprises they enjoy. Hobby hog or dairy farms are not as popular as beef cattle operations. The would-be cowboy-rancher may have taken as many ranches out of sheep or goat production as have coyotes. Dry land wheat production requires a relatively small amount of labor and management and appeals to many hobby or part-time farmers. Consumptive owners of rural land often choose a production enterprise like they choose a hat; cost, functionality or efficiency are secondary considerations to how they think it looks on them. Profitability, as important as it is, is often a lesser factor in investment and management decisions than personal desires for management style.

Conclusions

Agricultural economists generally acknowledge that farmers are utility maximizers. Much research, however, treats them as profit maximizers. Researchers sometimes forget that when evaluating the opportunity to purchase a hog farm and becoming introduced to its particular aroma, the profit maximizer may respond, "It smells like money to me," but the utility maximizer may think it stinks. When evaluating the opportunity to purchase a ranch supporting a cow-calf operation the profit maximizer sees the low rate of return and looks for alternative investments; the utility maximizer sees himself as a cowboy. It is sometimes forgotten that many utility maximizers prefer raising high country barley to river bottom cotton. These types of responses cannot be forgotten if recent developments in land values in many areas of the U.S. are to be understood.

In conclusion, the consumptive component of rural land values is complex and elusive. Consumptive demand has a relatively large influence in Texas and plays a role in varying degrees in other states as well. Consumptive demand, with its impacts on agriculture, presents a challenge that must be dealt with if issues relating to farm structure, property and income taxes, farm credit programs, income and price support programs, rural and urban development, and the distribution and use of public lands are to be most effectively addressed.

References

- Adkins, W. G., and K. E. Graeber. "Market Value Versus Use Value of Agricultural Land in Texas." R-178-1M-115, Texas Real Estate Research Center, Texas A&M University, January 1978.
- Boehlje, M. and S. Griffin. "Financial Impacts of Government Support Price Programs." *American Journal of Agricultural Economics* 61(1979):285-96.
- Brown, K. C. and D. J. Brown. "Heterogenous Expectation and Farmland Prices." *American Journal of Agricultural Economics* 66(1984):164-169.
- Castle, E. N., and I. Hoch. "Farm Real Estate Price Components, 1920-78." *American Journal of Agricultural Economics* 64(1982):8-18.
- Chavas, J. P., and C. R. Shumway. "A Pooled Time-Series Cross-Section Analysis of Land Prices." *Western Journal of Agricultural Economics* 7(1982):31-41.
- Fehrenback, T. R. *Lone Star*. New York: The Macmillan Company, 1968.
- Gale, J. F. "What Makes Farm Real Estate Prices?" *Agricultural Finance Review* 24(1963):8-17.
- Harris, D. G. "Inflation-Indexes, Price Supports, Land Values." *American Journal of Agricultural Economics* 59(1977):489-95.
- Keynes, J. M. *General Theory*. New York: Harcourt, Brace & World, Inc., 1964.
- Kliebenstein, J. B., W. D. Heffernan, D. A. Barrett, and C. L. Kirtley. "Economic and Sociologic Motivational Factors in Farming." *Journal of American Society of Farm Managers and Rural Appraisers* 45(1981):10-14.
- Klinefelter, D. A. "Factors Affecting Farmland Values in Illinois." *Illinois Agricultural Economics* 13(1973):27-33.

Melichar, E. "Capital Gains Versus Current Income in the Farming Sector."

American Journal of Agricultural Economics 61(1979):1084-92.

Musser, N. N., N. R. Martin, Jr. and J. O. Wise. "The Beef Cow-Calf Enterprise in the Georgia Piedmont: A Case Study in Conspicuous Production." *Southern Journal of Agricultural Economics*. 7(1975):89-95.

Pope, C. A. "Agricultural Productive and Consumptive Use Components of Rural Land Values in Texas." *American Journal of Agricultural Economics* (forthcoming).

Pope, C. A., C. E. Adams and J. K. Thomas. "The Recreational and Aesthetic Value of Wildlife in Texas." *Journal of Leisure Research* 16(1984):51-60.

Pope, C. A. and H. L. Goodwin. "Socio-Economic Motivations for Purchasing Rural Land in Texas." *Journal American Society of Farm Managers and Rural Appraisers* 48(1984):37-40.

Reinsel, R. D. and R. I. Reinsel. "The Economics of Asset Values and Current Income in Farming." *American Journal of Agricultural Economics* 61(1979):1093-97.

Schofield, W. H. "Prevailing Land Market Forces." *Journal of Farm Economics* 39(1957):1500-1513.

Sewell, G. and M. B. Rogers. *The Story of Texas Public Lands*. Austin, Texas: Texas General Land Office and the J. M. West Texas Corporation, 1973.

Smith, A. H. and W. E. Martin. "Socioeconomic Behavior of Cattle Ranchers, with Implications for Rural Community Development in the West." *American Journal of Agricultural Economics* 54(1972):217-225.

Texas Crop and Livestock Reporting Service. *1982 Texas Livestock, Dairy, and Poultry Statistics*. Austin, Texas, 1983.

U.S. Department of Agriculture, Economic Research Service. *Farm Real Estate Market Developments*. Various issues 1980-83.

U.S. Department of Commerce, Bureau of the Census. *Census of Agriculture*. Washington, D.C., 1978 and 1982.

U.S. Department of Commerce. *Survey of Current Business*. Various issues 1970-1983.

Uvacek, E., and I. W. Schmedemann. "The Cattle Business: Agricultural Enterprise or Outdoor Recreation?" *Texas Agricultural Progress* 14(1968):12-14.

Veblen, T. *The Theory of the Leisure Class*. New York: New American Library, Inc., 1953.