

TAX POLICY AND THE STRUCTURE OF AGRICULTURE

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The size, ownership, productivity, financial, and legal characteristics of the U.S. farm production sector have changed dramatically during the past two to three decades. These changes have led farmers, rural residents and policymakers to express renewed interest in the structure of U.S. agriculture and rural communities. Structure has been defined to include

- “• Organization of resources into farming units.
- Size, management, and operation of those units.
- Form of business organization, whether a sole proprietor or several individuals in a partnership or corporation.
- The degree of freedom to make the business decisions, and the degree of risks borne by the operator.
- Manner in which the firm procures its inputs and markets its products.
- Extent of ownership and control of the resources that comprise the farming unit.
- Ease of entry into farming as an occupation.
- Manner of asset transfer to succeeding generations.
- Restrictions on land use; immediate sovereignty versus stewardship for future generations.”¹

Public policy, whether it be farm income and price support policy, credit policy, environmental policy or tax policy, affects the structure of agriculture because it has a different impact on firms with different characteristics. This discussion will focus primarily on the impact of income and estate tax provisions and policy on the future structure of the U.S. farm production sector.

¹Penn, J. B., “The Structure of Agriculture: An Overview of the Issues,” *Structure Issues of American Agriculture*, Agricultural Economics Report 438, ESCS, U.S. Department of Agriculture, Nov. 1979, p. 5.

Why the Interest?

The implications of tax provisions for the structure of agriculture is of current interest for a number of reasons. First, some argue that the tax rules allow larger deductions for larger farmers and thus encourage farm growth. Furthermore, some argue that cash accounting rules are more advantageous to larger farmers.

The impact of the tax rules on the changing structure and location of the beef feeding industry, and the implications of tax provisions concerning capital gains and expensing of capital outlays on the beef breeding and citrus and orchard crop industries have been documented.²

Numerous changes have occurred recently in the tax rules that impact farmers, thus resulting in substantial interest in how tax rules might impact structure. For example, the Tax Reform Act of 1976 dramatically changed the estate and gift tax provisions including changes in the rate and credit structure along with new provisions for valuing real estate and deferring the payment of estate taxes.

New corporate tax rates were introduced in 1978, and additional changes in the personal and corporate income tax rate structures, depreciation, and other business deductions to encourage business investment are currently being discussed. Furthermore, inflation has brought about "bracket creep" which results in taxpayers paying a larger proportion of their real income in taxes because of the progressive nature of the income tax structure. Finally, recent analyses suggest that farmers may not pay their equitable share of income taxes, i.e., that the taxes paid as a proportion of their income is lower for farmers than other taxpayers.³

Structural Change in Agriculture⁴

Number and Size of Farms

Farm numbers have declined significantly from near 7 million in the mid-1930's to approximately 2.7 million in 1978. The rate of decrease has slowed to an average of 1.1 percent per year for the

²Harrison, Virden and W. Fred Woods, "Farm and Non-Farm Investment in Commercial Beef Breeding Herds: Incentives and Consequences of the Tax Law," Economic Research Report No. 497, USDA, Washington, D.C., 1972. Meisner, Joseph C. and V. James Rhodes, "The Changing Structure of U.S. Cattle Feeding," Agricultural Economics Special Report No. 187, University of Missouri, Columbia, 1975. Council for Agricultural Science and Technology, "Evaluation of the U.S. Treasury's Proposed Limitation on Artificial Accounting Losses and the Potential Impact on U.S. Agriculture," CAST, Washington, D.C., 1973. Williams, Willard F. "How Large Farming Operations Use Tax-Influenced Investment," *Income Tax Rules and Agriculture*, University of Missouri, Agricultural Experiment Station Report 1973, Columbia, 1975.

³Sisson, Charles A. "The Tax System and the Structure of American Agriculture." *Tax Notes*, Sept. 17, 1979, pp. 355-360 (Part I); Sept. 24, 1979, pp. 387-393 (Part II); Oct. 1, 1979, pp. 419-426 (Part III).

⁴See Schertz, Lyle and Others, *Another Revolution in U.S. Farming*, U.S. Department of Agriculture, Washington, D.C., 1979, for a more thorough discussion of the structural changes in agriculture.

1970's. Average farm size has almost doubled from slightly over 200 acres in 1950 to approximately 400 acres in 1978.

Although the averages provide useful information on the trends in farm numbers and size, they say nothing about the distribution and/or concentration of farms, farm production and resource control. Approximately 1.8 million of the 2.7 million total farms in 1978 had gross sales of only \$20,000 or less; 187,000 farms had gross sales in excess of \$100,000. Farms with gross sales of \$20,000 or less (1978 dollars) declined by 40 percent from 1960 to 1978.

Larger farms have been growing in both absolute and relative importance in terms of gross sales and resource control, although part of this growth has occurred not because of increased physical volume but because of price increases. A further indication of concentration is provided by the share of total receipts received by the 50,000 largest farms; these farms accounted for 36 percent of farm receipts in 1977 compared to 23 percent in 1960. The data on non-farm income of farmers suggests that there are more part-time farmers today compared to one or two decades ago.

Income and Wealth

Changes in income and wealth of farmers have accompanied the changes in number and size of farms. Total farm earnings (earnings on farm production assets) have increased three-fold in nominal terms from 1960-62 to 1976-78; when adjusted for inflation, real earnings increased by approximately 50 percent during this period.

Farmers have earned an increasing proportion of their disposable income from off-farm sources; since the late 1960's nonfarm income has been a larger proportion of disposable income of farmers than farm income except for the period 1973-74. With the increase in both farm and nonfarm income, the nominal per capita income of farmers has increased dramatically since 1950. But adjusting for inflation, the real per capita income of farmers (excluding the income of nonfarm landlords and farmers who do not live on farms) in 1978 was basically unchanged from 1962-64.

In addition to annual earnings, farmers who own farmland receive part of their return from farming in the form of capital gains. Nominal capital gains in agriculture totaled \$583 billion from 1960 to 1978. After adjusting for inflation, real capital gains totaled \$267 billion during this period. In only 2 years of the 18-year period from 1960 to 1978 has the rate of capital gain in agriculture been less than the rate of inflation, and in most years, it has been substantially greater. From 1970 to 1978, farm wealth as a proportion of total U.S. wealth increased from 7.7 to 8.7 percent. Furthermore, because of the concentration of the ownership of land (the major asset which exhibited capital appreciation during this period), the benefits of these capital gains in terms of increased wealth are concentrated as well.

Resource Ownership and Use

With increased farm size has come increased concentration of the control and ownership of farm resources. For example, in the North Central states 43.5 percent of the farmers owned 50 acres or less in 1978; as a group these farmers owned 6.8 percent of the farmland in these states. In contrast, .3 percent of the farmers in these states owned 1000 acres or more, and these farmers as a group owned 23.5 percent of the farmland.

Tenure arrangements have also changed during the past 3 decades. Part owner farms are more dominant than in the past. The percentage of farms operated by full tenants has declined rapidly during this period, while the proportion operated by full-owners has increased slightly.

Furthermore, the size of farm operated by part-owners is larger and has increased faster than that of full-owners. Part-owners now operate more than one-half of all land in farms. It is estimated that approximately 40 percent of farmland in the U.S. is operated by tenants and 60 percent by the owner.

The substitution of capital for labor has been one of the more dramatic transformations in agriculture. Labor utilization has declined from 40 percent of the value of all resources used in farming in 1950 to 14 percent in 1977. In contrast, capital accounted for 25 percent of the resources used in farming in 1950 and 43 percent in 1977. The quality of the capital, labor and land inputs has also increased during this same period, resulting in more than a 60 percent increase in output from 1950 to 1977 with only slightly more total inputs.

Business Entity

Sole proprietorships have historically and still do dominate the farm sector; in 1974, almost 90 percent of farms with sales of more than \$2500 were sole proprietorships. However, partnerships and corporations are larger in terms of both acreage and gross sales than sole proprietorships. In 1974, family corporations comprised 1.3 percent of the farms, controlled 7.8 percent of the land in farms and marketed 9.1 percent of total farm sales.

Publicly held corporations comprised .06 percent of the farms, controlled .6 percent of the land and marketed 3.4 percent of farm sales in the same year. Corporate farms are much more important in fruit and nut, vegetable, nursery and forest products, and poultry and cattle production than in other agricultural enterprises.

Taxes and Agriculture

Taxes and tax management appear to play a significant role in the choice among various production, marketing, and financial strategies by farmers. Farmers frequently comment that tax considerations are

important in their decision to purchase machinery or equipment, schedule the marketing of crops and livestock, utilize credit, improve land, choose a particular legal form of business, transfer property to various family members and even choose various enterprises.

Numerous commercial and public accounting services focus on generating reports and data that will be useful in making tax management decisions. Recent changes in federal income and estate tax laws, including the Tax Reform Act of 1976 and the Revenue Act of 1978, along with higher farm incomes (and thus, potential tax liabilities) have also resulted in tax management becoming a major focus of farm and business management.

Because of the impacts that tax rules have on farm decision-making, some analysts have argued that "federal tax laws have contributed significantly to structural change in agriculture."⁵ For example, provisions with respect to cash vs. accrual accounting, accelerated depreciation, investment credit, capitalization of production expenses, and differential taxation of business entities (sole proprietorship, corporation, partnership) may have differential impacts on farmers with different size, enterprise, tenure, asset composition and financial structure characteristics.

Tax laws with respect to special valuation of farmland at death, installment payment of estate taxes for closely held businesses, the installment reporting of capital gain, the interest deduction for mortgage or contract indebtedness used to purchase real property, the differential tax treatment of ordinary income compared to capital gains, and the opportunity to treat as current deductible expenses various land improvement expenditures (land clearing and conservation expenses) are believed to differentially influence the income stream, capital gains, and costs and benefits of owning real property depending upon the characteristics of the owners.

Estate tax provisions affect the cost of transferring property between generations, and thus may result in the sale of farm assets or the substitution of debt for equity funds to pay taxes and other estate settlement costs. These adjustments will affect the future size and financial structure of farm firms depending upon the current asset composition, family characteristics, and estate plan.

Tax Policy

Tax policy, like all public policy, must be judged based on its impacts on the population as a whole as well as on individual producers and consumers. Furthermore, the aggregate or social impact of tax policy may differ depending on the time period allowed for adjustments — the long-run impact of changing the tax laws may be quite different than the short-run impact.

⁵Penn, *op. cit.*, p. 15.

From a policy perspective, taxes have three key roles in society: (1) to raise revenue, (2) to impact the organization and efficiency of economy activity, and (3) to redistribute income and wealth among members of society. These three key roles provide the basis to evaluate changes in tax policy.

Efficiency

Efficiency in production and marketing has always been highly esteemed in agriculture. Most analysts indicate that consumers have benefited from improved agricultural productivity through lower cost, higher quality food.

Tax policy supposedly impacts efficiency in agriculture through the incentive or disincentive the tax provisions provide to: (1) acquire more productive technology, (2) substitute capital for labor (or vice-versa), (3) develop new technology, and (4) exploit economies of size.

The capital requirements in agriculture per worker and per dollar of sales are substantially higher than for other industries. Much of this capital embodies new technology which is in part responsible for the productivity increases in agriculture. Tax provisions impact the cost of acquiring new capital inputs and thus, optimal quantities of capital and labor to use. Tax provisions may also influence the long-run cost curves in farming and thus, size economies.

Finally, the rate of development and adoption of new technology can be enhanced by tax provisions that reduce tax liabilities for firms that adopt and improve upon new production techniques. Recent examples included the tax credits and incentives provided for energy conservation and energy production from agricultural and other biomass products.

Equity

Equity has many dimensions; the two most important to agriculture are probably equality of opportunities to enter farming and equality of income and wealth distribution.

Tax provisions can impact the opportunities to enter farming by the incentives they provide for various individuals to buy and rent or operate real property and by their treatment of property transferred between family members from one generation to the next. Sizeable estate tax liabilities would be expected to reduce the ability of succeeding family members to continue farming (at least at the same scale as the previous generation) because of the necessity to liquidate farm assets to pay estate taxes. Lower tax liabilities would facilitate intra-family transfers, but may reduce the opportunities for entry by individuals whose parents or ancestors were not engaged in farming. Alternatively, tax laws might directly facilitate entry by providing incentives for sales of farm property from retiring farmers to beginning farmers.

Equality of income and wealth distribution is an explicit objective of tax policy as exemplified by the progressive nature of the federal income and estate tax rate structures. Yet, some argue that this progressive tax rate structure enables the farmer in higher tax brackets to obtain more benefits from interest, depreciation and other deductions. The different impact of tax laws on farms with different characteristics (size, tenure, financial structure, enterprise specialization) is also an important equity issue.

The equity issue is further raised in the form of tax equality — are individuals and firms with similar incomes in different industries or employment paying similar taxes. Like other industries, farmers have their set of alleged “loopholes”, including cash accounting and the potential for reduced valuation of farmland and thus, reduced estate taxes at death.

Revenue Generation

Individuals with income from farming pay a small proportion of the total federal income taxes. Although federal estate and gift taxes are not a major source of government revenue, with inflation and appreciation in asset values, more revenue will be forthcoming from such taxes unless laws are passed to index the tax rates based on the rate of inflation.

Any revenue increases that are obtained by increasing the tax burden on farmers could substitute for taxes paid by other businessmen or wage earners, and a tax reduction for farmers would require increased tax liabilities for other taxpayers unless government expenditures are reduced or larger government deficits are accepted. There is also an interconnection here with the goal of equity.

If, for example, any revenue lost through lower income and transfer taxes on farmers were to be made up by a sales tax or other “regressive” tax, tax equity as well as income and wealth equity would not be improved. If lost revenue from lower tax bills for farmers was replaced with tax revenue from high income and wealth taxpayers, equity would likely be improved.

Given the numerous government policies that can impact farmers, the relative importance of tax policy compared to these other policies must be assessed. Tax policy may complement or be in conflict with other dimensions of policy that impacts farmers. The relative effects of various government policies — including tax policy — on farm firms, the farm production sector, and the structure of agriculture should be evaluated before policy changes are implemented.

Taxes and Structure — Some Illustrations

Estate Tax Provisions

Various changes in estate tax laws have been implemented in recent years. The implications for agriculture are now becoming

apparent. For example, the 1976 Tax Reform Act included a major provision on valuing real estate that will influence the income and estate tax burden on rural real estate. This provision calls for the valuation of land for estate tax purposes, based on its income generating capacity rather than market value. If certain qualifications are met, land will be valued based on the amount of cash rent minus property taxes capitalized by the Federal Land Bank interest rate on new loans. Five year historical averages are to be used. Recent analyses in Iowa indicate that such a valuation procedure will reduce the value of land for estate taxation purposes by 50-60 percent.

The special use value legislation is written to limit this procedure only to "bona-fide" farmers, but such restrictions will not completely eliminate the potential impact of this special tax treatment on the value of land. Farmers who can qualify additional purchases of real property for special use valuation will be willing to offer a higher price for real estate than other buyers who will not qualify for the privilege, or who will be unable to take advantage of it until many years in the future.

Consequently, the bid price for farm real estate would be expected to rise in the amount of the net present value of such tax benefits. Illustrative per acre benefits for different size estates are summarized in Table 1.

Because of the pre-death requirement that qualified property must be used for farming or other closely held business purposes for five of the eight years preceding death, one could presumably not obtain the use valuation benefits of a current purchase for at least a minimum of five years. If a purchase of qualified real property is made with expectations of death in five years, the present value of the use valuation benefits total \$238 per acre for the \$500,000 estate (Table 1). With the \$1,000,000 and \$2,000,000 estates, the present value of the benefits for a death in five years total \$260 and \$168 per acre, respectively. The benefits per acre decline above \$1 million, because the maximum reduction of \$500,000 is obtained at approximately that level and additional qualified acreage only

Table 1. Value of Benefits From "Use" Valuation Per Acre of Land

Net Worth	Benefits Per Acre	Present Value of Benefits (8%) Assuming Death in:			
		5 years	10 years	15 years	20 years
\$ 250,000	\$200	\$136	\$ 93	\$ 63	\$43
500,000	349	238	162	110	75
1,000,000	382	260	177	120	82
1,500,000	303	206	140	96	65
2,000,000	247	168	114	78	53
2,500,000	208	142	96	66	45

spreads the benefits over additional acreage. As the expected life increases, and thus more years elapse between the purchase of the property and the date of death, the present value of the "use" valuation benefit declines. The benefit totals \$40-80 per acre if death is expected to occur 20 years following the purchase.

These figures indicate the per acre price premium that could be paid for real property that would qualify for "use" valuation. For a farmer with a life expectation of five years, the price premium of Table 1 amounts to approximately 14 percent of the fair market value of the land used in the analysis. Thus, it could be expected that with increasing age, farmers would be encouraged to move toward a greater investment in land and less investment in nonland assets. Those with a longer life expectancy would pay a smaller premium for the benefits of "use" valuation as indicated in Table 1.

Thus, the "use" valuation legislation could enable older farmers to outbid younger farmers for a particular parcel of land based strictly on the value of the tax benefits each would receive. In general, the bid price for farm real estate would be expected to rise in the amount of the net present value of such tax benefits. This can only result in an increased divergence between the value of the land and its cash income generating capacity. If nonfarm investors are also able to qualify for special use valuation treatment of land in their estates, additional upward pressure on land values would be expected.

Taxation of Corporations

Current federal tax laws as well as other economic factors are expected to encourage increased use of the corporation form of farm business organization. Very large farms have long used a corporate form of business organization and now, family size farmers find that incorporation can facilitate estate planning and transfer and reduce federal income and social security tax costs when net income reaches and is expected to stay at or above \$25,000-\$30,000.

In recent years, federal income taxes have become a more important consideration in choosing a business organization. First, the net taxable income of most farming operations has been increasing due to inflation and increasing farm size. Secondly, corporate tax rates have twice been reduced during the past decade. Similar adjustments in the personal tax rates have not been forthcoming and as a result, sole proprietors have faced "bracket creep". Thus, taxes as a proportion of real income (nominal income adjusted for inflation) declined for the corporation but increased for sole proprietorships with 1969 incomes between \$10,000 and \$300,000, which is equivalent in 1979 purchasing power to \$19,800 to \$594,000.

While we lack a firm research base on which to analyze the potential effects of an increasing number of incorporated farms on the

organization and structure of agriculture, general economic concepts provide a useful guide. Incorporation is expected to encourage farm growth and increases in farm size because of lower tax liabilities and larger after-tax income available for reinvestment. Efficiency in use of resources is usually the first economic criterion used to analyze the impact of changing farm size.

Available economies of size studies are too outdated to firmly establish the point at which a farm firm reaches optimal size in resource use. It is likely to be much larger than was thought possible even a few years ago since machines and associated equipment have recently become available with substantially more field capacity than the largest available machines a decade ago. Also, industrial and financial management principles and practices are increasingly being adopted by larger firms. However, if size economies are not large or not passed through to consumers in the form of lower product prices, larger scale corporate farms may not be as desirable from an economic efficiency point of view.

In addition, larger firms are frequently able to analyze and more readily adopt new farm technology that becomes available, particularly technology that is size dependent as to cost (i.e., lower cost for larger units). An end result of the successful adoption of new technology is more efficient use of scarce resources including purchased inputs as well as the farmer's labor and management. When firms are able to reduce costs through efficient resource use, consumers benefit from a more abundant, higher quality, lower priced food supply.

Increased longer term resource efficiency may result when farmers use a corporate form of business organization to attract younger managers and owners who keep the farm operating at peak efficiency over several generations. In some cases, however, firms may become large and profitable enough so that a future generation of owners may be able to "live off past achievements." They may not change the firm to stay on the leading edge of technological innovation and efficiency. While a farm firm may be able to exist in such a state for a few years, it is unlikely that it could exist for a long period given the competitive pressures from other farm firms.

Large efficient farms that use a corporate form of business organization over several generations may effect land ownership patterns and the financing needs of agriculture. Currently, farm land is owned in relatively small tracts and is frequently offered for sale or lease from estates every generation or two. If larger tracts of land are put together and held by farm corporations that stay in business and grow over several generations, the amount of farm land that will be available for purchase or rental could decrease substantially.

Where farm land and other resources are owned by the same corporation through several generations, the potential exists for

multiple ownership of farm resources to increase. This has several possible implications. Nonfarm heirs may continue to leave their investment in the corporation over two or more generations. They may purchase additional shares of stock with income obtained from their nonfarm employment, investments and inheritance of spouses. If this phenomenon develops, the need for institutional credit to refinance each new generation of farm ownership could decrease. This intergeneration source of financing is not likely to be adequate, however, to meet the full financing needs of farms that expand and continually adopt new and more costly technology.

Corporations can more easily accommodate multiple ownership of resources; thus, one would expect a more diverse pattern of resource ownership (i.e., more people such as nonfarm heirs maintaining an ownership interest in farm assets), but more concentration of control over resource use because of larger and fewer total farms with a larger proportion being organized as a corporation. More nonfarm ownership of agricultural resources will also make the farm sector more financially interdependent with the nonfarm sector.

Finally, the structure of farm firm decision making will change as more of the larger family farms incorporate. Incorporation involves qualifying the firm to comply with a more complex set of federal tax regulations and filings as well as other more complex legal requirements. These requirements not only mandate more and better record keeping, but also usually require the services of specialized attorneys, accountants and financial advisors — not only for the initial incorporation work but also on an on-going basis to stay abreast of and evaluate changes in tax regulations, court rulings, and changing financial conditions.

In addition, larger farm firms regardless of the form of business organization used, also make more extensive use of consultants and outside advisors in such specialities as crop and livestock chemicals, materials handling, soil fertility and plant selection and care, record keeping and analysis, and farm input and product prices analysis. This relatively new farm industry has started to develop as a supplement and in some cases as a replacement for the traditional role that the Agricultural Extension Service and the Federal-State Experiment Stations have had in providing information and assistance to farmers.

