THE FARM TAX BURDEN: 1979 VERSUS 1983 WITH REGIONAL COMPARISONS*

by

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Abstract

Average tax burdens for agricultural producers in two tax years (1979 and 1983) were computed for nine geographic regions of the U.S. Results indicate that regional differences in tax burdens exist and have widened over time, and that total tax burdens have not declined from 1979 to 1983.

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In their report on the effects of tax policy on U.S. agriculture, Davenport, Boehlje, and Martin state that the three fundamental principles underlying the theoretical design of the income tax system are: (1) that a tax will be imposed on net income, (2) that the tax will be collected annually, and (3) that the amount of tax paid by each taxpayer each year should constitute a fairly and consistently determined proportion of the taxpayers net income as compared with other taxpayers.

Davenport, Boehlje, and Martin point out that in practice the system deviates from the basic theoretical design. The determination of net income is not straight-forward but depends heavily on what legally constitutes gross income and what deductions are allowed. The organization of businesses, including agricultural enterprises, can be highly influenced by these considerations. The majority of research studies concerning tax policy and agricultural producers have concentrated on how tax provisions concerning the legal definitions of income and expenses have affected: (a) investment decisions (Chisholm; Kay and Rister; Reid and Bradford); (b) land values (Boehlje and Reinders); or (c) farm profits and growth (Eginton; Kinnucan et al., Richardson and Nixon).[1/]

The focus of this paper is on the fairness and consistency of the total tax system. If the tax system is 'consistent,' then all taxpayers with a given net income would face a similar tax burden. In reality, different state and local tax provisions could result in significant regional differences in total taxes paid.[2/] Almost all of the studies in tax policy have dealt exclusively with the effects of federal income tax

policies. If the issue of tax fairness and consistency is to be addressed, then payroll taxes (Social Security taxes), state, and local taxes must be considered. These taxes, which are often regressive, can constitute an important part of the entire tax burden (Hoyt and Ayer).

Another issue bearing on the tax equity question is whether certain industries are so tax-favored that individuals deriving income from these industries pay substantially less taxes than the average citizen. While it is generally recognized that many provisions of the tax laws favor agriculture, few maintain as does Thurow that the agricultural industry is a tax scam. He states (p. 18), "If anybody thought about having a more equitable tax code, they would be talking about doing major things to raise the taxes on farmers, because agriculture pays no taxes, agriculture is a tax scam - just like real estate."

This study examines regional differences in the average farm tax burden as well as changes in the amount and composition of the farm tax burden from 1979 to 1983 will be examined. These analyses are aimed at illuminating the tax equity issue as it relates to the farm sector. Large regional differences in tax burdens that are not related to different income levels would challenge the 'consistency' of U.S. tax laws. Similarly, if agricultural producers are found to have significantly lower (or higher) tax burdens than the population in general, the "fairness" of the U.S. tax system could be called into question.

A final point of interest during this era of deficit-reduction proposals is whether the recent federal tax cuts have resulted in reduced tax burdens for agricultural producers. Then, too, a heavily tax-favored agricultural industry would have implications for the debate about the

appropriate level of government subsidies associated with farm policy.

Data

The data used in this study are the Individual Tax Model files of the Internal Revenue Service. These files represent a stratified simple random sample of unaudited individual income tax returns (Forms 1040, 1040A and 1040EZ) filed by U. S. citizens and residents during the calendar years 1980 and 1984 (1979 and 1983 tax years).[3/] The IRS constructs the files "to simulate the administrative and revenue impact of tax law changes, as well as to provide general statistical tabulations relating to sources of income and taxes paid by individuals." (Strudler and Jamerson, p. 1). The 1979 file consists of 203,536 returns, and the 1983 file contains data relating to 122,889 returns. "Farm" samples were created for each tax year by selecting returns which had a nonzero amount indicated for farm income (line 19 of the 1040 form). Based on this criterion, samples of 15,366 and 7,991 returns were obtained for the 1979 and 1983 tax years, respectively. "Farm" returns accounted for 7.5 percent of the total sample in 1979 and 6.5 percent in 1983.

The regions chosen for the study conform to the nine Census regions as defined by the U.S. Department of Commerce (Table 1). Note that Hawaii and Alaska are included in the Pacific region. With the possible exception of the New England region in 1983, regional sample sizes appear adequate to provide reliable statistics relative to each region. To ensure anonymity of individual returns, the IRS deleted state designations of returns having an adjusted gross income or loss of $200,000 or more. Because of the stratified nature of the sample design, the proportion of farm returns in this extremely high income (loss) category was 21.8 percent in 1979 and 56.3 percent in 1983. The IRS provides weighting factors with the data

files so that estimates of population means can be obtained given the stratified nature of the sample.

Results

The data were analyzed with four hypotheses in mind:

Hypothesis 1. The average tax burden of the farm population declined during the period 1979-1983.

Hypothesis 2. The federal share of the total farm tax burden declined during 1979-1983.

Hypothesis 3. Significant regional differences exist in the farm tax burden and these differences have increased over time.

Hypothesis 4. The tax burden of large farms diminished between 1979 and 1983.

The discussion below argues that the data tend to reject hypotheses 1 and 4 but are supportive of (fail to reject) hypotheses 2 and 3.

Hypothesis 1: Farm tax burdens have lessened.

Despite the rhetoric of tax reduction heard in the popular press, the data show no tendency toward declines in the average tax burden - at least with respect to the farm population (Table 2). In fact, just the opposite appears to be occurring. Increases in the average tax rates from 1979 to 1983 ranged from 2.4 to 37.4 percent, depending on the region. Four of the nine regions show average tax rates increasing by 17.5 percent or more between 1979 and 1983. Although statistical tests were not conducted to determine if these increases are significant, it does appear that farmers in at least four regions (Mountain, West North Central, Mid-Atlantic and New England) faced higher tax burdens in 1983 than in 1979.[4/]

Note, too, that these higher average tax rates are not due to rising

income (which would have placed farmers in higher (marginal) tax brackets): the average real total income of the farm population either held steady or declined (significantly in some regions) between 1979 and 1983.

Finally, the perception that farmers pay little or no taxes is not supported by the data. In 1979, depending on the region, between 16.1 and 20.9 percent of the total income received by farmers (excluding those with incomes exceeding $200,000 in absolute value) was diverted to taxes. The average tax rate of the high income farmer was 30.5 percent. In 1983 average tax rates across the regions were even larger -- ranging from 16.5 to 26.3 percent. For all regions combined, the average farm tax rate increased from 19.7 percent in 1979 to 23.8 percent in 1983. Thus, contrary to the assertion made by Thurow, farmers are surrendering a substantial portion of their reported net income to taxes. 5/

Hypothesis 2: Federal taxation of farmers has declined.

A goal of the Reagan Administration's tax policy was to lower the federal tax burden of the average U.S. citizen. With respect to the farm population, there is a suggestion that this goal may have been partially achieved. In all regions federal income taxes as a proportion of the total farm tax bill declined between 1979 and 1983 from 79.6 percent to 75.1 percent (Table 3). However, two caveats are necessary in interpreting the data with respect to this question. First, in most regions farm income declined between the sample periods and, with a progressive rate structure for the federal income tax, a decline in the relative share of the federal tax burden would be expected on the basis of this factor alone. However, in two regions - the East South Central and New England - real farm incomes

held steady yet decreases in the relative federal tax burden of 11.4 and 15.5 percent, respectively, are observed (see table 2 and compare with table 3).

Secondly, a decline in the federal tax burden does not automatically imply a lower overall tax burden for affected groups. In fact, the data suggest just the reverse has occurred with respect to the farm sector. Concomitant with the decrease in federal tax rates other tax rates, most notably state and local taxes and real estate taxes, have increased (Table 3). This indicates that increases in other taxes between 1979 and 1983 have more than offset the tax relief farmers may have experienced as a result of the Reagan tax initiatives.

The shift in composition of the tax burden from federal income tax to payroll, state and local taxes has equity implications. Most obviously, as state and local taxes increase in their relative importance interregional differences in overall tax burdens are likely to magnify. Secondly, because payroll, state, and local taxes are often regressive, heavier reliance on these taxes could result in greater percentage increases in tax burdens on low income households relative to higher income households. This hypothesis needs to be tested in future analyses.

Hypothesis 3: Regional differences in farm tax burdens exist.

The data do not contradict this hypothesis: regional differences in farm tax burdens do appear to exist and, moreover, they appear to be widening over time. In 1979 a regional average tax rate differed by 29.8 percent (from a low of 16.1 percent in the East South Central region to a high of 20.9 percent in the Pacific). In 1983 this spread had widened to 59 percent (table 2). Moreover, the differences can not be strictly related to income differences among the regions. For example, in 1983 average real

farm incomes in the East South Central and Mountain regions were essentially identical but average tax rates for the two regions differed by 27 percent. Similar comparisons hold for other regions as well. In general it appears that farmers in the Southern region of the U.S. face much lower tax burdens than farmers operating in say the Pacific or New England regions.

Hypothesis 4: Farm tax burdens have lessened during the Reagan era.

Although difficult to interpret because of the large decrease in income experienced by the "high income" farmers between 1979 and 1983, there is little evidence to suggest that "large" farmers pay little taxes or have benefitted from the Reagan tax law changes. In 1979 large farmers paid an average of $101,465 in taxes on an average income of $332,721--yielding an average tax rate of 31 percent. In 1983 the average tax rate of high income farmers increased to 48 percent. Deeper analysis of the data is needed to provide a more definitive answer as to whether richer farmers have fared better under Reaganomics, but at this juncture it would be erroneous to conclude that this group has benefitted from the post-1979 tax law changes or that they escape taxation completely.

Summary and Concluding Remarks

The 1979 and 1983 Individual Tax Model files of the Internal Revenue Service were used to compute average tax burdens for agricultural producers in nine regions of the U.S. General conclusions from this study are: (a) farm tax burdens have not decreased from 1979 to 1983, (b) significant regional differences in tax burdens exist and have widened over time and, (c) the composition of the total tax burden has changed from 1979 to 1983, with a higher percentage of the total tax burden coming from state and local taxes. These findings suggest that the consistency and fairness goals of

the theoretical design of the tax system are not well satisifed. The findings also indicate that increases in state and local taxes have more than offset the decrease in federal taxes provided by the Reagan tax cuts. The results do not indicate, however, that agricultural producers have lower than average tax burdens.

Because farm incomes fluctuate from year to year, conclusions based on only two years of data may not be completely representative of "average" conditions. Further research in this area should involve the analysis of annual data for a greater munber of years, using perhaps three year averages to indicate tax burdens typical of a given year. Another topic for future research is the analysis of tax burden by income level as well as geographic region. Finally, to determine whether individuals with farming interests have lower tax burdens than other segments of society, it would be useful to expand the analysis to include consideration of nonfarm tax returns.

Footnotes

1/This is by no means an exhaustive list of studies on the effects of tax policies on agricultural producers. A current annotated bibliography of taxation issues in agriculture is provided, by Davis, Hanson and Kinnucan.

2/It is recognized that significant regional differences may exist in quality of public services provided, thus compensating for differences in the level of taxation. Also, because of regional differences in the complexity of the overall tax code, tax compliance costs may differ regionally (Hansen, et al.). The scope of this paper, however, is limited to an examination of the more easily measurable taxes paid.

3/Technical details about sampling procedure as well as information on the quality of the data are provided in Kilss and Scheuren.

4/Testing whether the tax rate differences are significant is complicated by the stratified nature of the sample. Rather than run the risk of presenting biased tests, at this stage in the analysis it was decided to simply present data means. Work is underway to develop appropriate tests and these will be presented in future revisions of the paper.

5/ A study using similar data for the 1982 tax year found that the Federal treasury lost an estimated $3.8 billion as a result of tax provisions affecting farm income (Reinsel). Still, individuals with farm income in 1982 paid $11.2 billion in federal income taxes. Adding to the federal income taxes the other taxes paid by the farmer (see table 3), the conclusion that the farm sector escapes taxation is clearly erroneous.

Table 1. Definitions of Regions and Corresponding Sample Sizes for 1979 and 1983.

Region	States	No. of Observations 1979	1983
Pacific	Wash., Oreg., Calif., Alaska, Hawaii	1,112	457
Mountain	Idaho, Mont., Wyo., Nev., Utah, Colo., Ariz., N. Mex.	2,369	221
West North Central	N. Dak., Minn., S. Dak., Nebr., Iowa, Kans., Mo.	2,937	529
West South Central	Okla., Ark., Tex., La.	2,009	1,010
East North Central	Wis., Mich., Ill., Ind., Ohio	1,126	421
East South Central	Ky., Tenn., Miss., Ala.	1,013	297
South Atlantic	W. Va., Maryland, Virg., N.C., S.C., Ga., Fla.	882	381
Mid-Atlantic	N.Y., Pa., N.J., Del.	345	135
New England	Maine, Ver., N.H., Mass., Conn., R.I.	216	39
Not Classified	----------	3,357	4,501
Totals	----------	15,366	7,991

Table 2. Average Income Earned and Taxes Paid by U.S. Farmers by Region, 1979 versus 1983 Tax Years.

Region	Net Farm Income		Total Income		Total Tax Bill[a/]		Average Tax Burden		
	1979	1983	1979	1983	1979	1983	1979	1983	% Change
	----------1967 Dollars----------								
Pacific	-1,063	-2,038	14,339	9,517	3,003	2,114	.209	.222	6.2
Mountain	-570	-1,662	10,314	7,554	1,710	1,584	.166	.210	26.5
West North Central	1,613	-135	8,669	5,737	1,486	1,153	.171	.201	17.5
West South Central	-302	-2,018	11,582	8,187	2,113	1,612	.182	.197	8.2
East North Central	1,188	98	10,110	6,656	2,008	1,368	.199	.206	3.3
East South Central	-215	-550	7,883	7,491	1,262	1,235	.161	.165	2.4
South Atlantic	-448	-1,654	9,033	8,082	1,789	1,734	.198	.215	8.4
Mid-Atlantic	-53	-676	10,546	8,124	1,798	1,921	.170	.236	39.1
New England	-552	-728	7,837	7,280	1,498	1,911	.191	.263	37.4
Not Classified	-6,306	-24,258	332,721	105,063	101,465	50,846	.305	.484	58.7
All	376	-1,149	11,074	8,285	2,181	1,968	.197	.238	20.6

[a/] Includes federal income, state and local, self-employment (social security), real estate, and sales and personal property taxes.

Source: Internal Revenue Service Individual Tax Model Files.

Table 3. Distribution of the U.S. Farm Tax Burden by Region, 1979 and 1983 Tax Years.

Region	Year	Federal Income Tax	State & Local Taxes	Self-Employment Tax	Real Estate Tax	Sales & Personal Property Tax	Total Tax Bill
		Percent					
Pacific	1979	71.5	15.5	3.9	5.0	4.1	100
	1983	61.3	20.3	4.2	8.9	5.3	
Mountain	1979	74.1	8.7	8.6	4.6	4.0	100
	1983	71.6	12.2	6.4	6.3	3.5	100
West North Central	1979	74.3	7.5	14.0	2.2	2.0	100
	1983	68.5	10.0	15.1	2.9	3.5	100
West South Central	1979	85.8	2.5	6.5	2.7	2.5	100
	1983	81.2	4.5	6.2	4.6	3.5	
East North Central	1979	76.3	8.2	8.9	4.1	2.5	100
	1983	67.4	12.2	10.1	7.4	2.9	100
East South Central	1979	81.0	5.7	7.2	2.1	4.0	100
	1983	76.3	9.3	6.1	3.2	5.1	100
South Atlantic	1979	77.4	9.5	5.8	4.3	3.0	100
	1983	71.1	13.2	5.2	6.3	4.2	100
Mid-Atlantic	1979	74.6	9.5	6.6	6.6	2.7	100
	1983	64.1	16.5	6.5	9.8	3.1	100
New England	1979	68.1	8.5	9.5	10.9	3.0	100
	1983	57.5	18.4	4.7	16.6	2.8	100
Not Classified	1979	89.7	7.8	0.2	1.6	0.7	100
	1983	88.0	9.0	0.4	1.7	0.9	100
All	1979	79.6	7.7	7.0	3.2	2.5	100
	1983	75.1	10.8	6.2	4.8	3.1	100

Source: Internal Revenue Service Individual Tax Model Files.

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