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1986 Tax Reform and Dairy Farm Businesses

by
*Eddy LaDue, George Casler and Jeffrey Conrad**

The tax reform act of 1986 (TR86) restructured the tax environment in which dairy farmers operate. Personal and standard deductions were increased and tax rates were reduced. However, many of the tax advantages important to dairy farmers were eliminated. Most important among these are the capital gains treatment of livestock, investment tax credit, immediate write-off's of youngstock expenses, and short depreciation periods on dairy barns qualifying as special purpose livestock structures.

Although elimination of many of the tax advantages was designed to limit tax loss farming by the nonfarm community, it also effects the bonafide farmer. The objective of this research is to determine the effect of TR86 on commercial dairy farm businesses.

This report is divided into five sections. The first section outlines the data used and the general methodology employed. The second and third sections discuss the short-run and long-run implications of the act. The fourth section discusses capitalization of youngstock expense. Finally some general conclusions are presented.

Data and General Methodology

Tax data for 1985 were collected for 120 New York dairy farms. Farms were selected from those who had their 1985 taxes prepared by personnel in three Farm Credit System associations. All farms selected were required

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to: (1) be sole proprietorships, (2) have milk sales in excess of $80,000, and (3) receive a majority of gross farm income from dairy farming. Farms meeting these requirements were asked to release their data for research. A high proportion agreed to the release. The sample was randomly drown from the list of available farms.

The group of farms selected had average 1985 milk sales of $164,192 and total cash receipts of $176,934. The sample was designed to be representative of commercial full-time dairy farm businesses. Due to the characteristics of the data source, high leverage and zero leverage farmers are under-represented. However, since the reform measures adopted did not change the tax treatment of business interest payments, this should not bias the results of the study.

The methodology involved calculating the taxes for the individual farm businesses for various points in time. The short-run effects of TR86 are represented by calculations made for 1988. This was accomplished by: (1) using the same income and cash expense characteristics for each farm as occurred in 1985, (2) projecting the depreciation from the 1985 depreciation schedule and investments made during 1981-85, (3) calculating the taxes for each farm using TR86 rules and, (4) estimating the taxes to be paid and investment credit to be earned during 1986-87 to determine the investment tax credit (ITC) carryover into 1988. For the initial analysis it was assumed that all farmers used the alternate depreciation schedule (longer asset lives) rather than capitalize the cost of raising youngstock.

The long-run effects of TR86 were determined by calculations made for a future year after the transitory effects of the law change were fully dissipated. This point in time is referred to as equilibrium. This occurs

after: (1) all investment credit carryover has been used up, (2) all depreciable assets are being written-off at TR86 rates, (3) the phase in period for the new TR86 rules has expired, and (4) preproductive expenses are, or have been, capitalized for all animals in the herd, or all assets are being depreciated over the alternate depreciation schedule.

The equilibrium analysis recognizes the short-term nature of the tax effects of a change in depreciation schedules, or a switch to capitalization of preproductive expenses for youngstock, for a constant sized farm. Both changes have the effect of temporarily raising taxable income and, thus, taxes. However, after the transition period depreciation of purchased assets will again equal average purchases and depreciation of capitalized youngstock expenses will equal average youngstock expenses. The equilibrium situation can be estimated using 1985 depreciation and livestock expense levels. The major factors influencing the difference in taxes between 1985 and equilibrium are loss of capital gains, elimination of ITC and the change in tax rates.

The time path of tax payments from 1985 to equilibrium is estimated by calculating taxable income using the depreciation that would be allowable each year, calculating the tax using the new rates and then subtracting investment tax credit where applicable. Since no new ITC is generated, ITC results solely from use of carryover.

The analysis of the effect of capitalization of preproductive expenses for youngstock is conducted as a modification of the 1988 analysis. Animals are assumed to be born and freshen uniformly throughout the year with an age at freshening of 26 months. Since all costs may not

be required to be capitalized, taxes were calculated for preproductive expenses of $250 per year.

For each analysis, the taxes were calculated using a LOTUS spreadsheet incorporating the particular situation and tax rules being studied. In incorporating the new tax rules, the following assumptions were made where the new rules required information not contained in 1985 tax data; (1) if nonfarm wages and salaries exceeded $10,000, the taxpayer is covered by a pension plan. IRA deductions were then limited if taxable income exceeds $40,000 and eliminated if it exceeded $50,000, (2) future itemized deductions were estimated from 1985 deductions under the assumptions that those who listed only a charitable deduction had $2,000 of other itemizable deductions and that, for those who itemized, 85 percent of 1985 deductions would be deductible under TR86, (3) the new $10,000 expensing option was used whenever a tax liability would otherwise exist, (4) all conservation projects are/will be USDA approved and, thus, are deductible, (5) health insurance premiums per quarter will be $525 for family, $475 for a couple, and $220 for an individual, and (6) for depreciation schedules the minimum recovery period was used for all purchases.

The Short Run

The short-run effect of TR86 is to significantly increase taxable income (Table 1). Taxable capital gain income increases due to the elimination of the capital gain exclusion and depreciation expense declines as new purchases are depreciated less rapidly than items that are traded, sold or become fully depreciated. Loss of the dividend exclusion increases

income modestly. A small part of the increase is offset by health insurance costs which become partly deductible.

Table 1. *Effect of Tax Reform on Tax Characteristics and Income Taxes Paid 120 New York Dairy Farms*

Item	Actual 1985	Projected 1988	Projected Equilibrium
Farm Income			
Capital Gains [a]	$ 3,626	$ 9,015	$ 9,015
Other	176,934	176,934	176,934
Farm Expenses			
Conservation	41	41	41
Depreciation	24,458	21,004	24,458
Health Insurance	0	504	504
Land Clearing	17	0	
Other	152,896	152,896	152,896
Nonfarm Income			
Dividends	292	326	326
Other	5,135	5,135	5,135
Total Income	$ 8,575	$ 16,965	$ 13,511
Adjustments			
IRA	456	455	455
Two Earner Deduction	58	0	0
Other Deductions	17	17	17
Itemized Deductions	1,078	358	358
Personal Exemptions	3,805	7,101	7,283
Taxable Income [a]	$ 3,161	$ 9,034	$ 5,398
Federal Tax			
Regular	1,177	1,762	1,385
Other [b]	62	24	0
Tax Credits			
ITC	730	675	[b] 0
Other	5	0	0
Tax After Credits	$ 504	$ 1,111	$ 1,385

[a] Before subtracting the standard deduction. In 1985, the standard deduction was built into the tax table and, thus, taxable income had not been adjusted for the standard deduction. With TR86 the standard deduction is subtracted in calculating taxable income. However, for consistency the 1985 definition of taxable income is retained throughout.

[b] From carryover.

The limitations on IRA deductibility affected only one farmer. Elimination of the two earner deduction and deductibility of some itemized deductions increased taxable income modestly. The near doubling of the personal exemptions offset about 40 percent of the higher income.

Although taxable income nearly tripled, the tax on that income increased only about 50 percent. Investment tax carryover allowed use of about the same amount of ITC in 1988 as was used in 1985. Thus, all of the increase in taxes before credits is added to taxes after credits. For the average farm, taxes in the short-run would slightly more than double.

Most of the increase in taxes will be paid by the half of the farmers with the highest income (Table 2). The low income half pay little or no tax in 1988. Second and third quartile farms used considerable ITC carryover ($1,515 and $788, respectively) to limit their tax bill. However, the high income group had historically used much of the ITC as it was generated, had little carryover ($181) to use.

Table 2. *Income Taxes After ITC by Taxable Income Levels 120 New York Dairy Farms*

Taxable Income Group	Actual 1985	Projected 1988	Projected Equilibrium
High Quartile	$ 1,883	$ 3,848	$ 3,880
2nd Quartile	132	526	1,417
3rd Quartile	2	48	187
Low Quartile	0	0	36

The relationship between taxes paid and farm size was weak in 1985 but increased somewhat under TR86 (Table 3). The primary factor causing this is the elimination of capital gains treatment of dairy cattle. Larger

herds had higher cattle sales and adding 60 percent of those sales to taxable income strongly influenced total taxes paid.

Table 3. *Income Taxes After ITC by Farm Size*
120 New York Dairy Farms

Milk Sales	Actual 1985	Projected 1988	Projected Equilibrium
Less than 119,999	$ 524	$ 912	$ 1,182
120,000 - 159,999	315	788	1,142
160,000 - 199,999	542	1,029	1,315
200,000 and over	681	1,946	2,113

A major factor influencing the level of tax payments in the short run is the carryover of investment tax credits. Most dairy farmers had some ITC to carryforward in 1985 (Table 4). Low income farmers, of course, had the most unused credit. Although some high income farmers will have used up their ITC by 1988, the average year of depletion for the group is 1991. The average for all farmers in the sample is 1995. Low income farmers who pay little or no income taxes will not be able to use their investment tax credit before the end of the 15 year carryforward period in the year 2000.

Table 4. *Depletion of Investment Tax Credit Carryover*
120 New York Dairy Farms

Taxable Income Group	Actual ITC Available 1985	Year of Projected Depletion[a/]
High Quartile	$ 5,063	1991
2nd Quartile	8,403	1990
3rd Quartile	11,003	1996
Low Quartile	16,456	2000
All Farms	$10,231	1995

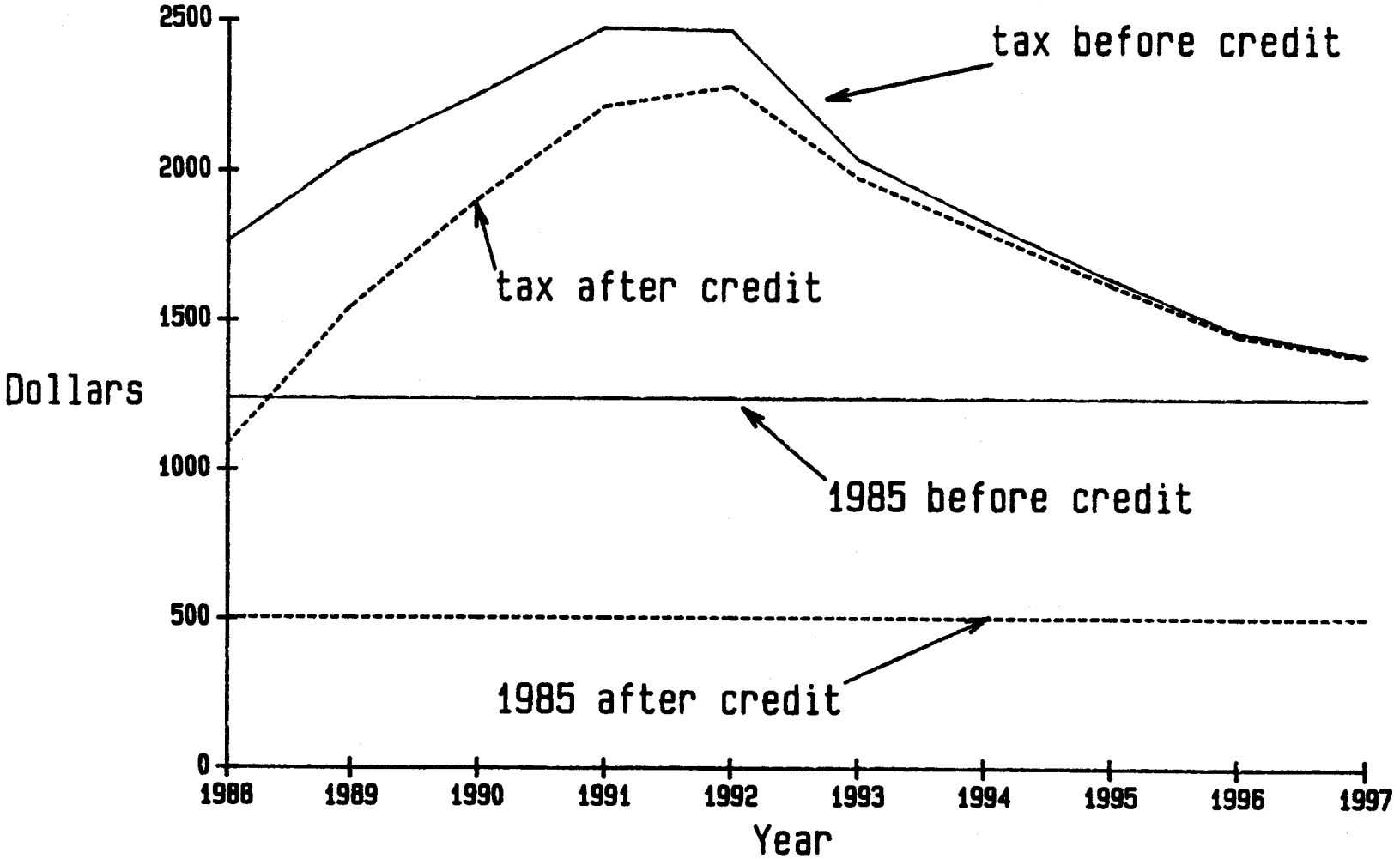
a/ At calculated rate of generation and use for 1985-88 and at 1988 rate of use thereafter.

The Long Run

In the long-run, the effect of the longer recovery periods will run its course and the amount of depreciation will return to the average level of asset purchases. As a result, taxable income and regular federal tax are lower in the long-run than for 1988, but, still considerably above the 1985 level (Table 1). However, in the long-run, the farmers will have no investment credit carryover, resulting in an increase in the taxes paid over 1988. In the long run, federal taxes paid by dairy farmers will average two to three times higher with TR86 than they did with prior tax law.

Since the 1988 analysis represents full implementation of the law (except for a $50 increase in personal exemptions in 1989), the primary difference between 1988 and equilibrium is the value of the depreciation deductions. The change in the depreciation deductions can, therefore, be used to estimate the path of income taxes before credits. During 1981-85 the 120 farms had an average investment in three and five year property of $17,026. Assuming that this represents machinery investment and that the rest of the depreciation deduction is expensed under Section 179 or represents long-term straight-line depreciation of buildings, the path of depreciation deductions under ADS can be calculated. The level of depreciation deductions calculated for each year were used to estimate the taxes under TR86 for each individual farm. Income taxes before credits peak in 1991 and taxes after credits peak in 1992. By 1997 depreciation deductions have returned to the level of average purchases resulting in taxes only modestly above 1988 levels (Figure 1). While ITC offsets a

Figure 1.
Effect of 1986 Federal Tax Reform on Taxes and Credits
Without Capitalization of Preproductive Expenses



significant portion of the before credits liability in 1988, the level of ITC declines rapidly.

Self Employment Tax

Farmers pay self employment tax (SET) on the earnings of the business, which IRS defines as schedule F net income. Thus, depreciation deductions are included in the calculation of earnings but income from the sale of breeding livestock is not. Elimination of capital gains does not influence SET but the change in the depreciation deductions cause a bulge in SET similar to that for income taxes before credits. However, ITC cannot be used to offset SET resulting in a temporary increase in SET. In the long-run, a slight increase in SET is caused by scheduled increase in rates (Table 5).

Table 5. *Self Employment Tax*
120 New York Dairy Farms

Taxable Income Group	Actual 1985	Projected 1988	Projected Equilibrium
High Quartile	$ 1,947	$ 2,072	$ 2,095
2nd Quartile	872	1,315	874
3rd Quartile	349	559	322
Low Quartile	149	236	160
All Farms	$ 829	$ 1,045	$ 863

The combined effect of the SET and income tax changes on average farm tax is an immediate increase due partly to income tax and partly to SET. Over time, declines in SET are offset by increases in the income tax. For individual farmers, even low income farmers will experience an increase in

SET. Most higher income farmers will experience increases in both income and SET. High income farmers without investment tax credit to carry-forward will see their total tax bill increase sharply with some reduction as depreciation deductions return to average investment levels.

Capitalization of Preproductive Expenses

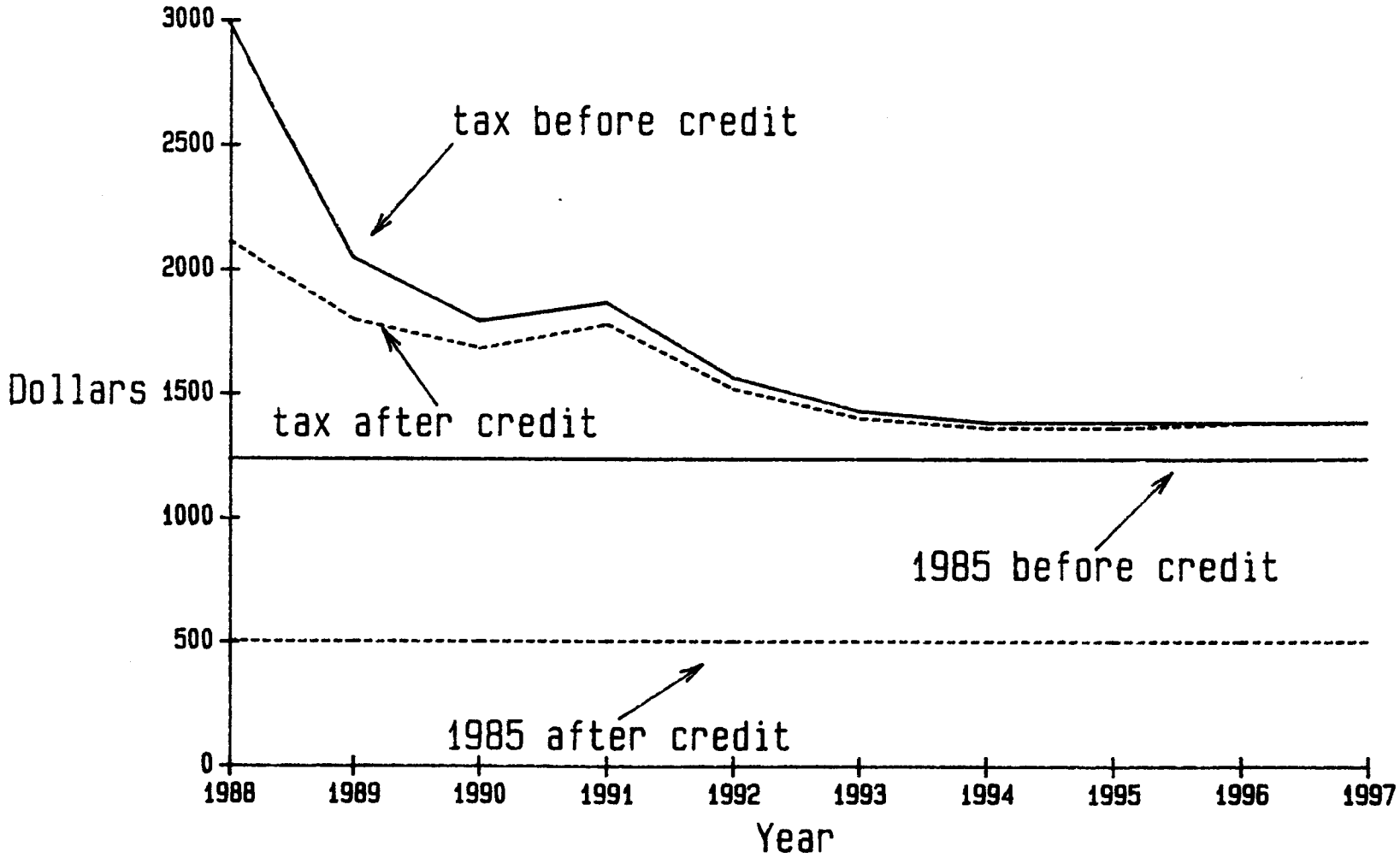
Farmers are required to capitalize the preproductive expenses of raised dairy cattle if they do not use the Alternative Depreciation System (ADS) on all assets. ADS basically requires longer depreciation periods and use of the straight-line method rather than double declining balance method. The analysis reported above uses ADS without capitalization.

For continuing constant sized farms in the absence of inflation, the effect of capitalization is temporary. In time, the annual depreciation of past capitalized values will equal the annual expenses that must be capitalized. The short-run effect, however, will be to increase taxable income and taxes. The amount of the increase will depend upon the exact definition of expenses to be capitalized.

Based on New York Cost Account values for the costs of raising replacements, the average farm would have tax deductible costs of approximately $250 per animal per year. Low cost, high equity family farms may have costs as low as $100 per animal per year. Alternately farms with all hired labor, high debt levels and entirely separate heifer raising enterprises may have costs as high as $400 per animal per year (LaDue and Snyder).

Using the $250 capitalization level, taxes were calculated for 1988-97 (Figure 2). Because the complete heifer raising expense is

Figure 2.
Effect of 1986 Federal Tax Reform on Taxes and Credits
Capitalization of Preproductive Expenses at $250 Per Year



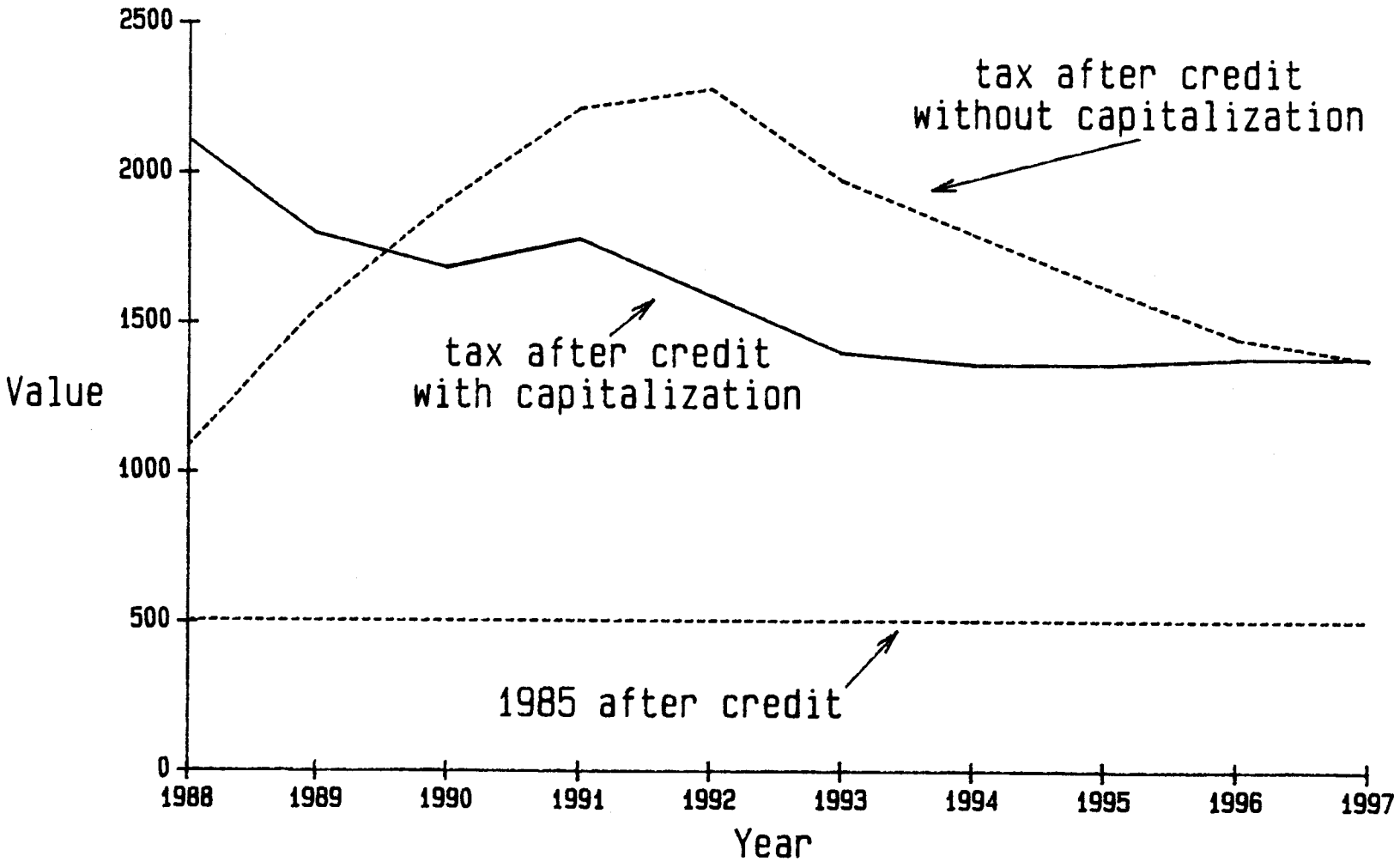
capitalized and depreciation increases slowly as heifers freshen, taxes jump sharply in 1988 (and 1987). The sharp increase in tax raises the tax credit used but still results in a large increase in taxes paid.

Comparing the level of taxes paid with and without capitalization (Figure 3) shows that capitalization results in a higher initial tax but a steeper decline as the fast depreciation methods result in a rapid return to normal depreciation levels. Use of ADS, rather than capitalization, result in lower taxes in the first few years but much higher taxes by 1992. Thus, the decision as to whether to capitalize or not should not be based on 1987 taxes alone. What appears to be the best alternative in the short run may have serious negative long-run consequences. When the two (after credit) tax streams are discounted at a real rate of four percent, the present values under the two tax methods are similar. Determining whether to capitalize will depend on the level of livestock costs relative to the amount of other depreciable property, the current level of profitability of the business and other factors.

Conclusions

The Tax Reform Act of 1986 will increase the income taxes paid by most dairy farmers in both the short- and long-run. For the group of commercial dairy farms studied, income taxes after all phase-in has been completed would be 170 percent above 1985 levels if income remained constant. Elimination of capital gain treatment of livestock and investment tax credit more than offset the increased deductions and reduction of tax rates. In the short-run, reduced depreciation deductions increase income and self employment taxes but some of the income taxes are

Figure 3.


2500
2000
1500
1000
500
0
Value
tax after credit
without capitalization
tax after credit
with capitalization
1985 after credit
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
Year

offset by carryover of investment tax credit resulting in average taxes paid somewhat below long-run levels.

High income farms will see sharply higher taxes either immediately or within a very few years because they have little investment credit carryover to offset the reduced depreciation deductions. With constant incomes, average high income farms will deplete ITC carryover by 1990 or 1991 while the average farm will be able to use ITC until 1995. Thus, some high income farms will pay much higher taxes during the first few years under TR86 than they will pay in the long-run.

Capitalization of youngstock expenses sharply increases taxes paid during the first few years. However, taxes decline quite sharply due to rapid depreciation methods. The decision of whether to capitalize is one that should not be based on 1987 taxes alone but should result from careful consideration of the likely characteristics of the farm business over the next several years.

References

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