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The Myths and Realities of Tax Bracket Creep

Steven Pressman*

INTRODUCTION

According to an old and popular adage, "If theory says it must be so then so it must be." A more recent adage holds that it is experience that determines the acceptability of theories. On this view, economics is "positive science" whose "ultimate goal . . . is the development of a 'theory' or 'hypothesis' that yields valid and meaningful (i.e. not truistic) predictions about phenomena not yet observed."[1] A theory can be tested "only by seeing whether the theory works, which means whether it yields sufficiently accurate predications."[2]

There must be something to the old view, otherwise it would not have survived so long. Predominant theories are useful because they provide an accepted and shared means of perceiving and understanding reality. Also, they enable us to take a leap of faith and make conjectures about what the world is like, without having to worry about where we are leaping.

Problems arise only when, like the cartoon character who has run off the edge of a cliff, our theories keep us floating in mid air as long as we do not look down. Inevitably that time must come. Then our theories are exposed as myths, and like the characters in the cartoons we face a long and painful crash landing.

A popular theory, which has gained widespread acceptance, is the theory of tax bracket creep. *Prima facie* this theory is quite simple. People try to keep up with price increases by demanding higher wages. Because the federal income tax system is progressive the increased income pushes people into higher tax brackets (hence "bracket creep"). Even if purchasing power is not lost to the ravages of inflation, the taxpayer is plundered by the government, which receives more in taxes because of higher effective tax rates.

Bracket creep appears to be a "meaningful prediction." Consequently one would expect numerous tests of its accuracy by economists. The theory could be tested for different incomes, for different years, for different countries, for single digit versus double digit inflation, etc. In point of fact, the paucity of empirical evidence is astounding. Old and popular adages, it appears, are hard to kill.

What follows is an exercise in positive economics. It exposes the theory of bracket creep to the real world. So exposed, the theory turns out to be part valid and part myth. Or, to be more precise, the theory meets the test of reality very well for some income levels, but very poorly for other income levels.

A History of the Theory of Bracket Creep

Jacob Viner[3] appears to have been the first to recognize the havoc that inflation creates for a tax system. Regarding individual income taxes, Viner cites three distortions that result from inflation.

First, income tax systems distinguish income from taxable income by exempting certain

*Monmouth College, West Long Branch, NJ 07764

income from taxation. Since exemptions are by and large fixed dollar amounts, inflation reduces their real value. Taxable income rises by a larger proportion than income, as do taxes owed. The result is that the effective tax rate—the ratio of taxes paid to income—rises.

Second, when an income tax system is progressive, marginal tax rates increase with income. When income increases, it is taxed at higher rates and effective tax rates rise. If nominal, but not real, income rises, higher effect tax rates mean lower after-tax real income.

The third distortion caused by inflation involves capital gains. When inflation increases the price of capital assets owned by individuals, these "fictitious gains" are subject to taxation because tax systems do not distinguish between real and nominal gains. Again, taxes rise though real income remains the same.

Viner's arguments have been repeated many times since 1923; and several estimates of inflation's distortions have been made utilizing the actual tax structure. Goetz & Weber[4] examined the tax rates paid by several typical families whose real personal income was constant between the years 1954 and 1970. These authors defined a typical taxpaying family as one claiming the standard deduction plus a fixed number of exemptions, and nothing else, on their tax return. Calculating taxes owed for several years between 1954 and 1970, Goetz & Weber conclude "the dollar cost of inflation's implicit tax is strikingly apparent over the periods 1954–63 and 1965–69 when there occurred no statutory liberalizations which might even partially offset the price-level increases" (p.55). Unfortunately, these authors provide no estimates of the extent of this "striking tax," and no analysis of how it affects people with different incomes. More importantly, they study hypothetical taxpayers who are unaffected by the many complexities of the American tax system, rather than real taxpayers who are.

Estimates of the extent of bracket creep have been made by Dan Throop Smith[5] and John E. McCain.[6] Both authors found the wealthy to be affected most by bracket creep. Assuming that taxable income increased in proportion to prices, Smith calculated the loss of real income resulting from 10% inflation for eleven income levels. Marginal tax rates of 1974 were used to calculate taxes and effective tax rates. Losses due to inflation ranged from .1% of taxable income for those with a taxable income of $1000, and increased progressively to 3.3% of taxable income when taxable income reached $200,000.

McCain was interested in the loss of gross income rather than taxable income. His study thus added the standard deduction and exemptions and estimated their reduction in real value due to inflation as well as the inflationary consequences of higher marginal tax rates. Since the real loss in the value of exemptions and the standard deduction is a fixed amount, the loss must be greatest relative to income for those with the lowest income. It is not surprising therefore that when McCain reworked Smith's computations the real loss due to 10% inflation was 1.2% for those with a gross income of $3800. (Given deductions and exemptions this is equivalent to the taxable income of $1000 which Smith focused on.) Losses decrease to 1% for gross incomes between $5800 and $13,500, and then rise gradually until they reach 3.4% for a gross income of $203,500.

Finally, one prior study attempted to measure bracket creep using actual tax data rather than by assuming things about a "typical taxpayer" who takes no advantage of the complexities and loopholes contained within the tax system. George M. von Furstenberg[7] selected four adjusted gross incomes (AGI's) in 1969 dollars. For each of these he found AGI's with equal purchasing power for other years. Using the *Statistics of Income,* von Furstenberg was able to calculate the *actual* taxes paid for each level of AGI and *actual* effective tax rates.

To examine the impact of inflation on tax rates von Furstenberg chose three years in which there were no major tax law changes—1965 through 1967. He found that "As the consumer

price index rose by 5.8% over the period, the effective tax rates on given real incomes increased by 10.9 per cent at the $5,000 level, by 5.8 per cent at the $10,000 level, and by 2.5 and 1.9 per cent at the two higher levels of $20,000 and $40,000 in constant 1969 dollars" (p.121). Real earnings fell by .77%, .56%, .34%, and .35% respectively as a result of these higher tax rates. These results contradict the various hypothetical calculations. In fact, it is low income taxpayers who suffer most from tax bracket creep.

While von Furstenberg is to be commended for using actual rather than hypothetical data his methodology is open to several objections.

First, it is necessary to distinguish income (or gross income) from adjusted gross income. The difference, adjustments to income, may or may not keep up with inflation. If adjustments increase by more than the rate of inflation, effective tax rates will be lower than the rates calculated by von Furstenberg. On the other hand, if adjustments to income do not increase at the same rate as prices, effective tax rates will actually be higher and bracket creep actually worse than von Furstenberg's estimates.

Second, a number of factors besides inflation are likely to cause changes in effective tax rates. Single people pay higher marginal and average tax rates than do married couples. For couples, filing separately rather than filing jointly will result in higher taxes. Unless we control for these variables we will be calling an increase in single taxpayers "bracket creep." Or, we may understate actual bracket creep because while inflation is increasing tax burdens, an increase in marriages is reducing tax burdens. The same point holds for legislative changes that alter allowable deductions, exemptions, tax credits or marginal tax rates.

von Furstenberg tries to control for changes in the tax laws by measuring bracket creep only over a three year period. However, one might want to examine bracket creep over time periods when tax laws have changed. Or one might compare bracket creep in years of low inflation with bracket creep in years high inflation. This requires a better means of controlling for changes in tax laws.

Finally, although von Furstenberg calculates the relationship between inflation and tax rates, he does not calculate how well changes in price explain changes in effective tax rates. Nor does he test for the significance of bracket creep.

To handle these problems a model of effective tax rates is needed. This model should measure effective tax rates using *gross* rather than adjusted gross income; and it should control for changes in filing status and changes in the tax laws. Only then can we accurately measure the extent of bracket creep for different income levels and be somewhat confident about our results.

METHODOLOGY

Every year information regarding individual tax returns is published in the IRS's *Statistics of Income, Individual Income Tax Returns.* To assure anonymity of individual information, aggregate data is provided for different ranges of adjusted gross income. At low income levels, the ranges are usually $1000 wide ($15,000–$16,000) while higher incomes ranges are several thousand dollars wide ($250,000–$500,000). For each range, data is provided on the number of returns filed, taxes paid, the number and value of exemptions taken, the value of adjustments to income reported, etc.

This data makes possible the construction of a time series of effective tax rates for any given real income. Several steps are involved in such an undertaking.

Since data is reported by AGI, while we are interested in computing effective tax rates

using gross income, we must first find gross incomes for each AGI. Dividing total ajdustments by the number of returns identifies the average adjustment for each range. By assuming the midpoint of each AGI range takes the average adjustment for the range we can use point interpolations to get average adjustments for *any* AGI. Adding adjustments to AGI yields gross income.

For example, consider two AGI ranges—$9,000 to $10,000 and $10,000 to $11,000. Average adjustments might be $320 and $350 respectively. We assume the taxpayer with an AGI of $9,500 takes $320 in adjustments and the taxpayer with an AGI of $10,500 takes $350 in adjustments. To find the adjustments for a taxpayer with an AGI of $9,700 we interpolate to get $326. Consequently an AGI of $9,500 is equivalent to a gross income of $9,820; an AGI of $9,700 is equivalent to a gross income of $10,026, and an AGI of $10,500 is equivalent to a gross income of $10,850.

Sixteen different income levels were chosen for this study. These correspond to the midpoints of each income range in the 1967 *Statistics of Income, Individual Income Tax Returns*.

Tax Returns

Gross incomes associated with each AGI midpoint were then inflated and deflated using the consumer price index. The resulting sixteen time series are each a set of gross incomes with constant purchasing power for 1982 dollars (the last year for which data is currently available). These series or income levels range from about $4000 to about $2 million.[8] If bracket creep exists, one would expect the effective tax rate for each income level to increase with inflation.

Finally, it is necessary to compute the effective tax rates for given gross incomes. To do this an AGI for each gross income must be found since taxes paid are reported by AGI rather than by gross income. Again it is necessary to interpolate adjustments and gross incomes to identify average adjustments for each gross income. Subtracting yields AGI. Assuming the midpoint of each AGI range pays the average tax for that range, point interpolations can be made to find the tax paid by any reported AGI. Dividing tax paid by gross income will yield the effective tax rate for that income.

These rates might vary for a number of reasons. First, according to the theory of bracket creep, inflation may push taxpayers into higher tax brackets, thereby causing tax rates to rise. Interestingly, bracket creep is not really necessary for higher rates. Whenever the marginal tax rate exceeds the average rate, the average must rise with income. This is true whether the marginal rate is one's current bracket or the next highest bracket. Because the tax system is progressive, marginal tax rates are greater than average tax rates, and any increase in income will be taxed at a rate greater than that of existing income. Inflation may also cause higher tax rates because, as Viner pointed out, inflation reduces the real value of the standard deduction.

Second, the filing status of taxpayers determines the amount of income that is not subject to taxation. Both the number and value of the standard deduction depend upon filing status. In addition, marginal tax rates vary with filing status. The lowest marginal tax rates are paid by a married couple filing jointly. The head of a household pays higher rates. Even higher rates are paid by singles who do not head a household. Finally, a married couple filing separately pays the very highest marginal tax rates. Since most returns are filed jointly by married couples (60–70%) and most of the remainder are filed by single individuals the other possibilities can be ignored. Overall, one would expect that as more income is earned by married taxpayers filing jointly, effective tax rates will fall. Conversely, as more income is earned by single taxpayers one would expect effective tax rates to rise.

Third, legislative changes in the tax law should affect tax rates. Changes in marginal rates and the standard deduction are of greatest importance for the years between 1954 and 1982.

Marginal rates have changed several times between 1954 and 1982. Many of these changes have been temporary though. For example, the years 1968–1970 included tax surcharges of 7.5%, 10%, and 2.5% respectively. Other reductions in marginal tax rates have been quite small in magnitude. ERTA, for instance, reduced marginal rates by 5% in 1981. But since the reduction did not take effect until the last quarter of the year, marginal rates in 1981 were only a fraction of a percent less than 1980 marginal rates.[9]

Essentially, between 1954 and 1982 there were three sets of marginal tax rates in effect. Between 1954 and 1964 marginal tax rates were identical. The Kennedy-Johnson tax cut lowered rates slightly, but not significantly, in 1964. The tax surcharges of 1968 and 1969 increased marginal rates back to their 1954–1963 levels.

The 1964 tax cut created a second set of marginal tax rates beginning in 1965. These rates were superseded by tax surcharges in 1968–69 which returned marginal rates to their level in the late 50's and early 60's. The tax surcharge of 1970 made marginal rates only 1% higher than in the years 1965–67 and 1971–78. The 1978 tax act made minor changes in marginal rates for the years 1979–80 and ERTA made only minor changes for 1981. Hence, except for 1968 and 1969, virtually the same marginal rates applied during the years 1965–1981.

Finally, ERTA reduced marginal rates significantly in 1982. This constitutes the third set of marginal rates in effect between 1954 and 1982.

To control for these changes in marginal tax rates two dummy variable were constructed. One, a dummy for the rates legislated by the 1964 tax act, has the value one for all years between 1965 and 1982, excepting 1968 and 1969. The second controls for the rate reductions legislated by ERTA. It has the value one for 1982, and zero elsewhere. It is expected that the coefficients of both dummy variables will be negative for all income levels.

Finally, the standard deduction is important in determining effective tax rates. Legislative increases in the value of the standard deduction work to reduce effective tax rates. Unless we control for this, we will underestimate the impact of inflation on tax rates. This is especially true of the 1970's when legislation gradually raised the standard deduction from $1000 to $3400 while inflation (as theory has it) raised effective tax rates.

Not everyone, however, benefits from these legislative changes. Those who itemize deductions do not pay lower taxes when the standard deduction is raised. However, they are immunized against losses in the real value of their deductions to the extent that itemized deductions increase in proportion to other prices throughout the economy.

Since only a fraction of taxpayers take the standard deduction, the value of that deduction for the average taxpayer is the amount of the deduction times the percentage of taxpayers taking the standard deduction. Legislative increases in the standard deduction should increase its value (as defined above) and thus lower effective tax rates.

Our model thus attempts to explain changes in effective tax rates based on inflation, filing status (Fracjt) and changes in the tax law. Important legislative changes are those in marginal tax rates due to the 1964 tax cut (D64) and the Economic Recovery and Taxation Act of 1981 (D82), and changes in the value of the standard deduction (Valstd).

RESULTS

Table 1 records regression coefficients and summary statistics for our model. Inflation, changes in tax laws, and changes in the filing status of taxpayers explain approximately 90% of the variation in effective tax rates for each income level.

TABLE 1
Explanatory Variables

Income Level (1982 $)	Constant	Inflation	D64	D82	Fracjt	Valstd	R^2	DW
$4,360	.057	−.051	−.015	−.001	−.312	−.00001	.95	2.04
	(11.23)*	(1.18)	(−6.65)*	(−.16)	(−2.62)*	(−4.80)*		
$7,285	.083	0.22	−.010	−.006	−.548	−.00003	.97	1.65
	(27.27)*	(.83)	(−7.26)*	(−2.11)*	(−7.06)*	(−11.05)*		
$10,211	.098	.058	−.008	−.004	−.627	−.00003	.95	2.10
	(35.33)*	(2.3)*	(−5.82)*	(−1.29)	(−8.68)*	(−12.30)*		
$13,126	.106	.074	−.008	−.006	−.602	−.00002	.92	1.76
	(34.06)*	(2.72)*	(−5.62)*	(−2.20)*	(−7.92)*	(−9.51)*		
$16,057	.110	.092	−.008	−.004	−.552	−.00002	.77	2.20
	(21.77)*	(2.03)*	(−3.22)*	(−.86)	(−4.29)*	(−4.81)*		
$18,948	.112	.082	−.008	−.006	−.502	−.00002	.89	2.01
	(30.13)*	(2.61)*	(−4.85)*	(−1.65)	(−5.81)*	(−5.19)*		
$21,890	.110	.122	−.012	.005	−.268	−.00001	.90	1.73
	(34.81)*	(4.18)*	(−7.67)*	(1.37)	(−3.21)*	(−2.27)*		
$24,792	.124	.050	−.009	−.008	−.510	−.00001	.89	1.80
	(26.4)*	(1.37)	(−4.71)*	(−2.05)*	(−5.29)*	(−3.79)*		
$27,705	.131	.053	−.009	−.009	−5.19	−.00001	.91	1.78
	(23.26)*	(1.45)	(−4.60)*	(2.44)*	(−5.60)*	(−4.24)*		
$36,434	.149	.029	−.011	−.017	−.668	−.00001	.91	1.63
	(23.67)*	(.65)	(−4.87)*	(−3.61)*	(−5.90)*	(−3.79)*		
$51,026	.171	.047	−.014	−.017	−.695	−.00001	.82	1.85
	(22.41)*	(.71)	(−4.14)*	(−2.35)*	(−3.75)*	(−2.24)*		
$101,876	.220	.171	−.039	−.013	−.866	−.00001	.86	1.90
	(14.70)*	(1.32)	(−5.82)*	(−.89)	(−2.39)*	(−.56)		
$217,839	.282	.097	−.026	−.018	−.076	.00001	.90	1.61
	(39.70)*	(1.54)	(−7.95)*	(−2.54)*	(−.42)	(1.03)		
$434,739	.384	.002	−.076	−.024	−.163	0	.83	1.75
	(14.00)*	(.01)	(−5.97)*	(−.83)	(−.23)	(0)		
$1,013,099	.349	.289	−.033	−.020	−.073	−.00001	.88	2.00
	(22.47)*	(2.32)*	(−5.03)*	(−1.51)	(−.22)	(1.20)		
$2,170,227	.358	.526	−.024	−.021	.870	.00004	.88	2.04
	(25.10)*	(4.18)*	(−3.62)*	(−1.50)	(2.45)*	(3.68)*		

Note: Figures in parentheses are t-statistics. A star indicates significance at the .05 level. R^2 is the coefficient of determination; DW is the Durbin-Watson statistic. Inflation is the percentage change in the consumer price index expressed as a decimal, D64 and D82 are dummy variables for the 1964 and 1982 cuts in marginal tax rates, Fracjt is the fraction of adjusted gross income reported on returns by married couples filing jointly, Valstd is the value of the standard deduction for the average taxpayer. Equations were estimated by the Cochrane-Orcutt method.

For those with 1982 incomes of $50,000 and below, the 1964 tax cut reduced income tax burdens by around 1%. For those with 1982 incomes of $100,000 and up, the 1964 tax cut lowered effective rates by about 3%.

The 1982 tax cut lowered tax rates by 1%–2% for those with incomes over $25,000, but had no or little effect on other taxpayers. Several provisions in the Economic Recovery and Tax Act of 1981 may explain this. First, in 1982 the top tax bracket was reduced from 70% to 50%. This was much larger than the reduction of any other 1982 tax rates, and benefited the very wealthy. ERTA also provided for a 5% deduction for couples with two income earners beginning in 1982.

This was of little use to the very wealthy who are more likely to have only one wage earner, and of little use to lower income households that have low incomes in part because there is just one wage earner. Consequently, it was the middle class that benefited from this provision. Overall, both the middle and upper classes had their tax rates reduced by ERTA.

The filing status of taxpayers was a significant determinant of effective tax rates for income levels up to and including $100,000. For all incomes (except $2,000,000) the coefficient for joint returns was negative, as expected. This indicates that a portion of the complaints about bracket creep may really be complaints about higher taxes paid by single individuals. Single baby boom children may be making less than their parents, but paying more in taxes. Or, they may be making more, but taking home less. Also, following a divorce, individuals will pay higher effective tax rates, and see smaller pay checks than they received when married. In inflationary times it may not be so easy to distinguish this tax increase from bracket creep.

Changes in the value of the standard deduction have significantly reduced effective tax rates for those with incomes of around $50,000 and below. However, given the miniscule changes in the value of the standard deduction, this has not been a major factor in reducing effective tax rates. For those with incomes greater than $50,000, increases in the standard deduction have been too small relative to income to significantly alter tax rates.

The relationships between inflation and effective tax rates are the most interesting in and of themselves. In addition, they are important because they provide empirical estimates of the extent and significance of bracket creep.

In general, four different results can be distinguished. With only a mild distortion of accepted terminology, our income levels can be divided into four classes. A lower class of taxpayers is comprised of those with incomes up to about $7300. A lower middle class begins with incomes of $10,000 and ends with incomes of $22,000. Taxpayers with incomes between $25,000 and $430,000 comprise the upper middle class. Finally, those fortunate enough to receive incomes greater than $1 million are members of the upper class. Borderlines between classes are of course fuzzy.

For the lower class no evidence of bracket creep exists. The regression coefficient for the very poor ($4360 in 1982 dollars) is negative, indicating that inflation lowers effective tax rates. Those with slightly more income ($7285) do pay more because of inflation. However, the inflation coefficient is very small. Prices would have to double for these taxpayers to lose 2% in real income due to bracket creep. Moreover, for the lower class, inflation coefficients are *not* statistically significant.

In contrast, for the lower middle class inflation is a significant determinant of effective tax rates. In addition, as income rises through the lower middle class both the extent and the statistical significance of bracket creep rise. Taxpayers earning $10,000 in 1982 would lose .6% of real income due to 10% inflation while the $22,000 income recipient would lose about twice that amount.

For the upper middle class the existence of bracket creep is again questionable. Beginning at the $25,000 income level the inflation coefficient drops below the value of the coefficient for the lower middle class. In addition, no inflation coefficient is significant for this class. This provides a striking contrast to the hypothetical results of Viner, Smith and McCain, where those with higher incomes are always hurt more by inflation.

Also striking is the fact that 10% inflation has a smaller impact on real incomes than either Smith or McCain hypothesized. Both authors estimated real income loss of between 2% and 3½% for their typical taxpayers. Actual returns though indicate losses on the order of .3% to 1.7% with .5% as the norm. The $200,000 earner, suffering the most from inflation according to

Smith and McCain actually does not suffer at all. An income of $200,000 in 1974 (the year that Smith and McCain use) has approximately the same purchasing power as $400,000 in 1982. For this income level, the inflation coefficient is virtually zero, indicating the total absence of bracket creep.

The wealthy, like the lower middle class, are adversely affected by inflation. A 10% price hike increases effective tax rates by about 3% for the millionaire and 5% for the multimillionaire. This accords with hypothetical estimates that bracket creep is worse for those in higher income brackets.

Although these results may have been unexpected, they are not unreasonable. The upper middle class has a number of buffers against inflation. Adjustments, tax credits, and itemized deductions generally rise with prices. Increases in these will tend to reduce taxes and mitigate bracket creep. For example, the upper middle class is more likely than the lower middle class to have business deductions and to be able to afford other adjustments to income. They are also more likely to take advantage of various tax credits such as child care expenses, political contributions, and energy saving credits. The lower middle class, pinched by rising prices and starting out with lower incomes, will less likely be able to afford additional outlays for these items.

Capped provisons, like IRA's, also work to the benefit of the upper middle class. The maximum a couple can deduct from taxable income for an IRA contribution is $4000. For those in the 50% bracket this amounts to a tax savings of $2000. This constitutes a 1% reduction in effective tax rates for those with incomes of $200,000, a .5% reduction in effective tax rates for those with incomes of $400,000, but a reduction of only .2% for millionaires. Families with incomes of $20,000 and under are less able to set aside $4000 until retirement, and so are less likely to take advantage of the tax savings available through IRA's.

Cheating patterns on tax returns reinforce these tendencies. Effective tax rates can be reduced by claiming more adjustments, deductions, or credits than one is legally entitled to. A fear of audit may reduce this sort of cheating by the upper class. In addition, it is easier for the upper class to cheat on taxes by not declaring income. For the middle class, where most tax is withheld at the source and most income is labor income, cheating must take place by overstating adjustments, deductions, and credits.

Cheating by the upper middle class reduces tax rates because taxes fall while income is constant. In contrast, upper class cheating reduces both taxes and income—therefore having little effect on measured tax rates.

For the lower middle class there is little opportunity to cheat. Income is almost entirely wage income, and these taxpayers are unlikely to itemize deductions and unlikely to have the sort of adjustments and tax credits that can be padded. Dishonesty then can not be a possible escape from bracket creep for the lower middle class.

CONCLUSION

It was noted at the outset of this paper that unquestioned, dominant theories can be quite useful. The theory of bracket creep has so been for the upper class and for the upper middle class.

For the upper class, discretionary tax cuts have substantially reduced effective tax burdens. In 1982, effective tax rates for those making $500,000 or more were lower than at any point since the mid 1960's. And additional reductions were to come in 1983. For the upper middle class, provisions have been incorporated into the tax laws which have mitigated any tendency for inflation to increase tax burdens.

Lost in the shuffle has been the lower middle class. They do suffer from bracket creep like the wealthy, but they cannot afford the loss of real income that bracket creep entails. Moreover, unlike the upper class, the lower middle class has not benefited from discretionary tax cuts to a large extent. In 1982, effective tax rates paid by the lower middle class were 1% to 2% higher than their 1970's rates. This class of Americans has been squeezed by inflation on the one hand and by lack of tax relief on the other hand. Matters have been made worse no doubt by increases in regressive sales and social security taxes over the same period.

The dangers of this situation are both political and economic. There is the possibility of outright rebellion by the lower middle class, and there are the negative economic consequences of slower economic growth due to lower consumption. As Joan Robinson warned fifteen years ago, the second economic crisis is distributional in nature.[10] The problem we face is one of poverty amidst plenty. It is quite sad that the tax system and fiscal policies have contributed to this problem. It can only be hoped that activist policies can reverse these trends.[11]

FOOTNOTES

1. Milton Friedman, "The Methodology of Positive Economics," in Milton Friedman, *Essays in Positive Economics* (Chicago: University of Chicago Press, 1953), p. 7
2. *Ibid.*, p. 15.
3. Jacob Viner, "Taxation and Changes in Price Levels," *Journal of Political Economy*, Vol 31 (August 1923), 494–520
4. Charles J. Goetz and Warren E. Weber, "Intertemporal Changes in Real Federal Income Tax Rates, 1954–70," *National Tax Journal*, Vol XXIV (March 1971), pp. 51–63.
5. Dan Throop Smith, "Progressive Income Taxation Discriminates against Larger Incomes during Inflation," *Tax Review*, Tax Foundation, Inc. June 1975, 23–28.
6. John E. McCain, "The Interaction between Federal Income Taxes and Inflation," *Nebraska Journal of Economics and Business*, Vol 22 (Spring 1982), 27–37.
7. George M. von Furstenberg, "Individual Income Taxation and Inflation," *National Tax Journal*, Vol XXVIII (March 1975), 117–125.
8. Effective tax rates between 1954 and 1982 for all sixteen income levels are available from the author on request.
9. For marginal rates see Joseph A. Peckman, *Federal Tax Policy*, 4th ed. (Washington: Brookings, 1983), pp. 304–7.
10. Joan Robinson, "The Second Crisis of Economic Theory," *American Economic Review*, Vol 62 (May 1972), pp. 1–10.
11. This work was supported, in part, by a Grant-in-Aid-for-Creativity award from Monmouth College. The author would like to thank Jeanne Applegate for her invaluable assistance.