PARETO SUPERIOR TAX REFORM:
SOME SIMPLE ANALYTICS

James M. Buchanan
George Mason University

As early as 1959, I suggested that political economists should spend their energies searching for possible changes in the parameters of economic structure that would attain consensus, or, in the terms of welfare economics, that would meet the criteria of Pareto superiority. We have not met this challenge. In particular, political economists acquiesced in the increases in marginal rates of income tax, enacted in 1993, treating these changes as the exercise of will by the political majority. No attention was paid to the prospect that some of the changes may have resulted in making everyone worse off, not only "the rich," who are directly subjected to the increased marginal rates, but also all of the others who are "tax users," as beneficiaries either of spending programs or of the promised reduction in the deficit.

At the very least, it can be shown that, post-1993, there exist Pareto-superior changes that will ensure that everyone gains, taxpayers as well as "the fisc" acting as agent for all beneficiaries. "The rich" can be made better off while actually paying more in taxes, thereby guaranteeing that all "tax users" are also made better off.

I shall demonstrate these results through the use of a stylized example and simple geometric construction. The general principles here are well understood in formal public finance theory, but it remains useful to present these principles in particular application to problems of current policy structure.

Consider Figure 1 in which I depict the situation for a single taxpayer (presumably rich enough to have been affected by the increase in marginal rates). Money income is measured along the abscissa and effort required to generate this income along the ordinate. I normalize units in the postulated linear relationship so that the set of feasible positions in absence of taxation is defined by the 45° line.

I assume that there is, in place, a tax on income with smooth progression in rates after a threshold income level below which a zero rate applies so that the effort-post-tax income relationship is described by the line OEP. Stepwise progression would not modify the analysis in its essentials. As depicted, the taxpayer attains equilibrium at $E$, with pre-tax income at $Y$, and with tax revenue at $R$.

We want to prove that there exist alternative arrangements such that

1. the taxpayer attains a higher utility level than that measured by the indifference contour $I$;
2. the fisc secures revenue higher than $R$; and,
3. the taxpayer attains full adjustment equilibrium.


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Consider, first, the possible replacement of progression in rates by proportionality. Draw a line, $dd$, through $E$, parallel to the 45° line. Any position that falls to the left (outside) this boundary guarantees that revenues exceed those measured by $R$ in the initial equilibrium. Draw a line connecting the origin with $E$ and extending beyond $E$. Think of the constant difference in slope between this line and the 45° line as the rate of an alternative proportional tax (set at the average rate actually paid by the individual under the progressive structure).

We know, by construction, that the slope of $OE$ at Point $E$ is

1. greater than the slope of the 45° line,
2. less than the slope of the curve of attainable positions under the progressive rate structure, $P$.

From these conditions it follows that there are positions on $OE$, as extended, that allow the taxpayer to attain a higher level of utility and pay more in total taxes, while attaining equilibrium. Such a position is shown at $E'$. Note that the taxpayer, at $E'$, is attaining more utility than at $E$, despite the fact that he is exerting more

NOTES

1. This note emerged as a by-product of a different and more comprehensive analysis (Buchanan and Yoon, 1968).

REFERENCES
