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Commentary

When One-Eyed Accountants are Kings: A Primer on Microeconomics, Income Taxes, and the Shibboleth of Efficiency*

Richard A. Westin**

The field of federal tax policy increasingly has become a battleground for the self-proclaimed forces of tax equity and those of efficiency.¹ For the purpose of tax policy, "tax equity" has been formalized and neatly divided into a set of principles and a baffling question concerning the appropriate level of progressivity,² whereas "efficiency" is used promiscuously and practically never defined. Perhaps the meaning of "efficiency" is considered obvious, or perhaps the concept is considered so obscure that only economists can organize it. Whatever the reason, the term is used loosely and deserves to be clarified, or reclarified, for those concerned with matters of federal tax policy, especially for those with limited backgrounds in economics. The purposes of this brief, nontechnical Commentary are to describe what microeconomists mean by the term "efficiency," to comment on the force of that concept, and to fathom some of

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1. See, e.g., Bittker, Equity, Efficiency, and Income Tax Theory: Do Misallocations Drive Out Inequities?, 16 SAN DIEGO L. REV. 735 (1979) (comparing the approaches of equity theorists and efficiency theorists). I most gratefully acknowledge the direction provided by Professor Bittker in reviewing an early and rather cumbersome draft of this Article. I also wish to thank Stephen W. Salant, Ph.D., of the Rand Corporation, an outstanding microeconomist, for his invaluable contributions. For a particularly lucid article on public policy issues presented by equity and efficiency, see Okun, Further Thoughts on Equality and Efficiency, in INCOME REDISTRIBUTION 13, 19-30 (C. Campbell ed. 1977).

2. The well-accepted theorems are vertical equity, the notion that those with comparatively greater ability to pay should pay more than those less able to do so, and horizontal equity, the notion that those with equal actual abilities to pay should pay equally. For a refined definition of horizontal equity, under which the aim would be to assure that the utility ranking of different taxpayers is preserved when the tax rules are changed, see Feldstein, Compensation in Tax Reform, 29 NAT'L TAX J. 123, 124 (1976)
its implications. One of the implications is that the concepts of efficiency and equity are in fact deeply intertwined.

POPULAR MISCONCEPTIONS OF EFFICIENCY: LAW PROFESSORS AND IDEOLOGUES

There is a rather long list of concepts that are commonly thought of as “efficiency” but that, as the term is defined by microeconomists, are not. The first of these alternate uses of “efficiency” is popular with law professors, who use the term in analyzing whether statutory provisions organize the revenue leakage they produce in a sensible manner. This analysis asks first the purpose of a particular feature of the statute and then whether the legislature chose the least wasteful means to that end.\(^3\) For example, section 168 of the Internal Revenue Code grants an eighteen-year write-off for improved real estate.\(^4\) The provision was enacted as part of an overall program of economic recovery,\(^5\) but, asks the law professor, is it not true that waving a magic wand over realty that was in existence on the date of enactment will do nothing to add to the nation’s stock of improved real estate and will provide no jobs? Accordingly, has not the legislature caused a purposeless leakage of revenue, that is, been inefficient? In the language of legislators, has not the statute been poorly “targeted?”\(^6\) For the law professor, then, efficiency is equated with sensible organization of revenue leakage.

At a somewhat more sophisticated level, the term “efficiency” is used in examining whether revenue losses have been sensibly distributed among the persons whose taxes were re-

3. No disparagement is intended, as the exercise can be highly revealing. For an especially good example, see Auerbach, *The New Economics of Accelerated Depreciation*, 23 B.C.L. Rev. 1327, 1346-48 (1982), which demonstrates that, assuming a 12% discount rate, the combined forces of accelerated cost recovery and the investment tax credit, I.R.C. § 38 (CCH 1984), result in a negative tax rate and a major bias in favor of short-lived property. See also Hulten & Robertson, *Corporate Tax Policy and Economic Growth: An Analysis of the 1981 and 1982 Tax Acts* (Discussion Paper, Urban Institute, Dec. 1982).


6. The same inquisitorial approach may be aptly applied to I.R.C. § 911 (1982), which grants a lavish exclusion from gross income for overseas occupations. Students will readily agree that the provision may be appropriate for a United States corporation competing for Middle East construction contracts, but entirely inappropriate for United States citizens comfortably employed as bankers in foreign jurisdictions with little or no income tax at the time § 911 was enacted.
duced. Comparisons between the somewhat stingy tax benefits available for research and experimentation expenditures\(^7\) and the benefits conferred on used real estate\(^8\) furnish a good example. Although Congress has declared its preference for encouraging research and development,\(^9\) the tax code encourages futile investment in used real estate and consequently less investment in research. The statutory provisions are therefore declared "inefficient." The analysis is similar to that described above, but the focus here is on evaluating differential revenue leakage in light of announced congressional policy.

The same type of analysis can be applied to taxes imposed on different sources of revenue. A typical inquiry is whether income from capital should be more favorably taxed than income from labor in order to encourage entrepreneurial behavior that provides employment and increases industrial output. Again, the focus is on whether the statute, as interpreted by the courts and the government, is crafted to do its intended job.

The other group that uses the term "efficiency" in an alternate sense might be classed as the antigovernment ideologues, who view any tampering with the marketplace as inexorably producing "inefficiency." They view the Internal Revenue Code as an inexcusable petri dish filled with toxic colonies of governmental intervention. Looking at the Code in this light, as an exception to an undiluted marketplace, examples of inefficiency abound. For example, the investment tax credit is inefficient because it discriminates in favor of tangible personal property rather than realty and intangible property.\(^{10}\) Tax-free municipal bonds\(^{11}\) are inefficient because they drive capital into otherwise marginally productive uses. To the ideologues, virtually every Code section is a candidate for repeal. This last view of efficiency seems to be a cross between a reductionist understanding of microeconomics and a preference for social Darwinism. Such language is the province of politicians and the press, not scrupulous economists.

\(^7\) See I.R.C. § 30 (CCH 1984).
\(^8\) See I.R.C. § 168 (1982).
THE MICROECONOMISTS' VIEW OF EFFICIENCY

Microeconomists occupy a rarified world of elegant models of economic behavior and alone among economists have a specific understanding of what efficiency represents. Microeconomists try to distill the study of resources and human preferences into a manageable form by using models, typically involving small numbers of imaginary participants, from which certain significant generalizations can be drawn. The result of their labors is an intellectually coherent system of economic principles. Such clarity, however, has its cost: all too often, the models lack any significant contact with day-to-day reality.

BASIC MICROECONOMIC THEOREMS

Any economy, whether free-market, welfare state, or centrally planned, results in an allocation of goods and services to its consumers. Economists use the term "efficient" or "inefficient" to characterize the particular allocation. If, given the existing technology and resource constraints, an alternative to a particular allocation of goods could be provided that every consumer in the economy would either be neutral towards or prefer to the allocation under scrutiny, then the first allocation is termed inefficient. Otherwise, it is termed efficient. The alternative allocation might be generated by using different combinations of factors to produce various goods, by producing different kinds of goods, or by distributing the produced goods differently.

The distinction between efficient and inefficient allocations can be clarified by means of a diagram that economists call a "utility possibility frontier."

Limited only by the economy's resources and existing technology, economists can, in principle, produce almost countless different allocations of goods. Each consumer in the economy is assumed capable of comparing the set, or "bundle", of goods received under one allocation to the set of goods that would be received in another allocation pattern. A consumer's preference may be discussed more conveniently by assuming that each consumer assigns a value number ("utility") to each bundle of goods that might be received. If the consumer has no preference between the bundles, both would receive the same number. If the consumer prefers one bundle to the other, the

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12. In the interest of simplicity, all references will be to goods alone, subsuming services as well. There will be no loss from this simplification.
preferred bundle would be given a higher number. Because an economy has limited resources, and because no technology can produce infinite output from scarce input, the "utility allocations" that an economy can deliver are limited. Indeed, even if there were only a single consumer, some bundles of goods would have rankings so high that they could not be delivered by the economy under consideration. With many consumers, the utility allocations that could be achieved are similarly limited.

To illustrate these concepts graphically, consider an imaginary economy occupied by at least two consumers (Persons 1 and 2), both of whom have a set of preferences among the goods the economy can generate. If each participant is apportioned different fractions of the economy's total resources, for example, Person 1 gets all the sheep and Person 2 all the butter, and the participants' particular preferences ("indifference curves") between the goods are known, it can be determined how they would trade their goods with each other. By going through extensive variations of these original allocations, known as "endowments" in the language of microeconomists, a so-called contract curve can be hypothesized that would show what the posttrading ownership patterns would look like for whatever particular endowment was assumed. To illustrate

![Contract Curve](image)

Figure 1. Contract Curve

the curve's implications, at point $S_1$, Person 1 has all the goods and no trading occurs. Conversely, at $S$, Person 2 has everything and again no trading occurs. Except for those trivial cases, the contract curve represents the best bargain that each

13. See J. Gould & C. Ferguson, Microeconomic Theory 423-26 (5th ed. 1980). The participants' relative bargaining skills will also influence their
participant can strike in light of the endowments and prefer-

posttrading outcomes.

To oversimplify, the contract curve represents points of tangency of the two consumers' utility curves. First, utility curves are constructed for each consumer. For example, Person 1's oversimplified utility map (composite utility curves) might look like this:

![Diagram of sheep and butter utility curves for Person 1]

Person 2's oversimplified utility map might look like this:

![Diagram of sheep and butter utility curves for Person 2]

Next, Person 2's graph is flipped and merged with Person 1's graph:

![Diagram showing the merging of utility curves]

Next, closely overlapping curves are evaluated. The crosshatched area represents the so-called trading space, within which both consumers are better off (given some initial endowment), measured in terms of utility, after trading. The hypothetical point on which the consumers land forms one point (for example, $M$) on the contract curve. The outcome ($M$) is one of the points where
ences of each, and, as such, this bargain is declared efficient by the microeconomist. Any point off the curve represents a condition in which at least one participant's circumstances can be improved with no loss to the other participant. Such a condition is inefficient until corrected.

To illustrate one point along the curve, at $M$ Person 1 has 145 pounds of butter and 45 sheep, and Person 2 of course has the balance of 55 pounds of butter and 55 sheep. The result is skewed in favor of Person 1, but from the point of view of the economist, it is efficient.

The exposition is incomplete until the contract curve is translated into a so-called utility possibility frontier. A utility-possibility frontier delineates the boundary of the set of utility allocations that the economy can deliver in light of its resources. Unlike the contract curve, it accounts for decisions relating to the production of goods as well as to their distribution. Consider the case depicted in Figure 2 for the same simplified two-person, two-product economy:

![Utility Possibility Frontier Diagram](image)

Figure 2. Utility Possibility Frontier

All utility combinations below $S - S_1$ are achievable given the

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14. This discussion avoids the microeconomic analysis of production; nothing is lost by doing so.
economy's resources and technology, but no utility combination above that curve can be achieved.

Allocations of goods giving rise to utility allocation below the curve are inefficient. By way of illustration, consider an inefficient point such as L or Z. Because there exist points "northeast" of them, alternative allocations exist that would be either preferred by all consumers or preferred by some and not resisted by any.

The simplest two-person economy, with no uncertainty, no production, no passage of time, etc., results in a utility-possibility curve like that in Figure 2. So does the most complex economy.\(^{15}\) Stated formally, the utility possibility set for an \(n\)-person economy (where \(n\) is greater than two) is an \(n\)-dimensional surface analogous to that in Figure 2. Indeed, Figure 2 can be interpreted as being the set of feasible utility allocations for two people in an \(n\)-person economy when the other \(n - 2\) people are always given allocations of unchanging rank. In short, Figure 2 is very general, and hence worthy of scrutiny.

An important characteristic of the efficient points in Figure 2 is their abundance; an infinite number of allocations are efficient. Economists, however, use a synonym for efficiency that tends to obscure this point. Instead of calling an allocation "efficient," they call it "Pareto optimal." Economists do not define "optimal" as the unique best, its Latin root notwithstanding. Instead, they mean one of an infinite number of "best" allocations.

Once it is understood that there are an infinite number of efficient allocations, the next logical step is to try to find some way of ranking the efficient points to find the "best" among them. Such ranking can be done, but only if value judgments are made about the relative merits of the needs of different consumers. For example, most people would consider allocation \(S_1\) as strikingly inhumane and hence inferior to allocation \(M\), even though both are efficient.\(^{16}\) \(S_1\) is Pareto optimal, or

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\(^{15}\) See J. Gould & C. Ferguson, supra note 14, at 426-27. That text continues with a parallel analysis of production and the eventual equilibrium struck between production and consumption for a two-person, two-commodity economy, and, by implication, for much larger economies. Failure to paraphrase those materials does no disservice to the messages of this Commentary.

\(^{16}\) The models assume that the participants in the economy are rational profit maximizers who do not engage in activities that wantonly destroy each other's output. The moral assumption that one consumer should not starve while the other has all the wealth and income is considered too obvious to dwell on.
Pareto efficient, because it assigns everything the economy produces to one consumer and consequently no other allocation exists that every other consumer, including the person receiving all the initial allocation of endowments, prefers or is at least indifferent to. In short, $S_1$ may be efficient, but it is also scandalously inequitable.

Economists disdain making the "interpersonal comparisons" required to rank efficient allocation. To paraphrase Tom Lehrer, that is not their department. Politicians are supposed to make such judgments. Economists view themselves as technicians who can be of no service to politicians if the economists impose their own values on situations. This seems sensible and is doubtless well-intentioned. Economists instead direct their considerable mathematics to determining whether under particular circumstances the allocation of the market economy will be efficient or inefficient. Circumstances leading to an inefficient market are termed "market failures." One triumph of modern economics—for which two Nobel prizes have in part been awarded—is proof that an efficient allocation results from laissez faire, provided certain assumptions are met.

**REDISTRIBUTIVE TAXATION AND ECONOMIC EFFICIENCY**

For economists to focus on efficiency and to leave interpersonal comparisons to others is appropriate if and only if others actually make those comparisons. Unfortunately, the political and legal systems have themselves become entranced with the economists' notion of efficiency. If none of the people directing the economists is concerned with equity, and economists refrain from injecting their own value judgments into their analyses, equitable judgments will not be made. A rationalization of the status quo is the likely result.

For example, assume the market economy results in an allocation, like $S_2$, that is monstrously inequitable. An economist will pronounce the situation Pareto efficient or Pareto optimal. The matter may end there, since the "optimal" sounds hard to beat. The starving consumer, however, or those sensitive to this consumer's plight, may point out the inequity of the private-market allocation. If this equitable view prevails, then a scheme to tax the wealthier consumer and redistribute the proceeds to the poorer consumer may be proposed that will result

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17. These prizes were awarded to Kenneth J. Arrow (1972) and Gerard Debreu (1983).
in a different allocation from the market economy. How will the economists rate this proposed scheme?

Suppose that the proposed scheme results in point $Z$ in Figure 2 and that, by some ethic, point $M$ would be the best feasible allocation. Since $Z$ is close to $M$, it would be a highly desirable allocation, but microeconomists will sincerely declare it "inefficient" and "suboptimal." In moving from $S_1$ to $Z$, they will correctly observe, the tax system has created distortions. Almost inevitably, therefore, efficient but inequitable allocations tend to persist, even though inefficient but more equitable allocations exist that those prepared to make interpersonal comparisons would prefer.

In response to this criticism, thoughtful economists suggest the obvious solution: transcend the paralyzing conclusion that a change in favor of equity is inefficient and instead demand that the extent of the inefficiency be quantified and the conclusions be handed over to policy makers for their final decision. Unfortunately, economists are often not given this further mandate, and quantification of the loss from inefficiency may be far more difficult than the conclusion that a particular change in policy would be inefficient. Consequently, the economist's conclusion that the change would be inefficient, misunderstood by most, tends to dominate the discussion.

As long as methods of redistribution result in inefficient allocations, the scenario just described rationalizes adherence to the status quo. Indeed, it is an item of faith among economists that the problem of inequitable inefficiencies is unavoidable. The pessimistic syllogism runs as follows. Economists can conceive of redistributive taxes that create no inefficiencies—"lump sum taxes," in the jargon of economists. In theory, a lump sum tax plus a redistribution could transform allocation

18. Such a tax would be an instantaneous, unanticipated transmission of wealth between or among participants, fixed in dollar amount and not influencing pretax behavior. It would depend, among other things, on perfect information and perfect markets, both of which are of course impossible. The conditions are more complex still because household indifference curves and firm production curves must be convex. These conditions are an element of Sen's Converse Theorem, which has been defined as follows:

If household indifference maps and firm production sets are convex, if there is a full set of markets, if there is perfect information, and if lump-sum transfers and taxes may be carried out costlessly, then any Pareto-efficient allocation can be achieved as a competitive equilibrium with appropriate lump-sum transfers and taxes.

$S_f$ into allocation $M$, and the overall reallocation would be efficient. In fact, however, lump-sum taxes are acknowledged to be an economic theorist’s idealized case, because in practice every allocation achieved by means of a tax plus a redistribution scheme will create some inefficiencies. At the very least, some citizens will pour resources into lobbying efforts and others will take anticipatory actions to reduce their prospective tax burdens or to increase their prospects for receiving redistributive benefits; any of these activities would render inefficient any redistributive scheme that finally became law.\textsuperscript{19}

**IMPLICATIONS FOR FUTURE TAX POLICY**

Using this formal definition of efficiency as a guide to tax policy, it becomes apparent that the remedy for society’s emphasis on efficiency is not an idealized tax but a recognition that such emphasis is misplaced. Interpersonal comparisons should not be neglected by everyone just because economists are unwilling to make them. Equity considerations are important and should not take a back seat to the relatively unimportant characteristic of efficiency.

Moreover, the premise that the present system is inherently efficient is insupportable, because the markets are not entirely free, information is lacking and substantial government intervention in the marketplace already exists. Further, reliable quantification of the adverse effects of intervention is highly controversial, which should come as no surprise because the abstractions that have been discussed are just that.

If society is willing to make ethical judgments about alternative allocations, the microeconomists’ conclusions about efficiency can be useful for deciding tax policy. Efficiency is a characteristic possessed both by very good and by very bad allocations. It is true that the best allocation in the economy will be efficient. Establishing that an initial allocation is inefficient, therefore, does prove that it is not the best, because an improvement for every consumer is, in principle, possible. Nevertheless, an inefficient allocation may be very good; indeed, it may be far superior, as determined by societal values, to an efficient allocation. Therefore, the fact that a tax-redistribution scheme transforms an efficient allocation into an inefficient one

\textsuperscript{19} There are two qualifications. First, after the redistribution, a new equilibrium will be struck. Second, substantial inefficiencies, such as lobbying, occur anyway.
does not imply that the tax scheme causes harm or that the inefficiency will be continuous.

The use of efficiency in characterizing contract curves and formulating utility-possibility frontiers in limited participant models, as described above, can be carried over into analogous policy-making theorems for large populations, but real-world equitable snags quickly appear. This application of efficiency analysis uses the concept of Pareto optimality to hunt for better economic policies. Lester Thurow characterizes the associated problems this way:

Economic theory avoids equity decisions by retreating into what is called Pareto efficiency—a fancy term for “more is better than less.” If a public program moves the economy from state A to state B, and in state B everyone is better off than, or as well off as, they were in state A, then we can say that the public policy is Pareto-efficient and should be adopted. But since there is always someone who is worse off after any change, nothing is Pareto-efficient in the real world. As a result, we retreat farther to the weak form of Pareto efficiency. In this weak form, state B is Pareto efficient if the economic gainers in state B could compensate the economics losers in state B so that everyone is as well off or better off. This, of course, is always possible as long as total resources in state B are larger than in state A. Therefore, any policy that raises the GNP is Pareto-efficient. The problem in the real world is that the compensation from winners to losers actually has to be paid, yet is almost never paid. As a result, we cannot avoid making economic equity decisions in public policies, even though we can eliminate them in economic theory.20

So where does this leave the determination of tax policies? If society is to insist on efficiency in adjusting public policies, then it must be scrupulous to assure that the principle is not violated in application and it must deal explicitly and faithfully with the equity issues entailed. If these efforts are not made, then the principle of efficiency falls too. As Thurow implies, a willingness to engage in redistributive activities to achieve a new Pareto optimum result expands policy-making powers, but a failure to follow up on the necessary redistribution violates the rules of efficiency and produces individual unfairnesses. In sophisticated policy making, therefore, equity confines efficiency.

Conversely, inefficiency confines equity. Policies can be

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20. L. THUROW, THE ZERO SUM SOCIETY 218 n.1 (1980) (emphasis added). For a discussion of the related, and somewhat stunning, proposition that victims of tax reform (for example, homeowners who lose the right to home mortgage interest deductions) are entitled to guaranteed compensation for such changes in order to prevent a violation of horizontal equity, see Feldstein, supra note 2, at 127-28.
designed that enhance equity but that are inefficient in a static economy in that at least one person is worse off, as in a shift from $S_1$ to $Z$ in the earlier example. If an economy expands, inefficiency does not necessarily follow, but, as Thurow points out, it virtually always does in fact. As noted above, unless microeconomic reasoning is to be thrown out of the system of policy making, the efficiency of a change should be considered. Analysis should not, however, stop with that observation. Instead, the economist’s mandate should be expanded to quantify the inefficiency, after which the policy makers can, it is hoped, intelligently evaluate the choices the proposal represents. Such an expansion is certainly preferable to a mind-deadening conclusion from a noted microeconomist’s declaration that the change is inefficient.