Natural Monopolies and Rent: A Georgist Remedy for X-Inefficiency among Publicly-Regulated Firms

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By GEORGE BABILOT, ROGER FRANTZ *and* LOUIS GREEN*

ABSTRACT.   *Publicly-regulated firms* are sheltered from *competition* and are *inefficient.* When analyzed within the theoretical framework of *X-inefficiency,* it is discovered that they are *subsidized* by a quasi-excise *tax* and result in *deadweight losses* to society. When the losses and X-inefficiency are understood as *rent,* an appropriate *public policy* is to levy a tax on these firms. A tax would raise *productivity* and increase tax *revenues* without reducing output.

I

Introduction

THE LAST DECADE has seen a renewed interest in capital formation and productivity in the United States and other countries. One aspect of these related issues is the performance of government-regulated firms such as privately-owned public utilities.[1] It has long been recognized that rate-of-return regulation may result in overcapitalization, a form of allocative inefficiency.[2] More recently economists have discussed and presented empirical data[3] demonstrating that rate-of-return regulation not only misallocates resources, but "wastes"[4] resources as well. That is, public utilities as monopolists are sheltered from competition and hence may refrain from pursuing cost minimization. Accordingly rate-of-return regulation not only changes relative factor prices and, therefore, the optimal input ratio, but also reduces the motivation to maximize the productivity of any given set of inputs.

This non-allocative form of inefficiency has been called X-inefficiency by Harvey Leibenstein.[5] X-inefficiency among public utilities has been reported to be as high as 24 percent. This implies that average costs are 24 percent above necessary levels, or that a given set of inputs yields 24 percent less output than its potential. X-inefficiency thus represents restrictions on output and wasted opportunities for social progress, *i.e.,* technological change, and increases in real living standards. What has not been widely recognized is that X and allocative

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inefficiencies caused by rate-of-return regulation is tantamount to a "quasi" excise tax. Henry George's canons of taxation and analysis of monopoly power are particularly relevant to understanding how best to deal with this problem.

II

X-(in)efficiency as Rent

ECONOMIC THEORY, assuming cost minimizing behavior by firms, has focused its discussion of efficiency on allocative or price efficiency. Accordingly efficiency has come to mean the equality of price and marginal costs, as well as the equality of the ratios of input prices with input productivities. The concept of X-efficiency (XE) was developed because of an observation that in many cases firms undertook *internal* (non-market) changes which raised input productivity and lowered unit costs. Leibenstein concluded from these data,[6] taken from both more and less developed countries, that firms are not always cost minimizers nor are they always doing as well as they can. This type of inefficiency is not allocative; hence the name X-inefficiency. For a firm, X-inefficiency means producing with higher than necessary costs or producing less output per unit of input than it can. For an individual X-inefficiency means behaviors contributing to the firm's X-inefficiency.

X-inefficiency has both personal and environmental elements. The former include an outright lack of cost consciousness by some, and, among others who may have a general desire to economize, a neglect of the details necessary to minimize costs and maximize productivity. X-efficiency (XE) requires exertion directed toward production efficiency and this is not always forthcoming. Leibenstein's explanation for this is that the human personality exhibits two contradictory characteristics: one "side" that is willing and eager to be concerned with production efficiency through attention to details and "rational" decision making, and another side that tends toward "looser" procedures and less concern for cost-cutting details.

The environmental elements are the pressures which the economic milieu exerts on either or both sides of the personality. These pressures include, for example, competition, peer pressure, unemployment rates and wages, all of which affect work effort.

Are people "naturally" inclined to avoid work effort? Economic theory often seems to imply that. For example, it is sometimes suggested that work effort and job satisfaction are inversely related to each other; from this perspective, labor (exertion) is seen as a "bad" rather than a good.[7] However, a study of the

Mondragon cooperation in Spain by Bradley and Galb[8] suggests that the tendency to avoid exertion may be more an environmental factor than a "natural" personal factor. The study showed that the cooperative not only outperformed non-co-operatives of the region in terms of productivitiy and profits, but that those

Figure 1

Allocative and X-Efficiency
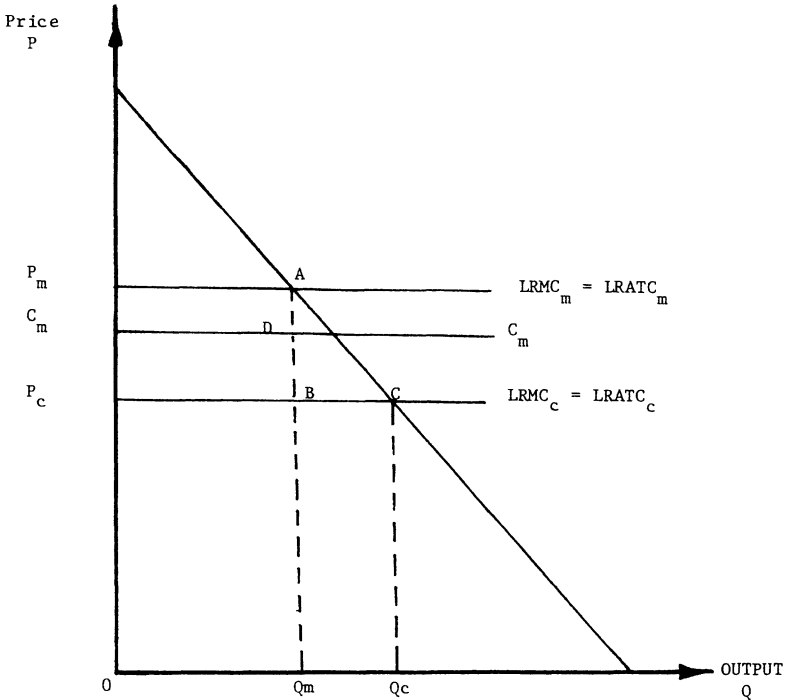

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P = price
C = cost
Q = output
LRMC = long run marginal cost
LRATC = long run average total cost
m = monopoly
c = competition
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performing "labor" and "management" functions cooperated in an environment of trust. Moreover, job satisfaction increased with relatively high levels of work effort. The authors credit a relatively high level of XE to a cooperative environment. The importance of the environment is reinforced by other studies, cited

below, which have shown that monopoly power leads to higher costs, inertia, and in general, to relatively inferior economic performances.

As a means of graphically distinguishing allocative inefficiency from X-inefficiency, we utilize Figure 1. Here we show a monopolist restricting output and selling it at a higher price (Pm) than it would under competitive conditions (Qc, Pc). Allocative inefficiency is thus the area ABC, the "welfare triangle." The area PmABPc is monopoly profits, a transfer of income from buyer to seller. However, if in addition to allocative inefficiency, the monopolist also has higher costs equal to LRMCm, then the area PmABPc is X-inefficiency, not profits; it is waste or a deadweight social loss rather than an income transfer. The social cost of monopoly power via government regulation is represented by the trapezoid PmACPc.

In the case where the monopolists' costs equal LRMCm the monopolists would only earn normal profits. However if their costs were equal to Cm then their profits would equal the area of PmADCm. X-inefficiency would then equal the area CmDBPc. In either case the monopolists' costs are in excess of the competitive cost level.

These costs in excess of a necessary minimum have been shown to exist for a variety of industries including public utilities, health care, airlines, banks, agriculture and restaurants. These data also cover several countries including the United States, Canada, Sweden, England, India, Mexico, Brazil, Norway, France and Thailand.[9] In many of these industries and countries comparisons are made between costs and monopoly power. The consistent result is that firms with monopoly power, firms sheltered from competition, have higher unit costs than their competitive counterparts. Although zero profit would be an extreme case, William Shepherd[10] has shown declining profits among firms with increased market share. He attributes this to the X-inefficiency, or higher costs, which occur along with increased market power.

Since these costs of the monopoly firm are in excess of its competitive counterpart, we can conclude that the difference, the area PmABPc, reflects costs not necessary for producing output Qm. The receivers of PmABPc, firm members and suppliers, may enjoy it, but this is clearly another matter. Other recipients of PmABPc include the politicians and lobbyists who receive campaign contributions and fees, respectively, for helping to maintain a firm's monopoly position.

In the case of public utilities, the need is to influence the public utility commission's rate hearings.[11] The receivers of PmABPc have not incurred any "real" costs in order to receive it. That is, although they may expend effort influencing the "rate makers" they do not contribute effort toward actual production. Neither greater efficiency nor greater productivity is the cause for their receiving access to a greater level of resources.

Because of these considerations we view these X-inefficiencies as "rent."

Rent, in the neoclassical analysis, is a payment in excess of a necessary minimum to call forth a given level of output. In Figure 1 this X-inefficiency or rent is the area PmABPc (or CmDBPc). Although X-inefficiencies have not heretofore been referred to in this manner, the association seems warranted. Because these costs are in excess of a necessary minimum, payments in excess of labor and capital expenses, they are comparable to ground rent which, as a concept in the Ricardian classical system has been present since the time of the Physiocrats.[12] Among electric utilities these excess costs fall in the range of 5–25 percent. Among water utilities a 24 percent estimate has been reported.

Rent does not emerge from real costs of production, nor is it a reward for efficiency or increased productivity. Rent is a "costless surplus," a return not requiring any increase in factor inputs. XE theory, as we have shown, is wholly consistent with this accepted analysis of rent. When inefficiencies lead to excess payments to firm members and suppliers, these payments clearly are not the reward for effort or payments for labor and capital inputs. Without monopoly protection, these payments would not exist.

This kind of rent among public utilities possibly exceeds that among private monopolies. This is because the regulatory agencies limit entry, inhibit competition and guarantee profits, and because utilities are not subject to the strictures of antitrust legislation such as the Sherman Act.

III

X-inefficiency as a "Quasi" Sales Tax and Subsidy

THE PUBLIC UTILITY is able to appropriate rent for the same reason a landlord is able to appropriate the net return to land. Like a landowner the public utility is given an "exclusive privilege" or franchise by the government. According to George[13] this exclusive privilege gives firms what amounts to the power to "tax" consumers.

The public utility's monopoly price is granted by the regulating government body. In terms of Figure 1, this implies that higher costs or rents (CmDPBc or PmABPc) to firm members or suppliers are "justified" by regulated price increases. Whereas higher costs generally lead to reduced profits under competitive conditions, a utility's higher costs allow it to "earn" either constant or higher profits. Moreover the price elasticity and income elasticity of demand for the product of the public utility are very low, thus favoring the firm's pursuit of higher and higher prices. What this means therefore, is that government regulation of public utilities leads to X-inefficiencies which retard progress and which are then often paid for by consumers in the form of higher prices. In essence, the regulatory agencies' penchant for allowing the utility a "fair rate of return"

means that consumers are "taxed" by the firm to the extent of its monopoly rent. Consumers pay this rent via a "quasi excise tax" to the firm. Ironically, all this occurs in a process initially designed to serve the public interest. Although utility regulators do serve an economic and social purpose, this aspect is clearly not one of their advantages. More importantly, it is an often overlooked aspect of regulation.

The "quasi excise tax" aspect unfortunately is overlooked when estimating the total tax burden of U.S. consumers. This burden is increasing when all taxes are considered and especially with regard to the burden of state and local levies. While federal excise taxes as a percentage of all federal tax revenues have fallen from 47.6 percent in 1902 to 4.3 percent in 1979, the sales and excise tax share of state and local revenues has increased. As a percentage of state revenues it has increased from 17.9 percent (1902) to 42.9 percent (1970), while for local government the increase has been from .6 percent (1922) to 13.2 percent (1979).[14] In addition, taxes paid by public utilities represent approximately 7 percent of all sales tax revenue but approximately 20 percent of local sales tax revenues.[15] As of the early 1970s 39 of the 50 states taxed public utilities.[16] In our view these figures on the tax burden are underestimated because they fail to take account of *government-induced inefficiencies and price increases,* which translate, as we have shown, into quasi excise taxes on the public.

The subsidy aspect of natural monopolies is also often overlooked. In general, federal subsidies are a relatively new area of inquiry despite their having been discussed by Marshall[17] and Pigou.[18]

Marshall dealt with subsidies in relation to economic welfare. According to him, the theoretical underpinnings for a subsidy rest on the assumption that total economic welfare increases whenever the "demand price" exceeds the "supply price." This is the case when commodities produced under conditions of increasing returns to scale have a lower supply price as output increases. Marshall said it is possible, in *theory* at least, to increase economic welfare by taxing commodities produced under diminishing returns and using those funds to subsidize commodities produced under increasing returns.

Pigou[20] considered subsidies to business and consumers as "optional" programs and hence limited only by good judgment and the ability to finance such programs. (Non-optional spending is limited to interest payments and a sinking fund on foreign-held debt.). Pigou[21] also considered a subsidy for wages in times of unemployment, and subsidies for the poor, either for purchasing specific commodities or to be used as the consumers considered most advantageous for themselves.

Despite these bits of theory, it was not until 1971 that a major Joint Economic Committee study was published on the issue of federal subsidies.[22] The introduction of this report reads, in part:

Unfortunately, the necessity for an accounting and evaluation of federal subsidy programs appears to have increased in the decade since 1960. We know little or nothing more about the benefits from these subsidy programs and who gets them. Our knowledge about what these programs cost the Government and what adverse effects they have on the economy is quite limited. On the other hand, new subsidies are constantly being proposed, often enacted, and the total subsidy system grows in size and cost to the general public. The system of federal subsidies seems to be somewhat out of control in the sense that it continues to grow despite the fact that we know so little about it.

As these comments imply, difficulty in controlling the subsidy system stems from public ignorance about this form of government activity. Neither the facts nor a framework for identifying, understanding, and evaluating the facts have been brought to the public arena. Subsidies have been allowed to exist in the shadow of public policy.[23]

The report concluded that federal subsidies in 1970 totaled $63 billion. This included direct cash subsidies, tax credits, benefits-in-kind, and purchase subsidies. The report did not include any discussion of these types of subsidies in relation to public utilities. One of its authors, Richard Posner,[24] did however report on "internal subsidies" of regulated industries. By this he meant charging some customers a price which is above cost in order to charge others a price below cost. That is, some customers are subsidizing others. Posner concludes that this is a form of excise tax.[25] Internal subsidization as an excise tax is not limited to electric utilities. For example, a flat rate postal fee, regardless of the cost of shipping and delivering a letter one block or 3000 miles, subsidizes some customers while "taxing" others. Telephone rates based on average costs over an entire state or region; long distance phone rates based only on distance and duration rather than on route density, which also affects costs; insurance for high-risk drivers written at below cost; water companies furnishing their product without charge to fire departments; and electric utilities providing discounts to hospitals, are other examples of internal subsidies among public utilities.

Utility regulation also leads to a different type of subsidy: one exacted from *all* consumers of the service provided by the firm. This conforms to the definition of a subsidy often used by Carl Kaysen. He writes that a subsidy to a firm results in a "decrease in the costs which it must bear to produce its output" and which results not from market causes but from the government.[26] In our view the public is paying for or subsidizing the inefficiencies of regulated firms. The higher costs shown in Figure 1, as noted earlier, do not come out of the firm's profits but out of the total real income of the firm's consumers. And the consumer payments of these higher costs have been shown to be equivalent in nature to ground rents, which the firm collects in addition to its profits from production.

George's canons of taxation,[27] along with his analysis of the workings of monopolies, raise serious questions about the "tax collecting" or "rent collecting" powers of utilities. He distinguished between "onerous" and "temporary" mo-

nopolies.[28] Among the former were businesses, such as telegraph, postal service and railroads, "which are in their nature monopolies," and which he said should be State-owned. He also included as onerous, businesses that enjoyed aggregate power based on grants of legislative privileges (which grants should be abolished). Temporary monopolies, on the other hand, based on patents and copyrights, represent rewards for production and progress and should be allowed to retain their status.

George's first canon is that taxes should not obstruct or serve as a check on production. Taxes placed upon manufacturing, commerce, or capital discourage these very things. On the other hand, taxes placed upon monopoly privileges, especially rent, do not. A tax equal to PmABPc in Figure 1 would not interfere with production.

Second, taxes should be levied directly on the ultimate payer, so that the people pay only what the government receives. In contrast, indirect taxes such as excise taxes are passed along, often with " profits" added on, in the form of higher prices to consumers. Those who are taxed do not realize it, they are "bled without feeling it."[30] Furthermore these are "private rents" created by public policy, rather than becoming public revenues and public goods.

Third, taxes should be equitable. On the whole excise taxes violate the principle of equity. In the case of this quasi excise tax, the authors have shown elsewhere that it is a regressive tax.[31] Using 1980–81 Bureau of Labor Statistics data the authors have shown that 36 percent of the "direct" burden of this electricity tax is paid by those with incomes $14,999 or less, 37 percent is paid by those with incomes in the $15,000–$29,000 range, while those with $30,000 or more of income pay 27 percent of the direct burden. Assuming X-inefficiency of 10 percent, the effective tax rate for these three income groups using before tax income is .008, .004 and .002 percent, respectively. This tax is thus an "infringement of natural rights"[32] in that it uses government's power to take from some in order to swell the profits of another.

Fourth and finally, taxes should not encourage either corruption of government or tax avoidance by citizens. Yet we find that payments to influence rate hearings by the firms attempting to maintain or increase their monopoly rents are quite common and accepted as "rational" behavior.[33] We conclude, therefore, that rate-of-return regulation is both antithetical to efficiency, and unjust.

IV

Some Corrective Measures for X-Inefficiency

THE STARTING POINT for taking steps to reduce or eliminate X-inefficiency is the understanding that as rent, they can be taxed away, with no loss in production

user prices or of the return to capital, but rather with an increase in production, efficiency, and economic welfare. One possibility, therefore, is to allow the utility to remain privately owned and regulated but impose a lump sum tax equal to the area PmABPc (or CmDBPc). This would force the firm to a "competitive solution." X-inefficiencies concommitant with rate-of-return regulation would be eliminated while society continues to receive the benefits of guaranteed service which cannot be discontinued without the authorization of the regulatory agency. This assumes that regulators could readily define X-inefficiency, which requires knowledge of competitive price levels (Pc), even for utilities that have no effective competition.

Alternatively, regulatory commissions and Congress could encourage competition among utilities. Primeaux[34] found that publicly-owned electric utilities which compete as duopolists produce with *lower* average costs than similar publicly-owned monopolists. Primeaux's data revealed per unit cost savings of 10.75 percent, and larger cost savings for small firms. In addition he reported that the benefits of economies of scale are outweighed by the X-inefficiency losses until the firm produces at least 222 million kilowatt hours of electricity per year. In 1964 approximately 300 of 3200 electric utility firms produced at least this amount. Thus, he concluded that for regulated products with a low price elasticity of demand, consumers pay for this X-inefficiency through higher prices. His other conclusion is that the entire issue of a "natural monopoly" needs to be called into question. He states that,

> The proponents of granting monopoly status to firms such as electric utilities argue that these firms are natural monopolies and that a monopolist can produce at a lower cost than if competition were permitted. This argument, which has been expressed since the early 1900s, probably would be valid if X-efficiency did not exist. Since it does indeed exist, however, it cannot be ignored. For public policy purposes, the mere existence of X-efficiency reflects a serious need for a re-examination of the regulated industries which are regarded as natural monopolies.[35]

In a second study, Primeaux[36] reported that duopoly firms, although they faced more downward pressure on capacity utilization, did not differ significantly in capacity utilization from the monopoly firm. Thus duopoly not only creates lower per unit costs but fails, in this case, to create "excess" capacity. Again, the arguments in favor of supporting a natural monopoly are brought into question. In a study by Stevenson[37] competitive pressure was found to be concommitant with lower unit costs—ranging from 6 to 8.5 percent—among electric utilities. Similar effects of competition have been summarized for a number of other industries and in a number of countries.[38]

Another approach to the "natural monopoly problem" is to make ownership

of the firm public. This, as already noted, was the recommendation of George. The empirical evidence on the relative productivity of public and private firms is mixed.[39] Those writing on the "economies of property rights" present evidence of the superior productivity and cost efficiency of the private sector.[40] However, Patrick Mann and John Mikesell,[41] and Thomas Bruggink[42] have presented evidence showing lower operating costs among publicly-owned water utilities. In the Bruggink study the differential was 24 percent. Caves and Christensen[43] have presented data on the Canadian railroads showing no significant difference in public and private sector Canadian railroads. Their conclusion is that,

> . . . public ownership is not inherently less efficient than private ownership—that the oft-noted inefficiency of government enterprises stems from their isolation from effective competition rather than their public ownership per se. Of course our findings do not provide any evidence in favor of public ownership over private ownership. There may be criteria other than productive efficiency which provide the basis for preferring either public or private ownership, but that is another question.[44]

Still another approach is to more closely monitor regulated firms. Gollop and Karlson[45] found an absence of X-inefficiency among privately-owned electric utility firms when the regulatory body closely monitored the costs which the firm could recover.

A major concern today is the federal deficit and how to deal with it. Deficits of 175 to 200 billion dollars per year into the 1990s are being projected. It is widely anticipated this will create upward pressure on interest rates and adversely affect the U.S. trade balance. Reducing deficits, according to most authorities, requires higher taxation, but whether the federal income tax is the proper instrument for this has been called into question because of the growing unrest and noncompliance with U.S. tax codes. Our intent is not to evaluate which taxes, if any, should be raised. However, the interest on increasing capital formation has led to a debate concerning whether to adopt more consumption type taxes like the VAT or some version of a "flat rate" income tax.[46] The point we wish to make is that taxing monopoly rents among public utilities would provide a source of revenues for deficit reduction and for public goods and social programs. Moreover, this would not adversely affect production efficiency but would encourage competitive market structures.

A growing proportion of the public goods and social programs provided by government serve the 65 and older age group. Whereas approximately 28 percent of federal outlays are now earmarked for this group, by the year 2000 this figure is estimated at approximately 30 percent, rising to 50 percent by the year 2030.[47] On the other hand this population group's income is currently approximately only 73 percent of that for the non-elderly population when measured *per family*.

For elderly Black families the figure is 70 percent when measured against all U.S. families. On a per-capita basis the elderly have approximately 4 percent more income than the non-elderly. Again, the exception is for Blacks who have 15 percent less when compared with all Blacks, and approximately 50 percent less when compared with all individuals.[48] On a per family basis, therefore, the costs of X-inefficiency rents among public utilities is higher for the elderly than the non-elderly, and this is the group which will be accounting for approximately 50 percent of federal outlays by the year 2030. At no cost in efficiency and with an accompanied decrease in regressivity of the "tax" system, federal outlays for this group could be partially funded by appropriation of this unearned income which we have been discussing in this paper. Failure to recognize these rents as a source of tax revenue leads to either higher taxes levied directly by the government on earned income or a reduction in the supply of public goods. In terms of efficiency and equity, neither case seems preferable to the taxing of rents.

Notes

1. See for example, Rodney Stevenson, *Productivity Measurement in Regulated Industries.* New York: Academic Press, 1981; G. Babilot, R. Frantz, and Lou Green, "Measuring the Social Cost (Welfare Loss) of a Firm Operating Under a Regulatory Constraint," Department of Economics, San Diego State University, 1984.

2. For the initial treatment of allocative inefficiency among regulated firms see, H. Averch, and L. Johnson, "The Firm Under Regulatory Constraint," *American Economic Review,* Vol. 52, Dec. 1962: 1052–69.

3. A full literature review is presented in Roger Frantz, "X-Efficiency Theory: A Review of the Literature, 1966–1983." *Center for Public Economics Working Paper,* San Diego State University, 1984.

4. Various definitions of "waste" have been lucidly discussed in H. Winthrop, "Towards a Revision and Extension of the Concept of Waste." *American Journal of Economics and Sociology,* Vol. 39, No. 2 (July, 1980), pp. 273*ff.*

5. The original treatment of XE theory is found in H. Leibenstein, "Allocative vs. 'X-Efficiency'." *American Economic Review,* Vol. 56, June 1966, pp. 392–415.

6. *Ibid.,* Table 2, p. 400 summarizes the studies.

7. Labor economics textbooks portraying an indifference curve with income and leisure imply disutility to work. A more realistic approach to the effort/utility relation is given in Harvey Leibenstein," Property Rights Theory and X-Efficiency Theory: A Comment," *American Economic Review,* Vol. 73, September 1983, pp. 831–842.

8. K. Bradley and A. Gelbt, "Motivation and Control in the Mondragon Experiment," *British Journal of Industrial Relations,* Vol. 19, 191, pp. 211–231.

9. See Frantz, *op. cit.*

10. William Shepherd, "The Elements of Market Structure," *Review of Economics and Statistics,* Vol. 54, February 1972, pp. 25–37.

11. This is discussed in M. Crain and A. Zardhoohi, "X-inefficiency and Nonpecuniary Rewards in a Rent Seeking Society: A Neglected Issue in the Property Rights Theory of the Firm, *American Economic Review,* Vol. 70, September 1980, pp. 772–82; G. Tullock, "The Welfare Costs of Tariffs, Monopolies, and Theft," *Western Economic Journal,* Vol. 5, June 1976, pp. 224–232.

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13. T. Bruggink, "Public versus Regulated Private Enterprise in the Municipal Water Industry: A Comparison of Operating Costs," *Quarterly Review of Economics and Business,* Vol. 22, Spring 1982, pp. 111–25.

14. Henry George, *Progress and Poverty* (New York: Robert Schalkenback Foundation, 1962), pp. 191–92.

15. These data were taken from R. Musgrave and P. Musgrave, *Public Finance: Theory and Practice* (New York: McGraw-Hill, 4th ed., 1984), pp. 316–17.

16. *Ibid.,* p. 433.

17. These data were taken from J. Due, *State and Local Sales Taxation.* (Chicago: Public Administration Service, 1971), pp. 81–83.

18. A. Marshall, *op. cit.*

19. A. C. Pigou, *A Study of Public Finance* (London: Macmillan and Co., Ltd., 1928); *The Economics of Welfare* (London: Macmillan and Co., Ltd., 4th ed., 1952).

20. Marshall, *op. cit.* pp. 472–73.

21. Pigou, *Public Finance,* p. 79.

22. Pigou, *Economics,* pp. 699–700.

23. See Joint Economic Committee, *The Economics of Federal Subsidy Programs.* 92nd Cong., 1st Sess. (Washington: U.S. Govt. Printing Office, 1972).

24. *Ibid.,* p. 1.

25. Richard Posner, "Taxation by Regulation." *Bell Journal of Economics and Management,* Vol. 2, Spring 1971, pp. 22–50.

26. R. Posner, "Subsidization by Pricing in Regulated Industries." In, *The Economics of Federal Subsidy Programs. A Compendium of Papers.* 1972), pp. 41–54.

27. Joint Economic Committee, *op. cit.,* p. 9.

28. Henry George, *op. cit.,* pp. 408–21.

29. *Ibid.,* pp. 411–12.

30. *Ibid.,* p. 410.

31. Henry George, *Social Problems* (New York: Robert Schalkenbach Foundation, 1961), p. 167.

32. G. Babilot, R. Frantz, and L. Green, "Consumer Welfare and Inefficiency in Regulated Industries." *Journal of Consumer Affairs,* Vol. 19, Winter, 1985, pp. 207–21.

33. George, *Social Problems,* p. 170.

34. Tullock, *op. cit.*

35. Walter Primeaux, "An Assessment of X-efficiency Gained Through Competition," *Review of Economics and Statistics,* Vol. 59, February 1977, pp. 105–13.

36. *Ibid.,* p. 107.

37. Walter Primeaux, "The Effects of Competition on Capacity Utilization in the Electric Utility Industry," *Economic Inquiry,* Vol. 16, April 1978, pp. 237–48.

38. Rodney Stevenson, "X-inefficiency and Interfirm Rivalry: Evidence From the Electric Utility Industry," *Land Economics,* Vol. 58, February 1982, pp. 52–66.

39. Frantz, *op. cit.*

40. M. Crew and Paul Kleindorfer, "The Natural Monopoly Problem: A Comparative Institutional Assessment." *Journal of Behavioral Economics. Symposium on Decision Making in the Firm.* Forthcoming.

41. L. DeAlessi, "An Economic Analysis of Government Ownership and Regulation: Theory and the Evidence from the Electric Power industry," *Public Choice,* Vol. 19, Fall 1974, pp. 1–42.

42. P. Mann and J. Mikesell, "Ownership and Water System Operation." *Water Works Bulletin,* October 1976.

43. D. Daves and L. Christensen, "The Relative Efficiency of Public and Private Firms in a Competitive Environment: The Case of Canadian Railroads," *Journal of Political Economy,* Vol. 88, October 1980, pp. 958–76.

44. *Ibid.,* p. 974.

45. F. Gollop and S. Karlson, "The Impact of the Fuel Adjustment Mechanism on Economic Efficiency," *Review of Economics and Statistics,* Vol. 60, November 1978, pp. 574–84.

46. C. L. Harris, "Problems in Flat-rate Income Taxation." *American Journal of Economics and Sociology,* Vol. 43, April 1984, pp. 159–162; C. L. Harris, "Proposals to Tax Life Insurance Savings as Personal Income Seem Ill Advised," *American Journal of Economics and Sociology,* Vol. 43, October 1984, pp. 427–33; W. Lissner, "A New Tax System for the United States." *American Journal of Economics and Sociology,* Vol. 43, October 1984, pp. 433–434.

47. B. Torrey, "Guns vs. Canes: The Fiscal Implications of an Aging Population," *American Economic Review Papers and Proceedings,* Vol. 72, May, 1982, pp. 309–13.

48. Bureau of the Census, *Statistical Abstract of the United States,* 1984, p. 465.

The Price of Social Peace

PRESIDENT REAGAN, in one of his weekly radio broadcasts, referred to "misguided welfare programs" as a "national tragedy of wasted money, broken families and dependency among America's poor." The President claimed that poverty had been declining since the 1950s until 1964. But when President Johnson declared his war on poverty and the Congress enacted related legislation, he asserted, the rate of poverty became worse in this country.

There is no doubt that substantive action needs to be taken to reform our welfare system. However, to best serve the interest of our whole society the interests of poor and non-poor alike, a reorientation of social policies and programs is called for and not their wholesale dismantling.

Our so-called "Welfare Stare," *i.e.,* the collection of publicly organized social-security systems, transfers and subsidies, or the public financing and provision of such personal services such as health, education, child and old-age care, have been highly successful in enhancing economic security for the average citizen