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CORPORATE TAX INCENTIVES:
AN APPROACH TO THEIR EVALUATION

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tional studies have all the strengths and weaknesses typically associated with that kind of research. Critics have pointed to several weaknesses for tax policy purposes. Ture (Daily Tax Report, 4/20/76, p. G8) complains that econometric models often fail to take into account "ripple effects," the secondary and tertiary impact on behavior which was perhaps not intended by policy makers. Sunley (ibid., p. G9) is critical of the grossness of econometric measurement: "...to my knowledge there have been no empirical studies which estimate the impact of investment tax credit on the composition of investment." This situation, of course, is far from ideal for tax policy makers, and in response they seem to have made little use of econometric studies.

A spokesman for the Congressional Budget Office recently said (ibid., p. G10): "Ideally, we would like to know the effect of tax changes on real after-tax income of people classified by level of income, by source of income -- labor or capital and perhaps industry and region--and by use of income." The reason this ideal is not achieved may be the result of forces other than technical shortcomings of econometric techniques. The political process at work behind the scenes in tax legislation may not be compatible with systematic and comprehensive data collection and analysis.¹ Surrey (1970, p. 197) aptly capsulizes this: "The tax subsidies tumble into the law without supporting studies, being propelled by cliches, debating points and scraps of data and and tables that are passed off as serious evidence."

This situation was brought into sharp focus with the passage of the Tax Reform Act of 1976. Critics of this legislation (Brandon and Pietz, 7/26/76) sum up their concern with a general denunciation of the system: "Other major policy decisions involving hundreds of

channels, and (3) verification of individual estimates by independent parties.

Definition of Tax Incentives

The meaning of tax incentive is not clear. Rice [1969, p. 783] demonstrates the logical complexities involved in trying to isolate tax incentives from other aspects of tax law:

- (1) Every taxing statute represents to the persons affected by it an incentive or disincentive to some degree.
- (2) The essence of a tax incentive is that someone gets an advantage at the expense of the tax-paying public; the advantage is given to him (at least ostensibly) to induce conduct beneficial to society.
- (3) Every time Congress confers a tax incentive (or for that matter fails to give an incentive or enacts a disincentive) this affects the balance between members of the pool of taxpayers; some will pay more and some will pay less.

The Congressional Budget Act of 1974 defines tax expenditures, i.e., tax incentives, as "revenue losses attributable to provisions of the Federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability." In attempting to give meaning to the terms "special," "preferential," and "deferral," the Treasury has turned to the concept of a "normal income tax structure." The requisite "specialness," etc., is deemed to exist if the provision is an exception to the "normal income tax structure." This, of course, only inserts "normal" for "special" and an arbitrary classification eventually becomes necessary. For example, the Treasury considers accelerated depreciation on real property an exception to the "normal income tax structure," while accelerated depreciation on personalty is not so considered.

Table 1
INCENTIVES

Description	Mechanism for Reducing Tax Obligation	Estimated Impact on 1977 Tax Collections (In Millions of Dollars)
Investment credit for certain expenditures	Special credit calculated as a percentage of qualified investment	\$6,550
Corporate rate structure	First \$25,000 of taxable income is exempt from 26% surtax	\$4,180
State and local obligations		
Interest on general purpose state and local debt	Exclusion	\$3,150
Interest on state and local government pollution control bonds	Exclusion	\$ 170
Interest on state and local industrial development bonds	Exclusion	\$ 195
Income of domestic international sales corporations (DISC)	DISC shareholders report income directly but can defer 50% until distributed to them.	\$1,560
Capital gains		
Capital gain (other than farming and timber)	Preferential rate of tax	\$ 900
Capital gain treatment extended to certain non-capital assets (royalties on coal and iron ore)	Preferential rate of tax	\$ 20
Capital gain treatment extended to certain non-capital assets (certain timber income)	Preferential rate of tax	\$ 165
Capital gain treatment extended to certain non-capital assets (agriculture)	Preferential rate of tax	\$ 40

Table 1 - Continued

Description	Mechanism for Reducing Tax Obligation	Estimated Impact on 1977 Tax Collections (In Millions of Dollars)
Financial institutions	Special deduction for excess bad debt reserves	\$ 570
Income earned in U.S. possessions	Exclusion	\$ 285
Credit unions	Special exemption from federal income tax	\$ 135
Certain shipping com- panies	Indefinite deferral of income taxes on portion of net income which is used for shipping pur- poses	\$ 130
Certain capital outlays (agriculture)	Special deduction (immediate expensing)	\$ 115
Western Hemisphere trade corporations (WHTC)	Special deduction which effectively reduces rate of tax paid by WHTC	\$ 55
Employment of AFDC recipients and public assistance recipients under work incentive program	Special credit to employer based on percent of employees' wages	\$ 50
Dividends from less developed country (LDC) corporations	Effective exclusion of portion of dividend income paid to parent of LDC corporation (gross- up not required)	\$ 10

in oil during the period 1959-71 by increasing the quantity of imports. Ironically, had there been no import quota, the special tax provision would have reduced oil imports thereby increasing self-sufficiency.... our analysis reveals that past policies, contrary to assertions by their proponents, did not unambiguously promote national independence in oil."

Erickson, Millsap and Spann (1974), also interested in energy independence, develop a model of oil reserves but they assume that user costs and price are determinants, with tax incentives being a component of the user costs. Although they favor the elimination of special tax breaks, Erickson, et al. (1974, p. 477) conclude that tax incentives have an impact on oil production: "Eliminating the special tax provisions that favor the petroleum industry would reduce the rents that will accrue because of higher domestic prices, and also increase the efficiency of resource allocation between oil and other industries. The drawback is that such a policy change would noticeably reduce the development of incremental oil supplies." They concede that the incentives have an impact on inland production but feel that their elimination would result in better allocation of resources and that the really significant production, i.e., offshore and Alaska, would not be materially affected.

Brannon (1975, p. 397) interprets the implication of empirical research in this area: "There is little evidence that income taxes provide a reserve.... The reserve issue depends on whether new drilling increases productive capacity more than production is increased."

The stimulation of asset acquisitions by corporations has been another major aim of tax incentive policy. As in oil and gas, there have been many studies of the impact of such policies. The reward, reduction in taxes, is associated with the acquisition of new productive

that only five cents on each dollar forgone by the Treasury reached the charities. On the other hand, Schwartz (1970) and Feldstein (1975) show greater effectiveness, with the latter concluding that 28 to 56 percent of all charitable contributions can be linked to the existence of tax incentives.

The preceding examples indicate the tax policy maker's dilemma. Not only are the conclusions difficult to understand in most cases, but there is little comparability of results among studies because of the different models used and variables measured, to say nothing of the conflicting conclusions reached. Of course, the universal caveat that association is not causation must be heeded. Another major drawback is that most such studies are based on past associations, making inferences about new and different tax policies very unreliable.

The system of ex ante evaluations proposed in the next section is not set forth as a panacea. It is, however, a plan for a system of data collection which could be used before the enactment of legislation and one which has several desirable characteristics not usually found in ex post studies.

Proposed System

As briefly stated in the introduction, the proposed evaluation system involves gathering data from managements of selected corporations which would predict the impact of proposed changes in tax incentives on corporate behavior. The forecasts would be reviewed by independent parties who would attest to their reasonableness in terms of objectively determinable corporation decision processes. The corporations' predictions and attestors' statements would then be accumulated and the tax

Table 2 depicts these assumptions by describing the specific nature of the steps in the continuum for certain listed tax incentives. Four major headings are shown: (1) Rewarded Behavior, (2) Target Behavior, (3) Intended Intermediate Effect, and (4) Ultimate Desired Effect. Columns 1 and 2 are seen as relating to individual corporations, while columns 3 and 4 must be viewed on an economy-wide basis (or at least in terms of some degree of aggregation).

Assumption 1 relates to columns 1 and 2. Two columns are necessary to describe this corporate activity because this assumption has two distinct dimensions. Column 1, Rewarded Behavior, describes the legal requirements for receiving tax benefits, i.e., the necessary actions which permit a deduction or the application of a tax credit, etc. This determination affects, of course, much of the practice of tax accountants and attorneys. Target Behavior described in column 2, on the other hand, is the desired corporate response assumed to flow from the tax reduction. It is stated in terms of increased corporate activity which is not necessarily the same as the rewarded behavior, i.e., there are often additional causal links between rewarded and target behavior which nevertheless may have an impact on the evaluation of tax incentive effects. The difficulties posed by lack of a straightforward connection between rewarded and target behavior will be discussed when specific incentives are described in detail.

The following general observations can be made about rewarded behavior and target behavior:

1. Target behavior is generally stated in terms of increased corporate expenditures whereas rewarded behavior is generally stated in terms of absolute amounts.

Table 2 - Continued

	Political-Social Realm	
	3	4
	Intended Intermediate Effect (Macro)	Ultimate Intended Effect (Macro)
Name of Incentive	(Aggregate Economic Impact)	(Aggregate Social Impact)
Investment credit	Increase in employment & GNP	Social welfare
Capital gains	Increase in employment & GNP	Social welfare
Percentage depletion	Improvement in natural resource reserves	Social welfare
Interest on state & local obligations	Improvement in financial status of local governments	Social welfare
DISC	Improvement in balance of payments	Social welfare
Construction period, interest and taxes	Increase in employment and growth in GNP	Social welfare
Exploration and development cost (natural resources)	Improvement in natural resource reserves	Social welfare
Contributions	Improvement in financial status of charities	Social welfare
Research and development expenditures	Technological progress	Social welfare
Depreciation	Increase in employment & growth in GNP	Social welfare

that aggregate effects do not just exist independently of specific individual actions and that creative statistical sampling and attestation procedures can be developed to make data gathering and aggregation as "legitimate" as the more common ex post correlational studies. In addition, the micro approach described herein will allow variables of interest such as industry, geographical location, etc., to be evaluated -- a desirable output which is not usually possible in macro studies.⁶

Viewing tax incentives in the context of the reconstructed logic described above brings into focus several important aspects of tax provisions which tend to be blurred in normal conversation. The following demonstrates how these subtle but critical issues can be analyzed and put into proper perspective.

Understanding statutes

What is rewarded behavior? This question is uppermost in the minds of tax accountants and attorneys. Certainly, if there is no consensus on this level, the effectiveness of the provision is affected, to say nothing of the time and effort spent on litigation. The proposed evaluation system does not address this problem and proposes no methodology for improvement in the wording of laws.⁷ It is assumed in this study that rewarded behavior can be identified within tolerable limits. In other words, the problems of achieving consensus on what rewarded behavior is are ignored.

Causal links between rewarded and target behavior

Assumption 1 is supported by both simple and complex causal links. The investment tax credit, for example, reduces taxes paid, and most capital budgeting decision models would therefore define a greater

little about effectiveness if all other variables vary. That reduced expenditures on capital assets correlate highly with use of the investment credit would not be proof of the inefficacy of that provision. If one is to give an opinion as to the increase in certain activity caused by a reduction in taxes, some notion of holding other variables constant must be used. This is consistent with the reconstructed logic.

Pseudo incentives

Some provisions which Congress views as tax expenditures do not seem to fit the three-assumption model used here. The surtax exemption, for instance, does not seem to have a target behavior as such and is perhaps related to some notion of equity as its goal rather than social welfare.

The Rewarded Behavior - Social Welfare Continuum is used in this study to demonstrate a reconstructed logic of tax incentive justifications. The three-assumption model gives the causal links which could be assumed by law makers. The first assumption in this sequence contemplates actions internal to individual corporations. The micro nature of this assumption makes its evaluation, at least in principle, a matter of understanding internal decision models. A discussion of implementation problems associated with the proposed evaluation scheme follows.

Corporate decision processes

Documentable decision processes which relate to tax reductions and target behavior are necessary before attestation can take place. The existence of sufficiently explicit decision rules would seem to be a necessary precondition for the evaluation system described here.

There are two sides to this issue. First, tax policy makers

Problems of attestation

Attesting to forecasts has been discussed in great detail in accounting literature, and many legitimate warnings have been given to those contemplating entering this field. In most cases, however, the debate has concerned public reporting of overall financial indicators such as income statements, balance sheets, complete budgets, etc. The system proposed here involves closely held information of a limited scope from a sample of corporations. It seems unlikely that a corporation's forecast of the impact of a hypothetical tax incentive on narrowly defined corporate behavior would be of crucial concern to the public, especially on an individual corporation basis. The aggregations could, of course, be valuable information in predicting trends in the economy, but the aggregation would not be the responsibility of the attestor. The tax policy makers would gather individual corporate data, and those aggregations would be used in their decisions. It is unlikely, therefore, that legal liability to specific parties or groups could ensue.

A major benefit which could result from this kind of activity would be the development and testing of attestation procedures in a relatively risk-free context. Insights into the problems of attestation to general statements would be gathered which otherwise would be difficult, if not impossible, to attain.

Hypothetical case

The Joint Committee on Internal Revenue is considering the problem of unemployment and the tax incentives which might have an impact on the problem. Stimulation of capital expenditures through an increase in the investment credit is a course of action with substantial support in the committee, but there is some uncertainty about the effect,

In this case it can be assumed that there would be little problem identifying rewarded behavior. The other criteria would be evaluated for each subject corporation individually. The "distinctness" of the capital budgeting model employed by each firm would vary, and the auditor would probably feel competent to comment on those firms with highly structured models. In any event, the auditor would use his professional judgment to determine if he could attest to the reasonableness of the estimates. Thus attestation would be limited to these facts: (1) the company has a model, and (2) the estimates are reasonable projections of the model. His opinion or comments could be a formal statement, comparable to the short-form attestations, or it could perhaps be in the form of a checklist. It is anticipated that the auditor's participation would add considerably to the credibility of the estimates. The results of the data-gathering process, i.e., how many firms could respond, how many auditors could attest, etc., should be helpful not only in evaluating a particular proposal but also as a guide to tax policy makers for structuring evaluable proposals. The estimates along with the auditor's comments would be submitted to the Joint Committee on Taxation for analysis.

Conclusion

In addition to achieving the general objective of providing data upon which ex ante analysis of tax incentives could be based, the system has several specific advantages. The micro-unit nature of the data is seen as supplying a needed perspective. Each management has its own views as to the impact of environmental changes. Certainly, unforeseen economic events, which could possibly be predicted in macro analysis, could change management's actions, but it is difficult to conceive of

of congressional intent in regard to tax incentives needs extensive investigation and discussion before a clear understanding can be approached. Techniques for operationalizing the nature and degree of target behavior specificity are crucial. The areas of the attestor's responsibility in the process and the exact nature of his message need thorough investigation.

Perhaps the most efficient technique for evaluation of the proposed system would be field studies in which corporations and CPAs would cooperate in tests of various reporting formats. These questions and perhaps many others could be answered in this way.

6. The possible use of a selective investment tax credit under which capital-poor industries would get a higher credit than others was discussed by Al Ullman, chairman of the House Ways and Means Committee, in a speech to a steel industry group in Pittsburgh, Pennsylvania, on January 16, 1976. Excerpts from the speech are included in the Daily Tax Report (1/16/76), pp. J9-J11.

7. The problem of drafting or wording of laws has been explored by scholars of the law for many years. "Ambiguity," "vagueness" and "generality" have all been described as flaws in wording. These terms are defined in Dunahoo (September, 1970) along with an introduction to this general problem.

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