

Two Cheers for Corporate Tax Base Broadening

***Abstract** - Many economists favor revenue-neutral reforms that broaden the corporate tax base and lower the statutory tax rate. Economic analysis provides partial, but not complete, support for this view. Welfare gains do not arise from a lower tax rate as such, but from leveling the playing field between different types of capital or otherwise promoting economic efficiency. Some base broadening measures obstruct, rather than advance, efficiency. Furthermore, corporate tax base broadening is likely to yield smaller welfare gains than reforms that reduce the distortion between business and non-business capital or between current and future consumption.*

INTRODUCTION

The United States federal corporate income tax features a top statutory tax rate of 35 percent, a rate that rises to about 39 percent when state corporate income taxes are included. As the U.S. Department of the Treasury (2007b) notes, this statutory tax rate is the second-highest among Organisation for Economic Co-Operation and Development (OECD) countries. Treasury also notes, however, that the ratio of corporate tax revenue to Gross Domestic Product (GDP) from 2000–2005 was only 2.2 percent, substantially lower than the 3.5 percent OECD average. Treasury (2007b, p. 10) attributes the low revenue yield to “the narrowness of the U.S. corporate tax base,” reflecting accelerated depreciation, “special tax provisions for particular business sectors,” favorable treatment for debt finance, and tax planning.

The U.S. Office of Management and Budget (2009) lists numerous tax expenditures for the corporate income tax. Some of the larger items, with associated fiscal 2010 costs, are deferral of tax on overseas earnings (\$38 billion), deduction for domestic production activities (\$11 billion), exclusion of interest on state and local bonds (\$10 billion), expensing of research costs and the research and development tax credit (\$9 billion), various energy provisions (\$6 billion), the low-income housing tax credit (\$4 billion), exclusion of interest on life insurance savings (\$3 billion), inventory property source rules (\$3 billion), lower rates for small corporations (\$3 billion), deduction for charitable contributions (\$2 billion), and the exemption of credit union income (\$1 bil-

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National Tax Journal
Vol. LXII, No. 3
September 2009

lion).¹ For comparison, the budget projects fiscal 2010 corporate income tax revenue at \$179 billion.

A number of economists have called for revenue-neutral reforms that broaden the corporate tax base while lowering the statutory tax rate. This approach has been endorsed by Aviva Aron-Dine (2008), then of the Center on Budget and Policy Priorities, and Jason Furman (2007), then of the Brookings Institution. At the November 2008 National Tax Association conference in Philadelphia, such a policy change was endorsed by Jane Gravelle of the Congressional Research Service and Rosanne Altshuler, then of Rutgers University, as reported by Tandon (2008).

Policymakers have also expressed interest in such an approach. The U.S. Department of Treasury (2007a, 2007b) discussed such an approach as a possible reform option. Then-candidate Barack Obama spoke favorably of the idea in a June 2008 *Wall Street Journal* interview, as reported by Davis and Chozick (2008). On February 23, 2009, President Obama stated, "On the corporate side, I at least have always maintained that if we try to think in the same ways that we thought about it in 1986, and if you closed loopholes, you could actually lower rates. And that's an area where there should be the potential for some bipartisan agreement" (White House, Office of the Press Secretary, 2009a). President Obama expressed similar sentiments in a March 12, 2009 speech (White House, Office of the Press Secretary, 2009b). The Administration's task force on tax reform, headed by former Federal Reserve chairman Paul Volcker, will give high priority to corporate tax base broadening and statutory rate reduction as it prepares a list of reform options to be released in December 2009, according to a July 2009 statement by Austan

Goolsbee, the task force's staff director, as reported by Duarte (2009).

Interest in base broadening has not been confined to the executive branch. On October 25, 2007, the House Ways and Means Committee chairman, Rep. Charles Rangel (D-New York), submitted such a proposal. He introduced H.R. 3970, a bill that would have lowered the statutory tax rate from 35 to 30.5 percent while adopting numerous base broadening provisions. The bill was not acted upon during the 110th Congress. In November 2008, Chairman Rangel stated that he was revising his proposal to include more base broadening provisions in an attempt to lower the statutory rate to 28 percent (Donmoyer and Cook, 2008).

The idea is not new. While the current corporate income tax may be a high-rate narrow-base system, those characteristics would be even more pronounced were it not for a landmark tax law enacted 23 years ago. The Tax Reform Act of 1986, alluded to by President Obama in the statement quoted above, adopted numerous base broadening provisions and lowered the statutory tax rate from 46 to 34 percent (the rate was increased to 35 percent in 1993). That law did not precisely fit the category of revenue neutral corporate base broadening, however, because it was intended to yield a net increase in corporate tax revenue (Auerbach and Slemrod, 1997).

It is not surprising that economists react favorably to the concept of revenue-neutral corporate tax base broadening. Under the current system, some types of capital face higher effective rates than other types of capital, which induces production inefficiency. A reform that lowers the statutory tax rate and restricts tax preferences can narrow the disparity in effective tax rates and bring about a more efficient alloca-

¹ Some of the values given in the text represent sums of two or more tax expenditure items. These sums should be viewed with caution because the items are not precisely additive.

tion of the capital stock, an outcome that virtually all economists would welcome.

The favorable reaction to revenue-neutral base broadening makes sense, provided that two caveats are kept in mind. First, the welfare gains from revenue-neutral base broadening arise only if the reform is done properly (i.e., in a way that actually narrows disparities in effective tax rates). If the reform denies tax “preferences” to capital that is already taxed more heavily than other types of capital, then it amplifies the disparity in effective tax rates and undermines production efficiency. The goal is a level playing field, not a low statutory tax rate, per se. Some actual reform proposals fall short on this count. Second, even when done properly, the welfare gains from revenue-neutral base broadening are likely to be modest relative to the gains from broader reforms that address the distortion between business capital and owner-occupied housing and the distortion between current and future consumption.

WHEN IS BASE BROADENING DESIRABLE?

In this section, I provide a stylized analysis of revenue-neutral base broadening and draw some conclusions about the welfare effects of such policies.

Stylized Analysis

I consider an economy with a continuum of industries distributed on the unit interval. Each industry j has endogenously determined capital stock K_j and its output is determined by an industry-specific concave production function, $Q_j = F_j(K_j)$. There is no depreciation. The aggregate capital stock is defined by, $K \equiv \int K_j dj$, with a corresponding definition of aggregate output Q .

Capital income is taxed at a statutory tax rate τ that is common to all industries. The tax system does not provide deprecia-

tion allowances, matching the absence of economic depreciation, but provides a set of industry-specific investment tax credits c_j . There are no other tax or non-tax distortions in the economy.

Investment is financed with equity funds that are obtained at a fixed after-tax rate of return r . There is no uncertainty. In equilibrium, the marginal product of capital in each industry is equated to the industry-specific user cost,

$$[1] \quad F'_j = r(1 - c_j)/(1 - \tau).$$

Because the required rate of return and the statutory tax rate are constant across industries, an industry has a higher before-tax marginal product than another industry if and only if it has a lower credit rate. Lightly taxed industries have lower marginal products, with the effective marginal tax rate in each industry given by $(F'_j - r)/F'_j$. The economy is assumed to be in a stationary state with no growth.

For future reference, $\alpha_j \equiv -F''_j K_j / F'_j$, which is the local elasticity of the marginal product (with respect to the capital stock) evaluated at the equilibrium allocation. Conversely, $1/\alpha_j$ is the elasticity (with respect to the user cost) of firms’ demand for capital.

I now examine the first-order impact of small revenue-neutral base-broadening changes around the initial system, where base broadening is defined as reductions in investment tax credits. Without loss of generality, I consider a reduction in the credit rate for a single industry i (the “targeted industry”); the first-order impact of a policy that changes multiple credit rates may be obtained by summing the first-order impacts of the individual credit-rate changes.

For simplicity, I define revenue neutrality on a “static” basis that treats the aggregate capital stock, its allocation, and its marginal product as fixed rather than on a “dynamic” basis that incorporates behavioral changes. On the whole, the

static approach may be more consistent with actual revenue-estimating practice, which excludes all macroeconomic behavioral effects and includes microeconomic behavioral effects only to the extent that they can reasonably be estimated and are expected to occur within the ten-year budget window. Also, to avoid transitional effects (discussed below), I assume that the reduction in the investment tax credit applies, as the rate reduction does, to the existing capital stock.

Note that the infinite-horizon present discounted value of the static revenue effect of a rate change is $d\tau \int K_j F'_j dj / r$ and that the corresponding effect of an investment tax credit change for industry i is $-K_i dc_i$. Accordingly, the static-revenue-neutral reform is taken to be a small change in the investment tax credit for industry i accompanied by the following small change in the statutory tax rate,

$$[2] \quad d\tau = dc_i [(rK_i) / (\int K_j F'_j dj)].$$

The capital stock in industry i responds in the following manner to a change in the industry's credit rate,

$$[3] \quad dK_i = dc_i [(rK_i) / (1 - \tau)\alpha_i F'_i],$$

and the capital stock in each industry j responds in the following manner to a change in the statutory tax rate,

$$[4] \quad dK_j = -[d\tau / (1 - \tau)] (K_j / \alpha_j).$$

Substituting [2] into [4], integrating [4] across industries, and adding [3] yields the change in the aggregate capital stock due to the base broadening policy,

$$[5] \quad dK = dc_i [rK_i / (1 - \tau)] \{ [1 / (\alpha_i F'_i)] - [(K_j / \alpha_j) dj] / (\int K_j F'_j dj) \}.$$

Because the change in each industry's output equals its marginal product mul-

tiplied by the change in its capital stock, the change in aggregate output is

$$[6] \quad dQ = dc_i [rK_i / (1 - \tau)] \{ (1 / \alpha_i) - [(K_j F'_j / \alpha_j) dj] / (\int K_j F'_j dj) \}.$$

The impact on social welfare is $dQ - rdK$, the change in aggregate output minus the opportunity cost of the change in the aggregate capital stock. This impact is given by

$$[7] \quad dc_i [rK_i / (1 - \tau)] \{ [(F'_i - r) / (\alpha_i F'_i)] - [(K_j (F'_j - r) / \alpha_j) dj] / (\int K_j F'_j dj) \}.$$

Base Broadening Is Not Inherently Desirable

The sign of [7] is ambiguous, revealing that revenue-neutral base broadening may either increase or reduce economic welfare. In particular, the welfare impact depends upon the difference between the two terms inside the braces. Because one of the terms pertains specifically to the targeted industry, it is apparent that the selection of that industry will be a crucial determinant of the welfare effect. The factors influencing these terms are considered below, but it is useful to first note that there is no inherent gain from base broadening and rate reduction, per se.

To see this point, consider a policy that reduces credit rates throughout the economy, with the reduction in each industry proportional to the industry's marginal product, $dc_i = -\lambda F'_i$. Substituting into [2] and integrating across industries reveals that the change in the statutory tax rate is then given by $d\tau = -r\lambda$. Substituting these policies into [3] and [4] and adding the two expressions for each industry reveals that each industry's capital stock (and hence its output) is unchanged. Accordingly, the real equilibrium is unchanged. This occurs because the offsetting changes

in the credits and the statutory tax rate leave all effective marginal tax rates unchanged. The proportional change in $(1 - c_i)$ in each industry is $\lambda r / (1 - \tau)$, which is also the proportional change in $(1 - \tau)$. In accordance with [1], there is then no net change in each industry's marginal product.

In short, revenue-neutral base broadening has no real effect when it is applied uniformly throughout the economy. The real effects arise from its impact on the relative treatment of different types of capital; as discussed below, the sign of the welfare effect depends upon the pattern of that relative treatment.

Determinants of Welfare Effects

Two key forces determine the welfare impact of revenue-neutral base broadening, as stated by [7]. Such base broadening can be beneficial if it narrows disparities in effective tax rates and thereby promotes production efficiency. Also, in a second-best world in which capital bears positive tax, revenue-neutral base broadening can be beneficial if it expands the aggregate capital stock by shifting the tax burden away from capital that is more elastically demanded. Although both forces are generally at work, it is useful to consider each of the special cases in which one force is absent, thereby permitting clearer analysis of the remaining force.

First, consider the case in which $\alpha_i = \alpha, \forall j$, so that the elasticity of capital demand is constant across all industries. It is convenient to refer to this as the Cobb-Douglas case, because this outcome would occur if all industries had identical Cobb-Douglas production functions with capital share $1 - \alpha$. In the Cobb-Douglas case, [7] simplifies to

$$[8] \quad dc_i \{ rK_i / [\alpha(1 - \tau)] \} \{ [(F'_i - r)F'_i] - [j(K_j(F'_j - r)dj) / (jK_j F'_j dj)] \}.$$

Because we are examining credit-rate-reducing policies, we take dc_i to be negative. The welfare impact is positive in this Cobb-Douglas case if and only if the targeted industry's effective tax rate $(F'_i - r) / F'_i$ is less than a weighted average (with weights given by before-tax capital income KF') of the effective tax rate for all industries, $[j(K_j(F'_j - r)dj) / [jK_j F'_j dj]]$. So, base broadening is beneficial only if the targeted industry has a relatively low effective tax rate.

In other words, base broadening is beneficial in the Cobb-Douglas case if it targets industries with high credit rates and thereby reduces the disparity in effective tax rates. Any reduction in that disparity is a movement toward production efficiency. In contrast, poorly designed base broadening that targets industries with low credit rates reduces economic welfare because it increases rather than reduces the disparity in effective tax rates. If the initial equilibrium features uniform credit rates, then there is no welfare gain from base broadening, or from base narrowing, in the Cobb-Douglas case.

As a side note, the welfare impact has an interesting relationship to the changes in capital and output. In the Cobb-Douglas case, integrating [5] across industries reveals that base broadening yields no change in aggregate output, while integrating [6] across industries reveals that the aggregate capital stock changes in a direction opposite to the welfare impact [8]. In other words, beneficial base broadening in this Cobb-Douglas case shrinks rather than expands the capital stock; the welfare improvement occurs precisely because the same level of output is obtained from a smaller capital stock.

There is nothing about base broadening that inherently levels the playing field; everything depends upon the nature of the base broadening provisions. Consider, for example, a proposal to lower the statutory tax rate and to finance the

reduction by eliminating all business expense deductions for, say, the transportation industry, so that those firms would be taxed on gross receipts while other industries would continue to be taxed on net income. Despite the lower statutory tax rate, there can be little doubt that this proposal would impede production efficiency and increase distortions.

Second, consider the case in which all credit rates (and hence effective tax rates) are uniform, so that marginal products are also uniform, $F'_i = F', \forall j$. It is convenient to refer to this as the uniform-tax case. Then, [7] simplifies to

$$[9] \quad dc_i[rK_i/(1 - \tau)][(F' - r)/F'] \\ \{(1/\alpha_i) - [(K_j/\alpha_j)dj]/(K_j dj)\}.$$

If $F' > r$ (so that the uniform capital tax rate is positive), then a policy for which dc_i is negative increases welfare if and only if the elasticity of capital demand, $1/\alpha_i$ is lower for the targeted industry than for a weighted average (with weights given by the capital stock, or equivalently capital income) of all industries. In other words, the policy increases welfare if and only if it targets an industry with inelastically demanded capital.

By lowering taxes on capital that is more elastically demanded, such a policy expands the capital stock and thereby offsets the welfare loss from the distortionary tax on capital. In this context, some degree of production inefficiency is desirable to offset the inefficient tax rate on capital income. Of course, the impetus for production inefficiency would vanish if the capital tax rate were set optimally (at zero in this simple framework with no other distortions), which is consistent with the Diamond and Mirrlees (1971) finding that production efficiency is desirable when tax rates on all consumer goods are set optimally and all pure profits are fully taxed.

In the general case, the welfare impact of base broadening depends upon both of the factors identified above. Indeed, it can be seen from [7] that the crucial consideration is how the product of the targeted industry's effective tax rate and its elasticity of capital demand compares to the weighted economy-wide average of that product.

Policy Implications

Most of the economists, and some of the policymakers, who advocate revenue-neutral base broadening couch their advocacy in terms of leveling the playing field, one of the two policy objectives identified in the above welfare analysis. Aron-Dine (2008, p. 700) calls for changes that "narrow the discrepancies in effective tax rates among different types of corporate investment" and Furman (2007) calls for reforms "to ensure that different forms of investment are taxed at similar rates." President Obama linked his June 2008 call for base broadening to support for a "level playing field" (Davis and Chozick, 2008). Similarly, in marketing the corporate tax provisions of H.R. 3970, Chairman Rangel said that "we close loopholes that cause disparity," as quoted by Cohen (2007, p. 28).

Yet, actual policy proposals are not always in full accord with this objective. For example, while many provisions of H.R. 3970 meet Chairman Rangel's announced standard, others appear to reflect a desire for statutory rate reduction as an end in itself. The proposal to eliminate LIFO may be the most prominent example. The finding that inventories face higher effective tax rates than almost all other types of capital, even with a significant fraction receiving LIFO, has been confirmed by numerous studies, including Gravelle (1983), Hendershott (1987), Fullerton and Karayannis (1993), and Gravelle (1994). Most strikingly, the Congressional Budget Office (2005) finds

that inventories bear the second-highest tax rate among 49 types of capital. As discussed by Viard (2006), this uniform train of evidence precludes any view that LIFO repeal is a step toward production efficiency, as it would further raise taxes on a type of capital that is already taxed far more heavily than most other types of capital.

THE BIG PICTURE

The above analysis confirms that base broadening can be beneficial, particularly if it reduces the disparity in effective tax rates. A number of considerations suggest, however, that it may be difficult to attain large gains from this approach.

Measuring the Tilt of the Playing Field

First, in the actual economy, it may be difficult to determine which reforms actually lower the disparity in effective tax rates. As Gravelle (1994) discusses, it can be very difficult to correctly measure depreciation rates for various types of capital. The stylized analysis above sidestepped that complication by assuming zero depreciation. In a more general setting, however, any disparity between true depreciation and tax depreciation can have a significant impact on the effective tax rate.

Summers (1987) provides a lengthy discussion of the difficulty of correctly measuring effective tax rates. In addition to the difficulty of measuring depreciation, he notes that most studies of effective tax rates do not consider uncertainty, make the counterfactual assumption that business assets are never traded among firms, and ignore differences across types of capital with respect to the availability of (tax-favored) debt finance. Again, this makes it difficult to determine which reforms reduce the disparity in effective tax rates.

Also, in an economy with multiple tax distortions, it may be difficult to pin down second-best considerations. For example, given that we cannot tax the overseas earnings of foreign-chartered firms, the second-best tax treatment of overseas earnings of U.S.-chartered firms depends on a complex tradeoff between capital export neutrality and capital ownership neutrality. The presence of non-tax distortions, such as monopoly power or inefficient government regulations, further complicates determination of the efficient allocation of capital across industries.

Discussing analyses of the impact of the Tax Reform Act of 1986 on capital allocation, Auerbach and Slemrod (1997, p. 627) observe that all calculations of the Act's efficiency changes "rely on stylized models and parameters that are estimated" and "were done in the absence of any actual information" about events that occurred after implementation of the Act. As they note, "This state of affairs is likely to persist, as identifying efficiency gains in the midst of a constantly changing economy is likely to be impossible."

Summers (1987) also emphasizes the omission of intangible business capital from most analyses and from most base broadening estimates. Most intangible investments, such as advertising, are expensed rather than amortized and therefore face a zero effective corporate tax rate. Narrowing modest differences in tax rates among tangible investments is likely to yield small welfare gains relative to equalization of the treatment of tangible and intangible capital. Yet, most base broadening proposals, including H.R. 3970, do little or nothing to change the availability of expensing for intangible capital.

Bigger Distortions

As Summers (1987) stresses, leveling the playing field within the corporate

sector may not offer large welfare gains, even if effective tax rates are correctly measured. The reason is that other distortions, such as the distortion between business capital and owner-occupied housing and the distortion between current and future consumption, are much larger. A revenue-neutral reform that leaves the overall corporate tax burden unchanged will have little effect on these large distortions. Larger welfare gains can be achieved only through reforms that reduce the overall tax burden on business capital and thereby narrow the large distortions.

This principle is illustrated by Gravelle's (1983) study of the Economic Recovery Tax Act of 1981 (ERTA), a law that reduced corporate tax revenue. When looking only at the business sector, she found that ERTA increased the annual deadweight loss from capital misallocation by \$0.5 billion, relative to prior law, because it amplified the favorable treatment of equipment relative to structures. When looking at the economy as a whole, however, she found that ERTA reduced the annual deadweight loss from capital misallocation by \$5.5 billion, because it reduced the taxation of business capital and thereby narrowed the distortion between it and lightly taxed capital in owner-occupied housing and consumer durables. She did not consider the distortion between current and future consumption.

On a similar note, the U.S. Department of the Treasury (December, 2007b) estimated that replacing the corporate income tax (and individual income taxes on the profits of noncorporate firms) with a value added tax would increase output by 2.0 to 2.5 percent. Treasury also found a 1.5 percent long-run output gain from introducing partial expensing while maintaining the corporate tax rate. In contrast to these reforms that would reduce corporate tax revenue, Treasury found much less encouraging results

for measures that were revenue neutral within the corporate sector. Treasury first considered a revenue-neutral base broadening measure that lowered the statutory tax rate to 28 percent while broadening the base through the elimination of accelerated depreciation and various special business tax provisions. Treasury concluded that the policy "might well have little or no effect on the level of real output in the long run because the economic gain from the lower corporate tax rate may well be largely offset by the economic cost of eliminating accelerated depreciation" (U.S. Department of the Treasury, 2007b, p. 48). Treasury found only a 0.5 percent long-run output gain from a revenue-neutral reform that lowered the statutory tax rate to 31 percent and adopted the base broadening measures other than the elimination of accelerated depreciation.

Analyzing H.R. 3970, Leonard (2008, p. 857) reports that, despite its significant reduction in the statutory corporate tax rate, the bill "cannot honestly be called a major corporate tax cut" and that due to the base broadening, the output and employment effects would be only "marginally positive."

Of course, the net efficiency effect of a policy that reduces corporate tax revenues depends upon how the revenue loss is offset. Replacement of the corporate income tax by a progressive consumption tax would be likely to yield efficiency gains without adverse distributional impact. In contrast, as Aron-Dine (2008) notes, the use of deficit financing would be a poor choice from the standpoint of promoting capital accumulation.

Corporate tax base broadening cannot provide the large welfare gains that may be available from more fundamental reforms. On the other hand, base broadening may be more politically feasible. Of course, any reform of either type must be sensibly designed and financed.

EXTENSIONS

Because the above analysis is highly stylized, it necessarily omits some considerations that are relevant to the welfare impact of revenue-neutral corporate tax base broadening. I now discuss some possible extensions. As detailed below, some of the extensions strengthen the case for base broadening while others weaken it.

Rate-Dependent Distortions

In the stylized analysis, the statutory tax rate and the investment tax credit rate enter symmetrically in the determination of the user cost of capital, which determines the welfare effects. However, the model's assumptions exclude some other distortions that may depend in a more direct and exclusive manner upon the statutory tax rate.

Notably, the analysis assumes away debt-equity decisions, corporate-noncorporate allocation, transfer pricing, and tax evasion, all of which may be closely linked to the statutory tax rate. If a firm replaces one dollar of dividend payments with one dollar of interest payments, the tax savings depend upon the statutory tax rate because the firm's deductions and credits are unaffected. If a dollar of capital income is shifted from a corporate to a noncorporate firm, the tax savings are likely to depend upon the statutory tax rate (perhaps net of any dividend preference at the stockholder level), assuming that both types of firms generally face the same credits, depreciation schedules, and other tax base rules. Similarly, if a firm books one dollar of above-normal returns in a foreign tax jurisdiction rather than in the United States, the resulting tax savings depend upon the U.S. statutory tax rate, perhaps net of the foreign statutory tax rate. If a firm conceals one dollar of taxable income from the tax collector,

the resulting tax savings depend on the statutory tax rate.

Many base-broadening, rate-reducing reforms should therefore reduce those distortions. Nevertheless, the welfare consequences continue to depend upon the impact on all affected distortions; the fact that the above distortions are lowered does not guarantee that the net welfare impact is favorable.

Moreover, not all potential revenue-neutral, base-broadening reforms actually lower the above distortions. For example, a corporate rate reduction financed by base broadening provisions that apply only to corporations (such as lengthening the amortization period for corporate organizational expenditures under Internal Revenue Code section 248 or increasing taxes on corporate reorganizations) would have little or no net effect on the corporate-noncorporate distortion. Similarly, a rate reduction financed by including a new type of income in the tax base may have an ambiguous effect on tax evasion; while the lower rate reduces the incentive to evade tax on income that was already taxed, the inclusion of the new income opens up a new opportunity for evasion.

The fact that some firms are in net operating loss status also changes the picture. Such firms experience no current tax savings from avoidance, although they may experience future tax savings. Base-broadening measures that restrict deductions or credits may push some of these firms back into currently taxable status, which increases the rate-dependent distortions. For example, consider two firms, one with positive taxable income and the other with a taxable income of negative \$100 after exhausting net operating loss carrybacks. With a 35 percent statutory tax rate, the first firm has a 35 percent marginal incentive to incur additional interest expense, book income overseas, or under-report income. For the second firm, taking

such steps (and thereby increasing its current loss) is likely to yield a significantly smaller present-value tax savings, perhaps only 15 percent. If revenue-neutral base broadening lowers the statutory tax rate to 30 percent, the first firm's incentive to take these steps falls to 30 percent. However, if the associated base-broadening measure denies the second firm more than \$100 of deductions, the firm's taxable income becomes positive. Its incentive to take the above tax avoidance measures then rises from 15 to 30 percent.

In the end, revenue-neutral base broadening is likely to reduce these rate-dependent distortions to some extent, but not by as much as initial appearances suggest. The impact on these distortions must be considered in an analysis of any specific reform proposal.

Transition

The stylized analysis assumed that the investment tax credit reductions apply to existing capital. In practice, however, changes in investment tax credits and depreciation schedules actually apply only to new investment while rate changes apply to both existing capital and new investment. As a result, revenue-neutral base broadening of the corporate tax may provide windfall gains to existing capital while increasing the effective marginal tax rate on new investment; Summers (1987) and Auerbach and Slemrod (1997) discuss this effect of the Tax Reform Act of 1986. In general, this consideration seems to weaken the case for base broadening.

To be sure, the proper treatment of existing capital during the transition raises difficult normative issues, as discussed by Shaviro (2000). While it is probably sensible to avoid providing unexpected windfalls to existing capital, it is not desirable to consistently impose unexpected burdens on such capital. The naïve pursuit

of capital levies can lead to highly pernicious outcomes.

Rent Seeking and Political Economy Considerations

As Tullock (1967) famously observed, rent seeking can add to the efficiency loss from distortionary policies. One might think that base broadening would promote a system in which there would be less need to lobby for special tax breaks. President Obama has suggested that base broadening would ensure that a firm's tax payments not depend upon the skill of its lobbyist (Davis and Chozick, 2008).

This expectation may be unwarranted. Base-broadening initiatives are shaped by the same political process that gave us the current corporate income tax. Rent seeking can also occur when the base is broadened as each industry seeks to ensure that another industry bears the burden. Sullivan (2007, p. 411) made the following predictions when Rep. Rangel introduced H.R. 3970, his revenue-neutral, base-broadening bill:

"That gets the Beltway community energized. Everything is in play. Business for tax lobbyists doubles because even the most out-of-touch CEO can see the need for paying their fees. Taxwriters get lots of office visits and dinner invitations and campaign contributions and press attention. Everybody is making money and having a good time."

Base broadening can even be used for egregious abuses of power, such as targeting a handful of unpopular taxpayers for special burdens. On November 18, 2005, the Senate passed S. 2020. Section 561 of this bill would have required six taxpayers (BP, Chevron, ConocoPhillips, Exxon-Mobil, Shell, and Total) to revalue their end-of-2005 oil inventories upward

by \$18.75 per barrel and to take the revaluation into taxable income.² Hostility to “Big Oil” clearly drove the proposal to apply this special rule, featuring an arbitrary dollar amount, to these six taxpayers, but not to numerous other taxpayers in the oil industry or to taxpayers with inventories in other industries. Also, section 562 of the bill would have eliminated amortization deductions for geophysical and geothermal expenditures only for those six taxpayers. Not only did these proposals constitute base-broadening measures from a mechanical perspective (they would have increased taxable income), but one sponsor, Senator Charles E. Schumer (D-New York), justified the inventory provision in base-broadening terms as avoiding “artificially low” profits and tax payments, though without explaining why this logic applied only to six taxpayers (Schumer, 2005).

Section 503 of the version of the bill signed into law as the Tax Increase Prevention and Reconciliation Act (Public Law 109-222, enacted May 17, 2006) did not include the inventory provision, but did lengthen the amortization period for geological and geophysical expenditures from two years to five years for (and only for) the six taxpayers. Another law enacted on December 19, 2007, Public Law 110-172, extended the amortization period further to seven years, again only for the six targeted taxpayers.³ It is clear that the use of base broadening measures and rhetoric is no guarantee against political abuse of the tax system.

Tax Simplification

Another argument for corporate tax base broadening is that it will lead to a

simpler tax system with fewer resources spent on administration and compliance. President Obama has commented that “... on the books, the rates in the United States are high. In practice, depending on ... what kind of accountant you can hire, they’re not so high” (White House, Office of the Press Secretary, 2009a). He has also alluded to “lowering corporate tax rates in exchange for closing a lot of the loopholes that make the system so complex” (White House, Office of the Press Secretary, 2009b).

As with individual income tax base broadening, however, corporate tax base-broadening measures can either reduce or increase complexity. For example, some provisions of H.R. 3970 would reduce complexity, such as the repeal of LIFO and termination of the Domestic International Sales Corporation provisions. Other provisions, such as the reforms to international tax rules, would add complexity. Of course, there is no necessary correlation between a provision’s effects on complexity and its impact on the efficiency of capital allocation.

An evaluation of corporate tax reform proposals must consider their effects on both simplicity and efficiency. Neither consideration, however, invariably points in the direction of base broadening.

POSTSCRIPT: OTHER MISPLACED EMPHASIS ON STATUTORY TAX RATES

A misplaced emphasis on statutory tax rates appears in a surprising variety of public finance applications. This pattern may reflect the ease of focusing on the statutory rate rather than on more complex provisions.

² The text of the bill identified the taxpayers by gross receipts and volume of oil production, rather than by name.

³ President Obama has proposed to extend the seven-year amortization period to all producers, which would end the discrimination against the six targeted taxpayers.

The error sometimes arises in discussions of individual income tax base broadening. Consider, for example, an income tax with a statutory tax rate of 40 percent that allows a deduction for apples purchases, which comprise roughly half of consumption, and applies only to purchases of oranges, the remainder of consumption. A revenue-neutral reform lowers the statutory rate to roughly 20 percent while repealing the apples deduction. It is quite correct to argue that this reform enhances efficiency by eliminating the distortion between apples and oranges. It is incorrect, however, to argue that the reform also reduces work disincentives by cutting the statutory tax rate roughly in half. Assuming that the two fruits are equally complementary to leisure, the effective tax rate on work is unchanged; there is less disincentive to work to buy oranges, but greater disincentive to work to buy apples. Auerbach and Slemrod (1997) stressed this point in their discussion of the Tax Reform Act of 1986, noting that revenue-neutral, distributionally-neutral base broadening of the individual income tax generally leaves labor supply incentives unchanged.

A closely related example is the “tradeoff fallacy” that often arises in discussions of consumption taxation. Because consumption is smaller than income, a revenue-neutral replacement of the income tax by a consumption tax would, all else equal, require an increase in the statutory tax rate. The fallacy recognizes that a constant-rate consumption tax eliminates the distortion under the income tax that favors current consumption relative to future consumption, but posits a “tradeoff” in which the higher statutory tax rate under the consumption tax triggers a larger distortion between consumption and leisure. In reality, the consumption tax features a larger distortion between leisure and current consumption, but a smaller distortion between leisure and future consumption; if current and future

consumption are equally complementary to leisure, work incentives are the same under the two taxes. The fallacy was recently discussed and rebutted by Bankman and Weisbach (2006).

Another striking example is the recent rise in turnover, or gross receipts, taxes at the state level, as documented by Mikesell (2007). Of course, such taxes have been uniformly condemned by public finance economists because they cascade through the various stages of production. Their recent political favor is largely due to their ability to raise substantial revenue with a low statutory tax rate. Little more need be said about the perils of focusing solely on statutory tax rates.

CONCLUSION

Few professional economists subscribe to the notion that statutory rate reduction is an end in itself. When they call for a rate reduction, they envision that the reform will, in fact, equalize effective marginal tax rates (“level the playing field”). Nevertheless, theory and recent experience make clear that it is possible for base broadening to widen, rather than narrow, disparities in effective marginal tax rates. Also, it is important to not let the pursuit of production efficiency within the corporate sector crowd out more fundamental reforms.

The lesson of this paper can be viewed as one application of a general principle. The welfare impact of a policy change depends upon all of its provisions and cannot be accurately described by one parameter of its specification.

Revenue-neutral corporate base broadening should therefore be pursued with attention to economics rather than the statutory tax rate. Properly done, a revenue-neutral lowering of the statutory rate accompanied by the removal of credits and deductions can reduce production distortions and advance economic welfare. Two cheers for corporate tax base broadening!

Acknowledgments

I would like to thank Peter Merrill and participants in the National Tax Association 2008 Spring Symposium, Washington, D.C., May 21–22, 2009, for helpful comments and Amy Roden for valuable research assistance. I am solely responsible for any errors or omissions.

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