Capital Income Taxation, Corporate Taxation, Wealth Transfer Taxes and Consumption Tax Reforms

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1. Introduction

In the 1960s, and indeed well into the 1970s, the standard objective of tax policy design, well represented, for example, in the work of Pechman (1987), was the achievement of a broad-based income tax. Consumption taxes existed, of course, notably in Europe in the form of the value added tax, but these had arisen as improvements that eliminated the cascading effects of turnover taxes, and as indirect taxes were not viewed as effective vehicles for progressive taxation. Indeed, even as interest in broad-based consumption taxes grew during the 1980s, Pechman (1990) devoted his presidential address to the American Economic Association at the end of that decade to a spirited defense of the income tax.

As of the late 1960s, it was still accepted practice for countries to impose "classical" systems of corporate income taxation, treating corporations as entities independent of their shareholders and imposing tax on corporate incomes. The incidence and distortions of such tax systems had already been described in the influential work of Harberger (1962, 1966), who characterized the corporate income tax as a surcharge on corporate capital that drove capital inefficiently out of the corporate sector and through this adjustment process imposed an extra tax burden on capital as a whole, not just on corporate capital. The further distortion of financial policy had already been identified by Modigliani and Miller (1958), who observed that the corporate interest deduction led to a violation of their invariance result with respect to corporate financial policy. These distortions in the allocation of capital and the determination of financial structure prompted consideration of corporate tax reforms, notably through some form of "integration" of corporate and

individual income taxes. Different schemes of dividend relief had already begun to arise, most notably through reduced corporate tax rates on distributed earnings adopted via a split-rate system or the basically equivalent imputation system of shareholder tax credits for corporate taxes paid. There was probably less intellectual support for reducing corporate tax rates. Indeed, at least one problem was seen in doing so, for if corporate tax rates were allowed to fall too far below top individual tax rates, then high-bracket individuals could lessen their tax burdens considerably by accumulating funds for extended periods within corporations.

The world of the 1960s was very different than now with respect to the magnitude of international capital flows. Even so, the appropriate taxation of foreign-source corporate income was an issue, with countries varying in their treatment by convention and by treaty. The most important perspective at the time was provided by Peggy Musgrave (1969), who discussed conditions under which different types of "neutrality" would be desirable. In particular, *capital export neutrality* – under which capital provided by a country would face the same overall rate of income tax regardless of the location of investment – would be desirable from the perspective of efficient world-wide capital allocation, and could be accomplished by having each country follow a system of world-wide taxation, taxing its outbound earnings at the same rate as its domestic earnings while providing a tax credit for the income taxes imposed by foreign governments on the same earnings.

Like many other countries, the US imposed a wealth transfer tax on the estates of the wealthy. In 1977, 7.65 percent of US decedents had taxable estates, facing a top marginal tax rate of 70 percent on estates over $5 million (US Joint Committee on Taxation

2007). Although the estate tax was understood to be especially susceptible to tax avoidance strategies using various accounting and financial structures (being labeled in that year by Cooper (1977) as a "voluntary tax"), it remained an accepted part of the US tax system. Even in the late 1970s, though, it accounted for less than 2 percent of federal revenues. Perhaps because of its limited importance as a source of revenue, it also had received relatively little attention from economic research.

In the past few decades, developments in economic theory and evidence, as well as changes in the structure of the economy and the political process, have had a marked impact on the state of thinking about capital income taxation – about how capital income taxes should be designed, and how important a role they should play in the tax system of an advanced economy like that of the United States. This paper reviews some of these developments, focusing primarily on economic research and concentrating on the three broad topics touched on above: the choice between income and consumption taxes, the form of the corporate income tax, and the role of the estate tax and related wealth transfer taxes.

2. The Choice between Income and Consumption Taxes

There is probably no larger shift in perspectives on tax policy than with respect to the choice of tax base for the economy's main system of progressive taxation. Arguments for an individual expenditure tax have existed for decades, of course, including the important contributions of Fisher (1939) and Kaldor (1955), who argued, respectively, that income taxes unfairly impose double taxation of saving and that consumption taxes can serve more effectively to impose tax burdens on accumulated wealth. Though these

arguments were recognized, a serious move toward viewing the expenditure tax as a viable alternative did not begin until two important developments in the 1970s — the theoretical contributions, most notably by Atkinson and Stiglitz (1976), that suggested the desirability of avoiding capital income taxes when a progressive labor income tax was available, and the roughly contemporaneous report of the US Department of the Treasury (1977) and the UK's Meade Committee (Institute for Fiscal Studies 1978), which laid out how direct expenditure taxes (rather than the indirect consumption taxes already in place) might actually be implemented. In the years since, there have been many additional contributions adding to both the theoretical support for progressive consumption taxes and the knowledge of how such taxes might be imposed.

A. Tax Wedges, Timing, and the Components of Capital Income

As to theoretical arguments, the work of Judd (1985) and Chamley (1986) showed that capital income taxes are undesirable from an efficiency perspective in the long run under very general conditions regarding household preferences; the logic is based on the nonlinearity of deadweight loss in relation to the size of the tax wedge, combined with the fact that the tax wedge continues to grow with the planning horizon for any non-zero capital income tax. While these results hold exactly only for the infinite horizon, they have quite similar implications for the long horizons of life cycle models as well. An important issue arising in the context of the Judd-Chamley result is that, while capital income taxes should approach zero in the long run, it is efficient to impose high capital income taxes in the very short run. This highlights the problem of dynamic inconsistency of government policy that implicitly or explicitly pervades the literature on capital income taxation.

While dynamic inconsistency may arise in other taxation settings, the nature of capital accumulation makes it central in the case of capital income taxation. An interesting question, on which there has been relatively little research, is the extent to which governments impose the capital levies predicted for time-consistent policies. Casual observation suggests the answer is, "not very much." Indeed, there are some interesting historical counterexamples. For example, the Tax Reform Act of 1986, by lowering the corporate tax rate while eliminating the investment tax credit, effectively imposed a negative capital levy on existing wealth by shifting the tax burden from old to new capital (Auerbach 1987).[1]

A related point is that that the analysis of tax reforms is different from a static comparison of different tax systems. As shown by Auerbach, Kotlikoff and Skinner (1983), the choice between a progressive tax on consumption and a progressive labor income tax, which are equivalent in the Atkinson-Stiglitz analysis, involves significant differences in efficiency and incidence because of the differences in how existing wealth is treated. Even though both reforms impose zero taxes on capital income, a shift to a consumption tax imposes implicit capital levies, while a shift to a labor income tax provides capital bonuses. As a consequence of this difference, the consumption tax involves much larger efficiency gains (which are in estimated to be negative for the labor income tax) as well as much higher long-run welfare due to generational transfers.

Concerning implementation of a consumption tax, additional approaches have been developed to impose a zero tax on capital, including the "flat tax" of Hall and Rabushka (1983) and a multi-rate version that Bradford (1986) called the "X tax," both based on a

[1] The importance of the structure of corporate taxation is an issue considered further below.

subtraction-method value added tax but with labor income taxed at the individual level in order to facilitate a progressive rate structure (one positive rate above a threshold under the flat tax; three under the X tax). From a practical perspective, it is significant that evaluation of the X tax suggests that it can successfully replicate the distributional effects of the US income tax circa 1997, even among the top 2 percent of the lifetime-income distribution (Altig et al. 2001).

Within the context of the standard life-cycle model analyzed by Altig et al., the efficiency gains from adopting a consumption tax depend on more than the obvious elasticities – the intertemporal consumption elasticity and the labor supply elasticity – on which the literature has provided estimates of increasing sophistication and clarity (e.g., Chetty et al. 2012). What matters perhaps even more is the extent to which the tax system maintains its progressivity and how much the transition losses of existing asset holders are offset by compensation by the government. For example, estimates by Auerbach (1996) suggest that the efficiency gains are generally small, *if* the tax system's progressivity is maintained *and* transition losses are offset, the latter effectively moving the consumption tax reform closer to the labor income tax reform. Thus, in the context of this model, estimates of the elasticities on which the literature has typically focused are not sufficient to decide on the welfare benefits of adopting a consumption tax.

Going beyond the standard results, but still working with models that ignore uncertainty, there are several other issues that are relevant in thinking about the potential benefits of consumption tax-type reforms. One point concerns the components of the returns to capital, and how they are treated by reform.

A nice summary of the components of capital income and how they are treated by different reforms is provided in the second volume of the recent Mirrlees Review (Mirrlees et al., 2011). It is useful to break down different approaches to taxing capital income to taxes imposed on saving, accumulation, and dissaving. One may distinguish between a so-called "TEE" approach (full *T*ax on initial saving, *E*xempt from tax on accumulation, *E*xempt from tax on withdrawal) and an EET approach (exempt from tax until withdrawal, at which time full tax is imposed), also sometimes known, respectively, as wage-tax and consumption-tax treatment of saving. (A traditional broad-based tax on labor and capital income would follow a TTE approach, taxing income devoted to saving as well as the accumulating earnings, but not dissaving.)

As emphasized above, the EET approach taxes the returns to existing assets; by contrast, the TEE does not. This distinction has received considerable attention. But the EET approach, and not the TEE approach, also hits supernormal returns to saving, which could arise from the existence of rents, as compensation for risk-taking, or as disguised returns to labor. This distinction is made even clearer under a third alternative discussed by the Mirrlees Review, the TtE or Rate of Return Allowance (RRA) method, which, like the current income tax system, taxes the annual returns to capital as they occur, but in this case only partially, allowing a deduction for the normal rate of return and thus leaving only supernormal returns in the tax base, just as under the EET approach.[2] For a normal return

[2] A potentially important difference between the EET and TtE approach is the timing of tax collections. The EET approach implicitly imposes positive or negative taxes on capital income if tax rates change over time, either through overall changes or changes in an individual's circumstances, because saving is deducted at a different rate than dissaving is taxed. The TtE approach largely avoids the timing misalignment of the EET approach while still taxing supernormal returns, but has the disadvantage of requiring an annual calculation of the rate of return deduction.

An administrative advantage of both the EET and TtE approaches relative to the TEE approach is that the TEE approach requires that capital and labor income be separately identified, so that capital income can be exempted

based on the risk-free return to capital, the difference between the TTE approach and the TtE approach (and hence the EET approach) may be extremely small, while the difference between the TTE approach and the TEE approach may be quite large, depending on the composition of the supernormal returns to capital.

If the supernormal returns to capital consist of returns to risk-taking, then the impact of taxing them depends on the efficiency of existing capital markets. As noted by Gordon (1982) and Kaplow (1994), among others, imposing a symmetric tax on excess returns to risk-taking leaves the investor's budget set unaffected, if the investor can increase holdings of risky assets. This equivalence at the investor level, though, leaves open what happens to risk taking in the economy as a whole. The answer depends on whether capital markets efficiently pool risks. If asset markets are efficient, the riskiness of the government's revenue cannot be reduced by pooling, and once this risk is transmitted back to the private economy, the added "background" risk would offset the propensity for increased individual purchases of risky assets, leaving the equilibrium unaffected by the decision of whether to include excess returns to risk-taking in the tax base.

This irrelevance result depends on several assumptions that are not fully satisfied, such as a symmetric treatment of gains and losses, complete market participation (so that individuals can offset changes in risk imposed by the government), and efficient private risk-pooling. But the literature has not provided a clear measure of the quantitative importance of these violations, and so the importance of taxing excess returns to risk is not well understood. As to the other components of supernormal returns to capital, these will

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from tax. Under either of the other two approaches, however, the same tax rate applies to marginal increments to either type of income, so the government does not have to identify the types of income separately and taxpayers have no incentive to misrepresent labor income as capital income.

be inconsequential for most individual returns to saving, for passive investments held at arms' length do not generate rents for their owners and cannot be used to shift labor income. Thus, they are not an important consideration for the design of broad-based individual taxes.

But the story is different for closely-held businesses and entrepreneurial enterprises, or other particular cases, such as private equity firms, where a large share of measured returns to capital may actually reflect current or past labor income. Here, the alignment of individual and business-level taxes and the treatment of capital gains becomes relevant, and eliminating or reducing the tax on capital income amounts to reducing labor income taxation. For corporations more generally, there may be rents that are subject to the corporate tax, but the attractiveness of taxing such rents depends on their source. If they are truly fixed rents, as in the case of monopoly, then taxing them is attractive. But if they are returns to unmeasured capital, such as intangible assets, then they should be thought of in the same manner as returns to existing assets. Even if they do represent noncompetitive rents, they may respond to the tax rate, or may, even if fixed in magnitude, be internationally mobile, an issue discussed further below.

Regardless of the composition of the returns in excess of the safe rate of return, if the main difference between an income tax and a broad-based consumption tax (or an income tax with a rate-of-return allowance) is the treatment of the safe return to capital, then other details may loom larger in the comparison. For example, the current income tax system provides very favorable treatment of one important class of capital – owner-occupied housing. If adoption of a consumption tax reduces the taxation of other types of

capital, then the improved capital allocation may potentially be more significant than the reduced distortion of intertemporal decisions.

There are also a variety of reasons why the tax wedge imposed on the safe return to capital should not be zero.[3] As discussed above, the Chamley-Judd result is compelling even for long finite horizons. But there may be other constraints on government policy. For example, if the government cannot impose different tax rates on labor income by age, then capital income taxes may serve as a substitute for imposing higher taxes on the labor income of older workers (Erosa and Gervais 2002), by effectively imposing taxes on their future consumption and lowering their real wages.

Another argument for using capital income taxes in lieu of age-based labor income taxes comes from Conesa et al. (2009), in whose model realizations of labor income diverge across individuals, meaning that more progressive labor income taxation later in life serve, given the assumption of incomplete markets, an insurance function that would be less relevant at young ages. If such age-related progressivity cannot be implemented, then capital income taxes can serve as an imperfect substitute (because of the intertemporal distortion) by imposing an implicit tax on those with higher realizations of labor income. A related argument for taxing capital income in the presence of uncertain labor income realizations and incomplete markets for risk-sharing is that put forward by Aiyagari (1995).

[3] Many of these arguments are considered by Banks and Diamond (2010).

B. Equity, Efficiency and the New Dynamic Public Finance

The preceding arguments in support of positive capital income taxes are efficiency-based, in what has been referred to as the "Ramsey" tradition, but there are also arguments for capital income taxation that start with optimal income tax problem, in the "Mirrlees" tradition, rationalizing a divergence from the Atkinson-Stiglitz result. One line of argument is simply that the basic Atkinson-Stiglitz assumptions regarding preferences – that they are common across individuals and weakly separable in labor and consumption – are not satisfied, so that capital income taxes can serve to relax the self-selection constraint on higher-ability individuals because, even conditional on the labor income they earn, they have a stronger preference for future consumption (e.g., Saez 2002, Diamond-Spinnewijn 2011).

More generally, though, what has come to be called the New Dynamic Public Finance (NDPF), analyzing the optimal income tax problem in a dynamic context in which individuals experience stochastic shocks to their abilities and the government's choice of tax instruments is constrained only by self-selection constraints, has provided an additional argument for the imposition of capital income taxes. The basic result in this literature, as discussed, for example, by Golosov, Kocherlakota and Tsyvinski (2003), comes through the inverse Euler equation that characterizes the *government's* optimal policy,

$$(1) \qquad 1/u'(c_t) = (\beta R_{t+1})^{-1} \mathrm{E}_t\{1/\mathrm{u}'(c_{t+1})\},$$

where R_{t+1} is the marginal product of capital and β is a discount factor reflecting the pure rate of time preference. It follows from Jensen's inequality that, in the presence of uncertainty,

$$(2) \qquad u'(c_t) < (\beta R_{t+1})\mathrm{E}_t\{\mathrm{u}'(c_{t+1})\}.$$

But, since the regular Euler equation must hold for the *individual's* private saving decision with respect to the private, after-tax rate of return, say r_{t+1},

$$(3) \qquad u'(c_t) = (\beta r_{t+1})\mathrm{E}_t\{\mathrm{u}'(c_{t+1})\},$$

it follows that there must be a positive wedge between the social return to capital, R, and the private return, r – a capital income tax.

The intuition for this result is that individuals who have a high-skill ability realization can more easily misrepresent themselves as low-skilled individuals, with low labor earnings, if they have an accumulation of assets to cushion their consumption. Anticipating this, individuals have an incentive to engage in private saving. The government, in turn, seeks to limit this masquerading by discouraging private saving and thereby relaxing the self-selection constraints imposed on its policy choices, allowing it to impose higher tax burdens on high-skill individuals. The logic is similar to that leading to positive marginal labor income taxes rates on lower income individuals in the static version of the model.

While the intuition for this result is pretty clear, its implications for the design of tax policy are less so. First of all, the result holds in a context in which the government's choice of tax instruments is quite unrestricted, permitting not only age-specific tax schedules but

also history-dependent ones. Constraints on such choices would presumably alter the optimal capital income tax, although they would not necessarily lower it.

Second, imposing a wedge on intertemporal decisions does not necessarily imply imposing positive capital income tax rates, on average. In a model constructed by Kocherlakota (2005)[4], for example, in which capital income taxes are allowed to be state-contingent, the expected tax rate is zero. In this case, the positive intertemporal wedge discouraging saving is implemented by having higher linear tax rates in low-income states, where the individual's welfare cost of tax payments is higher, than in high-income states, making the expected welfare cost of taxes to the individual positive even though their simple expected value is not.[5]

Third, even if the optimal tax wedge is positive, we don't know how positive, or how large the welfare cost is from eschewing capital income taxes. There have been some recent attempts to address this question. For example Farhi and Werning (2012), using a stylized model typical of the literature, find that, once general equilibrium responses are taken into account, capital income taxes play a relatively minor role in improving the allocation of resources. But this still leaves us pretty far from the answers needed for practical policy design.

In summary, the NDPF literature has provided a variety of interesting results and a clear additional rationale for utilizing capital income taxes. But the integration of such

[4] See also Werning (2007).

[5] The idea of having higher capital income tax rates on lower-income individuals may seem rather unrealistic at first, but one can think of features of the tax-transfer system that do effectively impose high capital income tax rates on low-income individuals, in the form of asset-testing of low-income welfare programs. It may be somewhat harder to think of broad instances in which high-income individuals face negative capital income tax rates, as would also be called for by this theory, although particular tax arbitrage strategies, such as realizing capital losses while holding capital gains, generate such an outcome for some assets held primarily by high-income individuals.

results with other arguments relating to the choice of capital income tax rates remains incomplete.

C. Tax Salience, Inertia, Self-Control and Targeted Saving

All of the literature previously discussed incorporates the assumption that individuals make rational decisions. This assumption encompasses many more specific ones: that individuals know their preferences; that these preferences are stable; that individuals understand the choices they face, including the impact tax provisions; and that actual decisions reflect this information.

However, saving decisions, particularly those involving long-term planning for retirement, have been particularly identified as being subject to the types of deviations from rational choice considered in the burgeoning behavioral economics literature, including present bias (i.e., undersaving relative to what "long-term" preferences would call for), inertia (a failure to make choices even when transaction costs appear minimal), and a lack of salience (incomplete attention to the influence of taxes on the outcomes an individual confronts).

The implications for public policy toward saving, including tax policy, are potentially important, but the implications themselves are unclear, for they depend on the nature of the deviations from the standard rational choice assumptions. For example:

- In the case of hyperbolic discounting, where individuals have a present bias relative to their long-run desire to save, subsidizing saving may be more desirable than in the case of stable preferences. However, if individual behavior is better characterized by a process in which "normal" behavior is occasionally and

stochastically interrupted by irrational binges, capital income taxation may be desired, as it can serve an insurance function (Bernheim and Rangel, 2007).

- If future tax consequences of current behavior are less salient than present ones, then otherwise equivalent tax policies can have different effects. For example, the basic equivalence between the TEE and EET approaches to exempting the normal return to capital from taxation may break down if individuals ignore the future tax liability associated with the latter approach, making it seem more attractive. For example, individuals appear to have been more likely to make tax-deductible IRA contributions if they owed money on their tax returns (Feenberg and Skinner 1989). Would the same have been true if the contributions were into Roth IRA accounts, which provide the tax benefit in future years?
- Beyond the timing of tax benefits, the manner in which tax incentives are described, and the simple provision of information about them around the time that saving decisions are made can also influence take-up (Saez 2009).
- If the level of individual saving through employer-provided saving schemes is heavily influenced by provisions such as defaults and requirements that individuals make active choices (e.g., Carroll et al. 2009), then tax incentives may be less important than the institutional details of such schemes.
- Tax-favored saving schemes that allow individuals to receive tax benefits for transferring existing wealth rather than for new saving would appear to be less efficient, following the logic of the above discussion comparing transition to a consumption tax to transition to a labor income tax. Much of the literature has suggested, however, that individuals are not as likely to engage in such asset

substitution as simple analysis would suggest, perhaps in line with the logic that different types of saving fall within different "mental accounts." But recent research by Chetty et al. (2012) find that tax incentives matter only for a small fraction of savers – those whose changes in saving levels reflect active personal choices rather than changes in defaults. Thus, the individuals who respond to tax incentives may be precisely those for whom the existing structure of tax-favored saving schemes is particularly inefficient.

In summary, a broad-based system that provides favorable capital income tax treatment to all individuals need not promote saving more effectively than a series of specific, employer-based savings-promotion schemes, but the advantages of such specific schemes may relate more to their presentation, defaults, and other non-tax characteristics than to the tax provisions themselves; and to the extent that the tax provisions do matter, existing approaches may not be especially efficient.

D. Summary

The literature of recent decades has moved us quite far from thinking it natural that capital and labor income should be taxed according to the same schedule. This perspective is at times observed in policy discussions, although the notion that it is unfair for those with capital income to pay lower taxes than those with labor income is still quite apparent. But we have come to understand not only that capital income is "different," but also that capital income has different components that might optimally be subject to different rates of taxation, that the other tax instruments available to the government also matter, and that non-tax provisions may be more important for some individuals' saving decisions.

It is difficult to draw from the literature a simple answer regarding what "the" tax rate on capital income should be. In the end, the Mirrlees Review's policy recommendation was to exempt the normal return to capital and to reform the treatment of the remaining returns to capital, along the lines discussed above. With respect to corporate taxation, in particular, there is considerable scope for reform.

3. Corporate Taxation

Although the corporate income tax is just a particular type of capital income tax, it merits separate consideration for several reasons, including the range of particular distortions that it introduces as well as the additional issues that arise when there is a separation between the ownership and control of assets. In addition, cross-border considerations, which are relevant for capital income taxes more generally, are especially important for the corporate tax, given the prevalence of multinational activity and international capital flows.

Views of the appropriate taxation of corporate source income have changed over time, reflecting developments in theory, accumulating empirical evidence about responses to tax provisions, and changes in the economic environment influencing corporate behavior.

A. Developments in Theory

On the theoretical side, contributions beginning with Stiglitz (1973) and Miller (1977) challenged the view that the Harberger view that the corporate tax imposes an extra wedge on new investment, given that companies can finance investment using

interest-deductible borrowing. The "new view" of dividend taxation, developed in papers by Auerbach (1979), Bradford (1981) and King (1974), suggests that taxes on the dividends ultimately paid from retained earnings may be capitalized into share values and not affect the decision to reinvest such earnings, another argument that undercuts the double-taxation perspective on the corporate tax. Together, these developments suggest that the corporate tax wedge may fall more on rents and the establishment of new enterprises.

This distinction between normal returns and rents, and between existing and new sources of capital, relates closely to the discussion in the previous section about how different tax systems hit different components of capital income, and there are similar implications for particular tax reforms. For example, the various approaches to corporate tax integration that effectively reduce tax rates on dividends, touched on above in the introduction, may largely amount to windfalls to existing assets, comparable to a permanent reduction in the tax rate under an EET system of capital income taxation.

Investment incentives introduce another channel through which the treatment of new and existing assets differs for corporations. To the extent that investments receive write-offs more favorable than deductions for economic depreciation, this lowers the effective corporate tax rate facing new investment, while at the same time introducing a gap between the tax treatment of new capital and existing capital, since existing capital's prospective tax benefits are less attractive. As discussed above in the context of dynamic inconsistency, US tax reforms can and have altered the relative tax rates on new and existing capital.

Together, investment incentives and the capitalization of dividend taxes and can introduce a very large deviation in the taxation of new and existing assets when statutory tax rates are high and investment incentives generous. Indeed the evolution of the magnitude of the capitalized tax burden on existing corporate capital has been put forward as an explanation for the evolution of share prices in the United Kingdom as well as the United States (McGrattan and Prescott 2005).

A general lesson from these developments is that corporate tax reform requires some thought, even if it is desirable to reduce the tax wedge facing new corporate investment. Like a reduction in the dividend tax rate, a cut in the corporate tax rate can also provide windfalls to existing assets, even as it reduces whatever gap remains in the tax rates on debt- and equity-financed investment, or on corporate and non-corporate enterprises. Thus, proposals of the type discussed in the Mirrlees Review, to impose a corporate cash-flow tax, which would eliminate the tax wedge on new investment through investment incentives and eliminate the debt-equity distinction by removing the interest deduction, appear an attractive alternative.

B. Empirical Evidence

Corporations respond to taxation on several margins. Evidence of these responses confirms the relevance of corporate tax reform as well as shedding light on the relevance of alternatives theories of behavior. Many recent papers, on corporate tax incidence, relate to international tax considerations and will be discussed further below. The focus here will be on various responses in the domestic context, notably investment and financial decisions.

The evidence that corporate investment responds to investment incentives is now fairly clear, especially when the analysis is based on responses to cross-section responses to differential changes in tax policy. A series of studies has focused on the effects of tax changes on the composition of business fixed investment, primarily using panel data on firms, industries or asset categories. These studies (for example, Auerbach and Hassett 1991, Cummins, Hassett and Hubbard 1994, and House and Shapiro 2008) relate changes in investment to changes in the Hall-Jorgenson user cost of capital, which incorporates changes in tax policy variables. The studies provide ample evidence that changes in the user cost of capital do influence the pattern of investment, i.e., that the mix of investment is responsive to relative changes in the user cost of capital. This literature suggests an elasticity of equipment investment with respect to the user cost ranging between -0.5 and -1.0 (Hassett and Hubbard 2002). Using a similar methodology, based on cross-country panel data, Bloom et al. (2002) find a similar long-run response for R&D investment in response to changes in tax incentives.

Also responsive to tax incentives is the corporate borrowing decision. Studies looking at variation in corporate incentives based on such factors as the asymmetric treatment of income and losses and the corporate minimum tax (Mackie-Mason 1990, Graham 1996) as well as imputed shareholder tax rates (Graham 1999) have found significant responses to the effective marginal tax incentive to borrow.

One question that arises in these studies of borrowing responses (as discussed by Graham, 1996, for example), though, is why taxes don't exert a more powerful effect on borrowing. There are, of course, many possible econometric explanations for a limited estimated response, but another possible explanation is the differing incentives of the

owners and managers of corporations. While owners with diversified portfolios might prefer the tax benefits of additional interest deductions, managers with human capital tied to the firm's continued operation, or averse to the effort needed to ensure the cash flow needed to service additional liabilities, might require a stronger push. Some suggestive evidence in favor of this argument comes from the premiums associated with leveraged buyouts (Kaplan 1989).

An interesting aspect of this possible divergence of interests is that it does not necessarily translate into reduced economic efficiency, because the private and social benefits of borrowing may also diverge. If borrowing involves non-tax costs as well as tax benefits, then tax incentives might otherwise cause firms to borrow too much, from a social perspective. Thus, managerial incentives might reduce the distortion to the borrowing incentive. On the other hand, lower borrowing may also exacerbate another distortion if it raises the effective tax rate on new investment. But the general second-best point remains, that with taxes distorting decisions, the added distortion associated with managerial incentives need not lead to further reductions in efficiency.[6]

Another important corporate response to taxation involves the payment of dividends. A variety of studies have found that companies increase their dividends in response to reductions in the dividend tax rate. But the interpretation of this response, and its implication for the design of tax policy, depends on how one models the firm's dividend decision.[7]

[6] A similar issue arises in the case of corporate tax avoidance, where managers who take a more aggressive stance in seeking to reduce their companies' corporate tax payments may increase share values (Desai and Dharmapala 2009).

[7] See, for example, the discussion in Gordon and Dietz (2006).

Under the "new view" of dividend taxation, discussed above, an increase in dividend payments might simply reflect a firm's response to intertemporal incentives, to pay dividends while tax rates are low. From this perspective, the dividend response actually reflects a higher cost of capital – the opportunity cost of retaining earnings is temporarily high because of the temporarily low dividend tax rate. Thus, the responsiveness is associated with a decline in investment, exacerbating the deadweight loss from the corporate tax. On the other hand, if managers balance the interests of their shareholders with their own desires for empire-building, then they may increase dividends in response to lower tax rates simply because it raises the cost of empire-building (e.g., Chetty and Saez 2010). In this case, a cut in the dividend tax may be welfare-improving, as it reduces overinvestment from the shareholders' perspective. However, this is another case in which shareholder and social interests may diverge, if the corporate tax pushes investment below its socially optimal level. But the social interest in maintaining investment must be balanced, in turn, by the misallocation of capital toward firms with retained earnings relative to newer firms.

Empirical evidence from the most recent important change in dividend tax rates, the 2003 tax cut, does suggest the relevance of agency considerations. For example, Chetty and Saez (2005) find the strongest response in firms where either managers have large holdings, or with large tax-sensitive institutional investors. Brown et al. (2007) find similar results relating to the impact of executive ownership. As discussed above, though, the implications for efficiency are not obvious, given the various distortions involved. Moreover, there is also evidence that firms use dividends as signals (Bernheim and Wantz 1995), and it is not clear how these influences interact. Also still unresolved is the role that

share repurchases play, given that they offer a less heavily taxed route for the distribution of funds. In short, we know that dividend policy responds to taxation, but we are far less clear about the implications of this responsiveness for tax policy.

C. The Changing Economic Environment

In addition to new thinking and new evidence on the effects of corporate taxation, the environment in which corporations operate has also evolved. Three major, interrelated developments stand out. First, a growing share of corporate activity is conducted by multinational companies. As an illustration of this development, between 1982 and 2005, the share of assets (at book value) in C corporations that were held by multinational companies (i.e., those with operations in foreign countries) rose from 49 percent to 82 percent (Altshuler et al. 2009).

Second, at least in the United States, the boundary between activities subject to the corporate tax and those not subject to the tax has shifted, with a much greater share of business activity and income escaping the tax. In 1980, C corporations accounted for 80 percent of U.S. business income, while partnerships, sole proprietorships, limited liability companies, and S corporations made up the remainder. By 2007, the C-corporation income share had fallen to 53 percent, with the fastest relative growth experienced by S corporations — corporations from a legal perspective that are taxed as pass-through entities, with their income attributed directly to shareholders and taxed only at the shareholder level. The income share of S corporations rose from 1 percent in 1980 to 14 percent in 2007 (President's Economic Recovery Advisory Board 2010).

Finally, financial innovation has increased the ability of corporations to exploit tax differences, between debt and equity, between corporate and non-corporate operations, and according to the location of profits and activities.

At least some of these changes are attributable to tax policy. For example, we know from cross-state differences (Goolsbee 2004) that the incorporation decision is responsive to taxation, and there is evidence that the Tax Reform Act of 1986's increase in the relative tax on corporations led to a jump in S-corporate activity (Auerbach and Slemrod 1997). But the trend away from C-corporate form has been too steady, over too long a period, for it to be attributable to a particular event. The same observation applies to the growth in multinational activity, even if US companies have tax reasons for shifting location. These shifts appear to reflect an interplay of existing tax incentives, the reduced transaction costs associated with changes in the organization of activities, as well as other ongoing economic changes, such as the rising importance of cross-border activity and a shift in industrial composition away from industries, such as manufacturing, that have historically been heavily concentrated in the corporate sector.

Even without changes in tax incentives over time, then, the effects of the corporate income tax on behavior may have changed. One question, in particular, for which this point is relevant is the incidence of the corporate income tax. Many recent papers have reconsidered the incidence of the tax with a focus on the open economy, where cross-border activity provides an important potential avenue for tax shifting and an additional range of complicated tax provisions come into play in determining the incentives that corporations face.

D. Corporate Taxation in the Open Economy

In an open economy, the provisions of corporate taxation become more complex. Not only companies gain flexibility with respect to their activities; governments have more choices about how to tax corporate income. A key issue is on what "basis" capital income is taxed, with two standard approaches being by *source* – where the income is earned, and by *residence* – who earns the income. Under a source-based corporate income tax, which is the simplest to describe, a country taxes the income earned within its jurisdiction. Under a residence-based tax, a country taxes the income earned anywhere by its residents.

In an open economy, a corporate income tax imposed on a source basis amounts to a tax on a potentially very mobile factor, capital, which can flee not only to other domestic production sectors, as in the Harberger model, but also abroad. Intuition suggests that this will reduce the burden of the tax that capital bears, but even simple models yield more subtle results. As shown in Bradford (1978) and Kotlikoff and Summers (1987), in a two-country model with a single production sector producing a homogeneous consumption good using capital and a fixed local factor (e.g., land, labor, etc.) as the taxing country becomes small relative to the other, the fall in the return to capital, r, does indeed converge to zero; but so does the ratio of taxed capital to worldwide capital, $K/(K+K^*)$. As a consequence, the share of the tax, tK, borne by worldwide capital, $tK/r(K+K^*)$, converges to a finite, positive value. In fact, with equal production functions in the two countries, this finite value is 1, just as in the base case for the Harberger model!

This surprising result can be reconciled with the intuition that a small country cannot shift a tax abroad with the additional result that the home fixed factor also bears 100 percent of the tax, while the foreign fixed factor *gains* 100 percent of the tax. Thus, the

home country does bear 100 percent of the tax, even though worldwide capital does as well. A subsequent literature analyzing the incidence of a source-based corporate income tax using more sophisticated general equilibrium models, incorporating untaxed domestic sectors, imperfect capital flows, and imperfect substitution of domestic and foreign consumption goods, surveyed by Gravelle (2010), generated a range of results, with the general thrust that the burden on domestic factors may be reduced by various deviations from perfect mobility and substitution. Given the range of plausible outcomes, though, there have been many attempts to address the incidence question directly through econometric analysis.

Although studies vary, the simplest approach is to examine the effects on wage rates of changes in corporate tax rates, using cross-country (or, cross-state) panel data. Using such an approach for a large panel of countries, Hassett and Mathur (2010) find a reduction in domestic wages well in excess of what 100 percent local incidence would imply. Several other papers, many of which are surveyed in Gravelle (2011), also find a substantial burden borne by domestic labor. Several of these recent papers relax the assumption of perfect competition, treating some of the corporate tax as a tax on rents, with a part of the shifting mechanism involving how the size of rents and their distribution between capital and labor responds to a change in corporate taxes. A generally acknowledged difficulty with most of the papers in this literature is that the tax changes being considered are not exogenous – we lack good natural experiments for changes in corporate tax rates. Thus, even with country fixed effects, unobserved time-varying local factors may confound the analysis. Another problem is that there are many ways in which a corporate tax system can change; a change in the tax rate, for example, should have a different effect than changes in the tax

base, even though both may reduce the effective tax rate on domestic investment. We thus have what might be characterized as strong suggestive evidence of a large burden on domestic factors.

In addition to these papers attempting to determine incidence directly, there is an extensive literature on the responses of multinational corporations to corporate taxation at various margins, such as the location of real activities, the shifting of expenses and gross profits, conditional on the location of activities, and the repatriation of foreign earnings.[8] This is a complex area because of the many tax provisions that must be taken into account, starting with the one familiar from the domestic context, between the tax rate and the tax base – deductions for interest, depreciation, etc. that reduce tax payments,, conditional on the tax rate. In the domestic context, a reduction in the tax rate provides a windfall to existing capital that a reduction in taxes through depreciation deductions does not. But with multinational corporate activity, a reduction in the corporate tax rate also encourages companies to relocate operations with positive profits (a response found by Devereux and Griffith 1998), to relocate expenses through shifts in where borrowing occurs, or simply to relocate profits and expenses using internal transfer pricing among related parties located in different countries.

At the same time, countries impose various additional tax provisions aimed at limiting shifting responses, such as "thin capitalization" rules applied to debt-asset ratios, and expense allocation rules, such as the United States applies to a company's R&D expenses, that are not easily distilled into a single corporate tax measure. With many

[8] Gordon and Hines (2002) survey this literature, although there have been many subsequent papers in the general area.

provisions of this sort, and many margins of behavior, one may measure specific taxpayer responses, to see if particular provisions "succeed," without gaining much insight into the incidence and efficiency effects of the provisions, or of the broader tax systems of which they are a part.

This difficulty may be illustrated with respect to the fundamental choice between source-based and residence based taxation which, as mentioned above, are generally viewed as the two main approaches to taxing the income of multinational corporations. The US system is generally described as a residence-based system, because it imposes taxes on the worldwide profits of corporations with US parents. However, the actual US system deviates in many important respects from a pure residence-based system, including

- The taxation of domestic profits of foreign companies;
- Deferral of the taxation of foreign-source income of US countries until repatriation of income; and
- A credit for foreign taxes paid on repatriated earnings, but only up to the US tax rate.

Together, these provisions make the US system something of a hybrid between source-based and residence-based taxation. It is difficult to assess the system's performance relative to those two polar cases, or to determine whether moving toward one approach or the other would be welfare- or efficiency-improving, because there are different distortions under the various systems. For example, under a residence-based system, in contrast to a source-based system, a US firm has no incentive to shift profits to low-tax jurisdictions, because profits are ultimately taxed at the US rate. On the other hand, a US firm under a residence-based system may face higher taxes than companies from other countries on operations in third countries, which may discourage US companies from operating and may

lead companies to shift their residence away from the United States. For the current US system, but neither of the other systems, companies with accumulated profits abroad may be discouraged from repatriating foreign earnings, because of the tax due on repatriation.

One may think of corporate tax reform and comprising two steps, the first involving what the tax base and tax rate should be, and the second involving what component of the worldwide base to tax. These two steps are of course not independent. For example, a standard result, consistent with the incidence theory discussed above, is that, for a source-based tax on capital income, the optimal rate tax rate is zero for a small country. The same might not be true for a residence-based tax, depending on one's assumptions, including about the mobility of companies and whether domestic companies raise funds globally or domestically. In particular, if a tax on residence-based companies is effectively a tax on the capital income of domestic residents, then the question reduces to the one considered in the previous section regarding the optimal tax rate on capital income. Still, it is useful to think of the two steps separately, in terms of how they are implemented, as they involve different components of the tax system. Indeed, this effectively was the approach taken by the Mirrlees Review, which first decided to exempt the normal returns to corporate income (using the TtE approach discussed above), and then to implement this scheme under a source-based tax.

Given the distortions associated with both source-based and residence-based taxation, Auerbach et al. (2010) propose a third alternative, using the *destination* basis to determine what part of the corporate tax base to tax. This approach taxes based on the location of sales, following the same approach practiced under existing valued added taxes. If one also allows a deduction for investment (following the EET approach), then the

approach is equivalent to a value added tax with a deduction for labor costs. Because the destination basis depends on the location of sales, a company's tax liability would vary neither with the company's location nor the location of its production or borrowing, so the associated distortions go away, replaced by those associated with incentives for consumers to move, the importance of which presumably are of a lower order of magnitude. Beyond this advantage, the desirability of a destination-based approach, as opposed, say, to a source-based one, depends on the extent to which the tax base includes rents. For example, a country with important natural resource rents might prefer source-based taxation, or to combine a destination-based tax with a separate tax on natural resource rents. But we do not have good quantitative estimates of the relative benefits of different approaches to the taxation of multinational corporations.

4. Wealth Transfer Taxes

To understand the determinants of optimal wealth transfer taxes, it is useful to start with a review of what makes wealth transfer taxes different from lifetime capital income taxes. In an infinite horizon model, as considered in the Chamley-Judd analysis, there is basically no difference. For forward-looking agents with an infinite horizon, it is the present value of capital income taxes, and how this present value depends on capital accumulation, that influences economic decisions. Collecting taxes at the time of a wealth transfer within the optimizing household, rather as the income accrues, is irrelevant. But for individuals whose bequest motive does not reduce simply to treating the consumption of heirs as part of their own optimization problem, wealth transfer taxes are different. Among the relevant differences are:

- Bequests are uncertain, and may be unintended, because incomplete annuity markets imply that even those without a bequest motive may leave a bequest;
- The preferences and abilities of those making and receiving wealth transfers may differ; and
- Because the recipients of wealth transfers are distinct individuals, it may be natural to include them separately in a measure of social welfare.

Also, from the perspective of tax design and enforcement, it matters that

- Wealth transfers may be difficult to measure, because doing so requires that one observe both the transfer of resources and the value of transferred resources; this includes not only transfers at death, but inter vivos transfers that may take many forms; and
- Wealth transfers are extremely concentrated among high-wealth, high-income individuals; thus the taxation of wealth transfers has the potential to play an important role in a progressive tax system.

The literature includes both theoretical and empirical contributions, most focusing on estate taxes;[9] the first group focuses on the derivation of optimal estate taxes under a variety of assumptions about the economic environment, the availability of tax instruments, the motivation of bequests, and the conception of social welfare; the second seeks to measure the determinants of bequests and the responsiveness of bequests to taxes.

[9] There is a formal distinction between *estate* taxes and *inheritance* taxes, based on whether the decedent or the recipient has the tax liability. Other than the basically irrelevant difference in statutory incidence, the taxes may vary with respect to whether the economic circumstances of the recipient influence tax liability, this being simpler to implement under an inheritance tax.

A. Optimal Wealth Transfer Taxation

As discussed, the optimal taxation of bequests in a simple dynastic model can be collapsed into one where the consumption of heirs is just another component of future consumption; under weak separability the Atkinson-Stiglitz result applies. But, if we treat heirs as distinct individuals, whose well-being should enter separately in the social welfare function, then the bequest decision has a positive externality, for the individual leaving the bequest takes account only of his own well-being, and not the benefit of the recipient(s). The standard Pigouvian solution is to subsidize bequests and other interpersonal gifts (Kaplow 2001). In a model where the well-being of individuals depends monotonically on the size of bequests received, this externality is declining in the size of the bequest, because of the concavity of social welfare with respect to the consumption of recipients, so the subsidy to bequests should be decreasing in the size of bequests, converging to zero (Farhi and Werning 2010).

A second relevant consideration is that bequests received influence individual decisions. Here, the insights of the NDPF literature carry over: reducing bequests received helps loosen incentive compatibility constraints on the income tax schedule facing heirs. Thus, whether the marginal tax rate on bequests should be positive or negative depends on the relative strength of this factor and the positive externality (Kopczuk 2013a). A useful observation here is that when the economic circumstances of heirs are not fully predictable from the size of bequests (as would be true if the abilities of parents and children are not perfectly correlated), then inheritance taxation, taking account of the heirs' economic circumstances, can improve the performance of the wealth transfer tax. Assuming the use of estate taxes, though, this intergenerational correlation of well-being will influence the

optimal tax rate; a stronger correlation points toward more progressive estate taxation, both because of the declining externality and the increasing value of relaxing the incentive compatibility constraint.

The preceding discussion presumes that bequests result from an optimizing decision in which those leaving bequests trade-off the benefits of own consumption and the benefits of leaving a bequest. But the precise nature of the bequest motive may matter for the design of the optimal tax schedule, and bequests may result even without an explicit bequest motive.

Without complete annuity markets, individuals may engage in precautionary saving to substitute for the lack of annuities, to avoid outliving their assets. Even with annuities that cover uncertain mortality, there are other important uncertainties in old age, such as the costs of health and long-term care expenditures, against which complete insurance may be difficult. Thus, individuals may leave "accidental" bequests. The magnitude of accidental bequests affects the optimal estate tax. Since there are no behavioral distortions involved, this would tend to increase the optimal estate tax rate. A way of thinking about this is that the taxation of bequests, relative to other taxes not conditional on mortality, acts as a kind of annuity, providing more resources to those who survive than those who die (Kopczuk 2003). However, the optimal estate tax rate would not be 100 percent even with only accidental bequests, since the well-being of heirs would still need to be taken into account.

As to the nature of the bequest motive, two standard assumptions are the dynastic motivation already discussed, and the "warm- glow" motive where the donor's utility derives from the net bequest. For some types of analysis the distinction is not that

significant, but one potentially important difference relates to the long-run elasticity of bequests with respect to the tax rate. Under the dynastic motivation, this elasticity would appear to be infinite, which would push the optimal tax rate (ignoring the additional impact of the externality) toward zero, following the Chamley-Judd logic. But in a model with stochastic ability draws that may break the chain of future bequests (because bequests cannot be negative), the distinction from the warm-glow approach lessens (Piketty and Saez 2013). Yet another potential motivation, the accumulation of wealth, resembles the warm-glow approach, in that the donor's well-being relates to the size of wealth not consumed, but if this well-being really doesn't depend on the size of the bequest *received*, then wealth transfer taxes are, as in the case of accidental bequests, not distortionary with respect to the bequest decision.

The actual motivation for bequests naturally differs across individuals (depending, for example, on whether they have children), and there is no reason to expect that any individual's bequests would reflect only one of the several motivations. Kopczuk (2013b) surveys the evidence, based on different approaches to determining bequest motives. An additional point that may be important here is that some observed patterns of bequests and inter vivos wealth transfers require further explanation, not being consistent with any of the foregoing motives. In particular, even individuals with large accumulations of wealth, who would benefit from transferring assets during their lifetimes (because the tax treatment of inter vivos gifts is more favorable than that of estates), appear to take too little advantage of such opportunities (Poterba 2001).

Given the factors that influence estate tax design, notably the nature and strength of the bequest motive, the intergenerational correlation of abilities (and preferences for

bequests), the underlying distribution of abilities, and of course the other tax instruments available to government, what can one say about the shape of the optimal estate tax? One approach, which side-steps the need to determine the nature of bequest motives, is to adopt a strategy based on "sufficient statistics" for the optimal estate tax schedule, deriving a formula based on observable elasticities (including that of bequests), ability distribution characteristics and social welfare weights. Using this approach, Piketty and Saez (2013) estimate optimal *inheritance* taxes as a function of the size of inheritance received, using parameters based on France and the United States. For both countries, they estimate marginal tax rates that are substantial throughout most of the inheritance distribution (around 50 percent for the United States; higher for France) but drop sharply and become negative within the top bequest quintile (where the externality of wealth transfers outweighs other factors).

While this is an interesting finding, one should keep in mind that it comes from a model focusing on intergenerational transfers, with labor income taxes the only other tax instrument, with no capital income taxes (and lifetime intertemporal decisions not modeled). While one might cite other arguments for not using lifetime capital income taxes, the fact that such taxes exist certainly affects one's conclusions about the optimal estate tax. Although they are not perfect substitutes, one would expect higher capital income taxes to translate into lower estate taxes, although the analysis is complicated by the fact that capital gains taxes are avoided at death, a fact often used to justify the estate tax as a backstop. Also, in more complex models, there are many margins of taxpayer response that are relevant to the design of the estate tax within the broader tax system.

B. Taxpayer Responses to Wealth Transfer Taxation

There is an extensive empirical literature estimating the responses to estate taxes of those leaving bequests and those receiving them. Kopczuk (2013b, sections 5 and 6) provides a recent and extensive survey of much of the literature, so we will only touch on several key conclusions of this literature here.

First, wealth accumulation does appear to respond to prospective estate taxes, with higher taxes depressing wealth accumulation. This is a difficult response to assess, as the taxes applicable at the time of bequest are unknown and possibly far in the future when capital accumulation decisions are made. Second, inter vivos giving responds to the relative taxation of gifts and bequests. Although gift and estate tax rates typically move together, there is some independent variation provided, for example, by changes in the estate tax threshold or the capital gains tax rate. Note that this result holds even though, as discussed above, individuals do not appear to take full advantage of the tax incentives for making inter vivos gifts, conditional on the relative tax treatment of gifts and bequests. Third, bequests (particularly if unexpected) appear to have a negative impact on labor supply and a positive impact on consumption, as would be predicted via an income effect.[10] Fourth, charitable bequests react to the estate tax rate, as well as to the relative incentive for gifts at death and lifetime gifts, which are deductible from the income tax. (Joulfaian 2001). Fifth, capital gains realizations, which are discouraged, especially late in life, by the prospect of step-up in basis at death, are encouraged by higher estate taxation.

[10] There are relatively few results regarding the impact on entrepreneurship, although some evidence (Brunetti 2006) that wealth transfer taxes induce sales of family businesses.

Finally, in addition to these "real" taxpayer responses, there is evidence that taxpayers use a variety of tax avoidance strategies based on accounting and financial transactions where there is little underlying change in economic activity. Although there are many variants that depend on particular provisions of the law, the basic strategy is to alter the characterization of assets in a way that legally permits the value of these assets to be understated for tax purposes.[11]

In summary, taxpayers respond to the incentives provided by the estate tax system. The many margins of response as well as the observed behavioral anomalies make it difficult to translate these effects into an optimal estate tax system, even using the sufficient statistic approach. But there are many reasons why some form of wealth transfer taxes might be part of an optimal tax system, even if lifetime capital income taxes applied to the normal rate of return are not.

5. Conclusions

Advances in theory and evidence have provided us with a better sense of the role that capital income taxation might play in a well-designed tax system. Even without a clear result that capital income taxation should be fully avoided, there are many obvious improvements possible, including a shift away from taxing normal returns to capital rather than all returns, reforming the base of the corporate tax and the mechanism for taxing the earnings of multinational companies, and a more careful integration of lifetime capital income taxes and wealth transfer taxes.

[11] An example of such as strategy involves establishing a partnership to own the bequeathed assets and asserting that this makes the underlying assets less marketable.

There are many more specific reforms not included among the three major areas covered here, notably the treatment of capital gains and owner-occupied housing. The case for reform in each of these areas is quite clear; one can make little sense of taxing capital gains as we do, only upon realization[12] and not at all at death, and providing a nearly unlimited tax benefit for home ownership. In these cases, the difficulties reside more in the political process than in our evidence. Of course, political obstacles are also present when one considers reforms of individual capital income taxes, corporate taxes and estate taxes, but we have made progress, in our research and perhaps in the political process as well, since the days of thinking that a broad-based income tax was the main objective for tax reform.

[12] One could continue to tax gains at realization and still eliminate the distortionary "lock-in" effect, as discussed in Auerbach (1991).

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