The Influence of Tax Costs on Organizational Choice in the Natural Resource Industry

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ABSTRACT

This study investigates the influence of TRA86, pre-TRA86 tax strategies, and firm characteristics on S conversions in the natural resource industry. TRA86 shifted substantial individual tax costs to corporations, inviting conversions, but also lowered corporate marginal tax rates and changed aspects of the built-in gain provision to reduce conversion benefits. Built-in gain changes affect industries differently because of differences in asset composition and economic conditions. The natural resource industry had substantial built-in gain potential and was consolidating and restructuring during the mid-80s, making built-in gain realization likely. Our results suggest that built-in gains negatively influenced conversions in the natural resource industry. This study enhances our understanding of the interaction between TRA86 rate changes and other provisions on incentives to convert from C to S corporate status. It also contributes to the organizational form literature by identifying factors related to TRA86, S corporation operating restrictions, firm characteristics, and tax strategies that influence conversion decisions.

INTRODUCTION

This study investigates the joint influence of tax and nontax factors on conversions from C to S corporate status in the natural resource industry around the Tax Reform Act of 1986 (TRA86). TRA86 created an incentive for eligible C corporations to convert to S status by reducing individual tax rates below the highest corporate rate. The conversion incentive likely differed across industries because of other tax and nontax factors, such as preexisting tax-minimization strategies, economic conditions, and the incidence of the built-in gains tax.

The built-in gains tax, first adopted in 1982, requires that a positive difference between the market value of a C corporation's assets immediately prior to conversion and the corporation's

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basis in those assets (built-in gain) incur additional corporate taxes if assets with built-in gains are sold shortly after conversion. The tax is avoided if the asset sale occurs after a specified holding period. TRA86 substantially changed the built-in gain provision to discourage C corporate conversions that were executed to avoid the effect of eliminating the General Utilities Doctrine.[1] Plesko (1995b) documented a lower probability of conversion in natural resources and a higher probability of conversion in the retail industry supporting the differential effect on conversions of TRA86. However, the built-in gain provision did not appear to be an effective deterrent to conversion (Plesko 1995b).

We chose to examine the natural resource industry because the potential for finding the intended built-in gain effect (i.e., the reduction of tax avoidance conversions) is greater in natural resources because of its high proportion of cost recovery assets and the industry consolidation around TRA86 implementation. Industries with a high proportion of depreciable/depletable assets (i.e., cost recovery assets) are likely to have larger built-in gains than industries with a lower proportion of cost recovery assets and, thus, have a greater potential for incurring the built-in gain tax after conversion. Approximately 63 percent of natural resource industry assets are cost recovery assets compared to approximately 46 percent for other industries (Omer and Terando 1999). In addition, the natural resource industry was consolidating and restructuring during the mid-80s when TRA86 was passed, so unlike many other industries, it faced a higher probability of triggering the built-in gains tax (reducing the perceived future tax benefit from conversion).

We used 1988 individual firm tax returns from the Internal Revenue Service Statistics of Income (SOI) corporate file to identify C corporations in the natural resource industry that were eligible to convert to S status and determined which ones converted between 1986 and 1988.[2] Our results imply that the built-in gain provision, along with potential shareholder conflicts and pre-existing tax strategies (e.g., optimizing owner-officer compensation, benefits, and debt use), significantly reduced C to S conversions in the natural resource industry. We conclude from this that the potential for built-in gain realization significantly reduced the probability of conversion in the industry and that modeling a single industry's decisions provides insights into subtleties that complicate economic choice prediction following pervasive tax law changes.

This study expands our understanding of the interaction between the TRA86 corporate and individual rate changes and other tax and nontax factors on C to S conversions in the natural resource industry. It contributes to the organizational form literature by identifying factors related to TRA86, S operating restrictions, firm characteristics and tax strategies that influence conversion decisions.

The remainder of the paper is organized as follows. The next two sections discuss prior research on C to S conversions and on the tax benefits and costs that would encourage or discourage conversion to S status. The fourth section describes our data collection and model specification methodology, and the final sections report our results and provide a discussion and conclusion.

PRIOR RESEARCH

TRA86 prompted numerous investigations of organizational form change because it changed the relative levels of individual and corporate tax rates, as well as ordinary and capital gains income definitions.[3] Scholes and Wolfson (1992) predicted that this increase in corporate operating costs, relative to available flow-through alternatives, would trigger conversions to flow-through entities, especially S corporations. Consistent with this prediction, recent studies suggest that shareholders are not indifferent to organizational form tax effects (Wittman and Gill 1998; Ayers et al. 1996;

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[1] The General Utilities Doctrine had allowed firms to avoid the corporate-level tax on liquidation.

[2] Our sample contains neither reverse conversions nor newly formed firms.

[3] TRA86 also changed the extent to which depletion was subject to recapture on disposition of property. Prior to 1986, only gains on the sale of depletable property that were associated with intangible drilling and development costs were subject to recapture as ordinary income; the depletion taken was treated as capital gains. After 1986, depletion was recaptured as ordinary income

Plesko 1994, 1995a). However, evidence about factors affecting the change is mixed because of the pervasiveness of the tax law change, the complexity of the conversion decision, and the analysis methods previously employed.

Plesko (1994) and Ayers et al. (1996) test the association between firm characteristics and organizational form choice, but measure firm characteristics after the choice, rather than before, which can lead to inference and interpretation problems if the research seeks to explain or predict a choice based on the measured characteristics. Ayers et al. (1996) find no association between tax shelter industries, primarily oil and gas and real estate, and the decision to convert to a flow-through entity. Plesko (1994) documents several factors that differ significantly between C and S firms, but provides no insight into whether these differences influenced, or were influenced by, form choice. Both studies contribute to our understanding of organizational form choice and provide initial steps toward building a cogent model of the choice.

Plesko (1995b) improved Plesko (1994) by measuring the hypothesized relevant decision characteristics prior to conversion. Using 1986 and 1988 tax returns, he identified all corporations with 35 or fewer shareholders in 1988 and matched them to 1986 returns. Overall, about 29 percent of the eligible C corporations in his sample converted to S by 1988 (Plesko 1995b). His results are consistent with those reported in Plesko (1994), but they provide more convincing evidence that tax and other factors affect organizational form choice.

The relevant nontax conversion influences represented in his model are number of shareholders, size, age, and several industry indicators, including natural resources. Plesko (1995b) analyzes gain and loss firms separately and documents a significant negative natural resource industry influence for both gain and loss firms. He also documents a significant positive retail industry influence for both gain and loss firms. The only other significant industry influences (all positive) are for loss firms only in the wholesale; services; other; and finance, insurance, and real estate industries.

Plesko's (1995b) relevant tax influences are the book income adjustment, gross taxes, interest paid, carryover general business credits, and the use of a short-form tax reporting. Plesko (1995b) also hypothesized a significant positive influence for the built-in gain provision, but, interestingly, his estimated coefficient for built-in gains was not significant. We conjecture that the influence of built-in gains is industry dependent and that an interaction between built-in gain and industry accounts for both Plesko's (1995b) lack of significance and the significant negative sign on his natural resource industry indicator. Thus, we predict a negative sign for built-in gain for our natural resource sample. Conventional wisdom held that the change in corporate marginal tax rates (relative to individual rates) would motivate changes from C to S in general (Watkinson 1989). However, the natural resource industry has, potentially, greater built-in gains and a higher gain realization probability, which may have diluted significantly the prospective tax savings from conversion.

S CORPORATIONS

Subchapter S of the Internal Revenue Code (IRC) was enacted in 1958 to allow ''small'' businesses to operate as corporations without paying a separate corporate tax. Revisions in the S corporation rules in 1982, and changes enacted as part of TRA86, further increased the benefit of conducting business as an S corporation. Table 1 provides information on the number of partnership and C and S corporation returns, total assets, and net income less deficit for 1985–1992 for the natural resource industry. In 1986, 42 percent of returns filed in this industry were C or S corporate. Although the industry was generally consolidating during the sample period, and the total number of returns filed was smaller in 1988 than in 1986, the number of S corporate returns filed increased. Thus, changes in TRA86, in general, favored S corporations for both conversions and new formations, even in the natural resource industry. Nevertheless, other aspects of the tax law made conversion of preexisting firms less attractive than in other industries. Built-in gain potential was higher for established natural resource firms because the proportion of cost recovery assets held by natural resource firms is higher than in other industries and because liquidation (by one means or another) was more likely in this industry during the period surrounding TRA86.

Although the natural resource industry is known for its tax shelter partnerships, corporations account for most of the industry's assets (over 75 percent). If the only change in TRA86 affecting

TABLE 1
PARTNERSHIP AND CORPORATE (C AND S) RETURNS AND
TOTAL ASSETS OF MINING INDUSTRY 1985–1992
(income and assets in 000s)

Year	Returns	Total Asset	Net Income Less Deficit
Partnership			
1985	62,383	66,929,582	1,481,701
1986	53,142	66,968,783	(3,458,320)
1987	59,925	71,492,079	(1,359,915)
1988	48,134	65,651,986	934,191
1989	45,537	62,073,040	1,965,205
1990	40,904	58,246,016	2,183,394
1991	39,022	53,725,039	779,467
1992	36,399	53,696,645	1,008,625
S Corporations			
1985	9,651	5,514,799	(10,702)
1986	10,197	5,339,003	94,840
1987	13,734	7,073,341	613,636
1988	13,344	8,378,613	260,847
1989	15,323	10,269,703	384,752
1990	16,030	11,145,270	775,230
1991	16,126	11,373,512	403,049
1992	15,563	11,980,729	593,529
C Corporations			
1985	31,775	235,301,197	(2,532,785)
1986	30,157	200,783,122	(3,217,405)
1987	28,316	213,063,722	(338,588)
1988	27,736	217,260,723	3,851,008
1989	26,308	226,069,469	2,759,934
1990	23,644	208,052,370	4,526,993
1991	23,073	201,589,323	3,598,307
1992	21,097	206,231,040	2,113,240

the natural resource industry had been the reduction in corporate tax rates (relative to individual rates), it is likely natural resource C corporations would have had the same incentive to convert to S as corporations in other industries. The lower-than-average conversion probability for this industry (Plesko 1995b) suggests that other conversion disadvantages influenced the decision. A brief summary of advantages and disadvantages is presented below, excluding the previously discussed built-in gain provision.

Advantages

Although the primary tax benefit of the S corporation is eliminating the double-tax on corporate distributions, others exist. The S form allows shareholders greater flexibility in using the firm's operating losses over its life. S shareholders can control current loss deductions, to some extent, through loans to the corporation; whereas, C shareholders receive no direct tax benefit from current corporate losses. In addition, converting C corporation shareholders escape the substantial tax liquidation costs incurred when converting to a partnership (Shelley et al. 1998). Finally, selecting an S corporation avoids the new alternative minimum tax (AMT), which is important in the natural resource industry because both percentage depletion and intangible drilling costs are

tax preferences that can trigger the AMT. However, the value of this advantage depends on the extent to which percentage depletion and intangible drilling and development cost preferences increase the likelihood that individual shareholders will incur the individual AMT. Because accumulated C corporation tax preferences are distributed across S corporation shareholders, the probability that the preferences and adjustments will rise to the level required to trigger the AMT is reduced.

Disadvantages

S corporation shareholders are restricted in number and type. The number of shareholders cannot exceed 35, with married couples counted as one.[4] Shareholders cannot be other corporations, nonresident aliens, or members of affiliated groups.[5]

In addition, S corporations are restricted from issuing preferred stock or more than one class of common stock. These restrictions reduce a firm's ability to raise equity capital, making an S corporation inappropriate for firms considering public trading. Gordon and Mackie-Mason (1994) suggest that the desirability of listing shares on a public exchange is an important nontax factor in choosing between C and S corporate forms and speculate that diversified ownership constraints may help explain the small number of S corporations in the natural resource industry.

S corporations cannot offer tax-free fringe benefits to shareholders with more than a 2 percent ownership interest. Thus, employment benefit contracts held by over-2-percent owners must be individually restructured on conversion rather than included in group plans. In addition, pension plans are available on only a limited basis for S corporate shareholders.

S status election must be a unanimous decision by shareholders, which makes conversion difficult for firms with diverse shareholders. In addition, S election is easily lost and if lost cannot be re-elected for 5 years, unless the loss is inadvertent. The burden of proof is on the taxpayer to show the loss is inadvertent. Also, S corporations' calendar and fiscal year ends must coincide unless strong evidence of a business purpose is provided favoring an alternative fiscal year-end. These details make the S corporation slightly more costly to administer than a C with similar characteristics.

S corporation owners are immediately taxed on their share of income, whether or not it is distributed; thus, the S status offers no tax deferral possibilities to its shareholders.[6] C corporations can accumulate earnings, up to a point, to defer some individual tax. Finally, S corporations may be subject to double taxation at the state level in states that do not recognize S corporations as pass-through entities.

Factors Affecting Natural Resources

TRA86 was intended to be revenue neutral. To compensate for revenue losses from lowering corporate rates, Congress broadened the tax base and wrote narrow provisions that changed complicated areas of the code affecting corporations in general, and specific industries (natural resources, finance, and insurance) and types of income (e.g., foreign source) (Auerbach and Slemrod 1997). Realization of the expected higher tax burden is documented by SOI data which indicate that from 1985–1990 income tax collections for all corporations increased 15 percent, whereas, the increase for the natural resource industry was 22 percent, second only to the finance and real estate category. These provisions, which consisted primarily of refining or changing income definitions, were projected to increase corporate tax revenues by $20 billion in 1990 (Auerbach and Slemrod 1997). Because some income was redefined to produce the additional tax revenues, it is difficult to control for income when comparing tax revenues across time periods. However, because

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[4] In 1997, the number of allowed shareholders was increased to 75 and the allowed shareholder type was modified.

[5] Some trusts are allowed as shareholders.

[6] Some may consider retirement plans a deferral opportunity available to S corporation shareholders.

the increase is greater in the natural resource and finance industries than others, there is at least weak evidence that the new provisions were successful in extracting more tax revenue from these industries.

All else constant, the industry-specific provisions outlined above would have induced the same positive incentive to convert from C to S in the natural resource industry as in other industries. However, in natural resources that incentive likely was constrained by the interaction between industry economic conditions at the time and built-in gains potential. By intent, the original built-in gain provision discouraged conversions executed to avoid the corporate tax on gains from foreseeable sales or liquidations by requiring a corporate-level tax on assets sold less than three years following conversion. Thus, the change in the built-in gain waiting period from three to ten years, effective for the 1987 tax year, was expected to increase the probability of converting before 1987. However, the natural resource industry's relatively high potential built-in gain (due to ex-traction industry depletion rules), along with the ongoing industry consolidation, likely reduced the possible tax savings from conversion. We hypothesize that, for the natural resource industry, the influence of previously accumulated built-in gains exceeded that of the increased waiting period and that the net effect reduced the probability that a natural resource firm would convert to S status before 1987.

Our analysis seeks to identify and document factors that reduced the incentive for both gain and loss firms in the natural resource industry to convert. The TRA86 provision of particular interest is the built-in gain provision because its intent was to discourage conversions, and we predict a negative estimated coefficient after controlling for the joint effects of potential shareholder conflicts, transaction costs, tax costs, tax benefits, and previous tax strategies.

METHODOLOGY

Data

Our data were obtained by matching corporate tax returns included in the 1986 and 1988 SOI corporate income tax return data sets. Each annual file contains selected tax return items from approximately 90,000 corporate returns. The IRS selects returns using a stratified probability sampling procedure based on return type, firm size, and income.[7] The IRS sampling procedure is designed to increase the probability that the same firms will be repeatedly selected over time, thereby reducing the sample variance for estimates of annual changes. See U.S. Internal Revenue Service Publication 16 (1991, Section 3) for a complete description of the procedure. One advantage of stratified sampling is that the sample for any given year is representative of the overall population in terms of the attributes used in the stratification process.

From the 1988 SOI file, we selected all corporations in the natural resource industry reporting 35 or fewer shareholders and *matched* them with their 1986 returns. Next we screened each matched return to determine whether the corporation was eligible to elect S status in 1986.[8] Cor-porations were excluded if either return indicated membership in a controlled group, operation of

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[7] The IRS forms a stratified sample annually to obtain representative industry samples. The successive samples are panel data. We select all eligible C corporations from the IRS's 1988 panel and match each to a 1986 return using transformed employers' identification codes. The transformation is random, so firms cannot be identified. However, because the transformation is random, we cannot rule out the possibility that a firm that went out of business after 1986 was erroneously matched with a new firm whose employer identification code was inadvertently transformed into the same number as the nonsurviving firm. Although we cannot rule out that possibility, the probability of such a mismatch is extremely small.

[8] The preferred procedure would be to select eligible corporations from the 1986 panel and match them with their 1988 returns. Unfortunately, shareholder numbers were not reported until 1988, so we first determine the number of shareholders in 1988, match the 1986 return and look for other evidence of eligibility. We cannot rule out the possibility that firms eligible to convert in 1986 were not selected in 1988 because they no longer had 35 or fewer shareholders. As a result, our sample may overstate the natural resource conversion rate.

an ineligible business line (certain financial institutions and insurance companies), or foreign ownership. Corporations were also excluded if they had filed an S corporate return before 1987. Our final sample contains 190 firms in the natural resource industry; 108 of these are in oil and gas.

Model

To examine the influence of built-in gains on the decision to convert from C to S, we propose the following conversion choice model. The model estimates allow a test for the influence of the built-in gain provision after controlling for the joint influence of tax savings from rate changes, the book income adjustment, transaction costs, shareholder conflicts, tax costs, and previously implemented tax strategies.[9]

$$S_i^* = \alpha + \beta_{SC}SC_i + \beta_{tc}TC_i + \beta_{taxc}TaxC_i + \beta_{taxb}TaxB_i + \beta_{ts}TS_i + \beta_{or}OR_i + \mu_i \qquad (1)$$

where the βs are coefficients on variables measuring shareholder conflicts (SC), transaction costs (TC), tax costs (TaxC), tax benefits (TaxB), existing tax strategies (TS), and operating restrictions (OR). S_i^*, the probability that firm i will convert to S status, is unobservable. We observe only whether a firm did or did not convert; thus, $S = 1$ if $S^* > 0$ and $S = 0$ otherwise. Model (1) is fit using a standard logit technique.

Explanatory Variables: Characteristics Influencing Conversion to S Status
Shareholder Conflicts

The number of shareholders can influence the likelihood of conversion in several ways. Shareholder unanimity is required for the decision to convert to S status, but may be difficult to achieve with many shareholders. This situation is similar to the holdout problem that arises during negotiations of private debt restructurings (Gilson et al. 1990). Gilson et al. (1990) document a negative association between shareholder number and successful restructuring negotiations. They explain that some creditors, perhaps naively, will hold out for better terms. C corporations with more than a handful of owners may experience a similar inability to achieve unanimous agreement because of the variety of interests, incentives, and information represented. It is also possible that many C corporations with a small number of shareholders are family owned; making coordination costs lower and conflicts less likely. In addition, for C corporation owner/managers paying themselves large salaries to avoid the corporate level tax, conversion to S offers the benefit of avoiding the Social Security tax on income.[10] Larger numbers of shareholders may also proxy for the likelihood of going public, which would also reduce the probability of conversion. We predict that as shareholder numbers approach the maximum allowed (35) the probability that a closely held C corporation will convert declines significantly.

Differences in compensation and benefit packages between organizational forms present another potential source of shareholder conflict.[11] Because fringe benefits can be provided tax-free to shareholder/managers in a C corporation, but are included as compensation for the S corporate shareholder/manager, some compensation packages may require renegotiation on conversion.

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[9] Plesko (1995b) fits his model to gain and loss firms separately. We include both loss and gain firms in our model estimation, but include a dummy variable for LOSS to determine the relative influence of losses on the decision to convert, given other factors that are likely to be associated with that decision. We estimated a second model that included interactions between LOSS and our continuous variables. The results indicate that only age had a different influence on gain and loss firms. Age reduced the probability of conversion for profitable firms, but it increased the probability of conversion for loss firms. Older unprofitable firms may have preferred to liquidate as an S corporation, especially if losses would shelter potential built-in gains. The interaction between LOSS and number of shareholders was also significant and negative. Number of shareholders has a significant negative influence on the probability that a gain firm will convert; the negative influence is stronger for LOSS firms.

[10] We thank our reviewers for pointing out these three possibilities.

[11] In this scenario we assume that at least some owners also act as firm managers. Given that the average number of shareholders is slightly larger than three, this appears reasonable.

Shareholders may disagree on the adjustments necessary to equalize the new and old compensation packages.[12] The extent to which shareholder/managers should be compensated for benefit package changes may be a source of conflict because shareholder/managers' true marginal tax rates are private information. Without truthful tax status revelation, determining the appropriate compensation change may be difficult. This is a less likely source of conflict if the corporation is owned and managed by only a few owners. However, as shareholder number increases, the likelihood of diverse responsibilities and perspectives increases. We predict that disagreements about changes in compensation packages will contribute to shareholder conflicts and reduce the likelihood of C corporate conversion.

We use the number of S corporate shareholders after conversion as a proxy for these shareholder conflicts (NUM_SH88). The preferred measure is pre-conversion shareholder numbers, but corporations were not required to report shareholder numbers until 1988. Estimates of the influence of shareholder number on conversion probabilities, using a post-conversion measure, may overstate the influence of shareholder numbers on conversion because shareholder numbers may have declined as part of the process of reaching and implementing a conversion agreement. Where there were disagreements, they may have been resolved by buying out objecting shareholders. If this were common, the effect would widen the gap between shareholder numbers in converting vs. nonconverting firms, relative to what it would have been in 1986. However, the decisions that lead to widening the gap are consistent with our hypothesis that conversion is easier with fewer shareholders.

Transactions Costs

Milgrom and Roberts (1992) discuss transaction costs of coordination and motivation problems prior to major firm decisions. Coordination costs are the costs of collecting, compiling, and transmitting information about a plan to be implemented. Motivation costs are the costs of providing all the information needed to determine whether an agreement is acceptable to the parties involved. The nature of these costs varies with organizational form. We argue that the cost of collecting and disseminating information about conversion costs and benefits, negotiating the decision and coordinating its implementation are analogous to Milgrom and Roberts' (1992) coordination and motivation costs. We assume that these transaction costs are positively related to firm size and age, and we proxy for transactions costs using size (SIZE), measured as the log of total assets, and age (AGE), measured as years since incorporation.

Even when the number of shareholders is small, the business operations of Cs may be large and complex, especially for firms that have been operating as C corporations for many years. In addition, the difficulties associated with renegotiating contracts and eliminating multiple types of equity claims are more likely to arise in larger firms. Thus, larger firms may be more costly to convert to S status and, hence, less likely to convert even though the marginal tax benefit of conversion may increase with size.[13]

On the other hand, size may proxy for the investment at stake in the corporation. If shareholders have substantial C corporate investments subject to the double taxation rules, they may be

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[12] This is likely to be true in our sample because the mean and median shareholder numbers are small. Deductions are only available for shareholder/manager/employees who hold less than 2 percent of outstanding equity.

[13] An alternative proxy for transaction costs is the complexity of the tax return filed by the C vs. the S corporation. The expected cost of complying with the stricter rules under Subchapter S, and the additional cost imposed on shareholders through more complex individual returns, may affect the decision to convert. Thus, firms that file the normal corporate form may be unable or unwilling to convert to the stricter requirements of the Subchapter S rules. On the other hand, C corporations that qualify to file a C corporation short form (1120-A) are smaller corporations that already meet many of the stricter requirements of Subchapter S rules. These firms may be more likely to switch to S status because the transaction costs of doing so are less. Although this measure may be a better indicator of transaction costs, our sample contained too few firms filing an 1120-A to include it as a separate variable.

better off as an S corporation if they can expect higher after-tax returns (i.e., deferral without the benefit of the capital gains preference reduces their after-tax returns). A firm with few shareholders with relatively large investments may convert to S status to increase the after-tax returns from their investment. Because of the conflicting influences of transaction costs and tax benefits, we cannot easily predict the sign of the size coefficient. It will depend on whether the transaction costs or tax benefits of conversion are larger on average in the natural resource industry. We include size in our model without a directional prediction, recognizing that omitting size from the analysis invites an omitted correlated variable problem.

Older firms with entrenched management, administration, compensation arrangements, and procedures are more likely to have established organizational efficiencies. Milgrom and Roberts (1992) suggest that existing arrangements are likely to have been efficient choices, so proposed changes in organizational form must be efficiency-enhancing responses to changes in the environment (cost of operating as C corporation). Owners must view an S conversion as efficiency-enhancing, or they will be unwilling to change, and if the transaction costs are large relative to the perceived tax benefits and efficiency gains, owners will be unwilling to convert. Based on this reasoning, we expect older or larger firms to be less likely to convert to S status.

Incomplete Flow-Through Treatment

While conversion generally is considered a way to eliminate the corporate-level tax, the elimination may not be complete because some states do not recognize, or only partially recognize, the S corporate form as a flow-through entity. In those states, the state-level corporate tax would continue even though the federal corporate tax is removed. C corporations in such states may be less likely to convert because the total tax benefit is smaller than for corporations in other states, and record keeping will become more complex. We use an indicator variable to capture the difference in conversion probability due to states that tax S corporations as C (STATE).

Tax Costs

C corporations that convert to S status lose any tax attributes associated with the C corporation, so unused credits and NOL carryforwards are available to the new corporation only if the assets are sold and built-in gains are realized. We predict that loss firms will be less likely to convert if the value of their foregone attributes is substantial. This prediction is consistent with results reported in Plesko (1995b). We use an indicator variable (LOSS) to proxy for lost tax attributes, and we assign it a value of 1 if a firm's net income was negative in 1986 and a zero otherwise.

Tax Savings and Strategies

The primary tax benefits of S status are the elimination of the corporate-level tax and flow-through of losses. We expect that firms likely to convert to S status are those that expect large tax savings from the conversion. To estimate the tax savings from avoiding the corporate level tax, we use a measure computed by multiplying the C corporation's gross tax liability minus credits reported for 1986, by the rate difference relative to the tax imposed at the corporate level, $((.34 - 28)/.34)$ (TAXSAVE).[14] The gross tax measure used in (Plesko 1995b) overstates the tax benefit

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[14] Plesko (1995b) used gross tax liability as a measure of the tax savings. We argue that our measure better represents the tax savings from conversion in the natural resource industry for two reasons. First, the tax savings are related to the relative sizes of corporate and individual tax rates. Thus, our measure may be a more precise measure of the savings expected from conversion because all funds taxed at the corporate level would still be taxed after the conversion but only at the individual rate. Thus, the change is the difference in tax rates not the gross tax liability. Second, after TRA86 the only major credits available to business were the Jobs Credit, Research and Development Credit, Alcohol Fuels Credit, and the Low-Income Housing Credit. None of these credits would be heavily used in the natural resource industry, but would be equally usable by the C corporation and S corporate shareholders. Although TRA86 allowed carryover ITCs to be used on a limited basis after TRA86, converting firms would only be able to use the carryovers to offset any built-in gain tax.

from conversion. It overstates the tax savings because it is not reduced by credits taken (tax credits are taken by S corporation shareholders) and because the actual tax saved is the difference between the tax paid under C status and the total tax paid under S status. Our measure understates the benefit somewhat because we do not include the amount of tax paid by shareholders on C corporation dividends.[15]

TRA86 introduced the Alternative Minimum Tax (AMT) to replace the add-on minimum tax for C corporations, so after TRA86 a tax benefit may follow from avoiding the AMT. S corporations are not subject to the corporate AMT and, therefore, are not subject to the additional administrative requirements for determining a tax liability under the minimum tax rules. The potential tax savings from avoiding the AMT may be large in the natural resource industry because percentage depletion and intangible drilling and development costs are tax preferences under the AMT. In addition, S corporations and shareholders were not subject to the AMT's book income adjustment. Percentage depletion and intangible drilling and development costs tend to increase the difference between book and taxable income. Thus, we expect firms with large book and taxable income differences will be more likely to convert to S status. To test this hypothesis, we construct a variable equal to one-half the difference between reported book and taxable income as a proxy for the tax benefit of avoiding the AMT (BOOKIA). However, because many of the preferences used to compute the corporate AMT merely flow through to shareholders of S corporations to be used to compute the individual AMT, the tax savings from avoiding the corporate level AMT may be small or non-existent. Thus, our estimated coefficient will not be significant if all the preferences that give rise to the corporate AMT merely increase the likelihood that individual shareholders will pay the individual AMT avoided at the corporate level.

Decisions to convert will also be affected by tax shields previously implemented at the corporate level to minimize corporate taxes or by tax deferral strategies implemented to minimize individual shareholder taxes. The extent to which conversion decisions are affected depends on the trade-off between TRA86 provisions and previously adopted strategies. The strategy of reducing C corporation taxes by maximizing the tax shield payments to corporate claimants was generally unaffected by TRA86.[16] This strategy includes compensation to officer/owners, salaries to shareholder/employees, fringe benefits (including pensions), and interest on debt (to both shareholders and nonshareholders) (McNulty 1992). Wilkie et al. (1996) document increased use of these tax strategies by firms that did not convert. Guenther (1992), Scholes and Wolfson (1992) and Gentry (1994) find that C corporations increased their debt-related tax shields after 1980 to minimize the earnings subject to two levels of tax. Plesko (1994) documents that in 1984 profitable C corporations were more highly levered than profitable S corporations, which is consistent with a strategy of using debt to minimize the C corporate tax.

If eligible C corporations had already undertaken tax-minimization strategies prior to 1986, the S status tax benefit may not have been sufficient to trigger conversion. We predict that firms that have implemented substantial tax-reduction strategies will be less likely to convert to S status because of their prior tax-minimization efforts. We use three measures to proxy for prior tax reduction strategies, all measured as a percentage of total deductions. They are interest paid to all

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[15] We constructed a variable that included an estimate of taxes paid on dividends by C corporation shareholders. We did this by adding to .34 the product of the highest individual tax rate (.28) and the proportion of income paid out as dividends (DIVPOL). This measure has two problems (one of which it shares with the TAXSAVE measure we report). First, it reflects the assumption that everyone pays taxes at the highest tax rate and, second, the DIVPOL measure is computed as a percentage of Gross Profit. This means that the percent of taxable income subject to individual tax rates is probably understated. When our model was estimated with this new tax savings measure (TOTTAXSAVE) replacing TAXSAVE, we obtained a lower significance level for tax savings (p = .0025 instead of p = .005), but our prediction level also declined by 1.5 percent. We erroneously predict that two more nonconverters will convert (40 vs. 38) and that one more converter will not convert (3 vs. 2) with the new tax savings variable included in the model. There was no evidence of degrading collinearity with both DIVPOL and TOTTAXSAVE in the model.

[16] This strategy is sometimes referred to as income splitting (see Samson and McLeod 1990).

creditors (INTPD); the sum of benefits, wages, and pension contributions (WSBEN); and officer compensation (OFFCOMP). Jointly, these measures represent prior tax-minimization efforts.

The tax-minimization strategies discussed above have limitations. Ownership debt and compensation to officers and employees of the C corporation are subject to scrutiny under thin-capitalization and unreasonable compensation rules. Thus, profitable firms that were unable to further lower corporate and individual tax liabilities using the strategies discussed above were likely to use the C corporation as a tax deferral vehicle for shareholders with high marginal tax rates (relative to the corporation). This strategy was preferred because accumulated corporate earnings were either taxed at capital gain rates on the sale of the stock or shareholder heirs received a step-up in basis at the shareholders' death. TRA86 significantly reduced the benefits of this strategy by lowering individual tax rates and removing the capital gains exclusion (Fellows 1987). Thus, firm owners expecting the greatest change in individual tax rates may have reassessed their deferral strategy in light of the rate change and the expected increase in C corporate tax costs.[17] Metzger (1989) suggests that, prior to TRA86, C corporate status was desirable when the corporation remained profitable after reasonable officer salaries. He suggests that two changes in TRA86 reduced the preference for C corporate status. The first was lowering the individual tax rate below the corporate tax rate. The second was elimination of the General Utilities Doctrine.

To test for possibility that firms changed their deferral strategy we use a measure of the firm's deferral efforts and dividend policies. We use the difference between beginning and ending retained earnings for 1986 as our measure of firms' tax deferral efforts (DEFERRAL) and dividends paid as a percentage of gross profits (DIVSHR) as our dividend policy measure. We suggest that firms that were accumulating earnings, and not paying dividends, had previously placed a high value on the deferral benefits of the C corporation and predict these firms were more likely to convert to S status as the value of deferral strategy decreased. Thus, we predict a positive estimated coefficient for DEFERRAL and a negative estimated coefficient for DIVPOL.

Clearly, our tax-savings and tax-strategy variables are interdependent, which creates potential collinearity problems. However, the weights that firms place on these factors differ across firms (for a variety of reasons); thus, cross-sectionally all the variables are potentially informative and should be included.[18]

Operational Restrictions

Several code provisions are intended to prevent changes in organizational form from creating a tax windfall or an escape from partnership passive income rules. Without the built-in gains provision, S conversions can create a windfall by allowing liquidating firms to avoid paying corporate tax on gains realized on liquidation. The built-in gain provision would likely affect industries differentially for two reasons. First, TRA86 extended the list of assets subject to built-in gains to include inventory and accounts receivable—which previously had escaped additional tax after conversion and extended the waiting period for avoiding the tax—so firms desiring conversion in industries with large inventories and/or accounts receivable had an incentive to convert before 1987. Second, firms in shrinking industries with large preexisting built-in gains and above average liquidation potential had little incentive to convert. Thus, whether the built-in gain provision influenced firms' decisions to convert positively or negatively likely depended on the makeup of the

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[17] The tax rate change may have provided the opportunity for firms that had been using the C corporation as a deferral vehicle to convert and avoid the accumulated earnings tax (AET) and personal holding company (PHC) penalty taxes. Corporations that were used as deferral vehicles by shareholders are more likely to be closer to the imposition of one of these two penalty taxes. Although this issue is not the main focus of the current study we conducted analyses to determine if this may have been a plausible explanation. Our results suggest that older firms with more deferral were more inclined to convert. However, we are unable to explicitly separate that effect from the marginal rate changes.

[18] We examined collinearity diagnostics for all our variables. Our condition indices and variance inflation factors are far from the level that would indicate either unstable coefficient estimates or overly inflated variance estimates (Belsley 1991).

firms' assets, the size of any preexisting built-in gain, and the probability of triggering the built-in gain within three years. Differential conversion rates would be expected between the retail/wholesale industries, whose assets were newly subject to built-in gains provisions, and the capital-intensive industries, whose assets previously had been subject to built-in gains provisions.

Plesko (1995b) argues that the extended holding period expedited conversions; thus, he expected a positive built-in gain coefficient, regardless of the character of the firm's assets. His argument implicitly assumes that near-term sales of affected assets are equally likely in all industries, so the restriction period length is the primary concern. We conjecture that sales are not equally likely and industries have not been equally affected by previous built-in gains rules. Thus, although the change in the asset sale restriction period may have expedited conversions in industries affected by the new built-in gain asset definition, we argue that the potential size of preexisting built-in gains, coupled with a higher than normal liquidation probability, was more influential in the natural resources industry.

Because of the change in the built-in gain definition some firms (e.g., retail or wholesale) would be more likely, if conversion were contemplated, to convert to avoid subjecting inventory to the built-in gains tax. The effect of the new asset definition would be most severe on firms contemplating conversion that had significant inventories and accounted for the cost of those inventories using FIFO (Kristan 1987). Firms using LIFO would also be affected but only when the old LIFO layers are sold. Thus, the urgency to file an election by the December 31, 1986 deadline may have been more closely associated with avoiding the new asset definition rather than the new restriction period for asset sales.

Other industries, such as natural resources, may be less likely to convert because of the size of previously accumulated built-in gain potential. We argue that because non-natural-resource capital-intensive industries depend heavily on accelerated cost recovery to reduce tax liabilities, firms in these industries would be less likely to convert because of the artificially induced difference between market value and asset tax basis created by cost recovery. The natural resource industry is unique in that firms also use depletion to recover the cost of assets. Thus, in addition to built-in gains that occur in other industries, the natural resource industry's depletion allowance further exacerbates the difference between market values and the asset's tax basis. Because both percentage depletion and accelerated depreciation are significant factors in determining taxable income in the natural resource industry, we predict that the size of potential built-in gains will substantially influence the decision to convert in the natural resource industry, regardless of the required holding period, especially in light of industry consolidation and restructuring occurring concurrently with TRA86. We proxy for the size of built-in gains (and, hence, the effect of the built-in gains tax) using the sum of accumulated depreciation, depletion, and amortization (BGAIN). We predict a negative estimated coefficient.

Passive income rules impose restrictions on the type of income that can be earned by S corporations. If more than 25 percent of an S corporation's income is deemed passive, the S corporation is taxed as a C corporation. Thus, C corporations that are at or near the 25 percent limit would be unlikely to convert to S status. We use the sum of dividend and royalty income as a percentage of gross profits to proxy for this restriction (PASSSHR) and we predict a negative estimated coefficient. The operational measures for the characteristics described in this section are summarized in Table 2.

RESULTS

Table 3 provides descriptive statistics for the sample split by conversion decision. On average, when compared to corporations that did not convert, converting corporations had fewer shareholders, less passive income, more accumulated earnings, but less interest as a percentage of total deductions than nonconverting firms. On average, converting firms also pay less in wages and benefits and show larger potential tax benefits after credits. The descriptive statistics shown in Table 3 are consistent with our discussion of factors that influence conversions from C to S status. However, the decision to convert occurs in response to the simultaneous effects of all factors.

Coefficient estimates from fitting Model (1) are presented in Table 4. Overall, the model correctly predicts 78.95 percent of the sample conversions. The prediction rates are 93.33 percent

TABLE 2
MODEL (1) OPERATIONAL DEFINITIONS

Shareholder Conflict	NUM_SH88	Number of shareholders in 1988
Transaction Costs	AGE	Number of years since incorporation
Transaction Cost/ Tax Benefit	SIZE	Total assets (in thousands)
Tax Costs	LOSS	1 if 1986 net income less than zero, 0 otherwise
	STATE	1 if located in a state that imposes a corporate tax on S corporations
Tax Benefits	TAXSAVE	C corporation gross tax liability minus credits times $((.34 - 28)/.34)$
	BOOKIA	One-half the difference between book and taxable income
Tax Strategies	DEFFERAL	Beginning retained earnings minus ending retained earnings 1986
	OFFCOMP	Officer compensation/total deductions
	WSBEN	Wages, benefits, and pension contributions/total deductions
	DIVPOL	Dividends paid/gross profit
	INTPD	Interest paid on loans to all parties/total deductions
Operating Restrictions	PASSSHR	The sum of dividends and royalties received/gross profit
	BGAIN	(Accumulated depreciation + depletion + amortization)

for converting firms and 76.25 percent for nonconverting firms.[19] Our percentage of correct predictions is substantially higher than that reported in Plesko (1995b). This is because it is easier to accurately predict conversion in a single industry than in several at once because we reduce the cross-sectional variation that was not modeled in Plesko (1995b).

The coefficients on variable proxies for transaction costs and shareholder conflicts (AGE and NUM_SH88, respectively) have the predicted sign, but only NUM_SH88 is significant. The coefficients on variables that proxy for the conversion tax costs, LOSS, and incomplete flow-through treatment, STATE, also have the predicted sign, but neither is significant.[20] The insignificance of AGE and LOSS is inconsistent both with our predictions and with the results reported in Ayers et al. (1996), who expected and find that startup firms (those incorporated less than 6 years) with negative income are more likely to organize as S than C corporations. However, our firms are not startup firms; our firms must convert to select S status, and conversion is costly.

We conjecture that other factors, such as ability to defer and potential tax savings, were more important than AGE and LOSS in the natural resource industry than in the overall population of

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[19] The proportion of type two errors in our model (i.e., the number of erroneously predicted conversions) is high relative to a model that uses a threshold of 0.5 for predicting a conversion. Using the naïve model (i.e., a threshold of .5), we correctly predict 23.3 percent of conversions and 97.5 percent of nonconversions for an overall prediction rate of 85.8 percent. Plesko's (1995b) results suggest that the sample distribution of conversions is closer to 29 than 50 percent, but even 29 percent may not describe any particular industry well. We set the threshold for our model to reflect our sample distribution of 15.8 percent conversions, and report based on that rate. Because this study attempts to determine the factors underlying the decision to convert, we think sacrificing predictability of nonconverters in favor of predicting converters is reasonable. If we use Plesko's (1995b) observed conversion rate of 29 percent, our model correctly predicts 53.33 percent of converting firms and 91.25 percent of nonconverting firms for an overall prediction rate of 85.26 percent.

[20] The result for STATE is not unexpected. Plesko (1995b) indicates that the states taxing S corporations as C corporations are Connecticut, Louisiana, Michigan, New Jersey, North Carolina, and Tennessee. Of this group, only Louisiana is likely to have a concentration of natural resource firms.

TABLE 3
DESCRIPTIVE STATISTICS[a]
CONVERSION VS. NON-CONVERSION

Characteristic	Variable	Conversions (n = 30) Mean[b] (Std. Dev.)	Nonconversions (n = 160) Mean[b] (Std. Dev.)
Shareholder Conflicts	NUM_SH88	2.566 (2.787)	4.081** (5.535)
Transaction Costs	AGE	14.033 (10.558)	17.381*** (17.606)
Transaction Cost/ Tax Benefits	SIZE[c]	15648.19 (29046.47)	19602.67 (63807.66)
Tax Costs	LOSS[d]	5 (17%)	69 (43%)
	STATE[d]	1 (3%)	19 (12%)
Tax Benefits	TAXSAVE[e]	165.7501 (539.864)	14.709*** (44.750)
	BOOKIA	0.014 (0.032)	0.024 (0.107)
Tax Strategies	DEFFERAL	1801.193 (4659.350)	−2018.955** (21698.968)
	OFFCOMP	0.115 (0.210)	0.143 (0.341)
	WSBEN	0.118 (0.173)	0.208** (0.342)
	NTPD	0.055 (0.069)	0.199* (0.403)
	DIVPOL	0.124 (0.307)	0.111 (0.197)
Operating Restrictions	BGAIN	5820.00 (9548.3)	8768.28 (29179.0)
	PASSSHR	0.184 (0.441)	0.535*** (3.219)

*, **, *** mean difference significant at less than 0.01, 0.05, 0.10, respectively.

[a]See Table 2 for variable definitions.

[b]All mean difference tests one-tailed except SIZE.

[c]Total assets reported in table. Log of assets is used in all analyses.

[d]We show frequencies and column proportions for the dummy variables LOSS and STATE. Univariate tests for these variables are χ^2 tests. The null hypothesis test predicts that gain and loss will follow the same cell frequency as conversions and the tendency to operate in a state that taxes S and C corporations the same will follow the same cell frequency as conversions.

[e]The value of TAXSAVE for one conversion firm is unusually large. The mean and standard deviation of TAXSAVE (for converters) without this firm are 69.491 and 129.114, respectively.

TABLE 4
LOGIT REGRESSION RESULTS
DEPENDENT VARIABLE = 1 FOR CONVERSION, 0 OTHERWISE
n = 190

Characteristics[a]	Variable	Predicted Sign	Coefficient[b] (Z)	Marginal Probability
	Intercept		−2.010** (−1.662)	
Transactions Costs	AGE	(−)	−0.022 (−1.123)	−0.388
Transaction Costs/ Tax Benefits	SIZE	(−)/(+)	0.303*** (1.805)	2.135
Tax Costs	LOSS	(−)	−0.665 (−1.118)	−0.514
	STATE	(−)	−1.312 (−1.204)	−0.269
Tax Benefits	TAXSAVE[c]	(+)	0.012* (2.569)	1.012
	BOOKIA	(+)	−2.668 (−0.790)	−0.069
Tax Strategies	DEFERRAL	(+)	0.0002** (1.931)	1.002
	OFFCOMP	(−)	0.756 (0.765)	2.130
	WSBEN	(−)	−2.044*** (−1.481)	−0.129
	INTPD	(−)	−5.218** (−1.802)	−0.005
	DIVPOL	(−)/(+)	−0.464 (−0.632)	−0.629
Operating Restrictions	BGAIN	(−)	−0.0002** (−2.181)	−1.000
	PASSSHR	(−)	−0.542 (−0.839)	−0.582

Overall Model	Log-Likelihood −58.915	Chi-Squared 47.84	Significance Level 0.000
Correct Predictions %	Overall 0.7895	Nonconversions 0.7625	Conversions 0.9333

*, **, *** significant at less than 0.01, 0.05, 0.10, respectively.
[a]See Table 2 for variable definitions.
[b]All tests one-tailed except SIZE.
[c]The model was re-fit excluding a firm with an unusually large TAXSAVE value. The results are essentially the same. TAXSAVE remains significant at less than .01.

eligible C corporations. Of the potential conversion costs listed, only shareholder conflicts appear to significantly reduce the probability of converting to S status in the natural resource industry.

Operating restrictions, primarily the built-in gains provision, appear to reduce the probability of conversion in the natural resource industry. The coefficients on the variables that proxy for operating restrictions imposed after conversion (PASSSHR and BGAIN) have the predicted sign, but only BGAIN is significant.[21] In Plesko (1995b) the coefficient for BGAIN was not significant for either gain or loss firms. Our argument that the size and definition of built-in gains is an important factor in discouraging conversion in the natural resources industry is consistent with the results we report.

Our result for PASSSHR is also different from that reported in Plesko (1995b) in which PASSSHR was significant for gain but not loss firms. The share of income from passive sources is important only to firms reporting positive income (Plesko 1995b). The greater the amount of positive reported income, the more important its makeup becomes. However, nearly 40 percent of our sample firms reported large losses during the sample period; only one gain firm reported passive income larger than the absolute value of the largest loss.

The coefficients on variables representing the specific tax benefits of conversion (BOOKIA and TAXSAVE) produce mixed results. The coefficient for BOOKIA is neither significant nor of the predicted sign, but the TAXSAVE coefficient is significant and has the predicted sign. Plesko (1995b) reported similar results for both gain and loss firms using his measure of tax savings (Gross Tax Liability). Thus, the tax savings expected from conversion appear to have significantly influenced the decision to convert. Our results for BOOKIA are not consistent with Plesko (1995b) whose coefficient for BOOKIA was positive and significant for loss firms. This suggests that exposure to the new AMT may not have differed significantly between C corporations and S corporate shareholders during this low-income period in the natural resource industry.[22]

Coefficients for two of the three variables representing prior tax shield strategies (WSBEN and INTPD) have the predicted sign and are significant. However, in contrast to Plesko (1995b), the coefficient for OFFCOMP is neither significant nor of the predicted sign.[23] The accumulated benefit of prior strategies apparently outweighed the expected net benefit of conversion for many firms. The coefficient for INTPD is significant and negative, which is consistent with the use of debt shields as a tax-minimization strategy, and this strategy apparently reduced the incentive to convert to a flow-through entity. Although our results for INTPD and WSBEN provide evidence consistent with the notion that small C corporations minimize C corporate taxes using tax strategies associated with debt and compensation, Plesko finds inconsistent results for OFFCOMP (at least for gain firms) and weak or no results for the separate variables WAGES and BENEFITS.

The estimated coefficient for our proxy for the declining value of a C corporation as a tax deferral vehicle (DEFERRAL) has the predicted sign and is significant. This suggests that increasing corporate tax costs, lower individual rates, and capital gains elimination reduced the value of the C corporation as a tax deferral vehicle enough to warrant conversion to a flow-through entity.

Finally, the estimated coefficient for SIZE is positive and significant at 0.036. When considered in conjunction with the sign and significance of NUM_SH88, the sign of the size coefficient is consistent with the conjecture that conversion benefits from tax savings were greater for larger

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[21] The built-in gain provision, proxied for by the sum of accumulated depreciation and depletion, is clearly related to the change in depletion recapture described in footnote 3. We were unable to find a suitable proxy for the effect of the depletion recapture. Thus, our built-in gain estimates suffer from the effects of an omitted (probably) relevant variable. The depletion recapture amount would be positively related to our proxy for built-in gain; it would also be positively related to the probability of conversion because of the new corporate-individual rate differential. Thus, our coefficient estimate for built-in gains is likely to be positively biased, which means that the negative effect of built-in gains is probably understated in our results.

[22] We also included an interaction between LOSS and BOOKIA in one fitting; the estimated coefficient was insignificant.

[23] Plesko (1995b) found that officer compensation was negatively related to conversions for loss firms and positively related for gain firms.

firms; but those benefits were tempered by potential shareholder conflicts. Among the significant factors, SIZE has the largest effect on the marginal conversion probability. Although numerous factors influence the decision to convert in this industry, the factors with the greatest influence on the marginal conversion probability (based on the marginal probability estimates reported in Table 4) are, in order, firm size, reduced C corporate tax deferral benefits, potential built-in gains, and the number of shareholders.

CONCLUSIONS

This study examines the decision to convert from a C corporation to an S corporation in the natural resource industry following tax law changes that generally increased the tax cost of operating as a C corporation. Two previous studies provide mixed or inconclusive results because the mix of incentives (and disincentives) for conversion included in TRA86 affects industries differently and specific industry differences were not modeled. One example is the built-in gain provision which may have produced a strong positive incentive for retail firms to convert to avoid being trapped in C status by future built-in gains on inventory or accounts receivable. Our results suggest the built-in gain provision produced a strong negative incentive for the natural resource industry that already had accumulated substantial built-in gains from depletion and was experiencing substantial consolidation and restructuring during the mid-1980s. The complexity of the tax law makes studies that focus on average results difficult to interpret, and sometimes misleading.

As in prior work, our results indicate the number of shareholders is significantly related to the decision to convert. We find an inverse relation between the number of shareholders and the probability of conversion, but we find no support for the argument that firm age (transaction costs) influenced the decision. In addition, we find results consistent with the argument that C corporations that had already undertaken tax minimization strategies were less likely to convert than other firms. However, the significant strategies identified relate to wages, benefits, pension contributions, and debt use, but not to officer compensation.

We find that the reduced tax deferral value of C corporations also contributed to the decision to convert and that firm size is important in understanding the conversion, although size alone is an unlikely explanation. Size is positively related to the probability of conversion, and when considered in light of other factors, the sign of the coefficient for size is consistent with the conjecture that shareholders of large corporations with few shareholders had more individual tax dollars at stake and, therefore, they converted to avoid double taxation.

Our most striking result is related to the built-in gain tax. Previous work suggests that the required holding period for asset sales after conversion was the primary built-in-gain-related influence on the conversion decision. We conjecture that the accumulated size of the potential built-in gain at the time of TRA86 and the new built-in gain asset definition were also important, but they worked in opposite directions. We suggest the size of the previously accumulated built-in gains is negatively associated with conversion, especially for firms with a potentially higher probability of near-term liquidation. The new built-in gain asset definition and the increased waiting period, together, are likely positively associated with conversion.

Our results support the negative impact of built-in gains on conversion. However, we suggest that the effectiveness of the built-in gain provision in limiting conversions in the natural resource industry is, in part, due to the significant restructuring that was occurring in the industry. We cannot say how effective the built-in gains provision might have been in deterring conversions if the restructuring had not occurred.

REFERENCES

Auerbach A. J., and J. Slemrod. 1997. The economic effects of the Tax Reform Act of 1986. *Journal of Economic Literature* XXXV (June) 589–632.

Ayers, B. C., C. Bryan Cloyd, and J. R. Robinson. 1996. Organizational form and taxes: An empirical analysis of small businesses. *Journal of the American Taxation Association* Supplement 18: 49–67.

Belsley, D. A. 1991. *Conditioning Diagnostics: Collinearity and Weak Data in Regression*. New York, NY: John Wiley & Sons.

Fellows, J. A. 1987. Weighing the S election after tax reform. *National Public Accountant* 32 (August): 18–23.

Gentry, W. 1994. Taxes, financial decisions and organizational form: Evidence from publicly traded partnerships. *Journal of Public Economics* 53 (2): 223–244.

Gilson, S. C., K. John, and L. H. P. Lang. 1990. Troubled debt restructurings: An empirical study of private reorganization of firms in default. *Journal of Financial Economics* 27 (2): 315–353.

Gordon, R. H., and J. K. Mackie-Mason. 1994. Tax distortions to the choice of organizational form. *Journal of Public Economics* 55 (2): 279–306.

Guenther, D. A. 1992. Taxes and organizational form: A comparison of corporations and master limited partnerships. *The Accounting Review* 67 (January): 17–45.

Kristan, J. B. 1987. Planning around the built-in gains tax. *The Tax Advisor* 18 (December): 865–873.

McNulty, J. K. 1992. *Federal Income Taxation of S Corporations.* Westbury, NY: Foundation Press.

Metzger, M. 1989. Advantages and pitfalls of electing S corporation status for personal service corporations. *CPA Journal* 59 (April): 30–35.

Milgrom, P. R., and J. Roberts. 1992. *Economics, Organization & Management.* Englewood Cliffs, NJ: Prentice Hall.

Omer, T. C., and W. D. Terando. 1999. The influence of tax and risk factors on corporate and limited partnership capital structures. *National Tax Journal.* (December).

Plesko, G. A. 1994. Corporate taxation and the financial characteristics of firms. *Public Finance Quarterly* 22 (3): 311–334.

———. 1995a. Gimme shelter? Closely held corporations since tax reform. *National Tax Journal* 48 (3): 409–416.

———. 1995b. The role of taxes in organizational choice: S conversions after the Tax Reform Act of 1986. Working paper, Massachusetts Institute of Technology, Cambridge, MA.

Samson, W. D., and R. W. McLeod. 1990. Choosing between C vs. S corporate status in the closely held corporation. *Journal of the American Society of CLU & ChFC* 44 (September): 62–75.

Scholes, M. S., and M. A. Wolfson. 1992. *Taxes and Business Strategies: A Planning Approach.* Englewood Cliffs, NJ: Prentice Hall.

Shelley, M. K., T. C. Omer, and T. J. Atwood. 1998. Capital restructuring and accounting compliance costs: The case of publicly traded partnerships. *Journal of Accounting Research* 36 (Fall) (2): 353–370.

U.S. Internal Revenue Service (IRS), *Statistics of Income: Corporation Income Tax Returns*. Publication 16 (1991). Washington, D.C.: IRS.

Watkinson, T. S. 1989. LIFO recapture on conversion from C corporation to S corporation: An S corporation penalty and failure in tax policy. *The Tax Lawyer* 42 (Spring) (3): 841.

Wittman, S. M., and A. Gill. 1998. S corporation elections after the Tax Reform Act of 1986. *SOI Bulletin Publication 1136* (Spring): 82–88.

Wilkie, P. J., J. C. Young, and S. E. Nutter. 1996. Corporate business activity before and after the Tax Reform Act of 1986. *SOI Bulletin*: 15: 32–45.