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# Tax Planning, Timing Effects, and the Impact of Repatriation Taxes on Dividend Remittances

Rosanne Altshuler, T. Scott Newlon,  
and William C. Randolph

## 7.1 Introduction

The U.S. system for taxing the income earned by the foreign subsidiaries of U.S. corporations defers taxation of foreign income until it is brought back to the United States and provides a credit for foreign taxes paid.<sup>1</sup> Under this credit and deferral system, the two main forms of repatriation tax that a firm incurs on income remitted from a foreign subsidiary are the residual home-country tax liability (if any) not offset by the foreign tax credit, and any withholding tax imposed by the source country. An open question in the literature on the taxation of multinational corporations is, do these repatriation taxes influence whether the profits of foreign subsidiaries are repatriated or reinvested abroad?

Theoretical arguments by Hartman (1985) suggest that, under a credit and deferral tax system, the repatriation tax on foreign-source income is irrelevant to the investment and dividend payment decisions of foreign subsidiaries that are financed through retained earnings (“mature” subsidiaries). Hartman’s insight was that, since the repatriation tax is unavoidable, it reduces the opportunity cost of investment and the return to investment by the same amount. As a result, the tax does not affect a mature subsidiary’s choice between reinvesting

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1. The subpart F provisions of the tax code provide for accrual-basis taxation on certain foreign income.

its foreign earnings and repatriating funds to its parent.<sup>2</sup> The results of recent empirical work that used cross-sectional data on U.S. multinationals seem to contradict this result.<sup>3</sup> These studies indicate that dividend remittances are sensitive to repatriation taxes. This presents a puzzle.

Hartman's analysis is based on the assumption that taxes on dividends are constant over time. In a recent study (Altshuler, Newlon, and Randolph 1995), we find that the empirical evidence can be reconciled with the theoretical results by recognizing that repatriation taxes on dividends may vary over time. This variability provides firms with an incentive to repatriate relatively more profits from a subsidiary when the tax cost of repatriation is temporarily low relative to the expected future tax cost. Likewise, they would retain more profits when the tax cost of repatriation is higher than the expected future tax cost. Such timing behavior would cause studies that use cross-sectional data to find a relationship between dividend payout levels and the current tax cost of dividend payments. However, the actual relationship would be between dividend payout levels and the current level of the tax cost *relative* to its expected future level.

If timing opportunities are important to dividend payout decisions, then it becomes difficult to interpret the tax effects estimated in previous papers. By using the current tax price of dividend repatriations as an explanatory variable, these estimates will tend to confuse the effects of permanent changes in current and future repatriation taxes, as would occur due to changes in statutory tax rates, with the effects of tax changes due to transitory changes in the situation of the taxpayer. In Altshuler, Newlon, and Randolph 1995, hereafter A-N-R, we use a data set containing U.S. tax return information for a large sample of U.S. corporations and their foreign subsidiaries to estimate separate effects for the permanent and transitory components of the tax price of dividend repatriation. We find that the permanent tax price effect is significantly different from the transitory price effect and is not significantly different from zero, while the transitory tax price effect is negative and significant. Our results imply that the

2. Note that this result does not imply that home- and host-country taxes have no effect on the repatriation decision. They do have an impact due to their effect on home- and host-country after-tax rates of return, but not through the tax on repatriation. This analysis is essentially an application of the "new view" or "tax capitalization view" of dividend taxation put forward by King (1977), Auerbach (1979), and Bradford (1981). The "new view" holds that taxes on dividends (if constant over time) have no distortionary effects on the real decisions of domestic corporations. Although Hartman's analysis pertains to the residual U.S. tax on foreign income, it applies equally well to withholding taxes.

3. Mutti (1981) found significant tax effects in estimates of the parameters of a dividend equation using U.S. tax return data from 1972. Hines and Hubbard (1990) used 1984 tax return data of a large sample of U.S. corporations and their foreign subsidiaries and found significant evidence of tax effects on income repatriation. Altshuler and Newlon (1993) used U.S. tax return data from 1986 to investigate tax effects on dividend remittances from foreign subsidiaries to their U.S. parent corporations. This paper improved upon previous work by providing a more accurate specification of the tax incentives facing firms. Results from estimates of dividend equations indicated a somewhat larger and more significant tax effect than had been previously estimated.

previous empirical work has measured the effect of timing behavior and does not, therefore, contradict the prediction of Hartman's model.

This paper summarizes the research methodology and results of A-N-R. Section 7.2 briefly discusses the tax consequences of dividend repatriations and explains how the tax consequences can vary over time. The econometric method used to separate permanent from transitory tax price effects is presented in section 7.3. The data set is briefly described and results are summarized in section 7.4. The policy implications of this work are discussed in the final section of the paper.

## 7.2 The Tax Price of Dividend Repatriations

We define the tax price of a dividend remittance as the additional global tax liability arising from an incremental dollar's worth of dividend repatriations. To derive the tax price, we must take into account both the incremental U.S. and source-country taxes on a dollar of dividends. The appendix to this volume describes the general features of U.S. taxation of the foreign income of multinational corporations. The foreign tax credit generated by a dividend remittance from a foreign subsidiary is calculated by grossing up the dividend to reflect foreign taxes deemed paid on the income underlying the dividend.<sup>4</sup> Suppose that subsidiary  $i$  makes a dividend payment,  $D_i$ , to its parent corporation. The grossed-up dividend is

$$(1) \quad D_i + T_i D_i / (Y_i - T_i),$$

where  $T_i$  denotes the total foreign income tax paid by subsidiary  $i$  and  $Y_i$  denotes the subsidiary's pretax income from the U.S. perspective. Equation (1) can be rewritten as  $D_i / (1 - \tau_i)$ , where  $\tau_i$  represents the average subsidiary tax rate,  $T_i / Y_i$ , on foreign earnings from the U.S. perspective. The U.S. tax on the dividend before credits is  $\tau D_i / (1 - \tau_i)$ , where  $\tau$  denotes the U.S. rate of tax. The foreign taxes creditable against U.S. tax liability are deemed-paid taxes plus withholding taxes, or

$$(2) \quad \tau_i D_i / (1 - \tau_i) + \omega_i D_i,$$

where  $\omega_i$  denotes the withholding tax rate in the host country. If the parent has excess credits, any U.S. tax liability on a dollar of dividends is offset by the foreign tax credit. If the parent has excess limitation, the U.S. tax liability equals

$$(3) \quad (\tau - \tau_i) D_i / (1 - \tau_i) - \omega_i D_i.$$

4. For tax years beginning in 1987, the amount of foreign tax credit associated with a dividend payment is based on the accumulated value of earnings and profits. Although this changes the gross-up formula in the text, it is not relevant for our analysis, since our data is taken from years prior to 1987.

To compute the global tax price, we add the source-country effect to the U.S. tax effect. Under a classical corporate income tax system, the only host-country tax consequences of a dividend remittance are the associated withholding taxes.<sup>5</sup> If the parent has excess credits, there is no U.S. tax consequence, and therefore the global tax price is  $\omega_f$ . Otherwise, the parent is in excess limitation, and the global tax price is  $(\tau - \tau_f)/(1 - \tau_f)$ .<sup>6</sup> As indicated in the appendix to this volume, the foreign tax credit limitation operates to some extent on an overall basis. This means that excess credits accruing from one source of foreign income can often be used to offset U.S. tax (excess limitation) on foreign income from another source. As a result, the effect of repatriating foreign income from a particular source may be positive, negative, or zero.<sup>7</sup>

There are at least two different ways in which the tax price described above may vary over time. First, it may vary due to differences between the tax-base definitions of the United States and the host country of the foreign subsidiary. As mentioned above, the U.S. foreign tax credit is based on the average foreign tax rate of subsidiary, where the average is calculated with respect to the U.S. definition of the tax base. Differences in tax-base definitions may vary over time, for example, if capital-cost allowances differ, causing the average foreign tax rate as defined by the United States to vary. This variation causes the foreign tax credit allowed for a given dividend payment to vary over time as well. Such variations in the average foreign tax rate may be planned. For example, to the extent that the timing of deductions and credits is discretionary, a foreign subsidiary may shift them from years in which it is remitting income to years in which it is not remitting income, thereby maximizing the foreign tax credit and minimizing the tax price of repatriation.<sup>8</sup>

5. For simplicity, we focus our discussion in this section on the derivation of the tax price of a dividend remittance from a foreign subsidiary operating in a country that uses a classical corporate tax system. In our empirical work, we also take details of host-country tax systems into account, since our sample includes subsidiaries that operate in countries with split-rate and imputation systems. The derivations of the tax prices for these types of tax systems are discussed in detail in Altshuler and Newlon 1993.

6. We neglect here the cases in which the parent corporation has tax losses, since, as in earlier papers by Hines and Hubbard (1990) and Altshuler and Newlon (1993), we include in our sample only those U.S. corporations with positive worldwide taxable income. They are excluded here for simplicity's sake, since the carryover rules for tax losses and foreign tax credits can interact in ways that may complicate the incentives for income repatriation of these firms.

7. This is called cross-crediting or averaging of foreign income. Congress has restricted cross-crediting by creating *baskets* of different types of foreign income, to each of which a separate foreign tax credit limitation applies. Before the 1986 Tax Reform Act, the period that our study covers, there were five separate baskets: (1) investment interest income, (2) domestic international sales corporation dividend income, (3) the foreign trade income of a foreign sales corporation, (4) distributions from a foreign sales corporation, and (5) all other foreign-source income, which we will call general limitation income. The act decreased the potential for cross-crediting further by increasing the number of separate limitation baskets to nine.

8. The method was a more useful tax-planning device for U.S. multinationals prior to the Tax Reform Act of 1986, when the foreign tax credit was calculated year by year. The act switched to a system in which the foreign tax credit is calculated based on the pool of previously unremitted

The second cause of variation in the tax price is movement, over time, by the parent company between the two foreign tax credit positions of excess credit and excess limitation. As explained above, the tax price differs between the two situations.<sup>9</sup>

### 7.3 An Empirical Model of Dividend Repatriations

Previous work has estimated a simple regression model of dividend repatriations.<sup>10</sup> For subsidiaries that pay a dividend, the model takes the following basic form:

$$(4) \quad d = a_0 + a_1P + br + XA + \varepsilon,$$

where  $d$  is the dividend payout, expressed as the ratio of subsidiary dividends to assets;  $P$  is the current tax price of dividend repatriation;<sup>11</sup>  $r$  is the after-tax rate of return for the subsidiary; and  $X$  represents several variable characteristics of the subsidiaries and parents, the most important of which is the age of the subsidiary.<sup>12</sup>

By using the current tax price,  $P$ , the above model may confound the potentially different effects of permanent and transitory components of the tax price and overestimate the effect of the permanent component.<sup>13</sup> Our empirical model generalizes equation (4) to allow for differences in transitory and permanent tax price effects:

$$(5) \quad d = a_0 + a_1(P - P^*) + a_2P^* + br + XA + \varepsilon,$$

where  $P^*$  is the permanent component of the tax price, and hence  $(P - P^*)$  is the transitory component.<sup>14</sup> We estimate the model in a slightly different form:

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foreign earnings and uncredited taxes, and, therefore, shifting the year in which tax credits and deductions are taken has much less effect on the foreign tax rate for U.S. foreign tax credit purposes.

9. Altshuler and Newlon (1993) found that a significant proportion of U.S. multinationals switched credit positions during the 1980s.

10. See Hines and Hubbard 1990; Altshuler and Newlon 1993.

11. Altshuler and Newlon (1993) also use a measure of the "expected" tax price that attempts to take into account the fact that excess foreign tax credits can be carried back to several prior years or forward to several future years to offset taxes in those years.

12. Some theoretical literature (such as Newlon 1987 and Sinn 1990) suggests that older subsidiaries should have higher dividend payout ratios. This prediction is a direct consequence of the value of deferral when there is a repatriation tax; that is, if there is deferral, then dividend payouts will on average be an increasing function of age, other things constant.

13. In particular, a transitory decrease (increase) in the tax price reduces the current tax price relative to future tax prices, and thus enables the firm to increase the value of its foreign source income by accelerating (delaying) dividend repatriations. But a permanent change in the tax price does not change the relative prices of current and future repatriation. Therefore, one would expect dividend repatriations to be affected more by transitory than by permanent changes in tax prices.

14. In using "permanent" and "transitory," we are adopting a convenient shorthand for talking about the expected future tax price and how it differs from the current tax price. Note that the expected future tax price may change over time, so it is not really permanent. Holding the transi-

$$(6) \quad d = a_0 + a_1P + (a_2 - a_1)P^* + br + XA + \varepsilon.$$

One difficulty in estimating equation (6) is that the permanent component of the tax price,  $P^*$ , is not observed. To capture the effect of  $P^*$ , we use an instrumental variables approach in which we instrument the tax price on a variable,  $P^i$ , that we expect to be correlated with the permanent component of the tax price but uncorrelated with its transitory component. This essentially involves replacing  $P^*$  in equation (6) with its predicted value,

$$\hat{P}^* = \hat{b}_0 + \hat{b}_1P^i + \hat{b}_2r + X\hat{B},$$

where the coefficients are derived from the regression

$$P^* = b_0 + b_1P^i + b_2r + XB + \xi.$$

In this paper, we use the country average tax price as an instrument for the permanent component of the tax price.<sup>15</sup> By using this method, we have assumed that variations in country average repatriation tax prices will be correlated with the permanent component of tax price variation, but uncorrelated with transitory variations.<sup>16</sup> In other words, the future tax price of repatriation from a particular subsidiary would be expected to be higher if the average price is higher when measured across all subsidiaries located in the same country. Because the average for each country is always calculated across more than twenty-five subsidiaries, regardless of whether dividends are paid from each subsidiary, the average would not depend on any particular parent's temporary credit position or any particular subsidiary's temporary level of the foreign effective tax rate used for calculation of the foreign tax credit. In A-N-R, we also experiment with using the statutory withholding tax rate as an instrument for the permanent tax price component.

## 7.4 Results

The data are described in more detail in A-N-R. Briefly, the data are derived from corporate income tax returns (1120 forms), the forms filed in support of foreign tax credit claims (1118 forms), and the information returns filed for each foreign subsidiary controlled by a U.S. corporation (5471 forms). These data allowed us to match subsidiary-specific information on dividend remit-

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tory component constant, however, the coefficient of  $P^*$  allows us to predict the effect of a permanent change in the tax price. This is why it is called the permanent price.

15. Our estimation strategy is similar to that of Burman and Randolph (1994), who used state tax rates as instruments to separate permanent from transitory effects of taxes on capital gains realizations.

16. We demonstrate that there is substantial variation across countries in mean tax prices in table 1 of A-N-R. We argue that the degree of variation we found across countries suggests that the average country tax price is a useful instrument, since the cross-country variation is presumably correlated with variation in the permanent component of the tax price.

tances and other financial variables with parent tax return information.<sup>17</sup> Detailed data from foreign tax credit forms and data from 5471 forms were available only in years 1980, 1982, 1984, and 1986. After applying several screens to the data to eliminate observations for which the data were deemed unreliable, we were left with a sample of 22,906 subsidiary-specific observations.

Table 7.1 presents our main estimation results. We use a Tobit procedure for our estimation to account for the fact that only 28 percent of the subsidiaries pay any dividends. Column 1 presents the results of estimating the simple dividend model presented in equation (4), which incorporates only the current tax price of repatriation. These results are similar to those found in previous work.<sup>18</sup> The coefficient of the current tax price is negative, statistically significant, and of similar magnitude to the estimates in previous papers.<sup>19</sup>

Column 2 presents the results of estimating the model in equation (6), which distinguishes between permanent and transitory tax price effects. To interpret the tax price coefficient estimates, recall that in equation (6) the effect of the transitory component of the tax price is captured by the coefficient of the current tax price, while the coefficient of the permanent tax price equals the difference between the effects of permanent and transitory changes in the tax price. Thus, for column 2, the coefficient estimates in the first row of the table represent transitory tax price effects, the second-row coefficient estimates represent the difference between the permanent and transitory tax price effects, and the coefficient estimates in the third row, which are sums of the coefficients in the first two rows, represent permanent tax price effects.

The estimated effect of the transitory component of the tax price (in the first row) is negative and statistically significant. Furthermore, it is larger in absolute magnitude than the estimated effect from the model excluding the permanent tax price effect.<sup>20</sup> This result implies that transitory variation in the tax price has a large effect on the incentive to repatriate income.

The estimated difference between the permanent and transitory tax price effects presented in the second row of column 2 is positive and statistically significant. This implies that the permanent component of the tax price not only is significantly different from the transitory tax price effect but also, since the coefficient is positive, cannot have as large a negative impact on dividend repatriations. In fact, the estimated permanent tax price effect presented in the

17. These data were supplemented by withholding tax rate information taken from the Price Waterhouse tax guides and tax treaties.

18. See Hines and Hubbard 1990; Altshuler and Newlon 1993.

19. To gauge the economic significance of this coefficient, note that it implies that a reduction in tax price of one standard deviation (0.34) implies an increase in the overall dividend payout ratio (including those that pay dividends and those that do not) of about 0.004, which is equal to about 11 percent of the mean dividend payout ratio of 0.036. Thus, moving the tax price from one standard deviation above the mean to one standard deviation below the mean implies an increase in the dividend payout ratio equal to about 22 percent of the mean dividend payout ratio.

20. A Hausman test shows that this difference is statistically significant.

**Table 7.1 Tobit Model Estimation Results (dependent variable: subsidiary dividends over assets)**

Right-hand Variables, Estimation Details	Without Permanent Tax Price	With Permanent Tax Price
Current (global) tax price	-0.046 (.0057)	-0.059 (.0062)
Permanent tax price <sup>a</sup>	—	0.087 (.016)
Sum of tax price coefficients <sup>b</sup>	—	0.027 (0.015)
Subsidiary earnings/assets	0.58 (.016)	0.55 (.016)
Subsidiary age/100	0.37 (.017)	0.38 (.017)
Intercept (1980)	-0.29 (.0059)	-0.29 (.0060)
1982 dummy	0.026 (.0051)	0.026 (.0051)
1984 dummy	-0.029 (.0053)	-0.030 (.0053)
1986 dummy	-0.012 (.0065)	-0.012 (.0065)
Observations	22,906	22,906
Paying dividends (%)	28	28

*Note:* Standard errors in parentheses.

<sup>a</sup>Measures the difference between effects of changes in permanent and transitory tax prices (transitory tax price = current tax price - permanent tax price).

<sup>b</sup>Measures the effect of permanent tax price changes, holding the transitory tax price constant.

third row is not significantly different from zero. These results provide support for the hypothesis that the dividend repatriation incentive is affected by transitory but not permanent changes in the tax price of repatriation.

In A-N-R, we also present the results from a series of estimation experiments designed to test the specification and methods underlying the results shown in column 2. One test provides evidence that further supports our claim that the coefficient of the current tax price measures only responses to transitory price changes. For this experiment, we use two-year changes in the tax prices for each subsidiary to construct an instrumental variable for the current tax price. We find that the results are essentially the same as in column 2. In another specification test, we find that our main results are essentially unchanged whether we use country average tax prices, as in column 2, or country withholding tax rates to construct instruments for the permanent component of the tax price. This test provides a stronger test of, but does not reject, the fundamental prediction from Hartman's model, because the withholding tax is purely a repatriation tax, whereas the country average tax prices may also vary

as a result of international differences in effective tax rates on corporate income.

## 7.5 Conclusions and Policy Implications

Our results suggest that the tax price effects on dividend repatriations found in previous studies using the simple model of dividend repatriations apparently measure largely the effect of the timing of dividend repatriations designed to take advantage of intertemporal variation in tax prices. These timing opportunities may arise either endogenously, through tax planning that affects both tax prices and dividend payments, or through exogenously caused variations in tax prices. Therefore, although repatriation taxes seem to affect dividend repatriation behavior, this is apparently only because tax prices vary over time. The observed behavior is thus reconciled with the prediction of Hartman's model.

The results presented here should not be construed to imply that the "permanent" levels of host and home-country income taxation do not affect dividend repatriation by foreign subsidiaries. As predicted by our results, host- and home-country corporate taxation will affect the earnings reinvestment decision, and hence the dividend repatriation decision, through their impacts on host- and home-country after-tax rates of return. The evidence from our study implies that host- and home-country taxation do not have any additional effect on repatriation through the permanent component of the repatriation tax.

These results may have policy implications. The most obvious implications relate to policies on dividend withholding tax rates. For example, many capital-importing countries have considered lowering withholding taxes, either unilaterally or in the context of bilateral tax treaty negotiations, to try to attract new equity investment. But some countries may have been inhibited by the fear that such a measure would lead to increased flight of the accumulated multinational equity "trapped" by existing high withholding taxes. According to our results, such fears are unfounded as long as the reduction in the withholding tax rate is viewed as permanent. Permanent changes in dividend withholding tax rates appear more likely to affect decisions about new equity investment, and do not appear to affect repatriation of equity accumulated from past earnings.<sup>21</sup>

To the extent that our results are consistent with the Hartman model, they have implications regarding the incentive effects of the credit and deferral system that the United States uses to tax most foreign income of U.S. multinationals. In particular, if the repatriation tax does not affect the decision to repatriate dividends, then, at least as with regard to retained earnings, the incentives for

21. If a reduction in withholding tax rates is perceived by multinational investors as a signal of more favorable and stable policies toward multinational investment, it may in fact increase reinvestment of earnings.

foreign investment out of foreign retained earnings are the same as they would be under a system that exempts foreign income from taxation.

## References

- Altshuler, Rosanne, and T. Scott Newlon. 1993. The Effects of U.S. Tax Policy on the Income Repatriation Patterns of U.S. Multinational Corporations. In *Studies in International Taxation*, ed. Alberto Giovannini, R. Glenn Hubbard, and Joel Slemrod, 77–115. Chicago: University of Chicago Press.
- Altshuler, Rosanne, T. Scott Newlon, and William C. Randolph. 1995. Do Repatriation Taxes Matter? Evidence from the Tax Returns of U.S. Multinationals. In *The Effects of Taxation on Multinational Corporations*, ed. Martin Feldstein, James R. Hines, Jr., and R. Glenn Hubbard. Chicago: University of Chicago Press.
- Auerbach, Alan J. 1979. Wealth Maximization and the Cost of Capital. *Quarterly Journal of Economics* 93:433–46.
- Bradford, David. 1981. The Incidence and Allocation Effects of a Tax on Corporate Distributions. *Journal of Public Economics* 15:1–22.
- Burman, Leonard, and William C. Randolph. 1994. Distinguishing Permanent from Transitory Effects of Capital Gains Tax Changes: New Evidence from Micro Data. *American Economic Review* 84(4):794–809.
- Hartman, David. 1985. Tax Policy and Foreign Direct Investment, *Journal of Public Economics* 26:107–21.
- Hines, James R., Jr., and R. Glenn Hubbard. 1990. Coming Home to America: Dividend Repatriations by U.S. Multinationals. In *Taxation in the Global Economy*, ed. Assaf Razin and Joel Slemrod, 161–200. Chicago: University of Chicago Press.
- King, Mervyn. 1977. *Public Policy and the Corporation*. London: Chapman and Hall.
- Mutti, John. 1981. Tax Incentives and Repatriation Decisions of U.S. Multinational Corporations. *National Tax Journal* 34:241–48.
- Newlon, T. Scott. 1987. Tax Policy and the Multinational Firm's Financial Policy and Investment Decisions. Ph.D. dissertation, Princeton University.
- Price Waterhouse. 1980, 1982, 1984, 1986. *Corporate Taxes: A Worldwide Summary*. New York: Price Waterhouse.
- Sinn, Hans Werner. 1990. Taxation and the Birth of Foreign Subsidiaries. NBER Working Paper no. 3519. Cambridge, MA: National Bureau of Economic Research, November.