FOREIGN INCOME AND DOMESTIC DEDUCTIONS –
A COMMENT

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I. INTRODUCTION

Should firms be allowed to deduct expenses related to income earned and taxed abroad? In a recent article, Hines (2008, p. 462) argues that “... the only policy consistent with efficiency ... is to permit full domestic deductibility of expenses incurred in the home country.” According to his analysis, full deductibility is efficient for all standard systems of taxing foreign income: full taxation after deduction of foreign taxes, full taxation after credits for foreign taxes and, most surprisingly, exemption. He thus contradicts the widespread intuition that expenses should only be deductible if the related income is taxed under the domestic tax system.

In this comment, we argue that — even in the model used by Hines — full deductibility of costs under the exemption system is incompatible with nationally optimal tax policy. We derive an optimality rule which suggests that cost apportionment rules are efficient. Our findings also imply that the exemption method should be accompanied by zero deductibility of costs if these costs are exclusively related to foreign source income.

Hines makes his key argument in three steps. First, he points out that exempting foreign profits from domestic taxation is optimal in settings where foreign investment does not decrease domestic investment, or even increases it.¹ Second, given that the government wants to exempt foreign income from tax, Hines assumes that it puts cer-

¹ This may be the case, for instance, if foreign investment takes the form of mergers and acquisitions (Desai and Hines, 2003, 2004). For a formal analysis of the national and global optimality of regimes for taxing foreign profits, see Becker and Fuest (2010).

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tain welfare weights on the income from domestic and foreign sources (expressed in equation [9] in Hines (2008, p. 473)). Third, given these specific welfare weights, the domestic government wants to allow full deductibility of costs related to both types of income. The formal analysis in Hines (2008) starts after the second step, i.e., Hines neither investigates the optimality of exemption in his model, nor does he formally derive the welfare weights from the model assumptions.

Our point is that the results derived in Hines (2008) are misleading because they are derived from a welfare function that has no foundation in economic theory. Assuming a government objective function in line with standard welfare economics, we show that combining the exemption of foreign source income with full deductibility of costs related to this income is incompatible with tax policy that is optimal from a national perspective. This applies to the setting described by the Hines (2008) model, as well as variants of this model. Therefore, it cannot be concluded that governments should allow deductions for expenses related to foreign income if this income is exempt from domestic tax. In the next section, we describe the model used in Hines (2008), discuss his choice of welfare function and explain our critique. Section III presents an alternative model which, in our view, is more suitable to yielding an accurate answer to the policy question of cost deductibility. The model also provides additional insights into the relationship between repatriation tax systems and cost deductibility. In section IV, we consider variants of the models in sections II and III that allow for changes in ownership of foreign firms. Section V concludes.

II. THE MODEL

A. The Model Setup

We adopt the setup and notation from Hines (2008) and extend it as necessary. Consider a one-period model of a representative firm spending $R$ at home in order to generate domestic and foreign gross receipts, $Q(R)$ and $Q^*(R)$, where the asterisk denotes the foreign location. Profits earned in each location are taxed at source, at rates $\tau$ and $\tau^*$. In addition, we allow for domestic taxation of foreign profits at a rate of $T$. The domestic government allows for the deduction of a fraction $\alpha$ of the expenses $R$, while the foreign government allowance is given by $\gamma R$. After-tax firm profits $\pi$ are given by

\begin{equation}
\pi = Q(R)(1 - \tau) + Q^*(R)(1 - \tau^* - T) - R(1 - \tau \alpha - \tau^* \gamma)
\end{equation}

With $T = 0$, the above equation is identical to equation [7] in Hines (2008, p. 473).

Profit-maximization implies $\partial \pi / \partial R = 0$ or

\begin{equation}
Q'(R)(1 - \tau) + Q''(R)(1 - \tau^* - T) + \tau^* \gamma = 1 - \tau \alpha
\end{equation}

It seems straightforward to assume that $Q'(R), Q''(R) > 0$ and $Q^*(R), Q''^*(R) \leq 0$ and that $R$ fully depreciates at the end of the period.
It is worth noting that the model Hines chooses to make his case deviates from the standard framework established by Peggy Musgrave (Richman, 1963) and the subsequent literature in at least two ways. First, the supply of $R$ is not limited; this is equivalent to assuming a small open economy facing a perfectly elastic factor supply on world markets. Second, $R$ is a common factor for production at home and abroad.\(^3\) Thus, the model concisely and elegantly captures the main features of a world which Hines (2008, p. 468) describes as backed by “considerable evidence”: an increase in foreign economic activity (measured by $Q^*$) is not associated with reduced domestic activity ($Q$) because investment ($R$) raises both activity levels. In this world, the main motivation for taxing foreign income emphasized by the earlier literature, which is to align the marginal private and social returns in the tradeoff between domestic and foreign investment, is no longer meaningful.

**B. The Choice of the Welfare Function**

The crucial point where we disagree with Hines is the choice of the welfare function used for the analysis of optimal deductibility under the exemption regime. Before we come to this, it should be noted that we fully agree with his analysis of the two other tax regimes, the system of full taxation of foreign income after deducting foreign taxes (henceforth, the deduction regime) and the tax credit system, where the analysis is based on commonly used welfare functions. When analyzing the deduction regime, Hines assumes that the welfare function is national income (firm profits plus tax revenue). Given this welfare function, the optimality of the tax regime and full deductibility can be derived simultaneously.\(^4\) The same is true for the analysis of the global optimality of the tax credit regime, where he assumes that world income (firm profits plus domestic and foreign tax revenue) is the objective function. Again, the tax credit system and full deductibility (granted by the domestic or the foreign government) can be derived simultaneously as an optimal policy choice from a global perspective.

When it comes to the analysis of the exemption system, Hines deviates from the standard welfare function used in the rest of his paper. He introduces a welfare function referring to a world in which, according to him, exemption has already been derived as optimal, presumably from a second and different welfare function that is not specified in the paper: “Exempting foreign income from taxation implies that the government values equally one dollar of after-tax domestic income earned by home-country firms and one dollar of after-foreign-tax foreign income, since home-country firms make this tradeoff at the margin.” (Hines, 2008, p. 473). On the basis of this statement, Hines (2008, p. 473, equation [9]) assumes that national welfare is given by

\[
Q(R) + \frac{Q^*(R)(1 - \tau^*) + \tau^*\gamma R}{1 - \tau} - R.
\]

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\(^3\) Below, we explore the model where inputs ($R$ and $R^*$) can be differentiated according their location.

\(^4\) Note, though, that this is not the only optimal policy choice here, as will be clarified later.
We think that this approach is misleading for at least three reasons. First, the statement cited above suggests that the government either does not value domestic tax revenue or attaches a value of $1/(1 - \tau)$ dollars to each dollar of foreign source income after foreign taxes. It is hard to see why this makes sense; exemption does not imply any of these valuations. Second, the statement cited above is inconsistent with the objective function in (3). Maximizing (3) over $R$ is equivalent to maximizing

$$Q(R)(1 - \tau) + Q'(R)(1 - \tau') + \tau' \gamma R - R(1 - \tau).$$

But a government that “values equally one dollar of after-tax domestic income earned by home-country firms and one dollar of after-foreign-tax foreign income” should maximize

$$Q(R)(1 - \tau) + Q'(R)(1 - \tau') - R(1 - \alpha - \tau' \gamma),$$

not (3) or (4). Thirdly, it is simply wrong that the optimality of exemption implies a welfare valuation as in (3). As we will demonstrate below, exemption may well be an optimal policy outcome if national income including domestic tax revenue is the government’s objective function. But even if that is the case, full cost deductibility is not optimal.

So, given that the government objective function used by Hines (2008) is flawed, what can be said about the issues raised? In the following section, we will derive the optimal tax regime for foreign source income and the optimal degree of expense deductibility. We will use exactly the same assumptions as in Hines (2008), except for the government objective function, where we use a standard welfare function.

C. Simultaneous Choice of Tax Regime and Deductibility

Home country welfare is given by home country income, which is equal to the sum of domestic tax revenue and firm profits after all taxes. This is given by $Q(R) + Q'(R)(1 - \tau') - R(1 - \alpha - \tau' \gamma)$. The home country’s return is maximized if $R$ satisfies

$$Q'(R) + Q''(R)(1 - \tau') - \tau' \gamma = 1$$

By assumption, the objective of the domestic government is to maximize the home country’s income. For this purpose, it has an incentive to align its objectives with the firm’s objectives, using its two instruments, $T$ and $\alpha$. Using (2) and (6), it can be shown that the firm will set $R$ so as to maximize national welfare if

$$\alpha = Q'(R) + \frac{TQ''(R)}{\tau}$$

It is optimal to allow costs to be deducted from the domestic tax base only to the extent that the expense of $R$ increases domestic tax revenue, either because foreign profits are

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Note that domestic taxes and tax deductions drop out as they only redistribute funds from the firm to the government or vice versa.
subject to domestic tax or because an increase in $R$ leads to an increase in domestic taxable profits. In the presence of an exemption system, equation (7) thus implies

\[ (8) \quad \alpha = Q'(R). \]

Thus, the optimal deduction under exemption accounts for the domestic part of the return, but not for the foreign part and is, thus, less than 100 percent (as follows from (6) using (8)). This suggests that cost apportionment rules are efficient, i.e., the apportionment of a fraction of $R$ to domestic purposes which then is allowed for deduction from the domestic tax base.\(^6\)

Which factors determine the optimal tax treatment of foreign source income in this model? Solving (2) for $Q'(R)$ and replacing it in (7) yields

\[ (9) \quad Q''(R)T = Q''(R)\tau(1 - \tau') - \tau(1 - \alpha - \tau'\gamma). \]

If there is full deductibility of costs from the domestic tax base ($\alpha = 1$), a full taxation after deduction system with $T = \tau(1 - \tau')$ is optimal under the additional condition that $\gamma = 0$. This may be summarized as

**Proposition 1:** *Full deductibility of costs related to foreign source income is nationally optimal if foreign profits are taxed under the full taxation after deduction principle and $\gamma = 0$. If the exemption principle applies, the optimal deduction is given by $\alpha = Q'(R)$.*

The result in proposition 1 implies that, even if the conditions for optimality of the exemption system hold, it will not be optimal to allow full deduction of costs from the domestic tax base. Rather, the optimality condition $\alpha = Q'(R)$ suggests that some apportionment rule is optimal.

In the following, we will consider a slightly modified version of the Hines model. This model is based on the idea of a small open economy in a large world capital market and can be used to demonstrate the optimality of the exemption system. This model allows for further insights into the relationship between repatriation tax systems and cost deductibility.

**III. AN ALTERNATIVE MODEL**

The model used by Hines (2008) is special in so far as domestic expenses increase both domestic and foreign income. It may be more straightforward to think of expenses associated with domestic and foreign production that can be separately adjusted within

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\(^6\) To be precise, full deductibility is desirable in a special case where $Q'(R) = 1$ which implies $Q''(R) = 0$, see equation (2) with $\gamma = 0$. This would imply that the increase in $R$ does not increase foreign output at the margin, which effectively makes it a domestic investment. Moreover, in this case, exemption and full taxation after deduction have the same allocative effects; $R$ is set where $Q''(R) = 0$ which is not distorted by $T$. 
the firm. In the following, we will therefore slightly modify the framework presented above. We allow for separate decisions on \( R \) and \( R^* \), which are related to domestic and foreign production, respectively.

If these expenses can be distinguished by the government, the firm would be required to charge a transfer price for the input. This would imply that domestic taxable income is generated and the issue of deductibility of expenses related to foreign operations does not arise.\(^7\) The picture changes if domestic expenses for domestic and foreign production are hard to distinguish for tax authorities. Headquarter management services would be real world examples of this situation. The cost of debt financing would be another example where it is difficult for tax authorities to distinguish between expenses related to domestic vs. foreign operations. To analyse this case, assume there is only one level of \( \alpha \) that applies to both kinds of expenditure. Given that the foreign government cannot distinguish between \( R \) and \( R^* \) either, assume for simplicity that no deductions are granted in the foreign country, i.e., \( \gamma = 0 \). After-tax profits are then given by

\[
\pi = Q(R)(1 - \tau) + Q'(R^*)(1 - \tau^* - T) - R(1 - \tau \alpha) - R^*(1 - \tau \alpha)
\]

Profit-maximization implies

\[
Q'(R)(1 - \tau) = 1 - \tau \alpha
\]

\[
Q''(R^*)(1 - \tau^* - T) = 1 - \tau \alpha
\]

National income is given by \( Q(R) + Q'(R^*)(1 - \tau^*) - R - R^* \) which is maximized if \( R \) and \( R^* \) satisfy

\[
Q'(R) = 1
\]

\[
Q''(R^*)(1 - \tau^*) = 1.
\]

What is the optimal level of \( \alpha \), given \( T \)? Maximizing national income over \( \alpha \) yields

\[
[Q'(R)-1] \frac{\partial R}{\partial \alpha} + [Q'(R^*)(1 - \tau^*) - 1] \frac{\partial R^*}{\partial \alpha} = 0
\]

where \( \partial R/\partial \alpha, \partial R^*/\partial \alpha > 0 \) is implied by (11) and (12). Combining (11) and (12) with (15) shows that, firstly, if foreign income is exempt from tax \( (T = 0) \), only partial tax deductions are optimal:

\[
\alpha = \frac{\tau}{1 - \tau \frac{\partial R}{\partial \alpha}} < 1.
\]

\[
\tau \frac{\partial R^*}{\partial \alpha} \frac{\tau \frac{\partial R}{\partial \alpha}}{1 - \tau \frac{\partial R}{\partial \alpha}} < 1.
\]

\(^7\) An exception would be the case where a firm borrows domestically to endow a foreign subsidiary with equity. In this case, no transfer price would be charged and deductibility of the financing costs would be an issue. It is straightforward to show that, in this case, combining exemption and full deductibility is not optimal.
Secondly, if full deductibility is granted, i.e., $\alpha = 1$, the optimal tax on foreign profits is given by $T = \tau (1 - \tau')$ which implies full taxation after deduction of foreign taxes. Again, it turns out that exemption and full deductibility are incompatible. We summarize this in

**Proposition 2**: If a single deduction parameter $\alpha$ applies to both $R$ and $R^*$, optimality requires that full deductibility be combined with full taxation after deduction of foreign taxes. If foreign income is exempt from domestic taxation ($T = 0$), partial deductibility ($\alpha < 1$) is optimal.

IV. CHANGES IN OWNERSHIP

The models discussed in the preceding two sections demonstrate that the main result in Hines (2008) does not hold in his model if an appropriate government objective function is used. Since Hines (2008) suggests that the possibility of shifting ownership might be important for the optimality of exemption and full cost deductibility, it seems worthwhile to investigate whether his results can be resurrected in another model that allows for a change in ownership. The model we develop in this section takes into account that domestic firms may want to sell their foreign affiliates to investors from other countries, and the tax treatment of foreign profits may affect this type of transaction. From a policy perspective, the tax system should make sure that the firm will only buy or sell a foreign affiliate if it is efficient to do so for the (national) economy as a whole.

We start by considering a variant of the model discussed in section 2. We extend the model by adding a stage preceding the choice of $R$, at which point the firm decides whether or not to sell the foreign production plant. At the second stage, the optimal input $R$ is determined.

Starting with the second stage, the firm chooses $R$ according to (2) if it keeps the affiliate and $Q'(\tilde{R})(1 - \tau') = 1 - \tau\alpha$ if it sells the affiliate at the first stage, where the tilde denotes the state where the affiliate has been sold. At the first stage, the firm chooses to sell or to keep the affiliate, depending on which pay-off after the second stage is higher. The pay-off when keeping the firm is given by (1). If the affiliate is sold, then the pay-off is equal to $\tilde{\pi} + P(1 - \theta) = Q(\tilde{R})(1 - \tau) - \tilde{R}(1 - \tau\alpha) + P(1 - \theta)$ where $P$ is the selling price and $\theta$ is a capital gains tax levied by the domestic government. Thus, the minimum price the firm is ready to accept is given by $(1 - \theta)\pi_{\min} = \pi - \tilde{\pi}$.

Is selling the affiliate at $\pi_{\min}$ desirable from the perspective of the domestic government? For this purpose, we derive the socially optimal minimum selling price. Let the home country’s return when keeping the affiliate, given above, be denoted by $Y$. If the firm sells the affiliate, this return is given by $\tilde{Y} + P = Q(\tilde{R}) - \tilde{R} + P$. Thus, the socially optimal minimum selling price is given by $P_{\gamma_{\min}} = Y - \tilde{Y}$. How do $P_{\pi_{\min}}$ and $P_{\gamma_{\min}}$ differ?

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8 The precise implications of the sale for capital gains taxation would depend on how the transaction is carried out, in particular whether it is carried out as a share deal or as an asset deal. For our analysis, the details of the capital gains tax treatment are of secondary importance.
The Hines argument implies that tax treatments other than exemption with full cost deductibility encourage firms to sell their foreign affiliates to foreign investors in cases where this is not desirable from a social point of view. In terms of our model, this is true if $P_{\pi}^{\text{min}} < P_{\gamma}^{\text{min}}$ which holds if

$$P_{\gamma}^{\text{min}} - P_{\pi}^{\text{min}} = \alpha Q(R) - \alpha R - \alpha Q(R) = \alpha R + TQ'(R) - \theta P_{\pi}^{\text{min}} > 0$$

If $\alpha = 1$, the firm sets $\tilde{R}$ so as to maximize $Q(R) - \tilde{R}$. Thus, under exemption of foreign profits, i.e., if $T = 0$, $P_{\gamma}^{\text{min}} - P_{\pi}^{\text{min}} < 0$ which implies that firms keep their affiliates even though it would be desirable from a social point of view to sell them. The reason is that foreign activity is subsidized if $\alpha = 1$ and $T = 0$. We summarize this in

**Proposition 3:** Under exemption, full deductibility of costs subsidizes the ownership of foreign affiliates and therefore leads to inefficiently high levels of such ownership.

The preceding analysis may also be carried out under the assumption that costs related to domestic and foreign investment are independent, as assumed in section 3. Again, we derive the selling price the firm is ready to accept. In this model, the minimum acceptable selling price is simply the income from the firm’s foreign affiliate: $(1 - \theta)P_{\pi}^{\text{min}} = Q'(R^*) (1 - T - R^*) = Q'(1 - \tau a - \gamma)$. From a social point of view, an acceptable selling price is $P_{\gamma}^{\text{min}} = Q'(R^*) (1 - T - R^*) = Q'(1 - \tau a - \gamma)$. Domestic ownership neutrality is given if

$$P_{\gamma}^{\text{min}} - P_{\pi}^{\text{min}} = TQ'(R^*) - \tau a R^* - \theta P_{\pi}^{\text{min}} = 0.$$ 

which implies that privately and socially optimal firm sales are only aligned if $T = \alpha = \theta = 0$. Note that, in the presence of a positive tax on capital gains, $\theta > 0$, a positive tax on foreign income, $T > 0$, is required to restore efficiency.

**Proposition 4:** If $R$ and $R^*$ are independently determined, the exemption system requires that expenses for $R^*$ cannot be deducted from the domestic tax base ($\alpha = 0$). If $\alpha > 0$, the exemption system leads to inefficiently high domestic ownership of foreign affiliates.

**V. CONCLUSIONS**

In this comment, we have analysed the argument made by Hines (2008) which asserts that it is optimal from a national perspective to allow for a full deduction of domestic expenses from domestic taxable income even if these expenses are partly or wholly related to income generated abroad, which is exempt from domestic tax. Our main point

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9 An exception is given for the special case of $Q(R) = R$ and, thus, $Q' = 1$, for all values of $R$. Then, the above price difference is zero under exemption and full cost deductibility. In all other cases, exemption with full deductibility does not ensure ownership neutrality.
is that this result is an artifact due to a peculiar welfare function that has no foundation in economic theory. Using a standard welfare function (based on maximizing national income) we have reconsidered this view in the model used by Hines (2008), as well as slightly modified variants of this model. We have shown that full deductibility of foreign source income will in general not be desirable if exemption is nationally optimal. For instance, exemption may be optimal if domestic expenses are exclusively related to income generated abroad. But in this case, zero deductibility from the domestic tax base is nationally optimal. If expenses for domestic and foreign activity can be determined separately, exemption and full domestic deductibility are also incompatible. The same applies to a model in which foreign investment may involve changes in ownership. In terms of policy conclusions, our results suggest that restrictions on the deductibility of costs related to income generated abroad, which are widespread in existing tax laws, are indeed justified.

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It is an understatement to say that the appropriate taxation of foreign business income is a controversial and potentially confusing topic. One of the mysteries of international taxation has been that the prescriptions of what, until recently, was the accepted academic wisdom differs so sharply from widespread international practice. In an important contribution, Richman (1963) noted that a home government confronted with the choice of where it would prefer one of its resident taxpayers to allocate a single unit of capital would weigh the after-foreign-tax return from investing abroad against the pre-tax return from investing at home. From this observation, she concluded that countries maximize their own welfare by subjecting foreign income to full current domestic taxation, permitting only a deduction for foreign tax payments. This analysis further implies that a policy of taxing foreign income while granting credits for foreign income tax payments maximizes world welfare.

In fact virtually no countries have policies that resemble those that this framework describes as optimal and therefore individually rational. Not only do most countries exempt active foreign business income from taxation, but the small number that do not nevertheless permit taxpayers to claim credits against domestic tax liability for foreign tax payments and do not tax foreign source income currently but only when it is repatriated to the domestic parent company. Hence international practice is to tax foreign income much less heavily than these theories imply that countries should ever want to do. This difference suggests either that governments systematically — and universally — err in their taxation of foreign income, or else that these older welfare frameworks fail to capture important aspects of the problem of taxing foreign source income.

More recent analysis of international tax norms challenges the older academic paradigms by calling attention to the importance of tax-induced ownership patterns. Desai and Hines (2003, 2004), Devereux (2008), and others note that the general equilibrium impact of taxation on asset ownership — the reallocation of business ownership to tax-preferred owners — and the role of ownership in influencing productivity together carry very different implications for national tax policies. In a world characterized by shifting ownership of business assets, countries maximize their own welfares by exempting active foreign business income from domestic taxation, and maximize world welfare by...
conforming their taxation of foreign income to world norms. The purpose of the paper by Hines (2008) is to call attention to another tax policy implication of this ownership framework for analyzing international taxation, which is that the same considerations apply to domestic expense deductions that generate foreign income; specifically, countries maximize their own welfares by permitting full deduction of domestic expenses, and maximize world welfare by conforming their deductions to world norms.

The spirited comment by Becker and Fuest (2010) helps to illustrate the basis of these findings. The welfare function used in the first part of the comment is fundamentally partial equilibrium in nature, in that it does not incorporate the welfare effects of any additional domestic investment from foreigners (and domestic residents!) that would be associated with greater outbound foreign investment. This is reflected in the home government maximizing the sum of domestic tax revenue and firm profits, but failing to incorporate tax revenue from foreign investors (and new domestic investors) in the domestic economy. This is the same government objective function used in the original Richman (1963) framework, and as a result, it is not surprising that the comment draws conclusions (captured in Propositions 1 and 2) that are similar in spirit to those of Richman.

The point of the Hines (2008) paper was to consider a home country that optimally taxes foreign source income, and evaluate the accompanying optimal tax treatment of domestic expenses that contribute to the production of foreign source income. It is not possible to perform this exercise using a framework in which the home country taxation of foreign source income is not optimal. In the partial equilibrium approach used in the first part of the Becker and Fuest (2010) comment, and reflected in Propositions 1 and 2, it is not optimal to exempt foreign income from domestic taxation; this is, indeed, the standard Richman (1963) result. The Becker and Fuest (2010) comment shows that if, in this setting, the home country nevertheless exempts foreign income from taxation, then it should not permit a deduction for domestic expenses that contribute to foreign income production. This analysis is correct, but it does not address the point of the Hines (2008) paper, which is to consider a situation in which governments have chosen their taxation of foreign income optimally.

It would be fair to say that the modeling framework used in Hines (2008) is anything but transparent in its treatment of the reasons underlying the optimality of exempting foreign income from taxation; for example, capital investment and labor inputs do not appear as arguments of the firm’s production function, instead being implicit — and the actions of foreign investors are not modeled at all. This might be justified on the basis of simplicity, but it carries with it the possibility of engendering confusion. In order to evaluate whether, with a given government objective function, it is optimal to exempt foreign income from taxation, it is necessary to consider a model that explicitly includes capital as an argument of the production function; the need to do this is obscured by the omission of capital from the production functions in Hines (2008). When capital is explicitly included as an argument of firm production functions, it becomes clear that exempting foreign income from home country taxation is not optimal in the setting analyzed in the first part of the Becker and Fuest (2010) comment.
Similarly including capital as an explicit argument of firm production functions in equation (9) of Hines (2008) produces the implication that home country welfare is maximized by exempting foreign income from taxation. The reason, therefore, to adopt equation (9) as the government’s maximand is that it captures other features of the economic setting that must hold in order for exemption to be optimal — presumably, as other papers in the literature have analyzed, the impact of shifting ownership. Equation (9) reflects that additional foreign income production by home country firms is associated with greater home country income production by foreign investors of a roughly equivalent amount, who respond to greater outbound investment by home country firms by increasing their investment in the home country. Equation (9) omits explicit consideration of foreign firms, but includes them implicitly by dividing the foreign profits of home country firms by \((1 - \tau)\) in recognition of the tax revenue that the home government will collect from foreign firms whose operations in the home country are (increasing) functions of the level of foreign activity by home country firms.

The second part of the Becker and Fuest (2010) comment very generously explores the possibility that the results reported in Hines (2008) could be obtained in an alternative partial equilibrium model in which home country firms have the ability to sell their foreign affiliates to unrelated foreigners. In this model foreigners appear for the first time, as potential acquirers of domestically owned foreign affiliates, though not as investors in the home economy. As the comment reports in its Propositions 3 and 4, the model implies that firms should not be permitted to deduct all of their domestic expenses incurred in the production of foreign income. Again, this should not be surprising. The setting in this part of the paper does not incorporate the domestic effects of greater foreign investment, and as a result, a true exemption system is not optimal, reflecting the fact that the model fails to capture all of the benefits of additional foreign income.

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