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Cross-border loss offset can fuel tax competition☆

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ABSTRACT

Following recent court rulings, cross-border loss compensation for multinational firms has become a major policy issue in Europe. This paper analyzes the effects of introducing a coordinated cross-border tax relief in a setting where multinational firms choose the size of a risky investment and host countries non-cooperatively choose tax rates. We show that coordinated cross-border loss compensation may intensify tax competition when, following current international practice, the parent firm's home country bases the tax rebate for a loss-making subsidiary on its own tax rate. In equilibrium, tax revenue losses may thus be even higher than is implied by the direct effect of the reform. In contrast, tax competition is mitigated when the home country bases its loss relief on the tax rate in the subsidiary's host country.

1. Introduction

Since the 2005 *Marks and Spencer* ruling by the European Court of Justice (ECJ), cross-border loss compensation for multinational firms has become an important policy issue in Europe. In this case the ECJ decided that the U.K. based parent company should not be prevented from deducting the losses of its subsidiary in another EU member state, if all loss offset possibilities in the host country of the subsidiary have been exhausted and the losses in the host country are therefore 'final losses'.[1] As a result of this decision, it is likely that EU member states will be legally obliged to offer some form of cross-border tax relief to multinational businesses. This will constitute a major change in current international tax systems, as most EU countries currently permit loss offset only between entities that reside in the same jurisdiction.[2]

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[1] Nevertheless the ECJ permitted the U.K. government to deny the parent company of *Marks and Spencer* to deduct the losses incurred by its subsidiaries in Belgium, France and Germany from its positive taxable profits in the United Kingdom, because it did not consider the subsidiaries' losses to be 'final'. See Lang (2006) for a critical discussion of the ECJ's argument and Boulogne and Slavnic (2012) for a review of further court decisions that have clarified the interpretation of 'final losses'.

[2] At present, only four out of 27 EU member states (Austria, Denmark, France and Italy) apply tax schemes that permit a cross-border loss offset. See European Commission (2006).

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In the wake of the *Marks and Spencer* ruling, the European Commission has presented alternative measures for providing a coordinated cross-border loss relief, which differ primarily in whether the loss transfer from the subsidiary to the parent country would be temporary or definitive (see European Commission, 2006). Moreover, a full cross-border loss offset would be a direct implication of introducing a common consolidated corporate tax base (CCCTB) in the EU, which has recently been proposed by the European Commission (2011). The European Commission has also made it very clear that the introduction of cross-border loss compensation will *not* be accompanied by a harmonization of corporate tax rates. Therefore, an important question is whether, and how, the introduction of cross-border loss offset affects the degree of corporate tax competition in Europe.[3]

Despite its immediate policy relevance, the issue of cross-border loss compensation has so far received only very little attention in formal theoretical analyses. In this paper we contribute to filling this gap. We set up a symmetric two-country framework with two representative multinational enterprises (MNEs), which have their parent company in one of the countries and a subsidiary in the other. Both MNEs endogenously choose the size of a risky investment project. Hence our model captures the positive effects on MNEs' investment incentives, which are regarded as the major economic advantage of cross-border loss compensation; see European Commission (2006). The two governments non-cooperatively choose their tax rates to maximize domestic tax revenues when, following current international practice, the parent and the subsidiary of a MNE are taxed as independent entities. A particular focus of our analysis lies on the question of how the introduction of a coordinated form of cross-border loss offset will affect the governments' non-cooperative tax choices.

In our benchmark scenario, we assume that the parent country of the MNE bases the tax rebate on its own, *home country* tax rate. This corresponds to the current practice in those countries that offer a unilateral cross-border loss offset to resident MNEs (see footnote 2). Moreover, this scheme also underlies the European Commission's proposals for a coordinated cross-border tax relief. We show that when this scheme is applied, an increase in loss offset opportunities is likely to lead to falling tax rates in equilibrium, and hence to intensified tax competition, at least when loss offset is almost complete in equilibrium. The fall in equilibrium tax rates will in turn cause tax revenue losses for each country to be even larger than is implied by the direct effect of the reform. The reason underlying this result is simple: maintaining a high corporate tax rate becomes more costly under cross-border loss compensation, because it induces a higher tax rebate to the resident MNEs. We conclude that if this scheme is realized, introducing cross-border tax relief may further fuel the ongoing tax competition in Europe.

We then show that these negative side effects of cross-border loss compensation can be avoided under an alternative loss offset scheme where tax rebates are instead based on the tax rate in the subsidiary's *host country*. In contrast to the benchmark scheme, equilibrium tax rates will rise in this case following the reform. This is because an increase in each country's own tax rate is not accompanied by higher tax rebates to loss-making subsidiaries, but more generous loss offset provisions increase the investment of both MNEs, and thus the corporate tax bases of both governments. As a result, tax revenues even increase under this alternative scheme when cross-border loss compensation is enhanced.

We analyze the robustness of our results by considering investments that are partly financed by intra-company loans, alternative government objective functions, an endogenous choice of the investment's success probability by the MNEs, and asymmetries between the competing countries. A particularly relevant setting arises when tax rates differ between countries. In this case the low-tax country would use a higher tax rate for loss rebates than for taxing positive profits in its territory, if the alternative system is applied universally. These redistributive effects can be avoided if each country applies the minimum of the tax rates in the parent and the subsidiary country to the losses incurred by the subsidiaries of its resident MNE. At the same time, this minimum rule is likely to increase tax revenues in both countries, relative to the universal application of loss offset at the parent country's tax rate.

In the related literature, most theoretical and empirical studies have analyzed the effects of incomplete loss compensation in a closed economy setting. Theoretical analyses have focused mostly on the effects on investment and risk-taking decisions over time (e.g. Eeckhoudt et al., 1997; Panteghini, 2001). The empirical literature has estimated the response of investment decisions to tax law asymmetries in a national setting, where positive profits are immediately taxed, whereas the tax value of a loss can only be offset against positive incomes. This asymmetry has long been known to cause important, negative effects on the investment and risk-taking decisions of firms; see Altshuler and Auerbach (1990), Devereux et al. (1994).

In recent years, a few papers have analyzed loss offset in an international setting, but this literature is still very small. Among the empirical studies, Niemann and Treisch (2005) perform a Monte Carlo simulation analysis of the unilateral introduction of cross-border loss compensation in Austria (see footnote 2). Fuest et al. (2007) estimate the tax revenue effects of a switch to a complete cross-border loss offset under the CCCTB and find that, in the EU average, the corporate tax base falls by 20% as a result of this change. Dressler and Overesch (2013) analyze the impact of national loss offset regimes on MNEs' investment decisions and find mixed empirical support for the claim that generous loss offset provisions increase foreign direct investment.

Little is known, however, about how the introduction of cross-border loss offset shapes national corporate tax policies in a setting of international tax competition. Gérard and Weiner (2003, 2006) study this issue in a framework where MNEs

[3] Corporate tax rates have fallen around the world, but the reduction has been particularly strong in Europe. Between 1995 and 2011, statutory corporate tax rates fell from 35% to 23% in the average of the EU-27 countries, and thus substantially more than in the non-EU member states of the OECD (see Eurostat, 2011, Tables II-4.1 and II-4.2). Moreover, recent empirical work confirms the existence of strategic interaction in corporate tax setting among OECD countries in general, but in particular among the member states of the European Union; see Devereux et al. (2008), Davies and Voget (2008).