

Thank you very much for your carefully reading on our paper and for giving your opinion about the same. We try to clarify and answer each of your concerns and comments below.

- ✓ As to your first main concern, we are going to review the English writing so as to improve issues of grammar, exposition and typos and correct inconsistencies in the references.
- ✓ Regarding your second main concern referred to the empirical analysis, we reply your reservations below.

- You are right when you state that the variable distance is not identified when the fixed effect estimator is applied, i.e. for the outbound sample. It is due to the within transformation of the model. The same is true for any variable with a time-constant value. However, although distance cannot be estimated when fixed effects are applied it is necessary to keep it in equation 1 so as to the Carr, Markusen and Maskus (2001) model is correct.

On the other hand, the effect of the variable distance is not so much important for our research and can be estimated for the other sample, which uses random effects. Moreover and most importantly, this fact does not affect the estimated value for the other model variables, since the effect of distance is subsumed into the fixed effects. Thus, it does not impact the estimated effect of our focus variable: double taxation treaties.

- It seems right that it is enough to estimate the empirical specification which includes yearly effects.
- Following your recommendation, we will review the definition of the variables in order to make it more rigorous. As to DTT, following the empirical literature we used a binary variable as indicator. Such binary variable takes the value of one the years when there exist a DTT between Spain and the corresponding state (and the value of zero otherwise). Subsequently, such variable was replaced by two different binary variables, each of which identifies the existence of old and new DTT respectively, being old DTT those created before the beginning of the data sample: 1993 for our sample. When doing so, we classified old renegotiated DTT into the group of new DTT from the year of renegotiation on.
- Each of the two samples includes bilateral investments between Spain and 56 countries. We listed such 56 countries at notes 8 to 11 by groups taking into account that some of them belong to more than one group: the OECD, the EU-28, the BRIC and Latin American countries. Moreover, as you noticed, information is observed for 21 years (from 1993 to 2013). However, the number of observations is lower than 1,176 (56x21) because the panel is unbalanced, as noted in page 7 of the paper.

In spite of the unbalanced panel, all countries in the sample are included in the estimates as missing data is randomly distributed alongside them. Nevertheless, when fixed effects are applied the DTT observations are eliminated from the estimations for some country-pairs: those for which a DTT had not existed between Spain and the corresponding country (for which the DTT binary variable was always zero) and most of those for which there had been an old DTT (for which the variable was always one). The reason is the within transformation of the model we referred to before. The variable DTT is not always one for the whole old DTT in our sample because of the denounced Denmark DTT and the five old renegotiated DTT. The value of the variable for these old Treaties passes from being one to being zero during the sample period. This is the reason why estimations produce results for old DTT when fixed effects apply.

- We examined indirectly the effect of the corporate income tax rates on investments, in fact. We did it to the extent that we computed the foreign and the domestic tax burdens (calculated from the corporate income tax rates, see Table A3 in the annex) for identifying the situations at which there could be a tax saving coming from the Territorial tax system in comparison to the Worldwide one.

The positive effect that we obtained from the Territorial system in comparison to the Worldwide one at situations at which the foreign tax burden was lower than the domestic tax burden means the following: the tax saving derived from the lower corporate income tax rates affects FDI positively.

- With regard to the endogeneity problem, the empirical literature has traditionally related it to old DTT or those created before the beginning of the data sample. For this reason old and new DTT have been estimated separately, associating new DTT estimations to more reliable results. We copied the argumentation of Blonigen and Davies (2002) underlying this thought in page 5 of the paper. It appears that old DTT are related to non-observable characteristics included in the error term. On the contrary, the authors suppose that for new DTT all factors affecting FDI are controlled for.

We think that an endogeneity problem could also exist for new DTT. The reasoning we give is in note 19 of page 10 of the paper. The high volume of FDI could have triggered the decision of creating a DTT since international taxation problems may arise to a greater extent between countries with high exchange levels of FDI. However, subsequently we rejected this other source of endogeneity arguing that from the moment at which the decision of creating a Treaty is made until the DTT is effectively created a long time passes. Hence, the possible influence of FDI on DTT occurs some time before the existence of DTT.

Additionally, we completely agree with you that when FE are introduced the endogeneity derived from old DTT, the one mentioned in Blonigen and Davies (2002), does not constitute a problem. As said before, for most country-pairs for which there had been an old DTT in place, observations related to DTT are eliminated from the estimations. Maybe we did not explain this correctly in the paper. On the one hand, in page 10 we warned about the fact that the variable DTT was basically capturing the effect of new DTT as most of the old DTT had a time-constant value and then were subsumed into the fixed effects. On the other hand, the endogeneity issue mentioned later in the same paragraph tried to justify the preceding sentence of such same paragraph. Rewriting the sentence, we wanted to say: as long as the endogeneity issue is related to old DTT, it does not seem a problem the fact that the variable DTT is basically capturing the effect of the Spanish DTT created during the sample period.

The answers below are in relation to your additional comments.

- ✓ It is true that the title of section two “The theory of double taxation treaties” could be misleading. In view of that, we propose to include its content, about the predicted impact of the different functions of DTT on FDI, in the introductory section.
- ✓ We do not understand your observation referred to the many existing studies examining the effects of double taxation treaties. The statements we made regarding the empirical literature on the issue are the following. First, in the introductory section we say that “there is not consensus about the effect of these Treaties on FDI in the empirical literature, yet” and that “The Spanish economic literature has barely done research into these topics”. Second, in

section 3 we indicate that tax policies are the most studied ones as determinants of FDI and add that “De Mooij and Ederveen (2003) estimated an elasticity of -3.3 of FDI to tax rates from a meta-analysis of 25 empirical studies”. Third, later in section 3 we state that “Within the tax policy area, the effect of DTT is fairly new for the empirical economic examination of the determinants of FDI and that there are not conclusive results around the same”. Moreover, Table A1 in the annex summarise a significant set of the empirical literature examining the effect of DTT and FDI.

- ✓ Following your suggestion we are going to make it clear that we use the reduced-form empirical framework of Carr, Markusen and Maskus (2001), which is derived from the knowledge-capital model of Markusen.
- ✓ Effectively there is a mistake concerning the subscripts of the variable distance and also the expression “specification in absolute terms”, which we are going to correct. The expression referred to variables in absolute terms.
- ✓ Following your recommendation we are going to present the estimated results for all the model variables.
- ✓ The International Tax Systems refer to the tax treatment given to foreign dividends when repatriated by the residence country of the investor and are defined by the content of DTT. DTT declare either the exemption or the credit method for the correction of the double taxation problem that emerges for this kind of income. The exemption method gives rise to the Territorial System and the credit method to the Worldwide one. Hence, it is clear that the Territorial or Worldwide system is part of the content of DTT and that the analysis of the same adds to the debate on the results of DTT on FDI. Our stance within the debate is that probably it is not possible to find a general agreed result of the effect of DTT, but instead to try to find some specific general results of some dimensions and aspects of their content.

Additionally, although DTT prevail over the internal law of countries, these laws have to be simultaneously examined because they complement each other. Particularly, the Spanish net of DTT declares usually that the double taxation problem will be avoided following either the provisions of the domestic law or the DTT provisions itself. This is the reason why we examined the content of the DTT and the internal laws for the definition of the International Tax System of Spain and the partner countries for each sample respectively.

Lastly, as explained in the paper, the tax saving provided by the Territorial system in comparison to the Worldwide one is the reason for the positive effect of the same on FDI. It happens when the foreign tax burden is lower than the domestic tax burden and profits are repatriated. At this moment, while Territorial system allows for the companies enjoy the lower foreign tax burden, the Worldwide system does not. We recognise that this result is based on several assumptions, being the most important one that foreign profits are repatriated. However, even if at the end of the day the tax savings do not realise, the Territorial tax system can induce a positive effect on investment due to the initial expectations. In any case, we will try to substantiate better this section of the paper by introducing some literature on the effect of the International Tax Systems on FDI.