The paper uses (aggregated) Spanish inbound and outbound FDI data to evaluate the impact of Double Taxation Treaties (DTTs) on cross-border investments. Relying on reduced form specification based on Carr, Markusen and Maskus (2001), the authors find a positive effect of DTT. The key contributions to the literature include consideration of international tax systems in the analysis and the "immediate investor" approach.

The study asks important questions and through its focus on one country only, it is able to deliver more fine-tuned answers than the studies that use global dyadic FDI data. The crucial issue for me after reading the paper is whether the presented results can be given causal interpretation or are they just a reflection of the underlying correlations. The language of the study suggests the causal interpretation. The paper does mention the potential endogeneity issues and caution about the potentially wrong inference, however, the relevant discussion is rather superficial and sometimes occurs misguided. In general, I feel that the endogeneity problem is not sufficiently dealt with.

For instance, the authors warn about the fixed effects approach (p. 10) and point to the potential endogeneity of old treaties, referring here to Blonigen and Davies (B&D, 2002). However, the issues mentioned by B&D do not pertain to a fixed effects analysis (in B&D when country-pair fixed effects are introduced, the effect of old treaties cannot be identified: "Note that now the effects of our time-invariant regressors, distance and old treaties, will be subsumed into these fixed effects. (…) Because of this, we focus solely on the new treaties enacted at some point during the sample of years." p. 18). As the authors use fixed effects for outbound analysis, the type of endogeneity problems mentioned in B&D does not constitute a problem here.

In general, the FE approach should be the preferred one as it takes care of any time-invariant confounding effects. It cannot, however, solve the issues of confounders changing over time and reverse causality. For instance, if two countries predict increasing bilateral investments, they might decide to sign (or be lobbied into signing) a DTT. I am not sure how the timing of conventions mentioned in footnote 19 solves that problem, especially for the bilateral random effects case. The renegotiations of DTT are probably primarily driven by the dynamics of FDI flows. Given that the renegotiations seem to be crucial for identification of some of the effects (see my remarks below), the potential reverse causality associated with them is particularly worrying. Is there any literature on why and how new DTTs are signed that could be of help here? Similarly, exploiting the heterogeneity of industries might be helpful for cleaner identification (the Spanish data is disaggregated by sector).

There are a couple of additional econometric issues.

- It is not clear whether the interpretation of the old taxation treaty (*odtt*) coefficient is correct for the outbound FDI. The variation used for its identification in the fixed effects case seems to come mainly from countries that had the DTT renegotiated (5 countries). Only one country had a treaty denounced (Denmark) in the analyzed period. I assume that for the renegotiation case, the double taxation treaty indicator jumps to 0 for old treaties and 1 for new treaties in the renegotiation year. Aside from the question of renegotiations being potentially highly endogenous and the representativeness of the countries that renegotiated (important European trading partners only), it occurs to me that having no treaty in place should have different effects than switching from one DTT to the other. Therefore, the coefficient *odtt* might reflect the effect of renegotiating the treaty and not the effect of having an "old" treaty in place. Table A5 appears to be an attempt to deal with that issue. It shows estimation results when renegotiated DTT are

treated as prolongation of old DTT. Doesn't it imply, however, that the identification of the old treaties effect is based solely on Denmark?

- Implementation of the international tax system analysis (section 5.1.2.) is confusing. It seems that the author want to look at the DTT conditional on the domestic laws ("although the content of DTT was the same for two countries, the effect of such DTT could differ between them if their domestic laws are different"). However, the territorial system variable is added to the regression (2) without interacting it with the DTT indicator, making the impact of tax treaties independent of the analyzed tax system. Was that really the intention?
- Given the stark impact of financial crisis on the FDI flows and GDP development, running the regressions without year fixed effects (first column in most of the tables, whole Table 7) seems a misguided approach. On the other hand, division of time into sub-periods is ad hoc, especially given that the periods themselves are defined by outcome variable (e.g. 2000-2007 – EU countries reach leading position in terms of FDI for Spain).
- The Territorial system indicator is significant only in few specifications and at 10% level at best. The description, on the other hand, suggests a robust impact. I find this misleading.
- Results for the remaining coefficients need to be shown, at least in the appendix. Some descriptive statistic are also desirable.

My main non-econometric concern was the choice of indicator capturing DTTs. The authors use a binary definition of DTT (a treaty in place or not or not) while, correctly, criticizing such a binary approach ("It has usually been a binary variable representing the existence or not existence of a treaty. This could be not very accurate.") Given the low number of the DTTs analyzed, is it not be possible to extract information about the features of individual treaties that were identified in other papers to be of importance for FDI and use them in regressions? (e.g. anti-treaty shopping provisions) If the authors decide to stick with their current indicator, they should at least discuss how the heterogeneity of the DTTs may interact with their results.

The study has a lot of potential to broaden our understanding of the effects of double taxation treaties, especially through the new elements introduced by the study. However, given the concerns listed above, I am not sure how reliable the results are.