Reply

Response to Discussant "Convergence of Accounting Standards and Foreign Direct Investment"

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1. Introduction

Minyue Dong provides a thorough discussion of our paper. In what follows, we offer a response to the issues raised by the discussant.

2. Theory and methodology

The discussant asks why it makes sense to explain FDI by IFRS. Specifically, there are two questions. First, is similarity in accounting systems so important as to affect FDI decisions? Second, if there is a positive association between FDI and IFRS, how can one ascertain that the causality goes from IFRS to FDI, but not the other way around?

As indicated by the discussant, our hypotheses are based on the recognition that institutional infrastructures such as accounting systems are important when studying international business activities (Dunning, 2005, 2006). Convergence in accounting standards reduces information barriers faced by foreign investors, thereby facilitating cross-border capital movement. The discussant indicates that this is a valid but a general argument, and the specific question is whether the effect from accounting standards harmonization is sufficiently large to impact FDI decision. We agree that this is fundamentally an empirical question.

Therefore, the empirical design becomes crucial.

The discussant recognizes that one innovation of our empirical design is the use of bilateral FDI flows among 30 OECD countries, which overcomes the limitation in prior work arising from the small number of country-level observations. Indeed, a relatively large sample size is essential for isolating the effect of IFRS from other institutional factors. This issue is related to a concern of the discussant about omitted variables. There are so many factors that impact FDI decisions, how can we identify the effect of IFRS? One way is to include a long list of control variables. We argue, however, that the approach of adding more control variables is a less effective way to resolve the omitted variable issue. First, it is impossible to include an exhaustive list of variables in the regression. Second, when more and more control variables are added, the number of observations without missing values for the regression tends to fall significantly. We argue that a more effective way of solving the omitted variable issue is to perform panel-data regressions with time and country-pair dummies. Our baseline results are obtained after controlling for both the time fixed effects and country-pair fixed effects, so we believe that they provide evidence of a positive association between FDI and IFRS that is less subject to the omitted variable issue.

But how can we make sure that the causality goes from IFRS to FDI, not the other way around? The discussant expresses the concern of a possible reverse causality by stating that an increase in FDI may push companies to adopt IFRS to fulfill information requests of foreign investors. We admit that this is a legitimate concern. However, the possibility of reverse causality is relatively low in our study because we use bilateral FDI between a pair of countries as the FDI variable. A country's IFRS adoption may be influenced by its overall level of FDI with the rest of the world, but is much less affected by the country's FDI with an individual country.

3. Data and measurement

The discussant raises several questions regarding the data used in our study. First, the data do not cover non-OECD countries (such as China and Russia) that are important in the global FDI flow. Second, the data do not distinguish between FDI in different legal forms while the accounting issue is less relevant for some forms of FDI. Third, the FDI data are based on all companies while the IFRS mandatory adoption applies only to listed companies. We admit these data limitations. As recognized by the discussant, one advantage of our study is the use of bilateral FDI-flow data, which overcomes the limitation in prior work due to the small number of country-level observations. To take advantage of bilateral FDI data, we have to restrict our sample to OECD countries. However, the lack of distinction between listed and non-listed companies in measuring IFRS adoption effect should not distract from our main results as this data limitation should be biased against finding significant results, but not against overestimating the statistical significance. Our goal is rather moderate: we hope to detect some empirical relationships between IFRS and FDI at the aggregate level despite imperfect measurement of IFRS and FDI variables. In the concluding section of our paper, we admit that concentration of our study on 30 OECD countries limits the generalizability of our results.

The discussant also has some concerns regarding measurement of FDI and IFRS conformity. In the baseline regressions, we use the total absolute value of FDI flows (FDI

inflow plus FDI outflow, including both FDI investments and disinvestments) to measure the FDI level. This is a measure of FDI traffic in bilateral FDI flows. It is true that the absolute value of FDI cannot distinguish between FDI investment and FDI disinvestment, but the OECD data does not allow us to make such a distinction. Our theoretical argument is built on the information asymmetry theory in which the IFRS adoption is considered to facilitate cross-border capital movement. Considering that the IFRS adoption facilitates both FDI investment and FDI disinvestment, we group them together in the total value of FDI flows. In the framework of bilateral FDI flows, an outflow of FDI from country i to country j ($FDIOUT_{ij}$) is indeed the inflow of FDI from country j to country i ($FDIIN_{ji}$). Therefore, the total value of FDI flows is the sum of FDI inflow from country i to country j and FDI inflow from country j to country i, which is consistent with the empirical literature on FDI determination.

In constructing IFRS conformity indices, we face a constraint of data availability. The data set gives us a measure of a country's conformity to IFRS ($CONFORM_i$). In the framework of bilateral FDI relationship, however, we need a measure of IFRS conformity between the two partner countries. Without data on such a variable, we assume that the degree of mutual IFRS conformity is a positive function of the IFRS conformity indices of the two countries. In our baseline regressions, we measure this variable by the average value of the IFRS conformity indices of the two countries ($ACONFORM_{ij}$). In the robustness checks, we use the geometric mean instead of the arithmetic mean. The discussant worries that the high correlation between $ACONFORM_{ij}$ and the two individual conformity indices may lead to multicollinearity. We are aware of this potential problem and thus we do not place $ACONFORM_{ij}$ and the two individual conformity indices in the same regression. The discussant also worries that in testing H2 the use of $ACONFORM_{ij}$ may carry the risk that the influence of individual countries' IFRS conformity indices is double-counted, as the use of the average of IFRS conformity indices for partner countries fails to proxy for the similarity of accounting systems between partner countries. We believe this potential problem is mitigated because we measure the similarity of accounting systems with data from a different source. In testing H2, $ACONFORM_{ij}$ measures the degree of mutual IFRS conformity, while another variable DA_{ij} measures differences in accounting systems between partner countries. The construction of the two variables uses data whose sources are independent.

4. Empirical results

The paper's main results are those on the cross-section correlation between FDI and IFRS conformity. Prior to the full convergence to IFRS, countries had different degrees of IFRS conformity. Table 5 in our paper shows that higher IFRS conformity in FDI partner countries is associated with higher FDI between them after controlling for unobserved time and country-pair fixed effects (H1a). To further examine the moderate effect of similarity in accounting system (H2), we construct two variables that measure mutual IFRS conformity (ACONFORM) and dissimilarity in accounting system (DA). The discussant questions why we change dummy variables for accounting system (BRITISH, CTEURO) to DA. Our answer is that BRITISH and CTEURO are dummy variables for individual countries, which do not measure similarity or dissimilarity in accounting system between two partner countries. The discussant raises a concern about not including DA in

regression (6.3). The paper explains in footnote 19 that DA does not appear as an independent variable because it is a time-invariant variable and the regression includes country-pair fixed effects. Nevertheless, we admit that there may be an econometric issue here and this result should be interpreted with extra caution. In addition, we have corrected the typographical errors in Table 6 of our paper pointed out by the discussant.

   One limitation of our study is that it examines only convergence towards IFRS and ignores convergence in other accounting standards. The discussant correctly points out that the accounting quality based on the U.S. Generally Accepted Accounting Principles (U.S. GAAP) is underestimated in our study. We caution readers to recognize this limitation of our study in interpreting the results and suggest this as a potential future research avenue.