FDI

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FDI are typically decomposed into greenfield FDI (FDI^G) and non-greenfield FDI (FDI^P where the P stands for purchase). In both case, FDI will lead to private equity accumulation[1] by the rest of the world:

$$FDI = FDI^G + FDI^P \tag{1}$$

$$E\dot{Q}_W = FDI \cdot e^N \tag{2}$$

In the case of Greenfield FDI, we take the hypothesis that they add up onto realised investment to increase total investment, while non-greenfield do not lead to any extra investment.

$$I = I^R + FDI^G \cdot e^N \tag{3}$$

This extra capital accumulation leads to an increase in the equity of firms as physical capital accumulates on the assets side without an increase in liabilities.

In the case of non-greenfield FDI, we assume that firms and banks issue new equity to foreign investors and dilute the existing stakeholders when they receive this type of FDI. As a result, FDI^P reduces financing needs of firms (TFN_F) and banks (TFN_B). This would also imply that when calculating distributed profits, we need to take into account ownership structure of firms and banks.

$$TFN_F = I^d - s_F.prof_F^e - \xi_f \cdot FDI^P.e_N \tag{4}$$

$$TFN_B = [\dot{L}^D + \dot{B}_G^B] + rrr(D^D + \dot{D}^D) - (\dot{D}^D + \dot{O}F) - R^D - (1-\xi_f) \cdot FDI^P \cdot e^N. \tag{5}$$

In Brazil, as for many if not all countries, private equity owners are households, non-financial corporations and financial corporations. But we do not have details regarding who sells equity to the rest of the world. We assume that it is unlikely for households to sell equity to rest of the world in the form of FDI, and government sales are cases of privatization which we do not model. Therefore, FDI is distributed to firms and banks.

[1] In practice, FDI can also take the form of loans. TODO ADD A NOTE ON THE NATURE OF SUCH LOANS AND REFER TO BOP MANUAL. In the case of Brazil, the quantity of FDI labelled as loans is marginal, this is not the case for other countries however.

$$EQ_F^{\dot{R}OW} = \xi_f \cdot FDI^P \cdot e^N \tag{6}$$

$$EQ_B^{\dot{R}OW} = (1 - \xi_f) \cdot FDI^P \cdot e^N \tag{7}$$

$$\tag{8}$$

where ξ_f is the share of non-greenfield FDI going towards firms. For simplicity, we assume that these share are equal to the share of private equity issued by firms and banks.

NOTE:We could take consolidated data and assume that NFCs don't own private equity emitted by NFCS. There is also the issue of banks emitting private equity and hence FDI buying banks.as well as banks holding private equity due to portfolio allocation.