Foreign Direct Investment in Western Balkans: What is the Right Approach to The Puzzling Panel?

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Introduction

- The long run impact of FDI on output should assume dynamic panel framework, and misleading implementation of panel estimation proce-dure is even more probable in that case
- Homogeneity of the region is questionable.
- Assumption of homogenous panel is more probable in microeconomics
- PVAR has its limitation in the case of West Balkan
- FAVARX approach does not leave any suspicion in positive impact of FDI
- Additional improvements are possible if additional sign restrictions are introduced.
- This specific approach could be set as point identified or as set of Bayesian priors.
- There is a comprise between this two choices presented by Uhligs penalty function.

Literature

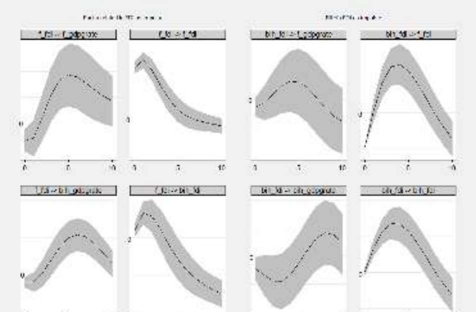
- Balasubramanyam, Salisu and Sapsford present results which suggest that FDI affect is conditioned by both the size of the domestic market and the competitive climate in relation to local producers
- De Mello has shown that growth of recipient country by technological upgrading and knowledge spillovers is conditioned on the level of com-plementarity and substitution between FDI and domestic investments. Also,he had used wide range of countries that were divided in two relative homogenous groups: OECD and non OECD countries
- West Balkan countries are transition economies. In that case it is pos-sible to have spillovers, but these have effects should not be overrated

Literature & Methodology

- B. S. Bernanke, J. Boivin and P. Eliasz: FAVAR Approach The key idea is that model catches the impact of observable economic variables but also the impact of unobserved factors.
- Uhligs Penalty Function Method which Partial identification method that stands for compromise between Uhligs Rejection Method and Rubio-Ramirez et als (2010) Rejection Method.
  - The penalty function is adjusted for the scale of the variables and the sign of the restriction because all failures across the impulse response symmetrically.
- Baumeister and Hamilton, Sign Restriction SVAR, and Useful Prior Information
  - traditional sign restriction methodology actually generates draws from prior distribution that they never even acknowledged that they had assumed
  - it is shown that traditional sign-identified VARS basically function as there are the prior distributions

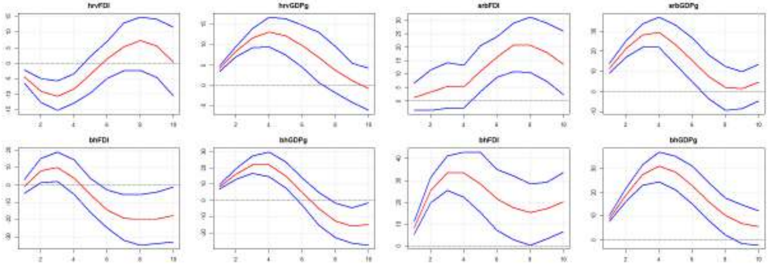
FAVARX: f_fdi → bih_fdi → f_gdpgrate → bih_gdpgrate

-BofA Merrill Lynch Euro High Yield Index Option-Adjusted Spread is exogenous.
- Reasonable to assume that regional FDI are more resilient on the impact from BHs FDI then vice versa (*Cholesky*, *heading*)?
-Note: relation between regional FDI factor and BHs FDI: in short term there is clear positive effect of the regional FDI factor on the FDI in BH, but in a long term it seems that region absorbs some FDI that could be destined to BH



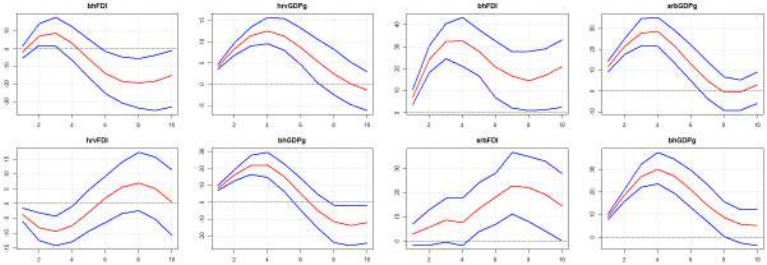
Sign restr. Cro and Srb FDIs as shock

- BVAR model with a flat Normal inverted-Wishart prior. - not only technical adjustments , but also two main regional influencers for BH, Croatia and Serbia, are identified
- Further, sign restriction; for first 3Q FDIs could only have positive effect on output
- Croatia does not record such huge positive impact of FDIs on BH output, as this is the case with Serbia
- FDIs in Serbia and BH are more linked?



Sign restr. BH FDIs as shock

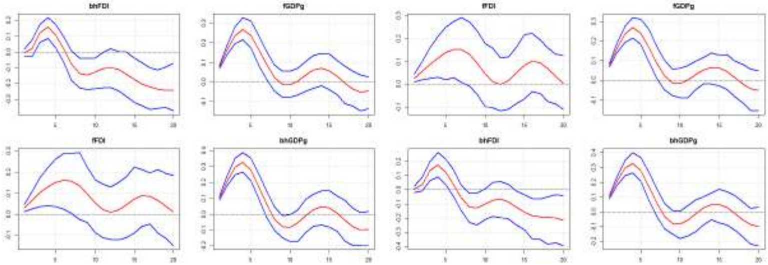
- FDI in BH have positive impact on output in Croatia and Serbia, because large proportion of consumption goes on imported goods and services from these countries
- negative reaction of FDIs in Croatia on same shock, could mean that simply BH and Croatia are not the part of the same investment pull?
- What is interesting that we have reaction of FDIs in Albania on the same line as in Serbia and that FDIs in FYRM give almost no reaction.



Sign restr.+ factors

So, .ifferent reaction of FDIs in Croatia and Serbia on FDIs in BH as shock is obvious (figure 7 and 9) and this could be one additional argu-ment for the complexity of the region and as consequence. But, what happens when we have sign restriction in FAVAR approach?

- Regions FDIs have positive impact on BHs FDIs and vice versa
- Regions FDIs have positive impact on BHs and regions output
- Reaction of BHs and regions output on regions FDIs is almost the same



Conclusion

- BH is important in regional framework and could play proactive role in that context
- FDIs come in region $\rightarrow$ the FDIs in BH will be on same wave.
- BH highly depends on the regional factor and observing its economy is such context, imposes the doubt in direct effect of exogenous shocks from the EU
- index related with interest rates in EU that is included as exogenous variable, does not provide significant effect on the BHs output, directly $\rightarrow$ there is some mild negative effect on the regional GDP growth rate factor and that kind of reaction is expected according to usu-al reaction of output on interest rates.

Conclusion

- Sign restriction mode: for the first 5 quartiles is that there is incline of BHs FDIs while there is the incline of regionals FDIs; after that initial period we do not have that kind of synchronization between region and BH
- identification were I assumed that for the first 3 lags FDIs (regional or BHs) can have only positive impact on output (regional or BHs) seems to give significant improvement to the results
- By choosing Uhiligs penalty function I hope to dodge the trap that is possible with classical point identified restriction
- If I need to end up with robust model that is basically using some set of priors, I find it sufficient to use this approach, and that does not mean that further development in Bayesian framework should be neglected.
- Overall regional (financial) integration could be seen as high, but BHs role as regional player could not be seen only in one dimension.