FDI round-tripping: what are the main factors?

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Extended abstract

In the world economy, multinational companies (MNCs) play an ever increasing role. Their foreign activities are connected to FDI (foreign direct investment), thus their international operations can be described through using FDI statistics. However, FDI is an incomplete measure of the international activities of MNCs (Lipsey, 2007) because there are an increasing number of transactions recorded as FDI, which do not fully comply with the operational definition of FDI. For example, there are transactions, which should be recorded as FDI, while there is no "new" capital involved, such as company reorganisations (UNCTAD, 2016). Changes in country-level regulations induce flows, which again are not connected to "real" capital investment (Kerner, 2014). Investments in offshore financial centres, channelled between the ultimate home and host countries, are increasing considerably and thus they represent a growing share of global FDI flows (Jones and Temouri, 2016). Furthermore, the increased use of tax havens and developed countries offering beneficial tax regulations inflates FDI flow data more and more often (Damgaard et al., 2019; Haberly, Wójcik, 2014). Countries participate to different extent in this process, thus country-level data are also affected (see e.g. Sutherland et al, 2019 for China).

Our analysis concentrates on roundtripping. Roundtripping should be first differentiated from transhipment, when the multinational company invests in a third country through using one or more intermediary countries, the aim of which can be organisational, or to conceal the real origin of the investment or to enjoy tax benefits (Kalotay, 2012). In the case of roundtripping, the multinational firm invests in its own home country with the intermediation of a foreign country. Thus in this case, foreign direct investment is not foreign (Aykut et al., 2017). Obviously, roundtripping inflates both inward and outward FDI, basically it adds to both sides investments (with the exception when the outward flow takes the form of cash or portfolio investment, which may happen (Sass and Vlckova, 2019)), which is not originating in and not destined to in reality a foreign country.

Round-tripping is important from an economic policy perspective, because it is a way to avoid certain taxes and regulations, and it is important from a business perspective as well, as the "round-tripped" FDI-related company is not foreign-owned in reality. Furthermore, it is also important from the point of view of data, because available statistics present a distorted picture about the regional and country breakdown of FDI, due to the use of intermediary country or countries and thus double or triple (or even more) counting of the same direct capital flow.

According to the literature, round-tripping may be motivated by presumptive financial gains from differences in corporate tax rates and possibly also from the entitlement to incentives or preferential treatment normally offered to foreign firms only. Other reasons behind round-tripping include political and institutional factors such as access to foreign capital markets, better financial services, classified financial transactions or concealment of the true identity of the investor. Round-tripping can even serve "system escape" purposes to avoid excessive state control, high costs of start-up regulations or uncertainties in general. The literature analysed round-tripping motives at an individual country level (country case studies on Russia and China mainly), or econometric studies, where roundtripping is lumped together with transhipment, but little is known about its importance and characteristics from a country of origin perspective.

This study presents short country case studies in order to find possible explanations for round-tripping for Austria, Czechia and Hungary and documenting through these country cases the possible motivating factors present in OECD member countries. In the Czech Republic we show the most extensive roundtripping in the country group, organised by Czech oligarchs, who set up the headquarters of their holding companies in European countries with beneficial regulations and/or with a high level of financial secrecy, such as in the Netherlands, Luxemburg and Switzerland. In Austria, in-between the two other countries, certain family-owned firms integrate in the network of their companies, a foreign subsidiary in the above developed economies. In the case of Hungary, with the lowest level of roundtripping, we identified just two firms, which are ultimately Hungarian-owned, through a foreign subsidiary set up in the first case in Austria, in the second case in Cyprus.

Furthermore, our study examines the determinants of round-tripping of FDI using a novel database compiled from BPM6-BMD4 FDI data for 21 OECD-member economies for the period 2013-19.

We used the following model:

$$\frac{roundtripping\ inward\ FDI\ stock_i}{inward\ FDI\ stock_i} \cdot 100 = \beta_0 + \beta_1 \ln(GDPpCapita)_i + \beta_2 \ [\![ln(Population)]\!]\_i + \beta_3 FDI\ restrictiveness_i + \beta_4 entry\ costs_i + \beta_5\ taxrev + \beta_6\ legal + \beta_7\ KOFecon + \beta_8\ KOFfin + \varepsilon_i,$$

where i denotes the country and ln() the natural logarithm and ε_i is the error term. The dependent variable is ⟦roundtripping inward FDI stock⟧ _i/ ⟦inward FDI stock⟧ _i ·100 measures the ratio of round-tripping inward FDI stock to total inward FDI stock

Independent variables include:

- GDPpCapita in USD as a proxy of the level of development of the country
- population as a proxy of country size
- FDI restrictiveness index of the OECD
- business climate measured as entry costs: entry_tp_d: days required to start a business + number of procedures to start a business
- Legal type (Anglo-Saxon or German)
- Tax burden measured as tax revenues of the government in GDP
- Globalisation level measured by the KOF economic globalisation and overall globalisation index

Data sources are the following: GDP per capita, population, entry costs, legal type: CEPII; BMD4 FDI data: OECD; FDI restrictiveness index: OECD; Tax revenues/GDP: OECD; KOF globalisation indexes: KOF Swiss Economic Institute, Zürich.

There were some issues that we had to address when we estimated the panel models. First, Hausman tests implied that fixed effect models are preferred against random effect specifications. Second, modified Wald tests for group wise heteroskedasticity in fixed effect regression models indicated the presence of heteroskedasticity. Third, Wooldridge's test for autocorrelation in panel data was conducted and the null hypothesis of no first order autocorrelation was rejected at the critical 1 percent significance level. Given these last two findings, the error structure was assumed to be heteroskedastic, autocorrelated up to some lag, and possibly correlated between countries. Thus we estimated our models with robust Driscoll-Kraay standard errors.

As far as our results are concerned, we show that the share of round-tripping related FDI in total inward FDI increases with the level of GDP per capita of the country of origin, decreases with its size (measured by the population). It increases with entry barriers (days required to start a business + number of procedures to start a business) and with tax levels (measured by the share of tax revenues in GDP).

More restrictive FDI environment (measured by the FDI restrictiveness index) goes together with less round-tripping. Thus these factors are relevant for mid- to highly developed countries. In the case of emerging economies, explanatory factors of course may differ from these – this is one possible avenue for further research.

Our results' main novelty is, that taxes still matter! Higher the tax burden, larger the roundtripping – this is obvious based on theories and country studies (see e.g. Aykut et al., 2017 or Sass and Vlcková, 2019), but it is opposed to the results of other empirical studies (see e.g. Jones and Temouri, 2016). This result is especially important in the time when negotiations concerning the global minimum tax are going on.

Limitations of our research results come from the fact, that we could include in the analysis a limited number of OECD (highly or mid-developed) countries.

Further research is planned in numerous areas. The link to multinational activity is obvious and explains parts of roundtripping, certain elements of the home country environment are or may be also important. Thus we would like to include additional factors on the home country environment and institutions. Furthermore, the inclusion of other, less developed countries would nuance the results and would call the attention to the fact that there may be different set of factors influencing roundtripping at the different level of development. UNCTAD estimations on roundtripping in around fifty countries, including less developed ones, and the availability of these data for more than one year now would help our analysis in this area. Also for the aim of identifying roundtripping factors in less developed countries, country case studies of less developed countries (especially China, India and Russia, but also smaller sized economies) could also help our analysis.

Keywords: foreign direct investment; roundtripping; OECD countries, BPM6-BMD4 data, Driscoll-Kraay standard errors

JEL: F21, F23, H26

References:

Aykut, D., Sanghi, A., & Kosmidou, G. (2017) What to do when foreign direct investment is not direct or foreign: FDI round tripping. The World Bank.

Damgaard, J.; Elkjaer, T. and Johannesen, N. (2019) The Rise of Phantom Investments. FINANCE & DEVELOPMENT, SEPTEMBER 2019, VOL. 56, NO. 3.

Haberly, D.; Wojcik D. (2014) Regional blocks and Imperial Legacies: Mapping the Global Offshore FDI Network, Journal of Economic Geography, Oxford University Press

Jones, C., & Temouri, Y. (2016) The determinants of tax haven FDI. Journal of World Business, 51(2), 237-250.

Kalotay, K. (2012): "Indirect FDI". The Journal of World Investment & Trade 13(4): 542-555.

Kerner, A. (2014) What We Talk About When We Talk About Foreign Direct Investment. International Studies Quarterly, Volume 58, Issue 4, December 2014, Pages 804–815,

Lipsey, R. E. (2007): Defining and Measuring the Location of FDI Output. NBER Working Paper, No. 12996., March.

Sass, M., Vlčkova J. (2019) Just look behind the data! Czech and Hungarian outward foreign direct investment and multinationals. *Acta Oeconomica*.

Sutherland, D., Hennart, J.-F. and Anderson, J. R. (2019) How does the routing of FDI to and via tax havens confound our understanding of Chinese MNE identity? a critical review of the empirical literature on Chinese MNEs, *Asian business & management*., 18 (5). pp. 337-359.