RECONSTRUCTION OF TIME SERIES

The reconstruction of Net FDI dataset is affordable only if your starting point consists in the current data of nowadays (2017 in this case, because data are already consolidated) and your back projection inmediately follows the path to the beginning of the series considered (1958).

 Methodological troubles are hopefully avoided when your reconstruction is in that direction, however there is not an econometric exercise inside this dossier. I am looking for the best temporal homogeneity on main variables chosen because they are data taken and handled from the sources treatment. In brief, there are not estimated data. The verisimilitude should be fine in order to get the best picture of main trends for the dataset concerned. Bias needs to be accepted conditioned to drawing the referred trends.

A variety of data resources were accessed at the European University Institute Library.

The times series got through this reconstruction are possibly the best chance, incluying all of those bias and inaccuracies, to achieve an appropriate representation of European FDI behaviour patterns during the 60 years of the period 1958-2017.

METHODOLOGY FOR COMPILATION OF FDI DATA

- The EUI Library has got some documental **sources by Eurostat** under custody that I checked out.

- The compilation of main **European** countries data (**6 foundators** basically) is based on Eurostat records. This source constitute the core of basic information for data collection, among them here you are the following references:

Office Statistique des Communautés Européennes (1969): *National Accounts 1958-1968*, 1969 Yearbook, Luxembourg.

Office Statistique des Communautés Européennes (1971): *National Accounts 1960-70*, 1971 Yearbook, Luxembourg.

https://ec.europa.eu/eurostat/web/exchange-and-interest-rates/data/database

Eurostat (1993): *National Accounts ESA Aggregates. 1970-1991*, Luxembourg, Office des publications officielles des Communautés européennes (printed in Belgium).

Eurostat (1996): *European system of accounts ESA 1995*, Luxembourg, Office des publications officielles des Communautés européennes (printed in Germany).

Eurostat (2002): European Union. Foreign Direct Investment Yearbook 2001. Data 1992-2000, Luxembourg, Office for Official Publications of the European Communities.

European Commission (2005): European business. Facts and figures. Data 1995-2004, Luxembourg, Office for official pubications of the european Commnunities.

EUROPEAN CAPITAL MOVEMENTS (FDI) 1958 2018   Supporting documentation

Eurostat/ Statistical office of the European Communities (2006): *Statistical portrait of the European Union 2007. 50 years of the Treaty of Rome establishing the EEC*, Luxembourg, Office for Official Publications of the European Communities.

Eurostat (2012): Chiffres clés de l'Europe, Luxembourg, Office des publications officielles des Communautés européennes,
https://ec.europa.eu/eurostat

Eurostat (2013): Statistics Explained Archive, vol. 1, General and Economic statistics, Luxembourg, December 2012.

https://ec.europa.eu/eurostat/web/balance-of-payments

https://appsso.eurostat.ec.europa.eu/nui/show.do

https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Euro

"The European aggregates will be compiled according to the old methodology (BPM5, BD3) for reference years up to 2012, and according to the new methodology (BPM6, BD4) from reference year 2013 onwards." See: *Implementing the new international standards for foreign direct investment (FDI) statistics*

European Union direct investments (BPM6) (bop_fdi6) Reference Metadata in Euro SDMX Metadata Structure (ESMS) Compiling agency: Statistical Office of the European Union (Eurostat).

htttp://www.imf.org/external/pubs/ft/bop/2007/bopman6.htm

OECD (2001), *International Direct Investment Statistics Yearbook 2000*, OECD Publishing, Paris, https://doi.org/10.1787/direct_invstat-2000-en-fr.

https://stats.oecd.org/viewhtml.aspx?datasetcode=SNA_TABLE4&lang=fr

- EUI Library allows to gaining access to the **wiiw Databases Central, East and Southeast Europe**, another relevant sources to the issue.
- The compilation of CESEE data is based in supporting documentation from Wienna Institute for International Economic Studies

    I take into account 12 countries from Central, East and Southeast Europe:

11 countries annexed to the European Union with available data (**wiiw FDI Database**)
There is no data for Malta neither for Cyprus, both belonging to the 10 countries that joined the EU in May 2004. On 1 Jannuary 2007 Bulgaria and Romania became members of the EU. Croatia acceded on 1 July 2013.

Owes to its potential explanatory power I include Russia among the 12 transition economies included in the analysis.

Bulgaria	FDI inflow	EUR mn	1990 - 2019
Bulgaria	FDI outflow	EUR mn	1995 - 2019
Croatia	FDI inflow	EUR mn	1993 - 2019
Croatia	FDI outflow	EUR mn	1993 - 2018
Czech Republic	FDI inflow	EUR mn	1990 - 2019
Czech Republic	FDI outflow	EUR mn	1992 - 2018
Estonia	FDI inflow	EUR mn	1992 - 2019
Estonia	FDI outflow	EUR mn	1992 - 2018
Hungary	FDI inflow	EUR mn	1990 - 2019
Hungary	FDI outflow	EUR mn	1993 - 2018
Latvia	FDI inflow	EUR mn	1992 - 2019
Latvia	FDI outflow	EUR mn	1992 - 2018
Lithuania	FDI inflow	EUR mn	1992 - 2019
Lithuania	FDI outflow	EUR mn	1995 - 2018
Poland	FDI inflow	EUR mn	1990 - 2019
Poland	FDI outflow	EUR mn	1991 - 2018
Romania	FDI inflow	EUR mn	1991 - 2019
Romania	FDI outflow	EUR mn	1990 - 2019
Russia	FDI inflow	EUR mn	1992 - 2019
Russia	FDI outflow	EUR mn	1992 - 2018
Slovakia	FDI inflow	EUR mn	1993 - 2019
Slovakia	FDI outflow	EUR mn	1993 - 2018
Slovenia	FDI inflow	EUR mn	1990 - 2019
Slovenia	FDI outflow	EUR mn	1990 - 2018

To compare with Eurostat Methodology, just in case, I am stating definitions from the next wiiw FDI Reports:

Gábor Hunya (wiiw), Jan Stankovsky (wifo) (2002, 48):

FDI is defined as a form of international capital movement that differs from other forms in the way and duration of the investor's commitment. In accordance with the IMF and OECD definition, capital investment abroad is regarded foreign direct investment if the purpose is to establish and maintain permanent equity relations with a foreign company and at the same time to exercise a noticeable influence on the management of that company (with portfolio investment, the emphasis is on earnings).

Direct investments have some further microeconomic peculiarities:

• they are concentrated investments, making up at least 10 percent of the target firm's nominal capital and can be as much as 100 percent;

• direct investments establish lasting relations between source and target firms. If investment takes the form of physical capital, it is less mobile than money; FDI has therefore a relatively long build-up period and is cumbersome to liquidate;

• FDI is a result of corporate-level decisions. The established subsidiary is part of the investor's strategy. Foreign direct investors acquire an active part in the decision-making process of the target firm.

Most Eastern European countries try to follow the IMF when compiling their FDI data. According to the international definition described in the IMF Balance of Payments Manual, Revision 5, FDI includes the following forms of capital transfers:

• equity investment in cash, • equity investment in kind, • reinvested profits, • loans from the parent company to the subsidiary.

These investments are aggregated in net terms (investment minus disinvestment) in a country. A basic methodological problem is to cover all these forms of investments. While all CEECs tend to follow the IMF definitions and methodological guidelines in their efforts to compile FDI data, serious differences appear in practice.

National methodologies are not always clearly defined and are often modified. There is a clear trend for increasing accuracy and broadening coverage. The main agency collecting and publishing FDI data is the national bank of the respective country.

FDI data are part of the balance of payments and are published in this framework. Also the statistical offices and other agencies publish data on FDI sometimes in more detail than the national banks.

See: Gábor Hunya (wiiw), Jan Stankovsky (wifo) (2002): *WIIW-WIFO DATABASE. Foreign Direct Investment in CEECS and the former Soviet Union with special attention to Austrian Fdi activities*, Wien. WIFO: ÖSTERREICHISCHES INSTITUT FÜR WIRTSCHAFTSFORSCHUNG

Gábor Hunya (wiiw), Jan Stankovsky (wifo) (2003): *WIIW-WIFO DATABASE. Foreign Direct Investment in CEECS and the former Soviet Union with special attention to Austrian Fdi activities*, Wien, July 2003.

Gábor Hunya (wiiw), Jan Stankovsky (wifo) (2004): *WIIW-WIFO DATABASE. Foreign Direct Investment in Central and Eastern Europe with Special Attention to Austrian FDI Activities in this Region, Wien, July 2004.*

Gábor Hunya and Monika Schwarzhappel (2012): *wiiw Database on Foreign Direct Investment in Central, East and Southeast Europe, 2012 Short-lived Recovery*, Wien, Wiener Institut für Internationale Wirtschaftsvergleiche

Gábor Hunya and Monika Schwarzhappel (2017): *FDI in Central, East and Southeast Europe: Recovery amid Stabilising Economic Growth. WIIW FDI REPORT 2017*, Wien, The Vienna Institute for International Economic Studies, June 2017.

NET FDI (OUTWARD - INWARD)

Eurostat calculation of Net FDI is always like this: FDI outflows minus FDI in the reporting economy under an annual basis. The partner considered for both type of FDI is the Rest of the World.

"Les États membres qui enregistrent une valeur positive on été des investisseurs nets dans le reste du monde, tandis qu'une valeur négative indique que l'État membre a été un bénéficiaire net d'IDE ("investissement direct étranger") en 2006". This statement is extracted from an Eurostat report and there are plentiful of other asserts througouth Eurostat documental papers that give us exactly same idea.

wiiw database calculation of Net FDI instead of the main principles applied by Eurostat, shows in some dataset the total bulk of Net FDI allocating as the "FDI, net" the addition of both FDI abroad (net) and FDI in the reporting economy (net), another type of figures then.

Nevertheless you can obtain from the sets of wiiww FDI databases the values that become from the broadly known operation: Outward minus Inward foreign direct investment flows, under an annual basis.

Every figures allocated like Net FDI in the dossier (Exel files) are obtained with this operation: Outward minus Inward investment flows, ever under an annual basis, either including EU powers or referred to CESEE countries. This is the way to rend understandable every comparison we need.

For flow data we rely first of all on the national banks of the FDI host countries. According to international standards, the balance of payments published by the national banks contains the information on FDI inflows and outflows. Both these figures are in net terms, investment minus disinvestment. See Gábor Hunya (2010, 5)

For analytical purposes FDI net is defined as inflow minus outflow See Gábor Hunya (2010, 12). Also see Gábor Hunya (wiiw), Jan Stankovsky (wifo) (2003, 11); (2004, 19)… (2013, 34)

The approach remain quite clear in this assessment: "Three countries had negative net FDI flows (outflows exceeded inflows) in 2016, of which Lithuania and Slovakia had current account deficits." See Gábor Hunya and Monika Schwarzhappel (2017): *FDI in Central, East and Southeast Europe: Recovery amid Stabilising Economic Growth WIIW FDI REPORT 2017,* Wien, Herausgeber, Verleger, p. 17.

Same idea is also checked in Gábor Hunya (2010): *wiiw Database on Foreign Direct Investment in Central, East and Southeast Europe, 2010, FDI in the CEECs Hit Hard by the Global Crisis, Wien, Wiener Institut für Internationale Wirtschaftsvergleiche,* May 2010. And as well in Gábor Hunya

(2013): *wiiw Database on Foreign Direct Investment in Central, East and Southeast Europe, 2013, .Growth Engine Stutters, Wien, Wiener Institut für Internationale Wirtschaftsvergleiche.*

Methodological explanations (wiiw FDI Report 2017, 34) are assessing "Netting out assets and liabilities results in the same amount as netting inflows and outflows in the (new) directional principle (FDI net is the same). The directional principle under BPM6 is used for FDI analysis and is provided in the wiiw FDI database and the wiiw FDI report". In other words "FDI net is defined as net incurrence of liabilities minus net adquisition of financial assets" (wiiw FDI Report 2017, 18). "FDI net means FDI inflow minus outflow" (wiiw FDI Report 2017, 44).

AVERAGE RETURN ON ASSETS (ROA)

The ROA (average return on assets) calculation follows same idea of National Accounts in both cases, United States of America and Europe. This idea has already been used by the Bureau of Economic Analysis (BEA), a dependent agency from the US Department of Commerce.

BEA, US Department of Commerce Methodology

Have a look to the definition by one of the BEA's authors: Lowe (1999; 59) "The outcome from each country got by assets that engendered rents (income) shared between US FDI position abroad at its historical cost each fiscal year".

Jeffrey H. Lowe (1999): "U.S. Direct Investment Abroad Detail for Historical-Cost Position and Related Capital and Income Flows, 1998", Survey of Current Business, September.

Eurostat Methodology

The Eurostat methodology described, for getting the "rate of return on direct investment" at the point number 3. Statistical presentation del European Union direct investments (BPM6) (bop_fdi6) seems coincident in its point number 3.2. (Classification system) with that already used by the Bureau of Economic Analysis (US Department of Commerce). See also Sixth edition of the IMF Balance of Payments Manual (BPM6) and OECD Benchmark definition of FDI Fourth Edition (BD4). Mentioned through the part 10.6. Documentation on methodology of BPM6.

You find out an example in *Globalisation patterns in EU trade and investment,* 4.4: Foreign direct investment — rates of return; Figure 3: Foreign direct investment, rates of return, 2017. See this Note: the rate of return is calculated as net income on investment / net investment position. Ranked on the average rate of return for direct investment abroad and direct investment in the reporting economy. *Source:* Eurostat (online data codes: bop_fdi6_pos and bop_fdi6_inc)

wiiw Database Methodology

There is another example getting in the definition made by Gábor Hunya (2014, 17): "The FDI-related income (outflow) relative to the inward FDI stock provides the rate of return on the foreign investment (table 4)". See   Wiener Institut für Internationale Wirtschaftsvergleiche (wiiw), *FDI Report 2014. Central, East and Southeast Europe. Hit by Deleveraging*. (Concept and analysis: Gábor Hunya, research economist at wiiw. Database and layout: Monika Schwarzhappel, head of the wiiw Statistics Department). As well as you find previously out in Gábor Hunya (2009, 16).

Gábor Hunya (2009): *wiiw Database on Foreign Direct Investment in Central, East and Southeast Europe, 2009, FDI in the CESEE under the Global Crisis: Sharp decline, Wien, Wiener Institut für Internationale Wirtschaftsvergleiche.*

PURCHASING POWER PARITY

For deflating series I used two PPP: Those from OECD and wiiw database.

PPP for GDP by OECD data series covers the lapse: 1960-2019
https://stats.oecd.org/viewhtml.aspx?datasetcode=SNA_TABLE4&lang=fr

PPP from wiiw database data series covers the lapse: 1989-2018

POPULATION AND GDP

Another indicators are involved in the explanation on "European capital movements (FDI), 1958-2018".

The evolution of population (totals, life expectancy at bird, infant mortality, unemployment rates···) as well as GDP (absolute figures and euro per capita) constitute a good help for interpreting the progress of FDI since the end of the Cold War.

Without considering the legal framework nor the international relations that were playing a role among FDI's main determining, it would be surely missed a more congruent interpretation on FDI performance.

EUROPEAN CAPITAL MOVEMENTS (FDI) 1958-2018

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EXCEL FILES, TABS and TOPICS

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2	**INFANT MORTALITY RATE IN THE CESEE COUNTRIES, 1950-2018**
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