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ESPON IRiE

Interregional Relations in Europe

Interregional FDI Flows in Europe
(University of Thessaly)

Pamplona, 24th November 2022

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ESPON Final Event
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Context

EU economic integration emaciates border obstacles and generates (releases) spatial dynamics that relate the flows of people, products, production factors, capital, and knowledge.

The debate concerning the distribution of the overall welfare gains from the EU economic integration process finds fertile ground since the size, the direction, and the composition of flows determine the prospects (and the limitations) for development.

Indeed, as the 'space of flows' (integration) affects the 'space of places' (development), the mix of opportunities and threats to EU territories continues to change.

Against such a backdrop, regional development strategies suffer from the lack of data on interregional relations.

Objectives

Within the ESPON IRiE project framework, the report on interregional FDI flows aims at:

- recording interregional FDI flows across the EU space (O-D matrices).
- overviewing the relatedness (interdependencies) among the EU regions.
- detecting the explanatory factors (drivers and barriers) of the interregional FDI flows across the EU space.
- feeding the discussion on future territorial and sectoral policies at the EU, national, and regional levels.

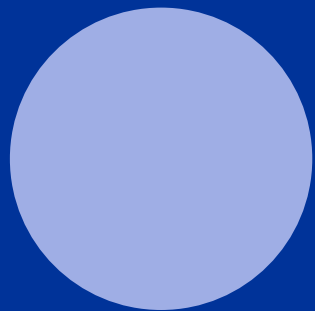
FDI Definition

FDI: “an investment involving a long-term relationship and reflecting a lasting interest and control by a foreign direct investor in a foreign direct enterprise”.

The main unit for the measurement of interregional FDI flows is shareholders' funds. Shareholders' funds represent the values of the foreign shareholders owing (each one) 10%+ of the equity funds in a company.

Within the ESPON IRiE project framework, the term “FDI” acquires an expansive interpretation as the within-country and the within-region direct investment flows are, also, considered.

→ Scientifically, such an interpretation allows for the study of the “border” effect with respect to investment flows.



Recording interregional FDI flows across the EU space

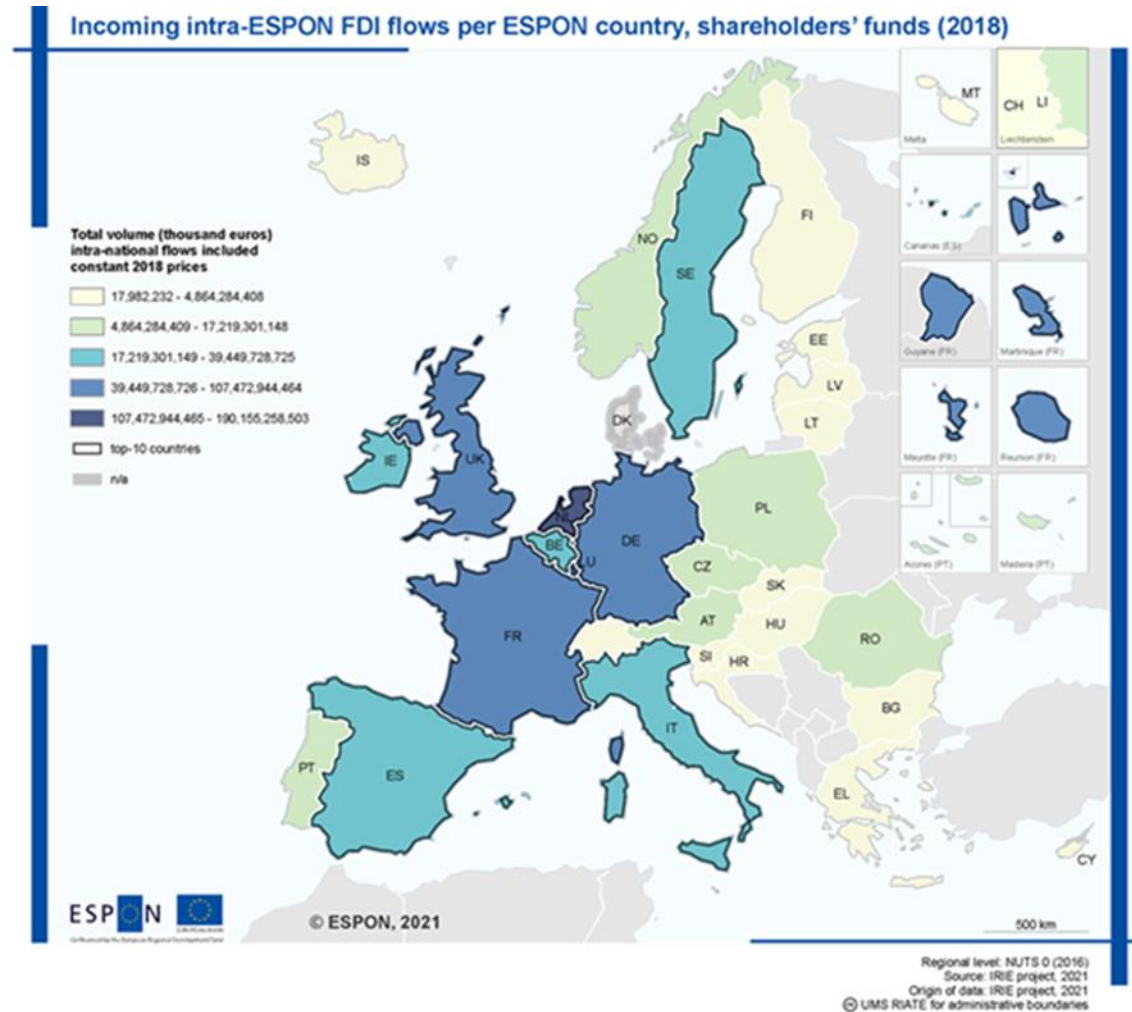
Specific Objective

- production and analysis of C2C and R2R (NUTS II), economy-wide and sector-specific (NACE 1), intra-ESPON FDI flows data (years 2010-2018)
- 32 ESPON countries [+ 44 “third” countries + RoW countries] / 329 ESPON NUTS II regions / 19 NACE 1-digit sectors / 9 years (2010-2018)
 - ESPON area: EU countries + UK + Switzerland + Lichtenstein + Norway + Iceland
- **Data Sources:**
 - **AMADEUS (BvD); aggregation of firm-level data**
 - **OECD / IMF / EUROSTAT**

Country Level (I)

- NL, LU, UK, FR, DE, ES, IT, BE, IE, and SE are the top-10 ESPON countries in terms of total volume incoming intra-ESPON FDI flows for the year 2018

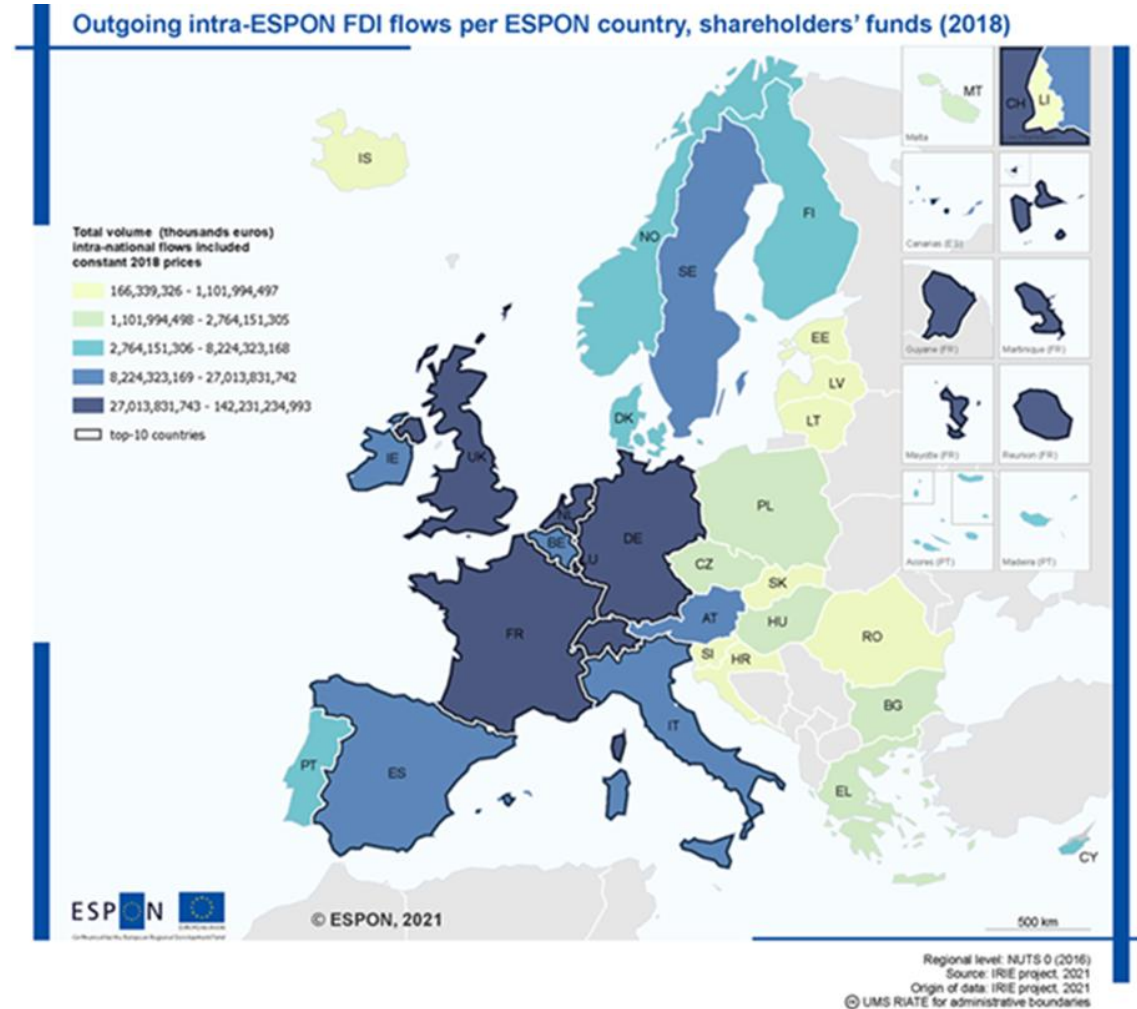
→ sectors C (manufacturing; 40.48%), G (wholesale and retail trade; 29.31%) and M (professional, scientific and technical activities; 5.37%) are the dominant ones.



Country Level (II)

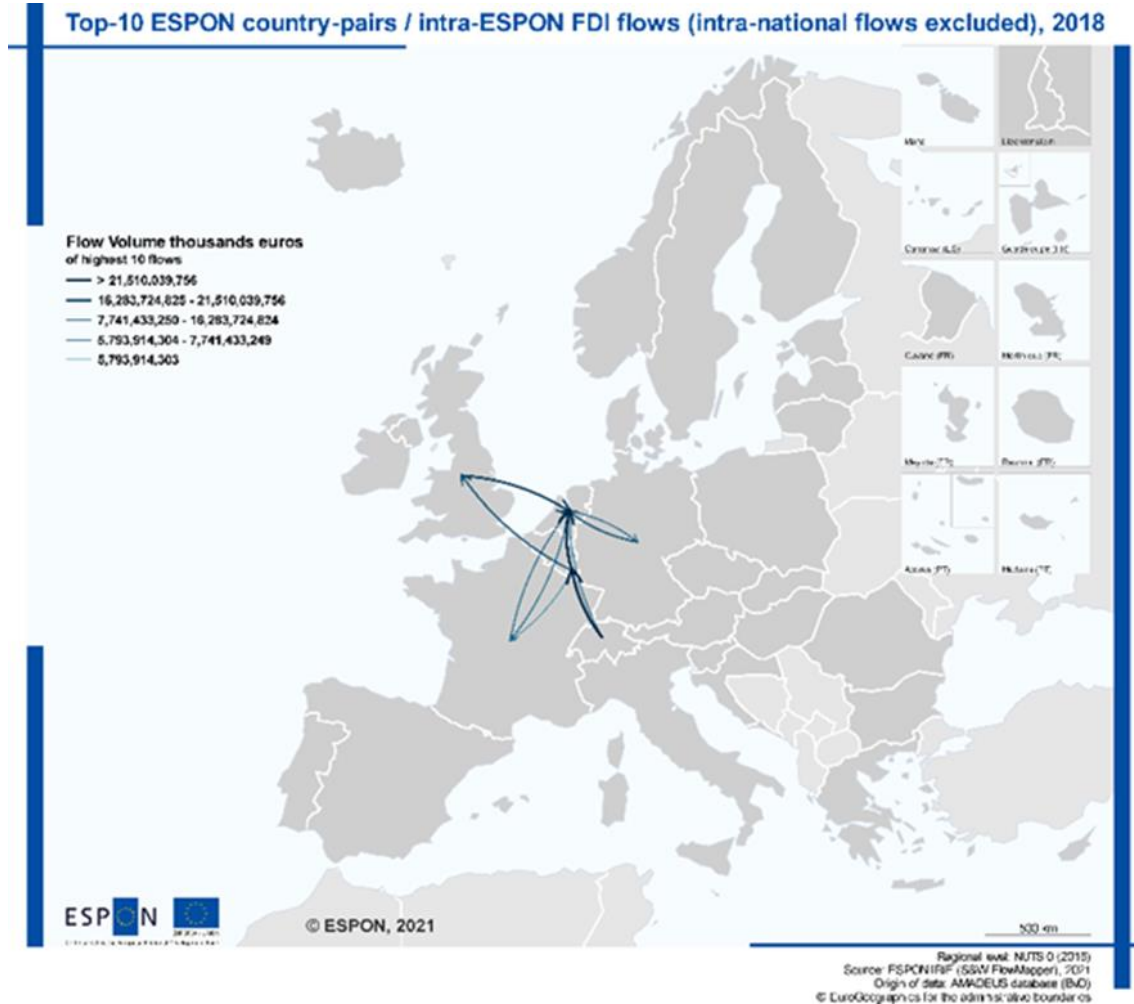
- NL, UK, LU, CH, DE, FR, ES, IT, BE, and IE are the top-10 ESPON countries in terms of total volume outgoing intra-ESPON FDI flows for the year 2018

→ sectors C (manufacturing; 38.53%), G (wholesale and retail trade; 22.73%) and D (electricity, gas and steam supply; 6.61%) are the dominant ones



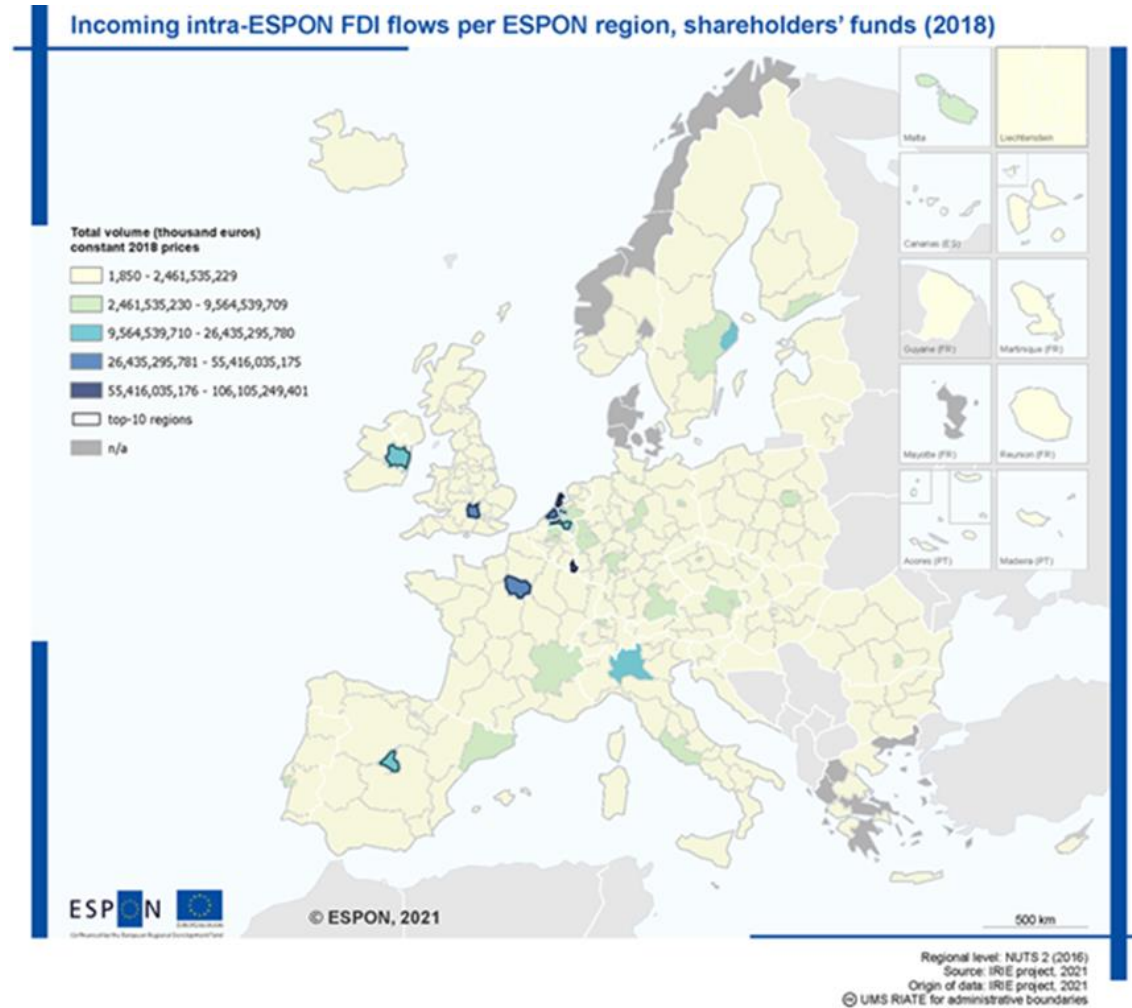
Country Level (III)

- LU-NL, UK-NL, DE-NL, CH-NL, NL-FR, NL-DE, CH-LU, LU-UK, FR-NL, and LU-FR are the top-10 ESPON country-pairs in terms of the total volume of intra-ESPON FDI flows during the year 2018.



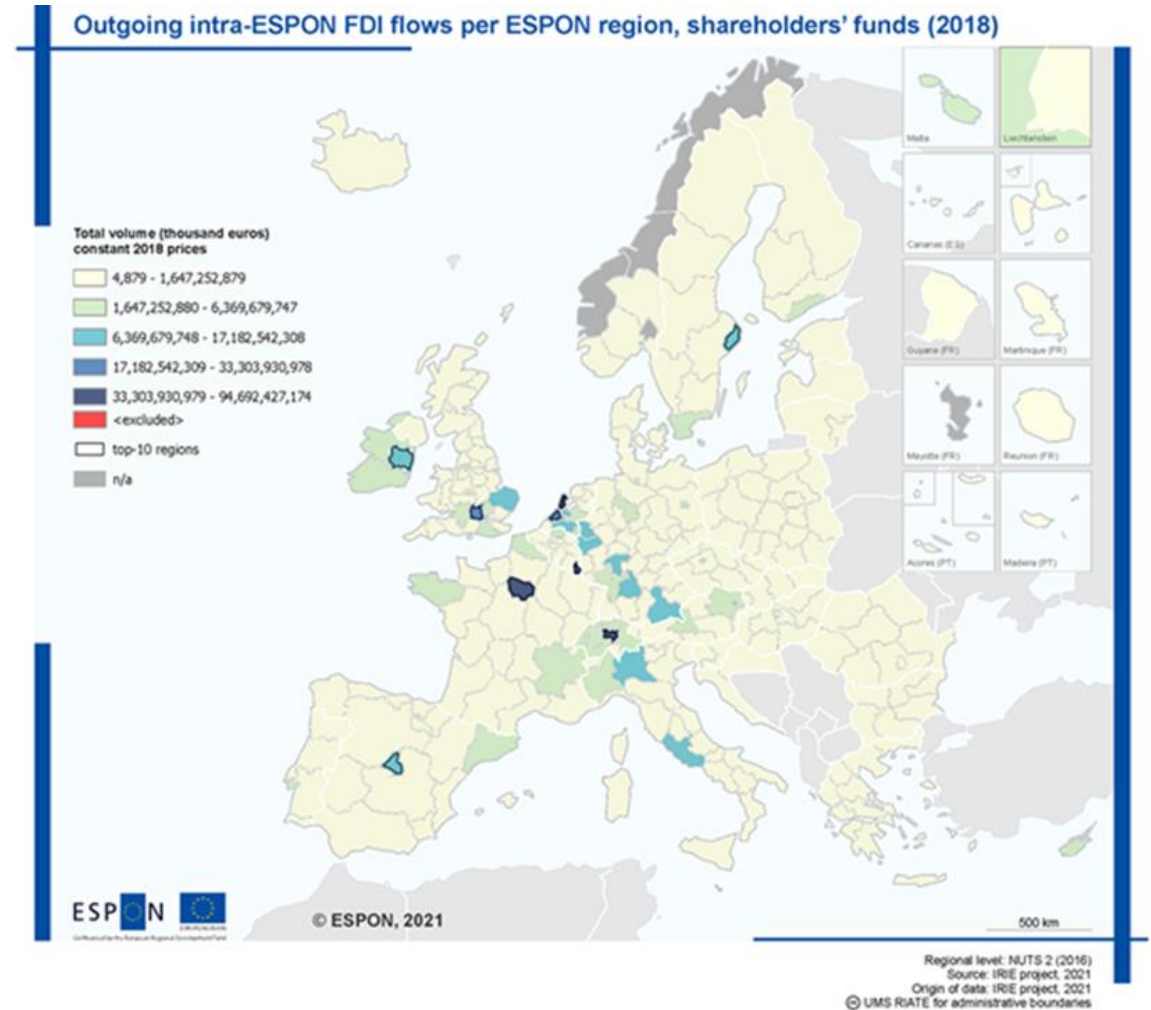
Regional Level (I)

- LU00, NL32, FR10, NL33, UKJ1, IE06, UKI3, ES30, NL31, and NL41 are the top-10 regions in terms of total-volume incoming intra-ESPON FDI flows during the year 2018.



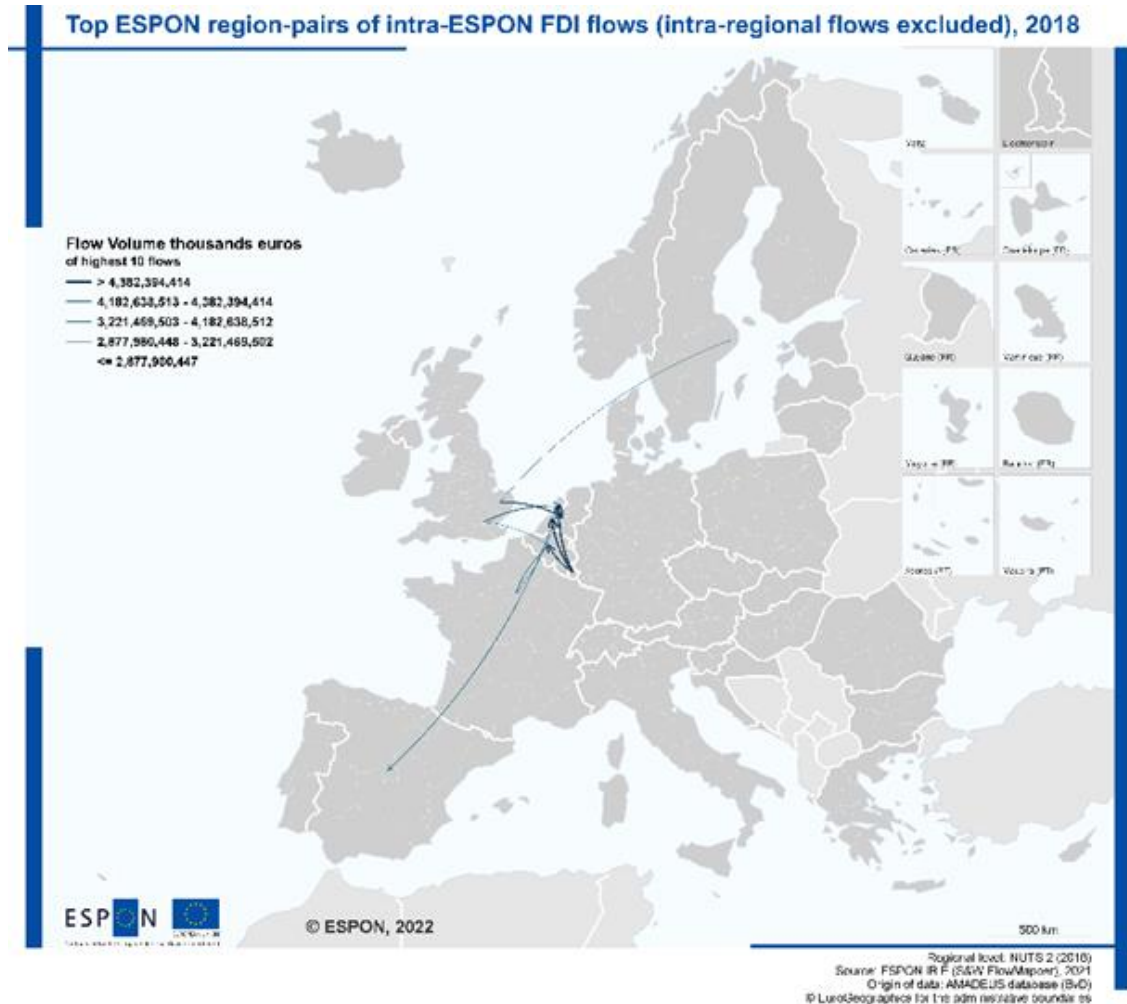
Regional Level (II)

- LU00, NL32, FR10, UKI3, NL33, UKJ1, ES30, SE11, CH06, and IE06 are the top-10 regions in terms of total-volume outgoing intra-ESPON FDI flows during the year 2018.



Regional Level (III)

- LU00-NL33, LU00-UKJ1, LU00-NL32, LU00-NL32, DE11-DE91, DEA2-NL31, UKI3-NL32, FR10-BE10, UKJ1-NL32, and UKH1-NL31 are the top-10 ESPON region-pairs in terms of the total volume of intra-ESPON FDI flows during the year 2018.



2

Overviewing the relatedness (interdependencies) among the EU regions

Specific Objective

- classification of EU regions, on the basis of common characteristics with respect to FDI flows, and creation of typologies (separately for incoming and outgoing FDI flows).

- **Methodology:**

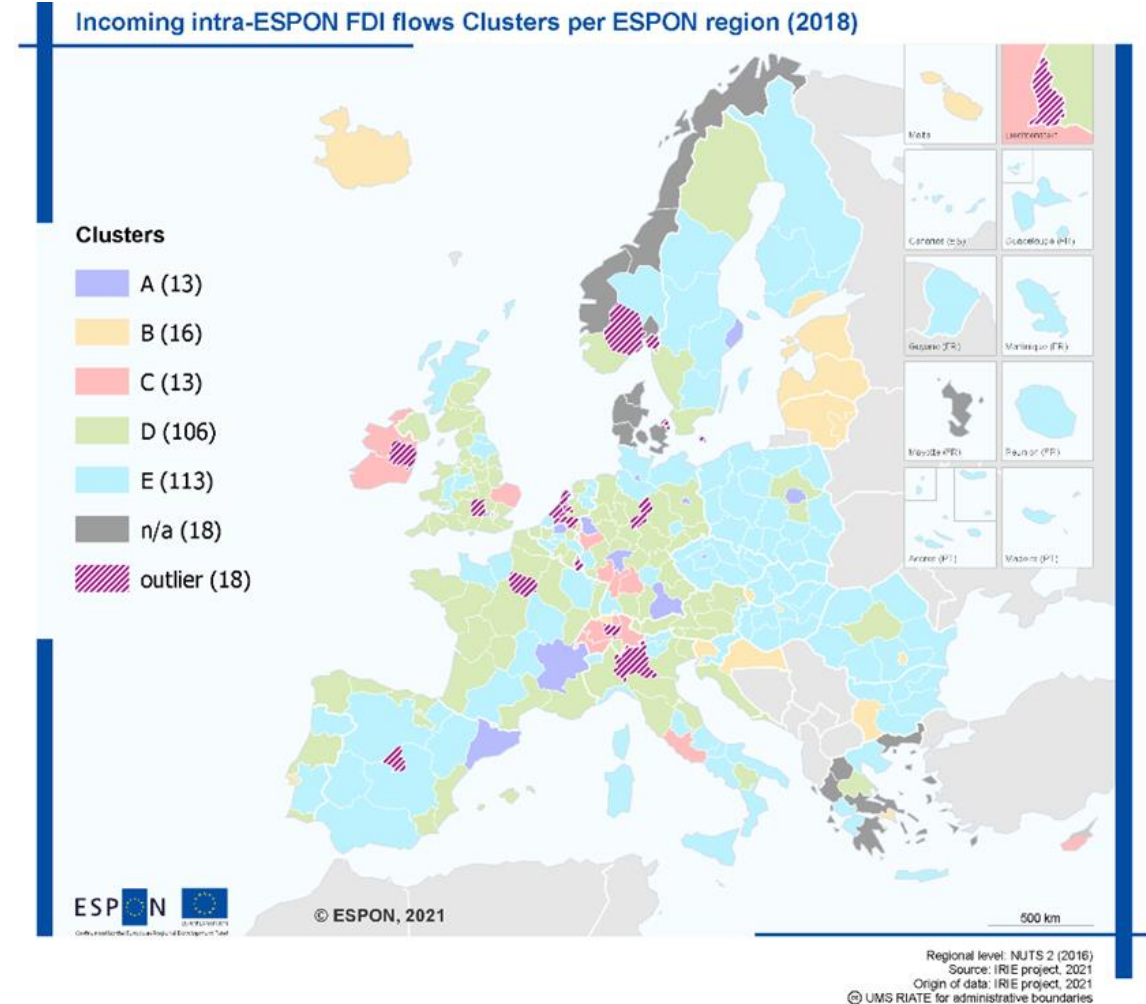
- **k-means (partition of n observations into k clusters in such a way that the within-cluster variances are minimized)**

- regional typologies are constructed on the basis of interregional FDI flows *per se* (i.e., seven (7) indicators)* and not on the basis of already-existing (i.e., pre-defined) regional typologies.

* INTENSITY, CONNECTIVITY, WEIGHTED INTENSITY, INTERREGIONAL BALANCE, NETWORK SELECTIVITY, EXTERNAL INFLUENCE, SEND-RECEIVE BALANCE

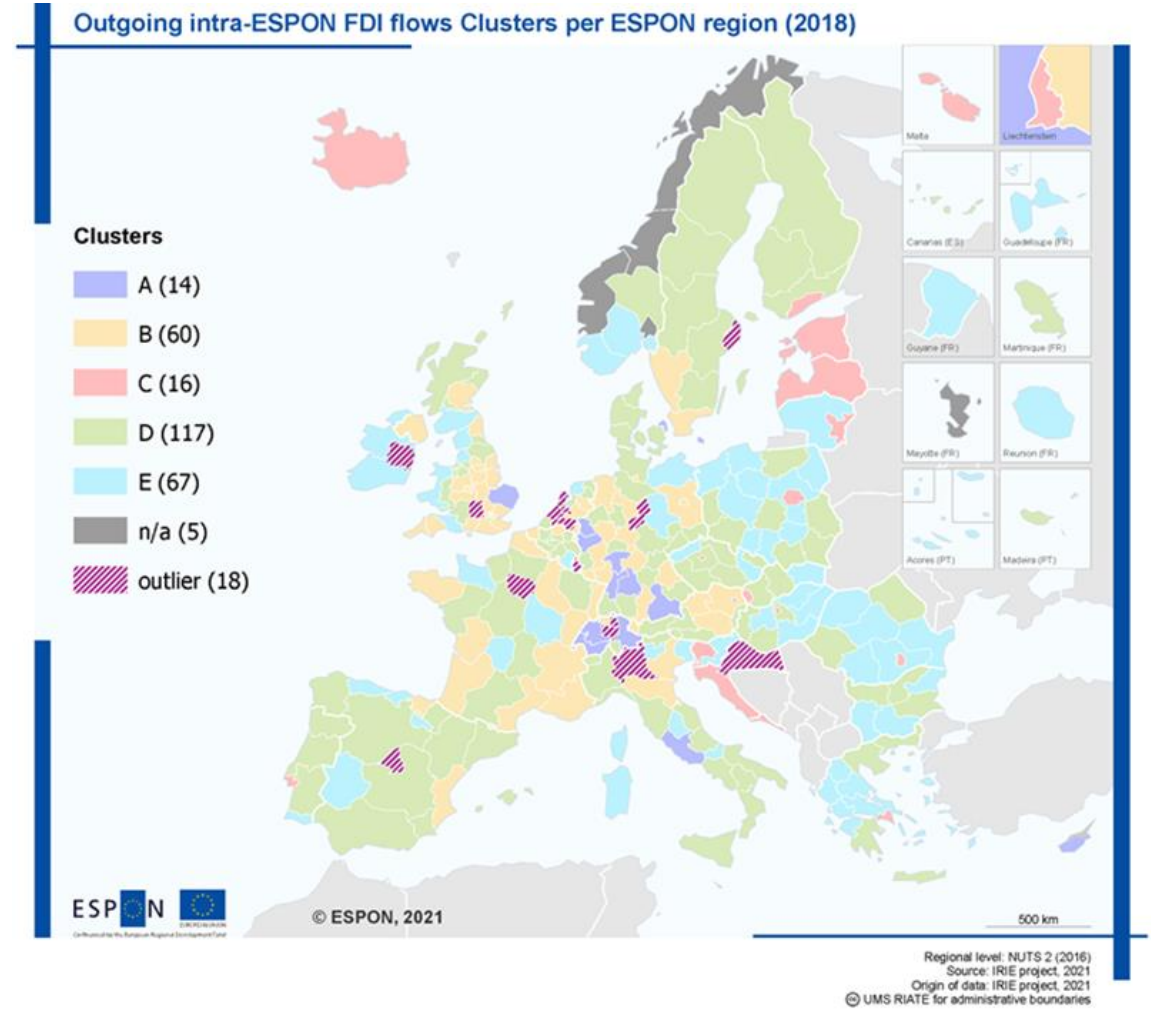
Regional Level (I)

- Regarding the incoming intra-ESPON FDI flows, five (5) clusters have been identified: a) cluster A (incoming FDI ESPON-wide hubs) – 13 regions, b) cluster B (incoming FDI national-wide hubs) – 16 regions, c) cluster C (third-level incoming FDI national-wide hubs) – 13 regions, d) cluster D (second-level incoming FDI influencers) – 106 regions, and e) cluster E (incoming FDI ESPON-wide relative hubs) – 113 regions.



Regional Level (II)

- Regarding the outgoing intra-ESPON FDI flows, five (5) clusters have been identified: a) cluster A (outgoing FDI ESPON-wide hubs) – 14 regions, b) cluster B (outgoing FDI influencers) – 60 regions, c) cluster C (outgoing FDI national-wide hubs) – 16 regions, d) cluster D (outgoing FDI independents) – 117 regions, and e) cluster E (outgoing FDI dependents) – 67 regions.



3

Detecting the explanatory factors (drivers and barriers) of the interregional FDI flows across the EU space.

Specific Objective

- detection of the drivers and barriers of interregional FDI flows
- **Methodology:**
 - **panel-data Poisson-type gravity model specification**
 - * **399,181 observations**

Regional Level (I)

Dependent	FDI level	FDI as share of GDP
	(1)	(2)
$\ln POP_{i,t}$	0.02	-0.02
$\ln POP_{j,t}$	1.33***	0.18
$\ln DIST_{j,i}$	-0.70***	-0.69**
$\ln PCGDP_{j,t}$	2.10***	1.54***
$\ln EXP(-1)_{j,i,t}$	0.12***	0.11***
$\ln ED TERT_{j,t}$	3.94***	3.72***
$SPECC_{i,t}$	0.17	-0.20
$POLSTAB_{i,t}$	0.36	0.62
constant	-30.61***	-32.29***
Country (origin & destination) and time fixed effects	YES	YES
Observations	399,831	399,831

Regional Level (II)

- The econometric analysis highlights that the population of the destination regions (only for absolute volume FDI), the level of per capita GDP of the destination regions, the exports from the FDI destination regions to the FDI origin regions (1-year time lag), and the presence of labor force with tertiary education in the destination regions are drivers for the attraction of FDI flows.
- In contrast, the econometric analysis highlights that the distance between the origin and the destination regions is a barrier to the attraction of FDI flows.

4

Feeding the discussion on future territorial and sectoral policies at the EU, national, and regional levels.

Specific Objective

- better understanding of the linkages among EU regions and provision of corresponding policy recommendations

Provision of Policy Recommendations

- The report on interregional FDI flows in the EU space fills an important gap in the current European statistical system, opening new fields for understanding the regional interlinkages in terms of FDI flows.
- Such an understanding eases the provision of specific, tailor-made, policy recommendations for the EU regions.
- This is especially so in the light of the mega-trends and events that are, currently, taking place (e.g. BREXIT, COVID19 pandemic, EU Green Deal Strategy, Russo-Ukrainian War).

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