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Where is the real impact of foreign direct investment? The case of the Portuguese outward foreign direct investment[1]

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[1] This contribution was prepared for the conference. The views expressed are those of the authors and do not necessarily reflect the views of the European Central Bank, the Bank of Spain, the BIS, the IFC or the other central banks and institutions represented at the event.

Where is the real impact of Foreign Direct Investment? - The case of the Portuguese outward FDI

Carlos Figueira, Banco de Portugal[1]

Abstract

Complex ownership structures of Multinational Enterprises (MNEs) often hinder the interpretation of classic Foreign Direct Investment (FDI) statistics both geographically and in terms of allocation by economic activity. MNEs usually channel their investments through a large number of companies until it eventually reaches the actual investment target. For that reason, FDI statistics should also be compiled in a different approach, in which the Ultimate Host Economy (UHE) is identified, in lieu of the Immediate Host Economy. This new set of data is needed to enhance the meaning and usefulness of FDI statistics. The present paper presents the different approaches for measuring outward FDI statistics by UHE and discusses the results obtained for the three approaches that were tested. The results show that the geographic distribution of the Portuguese outward FDI is significantly different when looking at UHE statistics, in particular, due to countries that are mainly used as intermediaries, showing the importance of looking through non-operational legal units. The insights of this study seek to contribute to the development of methodological guidance on the compilation of UHE statistics and to assess the feasibility of using the available information to produce such statistics with a high quality.

Keywords: Globalization, Foreign Direct Investment, Ultimate Host Economy, Data linking

JEL classification: C80, F21, F23, F60

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1. Introduction

Complex ownership structures of Multinational Enterprises (MNEs) are hindering the interpretation of classic Foreign Direct Investment (FDI) statistics both geographically and in terms of allocation by economic activity. MNEs do not always channel their investments through a single holding company or special purpose entity (SPE) but, instead, through a large number of companies (holding or SPE chains as well as operating units) until it reaches the actual investment interest. This occurs due to several factors, such as tax optimization, free flow of capitals, and optimization of production chains. For that reason, FDI statistics may also be compiled in a different approach, in which the Ultimate Host Economy (UHE) is identified, in lieu of the Immediate Host Economy. This new set of data is needed to enhance the meaning and usefulness of FDI statistics.

Theoretically, the ideal objective of UHE statistics is to allocate the investment to the economy where FDI is generating its real economic effects. However, this is a challenging task since ownership structures are increasingly intricate and even more because "near-SPEs"[2] are increasingly more common. Therefore, the data needed for the allocation of FDI to the correct UHE are quite significant in terms of both volume and complexity. As a result, practical guidance and a more pragmatic and feasible approach is needed, always bearing in mind that increasing reporting burden should be avoided and cross-country comparability should be ensured.

With that in mind, Banco de Portugal recently conducted a pilot study on the compilation of Outward FDI positions by UHE, making use of the information available in the EuroGroups Register (EGR) database. The present paper is an extension of the work initiated with that pilot study.

This paper discusses and presents the options for overcoming the aforementioned challenges and for compiling high quality statistics on FDI in a modern, highly globalized corporate sector. The paper also presents the results of the different approaches of measuring outward FDI statistics by UHE, showing the importance of looking through non-operational legal units (holding companies and Special Purpose Entities - SPEs). The results show that the geographic distribution of Portuguese outward FDI is significantly different when looking at UHE statistics instead of immediate counterparty data, in particular, due to countries that are mainly used as intermediaries. The paper relies on the combination of granular information available in the EGR database and micro data coming from the internal FDI database of Banco de Portugal. The insights of this study seek to contribute to the development of methodological guidance on the compilation of UHE statistics and to assess the feasibility of using the available information to produce such statistics with a high quality.

The paper is organized as follows: the next section provides a brief overview of the methods available to compile UHE statistics, identifying the methods used in the paper. Section 3 presents the data sources Banco de Portugal has at its disposal, how they can be used to compile this new set of statistics and it also presents some of the

[2] Near-SPEs are "hybrid companies displaying both SPE-like (financial intermediation) and non-SPE-like activities". For more details, see the Final Report of the Task Force on Special Purpose Entities: https://www.imf.org/external/pubs/ft/bop/2018/pdf/18-03.pdf

advantages and challenges of using each data source. In section 4, we discuss the results obtained and the last section concludes and discusses some potential next steps.

2. Methods to produce UHE statistics

The present section aims at presenting the different methods that can be used to reallocate outward FDI positions from the Immediate Host Economy (the economy of the immediately held subsidiary) to the Ultimate Host Economy (the economy that ultimately receives the investment). According to the IMF's Direct Investment Task Team (DITT)[3] Guidance Note "D.6 – Ultimate Investing Economy, Ultimate Host Economy and Pass-through Funds", the different possible approaches are the following[4]:

1. To show how the influence of the ultimate direct investor flows down the investment chain using balance sheet information and ownership shares at each link in the chain;
2. To use the value the direct investor would receive if that subsidiary were acquired by another enterprise (that is, measuring the ultimate investor's position in the Direct Investment Enterprise (DIE) in the specific economy where it is located)[5];
3. To define the UHE as the last economy in the chain;
4. To define the UHE as the first operating unit (even if it is not the end of an investment chain).

The fourth option, i.e., the first operating unit approach, was the one recommended by the DITT as its method of choice, mainly for practical reasons.

Alternatively, the U.S. Bureau of Economic Analysis (BEA) groups the methods to produce UHE statistics under three broad categories[6]:

1. Push-down methods;

[3] The Direct Investment Task Team (DITT) is one of the four Task Teams established by the IMF's Committee on Balance of Payments Statistics to contribute to the work related to revising the IMF's Balance of Payments and International Investment Position Manual, sixth edition (BPM6). This team has the mission of providing technical inputs and making recommendations on the methodology of direct investment within the framework of the BPM6 revision process.

[4] For further details on these four possible approaches, see Annex I from the DITT Guidance Note "D.6 – Ultimate Investing Economy, Ultimate Host Economy and Pass-through Funds": https://www.imf.org/-/media/Files/Data/Statistics/BPM6/approved-guidance-notes/d6-ultimate-investing-economyultimate-host-economy-and-passthrough-funds.ashx

[5] This presentation would result in statistics by UHE that are symmetric to the UIE (UIE data consistent with its UHE mirror data). For more details on this topic, see Borga and Caliandro (2018).

[6] For a more in-depth discussion on these methods, see the BEA's working paper on "Experimental Ultimate Host Economy Statistics for U.S. Direct Investment Abroad": https://www.bea.gov/system/files/papers/BEA-WP2023-9.pdf

2. Financial structure methods;
3. Apportionment methods

As the name suggests, push-down methods push the position down the ownership chain to either the first operating unit (or units) or the last unit in the investment chain.

In the financial structure methods, the position of the directly held affiliate is distributed along the affiliates in the chain, reflecting how much of the position "stays" at each tier. Even though these methods could arguably provide a better picture of MNEs' global financial structure, they are the most information-intensive methods because compilers would need accurate and detailed information on every foreign affiliate of the MNE, in particular, ownership percentages and affiliates' equity positions.

The least demanding methods in terms of informational requirements are the apportionment methods. Following these methods, the position can be apportioned using a third dataset, such as the Activity of Multinational Enterprises (AMNE) database or the Foreign Affiliates Statistics (FATS)[7]. The immediate outward FDI position can be apportioned using data on affiliates' economic variables, such as employment or turnover.

The present study explores an apportionment method where the Outward Foreign Affiliates Statistics (OFATS) are used to allocate the immediate outward FDI position to the countries and industries of the ultimate host entities. In addition, this paper also explores hybrid methods, which combine aspects from both push-down and apportionment methods. The hybrid methods developed make use of the ownership chain obtained from the EGR database to determine the ultimate host entity, which we define as being either the first-operating unit or the last unit in the investment chain. After determining the ultimate host entities, the immediate outward FDI position is apportioned to those ultimate host units using a key metric, in particular, employment data. The next section will describe in more detail the different methods used in this study.

It is worth noting that in this paper we defined an entity as being an "operating" unit when it is not classified as an SPE or a holding company. As explained in the next section, this aspect is only relevant when using data from the EGR database.

Lastly, it is important to mention that the selection of the methods to use in this study was made with the perspective of allowing in the future for a regular compilation system and, therefore, was mainly determined by data availability and practical reasons. The data sources available do not allow for the production of estimates following financial structure methods, since information on each affiliate's equity position would be needed. In contrast, the methods used are less-data intensive and relatively easy to implement.

[7] AMNE and FATS data are based on data reported to OECD and Eurostat in the framework of annual surveys on the activities of foreign-controlled enterprises and foreign affiliates abroad controlled by residents of the compiling country. These statistics provide economic measures of activities, such as number of affiliates, turnover, and employment.

3. Data Sources for the compilation of UHE Statistics

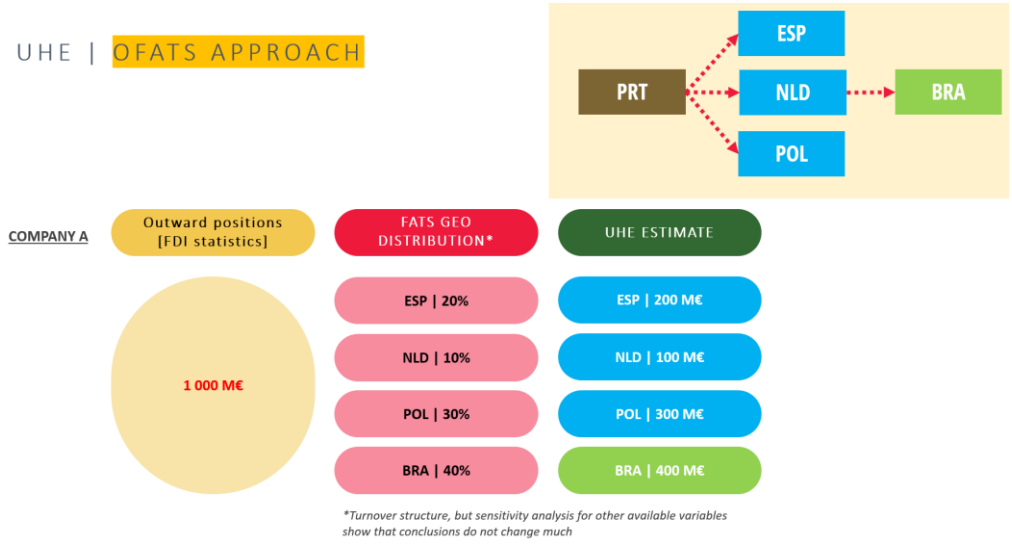
3.1 Two available data sources: OFATS vs. EGR

The first UHE estimates for Portugal were produced within the context of the EU FDI Pilot Studies carried out in 2019. The purpose of these studies was to determine the conditions, including the methodological framework, for introducing new data collections on annual FDI statistics, where UHE was included. Methodological guidance for these FDI statistics was developed by the Joint ESS/ESCB Task Force on FDI.

At that stage, the compilation of UHE statistics relied entirely on the information available in the Outward Foreign Affiliates Statistics (OFATS), since Banco de Portugal did not wanted to increase reporting burden. OFATS information, combined with our granular FDI database, allowed for respecting almost all requirements established by the Joint ESS/ESCB Task Force on FDI: i) outward FDI positions (directional principle); and, ii) UHE statistics for cases where the domestic investor is the ultimate parent. However, OFATS data did not allow for meeting one of the requirements: going through non-resident SPEs to locate the operating affiliates.

OFATS approach (example for company A)

Figure 1



OFATS data gives access to information on several economic variables (number of employees, turnover, etc.) for all foreign affiliates controlled by a resident enterprise. Taking the example presented in figure 1, in the OFATS data we would have information regarding the affiliates of company A that are resident in Spain, the Netherlands, Poland and Brazil. These data would be used to apportion the outward FDI position to the Ultimate Host Economies. Assuming an outward FDI position of

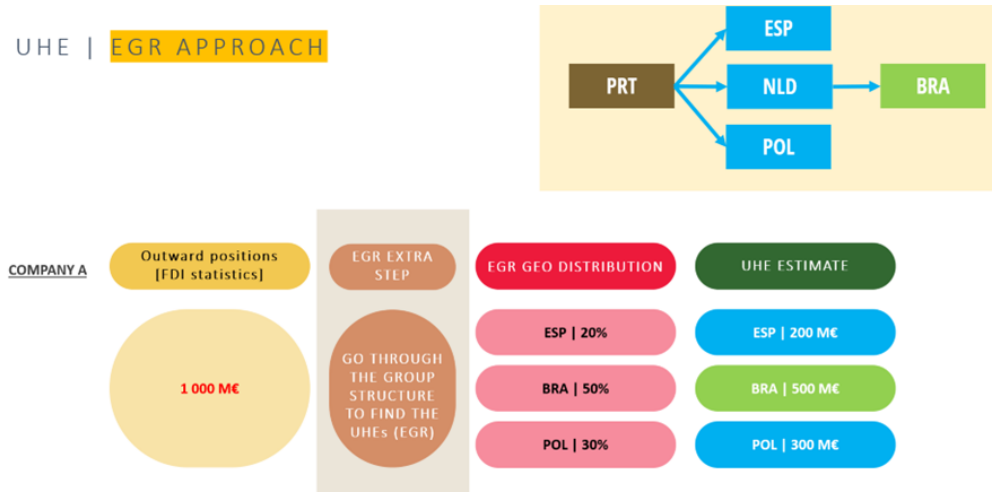
€1000 million and assuming that company A reported in OFATS a total turnover[8] of €10 million, where 20% of it was generated in Spain, 10% in the Netherlands, 30% in Poland and 40% in Brazil, then we would allocate the total outward FDI using this same structure, resulting in 20% of the outward FDI position to Spain (€200 million), 10% to the Netherlands (€100 million), 30% to Poland (€300 million) and 40% to Brazil (€400 million).

It is important to point out that in this case, there is no information about the group structure of company A (this is illustrated in the upper-right corner of figure 1 by the dotted lines). This aspect is crucial for the comparison between the OFATS approach and the methods based on the use of the EGR, since it represents one of the main differences between those methods.

The first estimates for 2014 and 2015 based on OFATS data showed a high concentration of Portuguese FDI positions by ultimate host economy in European countries (61% of the outward FDI positions, in 2015). Since the EGR database contains structural economic information on multinational enterprise groups with presence in the EU/EFTA (with at least one legal unit) and on their enterprises, the new pilot study had the objective of using the EGR database to produce new UHE estimates and compare the new results with the ones obtained with the OFATS data.

EGR method (example for company A)

Figure 2



When using the EGR database, the method used to produce UHE statistics is similar to the one followed when using OFATS data, but it has an additional step: going through the group structure (given by the EGR) to find the ultimate host economies. The example in figure 2, which is an extension of the one in figure 1, is

[8] The turnover structure was applied, but sensitivity analysis for other available OFATS variables showed that conclusions do not change significantly. Personnel costs, intra-group exports, intra-group imports, total exports, total imports, gross investment in tangible goods, number of employees and value added were some of the economic variables used in this sensitivity analysis.

useful to illustrate this EGR method. In this case, the full lines in the upper-right corner tell us that we have information on the ownership chain.

Based on the example in figure 2, Spain, Brazil and Poland[9] would be defined as the ultimate host economies and the outward FDI position of company A would be allocated to each of these countries based on employment weights (employment data comes from the EGR database), meaning that the results are different from the ones of the OFATS approach.

Deriving the UHE from a group's database (the EGR database)

Figure 3

YEAR	LEU_LEID	GEG_GGH_LEID	link1	link1_NACE	link1_aux	link2	link2_NACE	link2_aux	link3
2020	PT22	PT22	NL3	K.64.20	01	PT22	M.70.10	N;02	NL311
2020	PT22	PT22	NL3	K.64.20	01	PT22	M.70.10	N;02	CH23(
2020	PT22	PT22	NL3	K.64.20	01	PT22	Q.86.22	N;02	
2020	PT22	PT22	NL3	K.64.20	01	PT22	M.70.10	N;02	NL311
2020	PT22	PT22	NL3	K.64.20	01	PT22	M.70.10	N;02	NL311
2020	PT22	PT22	NL3	K.64.20	01	PT22	M.70.10	N;02	NL311
2020	PT22	PT22	NL3	K.64.20	01	PT22	M.70.10	N;02	NL311

YEAR	LEU_LEID	LEU_SPE_CODE	LEU_NACE_CODE	REL_P_LEU_LEID	LEU_GLOBAL_LEVEL	GEG_GGH_LEID	country_code_UHE	UHE
2020	PT2	N	K.64.20		0	PT2	PT	PT2
2020	PT2	N	K.64.20		0	PT2	PT	PT2
2020	PT2	N	K.64.20		0	PT2	PT	PT2
2020	PT2	N	K.64.20		0	PT2	PT	PT2

	UHE	UHE_link	UHE_NACE	SPE_CODE_UHE	GLOBAL_LEVEL_UHE	EMPL_UHE	TURN_ESTI	EMPL_UHE_Total	TURN_UHE_Total	Weight_EMPL
PT22		2	M.70.10	N	2	194		370		0.524324324
PT22		2	G.46.39	N	2	85		370		0.22972973
PT22		2	L.68.10	N	2	0		370		0
PT22		2	Q.86.22	N	2	91		370		0.245945946

To further illustrate how the EGR data was used to produce UHE estimates, figure 3 presents some extracts from the database that was compiled using EGR information. Basically, we built a database where we have the complete group structure enabling us to go through it, looking through non-resident SPEs and holding companies, until we reach the first operating entity or the last unit in the investment chain, which we will define as the ultimate host (UH). In the second table presented in figure 3, it is possible to observe, in the last column, the ultimate host entities for a particular resident investor. After defining the ultimate host entities, employment weights are computed (using data from the EGR). Those weights are then used for the allocation of each outward FDI position, as it is possible to observe in the last table of figure 3.

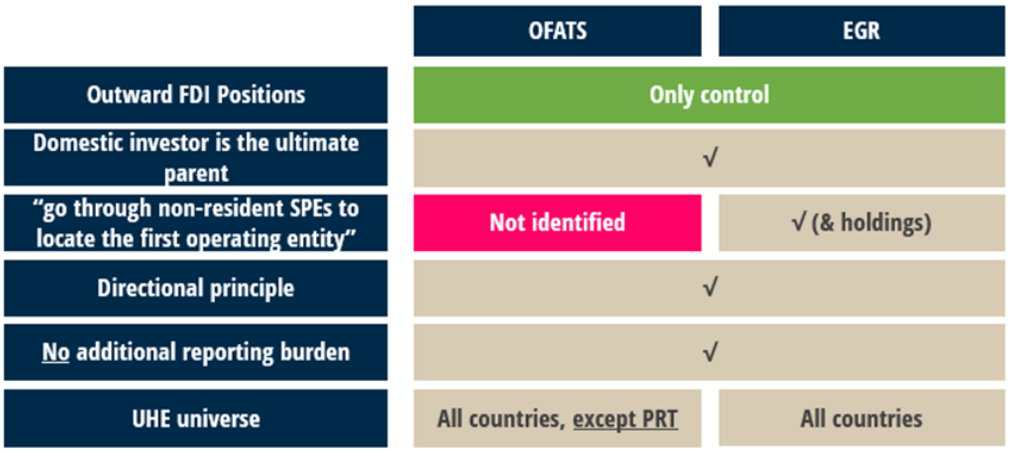
Figure 4 allows for a brief comparison of the two methods. In summary, both methodologies are based only on control relationships and in both cases outward FDI statistics by UHE are produced only for entities that are domestically-controlled, meaning that the ultimate controlling parent is resident in the compiling country, in this case Portugal. As mentioned before, in the OFATS approach, it is not possible to look through non-resident SPEs since that information is not available, but this is

[9] When defining the ultimate host entity as the first operating unit, looking through the affiliate located in the Netherlands can be justified by the fact that this entity is an SPE or a holding company.

precisely one of the advantages of using the EGR database. With the EGR we can go through the groups' structure and look through both SPEs and holding companies. In addition, in both cases, we are using the directional principle, because it better reflects the direction and degree of influence, and there is no additional reporting burden imposed on respondents. Lastly, in the OFATS approach, there is another limitation related to the fact that it is not possible to have the compiling economy, in this case Portugal, as the UHE. Conversely, this is possible when using the EGR. Indeed, this is an important advantage of using the EGR because in the case of Portugal there is some degree of round-tripping.

Two potential data sources

Figure 4



These two data sources (OFATS and the EGR) allow for the use of three different approaches to compile outward FDI statistics by UHE. The possible approaches are summarized in figure 5.

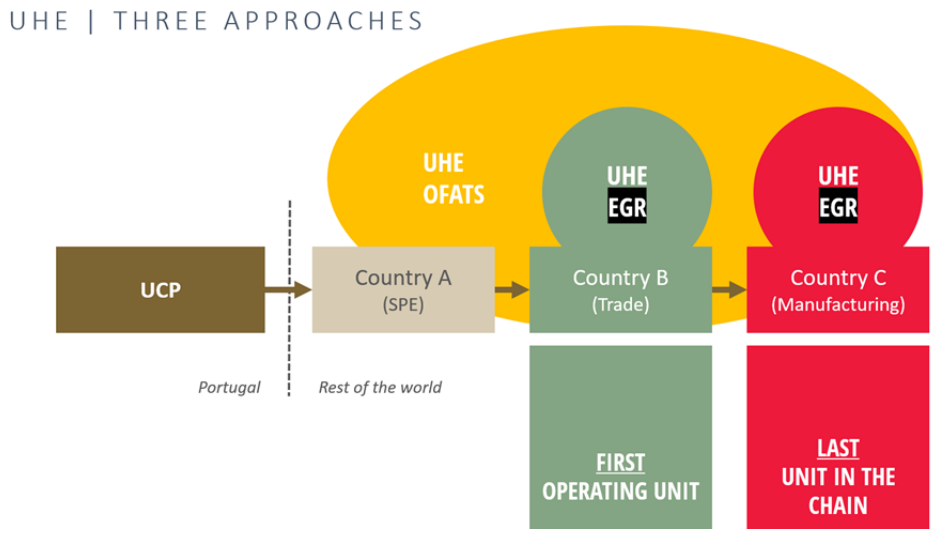
The first possible approach is the OFATS one. Based on the example presented in figure 5, according to this approach, countries A, B and C would be considered the ultimate host economies.

In case the EGR is used, given the fact that the group structure is available, two different approaches are possible, depending on how the ultimate host entity is defined. Considering the example from figure 5, if the ultimate host entity is defined as the first operating unit, country B is the UHE, because we would be looking through the SPE located in country A. If, instead, the ultimate host unit is defined as the last unit in the investment chain, then the UHE would be country C.

As it is possible to infer, the results from the three approaches may differ significantly, both geographically and in terms of economic activity allocation.

The three different approaches

Figure 5



3.2. Advantages and challenges of using the EGR database

The EGR database is a very useful tool to produce UHE statistics because it allows to go through non-resident SPEs and holding companies. It also allows to go to the bottom of the investment chain, since information on the group structure is available. Additionally, it is possible to allocate outward FDI positions to the compiling economy when this reflects the economic reality (round-tripping cases).

However, the use of EGR also poses some challenges. There are some missing values for the variable that tells us whether the non-resident entity is an SPE and some missing information for non-EU/EFTA entities. Regarding this last aspect, it is relevant to point out that some missing employment values were filled with data from the last year available.

Another challenge is related to the fact that turnover data is only available by "enterprise"[10] and not by "legal unit", making it difficult to conduct a sensitivity analysis. This is a challenging aspect because FDI data is produced by legal unit.

[10] The enterprise is the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations. An enterprise may be a sole legal unit (Council Regulation (EEC) No 696/1993 of 15 March 1993 on the statistical units for the observation and analysis of the production system of within the Community).

4. Result analysis

4.1 Main assumptions and general results

To start the analysis of the results, it is important to look at their representativeness on the total outward FDI positions in which the UCP is Portuguese. Those results are shown in figure 6.

Representativeness of the results (reference year: 2020)

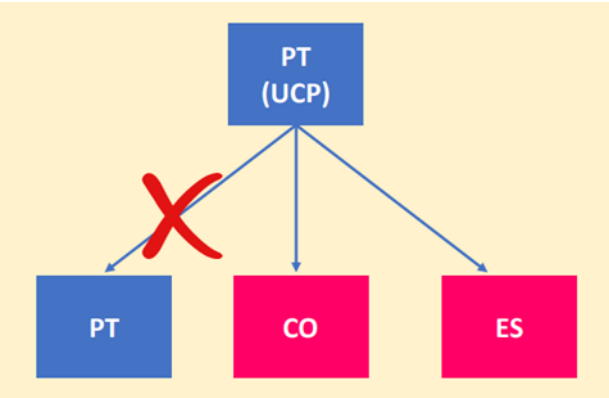
Figure 6

Representativeness	EGR		OFATS
	1st operating unit	Last unit in the chain	
ON OUTWARD FDI WITH UCP=PRT	94%	89%	68%

For the OFATS approach, 68% of the outward FDI where the UCP is Portuguese are allocated to a UHE. When using the EGR, the representativeness is much higher in both cases. When the ultimate host is defined as the first operating unit, 94% of the outward FDI positions are allocated and, when going until the last unit in the investment chain, 89% of those positions are allocated to a UHE.

Excluding immediate relations between a resident UCP and its resident subsidiary

Figure 7



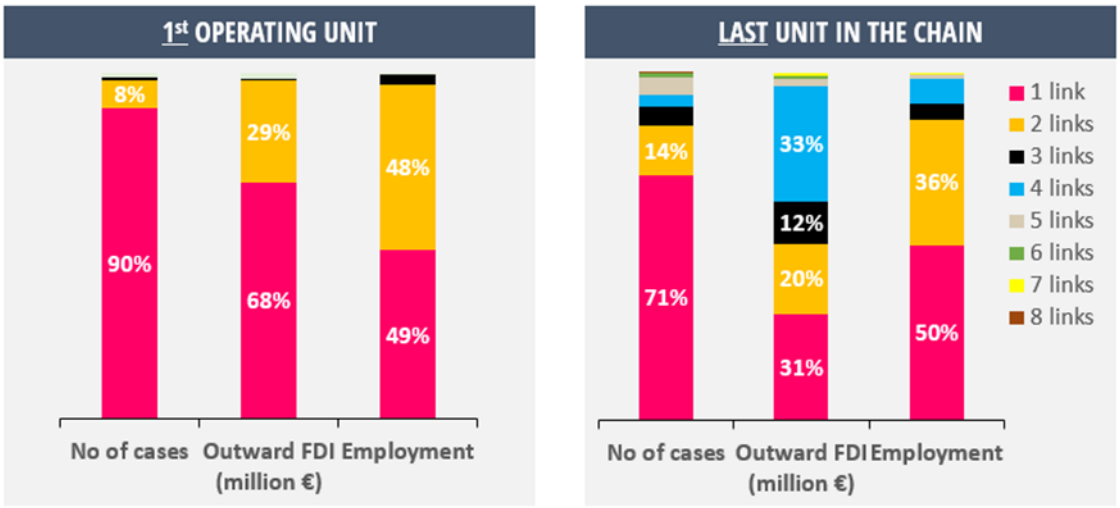
Two other important aspects help us to better understand the results. On one hand, we excluded from this exercise immediate relations between a Portuguese UCP and its resident subsidiaries (figure 7) since those relations are not inside the FDI

border. Considering the example in figure 7, we would move down along the group structure only for the links below non-resident entities, in this case below the entities located in Colombia and Spain. On the other hand, it was assumed that, for real estate investment, the immediate host economy corresponded to the UHE.

When considering the two approaches based on the EGR database, the first question that may come to our minds is: "how many units we have to look through to find the UHE?". Figure 8 provides the answer to that question.

How many links we need to look through until the UHE? (reference year: 2020)

Figure 8



In case we stop at the first operating unit, it is possible to observe that for the vast majority of cases (90%), the immediate subsidiary is also the first operating entity, that is, the ultimate host. Those cases represent 68% of the outward FDI positions and 49% of the employment. For this approach, there is also a significant part of the outward FDI for which the UHE is found at the second link (8% of the outward FDI position). In addition, using this approach, the maximum number of links needed to found the UHE was 4 (those cases represent around 2% of the outward FDI positions).

When going until the last unit in the investment chain, the ultimate host is still found at the first link in most cases (71%), and this can be better understood if we take into account that in the EGR most of the Portuguese groups have only one link. However, following this approach, these cases correspond to only 31% of the outward FDI positions in which the UCP is Portuguese, and this means a reduction to less than half. It is also important to highlight that, with this approach, there is a significant percentage of the outward FDI positions that is allocated to a unit found at the 3rd or 4th link, 12 and 33% of the outward FDI, respectively.

4.2 Outward FDI by UHE

Before looking at the outward FDI positions by UHE, it is important to have an idea of the most relevant immediate host economies in the case of Portugal. Figure 9 presents the outward FDI positions for the top 13 immediate host economies. It is possible to observe that 52% of the Portuguese outward FDI is directed to the Netherlands, 10% to Spain and 6% to Luxembourg. This means that there is a great part of the Portuguese outward FDI that is directed, in immediate terms, to financial centers.

Outward FDI positions for the top 13 immediate host economies (reference year: 2020)

Figure 9

Rank	Immediate Partner	Outward FDI Stocks (MEUR)	% of Outward FDI Stocks
1	NL	17 805	52%
2	ES	3 506	10%
3	LU	2 012	6%
4	BR	1 427	4%
5	AO	1 312	4%
6	MZ	921	3%
7	FR	909	3%
8	MO	758	2%
9	US	581	2%
10	GB	470	1%
11	DE	470	1%
12	CL	360	1%
13	PL	353	1%
TOP13		30 883	91%

When looking to outward FDI by UHE (figure 10), the Netherlands represents a much lower percentage of the Portuguese outward FDI, 1% for the OFATS approach. Also for the OFATS approach, it is possible to see that the two main destinations of Portuguese outward FDI are Poland, with 24%, and Spain, with 17%.

In the EGR approach, when stopping at the first operating unit, the Netherlands also reduces its importance (to 14%), but not as much as in the OFATS approach. Portugal becomes the main destination for the Portuguese outward FDI (round-tripping), and Poland and Spain also account for a significant share of the Portuguese Outward FDI (12% and 14%, respectively).

Still in the EGR approach, but now going until the last unit in the investment chain, Brazil becomes the main destination for the Portuguese outward FDI, accounting for 19% of the total. Colombia comes next with a weight of 17% and only then one can find Spain (12%) and Poland (8%). Additionally, it is possible to observe that Portugal decreases its importance, comparing with the first operating unit results, meaning that the round-tripping phenomenon is less relevant, and it accounts only for 6% (which compares with 17% for the first-operating unit approach).

As expected, countries that are relevant financial centres, like the Netherlands and Luxembourg, lost much of their importance when looking to FDI statistics by UHE. Luxembourg is no longer part of the top 13, in the three different approaches and, when it comes to the Netherlands, it is not part of the top 13, only when going until the last unit in the investment chain.

It is noteworthy that countries with important pass-through activities are even less relevant when the ultimate host is defined as the last unit in the investment chain. This is even more meaningful when combined with the fact that countries where productive activities likely take place, such as Brazil and Colombia, increase their relevance as main destinations for the Portuguese outward FDI.

Outward FDI positions by UHE (TOP 13 host economies for 2020)

Figure 10

RANK	OFATS		EGR 1st operating unit		EGR Last unit	
	UHE	Value (%)	UHE	Value (%)	UHE	Value (%)
1	PL	24%	PT	17%	BR	19%
2	ES	17%	ES	14%	CO	17%
3	MZ	5%	NL	14%	ES	12%
4	BR	3%	PL	12%	PL	8%
5	AO	3%	BR	6%	PT	6%
6	CO	2%	US	4%	US	4%
7	CV	2%	AO	3%	AO	3%
8	FR	1%	MO	2%	MO	2%
9	CI	1%	GB	2%	FR	1%
10	DE	1%	MX	2%	MX	1%
11	US	1%	FR	2%	CH	1%
12	NL	1%	CO	2%	RU	1%
13	GB	1%	RU	1%	DE	1%
TOP13		61%		80%		79%

4.3 Outward FDI by NACE of the ultimate host

Figure 11 presents the results by NACE[11] section, foccusing on the comparison between stopping at the first operating unit and going until the last unit in the chain. It is possible to observe that a significant part of the Portuguese outward FDI is not allocated to any NACE section and that this is more relevant when going until the last unit in the chain (25% when stopping at the first unit; 43% when going until the bottom of the investment chain). This happens because moving further down the

[11] The Statistical classification of economic activities in the European Community, abbreviated as NACE, is the classification of economic activities in the European Union (EU); the term NACE is derived from the French *Nomenclature statistique des activités économiques dans la Communauté européenne*.

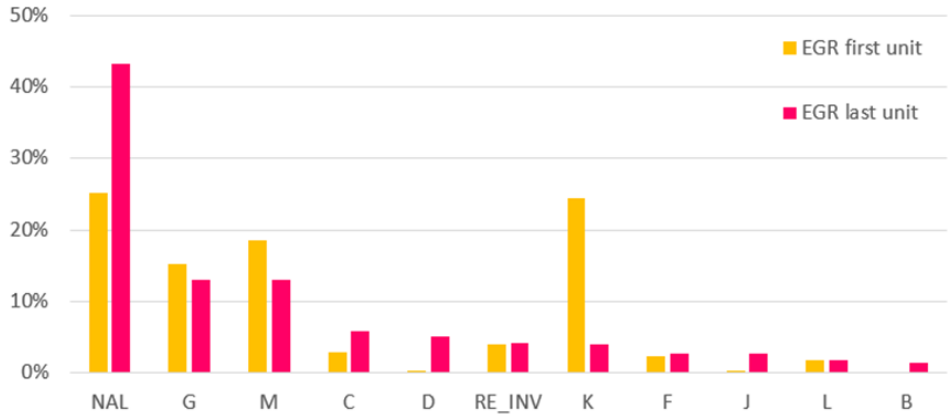
group structure lead us more frequently to non-EU/EFTA countries and information for companies from those countries is not always available in the EGR database.

It is also possible to notice a significant decrease in the Financial sector, section K from NACE ("Financial and Insurance Activities"), when comparing the two approaches. This means that for some cases the ultimate host moves away from the financial sector, when going until the last unit in the investment chain.

Moreover, it is important to highlight that sectors like Mining and Quarrying (section B), manufacturing (section C), Electricity (section D), and Construction (section F), increase their share on the Portuguese outward FDI.

Outward FDI positions by NACE section of the ultimate host (reference year: 2020)

Figure 11



[1] Notes: B – Mining and quarrying, C – Manufacturing, D – Electricity, gas, steam and air conditioning supply, F – Construction, G – Wholesale and retail trade; repair of motor vehicles and motorcycles, J – Information and communication, K – Financial and insurance activities, L – Real estate activities, M – Professional, scientific and technical activities, NAL – Not allocated, RE_INV – Real estate investment

5. Conclusion

The present paper presents the results of Banco de Portugal exploratory work on the production of outward FDI positions by UHE. Based on available data sources, three different methods were explored: an apportionment method and two hybrid methods. The hybrid methods studied make use of the ownership chain obtained from the EGR database to determine the ultimate host entity, which we define as being either the first operating unit or the last unit in the investment chain. Then, the immediate outward FDI position was apportioned to those ultimate host units, using employment data.

The results of this study show the importance of looking through non-operational legal units (holding companies and Special Purpose Entities - SPEs). Countries with important pass-through activities like the Netherlands and

Luxembourg have a much lower relevance when looking at outward FDI by UHE and this is even more the case when we go to the bottom of the investment chain. As a result, the geographic distribution of the Portuguese outward FDI is significantly different when looking at UHE statistics.

Moreover, the last unit method presents some important results compared to the other two methods explored. In particular, when going to the last unit in the investment chain, the round-tripping phenomenon (Portugal as UHE) reduces its importance and countries where productive activities likely take place, such as Brazil and Colombia, increase their relevance as main destinations for the Portuguese outward FDI. Additionally, the Financial sector (Section K) also reduces its importance as a final destination for the Portuguese outward FDI and non-financial sectors, like manufacturing, become more relevant.

However, this study also demonstrates that UHE estimates largely depend on the method applied. As a result, Banco de Portugal intends to continue exploring further refinements of the methods applied so that some of the existing limitations are overcome (e.g., missing data for entities located in non-EU/EFTA countries). In addition, UHE statistics can be produced for a larger time span so that it is possible to analyze the consistency of the results obtained.

Lastly, Banco de Portugal intends to use the insights obtained with this exercise to contribute to the development of the methodological guidance on the compilation of FDI statistics by UHE, including the development of a formal definition of "first operating unit" (different definitions can lead to different results).

References

Banco Central do Brasil (2018), "Direct Investment Report - 2018", accessed from https://www.bcb.gov.br/content/publications/directinvestmentreport/2017/dir_2017.pdf

Borga, Maria and Cecilia Caliandro (2018), "Eliminating the Pass-through: Towards FDI Statistics that better Capture the Financial and Economic Linkages between Countries", NBER Working Paper 25029, Cambridge, Massachusetts.

International Monetary Fund (2022) "D.6 – Ultimate Investing Economy/Ultimate Host Economy and Pass-through Funds", BPM6 update Direct Investment Task Team (DITT) Guidance Note.

Organisation for Economic Cooperation and Development (2008), Benchmark Definition of Foreign Direct Investment, 4th edition, Paris, France.

Organisation for Economic Cooperation and Development (2023), "DN.15 - Ultimate Host Economy", BD4 update Benchmark definition Technical Expert Group (BTEG) Direction Note.

U.S. Bureau of Economic Analysis (2023), "Experimental Ultimate Host Economy Statistics for U.S. Direct Investment Abroad", BEA Working Paper Series, WP2023-9

WHERE IS THE REAL IMPACT OF FOREIGN DIRECT INVESTMENT? THE CASE OF THE PORTUGUESE OUTWARD FDI

2ND EXTERNAL STATISTICS CONFERENCE

12-13 FEBRUARY 2024, MADRID

CARLOS FIGUEIRA

BANCO DE PORTUGAL
EUROSISTEMA

AGENDA

01	WHY UHE STATISTICS?
02	METHODS TO PRODUCE UHE STATISTICS
03	DATA SOURCES: OFATS vs. EGR
04	RESULTS
05	THOUGHTS ON EGR AND WAY FORWARD

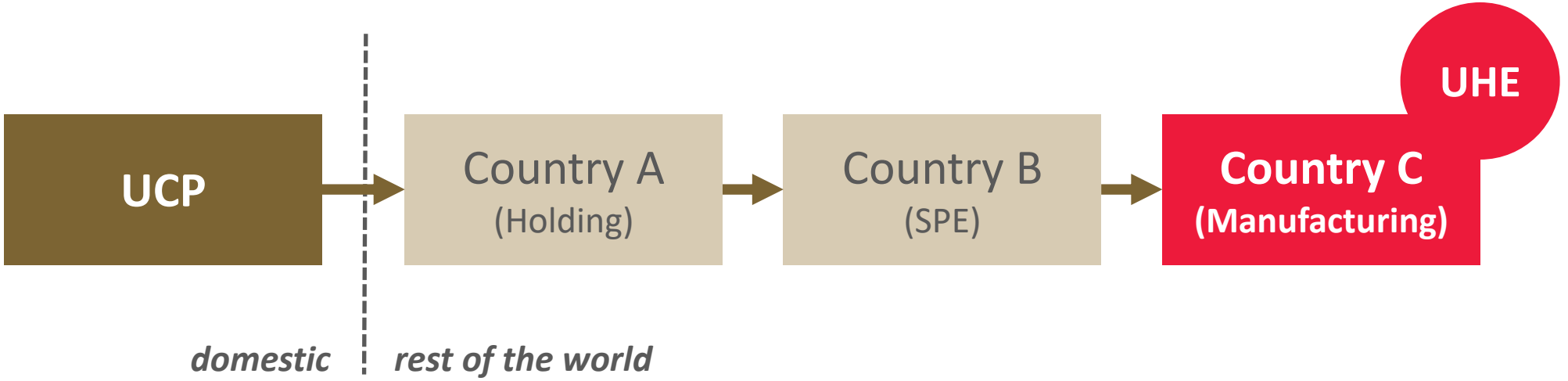
WHY UHE STATISTICS?

01

GUIDANCE ON UHE STATISTICS | UNDER DEVELOPMENT…

…theoretically we know what we want

…but we still need practical guidance



METHODS TO PRODUCE UHE STATISTICS

02

THREE METHODS TO PRODUCE UHE STATISTICS

Apportionment method	Hybrid methods
***(1)** Allocating the immediate outward FDI positions using economic variables from a third dataset*	***Apportionment** using a key metric* + ***Pushing** the positions down the ownership chain to either **(2) the first operating unit** or **(3) the last unit in the investment chain***

DATA SOURCES FOR UHE STATISTICS

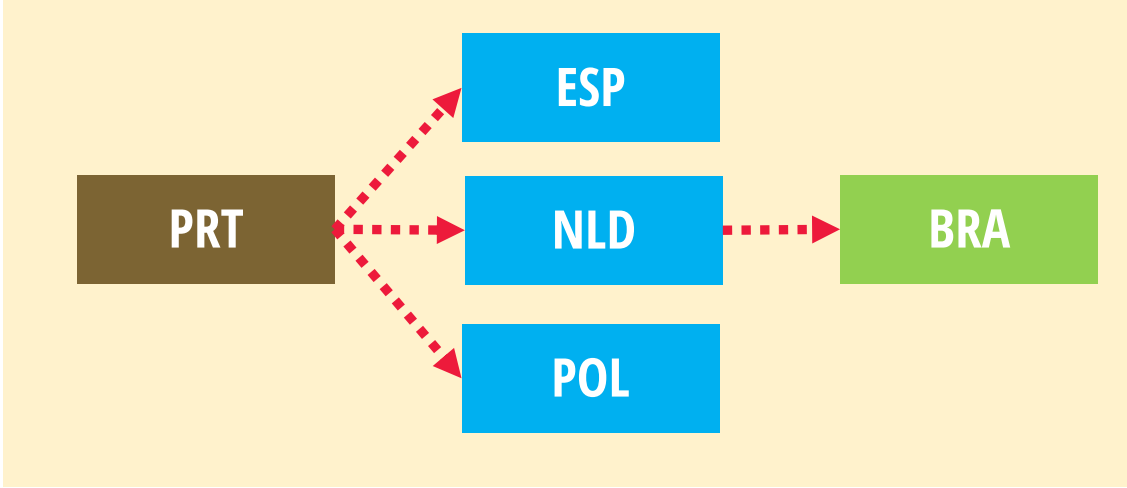
03

UHE | TWO POTENTIAL DATA SOURCES

UHE | TWO POTENTIAL DATA SOURCES

OFATS	EGR
OFATS **[Outward Foreign AffiliaTes Statistics]** *Activity of foreign affiliates abroad controlled by the compiling country*	**EGR** **[EuroGroups Register]** *European statistical register on multinational enterprise groups*

UHE | OFATS APPROACH

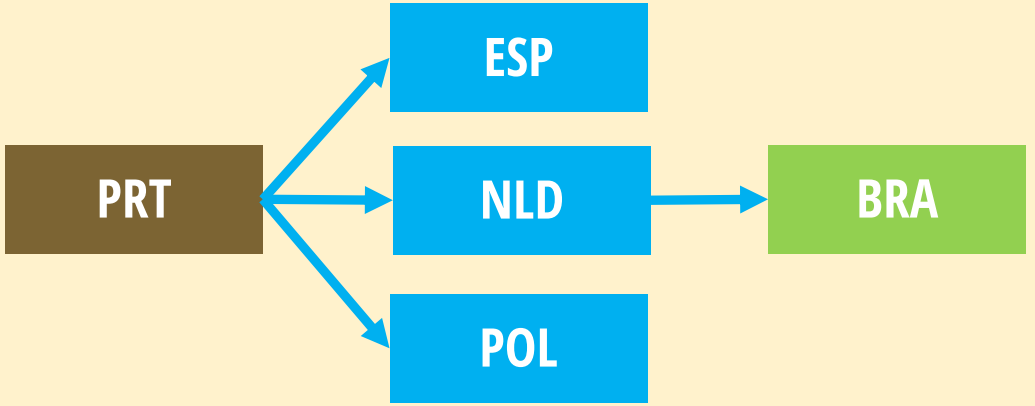


COMPANY A

Outward positions [FDI statistics]	FATS GEO DISTRIBUTION*	UHE ESTIMATE
1 000 M€	ESP | 20%	ESP | 200 M€
	NLD | 10%	NLD | 100 M€
	POL | 30%	POL | 300 M€
	BRA | 40%	BRA | 400 M€

**Turnover structure, but sensitivity analysis for other available variables show that conclusions do not change much*

UHE | EGR APPROACH



COMPANY A

Outward positions [FDI statistics]	EGR EXTRA STEP	EGR GEO DISTRIBUTION	UHE ESTIMATE
1 000 M€	GO THROUGH THE GROUP STRUCTURE TO FIND THE UHEs (EGR)	ESP | 20%	ESP | 200 M€
		BRA | 50%	BRA | 500 M€
		POL | 30%	POL | 300 M€

WHAT IS THE EGR?

Deriving the UHE from a group's database

YEAR	LEU_LEID	GEG_GGH_LEID	link1	link1_NACE	link1_aux	link2	link2_NACE	link2_aux	link3
2020	PT22 98	PT22 98	NL3 61	K.64.20	01	PT22 44	M.70.10	N;02	NL311
2020	PT22 98	PT22 98	NL3 61	K.64.20	01	PT22 44	M.70.10	N;02	CH23 49
2020	PT22 98	PT22 98	NL3 90	K.64.20	01	PT22 32	Q.86.22	N;02	
2020	PT22 98	PT22 98	NL3 61	K.64.20	01	PT22 44	M.70.10	N;02	NL311
2020	PT22 98	PT22 98	NL3 61	K.64.20	01	PT22 44	M.70.10	N;02	NL311
2020	PT22 98	PT22 98	NL3 61	K.64.20	01	PT22 44	M.70.10	N;02	NL311
2020	PT22 98	PT22 98	NL3 61	K.64.20	01	PT22 44	M.70.10	N;02	NL311

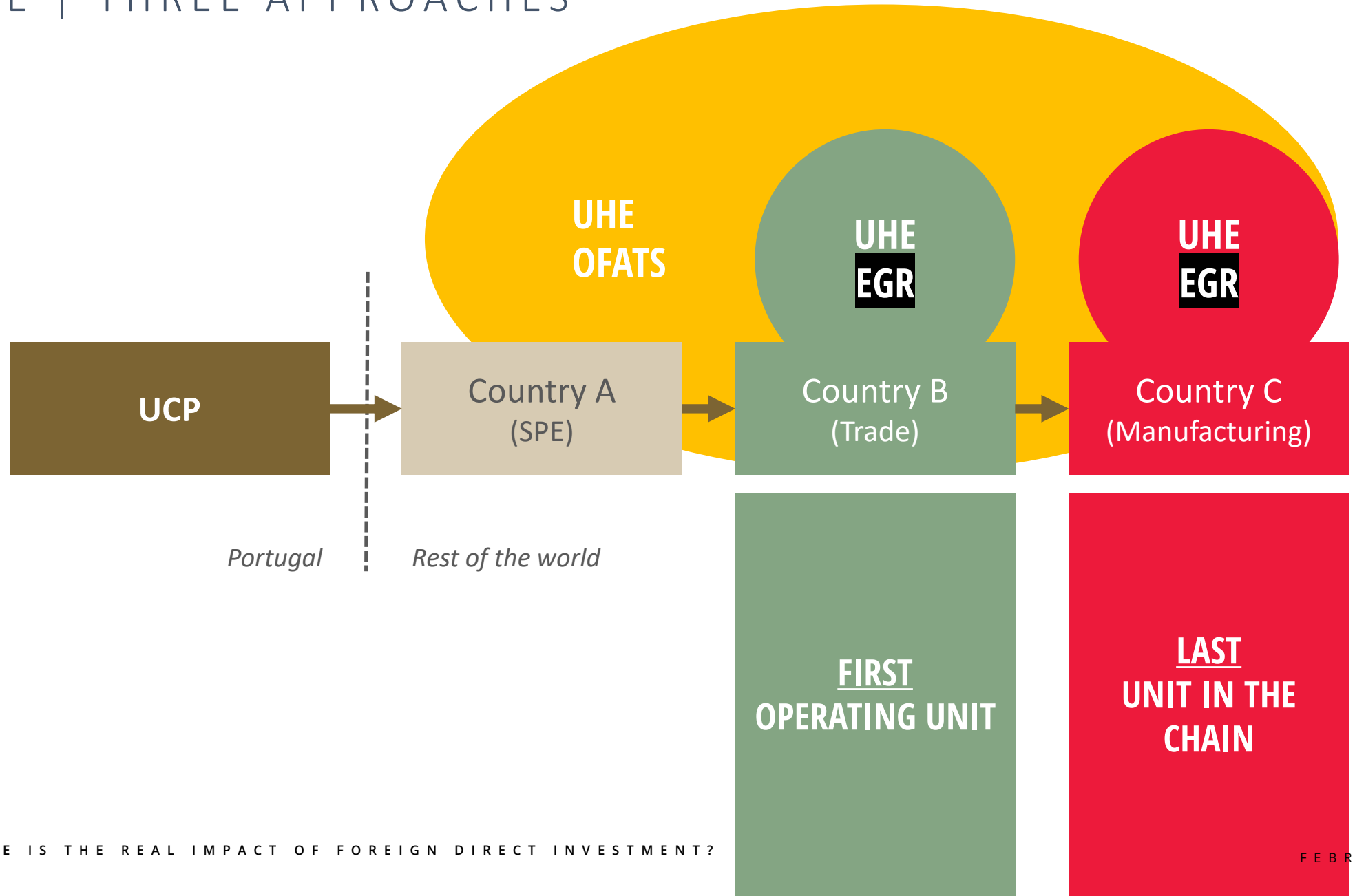
YEAR	LEU_LEID	LEU_SPE_CODE	LEU_NACE_CODE	REL_P_LEU_LEID	LEU_GLOBAL_LEVEL	GEG_GGH_LEID	country_code_UHE	UHE
2020	PT2 98	N	K.64.20		0	PT2 98	PT	PT2 44
2020	PT2 98	N	K.64.20		0	PT2 98	PT	PT2 57
2020	PT2 98	N	K.64.20		0	PT2 98	PT	PT2 34
2020	PT2 98	N	K.64.20		0	PT2 98	PT	PT2 32

UHE	UHE_link	UHE_NACE	SPE_CODE_UHE	GLOBAL_LEVEL_UHE	EMPL_UHE	TURN_ESTI	EMPL_UHE_Total	TURN_UHE_Total	Weight_EMPL
PT22 44	2	M.70.10	N	2	194		370		0.524324324
PT22 57	2	G.46.39	N	2	85		370		0.22972973
PT22 34	2	L.68.10	N	2	0		370		0
PT22 32	2	Q.86.22	N	2	91		370		0.245945946

UHE | TWO POTENTIAL DATA SOURCES

	OFATS	EGR
Outward FDI Positions	Only control	
Domestic investor is the ultimate parent	√	
"go through non-resident SPEs to locate the first operating entity"	Not identified	√ (& holdings)
Directional principle	√	
No additional reporting burden	√	
UHE universe	All countries, except PRT	All countries

UHE | THREE APPROACHES



RESULTS

04

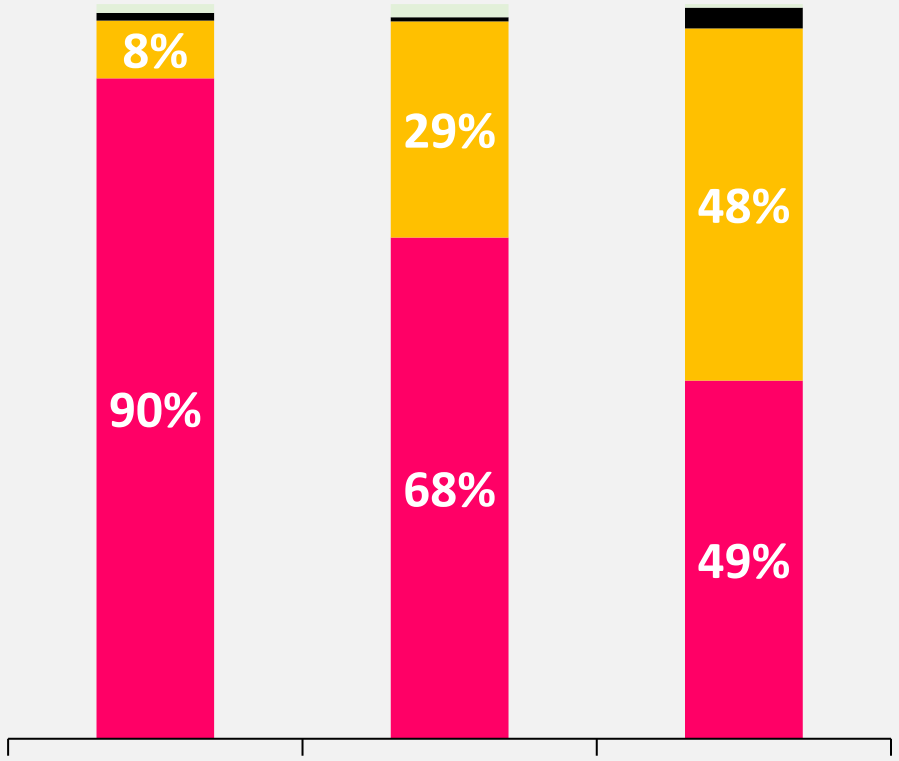
UHE | OFATS VS EGR APPROACH

Reference year: 2020

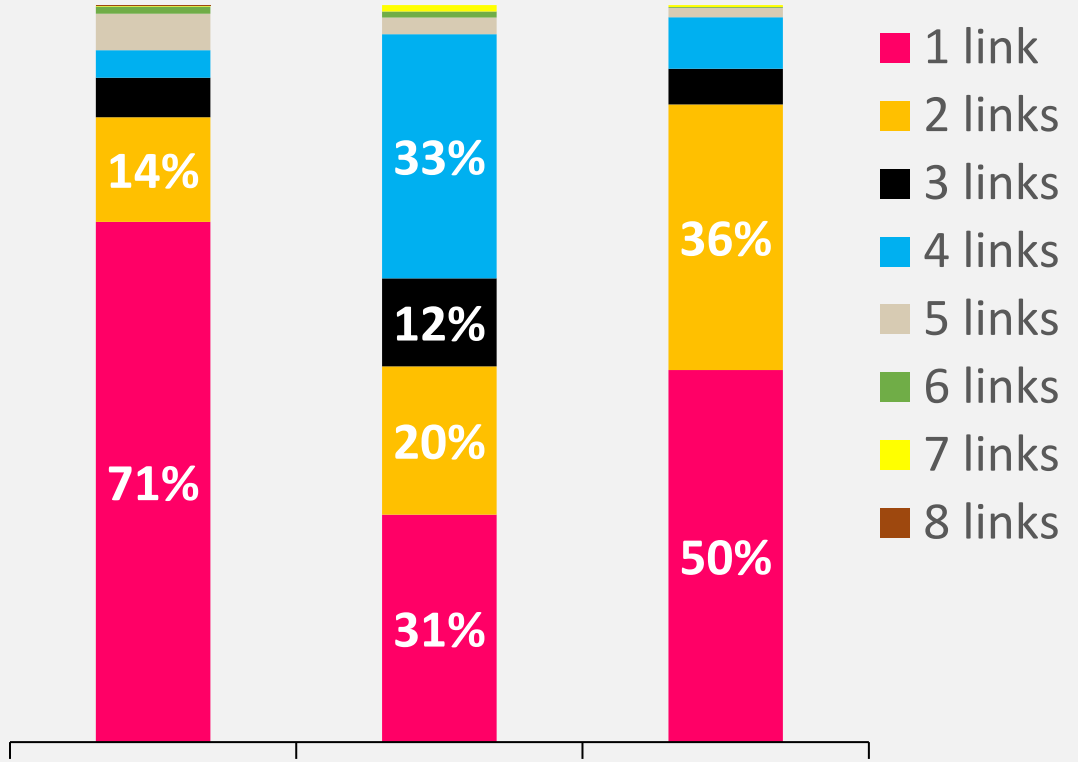
Representativeness (employment)	EGR		OFATS
	1st operating unit	Last unit in the chain	
ON OUTWARD FDI WITH UCP=PRT	94%	89%	68%

EGR | HOW MANY LINKS TO LOOK THROUGH?

1st OPERATING UNIT

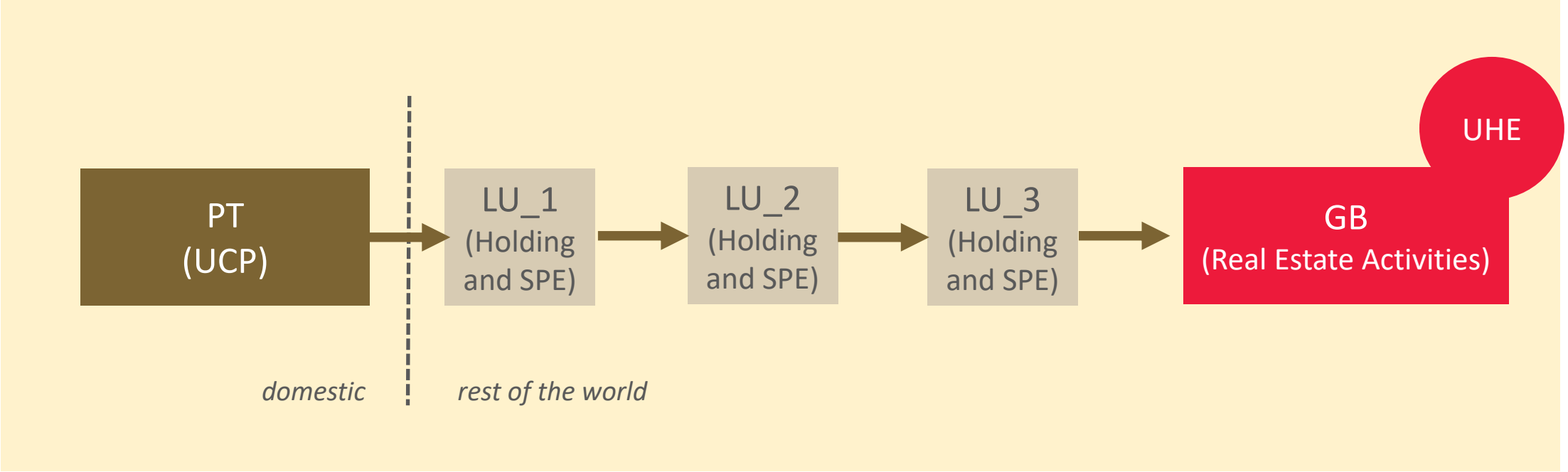


LAST UNIT IN THE CHAIN



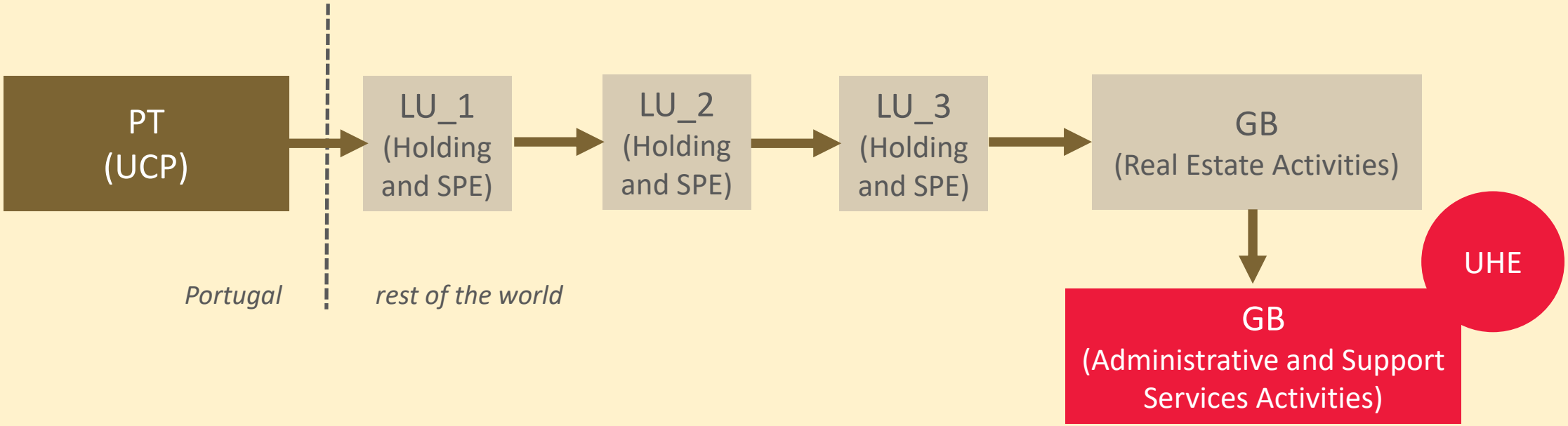
REAL EXAMPLE: IF WE STOP AT THE 1ST OPERATING UNIT

With this assumption, we go up to 4 links…



With 4 links: 38 cases (1%) that correspond to 568 MEUR of outward FDI (2%)

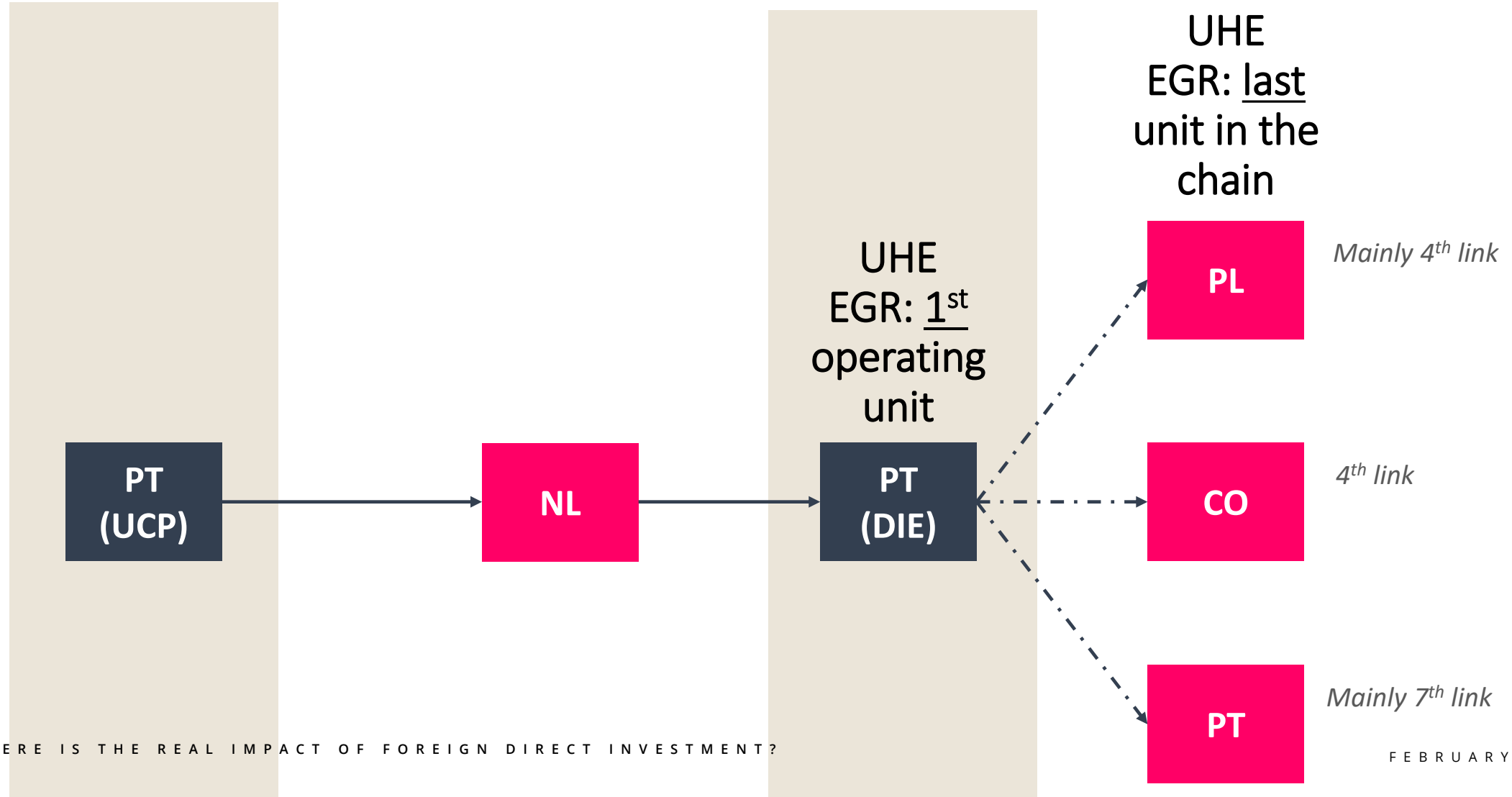
REAL EXAMPLE: IF WE STOP AT THE LAST UNIT IN THE CHAIN



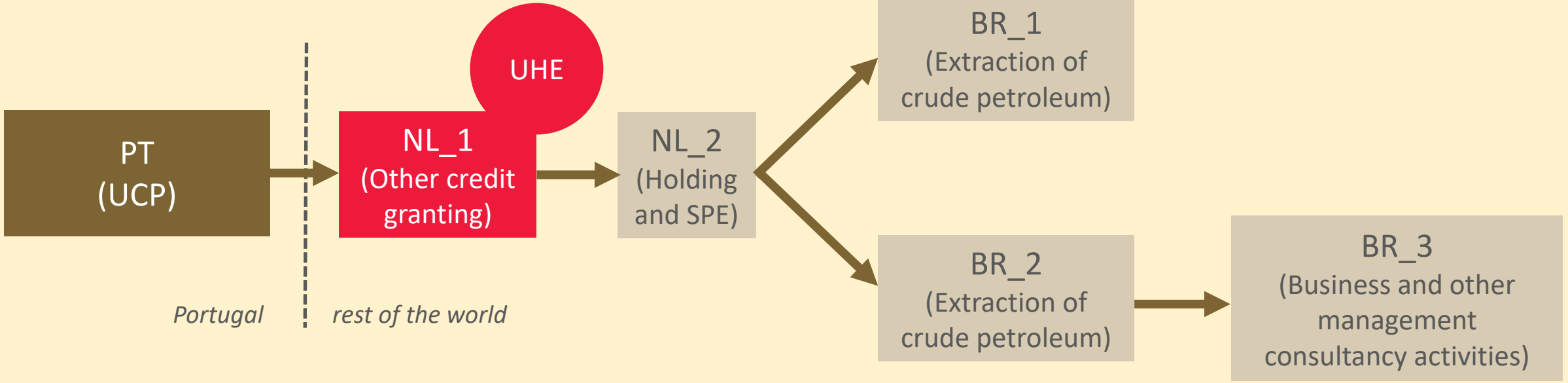
With 5 links: 165 cases (5%) that correspond to 1350 MEUR of outward FDI (5%)

THE VALUE OF THE EGR

Deriving the UHE from a group's database: **Simplified example**

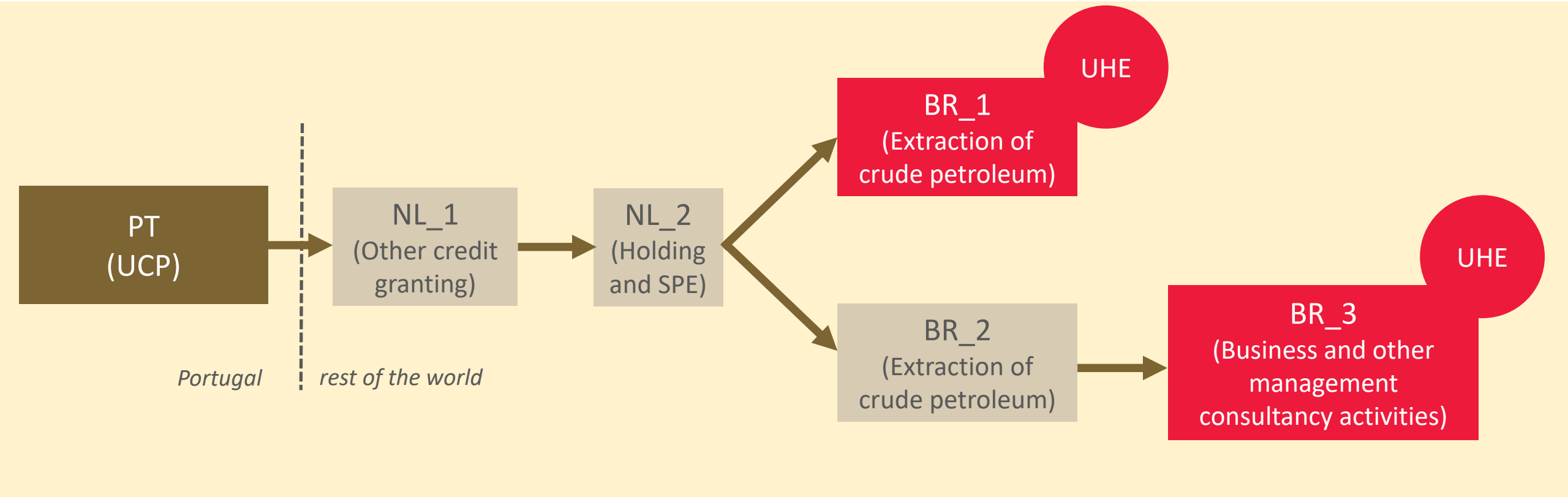


REAL EXAMPLE: IF WE STOP AT THE 1ST OPERATING UNIT



Can financial intermediaries be considered operating units?

REAL EXAMPLE: IF WE STOP AT THE LAST UNIT IN THE CHAIN



Potential problem: ending up in units outside the main economic activity of the group

TOP OUTWARD FDI, WHERE UCP=PRT (2020)

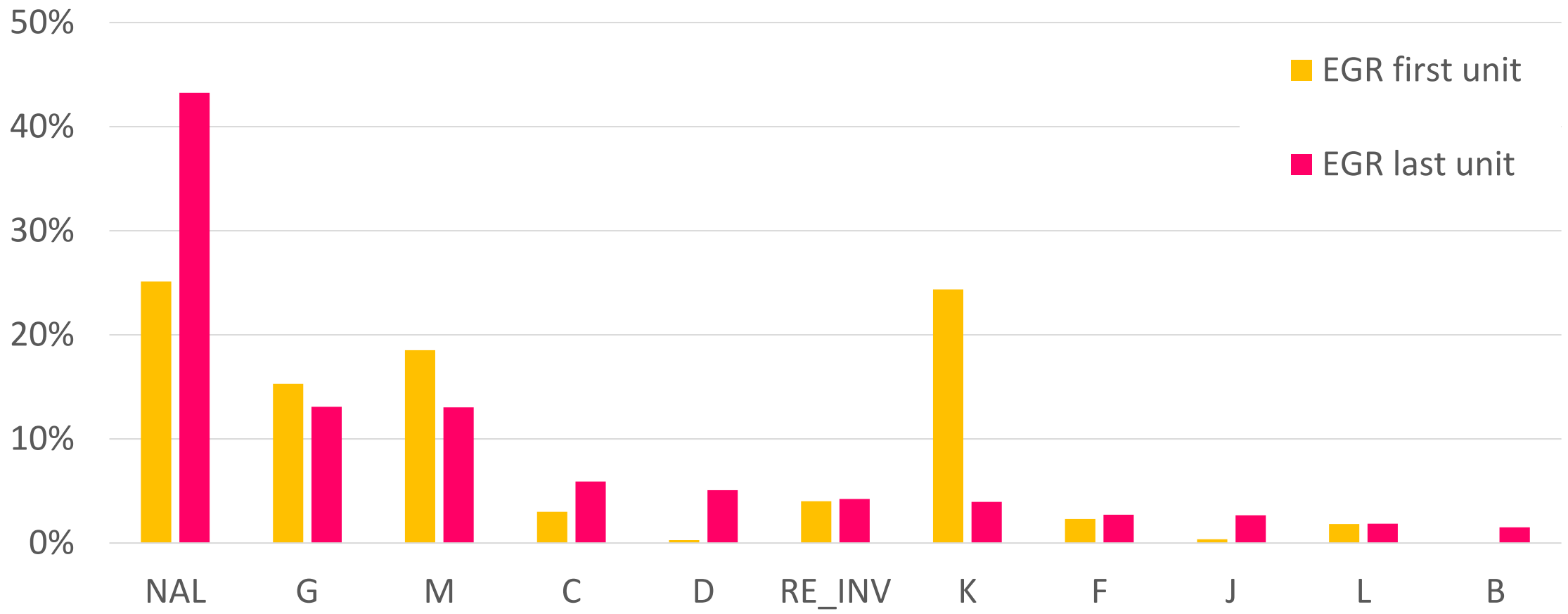
Rank	Immediate Partner	Outward FDI Stocks (MEUR)	% of Outward FDI Stocks
1	NL	17 805	52%
2	ES	3 506	10%
3	LU	2 012	6%
4	BR	1 427	4%
5	AO	1 312	4%
6	MZ	921	3%
7	FR	909	3%
8	MO	758	2%
9	US	581	2%
10	GB	470	1%
11	DE	470	1%
12	CL	360	1%
13	PL	353	1%
TOP13		30 883	91%

UHE RESULTS, UCP=PRT | RANKINGS (2020)

RANK	OFATS		EGR 1st operating unit		EGR Last unit	
	UHE	Value (%)	UHE	Value (%)	UHE	Value (%)
1	PL	24%	PT	17%	BR	19%
2	ES	17%	ES	14%	CO	17%
3	MZ	5%	NL	14%	ES	12%
4	BR	3%	PL	12%	PL	8%
5	AO	3%	BR	6%	PT	6%
6	CO	2%	US	4%	US	4%
7	CV	2%	AO	3%	AO	3%
8	FR	1%	MO	2%	MO	2%
9	CI	1%	GB	2%	FR	1%
10	DE	1%	MX	2%	MX	1%
11	US	1%	FR	2%	CH	1%
12	NL	1%	CO	2%	RU	1%
13	GB	1%	RU	1%	DE	1%
TOP13		61%		80%		79%

Immediate	%
NL	52%
ES	10%
LU	6%
BR	4%
AO	4%
MZ	3%
FR	3%
MO	2%
US	2%
GB	1%
DE	1%
CL	1%
PL	1%
TOP13	91%

OUTWARD FDI BY NACE OF THE UHE (2020)



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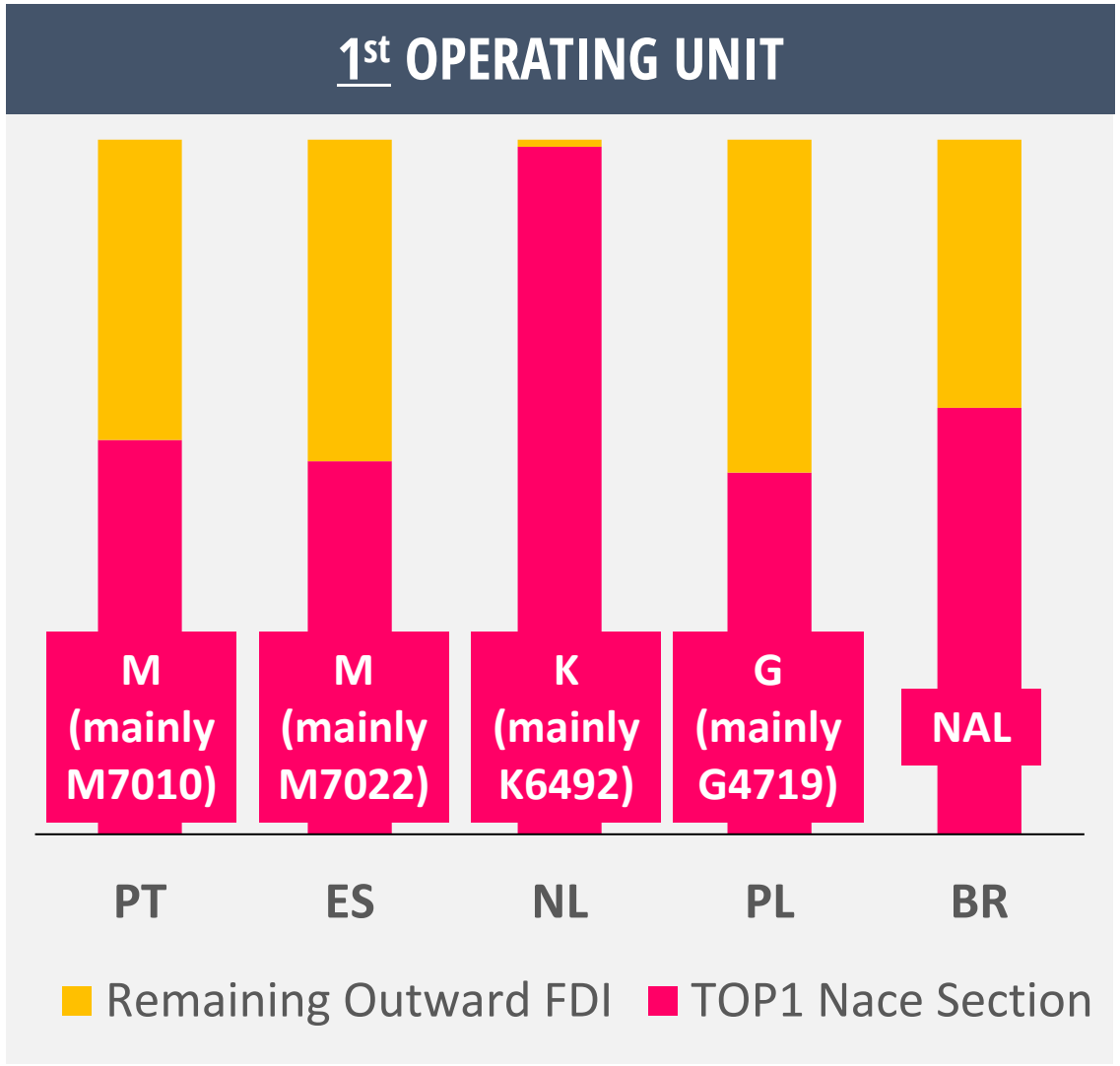
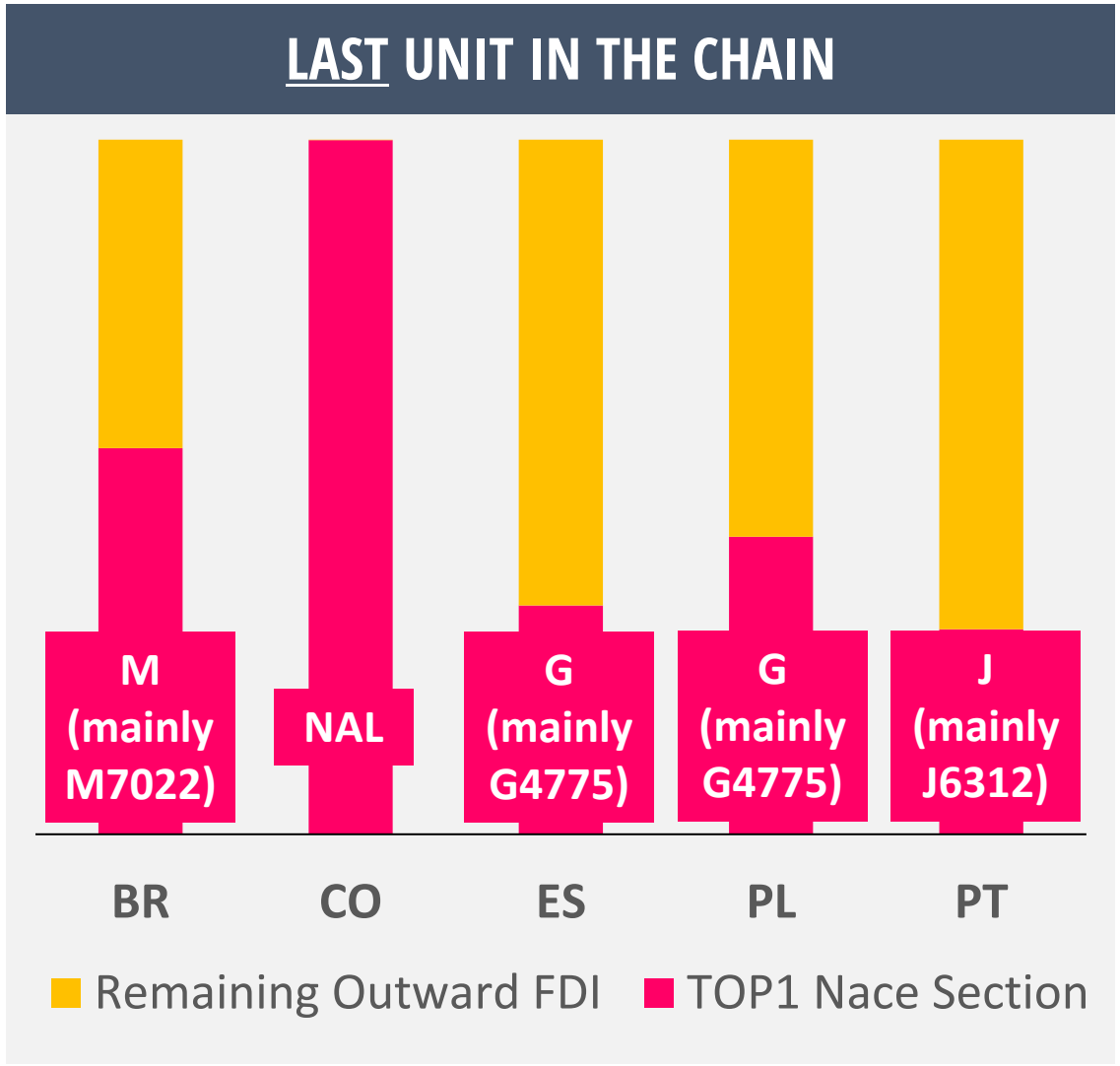
EGR | TOP1 NACE SECTION CONCENTRATION (2020)





CHALLENGES FACED WHEN FINDING THE UHE

Reference year: 2020

	1st operating unit		Last unit in the chain	
	Outward FDI (MEUR)	No of cases	Outward FDI (MEUR)	No of cases
UH is SPE	0	0	-1723	477
UH is a holding	0	0	-1716	578
UH is a head office	3061	80	48	92
UH has employment missing	0	760	0	1353
UH has zero employment and it is not a SPE	0	1304	0	3152

THOUGHTS ON EGR AND WAY FORWARD

05

ADVANTAGES OF USING EGR

- Go through SPEs and holding companies
- Go to bottom of the investment chain (groups' structure available)
- Allocate outward investment to the compiling economy

CHALLENGES OF USING EGR

- Missing values for non-resident SPE
- Missing values for non-EU/EFTA countries (some missing values were filled with data from previous years)
- Turnover data available by "enterprise" and FDI data by "legal unit"

CONCLUSIONS

- UHE estimates largely depend on the chosen method
- NL and LU have a (*very*) low share of the PRT outward FDI by UHE
- The EGR allows identifying PRT as UHE
- PRT as UHE has a lower importance, when going to the bottom of the investment chain
- When going to the last unit in the chain, section K reduces its importance

POSSIBLE NEXT STEPS

- Treat cases of investors that have an UH with no employment but there is only one UHE and produce UHE statistics for a larger time span

- Use the insights obtained with this exercise to contribute to develop the methodological guidance on the compilation of FDI statistics by UHE

- Explore other methods to compile Outward FDI statistics by UHE

- Develop a formal definition of “first operating unit”

QUESTIONS FOR DISCUSSION

1) To find the UHE where should we stop (e.g., SPE and holdings as UH)? Should this decision be based on the main economic activity of the group?

2) Should we consider head offices (NACE M7010) as operating entities?

3) Besides excluding holding companies, should we exclude other types of companies (e.g., financial intermediaries)?

4) Is it a problem if the economic activity of the UH has nothing to do with the main activity of the group?

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