


**United States - Ireland
Asymmetry Analysis Report
On Differences
2017 - 2019**

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Research Report

Background

As part of an Asymmetry Working Group (AWG), the U.S. Census Bureau has been working with the Ireland Central Statistics Office (CSO) on a merchandise trade goods reconciliation study to explain discrepancies in the official bilateral trade statistics.

The goal of this study was not to change the official statistics of either country, but rather to clarify differences in reporting, thereby facilitating a better understanding among data users in both countries of the actual trade situation. The research is based on the published bilateral merchandise statistical data in the calendar years 2017 through 2019.

Over the three-year period, the eastbound trade (Ireland to the United States) represented an average 19.1 percent difference as a percentage of imports. The westbound trade (United States to Ireland) represented an average 44.5 percent difference. Even though the westbound difference represented a much higher percentage of the import trade, the overall trade value is much smaller.

Table 1

Year	Westbound (\$ Billion)				Eastbound (\$ Billion)			
	U.S. Export	Ireland Import	Difference (Import - Export)	Difference as a % of Imports	U.S. Import	Ireland Export	Difference (Import - Export)	Difference as a % of Imports
2017	10.7	19.3	8.6	44.6%	48.9	37.6	11.3	23.0%
2018	10.7	20.2	9.4	46.8%	57.5	46.5	11.0	19.1%
2019	9.1	15.7	6.6	42.3%	61.9	52.6	9.3	15.0%

Westbound Trade (U.S. exports, Ireland imports)

In 2017 and 2018, westbound discrepancies of published data were 44.6 and 46.8 percent of the value of Ireland imports from the United States. In 2019, the difference dropped to 42.3 percent.

Figure 1

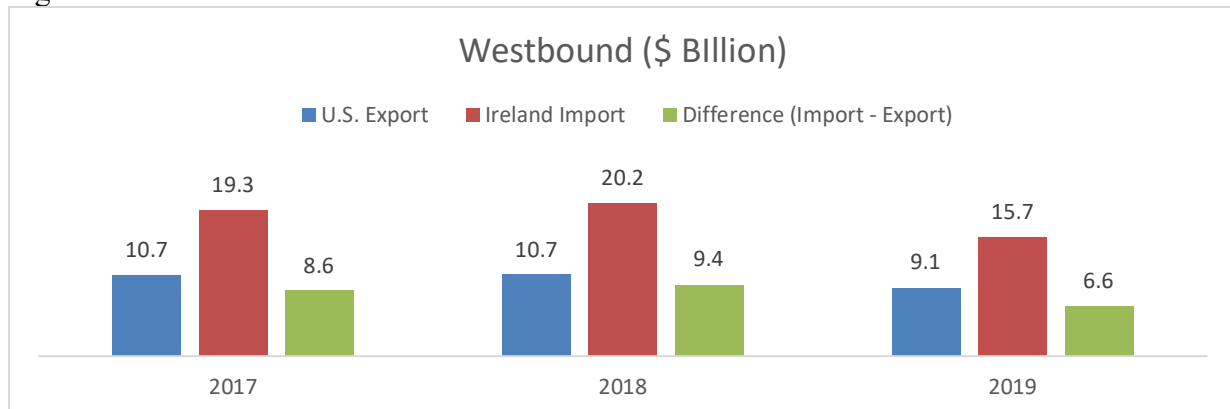


Figure 1 on the previous page shows the statistical difference, based on officially published data, was \$8.6 billion in 2017, \$9.4 billion in 2018, and \$6.6 billion in 2019.

Besides reviewing conceptual and methodological differences for total trade, we also analyzed the detailed trade transactions at the commodity level to identify causes for discrepancies. To do this, we analyzed the unadjusted transaction level data. Our results isolated the top 5 harmonized system (HS) chapters for each year; this accounted for between 98 and 100 percent of the U.S. export difference. The chapters are shown in Table 2 below.

Table 2

Westbound (\$ Billion)											
2017				2018				2019			
Chapter	US Export	Ireland Import	Difference (Imp - Exp)	Chapter	US Export	Ireland Import	Difference (Imp - Exp)	Chapter	US Export	Ireland Import	Difference (Imp - Exp)
88	1.7144	7.9818	6.2674	88	1.7816	10.4437	8.6621	88	0.1433	5.3365	5.1932
30	3.3619	5.1979	1.8360	84	1.4220	1.8744	0.4524	30	2.1297	2.8339	0.7042
84	1.0729	1.4686	0.3958	39	0.3864	0.5147	0.1283	84	1.1846	1.7855	0.6009
29	0.7816	0.5734	-0.2082	30	2.4343	2.5495	0.1152	27	1.0318	1.2486	0.2168
27	0.0196	0.2236	0.2040	27	0.3970	0.4972	0.1001	85	0.8645	0.6873	-0.1772
Top5	6.9504	15.4453	8.4949	Top5	6.4214	15.8795	9.4581	Top5	5.3538	11.8918	6.5380
Total	10.7077	19.3117	8.6040	Total	10.7445	20.1798	9.4353	Total	9.0580	15.7033	6.6453

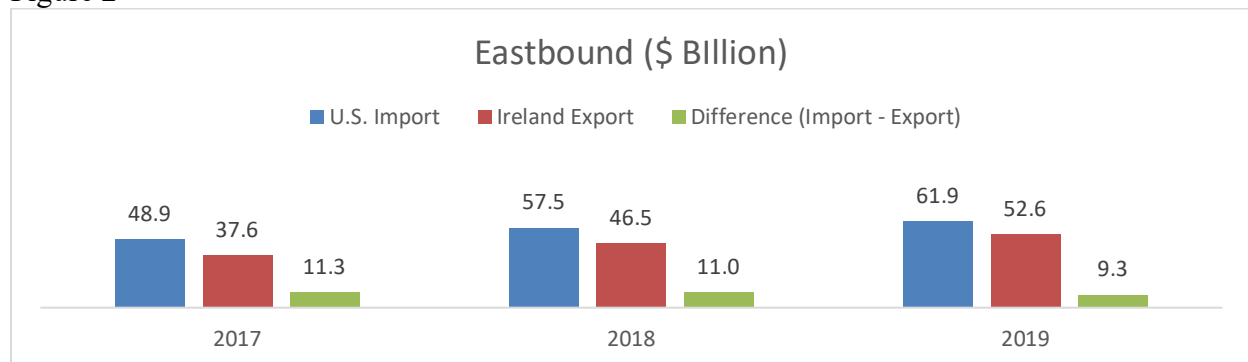
- 30 – Pharmaceuticals
- 85 - Electrical machinery and equipment
- 39 - Plastics
- 88 – Aircraft
- 29 – Organic chemicals
- 27 – Mineral fuels, mineral oil
- 84 – Nuclear reactors, boilers, machinery

The majority of the difference in this direction falls in chapter 88, aircraft. The 2019 trade data shows US exports of \$143 million; Ireland imports of \$5.3 billion; for a difference of approximately \$5.2 billion. There is one HS6 code, 8802.40 - airplanes and other aircraft, of an unladen weight exceeding 15,000 kg, that contributes to the largest portion or about 77 percent of the chapter difference. During the meetings it was determined that the main cause for the difference is how each country attributes economic ownership.

Eastbound Trade (Ireland exports, U.S. imports)

In 2017 and 2018, eastbound discrepancies of published data were 23.0 and 19.1 percent of the value of US imports from Ireland. In 2019, the difference dropped to 15.0 percent.

Figure 2



As shown in Figure 2 on the previous page, the eastbound statistical difference based on officially published trade data was \$11.3 billion in 2017, \$11.0 billion in 2018, and \$9.3 billion in 2019.

Similar to westbound, we then analyzed the detailed trade transactions at the commodity level. To do this, we analyzed the unadjusted transaction level data. Our results isolated the top 5 harmonized system (HS) chapters for each year; this accounted for between 52 and 78 percent of the U.S. import difference. The chapters are shown in Table 3 below.

Table 3

Eastbound (\$ Billion)											
2017				2018				2019			
Chapter	US Import	Ireland Export	Difference (Imp - Exp)	Chapter	US Import	Ireland Export	Difference (Imp - Exp)	Chapter	US Import	Ireland Export	Difference (Imp - Exp)
30	23.8250	12.5506	11.2744	30	26.6130	19.5893	7.0237	29	15.3579	12.3638	2.9941
88	0.0093	2.6058	-2.5965	88	0.0066	1.2605	-1.2540	30	25.8364	23.4358	2.4006
85	2.4269	3.0386	-0.6116	90	7.6135	6.7529	0.8607	90	8.1967	6.7714	1.4253
90	6.4897	6.0447	0.4451	85	1.2782	2.0986	-0.8203	88	0.0323	1.4389	-1.4066
33	2.3436	2.0609	0.2827	29	11.1126	10.8305	0.2821	84	0.9576	1.5399	-0.5823
Top5	35.0946	26.3005	8.7941	Top5	46.6239	40.5318	6.0921	Top5	50.3809	45.5498	4.8311
Total	48.8612	37.6087	11.2525	Total	57.4501	46.4542	10.9959	Total	61.8928	52.5851	9.3077

30 – Pharmaceuticals

88 – Aircraft

90 – Optical & photographic equipment

85 - Electrical machinery and equipment

29 – Organic chemicals

84 – Nuclear reactors, boilers, machinery

33 – Essential Oils, perfume

Analysis

The majority of the difference in this direction falls in chapters 29, organic chemicals, and 30, pharmaceuticals. The 2019 trade data shows the difference in these chapters of \$2.9 billion and \$2.4 billion respectively; upon closer analysis at the HS6 level in chapter 30, the true differences are shown in Table 4 below.

Table 4

2017			
HS6	US Import	Ireland Export	Difference
300490	12,402,480,977	4,635,205,650	7,767,275,327
300220	3,114,860,740	299,182,407	2,815,678,333
300213	3,067,963,456	788,530,034	2,279,433,422
2018			
300490	12,480,460,866	5,876,108,005	6,604,352,861
300215	4,048,048,536	6,630,160,815	-2,582,112,279
300220	2,862,640,986	704,997,143	2,157,643,843
2019			
300490	12,925,469,805	4,948,326,316	7,977,143,489
300215	4,823,781,768	11,274,254,759	-6,450,472,991
300220	2,097,418,740	187,626,092	1,909,792,648

As shown in the Table 4 on the previous page, using 2019 as an example, the largest differences are seen in HS6 3004.90, 3002.15, and 3002.20. All 3 codes show a significant amount of indirect trade¹ showing Ireland as the country of origin², but a different country of consignment³. Using country of origin equal to Ireland, for HS6 3004.90 – 59% of the value showed a different consignment country. For 3002.15 – 52%, and for 3002.20 – 98%.

In addition, we discovered a significant amount of trade entering a Foreign Trade Zone (FTZ) in Puerto Rico. The trade entered into the FTZ under HS6 2935.90 - sulfonamides, other, non-anti-infective agents. This raw material was then processed into a different commodity and then imported into the commerce of the US under HS6 3004.90. The concern here is that Ireland would show this as an export to the US under chapter 29. Since this entered into a FTZ, it has not officially entered the commerce of the US for consumption and is recorded as “general” trade for goods that crossed the US border. During processing inside this specific FTZ, the original commodity is transformed into a new product classified under HS6 3004.90. It then leaves the FTZ and is either exported to another country, or formally enters the US for consumption as “special” trade under 3004.90. Under this specific scenario, Ireland may not show corresponding exports to the US for that same commodity, contributing to the difference.

Country of Consignment

The trade statistics for the US are based upon the country of origin. This is determined and recorded by US Customs and Border Protection at the time of import. The country of origin is used by the importing country for many reasons, one of them to determine duty charges. The country of consignment is also captured in the import transactions. The United Nations International Merchandise Trade Statistics Compilers Manual, Rev.1 (2013), Chapter 16 on partner country recommends using country of origin for imports, and the country of last known destination for exports. It also recommends that country of consignment be recorded for imports in addition to country of origin. However, some countries use country of consignment to report their official trade statistics in addition to the country of origin. As a part of this study, we also conducted an analysis using the country of consignment to see the effects on the differences in trade as opposed to using the country of origin. The results are shown in Table 5 below.

¹ Indirect trade – goods that travel via an intermediary country or region.

² Country of origin - country where the goods were mined, grown, or manufactured or where each foreign material used or incorporated in a good underwent a change in tariff classification indicating a substantial transformation under the applicable rule of origin for the good.

³ Country of consignment – for imports, is the country from which goods were dispatched to the importing country, without any commercial transactions or other operations that change the legal status of the goods taking place in any intermediate country.

Table 5

US Imports vs. Ireland Exports (Consignment)											
2017				2018				2019			
Chapter	US Import Value (\$ Billion)	Ireland Export Value (\$ Billion)	Difference (\$ Billion)	Chapter	US Import Value (\$ Billion)	Ireland Export Value (\$ Billion)	Difference (\$ Billion)	Chapter	US Import Value (\$ Billion)	Ireland Export Value (\$ Billion)	Difference (\$ Billion)
30	12.12	12.03	0.08	30	16.73	19.57	-2.84	29	13.43	12.36	1.07
88	0.12	2.50	-2.38	88	0.22	1.26	-1.04	30	19.38	23.44	-4.06
85	2.46	2.91	-0.46	90	6.87	6.74	0.12	90	7.35	6.77	0.58
90	5.98	5.80	0.18	85	1.34	2.10	-0.76	88	0.17	1.44	-1.26
33	2.35	1.98	0.37	29	9.81	10.82	-1.00	84	1.35	1.54	-0.19
Top5	23.02	25.22	-2.20	Top5	34.97	40.48	-5.52	Top5	41.68	45.55	-3.87
Total	35.44	36.06	-0.62	Total	45.48	46.40	-0.91	Total	53.07	52.59	0.48

Table 6

Country of Consignment V.S. Country of Origin								
2017			2018			2019		
Chapter	Consignment Difference (\$ Billion)	Origin Difference (\$ Billion)	Chapter	Consignment Difference (\$ Billion)	Origin Difference (\$ Billion)	Chapter	Consignment Difference (\$ Billion)	Origin Difference (\$ Billion)
30	0.08	11.27	30	-2.84	7.02	29	1.07	2.99
88	-2.38	-2.60	88	-1.04	-1.25	30	-4.06	2.40
85	-0.46	-0.61	90	0.12	0.86	90	0.58	1.43
90	0.18	0.45	85	-0.76	-0.82	88	-1.26	-1.41
33	0.37	0.28	29	-1.00	0.28	84	-0.19	-0.58

Table 6 shows the significant change in value difference by chapter when using the country of consignment vs. the country of origin. There are some remaining differences even using the consignment country, but these differences are smaller and maybe more explainable given the Foreign Trade Zone processing.

Chapter 98 & Consignment country

One of the larger differences on the eastbound direction was chapter 98, specifically 9801.00.1028 – Products of the United States when returned after having been exported, or any other products when returned within 3 years after having been exported, without having been advanced in value or improved in condition by any process of manufacture or other means while abroad, articles provided for in chapter 30. Items reported under this HS code will have a country of origin equal to the US, and a country of consignment equal to Ireland, with an original HS code between chapters 1 through 97, in this case, chapter 30. The largest chapter 30 code reported using this chapter 98 provision was 3002.15.

Table 7

Eastbound - US Goods Returned			
Value \$ (Billions)	2017	2018	2019
Total Difference	11.3	11.0	9.3
HS 30 Difference	11.3	7.0	3.0
HS 3002.15 Difference	0.4	2.6	6.5
HS 3002.15 US Origin returned	1.1	2.7	3.1
US origin percent of difference	275%	104%	48%

As shown in Table 7, the differences for 3002.15 are \$0.4 billion in 2017, \$2.6 billion in 2018 and \$6.5 billion in 2019. If Ireland sends goods to the US under 3002.15 with a country of consignment equal to Ireland, and country of origin equal to any other country, including the US, that may inflate their export value under this scenario. As those goods enter the US, any transactions with HS 3002.15 and country of origin equal to the US would get placed in chapter 98 as US goods returned and would not be counted in chapter 30. Ireland would show an export in chapter 30, the US would show an import, just some in chapter 30, and the rest in chapter 98. The remaining trade with a country of origin not equal to the US would be processed as normal.

Conclusion

In summary, each party in the working group has conducted their independent analyses and discovered some identifiable reasons for legitimate differences in the published general merchandise trade statistics. Overall, in both directions of trade, the research into the larger discrepancies revealed no errors in the trade statistics. In the westbound trade, the rules surrounding the economic ownership of large aircraft and how each country defines a sale versus a lease is the most likely reason for the difference. In the eastbound trade, areas of indirect trade, the roles of processing goods in Foreign Trade Zones within the United States, and country of consignment versus country of origin, all contribute to the larger differences. The large differences seen in eastbound trade in HS chapters 29 and 30 are significantly reduced when the country of consignment is used for analysis. These smaller differences in trade statistics using a country of consignment are encouraging. However, if countries follow the United Nations compilers manual guidelines and compile imports using country of origin and exports using last known country of export, differences in published statistics will exist. The issue of origin country at the time of import is important for Customs agencies to determine the appropriate tariff or special program.