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Online annex for BIS Bulletin no 118: "International footprint of global firms: residence and nationality perspectives on maritime shipments"

This annex provides additional analysis of the maritime shipment data used in the analysis. The data are from Dun & Bradstreet (D&B) for the year 2024 and cover approximately 33% of global maritime container volume. Each observation in the data is a single shipment transaction and includes information on the shipper and consignee (identity, industry and residence), product classification and shipment volume and value, among other information. These shipment data were matched with corporate ownership data from D&B as of end-2023. We exclude shipments where shipper and consignee residence economies are the same (for example in cases of offshore trade). As the data only capture *maritime* shipments, trade flows using other modes of transport, such as land transport, common within regions such as Europe and North America, will not be captured.

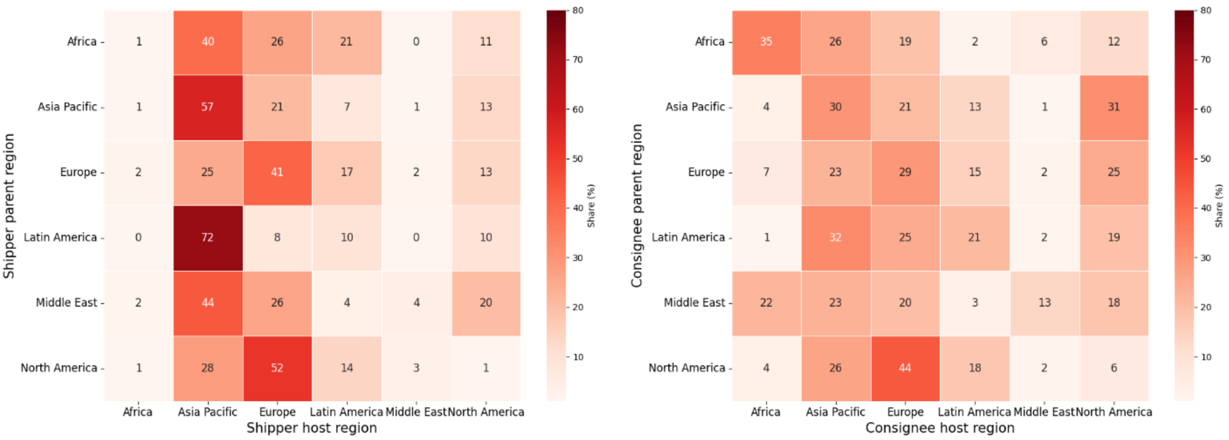
Graph A1 complements Graph 4 in the main text by showing the location of foreign subsidiaries. It illustrates the distribution of foreign subsidiary parent and host regions, weighted by total shipment value, distinguishing between subsidiaries acting as shippers (Graph A1.A) or consignees (Graph A1.B). The numerator represents the value of shipments conducted by foreign subsidiaries located in a specific region and of a certain nationality, while the denominator reflects the total value of shipments of foreign subsidiaries of that nationality.

Foreign subsidiary locations

Graph A1

A. Foreign subsidiary as shipper

B. Foreign subsidiary as consignee



Parent regions are represented along the y-axis while host regions are represented along the x-axis. A darker (lighter) coloured square reflects a higher (lower) share of foreign subsidiary shipment value in the host region indicated along the x-axis relative to the total shipment value of the parent region indicated along the y-axis. According to the D&B classification, North America includes the United States and Canada, while Latin America includes Mexico.

Sources: D&B; authors' calculations.

The geographic distribution of foreign subsidiary shipments is more concentrated for shippers, with Asia as the leading host region given its role as a manufacturing region. Europe is also an important host region for North American and European subsidiaries, while Latin America is a preferred location for North American shippers. For consignees, the distribution is more balanced across Asia, Europe and North America. Consignees also exhibit higher shipment activity within their parent markets, as shown by darker diagonal squares.

Maritime shipments among 10 economies: residence vs nationality perspectives

In billions of US dollars — Table A1

Shipper residence	Consignee residence: CN	US	DE	FR	NL	KR	IT	MX	JP	GB	Total
CN	0.00	20.55	1.59	2.55	1.24	0.44	1.23	3.87	0.26	2.16	33.89
US	4.65	0.00	1.12	0.32	0.97	2.68	0.58	0.29	2.65	0.61	13.85
DE	0.83	3.81	0.00	0.03	0.01	0.20	0.03	0.72	0.35	0.05	6.04
FR	2.21	2.08	0.01	0.00	0.03	0.25	0.01	0.19	0.73	0.06	5.58
NL	1.29	1.87	0.07	0.04	0.00	0.34	0.10	0.40	0.31	0.04	4.46
KR	0.05	2.51	0.26	0.10	0.10	0.00	0.26	0.36	0.27	0.17	4.07
IT	0.29	2.83	0.00	0.02	0.00	0.10	0.00	0.31	0.20	0.03	3.78
MX	0.19	1.33	0.17	0.14	0.13	0.54	0.24	0.00	0.57	0.16	3.48
JP	0.17	2.17	0.20	0.06	0.13	0.04	0.10	0.23	0.00	0.22	3.33
GB	0.60	1.29	0.01	0.05	0.00	0.16	0.01	0.44	0.23	0.00	2.80
Total	10.27	38.45	3.43	3.30	2.62	4.75	2.57	6.82	5.57	3.50	81.29

Shipper nationality	Consignee nationality: CN	US	DE	FR	NL	KR	IT	MX	JP	GB	Total
CN	11.04	20.25	1.75	2.78	1.60	0.54	0.82	2.31	0.96	1.42	43.48
US	5.51	26.03	0.78	0.25	1.53	2.48	0.50	0.29	1.49	1.38	40.23
DE	0.76	1.43	16.36	0.16	0.13	0.41	0.14	0.14	0.34	0.17	20.03
FR	1.27	1.40	0.11	6.96	0.46	0.12	0.15	0.05	0.68	0.18	11.39
NL	1.17	1.71	0.57	0.27	5.38	0.32	0.37	0.33	0.40	0.42	10.95
KR	0.07	2.01	0.34	0.15	0.14	4.21	0.23	0.06	0.36	0.28	7.86
IT	0.18	1.43	0.25	0.09	0.12	0.10	1.28	0.14	0.21	0.06	3.86
MX	0.13	0.52	0.09	0.02	0.14	0.08	0.06	1.02	0.54	0.10	2.70
JP	0.40	1.58	0.16	0.33	0.13	0.13	0.10	0.18	9.84	0.36	13.22
GB	1.45	1.63	0.38	0.11	0.43	0.61	0.05	0.32	0.68	5.18	10.85
Total	21.98	58.00	20.78	11.14	10.06	9.02	3.70	4.85	15.50	9.56	164.58

Table A1 presents the numerical values of maritime shipments that underpin the Sankey diagrams in Graph 1. It shows the maritime shipments between the top 10 major trading economies from both the residence and nationality perspectives. Rows represent shippers, while columns represent consignees. While diagonal values are all zero from a residence view, trade between entities of the same country are significant by nationality, driven by shipments between foreign subsidiaries and their parent countries and among foreign subsidiaries themselves. Total "by nationality" shipments among these economies are more than double those "by residence", highlighting the prevalence of foreign subsidiaries.

Table A2 presents the values of maritime shipments among the top 10 major trading economies as a share of total incoming shipment value from these 10 economies, from both the residence and nationality perspectives. By residence, China emerges as an important shipper, accounting for the highest share of incoming shipment values for all the economies except Japan and Korea, with shares around or above 50%. However, when analysed from the nationality perspective, the importance of domestic shipment values becomes much more prominent. For example, shipments between entities of the same nationality account for 45% of total shipment value in the United States, 79% in Germany and 50% in China. This illustrates the stark differences in trade landscapes when comparing shipments by residence and by nationality.

Maritime shipments among 10 economies: residence vs nationality perspectives

Shares of total incoming shipment value — Table A2

		Consignee residence									
		CN	US	DE	FR	NL	KR	IT	MX	JP	GB
Shipper residence	CN	0.00	0.53	0.46	0.77	0.47	0.09	0.48	0.57	0.05	0.62
	US	0.45	0.00	0.33	0.10	0.37	0.56	0.22	0.04	0.47	0.17
	DE	0.08	0.10	0.00	0.01	0.00	0.04	0.01	0.11	0.06	0.01
	FR	0.22	0.05	0.00	0.00	0.01	0.05	0.00	0.03	0.13	0.02
	NL	0.13	0.05	0.02	0.01	0.00	0.07	0.04	0.06	0.06	0.01
	KR	0.00	0.07	0.07	0.03	0.04	0.00	0.10	0.05	0.05	0.05
	IT	0.03	0.07	0.00	0.00	0.00	0.02	0.00	0.05	0.04	0.01
	MX	0.02	0.03	0.05	0.04	0.05	0.11	0.09	0.00	0.10	0.05
	JP	0.02	0.06	0.06	0.02	0.05	0.01	0.04	0.03	0.00	0.06
	GB	0.06	0.03	0.00	0.01	0.00	0.03	0.01	0.06	0.04	0.00

		Consignee nationality									
		CN	US	DE	FR	NL	KR	IT	MX	JP	GB
Shipper nationality	CN	0.50	0.35	0.08	0.25	0.16	0.06	0.22	0.48	0.06	0.15
	US	0.25	0.45	0.04	0.02	0.15	0.27	0.13	0.06	0.10	0.14
	DE	0.03	0.02	0.79	0.01	0.01	0.05	0.04	0.03	0.02	0.02
	FR	0.06	0.02	0.01	0.63	0.05	0.01	0.04	0.01	0.04	0.02
	NL	0.05	0.03	0.03	0.02	0.54	0.04	0.10	0.07	0.03	0.04
	KR	0.00	0.03	0.02	0.01	0.01	0.47	0.06	0.01	0.02	0.03
	IT	0.01	0.02	0.01	0.01	0.01	0.01	0.35	0.03	0.01	0.01
	MX	0.01	0.01	0.00	0.00	0.01	0.01	0.02	0.21	0.03	0.01
	JP	0.02	0.03	0.01	0.03	0.01	0.01	0.03	0.04	0.63	0.04
	GB	0.07	0.03	0.02	0.01	0.04	0.07	0.01	0.07	0.04	0.54