

Technology Balance of Payments

10 December 2025

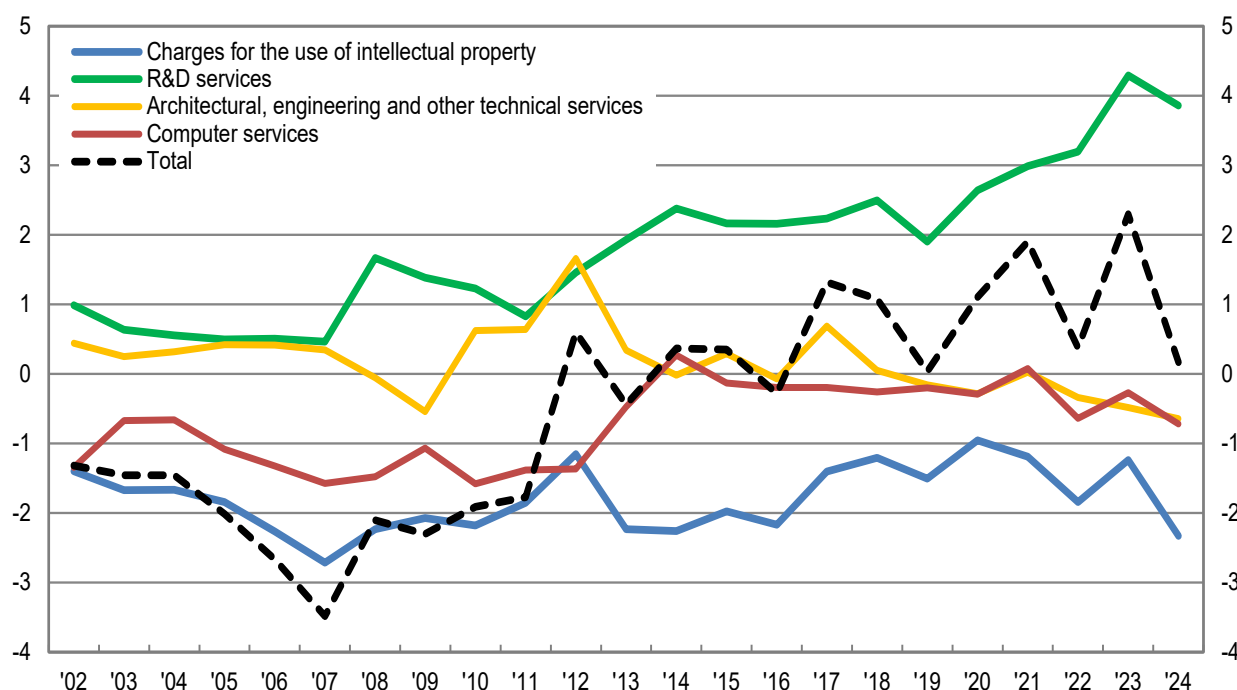
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Main findings¹

In 2024, Italy's technology balance of payments – which includes charges for the use of intellectual property, as well as trade in computer services, research and development (R&D) services, and architectural and engineering services (collectively defined as international trade in disembodied technology) – was broadly balanced (€0.2 billion), down from the 2023 surplus of €2.3 billion (Figure 1 and Table 1).

Imports increased further, especially the charges for the use of intellectual property. Exports decreased; nevertheless, they have continued to greatly outperform other types of services over the past 15 years. Disembodied technology transactions are attributable to both service firms and, to a lesser extent, manufacturing firms; the share of Italian firms belonging to foreign groups remained high, at over 60 per cent.

Figure 1 – Italy's technology balance of payments by transaction type
(billions of euros)



¹ This report was prepared by Enrico Tosti, the data were processed by Arcangela De Cata and Francesca Monica Romano.

Italy's technology balance of payments in 2024

The TBP has been positive since 2017

In 2024, Italy's technology balance of payments (TBP),² which has been positive since 2017, was broadly balanced (€0.2 billion), down from its 2023 peak of €2.3 billion (Table 1). There was a decline across all components; specifically, the deficit in charges for the use of intellectual property nearly doubled.

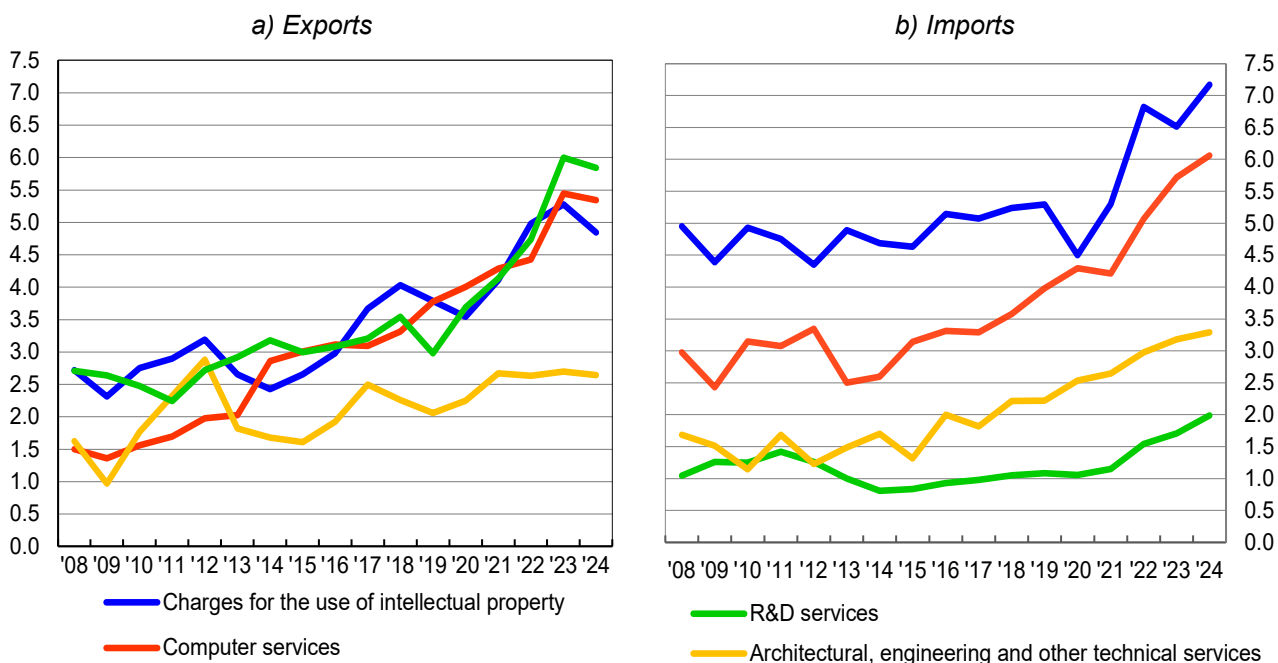
Exports decline in 2024 ...

After the robust growth under way since 2020, TBP exports declined by 3.8 per cent in 2024. The biggest reduction was in the charges for the use of intellectual property, followed by computer services, architectural and engineering services and R&D services (Figure 2.a).

... while imports grow

Imports grew once again. There was an increase (8.1 per cent overall) in all components, especially charges for the use of intellectual property.

Figure 2 – Italy's technology balance of payments: exports and imports by transaction type
(billions of euros)

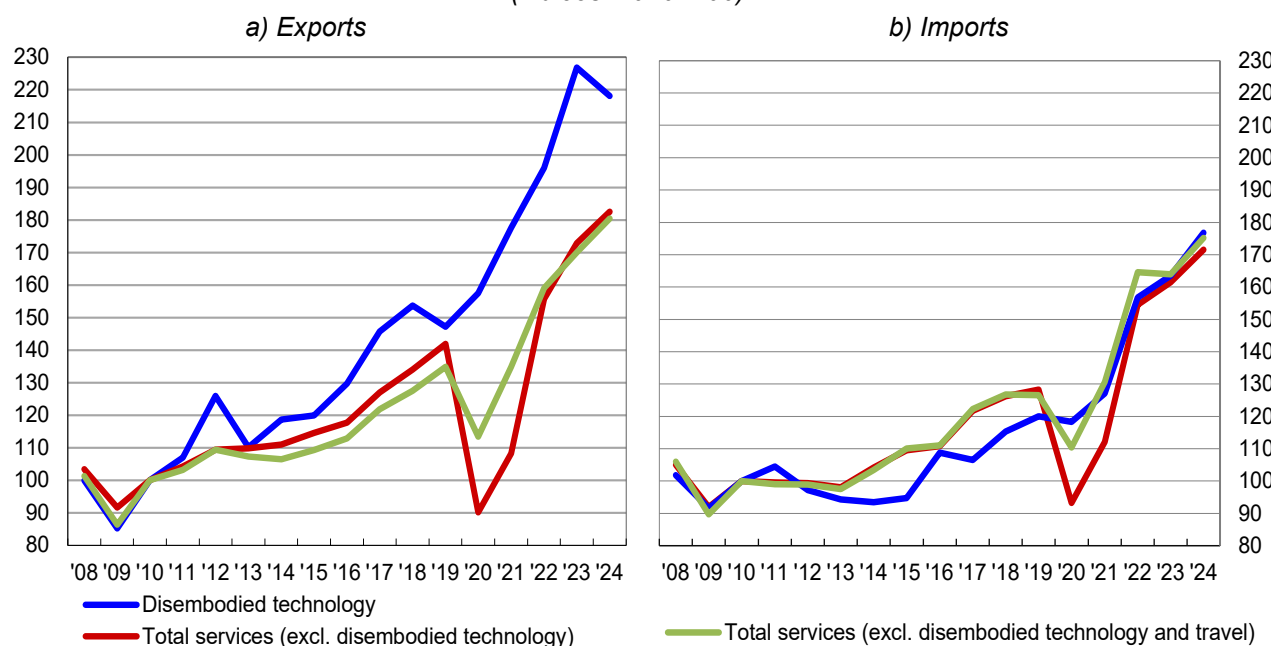


Technology exports have risen faster than other services since 2010

Despite the contraction recorded in 2024, TBP exports have continued to grow at a higher rate than those of other types of services overall (8.4 per cent compared with 5.9 per cent per year on average; Figure 3.a). The increase in TBP imports was in line with imports of other services (5.5 and 5.1 per cent respectively on average; Figure 3.b).

² The definition of 'technology balance of payments' follows the OECD's taxonomy, which excludes the sale of concessions and similar rights, royalties and other non-R&D-related licences in order to avoid overestimation. These flows are recorded as 'intangible assets' in the capital account and cannot therefore be kept distinct from other transactions entered under that item (such as the sale of CO₂ emission rights and the like, television and film rights and transfers of sports players from one club to another). In any case, the value of these transactions is likely to be negligible. For further details, see: [Methods and sources: Methodological notes](#).

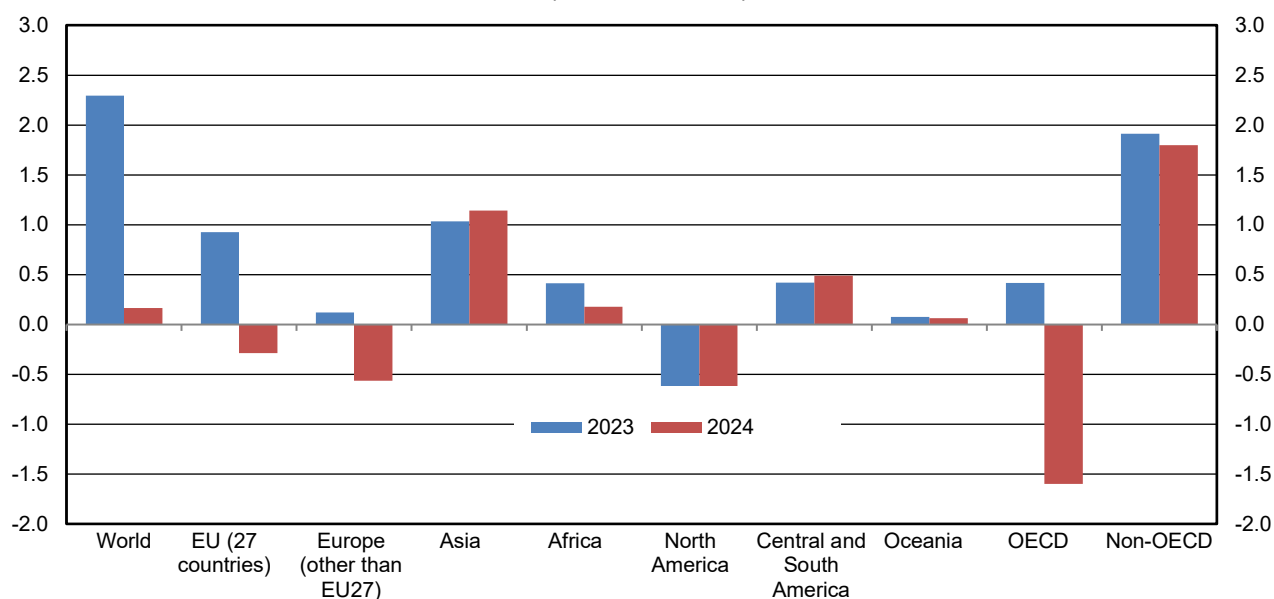
**Figure 3 – Italy's technology balance of payments:
exports and imports compared with other services data**
(indices: 2010=100)



**The balance
vis-à-vis
European
countries
deteriorates**

The lower TBP surplus in 2024 was almost entirely due to developments in the balance vis-à-vis European countries, both EU and non-EU (Figure 4 and Table 2), which returned to a substantial deficit (-€0.8 billion, from €1.0 billion). Trade with this region accounts for 70 per cent of exports and 75 per cent of imports. Specifically, the bilateral trade balances with the United Kingdom, France, Ireland and the Netherlands worsened. The surplus vis-à-vis non-European countries decreased slightly.

Figure 4 – Italy's technology balance of payments by geographical area
(billions of euros)



Italy's main counterparties are France (for exports) and the US (for imports)

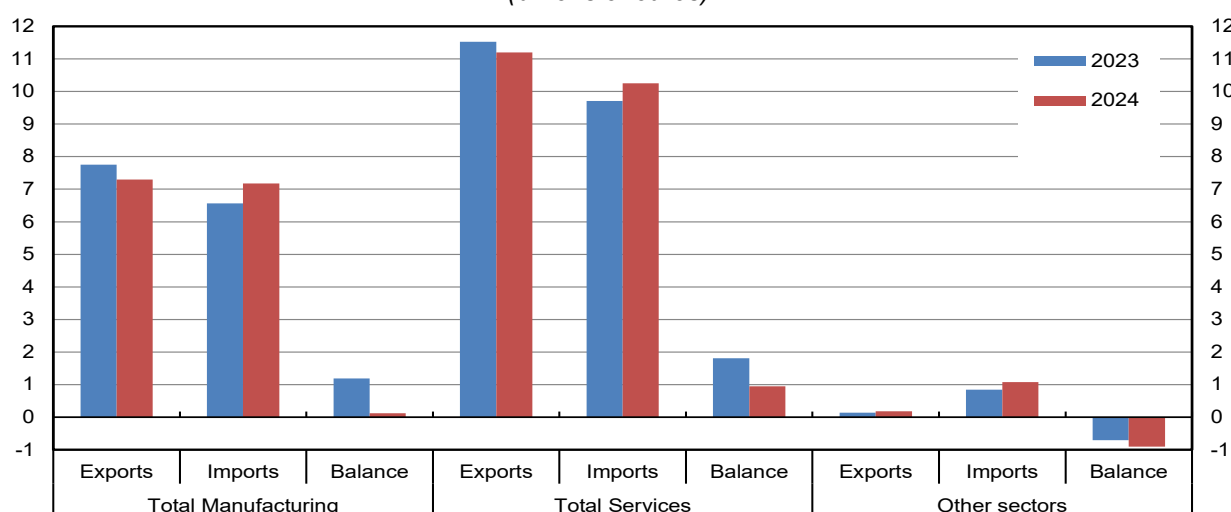
For the second consecutive year, despite declining sales, France was the top export destination market for Italy, followed by the United States (mainly for R&D services). Other important export destination markets include Germany, Switzerland, the United Kingdom and Ireland. Outside the OECD, the main destination markets were China, Singapore and Brazil. The United States remained the top import partner country for Italy, especially for charges for the use of intellectual property and computer services, followed by Germany, the United Kingdom, France and Ireland. Italy's imports from all the main countries increased.

Both service and manufacturing firms contribute to trade in disembodied technology

Service firms³ accounted for 60 per cent of exports (particularly professional, scientific and technical services, and information and communication services), while the remaining 40 per cent was almost exclusively attributable to manufacturing firms (especially those operating in the transport equipment, machinery and pharmaceutical sectors). Service firms' share was larger than that of manufacturing firms for imports as well (55 per cent compared with 39 per cent), with the main segments being 'transport equipment' and 'electrical engineering'. Information and communication services continued to account for the largest share of service imports, although it is decreasing.

Both manufacturing and service firms recorded a smaller surplus than in 2023 (€0.1 billion and €0.9 billion respectively; Figure 5 and Table 3). The rest of the macro-sectors actually affected by trade in disembodied technology – i.e. construction and the aggregate of the electricity, gas and water supply and waste treatment sectors – recorded an overall deficit of €0.9 billion.

Figure 5 – Italy's technology balance of payments: exports, imports and balances for the manufacturing and service sectors
(billions of euros)

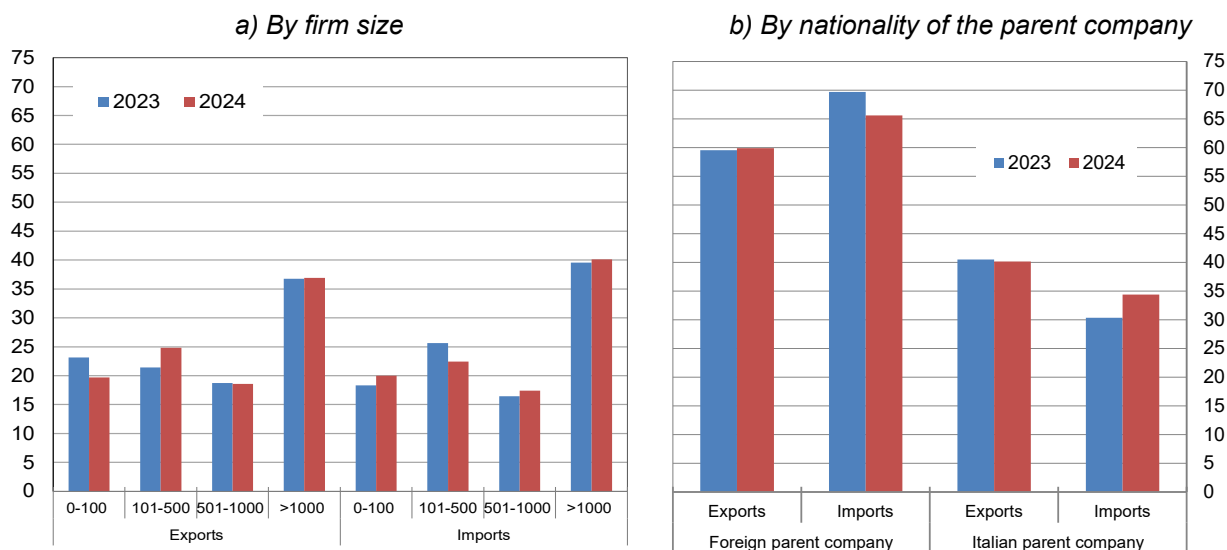


Foreign-controlled firms continue to play a major role

From a firm-size perspective, more than half of the trade in disembodied technology was attributable to firms with more than 500 employees; the contribution of firms with up to 100 employees, however, was not negligible (around 20 per cent; Figure 6.a). Taking into account the distribution by nationality of the parent company, foreign-controlled firms remained at around 60 per cent of exports while the figure went down to 66 per cent for imports (Figure 6.b).

³ As mentioned in the previous edition (see https://www.bancaditalia.it/pubblicazioni/bilancia-tecnologia/2024-bilancia-tecnologia/en_statistiche_BPT_20241217.pdf?language_id=1), the size of the survey sample was expanded in 2023 to meet new statistical requirements, leading to more accurate estimates, especially in terms of the firms' breakdown by sector and class size. In this edition, these characteristics too can therefore be compared homogeneously with data from the previous year.

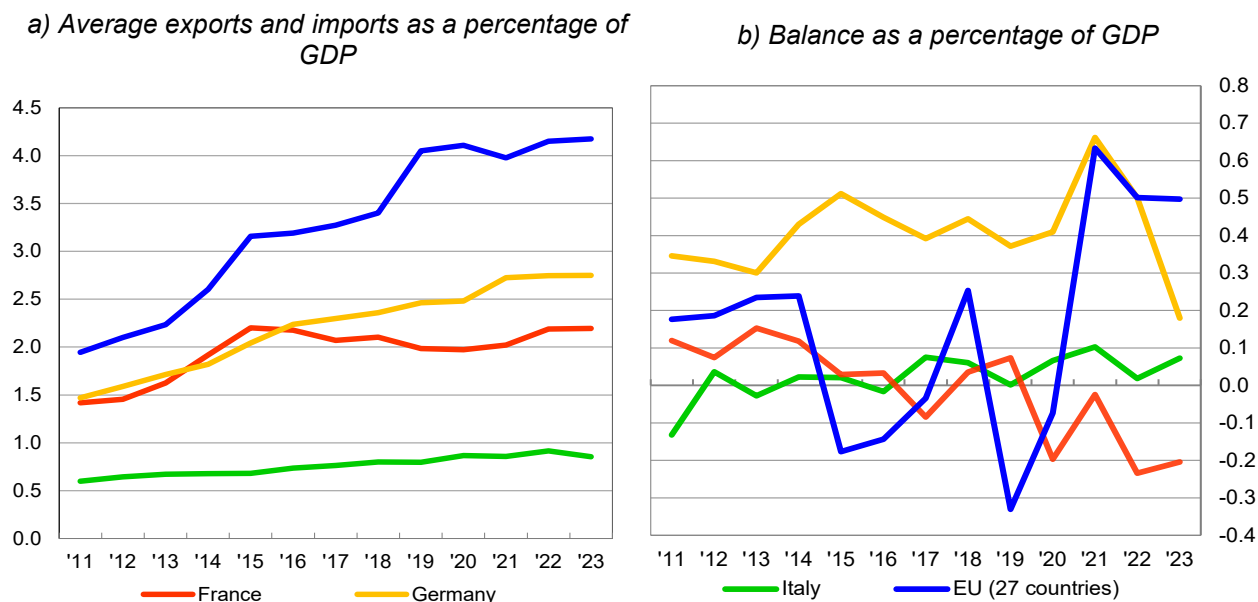
**Figure 6 – Italy's technology balance of payments by firm size and by nationality of the parent company
(per cent)**



The TBP as a percentage of GDP is still below the EU average

In 2023 (the last year for which internationally comparable data are available), Italy's TBP flows as a percentage of GDP were still significantly smaller than those of Germany and France (Figure 7.a).⁴ The high EU average reflects the large share of technology trade in countries such as Ireland, where companies belonging to large multinational groups operate. Again, in relation to GDP, Italy's balance was greater than France's but below the EU average and lower than the balance for Germany, albeit only slightly (Figure 7.b).

Figure 7 – Italy's technology balance of payments: EU comparison



Source: Based on Eurostat data (balance of payments data; national accounts data for GDP).

⁴ The gap was observed for both exports (0.9 per cent of GDP in Italy, compared with 2.1 per cent in France and 2.8 per cent in Germany) and imports (0.8 per cent of GDP in Italy, compared with 2.3 per cent in France and 2.7 per cent in Germany).

Tables

Table 1 – Italy's technology balance of payments by transaction type (millions of euros)

Year	A) Charges for the use of intellectual property	B1) Computer services	B2) Architectural, engineering and other technical services	Technology-related services (B=B1+B2)	C) Research and development services	Total TBP (A+B+C)
EXPORTS						
2002	2,040	1,008	1,274	2,282	1,746	6,068
2003	2,163	1,099	1,145	2,244	1,523	5,930
2004	2,321	1,209	1,438	2,648	1,691	6,659
2005	2,610	1,358	1,690	3,048	1,549	7,207
2006	2,934	1,526	1,899	3,425	1,741	8,100
2007	3,101	1,613	2,008	3,621	1,841	8,563
2008	2,720	1,498	1,624	3,122	2,709	8,552
2009	2,316	1,360	972	2,332	2,641	7,289
2010	2,752	1,563	1,768	3,331	2,477	8,560
2011	2,901	1,695	2,323	4,018	2,241	9,160
2012	3,193	1,980	2,884	4,863	2,719	10,775
2013	2,658	2,027	1,821	3,849	2,922	9,428
2014	2,427	2,862	1,680	4,542	3,182	10,152
2015	2,656	3,009	1,608	4,617	2,996	10,269
2016	2,980	3,116	1,925	5,041	3,084	11,106
2017	3,669	3,092	2,499	5,591	3,209	12,470
2018	4,031	3,316	2,262	5,578	3,543	13,152
2019	3,786	3,776	2,059	5,835	2,981	12,602
2020	3,543	4,004	2,248	6,252	3,689	13,484
2021	4,109	4,285	2,672	6,957	4,137	15,203
2022	4,981	4,430	2,635	7,065	4,736	16,781
2023	5,276	5,447	2,696	8,143	5,999	19,418
2024	4,844	5,340	2,645	7,985	5,844	18,673
IMPORTS						
2002	3,438	2,356	833	3,189	759	7,386
2003	3,832	1,770	896	2,666	890	7,388
2004	3,990	1,870	1,119	2,989	1,139	8,118
2005	4,452	2,441	1,272	3,713	1,058	9,223
2006	5,196	2,849	1,485	4,334	1,234	10,765
2007	5,815	3,188	1,662	4,850	1,381	12,046
2008	4,951	2,978	1,682	4,660	1,046	10,658
2009	4,388	2,429	1,515	3,944	1,262	9,594
2010	4,931	3,145	1,144	4,289	1,249	10,469
2011	4,753	3,078	1,687	4,765	1,417	10,935
2012	4,348	3,344	1,226	4,571	1,261	10,179
2013	4,891	2,499	1,485	3,983	997	9,871
2014	4,685	2,595	1,698	4,293	807	9,785
2015	4,631	3,139	1,316	4,455	835	9,920
2016	5,147	3,314	1,999	5,312	930	11,389
2017	5,072	3,288	1,816	5,104	977	11,153
2018	5,236	3,576	2,214	5,790	1,049	12,076
2019	5,291	3,978	2,217	6,195	1,081	12,567
2020	4,500	4,295	2,533	6,828	1,054	12,381
2021	5,298	4,209	2,646	6,856	1,149	13,303
2022	6,822	5,067	2,975	8,042	1,543	16,407
2023	6,516	5,718	3,180	8,898	1,708	17,122
2024	7,172	6,058	3,291	9,349	1,986	18,508
BALANCES						
2002	-1,398	-1,348	441	-907	987	-1,318
2003	-1,669	-671	248	-422	634	-1,458
2004	-1,669	-661	320	-341	551	-1,459
2005	-1,842	-1,083	418	-666	492	-2,015
2006	-2,263	-1,323	414	-909	507	-2,665
2007	-2,714	-1,575	346	-1,229	459	-3,484
2008	-2,231	-1,480	-58	-1,538	1,663	-2,106
2009	-2,072	-1,069	-543	-1,612	1,379	-2,305
2010	-2,179	-1,582	624	-958	1,228	-1,909
2011	-1,852	-1,383	636	-747	824	-1,775
2012	-1,155	-1,364	1,657	293	1,458	596
2013	-2,233	-471	337	-135	1,925	-443
2014	-2,257	267	-18	249	2,375	367
2015	-1,974	-130	292	162	2,161	349
2016	-2,167	-198	-73	-271	2,154	-283
2017	-1,402	-196	684	488	2,232	1,317
2018	-1,205	-261	49	-212	2,494	1,076
2019	-1,505	-202	-158	-360	1,899	34
2020	-957	-291	-284	-575	2,635	1,103
2021	-1,189	76	26	101	2,988	1,900
2022	-1,841	-638	-340	-978	3,193	375
2023	-1,240	-271	-484	-755	4,291	2,295
2024	-2,328	-718	-646	-1,364	3,857	165

Table 2 – Italy's technology balance of payments by counterpart country or geographical area
(millions of euros)

Counterpart country or geographical area	EXPORTS		IMPORTS		BALANCES	
	2023	2024	2023	2024	2023	2024
World	19,418	18,673	17,122	18,508	2,295	165
EU (27 countries)	10,238	10,113	9,313	10,399	925	-286
Europe (other than EU-27)	3,231	2,971	3,110	3,534	120	-563
Asia	2,001	2,041	966	897	1,035	1,143
Africa	695	281	281	102	413	179
North America	2,635	2,574	3,300	3,401	-664	-828
Central and South America	508	587	86	97	422	491
Oceania	107	104	30	42	77	62
<i>Unallocated data</i>	4	3	36	36	-32	-34
OECD	16,081	15,664	15,665	17,261	416	-1,598
Austria	191	172	135	155	57	17
Belgium	599	554	222	241	376	312
Finland	155	181	114	178	41	2
France	2,890	2,683	1,951	2,159	939	525
Germany	1,862	2,054	2,574	2,783	-712	-729
Ireland	1,417	1,282	1,511	1,712	-94	-430
Luxembourg	1,019	1,053	146	132	873	921
Netherlands	402	418	782	1,075	-380	-657
Poland	182	225	104	114	79	111
Spain	549	442	537	572	12	-130
Sweden	273	281	589	581	-316	-301
United Kingdom	1,434	1,301	2,109	2,411	-675	-1,110
Switzerland	1,555	1,432	827	924	728	508
Türkiye	92	80	46	60	47	20
United States	2,468	2,458	3,152	3,298	-683	-841
Canada	167	116	148	103	19	13
Japan	92	104	159	178	-67	-73
Other OECD countries	731	828	561	584	171	244
Non-OECD countries	3,333	3,007	1,422	1,210	1,912	1,797
Saudi Arabia	110	168	45	55	65	114
Brazil	229	248	42	36	187	212
China	710	683	298	209	412	474
Croatia	143	139	16	19	127	120
Egypt	373	85	226	75	147	10
United Arab Emirates	149	136	27	21	122	114
India	122	85	124	101	-2	-16
Qatar	95	155	15	42	80	113
Romania	140	168	113	134	28	33
Russia	26	28	3	2	24	27
Singapore	270	334	133	86	137	248
Other non-OECD countries	965	778	380	429	585	349

Table 3 – Italy's technology balance of payments by sector of economic activity of the resident reporting entity (millions of euros)

	EXPORTS		IMPORTS		BALANCES	
	2023	2024	2023	2024	2023	2024
Manufacturing	7,754	7,296	6,566	7,175	1,189	121
<i>of which: Food, beverages and tobacco</i>	609	641	713	772	-104	-131
<i>Textiles, wearing apparel, leather and related products</i>	392	398	72	80	319	318
<i>Chemicals</i>	499	386	255	169	244	217
<i>Pharmaceuticals</i>	946	901	804	986	142	-84
<i>Computer, electronic and optical products</i>	989	886	201	246	788	640
<i>Electrical equipment</i>	255	248	679	1,083	-424	-834
<i>Machinery and equipment n.e.c.</i>	1,034	925	705	625	329	299
<i>Motor vehicles, trailers and semi-trailers</i>	1,425	1,512	813	1,116	613	396
<i>Other transport equipment</i>	985	816	893	751	92	66
Services	11,525	11,198	9,710	10,253	1,814	945
<i>of which: Wholesale and retail trade</i>	1,322	1,120	1,876	2,307	-554	-1,186
<i>Information and communication</i>	4,088	4,033	4,851	4,455	-763	-421
<i>Financial and insurance</i>	122	117	582	780	-460	-663
<i>Professional, scientific and technical</i>	5,141	5,068	1,013	1,111	4,128	3,957
Other sectors*	139	179	846	1,079	-707	-900
Total	19,418	18,673	17,122	18,508	2,295	165

Note (*) - Other sectors include: (i) Agriculture; (ii) Mining and quarrying; (iii) Electricity and waste; (iv) Construction.

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