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Statistical burden reduction and new monthly estimates of intra-EU imports

- The Intrastat survey represents the most relevant statistical burden for economic operators at the European level. According to a survey conducted by Eurostat in 2015, approximately 3.7 million European companies were involved in trade in goods between EU Member States, of which about 485,000 were required to file an Intrastat declaration: 207,000 (42%) for imports only, 129,000 (27%) for exports only, and 150,000 (31%) for both flows. At the national level, in 2024, approximately 14,000 Italian economic operators were required to submit monthly statistical reports for intra-EU trade, about 2% of the 720,000 importers. The reporting obligation for intra-EU exports involved over 30,000 Italian economic operators- about 18% of the 170,000 intra-EU exporters.
- As part of the “Vision 2020” program, national statistical authorities have been encouraged to develop methodologies and utilize new data sources, including administrative data available at the national level and data resulting from international cooperation among EU Member States, in order to reduce the statistical burden on respondents to the Intrastat survey, while maintaining high quality standards in the statistical information produced.
- Following a pilot study conducted by Istat, starting with the publication of data for January 2026, the threshold determining the obligation to respond to the Intrastat statistical survey for intra-EU imports of goods has been raised from €350,000 to €2,000,000 in quarterly arrivals, pursuant to Decision No. 84415 of the Customs and Monopolies Agency dated February 3, 2026. This measure has exempted approximately 10,000 economic operators out of the 14,000 previously required to file the declaration, reducing the coverage of intra-EU imports by value from 91% to approximately 80%.
- To estimate the information previously provided by operators who are now exempt, Istat introduced a new methodology based on the integration of “invoices data,” provided monthly by the Revenue Agency, with the intra-EU export microdata received monthly from the national statistical institutes of other EU Member States, as part of the microdata exchange system known as MDE (Micro Data Exchange).
- An analysis of the quality of the estimates produced, conducted during the pilot phase by comparing the total value of imports reported by operators with that estimated by the new sources, shows a difference of less than 0.4% for all months considered. Further assessments have confirmed the accuracy of the estimates by product category and by country of import.

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An integrated approach to estimating monthly intra-EU import

Statistical Regulation (EU) 2019/2152 abolished, with effect from 2022, the obligation to ensure minimum coverage of intra-EU imports through direct surveys, explicitly promoting the use of alternative sources. The aim of the European legislator, implemented by Istat, is to reduce the statistical burden on economic operators by reusing data already provided to public administrations (the 'once-only' principle). In this context, pursuant to Decision No. 493869 of the Director of the Customs and Monopolies Agency of 23 December 2021, a simplification was implemented from January 2022 by raising the statistical threshold from €200,000 to €350,000 for quarterly intra-EU imports. From January 2026 data onwards, the availability of the new 'invoices data' source received monthly from the Revenue Agency allows for the full use of microdata on intra-EU exports received from other EU countries and, therefore, has made it possible to further reduce the number of economic operators required to respond to the monthly Intrastat survey on purchases (the threshold was raised to €2 million by Decision No 84415 of the Directorate of the Customs and Monopolies Agency dated 3 February 2026), whilst maintaining the high quality of the statistical information produced.

From January 2026, with the discontinuation of data provided by exempt operators, the monthly compilation of statistics on intra-EU imports of goods is based on the following sources of statistical and tax microdata:

- MDE microdata (Micro-Data Exchange): Regulation (EU) 2019/2152 has enabled the European Statistical System to establish a harmonised and interoperable system for the exchange of statistical microdata on intra-EU exports collected by Member States as part of the Intrastat survey. From 2022, the exchange of MDE microdata provides receiving Member States with an additional statistical source for compiling statistics on intra-EU imports of goods. Whilst providing the highest level of statistical detail, MDE microdata do not, however, offer complete coverage of goods imports by every single economic operator, as they are collected from national samples of European exporters defined in the various Member States. These samples, as required by the Regulation, cover approximately 95% of the value of exports from each Member State;
- Invoices data: the Italian Revenue Agency's 'electronic invoicing' system includes, under document code TD18, what is known as 'invoice data', which is used to record purchases of goods from EU countries. Although the data elements useful for statistical compilation refer only to the taxable amount, the national trader's identification number and that of the foreign supplier, the collection of these data enables Istat to have a highly timely monthly administrative census of intra-EU imports. This helps to address the 'under-coverage' of MDE microdata: if an Italian company purchases goods in Europe, even if the foreign supplier is too small to be included in its country's sample (and therefore excluded from the MDE data), the transaction is still recorded in the 'invoices data';
- Intrastat reporting on intra-EU purchases of goods (INTRA 2bis forms): The Intrastat reporting system, established in 1993 with the creation of the Single Market, has for decades been the main tool for monitoring trade in goods between EU countries. Over time, its nature has evolved significantly. From 2018 onwards, the component relating to intra-EU purchases of goods has taken on an exclusively statistical nature, no longer falling within the obligations strictly linked to VAT reporting. The Intrastat survey does not cover all businesses but is based on a sample with a statistical threshold; in other words, only economic operators whose value of purchases exceeds a certain threshold in at least one of the four preceding quarters are required to submit the INTRA 2bis forms monthly.

Methodology for estimating monthly intra-EU import flows not covered by the Intrastat survey

The new production system is based on a mixed estimation approach, which combines 'invoices data' with the detailed information from MDE microdata. For economic operators exempt from the reporting obligation (those below the €2 million threshold), the statistical value of imports is determined using a model that takes the taxable amount declared in the 'invoice data' as an estimate of the total statistical value.[1]

As the tax source data does not contain statistical variables, such as the product classification of goods, the model applies a weighting structure derived from MDE microdata to determine the breakdown by product (Combined Nomenclature), trading partners, countries of origin, nature of the transaction and mode of transport. Furthermore, for specific types of trade that do not involve a transfer of economic ownership of the goods and are therefore not included in 'invoices data' (for example, flows of goods for processing on behalf of third parties), the model directly incorporates

[1]The CIF (Cost, Insurance, and Freight) statistical value is the standard valuation basis used for imports, which includes the value of the goods, insurance and transport costs up to the border of the importing country. During the preliminary testing prior to the adoption of the estimation model, a linear regression model was applied to analyze the relationship between intra-EU imports declared by the relevant operators and the estimated value. For the period covered by the trial (February–May 2025), the model's high goodness of fit (R^2)and the proximity of the regression parameters to ideal values (slope close to 1 and intercept close to 0) confirmed the validity of the estimate as an accurate proxy for the observed statistical value.

information from MDE microdata, the only available source.

The estimate of intra-EU imports for a specific economic operator I, from partner country J and commodity K is therefore derived as follows[2]:

$$Import\ estimate(I,J,K) = Taxable\ amount(I) \cdot W(I,J,K) + MDE_{only}(I,J,K)$$

where $MDE_{only}(I,J,K)$ refers to MDE microdata relating to trade transactions not included in "invoices data", and W is the weighting structure required to break down the total import value according to all statistical variables, again derived from the MDE microdata:

$$W(I,J,K) = \frac{MDE\ (I,J,K)}{\sum_{(L,M)} MDE\ (I,L,M)}$$

Furthermore, for non-resident economic operators X who are not required to adopt the electronic invoicing system, the model directly incorporates information from MDE microdata:

$$Import\ estimate(X,J,K) = MDE\ (X,J,K)$$

As mentioned, MDE microdata do not provide complete coverage of trade flows, and there are cases where the imports of certain economic operators are recorded solely in the 'invoices data'. In such cases, the geographical breakdown is derived by approximating the country of import with the supplier's country of tax residence; whilst the product breakdown is derived from the set of exempt operators for whom MDE data is available, stratified by economic activity (NACE division), derived from the Statistical Registers (enterprises, institutions and administrations). For each economic operator Z, for whom no MDE microdata is available and with economic activity E, the breakdown by country of import J and the product K is estimated as follows:

$$Import\ estimate(Z,J,K) \approx Taxable\ amount(Z, country\ of\ tax\ residence\ J) \cdot W(E,K)$$

where $W(E,K)$ is the share of imports of product K in the total imports of economic operators engaged in economic activity E:

$$W(E,K) = \frac{MDE\ (E,K)}{\sum_{M} MDE\ (E,M)}$$

Accuracy of estimates

The overall accuracy of the estimates produced was verified by comparing, for certain months of 2025, the estimated import value with that derived from the Intrastat forms for Intrastat respondents with a quarterly import value ranging between €350,000 and €2,000,000. This group of operators is, in fact, the one directly affected by exclusion from the sample following the raising of the threshold. The difference between the estimated import value and that declared by this group of operators was less than 0.4% in all the months examined.

[2] The estimate covers all the statistical variables listed, including imported quantities, countries of origin, the nature of the transaction and the mode of transport. For the sake of simplicity, the formulas provided refer explicitly only to products and partner countries.

TABLE 1. COMPARISON BETWEEN OBSERVED AND ESTIMATED IMPORT VALUES FOR ECONOMIC OPERATORS IN THE NEW EXEMPTION STRATUM. Number of economic operators, import values in millions of euros, percentage figures

Reference month	Number of respondents impacted by the increase in the threshold	Observed import value reported via INTRA 2bis forms	Estimated import value using a combination of MDE microdata and "invoice data"	Percentage difference between observed value and estimated value
February 2025	9,286	2,836.9	2,834.9	0.07
March 2025	10,154	2,921.8	2,915.4	0.22
April 2025	9,802	2,824.2	2,823.4	0.03
May 2025	9,985	2,848.3	2,837.6	0.38

To assess how accurately the model reproduces the structure of imports, a comparative analysis was carried out using data from November 2025. The test was conducted exclusively on the subset of economic operators who, from 2026 onwards, are exempt from the reporting obligation following the raising of the threshold.

The comparison was carried out by analyzing multidimensional vectors whose components represent the import values relating to the various imported products i (8-digit Combined Nomenclature codes) and the countries of import j:

- observed vector $V_O(i,j)$: contains the actual values declared by operators in the Intrastat forms,
- estimated vector $V_S(i,j)$: contains the values generated by the new integrated estimation model.

To measure the comparability of these two vectors, two indicators were used:

- the cosine similarity index, calculated as the scalar product of the two vectors normalized by the product of their norms. This index (ranging from 0 to 1) measures angular proximity, i.e., the extent to which the estimated product and geographical composition replicates the actual one, regardless of absolute volumes;
- Pearson's correlation coefficient, to assess the strength of the linear relationship between the components of the two vectors.

Table 2 shows the two indicators calculated to analyze the accuracy of the estimate at a geographical level, for each importing country j

$$Cosine\ similarity(j) = \frac{\sum_{(i)} V_O\ (i,j) \cdot V_s\ (i,j)}{\sqrt{\sum_i V_O\ (i,j)^2 \cdot \sum_i V_s\ (i,j)^2}}$$

$$Correlation\ coefficient(j) = \frac{\sum_{(i)}(V_O\ (i,j) - \langle V_O\ (j)\rangle) \cdot (V_s\ (i,j) - \langle V_s\ (j)\rangle)}{\sqrt{\sum_i (V_O\ (i,j) - \langle V_O\ (j)\rangle)^2 \cdot \sum_i (V_s\ (i,j) - \langle V_s\ (j)\rangle)^2}}$$

For the five main trading partners, which account for around 70% of imports by exempt operators, the cosine similarity index is consistently above 0.7, with France and Austria standing out as the best performers. This confirms that the model correctly identifies the product structure for the various importing countries.

TABLE 2. MEASURING THE ESTIMATES ACCURACY OF INTRA-EU IMPORT FLOWS BY PARTNER COUNTRY
November 2025

PARTNER COUNTRY	Accuracy indicators		Import value percentages	
	Cosine similarity	Correlation coefficient	Observed Intrastat	Estimated MDE and 'Invoices data'
Germany	0.77	0.73	27.14	24.17
France	0.97	0.97	16.01	17.09
Spain	0.83	0.80	10.89	12.12
Netherlands	0.72	0.69	9.77	10.96
Austria	0.95	0.95	6.71	7.09
Belgium	0.85	0.83	5.83	4.84
Poland	0.73	0.69	4.33	3.05
Romania	0.90	0.87	2.21	2.51
Czechia	0.46	0.42	2.84	3.04
Slovenia	0.90	0.88	1.29	1.54
Hungary	0.78	0.75	2.05	2.28
Sweden	0.85	0.83	1.65	1.62
Greece	0.93	0.92	1.39	1.61
Denmarck	0.49	0.45	1.20	1.24
Portugal	0.78	0.76	1.17	1.13
Bulgaria	0.86	0.83	1.10	1.32
Croatia	0.93	0.92	0.76	0.83
Slovakia	0.85	0.81	0.76	0.68
Finland	0.90	0.88	1.36	1.44
Lithuania	0.93	0.92	0.52	0.49
Ireland	0.88	0.87	0.20	0.21
Latvia	0.96	0.95	0.42	0.30
Luxemburg	0.56	0.48	0.21	0.24
Estonia	0.87	0.84	0.14	0.12
Malta	1.00	1.00	0.04	0.04
Cyprus	0.78	0.66	0.01	0.01

Table 3 shows the results for the top ten categories of imported goods, by chapter of the Combined Nomenclature, which account for approximately 45% of imports recorded via Intrastat returns for the group of exempt operators.

By defining the individual chapters of the Combined Nomenclature using $HS2$, the indicators were calculated as follows:

$$Cosine\ similarity(HS2) = \frac{\sum_{(i \in HS2,j)} V_O\ (i,j) \cdot V_s\ (i,j)}{\sqrt{\sum_{(i \in HS2,j)} V_O\ (i,j)^2 \cdot \sum_{(i \in HS2,j)} V_s\ (i,j)^2}}$$

$$Correlation\ coefficient(HS2) = \frac{\sum_{(i \in HS2,j)} (V_O\ (i,j) - \langle V_O\ (j) \rangle) \cdot (V_s\ (i,j) - \langle V_s\ (j) \rangle)}{\sqrt{\sum_{(i \in HS2,j)} (V_O\ (i,j) - \langle V_O\ (j) \rangle)^2 \cdot \sum_{(i \in HS\ \ ,j)} (V_s\ (i,j) - \langle V_s\ (j) \rangle)^2}}$$

The cosine similarity is generally 0.7 or higher, with the exception of Chapter 90. For key chapters, such as mechanics (Chapter 84) and electronics (Chapter 85), the model exhibits excellent robustness.

TABLE 3. MEASURING THE ESTIMATES ACCURACY OF INTRA-EU IMPORT FLOWS BY IMPORTED PRODUCT
November 2025

COMBINED NOMENCLATURE CHAPTERS	Accuracy indicators		Import value percentages	
	Cosine similarity	Correlation coefficient	Observed Intrastat	Estimated MDE and 'Invoices data'
84 -Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	0.79	0.76	12.09	11.46
85 - electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	0.71	0.68	7.84	8.49
39 - Plastics and articles thereof	0.74	0.71	8.97	9.1
73 - Articles of iron or steel	0.87	0.85	2.88	2.71
90 - Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	0.53	0.48	3.93	4.41
62 - Articles of apparel and clothing accessories, not knitted or crocheted	0.84	0.83	1.04	1
61 - Articles of apparel and clothing accessories, knitted or crocheted	0.82	0.79	0.93	0.83
29 - Organic chemicals	0.77	0.71	1.45	1.51
48 - Paper and paperboard; articles of paper pulp, of paper or of paperboard	0.86	0.83	3.01	3.16
72 - Iron and steel	0.9	0.86	3.25	3.29

For the highest level of detail considered in the analysis – namely, the combination of partner country and imported product – the indicators were calculated as follows:

$$Cosine\ similarity(HS2, j) = \frac{\sum_{(i \in HS2)} V_O\ (i,j) \cdot V_s\ (i,j)}{\sqrt{\sum_{(i \in HS\ )} V_O\ (i,j)^2 \cdot \sum_{(i \in HS2)} V_s\ (i,j)^2}}$$

$$Correlation\ coefficient(HS2, j) = \frac{\sum_{(i \in HS2)} (V_O\ (i,j) - \langle V_O\ (j) \rangle) \cdot (V_s\ (i,j) - \langle V_s\ (j) \rangle)}{\sqrt{\sum_{(i \in HS2)} (V_O\ (i,j) - \langle V_O\ (j) \rangle)^2 \cdot \sum_{(i \in HS\ )} (V_s\ (i,j) - \langle V_s\ (j) \rangle)^2}}$$

Table 4 lists the top ten combinations by relevance, which account for approximately 22% of the intra-EU imports declared by the group of operators. Here too, the similarity index is almost always above 0.7.

TABLE 4. MEASURING THE ACCURACY OF ESTIMATES OF INTRA-EU IMPORT FLOWS BY PARTNER COUNTRY AND IMPORTED PRODUCT
November 2025

PARTNER COUNTRIES	COMBINED NOMENCLATURE CHAPTERS	Accuracy indicators		Import value percentages	
		Cosine similarity	Correlation coefficient	Observed Intrastat	Estimated MDE and 'Invoices data'
Germany	84 - Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	0.86	0.81	5.04	4.42
Germany	85 - Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	0.93	0.91	2.85	2.55
Germany	39 - Plastics and articles thereof	0.66	0.61	2.65	2.91
France	01 - Live animals	0.98	0.98	2.54	2.46
Germany	87 - Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	0.88	0.86	2.07	1.47
Austria	44 - Wood and articles of wood; wood charcoal	1.00	1.00	2.00	1.98
Germany	90 - Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof	0.65	0.57	1.71	1.85
France	84 - Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	0.84	0.82	1.53	1.59
Netherlands	84 - Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	0.78	0.72	1.35	1.41
France	39 - Plastics and articles thereof	0.95	0.94	1.23	1.26

For technical and methodological information

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