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Prospects for Export of Goods from Turkey to the European Union Countries in the Context of Carbon Taxation

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ABSTRACT

The subject of the study is the carbon border adjustment mechanism (CBAM), one of the European climate regulation tools aimed at curbing the "carbon leakage" that occurs when importing goods from countries with less stringent climate regulation to countries with more stringent regulation. For this reason, the carbon tax affects the interests of exporters of carbon-intensive goods to the EU, especially Russia, Turkey, China, which will suffer the greatest damage. **The purpose** of the paper is to assess the dynamics of the export of Turkish goods to the EU countries and to determine Turkey's position on the introduction of a carbon tax. One of the main tasks of the work is to determine the extent to which Turkey supports Russia in the EU's opposition to the introduction of this tax. **The research methodology** is based on the use of statistical analysis methods (sampling, comparison, grouping, etc.) and analysis of identified trends. An analysis of the dynamics and structure of trade between the EU and Turkey led to **the following results**: 1) Turkey is one of the leading countries exporting carbon-intensive products to the EU; 2) The existence of a weak dependence of the EU on carbon-intensive Turkish goods due to the differentiation of its imports and, conversely, a strong dependence of the Turkish economy on the EU due to the significant orientation of Turkish exports to EU markets. **It is concluded** that Turkey is in a difficult situation in connection with the CBAM. On the one hand, there is a threat of a decrease in the competitiveness of products of the cement, mechanical, and metallurgical industries; on the other hand, national companies are successfully integrated into European production chains, and the strategy of adaptation to the European Green Deal may be preferable both for them and the national economy as a whole. Therefore, there is a possibility that Turkey will take a "pro-European" position. If a "pro-European" position prevails, this will create additional risks for the Russian Federation in the fight against EU carbon taxation.

Keywords: carbon-intensive goods; export value; carbon tax; financial mechanism; decarbonization of the economy; European Union; EU; Turkey

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INTRODUCTION

The Green Agenda adopted by the European Union Commission in July 2021 poses serious challenges for the development of carbon-intensive export-oriented industries in non-EU countries. One of the mechanisms for implementing the carbon border adjustment method was proposed by EU / transboundary carbon control (TCC) [1–5] (further — CBAM).

In the face of environmental pollution and global warming, the implementation of the green agendas of individual countries and regional economic unions requires enormous financial resources, leading to various environmental taxes and charges [6–8]. One of them is CBAM, which is an interesting example of finding and choosing a source of funding for environmental and energy-saving activities within the framework of the energy transition of EU countries. Although CBAM is only the first attempt to apply cross-border carbon taxation in practice, if fully implemented, it can become an effective tool for achieving carbon neutrality in the EU.

Literature review confirms CBAM is effective in reducing carbon leakage [1–4]. A. Köppl and M. Schratzenstaller consider that a carbon tax can effectively reduce carbon emissions, or at least contain their growth, without affecting economic growth and employment, and also recommend that carbon tax rates be set high enough to stimulate emission reduction and innovation [1, p. 28–29]. According to G. Mörsdorf, CBAM will generate significant revenues (up to 32 bln dollars per year) that can be used to support low-carbon innovation and international climate finance [3]. This is essentially about creating a financial mechanism for decarbonizing the world economy — defining sustainable sources, stable cash flows, methods of their use — on the basis of equal carbon prices for European and imported goods.

Many EU trade and economic partners, in particular, China, Russia, Brazil, India and, not least, Turkey, are opposed to this initiative. According to J. Zhong and J. Pei, there is an unequal distribution of tax burdens that primarily impacts China, Russia, and India [9]. This results in the transfer of energy transition costs from developed regions to developing countries, which is consistent with the UN Framework Convention on Climate Change's principle of common but differentiated responsibility. At the same time, one of the key opponents of CBAM may be the US — the developed country [10].

Russian researchers, questioning the compliance of CBAM with the WTO free trade principles, the timing and effectiveness of its implementation, even suggest ways and tools of interaction on this problem of Russia and major global players [11–14]. For example, S. Roginko writes: "This European Union initiative (*CBAM. — Author's note*) is not only opposed by China, but also by Turkey, Brazil and India. … These are our real allies that we need. And the theme of cross-border carbon regulation is a real resource for strengthening relations with these countries" [14, c. 463].

In this regard, the question arises: do these countries share Russia's concerns about CBAM? Will they support Russia in counteracting the introduction of this tax? In this paper, we answered this question with the example of Turkey.

Turkey is one of the three nations — along with Russia and Ukraine — that will be most negatively impacted by the carbon tax, which is the reason for its outburst. Other nations that will suffer include South Korea, China, and the US.

ANALYSIS OF THE DYNAMICS OF THE EU AND TURKEY

The Turkish Republic and the EU are linked not only by close trade and economic relations, but also by integration. According to the European Commission, in 2022, Turkey was among the six largest EU trading partners, accounting for 3.3% of EU foreign trade turnover. In turn, the EU is an absolute leader in trade and economic cooperation with

Turkey, receiving more than 40% of Turkish exports and accounting for more than 25% of Turkey's imports. In 2022, Turkish goods exports to the EU amounted to 98.6 bln euros, of which textiles accounted for 17.5 bln euros (17.7%), followed by transport equipment worth 17.3 bln euros, base metals and articles worth 16.8 bln euros, and machinery and appliances worth 15.8 bln euros (for comparison: Turkey's "export" of tourist services to the EU amounted to 3.9 bln euros, 34.2% of the export of services). Turkey's imports from the EU in 2022 amounted to 99.6 bln euros. It was dominated by machinery and instruments (25 bln euros, 25.1%), transport equipment (17.5 bln euros), miscellaneous articles of base metal (13.1 bln euros) and chemicals (13 bln euros).[1]

Even based on these general statistics, it can be concluded that:

- firstly, the trade balance between the two countries has almost been achieved;
- secondly, machinery and equipment are the hub of trade between Turkey and the EU; this is facilitated by the fact that Turkish industry is deeply embedded in European production chains. It should be noted that, according to R. Kashbrasiev: "Turkey is an active participant in the international division of labor and international industrial cooperation…many provisions of the technical legislation of Turkey are harmonized with EU standards" [15, p. 171];
- thirdly, among Turkey's major exports to the EU, carbon-intensive goods do not occupy much place (these are non-ferrous metals and articles, which account for 17% of Turkish exports into the EU; in turn, Turkey imports 13.15% of EU chemicals). On the contrary, carbon-intensive goods — mineral fuels, oil and petroleum products, black metals, plastics, organic chemicals, aluminum, copper and copper products — predominate in Turkey's imports (from all countries of the world, not just the EU) for 167.19 bln dollars, or 45.67% of total imports.

The increased competitiveness of the Turkish economy, which was largely due to its customs union with the EU, has led to an increase in the export of Turkish goods to the EU: not only textiles, ready-made clothing and agricultural products, but also black metals, non-ferrous metal, chemical products, transport equipment, machines and instruments, etc.

Nevertheless, Turkey is one of the leading countries involved in the export of carbon-intensive products to the EU with 11% of the total cost of exports of carbon intensive goods in 2019 [16]. Since the carbon-intensive goods regulated by CBAM are not just the exports mentioned above, it is interesting to study all the items of Turkish exports to the EU, paying special attention to cement, aluminum, steel, fertilizers, electricity, subject to carbon tax in the first place. This requires more detailed consideration of carbon-intensive commodity groups exported from Turkey to EU countries and affected by the European Carbon Border Adjustment Mechanism.

For this purpose, a list of all carbon-intensive goods exported from Turkey to EU countries was compiled, based on the data of the International Trade Centre (ITC) on 96 commodity nomenclatures of foreign economic activity,[2] and the goods themselves, for the convenience of analysis, were grouped into the following commodities groups: "ferrous metals", "non-ferrous metals", "cement" etc. Dynamics of merchandise exports from Turkey to the EU by major carbon-intensive commodity groups are presented in *Table 1*.

Table 1 shows the commodity items for which the EU carbon regulation has not yet been introduced: oil and petroleum products, gas, coal, glass and paper.

[1] European Commission. Trade. URL: EU trade relations with Türkiye (europa.eu) (accessed on 24.07.2023).

[2] ITC. Bilateral trade between Türkiye and European Union (EU 27). URL: https://intracen.org/resources (accessed on 24.07.2023).

Table 1

Carbon-Intensive Product Groups of Turkish Exports to the EU (Extended List — All Carbon-Intensive Goods are Presented, Including Those Not Yet Included in the CBAM Regulation)

Product name	Turkey's export volume to the EU, thousand US dollars				
	2018	2019	2020	2021	2022
Ferrous metals, total	8 347 892	7 210 544	6 653 691	11 974 574	11 446 017
incl. iron and steel	4 671 677	3 480 362	2 814 125	6 431 185	4 959 446
Non-ferrous metals, total	2 783 722	2 619 925	2 510 388	4 652 663	6 058 711
incl. aluminium and aluminium products	1 652 763	1 678 070	1 576 080	3 016 908	4 142 967
Cement, total	1 212 025	1 303 218	1 392 572	1 840 971	2 125 085
Mineral fertilizers	81 335	88 903	94 331	130 255	479 835
Electricity	–	–	–	–	–
Petroleum and petroleum products, total	9 480 749	12 120 052	9 908 501	15 224 712	20 540 642
incl. mineral fuels	2 100 406	4 399 615	2 218 112	4 177 368	8 542 799
Gas	–	–	–	–	–
Coal	139 960	137 565	140 731	244 746	409 455
Glass	462 400	517 257	512 358	642 000	748 230
Paper	573 498	552 599	559 622	823 783	1 088 055
incl. paper and cardboard	526 190	477 470	486 769	720 520	978 018

Source: ITC. URL: https://intracen.org/resources (accessed on 24.07.2023).

The most profitable items of Turkey's exports to the EU in 2022 are mineral fuels and oils (from the category "Oil and petroleum products"), iron and steel ("Ferrous metals"), plastics and products thereof ("Oils and petroleum products"), products of iron and steel ("Ferrous metals"), aluminum and products thereof ("Non-ferrous metals"), rubber and products thereof ("Oil and petroleum products"), copper and products thereof ("Non-ferrous metals") etc. The product categories for profitability are as follows: "Oil and petroleum products", "Ferrous metals", "Non-ferrous metals", "Cement", "Paper" etc.

All carbon-intensive product groups of Turkish exports to the EU, including non-CBAM products, accounted for **40.76%** of total Turkish exports to the EU (2022).

The dynamics of total exports and carbon-intensive exports from Turkey to the EU are interesting. Total exports and carbon-

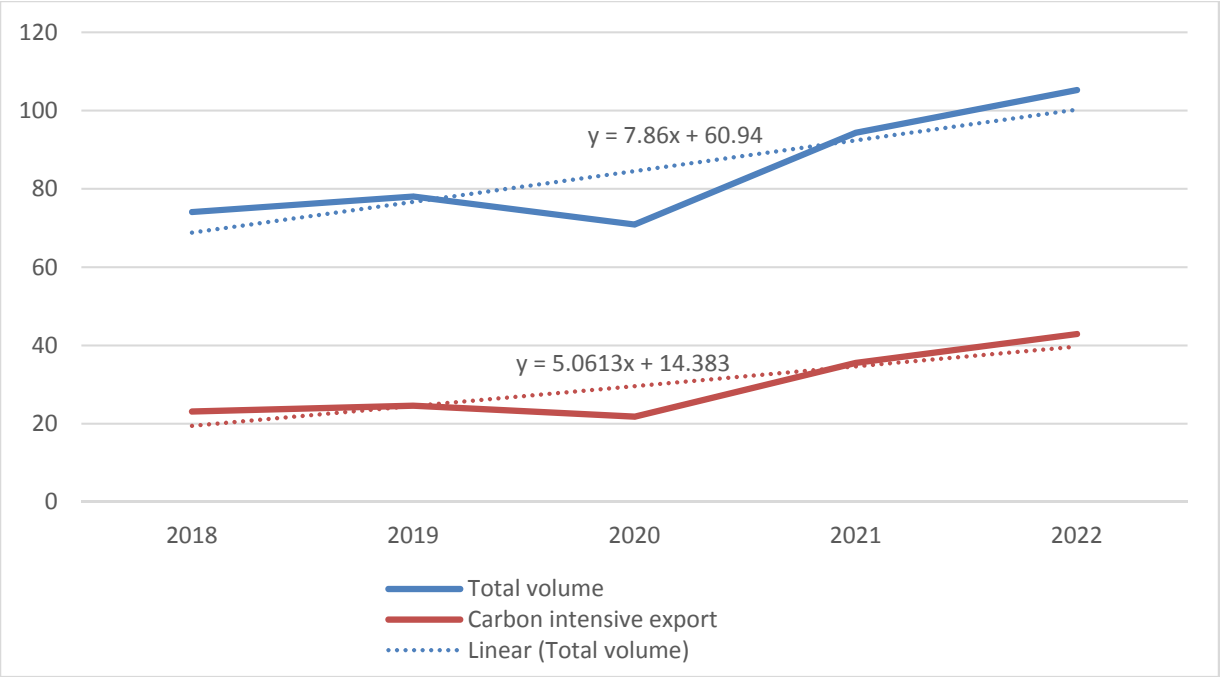

Fig. 1. **Dynamics of Turkey's Total and Carbon-Intensive Exports to the EU in 2018–2022, Billion US Dollars**

Source: ITC. URL: https://intracen.org/resources (accessed on 24.07.2023).

intensive Turkish exports in 2018–2022 are presented in *Fig. 1*.

As shown in *Fig. 1*, according to the trend formula, total exports from Turkey to the EU are growing more rapidly, reaching in 2022–105.2 bln dollars. Average annual growth of carbon-intensive commodity mass is 34.4% — from 23.1 bln dollars (2018) to 42.9 bln dollars (2022).

ANALYSIS OF THE DYNAMICS OF THE EU AND TURKEY TRADE WITHIN THE CBAM PRODUCT GROUPS

If we exclude from the nomenclature of Turkish exports to the EU the product groups not included in the CBAM regulation, we will get the product groups (*Table 2*). Typology as Essential Classification [17] will allow us to identify the most significant items of Turkish exports subject to EU carbon regulation.

Then the most significant items of Turkish exports subject to EU carbon regulation will be: "Ferrous metals" (especially iron, steel and products from them), "Non-ferrous metals" (especially aluminum, copper and their products), "Cement" and "Mineral fertilizers".

If we analyze the overall dynamics of exports and carbon-intensive exports (CBAM only) from Turkey to EU countries, we can find a greatly decreased volume of carbon intensive exports (**19.1%** of total Turkish exports to the EU in 2022) and its weak dynamics. Total volume of exports and volume of carbon-intensive Turkish exports in 2018–2022 are presented in *Fig. 2*.

According to *Fig. 2*, total exports from Turkey to the EU are growing at a faster rate than carbon-intensive (CBAM-regulated) exports (trend formula factors show this). The average annual growth of carbon-intensive exports (CBAMs) is 16.9% per year compared to 34.4% of all carbon-intense exports. As far as commodity mass is concerned, the growth was 12.43 bln dollars (2018) to 20.11 bln dollars (2022) (for comparison: exports of all carbon-intensive goods amounted to 23.1 bln dollars in 2018 and 42.9 bln dollars in 2022). Thus, according to the CBAM project, only half (46.88% in 2022) of carbon-intensive goods

Table 2

Carbon-intensive Product Groups of Turkish Exports to the EU (CBAM only)

Product name	Turkey's export volume to the EU, thousand US dollars				
	2018	2019	2020	2021	2022
Ferrous metals, total, of which:	8 347 892	7 210 544	6 653 691	11 974 574	11 446 017
iron and steel	4 671 677	3 480 362	2 814 125	6 431 185	4 959 446
iron or steel products	2 704 453	2 707 229	2 687 100	3 863 590	4 728 888
ore, slag and ash	477 837	442 308	566 965	913 774	966 271
miscellaneous articles of base metal	364 439	374 516	395 671	509 946	536 468
tools, fixtures, cutlery, spoons and forks made of non-priced metal; their parts are made of non-priced metal	116 302	137 990	120 569	142 290	148 639
miscellaneous articles of base metal; ceramics and its products	13 184	68 139	69 261	113 789	106 305
Non-ferrous metals, total, of which:	2 783 722	2 619 925	2 510 388	4 652 663	6 058 711
aluminium and its products	1 652 763	1 678 070	1 576 080	3 016 908	4 142 967
copper and its products	1 111 682	912 043	904 974	1 598 182	1 787 765
zinc and its products	3 181	2 112	2 290	2 779	76 700
lead and its products	12 987	17 624	20 495	20 376	35 502
nickel and its products	3 016	9 837	6 264	11 492	15 309
tin and its products	93	239	285	2 926	468
Cement, total, of which:	1 212 025	1 303 218	1 392 572	1 840 971	2 125 085
salt; sulphur; earth and stone; plaster, lime and cement	505 999	546 159	554 071	777 162	915 765
ceramic products	475 500	499 009	534 030	646 897	755 902
products of stone, plaster, cement, asbestos, mica or similar materials	230 526	258 050	304 471	416 912	453 418
Mineral fertilizers	81 335	88 903	94 331	130 255	479 835
Electricity	–	–	–	–	–

Source: ITC. URL: https://intracen.org/resources (accessed on 24.07.2023).

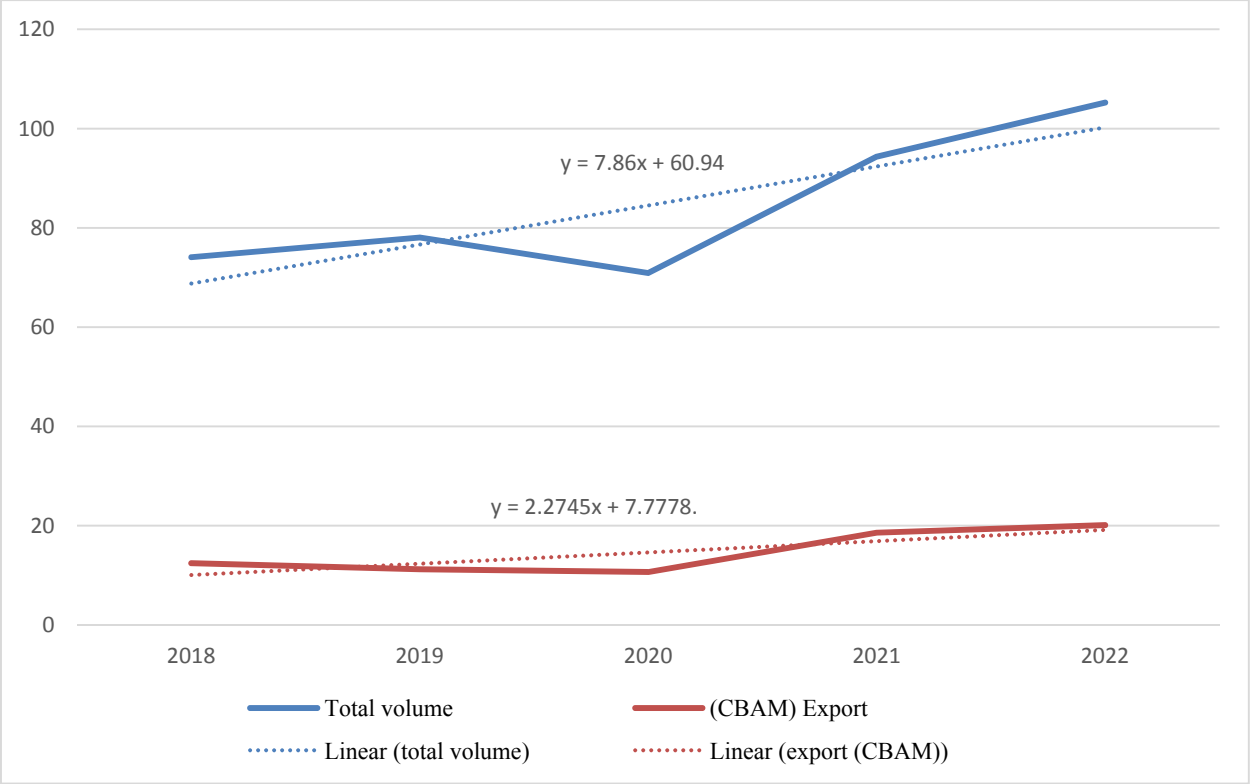

Fig. 2. **Dynamics of Total and Carbon-Intensive (CBAM-Regulated) Turkish Exports to the EU in 2018–2022, Billion US Dollars**

Source: ITC. URL: https://intracen.org/resources (accessed on 24.07.2023).

exported from Turkey to EU countries will be subject to carbon taxation.

It should be noted that the actual figure will be even lower, as the carbon tax will not be levied on all products belonging to the export groups mentioned above. In the event of the introduction of CBAM carbon-based taxation are subject: 12 codes of the European nomenclature of the group "Iron and steel", 5 codes "Mineral fertilizers", 4 code "Cement" etc. [13, p. 89].

IMPACT OF CBAM ON TRADE BETWEEN THE EU AND TURKEY

To assess the impact of CBAM on trade between the EU and Turkey, it is advisable first to examine the interdependence patterns of the Turkish and EU economies. Data on EU dependency on carbon-intensive Turkish exports are presented in *Table 3*.

The share of Turkish carbon-intensive products in total EU imports is not so large — an average of 1.42% for 2018–2022, from 1.32% (2018) to 1.41% (2022) at a maximum of 1.48% (2021). *Table 3* demonstrates that EU imports are well diversified and their dependence on Turkish exports is minimal, although it has grown by about 1% in the last five years for all product groups.

The highest share in 2022 for cement (3.8%), non-ferrous metals (2.9%) and ferrous metals (2.4%) (*Fig. 3*). However, if you analyze by individual product items, you can see that the greatest dynamics in "Iron products" (iron or steel products; tools, appliances, utensils, spoons and forks made of precious metal; their parts made of non-precious metals; miscellaneous articles of base metal; metal ceramics; products made of them), that is, in the products of higher divisions: from 4.4% in 2018 to 5.8% of Turkish exports in 2022 (*Fig. 4*). Despite their carbon footprint, these products belong to the high value-added commodity group and in terms of export they

Table 3

EU Dependence on Carbon-intensive Turkish Exports

Product name	Turkey's share of total EU imports				
	2018	2019	2020	2021	2022
Ferrous metals, total, of which:	2.3%	2.2%	2.3%	2.8%	2.4%
iron and steel	2.9%	2.5%	2.5%	3.3%	2.2%
iron or steel products	2.5%	2.7%	2.9%	3.1%	3.5%
ore, slag and ash	1.4%	1.4%	1.8%	1.9%	2.1%
miscellaneous articles of base metal	1.4%	1.5%	1.7%	1.7%	1.8%
tools, fixtures, cutlery, spoons and forks made of non-priced metal; their parts are made of non-priced metal	0.5%	0.6%	0.6%	0.5%	0.5%
miscellaneous articles of base metal; ceramics and its products	0.2%	1.0%	1.4%	1.7%	1.1%
Non-ferrous metals, total, of which:	2.0%	2.1%	2.2%	2.7%	2.9%
aluminium and its products	2.2%	2.5%	2.6%	3.5%	3.7%
copper and its products	2.5%	2.3%	2.3%	2.7%	2.9%
zinc and its products	0.0%	0.0%	0.0%	0.0%	0.8%
lead and its products	0.4%	0.7%	0.9%	0.7%	1.1%
nickel and its products	0.0%	0.1%	0.1%	0.1%	0.1%
tin and its products	0.0%	0.0%	0.0%	0.1%	0.0%
Cement, total, of which:	2.7%	3.0%	3.3%	3.5%	3.8%
salt; sulphur; earth and stone; plaster, lime and cement	3.7%	4.1%	4.4%	5.0%	5.2%
ceramic products	3.3%	3.6%	3.9%	3.7%	4.1%
products of stone, plaster, cement, asbestos, mica or similar materials	1.4%	1.5%	1.9%	2.1%	2.2%
Mineral fertilizers	0.6%	0.7%	0.8%	0.7%	1.6%
Electricity	0.0%	0.0%	0.0%	0.0%	0.0%

Source: ITC. URL: https://intracen.org/resources (accessed on 24.07.2023).

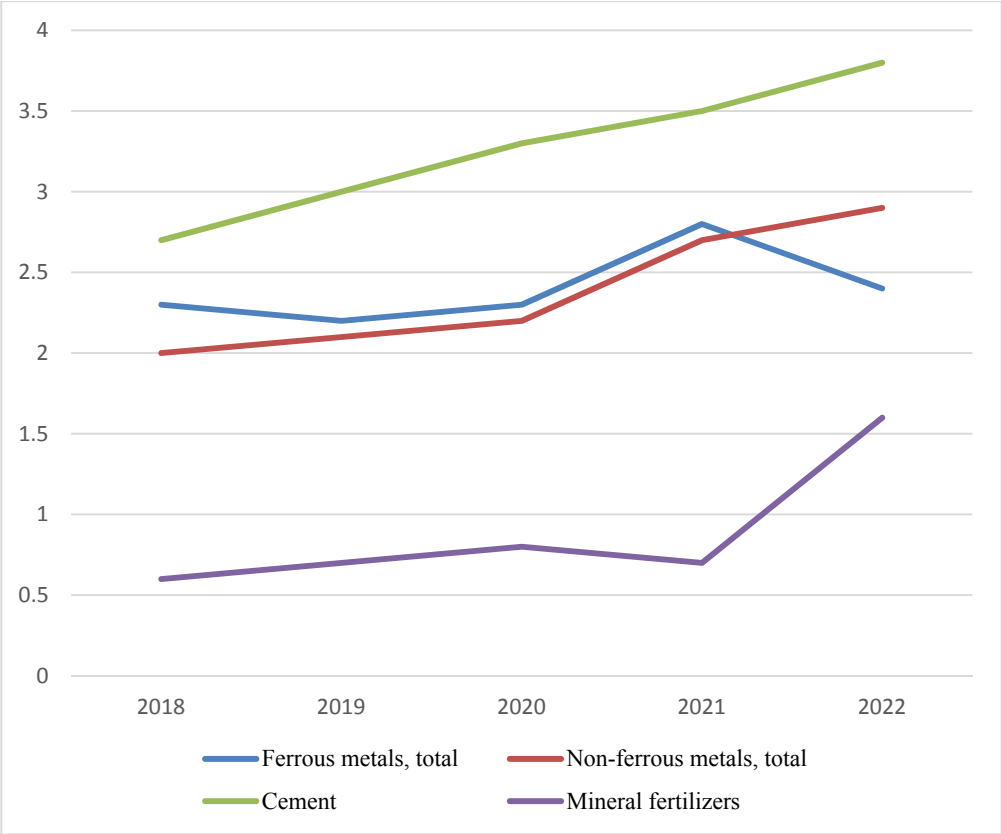

Fig. 3. **Share of Carbon-Intensive Goods Exports from Turkey to the EU 2018–2022 Regulated by CBAM, %**

Source: ITC. URL: https://intracen.org/resources (accessed on 24.07.2023).

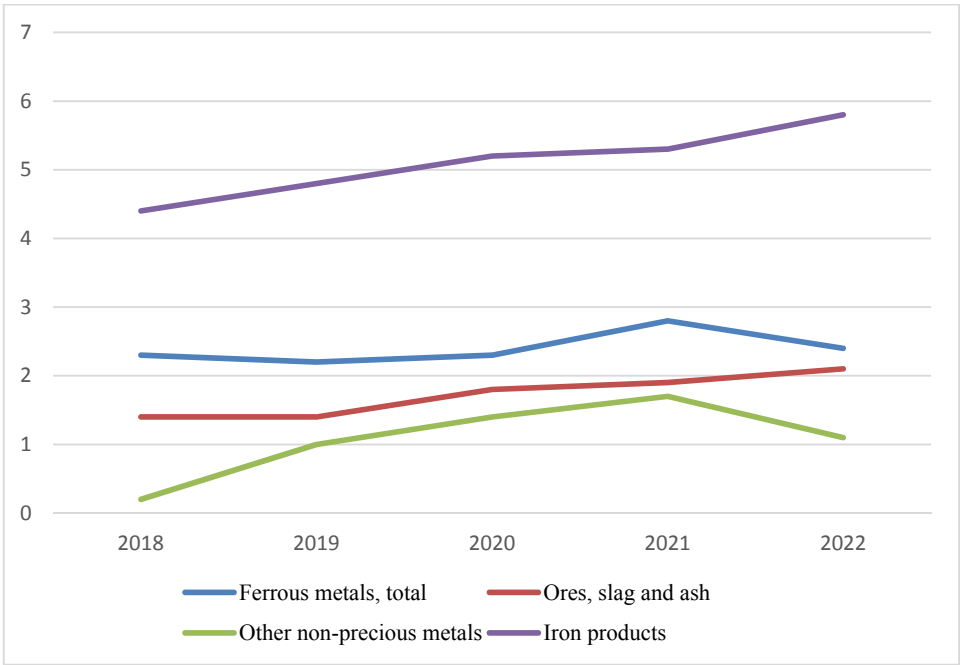

Fig. 4. **Share of Exports of Ferrous Metals from Turkey to the EU in 2018–2022, %**

Source: ITC. URL: https://intracen.org/resources (accessed on 24.07.2023).

Table 4

Dependence of the Turkish Economy on the EU

Product name	EU share in Turkey's total exports				
	2018	2019	2020	2021	2022
Ferrous metals, total, of which:	40.5%	37.4%	37.1%	40.2%	38.9%
iron and steel	40.5%	34.7%	32.0%	37.7%	33.9%
iron or steel products	41.4%	40.5%	42.2%	43.9%	44.9%
ore, slag and ash	36.1%	36.0%	41.0%	42.2%	43.0%
miscellaneous articles of base metal	39.4%	39.4%	40.2%	41.2%	39.3%
tools, fixtures, cutlery, spoons and forks made of non-priced metal; their parts are made of non-priced metal	47.7%	51.2%	47.2%	43.6%	39.5%
miscellaneous articles of base metal; ceramics and its products	50.8%	67.2%	47.0%	60.8%	35.9%
Non-ferrous metals, total, of which:	56.8%	55.0%	52.4%	58.3%	61.8%
aluminium and its products	55.2%	53.8%	51.5%	58.3%	61.8%
copper and its products	62.0%	59.8%	57.2%	61.5%	67.1%
zinc and its products	20.0%	19.3%	32.0%	16.8%	53.4%
lead and its products	58.8%	59.7%	70.0%	50.7%	56.8%
nickel and its products	4.0%	12.7%	5.8%	8.1%	7.9%
tin and its products	4.4%	3.4%	3.9%	19.1%	1.2%
Cement, total, of which:	24.3%	24.3%	25.2%	26.7%	27.4%
salt; sulphur; earth and stone; plaster, lime and cement	19.3%	19.6%	19.8%	22.7%	24.0%
ceramic products	44.1%	42.8%	42.8%	40.0%	40.7%
products of stone, plaster, cement, asbestos, mica or similar materials	17.8%	18.1%	20.6%	22.4%	21.7%
Mineral fertilizers	32.4%	25.7%	25.1%	27.5%	48.8%
Electricity	0.0%	0.0%	0.0%	0.0%	0.0%

Source: ITC. URL: https://intracen.org/resources (accessed on 24.07.2023).

are more stable than iron and steel, ore, other non-precious metals, whose share is 1.1–2.4% (2022). Higher-grade goods are another "softening circumstance" in the context of the carbon taxation of Turkish exports

Turkey's economic dependence on the EC, on the contrary, is strong. The export sector of the Turkish economy is largely oriented towards the EU markets (*Table 4*), with some commodities accounting for more than half of its exports, while the EU accounted for 61.8% of its aluminum exports.

Turkey's export dependence on the European market is most evident in such sectors as copper and copper products (67.1% of all products were exported to the EU), aluminum and aluminum products (61.8%), lead and products from it (56.8%), zinc and products of it (53.4%), mineral fertilizers (48.8%), iron and steel products (44.9%). Moreover, in the period from 2018 to 2022, the largest growth of supplies to the EU was observed in the producers of zinc and zinc products (a 33.4% growth from 20% to 53.4%) and mineral fertilizers (a 16.4% growth from 32.4% to 48.8%).

At the same time, the average share of the EU in Turkey's total exports is 42.47% (44.12% in 2018 and 41.4% in 2022). Therefore, taking into account *Table 4* on ferrous metals, cement and mineral fertilizers, the share of carbon exports from Turkey to the EC is not much different from the average of total Turkish exports to the EU.

Taking into account the identified patterns of trade-economic interaction between Turkey and the EU obtained during the study of indicators (absolute and relative indicators of Turkish exports to the EU, trade dynamics in 2018–2022, the share of Turkish goods in the imports of the European Union, etc.), it is possible to guess what economic tactics Turkey will decide on in connection with the forthcoming implementation of CBAM. How will it interact with the EU to hedge its own risks arising from the introduction of a cross-border carbon tax? Will it cooperate with trade and economic partners such as China, Russia, Brazil, India (and even the US) who are opposed to this tax?

There is an opinion that Turkey currently holds a dual position on CBAM.

The Turkish Ministry of Commerce initially argued "against" (April 6, 2020), recalling that "the free trade agreement for coal and steel products between Turkey and the EU prohibits the introduction of customs duties, quantitative restrictions, and charges, as well as measures that have an equivalent effect on the trade in these goods between the EU and Turkey" (p. 14),[3] and stressing that EU carbon taxation measures must be compatible with WTO rules and EU inside. This position appears to be quite reasonable, as the overall adverse impact of CBAM on the Turkish economy may range from 2.7 to 3.6% of GDP losses by 2030 [18], will lose "many jobs, tax revenues and export revenues" [19], and the amount of annual tax paid by Turkey in the event of the introduction of a cross-border carbon tax, some estimates will reach 686 mln euros [16, p. 9].

Later, on July 16, 2021, the President of Turkey established the Working Group on the Green Course (YMÇG), whose ultimate objective is to ensure the country's adaptation to the European Green course.[4] Special task forces are working on issues such as:

1) carbon emission control mechanism at the border;

2) national carbon pricing;

3) national action plan for the closed cycle economy;

4) green finance, etc.

Thus, Turkey has expressed its readiness to work together with the EU on issues of low-carbon development, green technologies, cross-border carbon regulation,

[3] Republic of Turkey, Ministry of trade. Views of the government of Turkey on the carbon border adjustment mechanism within the framework of the inception impact assessment (April 6, 2020).

[4] Green Deal Action Plan and Working Group. URL: https://ticaret.gov.tr/dis-iliskiler/yesil-mutabakat/yesil-mutabakat-eylem-plani-ve-calisma-grubu (accessed on 24.07.2023).

the introduction of carbon taxation, etc. This has also been reflected in academic literature [20, 21].

Turkey's business community also holds a dual position:

- on the one hand, concern about the emergence of an EU carbon mechanism at the border, which could affect the cement, automotive, mechanical, metallurgical and textile industries (with losses estimated at 1.8 bln euros per year),[5] regret about the financing of the EU's energy transition through funds that will be collected, including from Turkish exporters through the CBAM mechanism, in addition to increasing the outflow of foreign currency from Turkey;
- on the other hand, understanding the need for "green" transformation and climate neutrality.

Thus, the head of the Foreign Economic Relations Council of the Turkish private sector, Z.B. Okyaj, said that "Turkey should also create its own ETS (the EU has established a European emissions trading system — EU ETS. — *Author's note*). Thus, while sectors are interested in emission-reducing technologies, domestic emission revenues can be used to finance a "green transformation" and an ecosystem can be created that guarantees resource conservation within the country".[6] The President of the Istanbul Chamber of Commerce, Sh. Avdagich, also advocated the financing of new technologies, urging companies to include the "Green deal" on their agenda: "It is a fact that the costs of "green" transformation that our business community avoids today will disappear from our pockets tomorrow, either as a lost order or as a carbon tax".[7] These measures contribute to the convergence of the Turkish and EU economies, the development of a system of common production and management standards, and the adaptation of Turkey to the European green course.

CONCLUSION

The EC initiative to introduce a cross-border carbon tax, launched in 2021, is one of the most discussed topics of the EU Green Agenda. Recognizing CBAM as a generally promising method of financing environmental and energy-saving activities within the framework of the energy transition of EU countries, many experts believe that it will create serious challenges for the development of carbon-intensive export-oriented industries of non-EU countries, especially emerging markets.

In this regard, the current state and prospects of trade and economic cooperation between the EU and Turkey, one of the EU's main trading and economic partners, were analysed. Main results of the analysis:

40.76% — share of all carbon-intensive commodity groups in total Turkish exports to the EU in 2022;

19.1% — share of carbon-intensive commodities regulated by CBAM in total Turkish exports to the EU in 2022;

the overall level of the carbon tax is serious, but not critical (less than 1% of total Turkish exports; 0.97% in 2019); a reduction in the tax burden is possible if Turkey creates an ETS.

The basic patterns of interdependence between the economies of Turkey and the EU are formulated as follows:

the EU's dependence on Turkish exports is minimal, Turkey has no monopoly advantage on any of the export items, and the EU has differentiated imports and, accordingly, free pricing in the markets;

the dependence of the Turkish economy on the EU, on the contrary, is strongest. The export sector of the Turkish economy, including the export of carbon-intensive goods, is largely focused on the EU markets.

As a result of the contradictory patterns, Turkey has found itself in a difficult situation:

[5] Are We Ready for the European Green Deal? URL: https://geridonusumekonomisi.com.tr/avrupa-yesil-mutabakatina-hazir-miyiz.html (accessed on 24.07.2023).

[6] Ibid. URL: https://geridonusumekonomisi.com.tr/avrupa-yesil-mutabakatina-hazir-miyiz.html (accessed on 24.07.2023).

[7] Ibid. URL: https://geridonusumekonomisi.com.tr/avrupa-yesil-mutabakatina-hazir-miyiz.html (accessed on 24.07.2023).

on the one hand, the emergence of a carbon tax may lead to a reduction in the competitiveness of products of the cement, machinery, metallurgy and textile industries; on the other hand, national companies are well integrated into European production chains, and a strategy of adaptation to the European green price may be preferable for both them and the national economy as a whole.

The complexity of the situation and its duality lead to the fact that the basic question: "Does Turkey share Russia's concerns about CBAM, will it support Russia in counteracting the imposition of this tax?" cannot be answered unequivocally. There is an equal certainty: Turkey may become an ally of Russia against CBAM, may take a special "pro-European" position.

If the "pro-European" position prevails, it creates additional risks for Russia in the fight against carbon taxation (and in today's form the EU's initiative is indeed untimely and contradictory), Russia will have few allies.

Further research on the definition of Russia's carbon neutrality, taking into account its vast territories, as well as the features of the spatial placement of productive forces that minimize environmental pollution and climate change, is advisable in order to successfully counteract the EU's current carbon tax initiative and find close allies. Small EU countries, Turkey, South Korea, the US, China, and Russia do not all have the same territorial absorption potential.

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