

Analyzing the Performance of Algerian Non-Hydrocarbon Exports Amidst the Proliferation of Non-Tariff Measures (2000–2024)**تحليل مسار الصادرات الجزائرية خارج المحروقات أمام تصاعد التدابير غير التعريفية خلال الفترة (2024–2000)****Hassani Imane ¹, Benabdelaziz Soufyane ²**¹ Tahri Mohamed University Bechar (Algeria), hassani.imane@univ-bechar.dz² Tahri Mohamed University Bechar (Algeria), benabdelaziz.soufyane@univ-bechar.dz**Received:** 23/01/2026**Accepted:** 29/03/2026**Published:** 31/03/2026**Abstract:**

This study aimed to monitor and analyze the trajectory of Algerian non-hydrocarbon exports (2000-2024), highlighting the impact of international regulatory shifts on their performance. The research examined the relationship between export value fluctuations and the escalation of Non-Tariff Measures (NTMs), particularly during periods of intensified procedural pressure from trading partners. The results indicate that export declines (notably in 2015 and 2023) coincided with unprecedented peaks in quality requirements and technical and sanitary standards. The analysis concludes that these restrictions constitute mandatory regulatory frameworks for market access, making compliance a fundamental prerequisite for the international competitiveness of Algerian products.

Keywords: Non-tariff measures; sanitary and phytosanitary measures; technical barriers to Trade; algerian exports; international markets.

JEL Classification Codes: F13, F14

ملخص:

هدفت هذه الدراسة إلى رصد وتحليل مسار الصادرات الجزائرية خارج المحروقات خلال الفترة (2024–2000)، مع تسليط الضوء على مدى تأثير أداء هذه الصادرات بالتحويلات التنظيمية في الأسواق الدولية. وقد ركز البحث على استقراء العلاقة بين تذبذب القيم التصديرية الوطنية وبين تصاعد التدابير غير التعريفية، خاصة في المحطات التي شهدت ضغطاً إجرائياً مكثفاً من قبل الشركاء التجاريين. وقد توصلت الدراسة إلى أن فترات التراجع في الصادرات (عامي 2015 و 2023) تزامنت مع ذروات غير مسبوقة في اشتراطات الجودة والمعايير الفنية والصحية. كما أثبت التحليل أن هذه القيود تمثل قواعد تنظيمية عامة تحكم النفاذ للأسواق الكبرى، مما يضع المنتج الجزائري أمام تحدي المطابقة الإلزامية كشرط أساسي للتنافسية.

كلمات مفتاحية: قيود غير تعريفية، تدابير الصحة والصحة النباتية، عوائق فنية للتجارة، صادرات جزائرية، أسواق عالمية.

تصنيفات JEL : F14 ، F13

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INTRODUCTION:

The diversification of exports beyond the hydrocarbon sector represents a strategic imperative for the Algerian state, particularly in light of the challenges posed by the volatility of global energy markets. Although significant efforts have been made to promote domestic products, gaining access to international markets is no longer solely contingent upon production capacity. Instead, it is increasingly governed by a complex framework of regulatory requirements known as Non-Tariff Measures (NTMs). These measures, which encompass sanitary and phytosanitary (SPS) requirements and technical barriers to trade (TBT), have become the most influential tools in shaping the landscape of contemporary global trade. Consequently, it is crucial to analyze the trajectory of Algerian exports—not merely as abstract figures, but as a dynamic response to an international regulatory environment characterized by rapid and unforeseen shifts, especially among both traditional and emerging trading partners.

Research Problem: The research problem focuses on understanding the nature of the fluctuations that characterize the trajectory of Algerian non-hydrocarbon exports amidst the continuous rise of global non-tariff measures. Accordingly, the study seeks to address the following central question: How have international market access requirements and global regulatory shifts influenced the dynamics and sustainability of Algerian non-hydrocarbon exports over the period (2000–2024)?

Research Hypotheses:

- **Hypothesis 1:** The decline in the growth rate of Algerian non-hydrocarbon exports coincides with periods of heightened regulatory stringency among trading partners; this suggests a high sensitivity of national products toward newly introduced international requirements.
- **Hypothesis 2:** The fluctuations in international market access are attributed to a gap between the specifications of national products and global safety and quality standards, which hinders the sustainability of the Algerian presence within international value chains.

Significance of the Study:

The scientific and practical value of this study stems from its focus on one of the most complex obstacles in contemporary international trade: Non-Tariff Measures (NTMs). This is examined within the context of the Algerian experience and its strategic pursuit to transition away from hydrocarbon dependency.

The significance of this research lies in providing an objective analysis that bridges the gap between international statistical trends and the practical reality faced by Algerian exporters. By doing so, it offers policymakers and national institutions an analytical framework to better understand the "new rules of the game" in global markets. Furthermore, the study contributes to redefining competitiveness; it argues that competitive advantage is no longer merely a function of low pricing, but rather an institutional capacity to comply with ever-evolving sanitary, technical, and environmental standards.

Research Objectives:

- Tracing the temporal evolution of non-hydrocarbon exports and identifying the positive and negative turning points over the past two decades.
- Deconstructing the regulatory environment by conducting an inventory and classification of the types of restrictions (technical, sanitary) imposed by Algeria's primary trading partners.
- Exploring available opportunities in regional and emerging markets, while evaluating their compatibility with the current technical capacities of Algerian exporters.
- Proposing procedural solutions to mitigate the impact of non-tariff barriers by identifying the global markets with the most stringent non-tariff protectionist policies.

Research Methodology:

To address the central problem of this study, a descriptive approach was employed to define the theoretical framework of non-tariff barriers. For the empirical component, an analytical approach was adopted to examine the current state of Algerian exports within international markets.

Previous Studies:

This research builds upon a body of literature that has explored the intersection of foreign trade and non-tariff measures. Notable among these is:

- The study by (**Joe & others, 2022**): This study examined the relationship between Sanitary and Phytosanitary (SPS) measures and cocoa exports in Cameroon to its top ten importing nations, employing a Gravity Model alongside an institutional analysis of compliance mechanisms. Contrary to common expectations, the findings revealed that SPS measures in key markets did not significantly impact export volumes. Instead, other factors such as Gross Domestic Product (GDP), common language, and production capacity (supply-side factors) played a more decisive role in determining trade dynamics.
- The study by (**Harfouche, 2017**): This research focused on analyzing the impact of Rules of Origin (RoO) on Algerian foreign trade within the framework of the Association Agreement with the European Union. The findings revealed a negative correlation between the application of these rules and the growth of Algerian exports. The study concluded that Rules of Origin have evolved into an administrative burden and an additional cost, thereby undermining the competitiveness of national products within European markets.: This research focused on analyzing the impact of Rules of Origin (RoO) on Algerian foreign trade within the framework of the Association Agreement with the European Union. The findings revealed a negative correlation between the application of these rules and the growth of Algerian exports. The study concluded that Rules of Origin have evolved into an administrative burden and an additional cost, thereby undermining the competitiveness of national products within European markets.
- The study by (**Mehzem, 2016**): This study aimed to present several concepts regarding protectionism, subsequently highlighting the impact of disguised protectionist methods on Moroccan seafood exports. The researcher reached a striking conclusion that contradicts much of the previous literature: these methods did not significantly affect the volume of Moroccan exports in this sector. The study attributed this outcome to the "alignment" strategy adopted

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by Morocco, which involved developing regulatory systems and adhering to all international standards.

Definition of Terms

Non-Tariff Measures (NTMs): All regulatory requirements (technical and sanitary) faced by Algerian products during the export process, the impact of which will be analyzed throughout this research.

Sanitary and Phytosanitary (SPS) Measures: Measures applied to protect human or animal life from risks arising from food additives, contaminants, toxins, or disease-causing organisms in food (UNCTAD).

Technical Barriers to Trade (TBT): Measures related to technical regulations and conformity assessment procedures that specify product characteristics or their related processes and production methods, including applicable administrative provisions, with which compliance is mandatory (UNCTAD).

1- Theoretical Aspect:

1-1 Definition of Non-Tariff Measures (NTMs):

Non-tariff measures are defined as policy instruments, other than ordinary customs tariffs, that potentially have an economic effect on international trade in goods, changing quantities traded, prices, or both. (UNCTAD, 2020, p. 01)

They are also defined as all measures and procedures that a state party may implement to control imports for purposes other than regulatory or statistical ones. These notably include quantitative, monetary, and administrative restrictions imposed on importation. (Dagher, Albert;, 2007, p. 263)

In another definition, they encompass all restrictions—other than traditional customs duties that distort international trade. More precisely, they refer to any practice issued by public authorities that directly obstructs imports into a country, leading to discrimination against foreign goods in a manner that does not apply equally to domestic production or distribution.

It can be challenging to distinguish between non-tariff barriers and regulations justified by consumer protection. For this reason, some authors emphasize that the term "trade barrier" should not apply to measures that may have a restrictive effect on trade but whose primary objective is to correct market inefficiencies. (l'OCDE, 2003, pp. 50-51)

1-2 Characteristics of Non-Tariff Measures (NTMs)

Non-tariff barriers are characterized by a set of distinct features that differentiate them from traditional customs tariffs. These characteristics include (Zairi, 2022):

- **Impact on Trade Values:** These measures affect trade based on how they are applied. This may include arbitrary use by responsible agencies, high costs, or the inability of countries to meet certain requirements. In contrast, customs tariffs can be measured quantitatively, providing more certainty for exporters and importers and helping trade liberalization.
- **Constant Change and Substitution:** Non-tariff barriers change continuously. When one measure is strictly controlled, it is often replaced by another. This makes it difficult to

distinguish between legitimate public policy goals and protectionist motives.

- **Response to International Developments:** Global trade developments require the use of non-tariff measures for various reasons, such as the growth of global production networks, climate change, and consumer concerns regarding health and the environment in wealthy countries. The focus here is on protecting consumers and society, not just production.
- **Complexity and Lack of Cooperation:** The heavy use and increasing complexity of these barriers hinder effective international cooperation and make global convergence in this area difficult.
- **Measurement Difficulty:** While customs tariffs are usually a percentage of the product's value (ad valorem), non-tariff barriers lack clear numerical or price indicators for measurement.
- **Market Fragmentation:** Trade barriers now result more from non-tariff measures than from tariffs, leading to market fragmentation. Anyone trading across borders must follow many technical regulations and standards, and the difficulty of compliance limits regional trade.

Regarding the characteristics of Non-Tariff Measures (NTMs) usage across countries, it is noted that (Eyal, Ronen, 2017, pp. 48-49):

- **Variation by Comparative Advantage:** NTMs vary significantly between countries, depending largely on each country's comparative advantage and political-economic preferences. NTMs imposed on agricultural products tend to be more restrictive in countries with a strong comparative advantage in agricultural production. This is evident in the use of Sanitary and Phytosanitary (SPS) measures, as well as quantity and price control measures, which are more prevalent in developing countries. Countries that rely heavily on domestic production in traditional sectors, such as agriculture, use these tools more extensively than developed countries. On the other hand, wealthier countries, often concerned with protecting import-competing industries or infant industries, impose Technical Barriers to Trade (TBT) more widely than elsewhere.
- **Commitment to Trade Liberalization:** Wealthier countries are generally more committed to reducing all types of trade barriers, as internationally agreed upon under the general principles of the World Trade Organization (WTO). Consequently, the average usage of NTMs among the richest countries is the lowest. These nations are typically more open and dependent on international trade. Conversely, with some exceptions, less developed countries are less likely to be open to import competition. Low-income countries, which rely heavily on revenue-generating tax measures like import tariffs, prefer not to operate costly and complex administrations. Furthermore, low-income countries have a larger tariff gap (the difference between bound and applied tariffs), giving them the legal flexibility to increase actual tariff levels.
- **Export Performance and Trading Partners:** When exploring NTM usage, it is essential to address country-specific characteristics such as export performance and natural trading partners. Generally, high-income countries tend to export more as a share of GDP and direct their exports mostly to other wealthy nations. Low- and middle-income countries still trade mostly among themselves, although they have increasingly expanded their exports to high-

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income countries over the last decade. Trade data indicates that the share of developing countries in global merchandise exports has expanded significantly from 17% to 43% over the past 25 years.

- **Financial and Manufacturing Constraints:** Although low-income countries may have better market access than in the past, they still face greater financial and manufacturing constraints. These capacity constraints make it more difficult to overcome NTM barriers. Since low-income countries specialize in traditional exports like agricultural products, textiles, and clothing, it is concerning that they face significant obstacles in the form of high tariff-NTM substitution in their main export markets. This problem is further highlighted by recent International Trade Centre (ITC) business surveys, which show that agricultural exporters report more problems with SPS measures than exporters of manufactured goods (59% compared to 34%, respectively).

1.3 Classification of Non-Tariff Measures (NTMs)

The international classification of non-tariff measures (UNCTAD; 02) consists of 16 chapters covering different categories of measures (Table 1). The first fifteen chapters (A to O) cover import-related non-tariff measures, which are the conditions imposed by a country regarding imported products. The final chapter (P) covers export-related measures, which are the conditions imposed by a country regarding exported products.

A distinction is made between technical measures (Chapters A to C) and non-technical measures (Chapters D to O). Technical measures include Sanitary and Phytosanitary (SPS) measures and Technical Barriers to Trade (TBT), as well as pre-shipment inspection and other official formalities. These measures mostly aim to achieve public policy objectives, such as protecting the life and health of humans, plants, and animals, or national security and the environment. Although the primary focus of these technical measures is not trade-related and they can also be applied to domestic producers, they nevertheless regulate and influence international trade and are therefore considered non-tariff measures.

Non-technical measures cover a range of policies, including traditional trade policies such as contingent trade-protective measures, including anti-dumping and countervailing duties (Chapter D), quotas and non-automatic import licensing (Chapter E), price control measures, and para-tariff measures (Chapter F).

Table (1): Classification of non-tariff measures by chapter

Imports	Technical measures	A	Sanitary and phytosanitary measures.
		B	Technical barriers to trade.
		C	Pre-shipment inspection and other formalities.
	Non – Technical measures	D	Contingent Trade-protective measures.
		E	Non-automatic import licensing, quotas, prohibitions, quantity-control measures and other restrictions not including sanitary and phytosanitary measures or measures relating to technical barriers to trade.
		F	Price-control measures, including additional taxes and charges.
		G	Finance measures.
		H	Measures affecting competition.

		I	Trade-related investment measures.
		J	Distribution restrictions.
		K	Restrictions on post-sales services.
		L	Subsidies and other forms of support.
		M	Government procurement restrictions.
		N	Intellectual property.
		O	Rules of origin.
	Exports	P	Export-related measures.

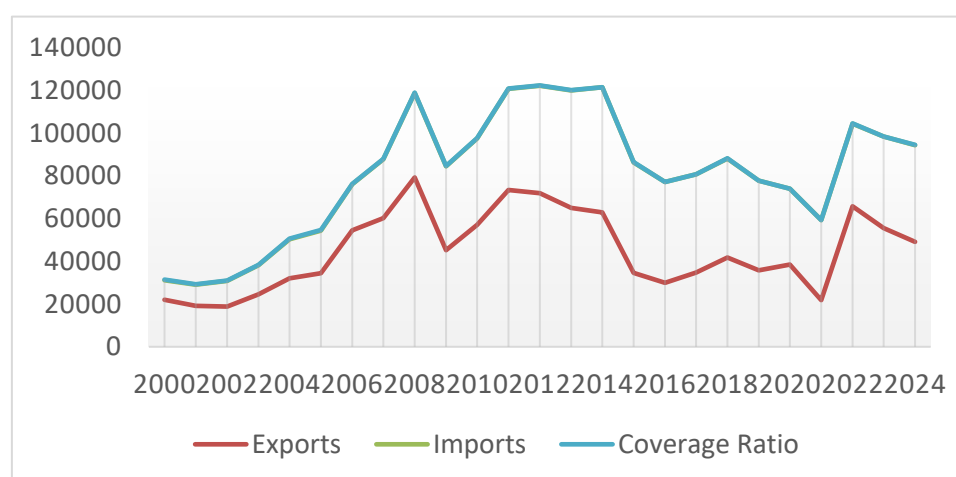
Source: (UNCTAD, 2012, p. 03)

2- Applied Study:

2-1 Diagnosis of the Status and Performance of Algerian Foreign Trade (2000-2024)

2-1-1 Evolution of the Trade Balance (2000-2024)

Fig (1): Evolution of the Trade Balance in Algeria (2000-2024) (Unit: Million USD)



Source: Prepared by the researchers based on (General Directorate of Customs, 2000-2020) and (Bank of Algeria, 2023-2024).

Tracking the trajectories of the graphic curves for Algeria's foreign trade over a quarter-century reveals pivotal turning points that reflect the reality of the country's macroeconomic balances. During the first phase of the study (2000–2014), we observe a generally stable upward trend in the export curve, which maintained a clear superiority over imports, reaching an exceptional peak in 2008 with a trade surplus of 39.819 million USD. This comfortable surplus allowed the coverage ratio to remain at high levels, providing the state with strong financial margins during that period.

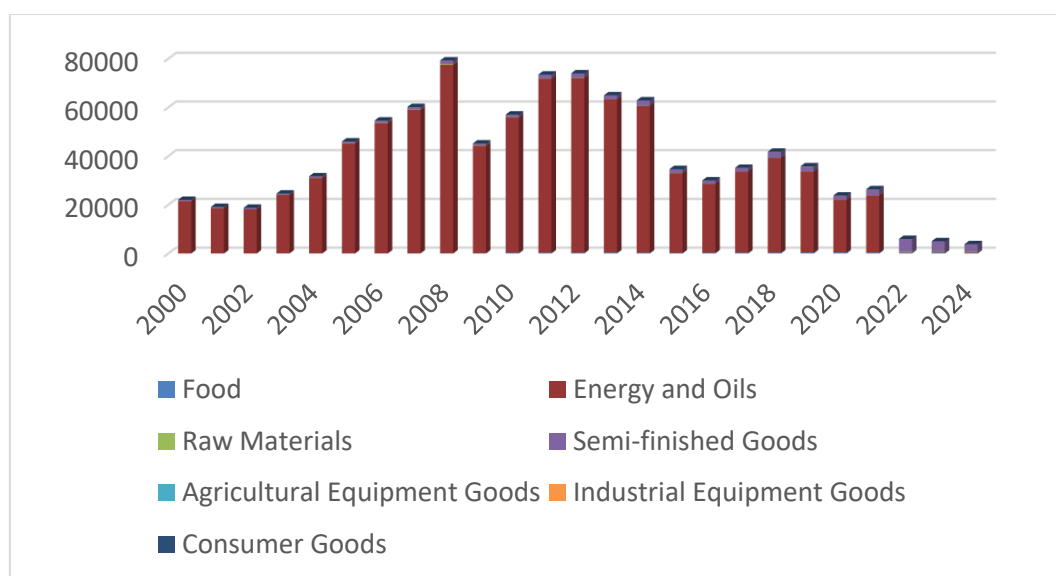
In contrast, the curves show a sharp turning point starting in 2015, where the export and import lines intersected, causing the trade balance to enter a structural deficit zone for the first time, recording a sharp decline of -17.034 million USD. The most notable observation here is the alarming drop in the coverage rate, which fell to the 64% threshold in 2016, reflecting the national economy's high sensitivity to shocks and fluctuations in the global market. Despite modest attempts to adjust the trajectory in 2018 (by narrowing the deficit to 4.5 billion USD), the volatility of the curves remained the dominant feature leading up to the global recession triggered by the COVID-19 pandemic.

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However, the final graphic scene (2022–2024) inspires a degree of cautious optimism; the export curve regained its strong upward momentum in 2022, achieving a significant surplus of 26.959 million USD, which corrected the path of the coverage ratio, raising it to 169%. This continuous fluctuation in the curves confirms an economic reality: the sustainability of the trade surplus remains a hostage to external volatility. This necessitates enhancing the competitiveness of national products and their ability to penetrate international markets, independent of primary commodity fluctuations.

2-1-2 Commodity Structure of Algerian Exports (2000–2024)

Figure 02: Structure of Algerian Exports (Unit: Million USD)



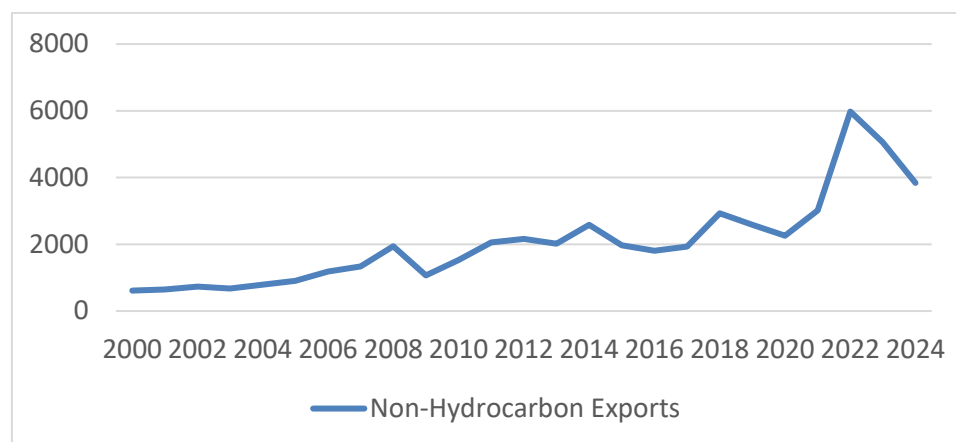
Source: Prepared by the researchers based on (General Directorate of Customs, 2000-2020) and (Bank of Algeria, 2023-2024).

The data presented in the attached figure reveals a heavy concentration of Algerian exports in the Energy and Oils category, which accounted for the largest share of total exports throughout the period from 2000 to 2021. For instance, in 2008, this category recorded a value of 77.361 million USD out of total exports amounting to 79.298 million USD, indicating the limited contribution of other sectors during that stage.

Moving to the period between 2021 and 2024, we observe a change in the relative shares of export components. The value of semi-finished goods increased significantly, reaching 5.086 million USD in 2022, compared to only 1.611 million USD in 2020. This growth in value-added products reflects a shift toward diversifying exports outside the hydrocarbons sector. However, a quantitative reading for the years 2023 and 2024 shows a decline in the total values of these categories, reaching 5.059 and 3.838 million USD, respectively.

2-1-3 Evolution of the Volume of Algerian Non-Hydrocarbon Exports (2000–2024)

Figure 03: Evolution of the Total Volume of Algerian Non-Hydrocarbon Exports (Unit: Million USD)



Source: Prepared by the researchers based on the aforementioned data.

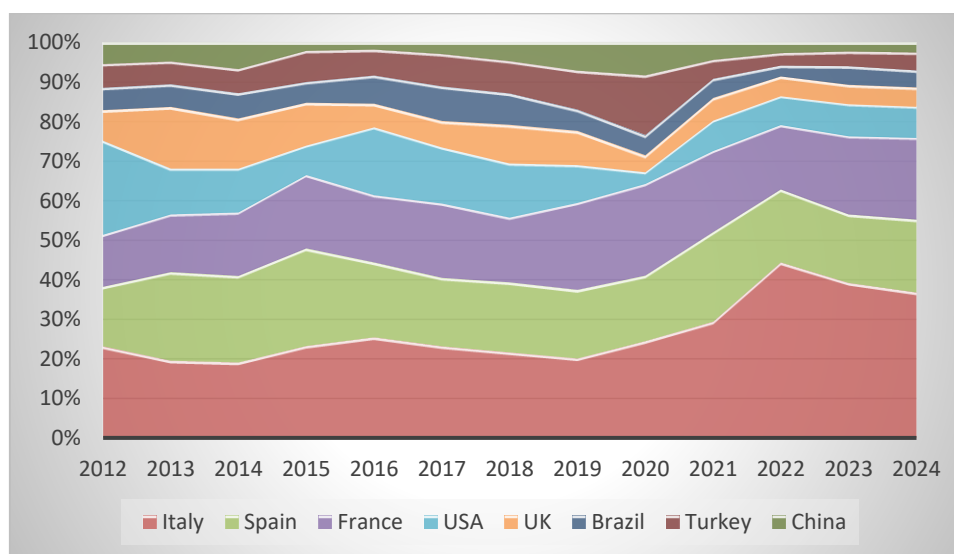
Tracking the trajectory of Algerian exports outside the hydrocarbons sector during the period (2000–2024) reveals two distinct performance phases. The first phase was characterized by relative stability at limited levels, which did not exceed the 2 billion USD threshold until 2011.

However, the graphic curve records a remarkable shift in the growth momentum starting from 2021, as the value jumped from 3.015 million USD to reach its highest level in 2022 at approximately 5.978 million USD. Despite the relative decline recorded in 2023 and 2024 (with values of 5.058 and 3.838 million USD, respectively), exports maintained a high pace compared to the past two decades. This recent fluctuation in recorded values raises questions regarding the sustainability of this export momentum and its ability to overcome technical and regulatory obstacles in international markets. This will be examined in the next section through an analysis of the nature of the non-tariff measures (NTMs) imposed on these products.

2-1-4 Geographical Distribution of Algerian Exports (2012–2024)

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Figure 04: Major Trading Partners (Unit: Million USD)



Source: Prepared by the researchers based on (General Directorate of Customs, 2000-2020) and (International Trade Centre (ITC)).

A visual reading of the (area) chart above allows for determining the relative importance of each international market for Algerian exports. It clearly highlights the concentration of trade exchanges with traditional partners despite profound changes in market shares. The distributed color areas show that Italy maintained its position as the largest export destination throughout the study period, with its share peaking in 2024 at a value of 11.967 million USD.

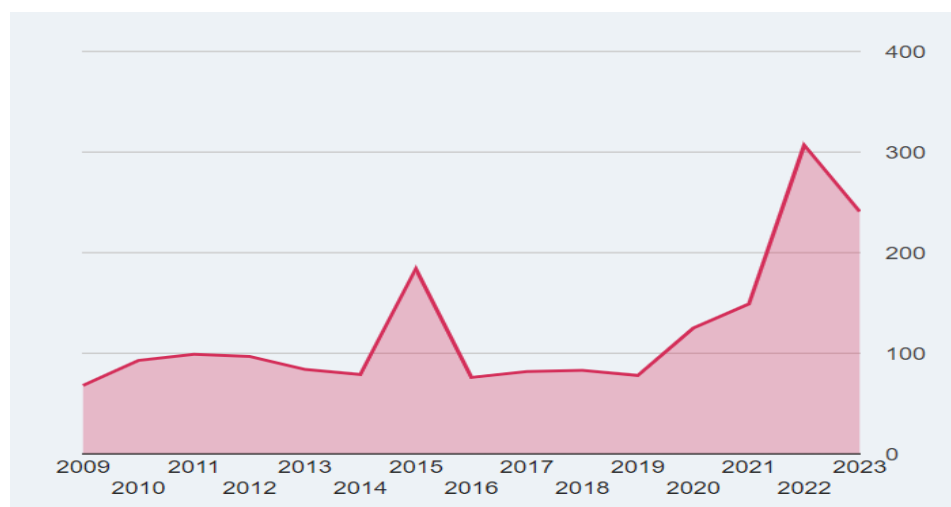
In contrast, the figure reveals a gradual and continuous decline in the U.S. market's area within the export structure; values shrunken from 11.943 million USD in 2012 to only 2.540 million USD in 2024. This shift coincided with a relative rise of other markets, such as the Chinese market, which, despite its fluctuations, recorded a leap in 2015 before stabilizing at specific levels.

When comparing these geographical changes, it is noted that European partners (Italy, Spain, France) still represent the largest bloc absorbing Algerian products, with an average annual export value exceeding 6.000 million USD per destination.

2-2 Protectionist Methods Applied to Algerian Products

2-2-1 Analysis of Protectionist Trends in International Markets Toward Algerian Exports (2008–2023)

Figure 05: Chronological Evolution of the Global Non-Tariff Barriers Environment in International Markets

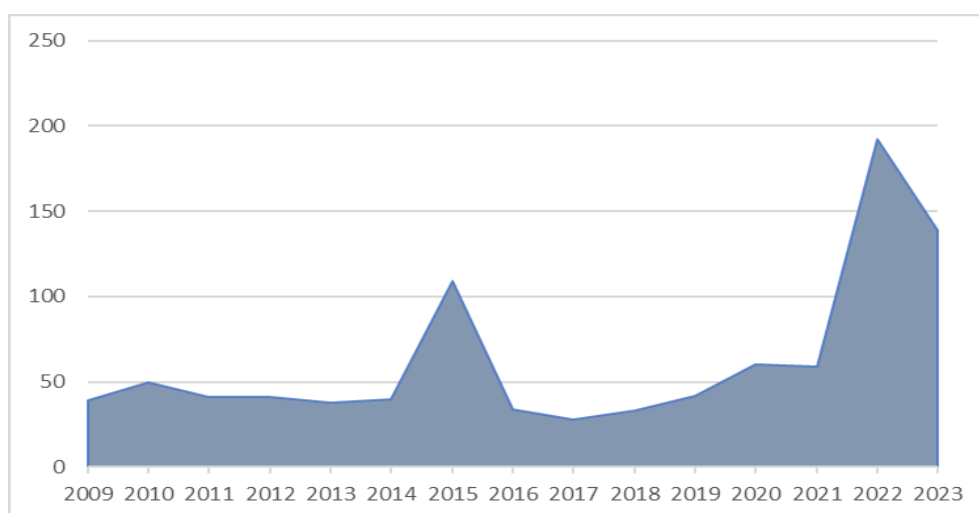


Source: Prepared by the researchers based on (Global Trade Alert).

The figure embodies the accelerating dynamics of regulatory frameworks in international trade, showing the cumulative rise of non-tariff measures (NTMs) adopted by various countries worldwide during the specified period. The fact that these measures reached their peak in 2022, with 307 new measures introduced, reflects a global trend toward the "globalization of standards," where quality and safety requirements have become the primary determinant of goods movement.

For Algeria, these figures do not represent direct targeting, but rather reflect the "difficulty of the market access environment." The recorded accumulation (1,845 measures) represents a package of technical and sanitary requirements that Algerian products must fulfill to cross the threshold of acceptance in global markets. This makes standardized compliance an indispensable condition for diversifying exports outside the hydrocarbons sector.

Figure 06: Intensity of General Regulatory Requirements Imposed by Algeria's Trading Partners



Source: Prepared by the researchers based on (Global Trade Alert).

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The figure provides a more specialized reading of the regulatory environment facing Algerian foreign trade. While the previous figure tracks total global restrictions, this curve focuses on the measures implemented by Algeria’s primary customers within their legal trade frameworks. A clear alignment is observed between the two curves, confirming that national exports are dealing with an escalating system of general regulatory rules governing access to traditional and core markets.

Despite the relative stability in the number of these restrictions during the first decade (2009–2019), the year 2015 witnessed a qualitative leap reaching 110 measures. This figure reflects that the technical requirements introduced by partners in that year—which apply to all exporting countries—directly impacted the cost and conditions for Algerian goods to access those destinations.

The intensity of this trajectory is most evident in the final stage (2021–2023), where the gray curve recorded an unprecedented peak in 2022, approaching the 200 measures threshold. This sharp escalation logically explains the decline in market shares in certain destinations, as these general requirements have transformed into technical barriers that determine the competitiveness of goods according to stricter quality and environmental standards.

2-2-2 Structural Distribution of Non-Tariff Measures (NTMs) in Major International Markets Importing Algerian Products

Table 02: Detailed Distribution of Regulatory and Protectionist Rules in Major Markets for Algerian Exports (2000–2024)

Trading Partner	SPS Measures	TBT Measures	Other Measures (SG, SSG, QR)	Total Number of Restrictions
China	1381	1652	42	3075
USA	3055	1872	535	5462
Brazil	1806	1315	3	3124
European Union (France, Italy, Spain)	25	311	0	336
Turkey	116	194	42	352
Grand Total of Restrictions	6394	5399	623	12416

Source: Prepared by the researchers based on (World Trade Organization).

The qualitative distribution of the measures presented in the table reveals the dominance of technical and sanitary requirements as primary tools for regulating access to target markets. The combined total of Sanitary and Phytosanitary (SPS) measures and Technical Barriers to Trade (TBT) reached 11793 measures. The United States leads the list of partners in terms of the intensity of these rules, with a total of 5462 measures, followed by Brazil and China, with rates exceeding 3000 measures each.

It is noted that these regulatory rules, which are generally applied to all international trade flows, are heavily concentrated in sanitary aspects within the U.S. market (3055 measures) and

the Brazilian market (1806 measures), while the balance in the Chinese market is nearly equal between sanitary and technical requirements. This variation indicates that Algerian exporters face varying levels of compliance difficulty; while some partners focus on food product safety, others prioritize technical and manufacturing specifications.

On the other hand, the table shows a limited use of direct protectionist tools such as Quantitative Restrictions (QR) and Special Safeguards (SSG), most of which are concentrated in the U.S. market (527 combined measures) and Turkey (42 measures). Consequently, the fundamental challenge for diversifying Algerian exports in these markets does not lie in the existence of specific import quotas, but rather in the technical capacity to meet thousands of general requirements related to quality and technical standards. These regulations have become the true benchmark for competitiveness in contemporary international trade.

2-3 Comparative Analysis: Algerian Export Trends vs. The International Regulatory Environment :

The statistical correlation between Algerian non-hydrocarbon export movements and the escalation of non-tariff measures (NTMs) reveals a clear impact relationship, prominently visible across three key chronological stages:

- **Stage of Relative Stability (2009–2014):** This period was characterized by a gradual growth in exports, reaching 2.575 million USD. This coincided with relative stability in global regulatory pressures, which did not exceed the threshold of 100 measures per year. This balance allowed Algerian products to maintain traditional market access without facing sudden technical barriers.
- **The Regulatory Threshold (2015):** This year represents a turning point; Algeria's trading partners recorded a sharp spike in procedural requirements, reaching 110 new measures. This pressure coincided with a decline in the value of Algerian exports to 1.971 million USD. This intersection confirms that the increase in global technical and sanitary standards—despite their general nature—coincided with a decrease in the ability of Algerian trade flows to maintain their previous levels.
- **The Peak (2021–2024):** The year 2022 witnessed the historical peak of Algerian exports, valued at 5.978 million USD. However, alongside this quantitative success, the international environment recorded an unprecedented peak in regulatory restrictions, with more than 300 global measures, nearly 200 of which were issued by direct customers. The impact of this accumulation became clearly visible in the following two years, as exports began a gradual decline, stabilizing at 3.838 million USD by 2024.

Conclusion:

This analytical study of Algerian non-hydrocarbon export trends (2000–2024) concludes that the openness of national products to international markets is no longer solely dependent on production capacity or price competitiveness. Instead, it has become contingent upon the level of responsiveness to the changing global regulatory system. Statistical monitoring revealed that the recorded export leaps, particularly in 2022, quickly collided with a broad wave of technical and sanitary requirements implemented by trading partners to regulate their markets. This reality places the Algerian economy before the imperative of shifting from a 'Quantitative

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Export' logic to a 'Qualitative Compliance' logic to ensure sustainable participation in global value chains.

results of the study:

- Correlation with Global Protectionism: The performance of Algerian non-hydrocarbon exports is clearly linked to the movement of global protectionist restrictions.
- Impact of Regulatory Spikes: Exports recorded a noticeable decline in years that witnessed accelerated growth in international regulatory measures, especially in 2015 and 2022.
- The Challenge of Standardized Compliance: Non-tariff measures (NTMs) represent general rules applied by partners to all exporters; therefore, the core challenge lies in the national product's ability to achieve compliance.
- High Intensity in Major Markets: Algerian exporters face a high density of sanitary and technical standards in key markets such as China, the USA, and Brazil.
- Dominance of SPS and TBT: Sanitary and Phytosanitary (SPS) measures and Technical Barriers to Trade (TBT) dominate the regulatory landscape, making Quality the primary driver for market access.

Recommendations:

- Upgrading the Quality System: The necessity of aligning Algerian national specifications with international standards (ISO) and European Union specifications to reduce the "Compliance Burden" during export.
- Digitalization of Traceability: Encouraging exporters to adopt digital systems for product quality tracking, consistent with the requirements of international partners that increasingly focus on environmental and safety standards.
- Strategic Market Diversification: Directing a portion of Algerian non-hydrocarbon exports toward African markets as a strategic option to mitigate the severity of regulatory restrictions imposed in traditional markets.

Bibliography List:

1. Bank of Algeria. (2023-2024). *Economic and Monetary Evolution*. Algeria: Bank of Algeria.
2. Dagher, Albert;. (2007). *The Arabic Encyclopedia of Knowledge for Sustainable Development* (Volume Four, First Edition ed.). Beirut (Lebanon): Arab House of Science.
3. Eyal, Ronen. (2017, February). Tariffs and non-tarif measures: substitutes or complements. A cross-country analysis National Bank of Poland. *Bank i Kredyt*.
4. General Directorate of Customs. (2000-2020). *Algeria's Foreign Trade Statistics*. Algeria: Ministry of Finance.
5. Global Trade Alert. (2023, January). *Algeria: Trade Interventions and Non-Tariff Measures*. Retrieved from GTA: <https://www.globaltradealert.org/>
6. Harfouche, Siham;. (2017, August). Standards of origin in Algerian foreign trade in the phenomenon of joint participation. *Journal of Law and Human Sciences*, 11(02).
7. International Trade Centre (ITC). (2026, January 10). *Trade statistics for international business development: Algeria exports*. Retrieved from Trade Map: <https://www.trademap.org>

8. Joe , E., & others. (2022, January). The effect of sanitary and phytosanitary measures on cameroon`s cocoa exports: An application of the gravity model. *Heliyon journal*, 08(01).
9. l'OCDE. (2003). *L`impact des réglementations sur le commerce de produits agroalimentaires (les accords sur les obstacles techniques au commerce OTC et l`application des mesures sanitaires et phytosanitaires*. Paris (France): l'OCDE.
10. Mehzem, Hassina;. (2016, Jun). The impact of disguised protectionist measures on commercial exports - a case study of the Moroccan seafood sector. *Journal of Human Sciences*, pp. 123-136.
11. UNCTAD. (2012). *International Classification of Non-Tariff Measures*. Geneva: United Nations Conference on Trade and Development.
12. UNCTAD. (2019). *International Classification of Non-Tariff Measures*. New York and Geneva: United Nations.
13. UNCTAD. (2020). *Guidelines to collect data on official non tariff measures 2019 version.* , New York Geneva UN: UNCTAD.
14. UNCTAD;. (2019). *Non-tariff measures from A to Z*. Geneva: United Nations Conference on Trade and Development.
15. World Trade Organization. (n.d.). *Integrated Trade Intelligence Portal (I-TIP): Detailed Non-Tariff Measures for Algeria*. Retrieved January 09, 2026, from WTO I-TIP Database: <https://i-tip.wto.org/goods/>
16. Zairi, B. (2022). *Non-tariff barriers and their impact on trade costs under the African Continental Free Trade Area (AfCFTA)*. Retrieved from trendsresearch: <http://trendsresearch.org/>