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NORTH MACEDONIA–UNITED STATES TRADE RELATIONS: TRENDS AND PERSPECTIVES

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ABSTRACT

This paper examines the trade relations between North Macedonia and the United States, focusing on the structure, competitiveness, and balance of trade through the application of the Revealed Comparative Advantage (RCA) and Trade Balance Index (TBI) over the period 2015–2024. The analysis reveals that North Macedonia maintains a strong and consistent comparative advantage in beverages and tobacco, as well as in food and live animals, which continue to dominate its export profile to the U.S. market. Emerging trends indicate a gradual improvement in machinery and transport equipment, reflecting growing industrial capacity and diversification driven by foreign investment and integration into global value chains. Conversely, sectors such as chemicals, fuels, and raw materials remain import-dependent, with persistently low RCA and negative TBI values. Overall, the findings highlight a trade structure still concentrated in traditional products, yet showing potential for transformation toward more value-added and technology-oriented exports. The paper concludes by emphasizing the need for policy measures that support innovation, export diversification, and stronger bilateral economic cooperation between North Macedonia and the United States.

Key words: trade relations, North Macedonia, United States, Revealed Comparative Advantage, Trade Balance Index

INTRODUCTION

International trade plays a central role in shaping the economic performance and development prospects of small open economies, particularly those undergoing structural transformation and integration into global markets. For countries such as the Republic of North Macedonia, external trade is not only a key driver of economic growth but also an important channel for technological diffusion, productivity gains, and structural upgrading. In this context, bilateral trade relations with major advanced economies warrant particular attention, as they reflect both opportunities for export expansion and challenges related to competitiveness and trade balance sustainability.

The United States represents one of the world's largest and most sophisticated markets, characterized by high purchasing power, diversified demand, and strong technological intensity. Although geographically distant, the U.S. market holds strategic importance for North Macedonia, offering potential for export diversification beyond traditional European partners and for deeper integration into global value chains. At the same time, trade relations between a small transition economy and a large advanced economy are often marked by asymmetries, including persistent trade deficits, sectoral concentration of exports, and dependence on imports of high value-added goods. Understanding the structure and dynamics of North

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Macedonia–United States trade relations is therefore essential for assessing both current performance and future development prospects.

Between 2015 and 2024, bilateral trade between North Macedonia and the United States expanded considerably, reflecting intensifying economic links and growing trade volumes. However, this expansion occurred alongside a persistent trade imbalance in favor of the United States. While North Macedonia's exports to the U.S. increased over time, particularly in the post-2020 period, imports consistently exceeded exports, resulting in sustained trade deficits. These developments point to underlying structural features of the bilateral trade relationship, including differences in production structures, technological capabilities, and comparative advantages.

Despite the economic relevance of these trends, the literature specifically addressing trade relations between North Macedonia and the United States remains relatively limited. Existing studies tend to examine North Macedonia's external trade within broader regional or thematic contexts, such as the Western Balkans, transition economies, or small open economies integrating into the global trading system. These contributions highlight common patterns of specialization in traditional, low-technology sectors and chronic deficits in capital and technology intensive industries. However, focused empirical analyses of North Macedonia's bilateral trade with the United States, particularly those combining competitiveness and trade balance perspectives over an extended period, are scarce.

Against this background, the present paper aims to provide a comprehensive and up to date analysis of North Macedonia–United States trade relations over the period 2015–2024. The study examines both aggregate trade flows and sectoral trade structures, with a particular emphasis on export competitiveness and trade balance dynamics. To achieve this, the paper applies two well-established and complementary indicators: the Revealed Comparative Advantage (RCA) index, which captures patterns of export specialization and competitiveness, and the Trade Balance Index (TBI), which reflects sectoral export or import orientation.

By jointly applying RCA and TBI, the paper seeks to identify sectors in which North Macedonia holds sustained or emerging comparative advantages in the U.S. market, as well as sectors characterized by persistent import dependence. In doing so, the analysis contributes to a better understanding of the structural strengths and weaknesses of bilateral trade relations and highlights areas with potential for future export growth and diversification.

The remainder of the paper is organized as follows. Section 2 outlines the methodology and data sources used in the analysis. Section 3 presents the empirical results, including an overview of trade flows and a detailed sectoral assessment based on RCA and TBI indicators. The final section discusses the main findings and outlines perspectives for strengthening North Macedonia–United States trade relations in the context of ongoing structural transformation and global economic integration.

1. LITERATURE REVIEW

The literature on trade relations between North Macedonia and the United States is relatively limited and is most often embedded within broader studies on the Western Balkans, transition economies, and small open economies integrating into global markets. Existing research emphasizes the asymmetric nature of trade relations between small developing or transition economies and large advanced economies, highlighting structural imbalances, sectoral concentration, and dependence on imports of high value-added goods (Krugman, Obstfeld & Melitz, 2018; Baldwin, 2016).

Early studies and policy assessments of North Macedonia's external trade profile emphasize its narrow export base and limited diversification. According to World Bank analysis, despite export growth over time, the country's export structure remains heavily concentrated in a few goods, and this limited diversification has restrained its overall economic transformation and export-led growth potential. The Bank's Trade Policy Strategy 2.0 report highlights that trade in goods continues to dominate the economy, with services exports lagging and export diversification still weak compared with peer countries. This has contributed to high import dependence, particularly for capital goods and intermediate inputs needed for manufacturing and industrial activity, undermining the potential gains from export activity.

Similarly, the International Monetary Fund's Selected Issues report on North Macedonia (2020) underscores structural constraints that shape the trade profile, noting that integration into larger markets such as the EU is central to supporting export performance, while domestic challenges, including productivity gaps and import reliance for advanced goods, limit expansion into more complex and higher value-added exports.

These works argue that historical specialization patterns, limited technological capabilities, and small domestic market size constrain export diversification, particularly toward developed markets such as the United States. Within this context, the U.S. market has been described as strategically important but underutilized, given its scale, purchasing power, and demand for higher value-added products.

The concept of Revealed Comparative Advantage (RCA), originally introduced by Balassa (1965), has been widely applied in the literature to assess export competitiveness of countries and sectors. Studies applying the concept of Revealed Comparative Advantage (RCA) beyond Balassa (1965) find that comparative advantages in the Western Balkans are typically concentrated in traditional and resource-based sectors such as agri-food products, with particularly strong RCA values observed in beverages, tobacco, and selected agricultural exports for North Macedonia (Matkovski, Tadic & Petrović, 2022). For North Macedonia specifically, RCA-based analyses consistently identify strong advantages in beverages, tobacco, and selected agricultural products, confirming the persistence of traditional export patterns even after trade liberalization and EU-oriented reforms.

Complementary to RCA, the Trade Balance Index (TBI) has been used to distinguish between export-oriented and import-dependent sectors (Lafay, 1992). Studies applying TBI to small transition economies show that negative trade balances are common in energy, chemicals, and machinery, reflecting limited domestic production capacity and technological gaps (Ferto & Hubbard, 2003). For North Macedonia, previous empirical work indicates chronic deficits in fuels and chemical products, while only a few sectors achieve sustained trade surpluses, reinforcing the view of a structurally imbalanced trade relationship with advanced economies.

Recent literature highlights the increasing importance of foreign direct investment (FDI) and global value chains (GVCs) in reshaping the export structures of small and transition economies. The GVC framework, developed extensively by scholars such as Gereffi (2018), explains how multinational enterprises and fragmented production networks link developing country producers to high value addition and export sophistication, enabling firms to upgrade within global production networks. OECD policy analyses further emphasize that FDI is a key driver of global value chain participation, with cross-border investment facilitating deeper integration into international markets and production networks. In the case of North Macedonia, research on the automotive components manufacturing sector shows that reforms and investment promotion have attracted export-oriented FDI, contributing to a more complex export structure and stronger links to international supply chains, particularly in machinery and related manufacturing sectors. Although the United States is not the primary destination for these exports, these developments point to emerging potential for more technology-intensive trade relations.

The literature on bilateral trade between the United States and smaller economies emphasizes the importance of institutional frameworks, trade facilitation, and political-economic relations in shaping trade flows. Textbooks on international trade policy highlight how transparent and predictable trade regimes, as well as institutional commitments through trade agreements, enhance market access and export performance for smaller partners trading with large advanced economies (Feenstra & Taylor, 2017). Annual U.S. International Trade Commission reports also underscore the role of trade agreements, investment frameworks, and cooperative mechanisms in facilitating bilateral and multilateral trade engagement (United States International Trade Commission, 2023). In the specific case of North Macedonia, the U.S. Department of State's 2022 Investment Climate Statement notes that while political relations with the United States are strong and institutional openness exists, economic ties remain modest, pointing to untapped potential for deeper trade and investment cooperation.

Overall, the existing literature converges on several key points relevant to this study. First, North Macedonia's trade with advanced economies is characterized by strong specialization in traditional products and persistent deficits in high value-added sectors. Second, RCA and TBI are well-established and complementary tools for assessing competitiveness and trade structure, particularly in small open economies. Third, recent structural changes driven by FDI and global value chain integration suggest emerging opportunities for export diversification, though these remain uneven and fragile. Building on these insights, the present paper contributes to the literature by providing a focused and updated analysis of North Macedonia–United States trade relations over the period 2015–2024, combining RCA and TBI to assess both competitiveness and trade balance dynamics and to identify future perspectives for bilateral economic cooperation.

2. METHODOLOGY

This study employs a quantitative, descriptive analytical approach to examine trade relations between the Republic of North Macedonia and the United States over the period 2015–2024. The analysis focuses on the structure, competitiveness, and balance of bilateral trade by applying two widely used and complementary indicators of international trade performance: the Revealed Comparative Advantage (RCA) index and the Trade Balance Index (TBI). Together, these indicators allow for a comprehensive assessment of both export specialization and sectoral trade orientation.

The empirical analysis is based on annual bilateral trade data between North Macedonia and the United States, covering exports and imports by product category. The data are classified according to the Standard International Trade Classification (SITC, Rev. 3) at the one-digit level, encompassing nine major product groups: food and live animals; beverages and tobacco; crude materials, inedible except fuels; mineral fuels, lubricants and related materials; animal and vegetable oils, fats and waxes; chemicals and related products; manufactured goods classified chiefly by material; machinery and transport equipment; and miscellaneous manufactured articles. Using one-digit SITC categories allows for consistency over time and facilitates comparability with existing studies on small open and transition economies.

Trade data are sourced from official international databases (such as UN Comtrade or national statistical sources), ensuring consistency, reliability, and cross-country comparability. All values are expressed in current U.S. dollars, and no deflation is applied, as the focus of the study is on relative trade performance rather than absolute trade volumes.

To assess export competitiveness, the study applies the Revealed Comparative Advantage (RCA) index originally proposed by Balassa (1965). The RCA index measures the relative importance of a given product in a country's export structure compared to its importance in world trade. It is calculated as:

$$BI = \frac{x_{ij}^{k} / X_{ij}}{x^{k} / X_{j}}$$

where:

x_{ij}^{k} - exports from the country i to the country j of the product k

X_{ij} - total exports from the country i to the country j

x^k - total exports of the product k

X_i - total exports from the country i

An RCA value greater than one (RCA>1RCA > 1RCA>1) indicates that North Macedonia has a revealed comparative advantage in the given product category, while values below one (RCA<1RCA < 1RCA<1) signal a comparative disadvantage. Changes in RCA over time are interpreted as shifts in export specialization and competitiveness.

To complement the RCA analysis and capture the trade orientation of each sector, the study uses the Trade Balance Index (TBI), following Lafay (1992). The TBI measures the relative balance between exports and imports for each product group and is defined as:

$$TBI_{ij} = \frac{\lfloor X_{ij} - M_{ij} \rfloor}{\lfloor X_{ij} + M_{ij} \rfloor}$$

Where\:

X_{ij} *- Exports of product i*

M_{ij}-Imports of product i

The TBI ranges from –1 to +1. Positive values indicate export-oriented sectors with trade surpluses, while negative values reflect import-dependent sectors with trade deficits.

By combining RCA and TBI, the methodology allows for a nuanced classification of sectors into competitive exporters, potential exporters, import-dependent industries, and structurally weak sectors.

The analysis proceeds in three steps. First, RCA and TBI values are calculated for each product category and year from 2015 to 2024. Second, sectoral trends are examined to identify persistent patterns, structural changes, and periods of improvement or deterioration in trade performance. Third, the results are interpreted jointly, enabling the identification of sectors where comparative advantage aligns with export surpluses, as well as sectors where competitiveness does not translate into favorable trade balances.

While RCA and TBI are effective tools for assessing trade performance, they are not without limitations. Both indicators are based on observed trade flows and do not account for policy distortions, non-tariff barriers, or qualitative factors such as product quality and technological content. In addition, the use of aggregated SITC categories may mask product-level heterogeneity. Nevertheless, given data availability and the exploratory nature of the study, these indices provide a robust and widely accepted framework for analyzing North Macedonia–United States trade relations.

Overall, this methodological approach enables a systematic and transparent evaluation of trade competitiveness and balance, offering insights into both current trade patterns and future prospects for bilateral economic cooperation.

3. EMPIRICAL ANALYSES AND RESULTS

3.1. Trade Flows Between North Macedonia and United States: An Overview

Trade flows between North Macedonia and the United States have shown a clear upward trend over the past decade, characterized by growing trade volumes and a persistent trade deficit for North Macedonia.

The trade exchange between the Republic of North Macedonia and United States, measured in US dollars, for the period 2015–2024 is presented in Table 1.

Table 1: Trade exchange between the Republic of North Macedonia and United States (in U.S. dollars)

	2015	**2016**	**2017**	**2018**	**2019**
Export	40674760	51053108	55547652	67377753	50506777
Import	101623623	150571778	176468276	244486335	309112620
Total trade	142298383	201624886	232015928	311864088	359619397
Trade Surplus/Deficit	-60948863	-99518670	-120920624	-177108582	-258605843
Export/Import ratio	40,02%	33,91%	31,48%	27,56%	16,34%
	2020	**2021**	**2022**	**2023**	**2024**
Export	49743168	82179188	85904746	95319304	118244480
Import	236358853	223692879	183862066	267130824	195949441
Total trade	286102021	305872067	269766812	362450128	314193921
Trade Surplus/Deficit	-186615685	-141513691	-97957320	-171811520	-77704961
Export/Import ratio	21,05%	36,74%	46,72%	35,68%	60,34%

Source: State Statistical Office of North Macedonia

Between 2015 and 2024, trade relations between North Macedonia and the United States expanded considerably, reflecting deeper economic interaction and growing demand for U.S. products, while also revealing persistent structural asymmetries. Over this period, total bilateral trade increased from about USD 142 million in 2015 to over USD 314 million in 2024, despite notable fluctuations. Throughout the decade, North Macedonia consistently recorded a trade deficit, indicating that bilateral trade remained strongly tilted in favor of the United States. This imbalance largely reflects fundamental differences in economic size, technological capacity, and production structures between the two countries.

In the first half of the period (2015–2019), trade growth was driven primarily by a rapid increase in imports from the United States. Imports more than tripled, rising from approximately USD 102 million to over USD 309 million, as rising domestic demand in North Macedonia coincided with limited local production of capital goods, machinery, chemicals, and energy-related products. Although exports to the U.S. increased gradually, from about USD 41 million to USD 51 million, they grew at a significantly slower pace and remained concentrated in a narrow range of traditional products. As a result, the trade deficit widened continuously, peaking at around USD 259 million in 2019, while export coverage deteriorated sharply from 40% to just 16%, underscoring North Macedonia's strong import dependence.

The year 2020 marked a clear turning point, as global economic disruptions caused by the COVID-19 pandemic led to a contraction in overall trade flows. Total trade declined to approximately USD 286 million, with imports falling more sharply than exports due to weakened domestic demand and disrupted supply chains. This adjustment resulted in a partial narrowing of the trade deficit to around USD 187 million and a modest improvement in export coverage to about 21%, driven mainly by suppressed imports rather than structural changes in export performance.

From 2021 onward, bilateral trade entered a recovery and gradual rebalancing phase. North Macedonia's exports to the United States grew more strongly, increasing from roughly USD 82 million in 2021 to USD 86 million in 2022, supported by improved manufacturing capacity, the effects of foreign direct investment, and deeper integration into international production networks. At the same time, imports declined from about USD 224 million to USD 184 million, reflecting both cyclical factors and adjustments in domestic demand. These developments contributed to a substantial reduction in the trade deficit, from approximately USD 142 million to USD 98 million, and a marked improvement in export coverage, which rose to nearly 47% in 2022, signaling a strengthening of North Macedonia's competitive position in the U.S. market.

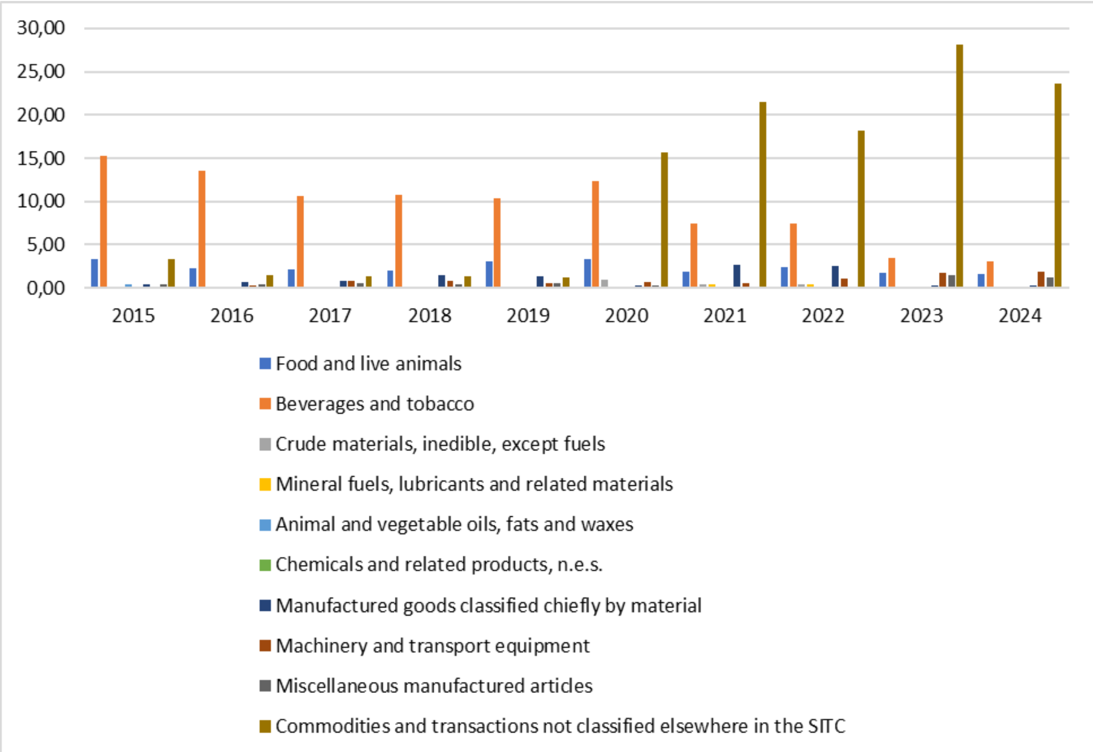
In 2023, total trade reached a decade high of around USD 363 million, driven mainly by a rebound in imports to approximately USD 267 million, partly reflecting renewed demand for capital and intermediate goods. Although exports continued to grow and reached about USD 95 million, the trade deficit widened again to roughly USD 172 million, and export coverage declined to 36%, highlighting the sensitivity of bilateral trade flows to domestic investment cycles and external price dynamics.

By 2024, trade dynamics improved significantly. Exports surged to approximately USD 118 million, the highest level of the decade, while imports declined to around USD 196 million. As a result, the trade deficit narrowed sharply to about USD 78 million, and the export-to-import ratio rose to 60%, indicating that for the first time in the period under review, North Macedonia covered more than half of its imports from the United States with its exports. Overall, while trade relations remain structurally imbalanced, recent developments point to a meaningful strengthening of North Macedonia's export performance and a gradual adjustment of bilateral trade asymmetries, driven by industrial upgrading, export diversification, and deeper integration into global value chains.

3.2. Revealed comparative advantage in trade between the Republic of North Macedonia and United States

The calculated index of revealed comparative advantage of Macedonian exports in relation to United States is shown in Figure 1.

Figure 1: the RCA index of North Macedonia to United States



Source: Authors' calculations

The Revealed Comparative Advantage (RCA) indices for North Macedonia's trade with the United States over the period 2015–2024 point to a highly concentrated pattern of export competitiveness. Overall, North Macedonia's comparative advantages are limited to a small number of product groups, while most sectors remain structurally uncompetitive in the U.S. market. At the same time, the results indicate a gradual evolution of export competitiveness in recent years, particularly toward higher value-added manufacturing, reflecting ongoing structural transformation and integration into global production networks.

In food and live animals, North Macedonia maintains a stable comparative advantage throughout the entire period, with RCA values consistently above unity. Although the index declined from 3.28 in 2015 to around 2.0 by 2018, it rebounded during 2019–2020 before moderating to 1.63 in 2024. This trend reflects the country's long-standing specialization in agricultural and food products, supported by natural endowments and established production capacity, while the gradual weakening of RCA suggests increasing competition and limited upgrading within this traditional sector.

Beverages and tobacco represent North Macedonia's strongest export sector to the United States, with exceptionally high RCA values, reaching 15.21 in 2015 and remaining well above unity throughout the period, despite declining to 3.10 by 2024. This persistent advantage is driven by strong brand recognition, product reputation, and niche positioning in the U.S. market. The downward trend, however, indicates market saturation, rising competition, and limited diversification within the sector.

By contrast, crude materials and mineral fuels display consistently low RCA values, remaining well below one for most of the period, with only temporary improvements around 2020 (RCA close to 0.9 in crude materials). These patterns reflect structural constraints, including limited domestic resource extraction, scale disadvantages, and the absence of vertically integrated supply chains, resulting in weak and unstable competitiveness in these categories.

Similarly, animal and vegetable oils and chemicals show persistently low RCA values, typically close to zero. In chemicals, RCA remains around 0.01 throughout the period, underscoring a near-total lack of comparative advantage. These outcomes reflect high technological barriers, capital intensity, and strong reliance on imports, particularly from advanced economies such as the United States.

A more dynamic pattern emerges in manufactured goods classified chiefly by material. RCA values temporarily exceeded unity in 2018–2019 and again peaked at 2.70 in 2021, before declining below one by 2024. This volatility suggests that competitiveness in this sector is largely driven by short-term factors, such as subcontracting arrangements or cyclical demand, rather than sustained structural strength.

A clear structural shift is observed in machinery and transport equipment, where RCA values increased steadily from 0.21 in 2015 to 1.92 in 2024, surpassing unity for the first time in 2022. This emerging comparative advantage reflects the impact of foreign direct investment, particularly in manufacturing and automotive components, as well as deeper integration into global value chains. Unlike traditional sectors, this category shows signs of sustained competitiveness and technological upgrading.

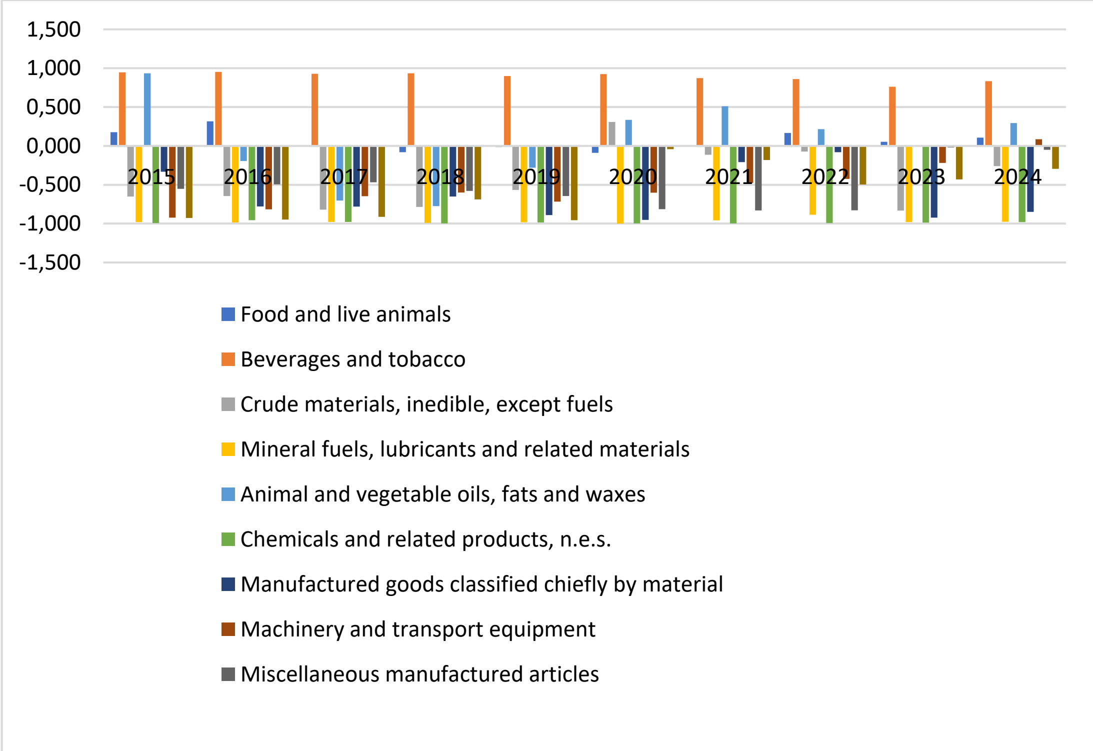
Finally, miscellaneous manufactured articles remained uncompetitive for most of the period but recorded a sharp improvement in 2023, when RCA rose to 1.43, remaining above unity in 2024 (1.17). This recent shift suggests successful entry into new market niches and improved export capabilities, possibly linked to small-scale specialization, design-intensive products, or spillover effects from manufacturing FDI.

In summary, the RCA analysis confirms that North Macedonia's comparative advantage in trade with the United States has historically been concentrated in traditional sectors such as beverages, tobacco, and food products. However, the recent emergence of comparative advantages in machinery and transport equipment and selected manufactured articles points to a gradual diversification of exports toward higher value-added activities. These developments are consistent with broader patterns of industrial upgrading and signal improving long-term prospects for strengthening North Macedonia's export competitiveness in the U.S. market.

3.3. Trade Balance Index of North Macedonia's trade with United States

The trade balance index of North Macedonia in relation to United States is shown in Figure 2:

Figure 2: the TBI index of North Macedonia *to* United States



Source: Authors' calculations

The Trade Balance Index (TBI) for North Macedonia's trade with the United States over the period 2015–2024 reveals a strongly asymmetric and sector-specific trade structure. Overall, bilateral trade is predominantly import-driven, reflecting North Macedonia's dependence on U.S. high value-added goods and limited export diversification. Although signs of adjustment emerge toward the end of the period, most notably in machinery, structural trade deficits remain widespread across most sectors.

In food and live animals, the TBI fluctuates close to balance, moving between moderate surpluses and small deficits and reaching a mildly positive value of 0.11 in 2024. This pattern reflects relatively stable two-way trade based on traditional agricultural products, but also indicates limited scale and weak specialization, as neither exports nor imports dominate decisively.

Beverages and tobacco stand out as North Macedonia's most stable export-oriented sector. The TBI remains consistently high throughout the period, exceeding 0.9 in the mid-2010s and remaining strongly positive at around 0.83 in 2024. This sustained surplus reflects well-established production capabilities, strong brand recognition, and niche positioning in the U.S. market, which allow exports to consistently exceed imports in this category despite gradual competitive pressures.

By contrast, crude materials exhibit persistent and volatile deficits, with the TBI remaining negative for most of the period and falling to –0.26 in 2024. Occasional improvements, such as the temporary surplus in 2020, are linked to short-term disruptions in import demand rather than lasting competitiveness, underscoring the sector's structural weakness and exposure to external shocks.

An even more pronounced deficit characterizes mineral fuels and related products, where the TBI remains close to –1 throughout the entire period, including –0.98 in 2024. This reflects an almost complete reliance on imports, driven by the absence of domestic energy resources and limited export capacity in this sector. The trade balance in animal and vegetable oils is highly unstable. A strong surplus in 2015 is followed by several years of deficits, before the index returns to a moderate surplus of 0.29 in 2024. These fluctuations reflect irregular production volumes, sensitivity to price changes, and the small scale of trade flows, rather than sustained competitive strength.

In chemicals and related products, the TBI remains persistently and deeply negative, staying close to –1 throughout the period and standing at approximately –0.98 in 2024. This structural deficit reflects high technological barriers, capital intensity, and strong dependence on imports of chemical inputs from the United States.

Manufactured goods classified chiefly by material also show predominantly negative TBI values. Although the deficit narrowed temporarily in 2021–2022, it widened again by 2024 (around –0.85), suggesting that competitiveness gains in this sector are fragile and largely dependent on short-term production arrangements rather than durable structural advantages.

A more favorable and consistent adjustment is observed in machinery and transport equipment. The TBI improves steadily from a deep deficit in 2015 to a slightly positive value of 0.09 in 2024, indicating that exports have begun to match and marginally exceed imports. This trend reflects the impact of foreign direct investment, industrial upgrading, and integration into global value chains, particularly in automotive components and machinery-related manufacturing.

Finally, miscellaneous manufactured articles remain in deficit for most of the period, but the imbalance narrows significantly toward the end, with the TBI approaching balance in 2023–2024 (around –0.05 in 2024). This improvement suggests early signs of enhanced export capacity in niche manufacturing segments, possibly linked to specialization, design-intensive production, or spillover effects from broader industrial development.

Overall, the TBI analysis confirms that North Macedonia’s trade with the United States is dominated by imports, with persistent deficits in energy, chemicals, and several manufacturing sectors reflecting structural production and technological gaps. At the same time, sustained surpluses in beverages and tobacco and the gradual shift toward balance in machinery and selected manufactured goods point to selective areas of competitiveness and a slow but meaningful process of structural upgrading in bilateral trade relations.

CONCLUSION

This paper has examined the evolution, structure, and competitiveness of trade relations between the Republic of North Macedonia and the United States over the period 2015–2024, applying both the Revealed Comparative Advantage (RCA) index and the Trade Balance Index (TBI) to capture sectoral specialization and trade orientation. The analysis reveals a clear expansion of bilateral trade over the past decade, alongside persistent structural imbalances that continue to shape the nature of economic relations between the two countries.

At the aggregate level, total bilateral trade more than doubled between 2015 and 2024, reflecting intensifying economic links and growing integration into global markets. However, this expansion was accompanied by a sustained trade deficit for North Macedonia, driven primarily by strong import dependence on U.S. capital goods, machinery, chemicals, and energy-related products. Although the deficit narrowed significantly in 2024, supported by a surge in exports and a decline in imports, it remains indicative of underlying asymmetries in production structures, technological capacity, and economic scale.

The sectoral analysis provides deeper insight into these dynamics. The RCA results confirm that North Macedonia’s export competitiveness in the U.S. market has traditionally been concentrated in a narrow set of low-technology and resource-based sectors, particularly beverages and tobacco and food products.

These sectors display sustained comparative advantages and positive trade balances, reflecting established production capabilities, brand recognition, and niche market positioning. At the same time, the gradual decline in RCA values in these traditional sectors points to increasing competition and limited scope for further expansion without upgrading and diversification.

In contrast, most capital- and technology-intensive sectors, such as chemicals, mineral fuels, and certain manufactured goods remain structurally uncompetitive, as evidenced by persistently low RCA values and deeply negative TBI scores. These patterns underscore North Macedonia's reliance on imports of high value-added goods from the United States and highlight the constraints posed by technological barriers, scale disadvantages, and limited domestic industrial capacity.

Nevertheless, the analysis also identifies important signs of structural transformation. The emergence of comparative advantage and improving trade balance positions in machinery and transport equipment, as well as the recent improvement in miscellaneous manufactured articles, signal a gradual shift toward higher value-added manufacturing. These developments are closely linked to foreign direct investment, participation in global value chains, and industrial upgrading, and they represent the most promising avenue for strengthening North Macedonia's long-term export competitiveness in the U.S. market.

Overall, the findings suggest that while North Macedonia–United States trade relations remain structurally imbalanced, recent trends point to a slow but meaningful process of adjustment. The coexistence of persistent deficits and emerging competitive niches highlights both the challenges faced by a small open economy trading with a major advanced market and the opportunities created by structural change and global integration.

Based on the empirical findings, several policy recommendations emerge:

First, export diversification and upgrading should be a central policy priority. While traditional sectors such as beverages and food products will remain important, future export growth to the United States should increasingly focus on higher value-added manufacturing, particularly machinery, automotive components, and specialized manufactured goods. Supporting innovation, quality upgrading, and compliance with U.S. standards is essential in this regard.

Second, foreign direct investment should be further leveraged as a catalyst for export competitiveness. Policies aimed at attracting efficiency-seeking and technology-intensive FDI, especially from U.S. firms, can strengthen domestic production capabilities, enhance knowledge spillovers, and deepen integration into global value chains. Strengthening linkages between foreign-owned firms and local suppliers would help translate FDI into broader export capacity.

Third, trade facilitation and institutional support for exporters should be enhanced. Targeted export promotion programs, market intelligence services, and support for small and medium-sized enterprises can help overcome informational and scale barriers associated with entering and expanding in the U.S. market. Improving logistics, customs procedures, and certification processes would further reduce trade costs.

Fourth, human capital development and skills upgrading are critical for sustaining competitiveness in higher value-added sectors. Investments in technical education, vocational training, and digital skills can support industrial upgrading and improve the absorptive capacity of the domestic economy.

Finally, deepening economic cooperation with the United States beyond trade flows, through investment agreements, technology partnerships, and development cooperation, can help unlock untapped potential in bilateral relations. Strong political ties provide a favorable foundation, but translating them into deeper economic engagement requires coordinated and proactive trade and industrial policies.

In conclusion, North Macedonia's trade relations with the United States are characterized by both persistent structural challenges and emerging opportunities. While the trade balance remains negative, recent improvements in export performance and competitiveness point to a gradual transformation of the bilateral trade structure. Sustained policy efforts aimed at diversification, upgrading, and integration into higher value-added segments of global trade will be crucial for strengthening North Macedonia's position in the U.S. market and for ensuring more balanced and resilient trade relations in the future.

LITERATURE

1. Balassa, B. (1965). Trade liberalisation and "revealed" comparative advantage 1. *The manchester school*, *33*(2), 99-123.
2. Baldwin, R. (2016). *The great convergence: Information technology and the new globalization*. Harvard University Press.
3. Feenstra, R. C., & Taylor, A. M. (2017). *International Trade* (4th ed.). Worth Publishers.
4. Fertő, I., & Hubbard, L. J. (2003). *Revealed comparative advantage and competitiveness in Hungarian agri-food sectors*. *The World Economy*, 26(2), 247–259.
5. Gereffi, G. (2018). *Global value chains and development: Redefining the contours of 21st century capitalism*. Cambridge University Press.
6. International Monetary Fund. (2020). *Republic of North Macedonia: Selected Issues*. IMF Staff Country Reports.
7. Krugman, P., Obstfeld, M., & Melitz, M. (2018). *International economics: Theory and policy* (11th ed.). Pearson.
8. Lafay, G. (1992). *Measuring export performance: Trade balance and revealed comparative advantage*. In *New Questions in Agricultural Trade* (pp. 199–212). London: Macmillan.
9. Matkovski, B., Tadic, M., & Petrović, D. (2022). Agri-food trade and revealed comparative advantages in the Western Balkans. *Economic Annals*, 67(235), 47–66.
10. OECD. (2021). *Global value chains and foreign direct investment* (OECD policy overview). OECD.
11. State statistical office of the Republic of Macedonia, Commodity international exchange of the Republic of Macedonia. URL: http://www.stat.gov.mk/PublikaciiPoOblast.aspx?id=14&rbrObl=23
12. United States Department of State. (2022). *Investment Climate Statements: North Macedonia*.
13. United States International Trade Commission. (2023). *The Year in Trade 2022: Operation of the Trade Agreements Program* (USITC Publication 5476).
14. World Bank. (2018). *Positioning FYR Macedonia for the global economy: The impact of reforms and investment promotion in the automotive components manufacturing sector*. World Bank.
15. World Bank. (2022). *The Trade Policy Strategy 2.0 for North Macedonia*. World Bank Group.