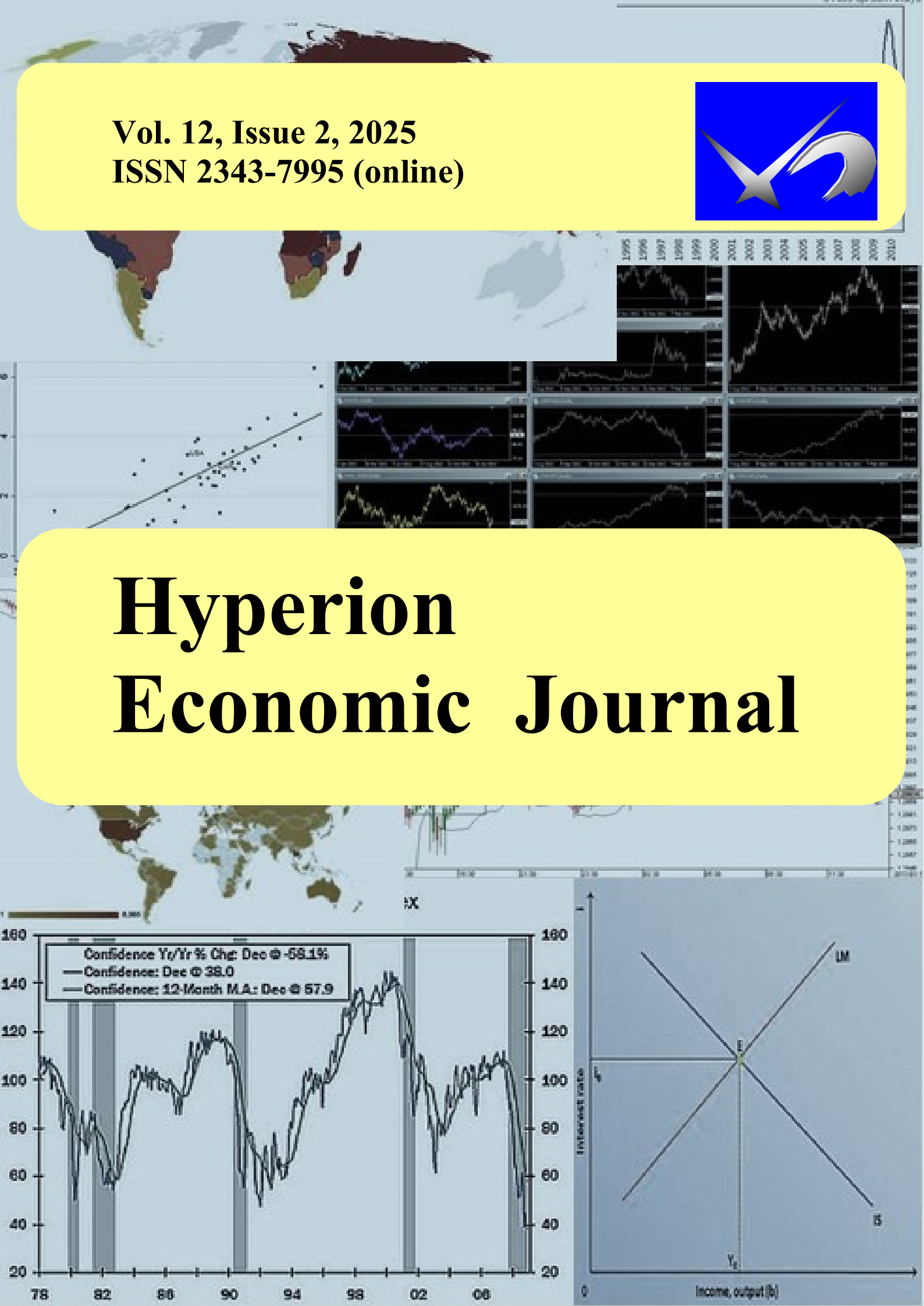
Vol. 12, Issue 2, 2025
ISSN 2343-7995 (online)

Hyperion Economic Journal



HYPERION ECONOMIC JOURNAL

Semiannual journal published by
Faculty of Economic Sciences
Hyperion University of Bucharest
Romania

YEAR XII, ISSUE 2, September 2025
ISSN 2343-7995 (online)

Editorial Office: Hyperion University, Faculty of Economic Sciences,
Calea Calarașilor no. 169, district 3, Bucharest, 030615
http://www.hej.hyperion.ro hej@hyperion.ro

CONTENTS

GREEN CERTIFICATES: MECHANISMS FOR PROMOTING RENEWABLE ENERGY AND THEIR IMPACT ON THE ENERGY MARKET

Anca CRISTEA[1]
Institute for World Economy, Romanian Academy,
Faculty of Economic Studies from the Hyperion University of Bucharest

ABSTRACT: *Green certificates are a market-based mechanism designed to promote renewable energy deployment and support the transition to sustainable energy systems. This study examines their implementation and effects in Romania, Italy, and China, focusing on market performance, investment stimulation, and energy diversification. Analysis of historical data shows that green certificates have contributed to significant growth in wind, solar, and biomass capacities, reducing dependence on fossil fuels and enhancing the attractiveness of renewable investments. Romania and Italy demonstrate the importance of quota adjustments and transparent market monitoring in maintaining stability, while China's rapid expansion highlights the effectiveness of strong policy incentives combined with certificate schemes. Key challenges, including price volatility, greenwashing, and impacts on consumers, emphasize the need for adaptive regulation and continuous oversight. The findings indicate that, when integrated into broader energy policy frameworks, green certificates are an effective tool for accelerating renewable energy adoption, balancing markets, and supporting economic and environmental objectives.*

Keywords: *Green Certificates; Renewable Energy Policy; Electricity Market; Investment Incentives; Market Dynamics*

JEL Classification: *Q42; Q48; L94; G38*

1. INTRODUCTION

The global and national energy transition is driven by the need to reduce greenhouse gas emissions and ensure a sustainable energy mix. In the context of the Paris Agreement and the European Union's 2030 targets, promoting renewable energy has become a priority for governments and economic operators.

Green certificates are economic instruments designed to stimulate electricity production from renewable sources. They provide proof that a certain amount of energy was generated from clean sources and can be traded between producers and suppliers. The system works by creating an artificial demand for renewable energy, offering financial incentives to producers, and contributing to the increase of renewable energy share in total energy consumption.

[1] Ph.D., Scientific Researcher III, anca.cristea@iem.ro

This paper analyzes the mechanisms of green certificates, their impact on the energy market, and the challenges associated with their implementation, with a particular focus on the experiences of Romania, Italy, and China.

2. MECHANISMS OF GREEN CERTIFICATES

2.1 Definition and Functioning

Green certificates are an economic instrument used to stimulate renewable energy production. They are issued for each megawatt-hour (MWh) of electricity generated from sources such as wind, solar, small hydro, biomass, or biogas. Each green certificate certifies the "green" nature of the energy produced and can be traded on specialized markets.

This mechanism provides producers with an additional source of revenue, beyond the electricity price, reducing the payback period for renewable technology investments. At the same time, energy suppliers are required to hold a certain number of green certificates proportional to the energy they sell to end consumers. Failure to comply involves paying a compensatory fee, which is significantly higher than the market price of the certificates, thus encouraging compliance.

2.2 Implementation in Different Countries

We chose to analyze the green certificate system in three countries: Romania, as the primary case study, and Italy and China, selected for their strong presence in the renewable energy sector. This comparative approach allows for an examination of different regulatory frameworks, market mechanisms, and policy outcomes, highlighting both the common principles and the variations in implementation across diverse national contexts.

Across these three countries, several common themes emerge. All systems use certificates to create financial incentives for renewable energy, yet the mechanisms differ in flexibility and market integration. Romania and Italy rely primarily on mandatory quotas, with Italy emphasizing periodic adjustment of incentives, while China integrates certificates directly with electricity market pricing, highlighting a more dynamic market-based strategy. These variations illustrate how national contexts—including regulatory frameworks, market maturity, and policy priorities—shape the design and effectiveness of green certificate schemes.

In Romania, the green certificate system was introduced in 2008 and is regulated by the National Energy Regulatory Authority (ANRE). Under this system, energy suppliers are required to purchase a minimum number of green certificates proportional to the energy they sell, thereby creating a steady demand for renewable energy. The costs of these certificates are partially passed on to end consumers, linking renewable energy promotion directly to the electricity market. The system has contributed significantly to the expansion of wind and solar capacities, attracting private investment and diversifying Romania's energy mix. Furthermore, integration with European renewable energy schemes has ensured compliance with EU directives, reinforcing the country's broader sustainability objectives.

Italy has implemented a green certificate system based on mandatory quotas, in which renewable energy producers receive certificates that can be sold to suppliers to fulfill legal obligations. Over time, the Italian system has undergone several revisions to adjust incentives according to technological developments and market conditions, including modifications to certificate validity periods and guaranteed minimum prices. This adaptive approach has preserved the attractiveness of renewable energy investments while maintaining market balance and preventing distortions. Italy's experience underscores the importance of

periodically reviewing and updating regulatory frameworks to respond to rapid technological evolution and changing economic conditions.

China employs a hybrid approach, combining green certificates with electricity market pricing to stimulate renewable energy development and reduce reliance on fossil fuels. Authorities issue guidelines to ensure proper certificate trading and compliance, establishing a regulated yet market-oriented framework. By linking certificate issuance with electricity prices, China creates strong financial incentives for renewable energy producers while encouraging efficiency and competitiveness in the sector. This approach demonstrates how integrating market-based mechanisms with regulatory oversight can effectively drive renewable capacity growth and support national energy transition goals.

3. IMPACT ON THE ENERGY MARKET

3.1. Economic Effects

The implementation of green certificates directly influences electricity prices both on the national market and for end consumers. In Romania, the cost of purchasing green certificates is often included in consumer bills, which can lead to temporary increases in electricity prices. However, stimulating renewable energy production can generate, in the medium and long term, a diversification of energy sources and a reduction in dependency on imported fossil fuels.

For instance, Romania's solar energy capacity reached 8.4% of its total power capacity by 2023, with a target to increase photovoltaic capacity from 1,400 MW to 3,140 MW by 2030 [1]. Similarly, Italy's renewable support component accounted for about 15% of the net electricity price for the average residential customer in 2020-2021 [2].

In China, the green electricity trading volume reached 233.6 billion kWh in 2024, indicating significant progress in renewable energy adoption [3].

These examples demonstrate that while green certificate systems may lead to short-term increases in electricity prices, they play a crucial role in promoting renewable energy, thereby contributing to long-term energy diversification and reduced reliance on fossil fuels.

3.2. Stimulating Investments in Renewable Energy

Green certificates function as an indirect financing mechanism designed to support investments in renewable energy technologies. By issuing tradable certificates that correspond to each unit of electricity generated from renewable sources, governments create a supplementary revenue stream for energy producers, which operates independently of the wholesale electricity price. This additional income reduces the financial uncertainty and market risks associated with renewable energy projects, thereby improving their bankability and overall attractiveness to private investors and financial institutions. As a result, green certificate systems have been shown to catalyze the development of wind, solar, and biomass projects by lowering the cost of capital and incentivizing early-stage investment in emerging technologies. Moreover, these mechanisms facilitate the achievement of national and regional renewable energy targets, as they can be combined with other policy instruments such as feed-in tariffs, quota obligations, or carbon pricing schemes, creating a multifaceted incentive structure that promotes sustainable energy deployment.

3.3. Challenges and Criticisms

Despite their widespread adoption, green certificate schemes face several challenges and criticisms that may affect their overall effectiveness in promoting renewable energy and achieving environmental goals.

One of the primary challenges of green certificate markets is price volatility. Fluctuations in certificate prices can significantly affect the profitability of renewable energy projects, particularly for smaller or emerging developers. Sudden drops in certificate value may reduce the expected revenue stream, increasing financial risk and potentially discouraging investment. Conversely, periods of unexpectedly high prices can create market distortions and speculative behavior, undermining long-term policy objectives [4] [5].

While green certificates are designed to promote clean energy generation, their effectiveness in directly reducing greenhouse gas emissions can be limited. In some cases, companies purchase certificates to meet regulatory requirements or corporate sustainability targets without implementing additional emission reduction measures, a practice commonly referred to as greenwashing. This phenomenon raises concerns about the environmental integrity of certificate schemes and highlights the need for complementary policies, such as emissions caps or monitoring frameworks, to ensure that renewable energy deployment translates into measurable carbon reductions [6].

Another criticism relates to the economic burden on electricity consumers. The costs associated with green certificates are often passed on through electricity tariffs, potentially leading to higher bills for households and businesses. This can generate public resistance to renewable energy policies and create social equity concerns, especially in regions where electricity costs already represent a substantial portion of household expenditures. Policymakers must therefore balance the need to incentivize renewable energy investment with measures that mitigate adverse effects on consumers, such as targeted subsidies or progressive tariff structures [7].

Overall, while green certificate systems have proven effective in mobilizing investment and expanding renewable energy capacity, addressing these challenges is essential to ensure their sustainability, social acceptability, and alignment with broader climate policy objectives.

Table 1. Challenges of Green Certificate Schemes – Country Comparison

Challenge	Italy	Romania	China
Price volatility	Certificate prices have fluctuated due to oversupply in some auction rounds; sudden drops reduced profitability for smaller solar and wind developers [8].	Quota obligations led to temporary spikes in certificate prices in early years; later market saturation caused price declines, affecting investor confidence [11].	GEC prices have risen steadily due to regulatory changes, but sudden policy updates (e.g., Fe r X framework) risk short-term instability [14].
Limited effectiveness / Greenwashing	Some companies met quotas by purchasing certificates without additional emission reduction projects; impact on CO_2 reductions was uneven [9].	Large industrial consumers met obligations via certificates without increasing renewable generation, raising greenwashing concerns [12].	Companies in steel, cement, and data centers use GECs to comply with mandatory targets; actual emission reductions depend on integration with clean energy projects.
Impact on consumers	Costs of certificates were passed through electricity tariffs, causing public	Retail electricity prices included green certificate costs, disproportionately	GEC costs are reflected in industrial and commercial tariffs; efforts to mitigate

Challenge	Italy	Romania	China
	concern over higher bills [10] .	affecting low-income households [13].	household impact are ongoing [15].

Source: Author's elaboration based on the reviewed scientific literature cited in the bibliography.

Comparative experiences from Italy, Romania, and China illustrate the practical challenges of implementing green certificate schemes. Price volatility has been a recurring issue: in Italy and Romania, oversupply or market saturation led to sudden drops in certificate prices, affecting the profitability of renewable energy projects, while in China, regulatory changes such as the Fer X framework could introduce short-term instability in GEC prices. Limited effectiveness in emission reduction, or "greenwashing," has also been observed: companies in all three countries have sometimes used certificates to meet regulatory or corporate targets without additional investment in renewable generation.

Finally, the costs associated with certificates are often passed to consumers, raising concerns about electricity affordability and social equity. In Italy and Romania, tariff increases affected households and smaller businesses, whereas in China, GEC costs are mainly reflected in industrial and commercial tariffs. These experiences highlight the need for carefully designed complementary policies, including monitoring frameworks, consumer protections, and market stabilization mechanisms, to maximize the environmental and economic benefits of green certificate programs.

4. CASE STUDIES

4.1. Romania

The green certificate system, introduced in Romania in 2008, has served as one of the most effective market-based mechanisms for stimulating renewable energy investments. By ensuring additional revenue streams for producers, the scheme created favorable conditions for both domestic and international investors, leading to a surge in capital flows directed toward wind, solar, and biomass projects. Between 2008 and 2023, wind capacity alone exceeded 3 GW, positioning Romania among the leading wind markets in Central and Eastern Europe. Furthermore, the predictable framework of mandatory quotas established annually by the Romanian Energy Regulatory Authority (ANRE) enhanced investor confidence and enabled long-term planning, contributing to the development of supporting industries, job creation, and local supply chains.

Tabel 2. The Installed Capacity of Renewable Energy Sources in Romania, from 2015 to 2023

Year	Wind Energy (MW)	Solar Energy (MW)	Biomass and Biogas (MW)	Total Renewable Energy (MW)
2015	2,000	800	500	3,300
2016	2,300	1,200	550	4,050
2017	2,600	1,800	600	5,000
2018	2,800	2,100	650	5,550
2019	2,900	2,300	700	5,900
2020	3,000	2,500	750	6,250
2021	3,050	2,700	800	6,550

Year	Wind Energy (MW)	Solar Energy (MW)	Biomass and Biogas (MW)	Total Renewable Energy (MW)
2022	3,100	2,900	850	6,850
2023	3,150	3,100	900	7,150

Source: Author's elaboration based on the reviewed scientific literature cited in the bibliography

The table presents the installed capacity of renewable energy sources in Romania from 2015 to 2023, including wind, solar, and biomass/biogas energy. Over this period, Romania experienced a consistent growth in total renewable energy capacity, increasing from 3,300 MW in 2015 to 7,150 MW in 2023.

Wind energy capacity showed a steady increase throughout the period, from 2,000 MW in 2015 to 3,150 MW in 2023. This represents an approximate 57.5% increase over nine years, indicating continuous investment in wind power infrastructure. Solar energy experienced the most rapid growth among the three sectors. Starting at 800 MW in 2015, solar capacity rose to 3,100 MW by 2023, nearly quadrupling in less than a decade. This trend reflects the global expansion of photovoltaic technologies and Romania's supportive policies for solar energy. Biomass and biogas energy showed a steady but more modest increase, from 500 MW in 2015 to 900 MW in 2023, accounting for an 80% increase. This growth highlights the gradual development of bioenergy facilities and utilization of agricultural and organic waste. Overall, Romania's total renewable energy capacity more than doubled from 3,300 MW in 2015 to 7,150 MW in 2023. While wind energy contributed the largest share initially, solar energy's rapid expansion has significantly balanced the renewable energy mix.

As a conclusion, the period 2015–2023 reflects a strong upward trend in renewable energy adoption in Romania, with solar energy emerging as a key driver of growth, complemented by steady increases in wind and biomass/biogas capacities. This trajectory indicates Romania's commitment to diversifying its energy portfolio and advancing toward sustainable energy targets.

4.2. Italy

Italy recorded a record level of wind and solar production in 2023: solar energy generated approximately 30.6TWh, while wind contributed around 23.4TWh. Overall, renewable sources covered nearly 37% of the country's electricity demand, compared with about 31% in 2022 [16].

In the first half of 2024, renewable energy production in Italy increased by approximately 27.3% compared with the same period of 2023, accompanied by a significant decline in fossil fuel generation. Renewables accounted for around 43.8% of total electricity demand during this period, reaching as high as 52.5% in June. Installed renewable capacity expanded by roughly 3,691 MW, driven primarily by solar photovoltaic additions [17].

In the most recent renewable capacity auction (Round 16), Italy allocated about 278.5 MW to solar PV projects. Bids generally reflected discounts ranging between 2% and 7.9% compared with the maximum auction price.

Concerns have been raised regarding the new "Fer X" regulatory framework, which introduces higher starting prices in auctions (approximately €85/MWh for solar and wind) compared with current PPA market prices (around €67–70/MWh). This discrepancy may distort the PPA market, as some projects might prefer auction participation even when PPA-fixed or guaranteed prices are lower.

Finally, recent analysis of the Italian electricity market highlights a "merit order effect": an increase in the renewable generation share reduces the National Single Price (PUN). For

example, a 10% increase in renewable penetration is estimated to lower the average market price by about €8.2/MWh [18].

Tabel 3. The Evolution of Wind and Solar Energy Capacities in Italy, between 2015 and 2023

Year	Wind Energy (MW)	Solar Energy (MW)	Total Renewable Energy (MW)
2015	8,500	18,000	26,500
2016	8,700	18,500	27,200
2017	9,000	19,200	28,200
2018	9,300	20,000	29,300
2019	9,500	20,700	30,200
2020	9,700	21,500	31,200
2021	9,900	22,000	31,900
2022	10,100	22,500	32,600
2023	10,300	23,000	33,300

Source: Compiled by the authors based on TERNA statistical data (years) https://www.terna.it/DesktopModules/AdactoBackend/API/directdownload

The data reflect the evolution of wind and solar energy capacities in Italy between 2015 and 2023, along with the total renewable energy capacity. Over this period, total renewable energy capacity increased steadily from 26,500 MW in 2015 to 33,300 MW in 2023, highlighting continuous development in the renewable sector.

Wind energy showed gradual growth, increasing from 8,500 MW in 2015 to 10,300 MW in 2023, an overall increase of approximately 21%. This trend indicates sustained investment in wind power infrastructure and its stable contribution to Romania's renewable energy mix. Solar energy exhibited a stronger growth trend compared to wind energy. Installed capacity rose from 18,000 MW in 2015 to 23,000 MW in 2023, an increase of nearly 28%. This reflects the growing adoption of photovoltaic technologies and supportive policies promoting solar energy deployment. The combined capacity of renewable energy sources showed a consistent upward trend, driven primarily by solar energy growth, complemented by steady wind energy expansion. The total renewable capacity grew by 6,800 MW over nine years, indicating Romania's commitment to diversifying its energy sources and enhancing sustainability.

As a conclusion, from 2015 to 2023, Italy experienced stable growth in renewable energy, with solar energy leading the expansion while wind energy maintained steady development. The overall increase in renewable capacity underscores the country's progress toward a sustainable energy transition.

4.3 China

China has implemented a dual mechanism combining Green Electricity Certificates (GECs) with electricity market prices to stimulate renewable energy investments and reduce dependence on fossil fuels. Introduced in 2017 and expanded in 2024, the GEC system serves as a tradable instrument certifying the generation of renewable electricity, with each certificate

representing one megawatt-hour (MWh) of clean power [19]. This system allows renewable energy producers to sell GECs to consumers or companies aiming to meet sustainability targets, thereby creating an additional revenue stream for green energy projects.

In August 2024, China's National Energy Administration (NEA) issued comprehensive rules governing the issuance and trading of GECs, aiming to standardize the market and enhance its efficiency. These regulations facilitate the integration of GECs into the broader electricity market, where they are traded alongside conventional electricity, allowing for a combined pricing mechanism. The introduction of GECs has led to increased demand and rising prices, reflecting their growing importance in China's clean energy strategy.

Furthermore, China has mandated renewable energy consumption in key industrial sectors, such as steel, cement, and polysilicon production, as well as data centers. These sectors are now required to source a specified percentage of their energy from renewable sources, thereby creating a steady demand for GECs and reinforcing the market's role in promoting clean energy.

This integrated approach not only incentivizes renewable energy production through market-based mechanisms but also aligns with China's broader objectives of reducing carbon emissions and transitioning towards a more sustainable energy system.

Comparative experiences from Italy, Romania, and China illustrate the practical challenges of implementing green certificate schemes. Price volatility has been a recurring issue: in Italy and Romania, oversupply or market saturation led to sudden drops in certificate prices, affecting the profitability of renewable energy projects, while in China, regulatory changes such as the Fer X framework could introduce short-term instability in GEC prices.

Limited effectiveness in emission reduction, or "greenwashing," has also been observed: companies in all three countries have sometimes used certificates to meet regulatory or corporate targets without additional investment in renewable generation. Finally, the costs associated with certificates are often passed to consumers, raising concerns about electricity affordability and social equity. In Italy and Romania, tariff increases affected households and smaller businesses, whereas in China, GEC costs are mainly reflected in industrial and commercial tariffs.

These experiences highlight the need for carefully designed complementary policies, including monitoring frameworks, consumer protections, and market stabilization mechanisms, to maximize the environmental and economic benefits of green certificate programs.

Tabel 4. The Evolution of Wind and Solar Energy Capacities in China, between 2015 and 2023

Year	Wind Energy (GW)	Solar Energy (GW)	Total Renewable Energy (GW)
2015	145	43	188
2016	160	60	220
2017	175	95	270
2018	190	130	320
2019	210	175	385
2020	220	200	420
2021	240	250	490
2022	265	320	585

Year	Wind Energy (GW)	Solar Energy (GW)	Total Renewable Energy (GW)
2023	290	400	690

Source: Author's elaboration based on data from IRENA (2024), IEA (2024), and Our World in Data (2024).

The table presents the evolution of wind and solar energy capacities in China between 2015 and 2023, alongside the total renewable energy capacity. Over this period, China recorded a remarkable expansion in renewable energy, with total installed capacity rising from 188 GW in 2015 to 690 GW in 2023, more than tripling in less than a decade.

Wind power capacity increased steadily from 145 GW in 2015 to 290 GW in 2023, representing a 100% growth. Although the rate of expansion was moderate compared to solar, wind energy remained a crucial component of China's renewable portfolio, reflecting large-scale investments in both onshore and offshore projects. Solar energy demonstrated the most dynamic growth. Installed capacity rose from just 43 GW in 2015 to 400 GW in 2023—an almost tenfold increase. This rapid expansion underscores China's global leadership in photovoltaic manufacturing, falling solar costs, and strong national policies favoring solar deployment. The combined renewable capacity increased by more than 500 GW between 2015 and 2023. While wind energy contributed significantly, solar energy was the main driver of growth, particularly after 2017, when annual additions accelerated.

Sob Between 2015 and 2023, China achieved unprecedented growth in renewable energy capacity, positioning itself as a global leader in the energy transition. Solar energy emerged as the fastest-growing sector, while wind energy continued to expand steadily, together creating a diversified and robust renewable energy system.

4.4. Lessons Learned from the Implementation of Green Certificate Mechanisms

The experience with green certificate systems provides several important insights relevant for shaping effective renewable energy policies.

One of the key lessons is that maintaining a dynamic balance between renewable energy supply and market demand requires frequent and systematic adjustments of quotas and certificate prices. Fixed quotas or static pricing can lead to either oversupply, which depresses certificate values and undermines investment incentives, or undersupply, which drives up costs for energy consumers. Regular recalibration ensures that market signals remain accurate, promoting consistent growth in renewable energy deployment while preventing market distortions.

Transparent market operations and continuous monitoring are essential for preventing speculative behavior and protecting consumers. Lack of visibility or insufficient regulatory oversight can lead to price manipulation or volatility, reducing the credibility of the certificate system. Implementing clear reporting mechanisms, centralized trading platforms, and independent auditing helps ensure that certificates reflect genuine renewable generation and that the benefits of the system are equitably distributed.

Green certificate schemes achieve their maximum effectiveness when embedded within a comprehensive energy policy strategy. Certificates alone cannot drive the energy transition; their impact is magnified when coordinated with complementary measures such as feed-in tariffs, investment incentives, grid modernization, and long-term de-carbonization targets. Policy integration ensures that the certificates contribute to broader goals, such as achieving national renewable energy targets, enhancing energy security, and reducing greenhouse gas emissions, rather than operating as isolated market instruments.

The lessons learned highlight that successful green certificate systems are not only a matter of market design but also of active policy management. Regular adjustments, transparency, monitoring, and strategic integration into overarching energy policies are all critical to maximizing their effectiveness and accelerating the transition toward sustainable energy systems.

5. CONCLUSIONS

Green certificates have proven to be an effective policy instrument for promoting renewable energy generation. The analysis demonstrates that they play a significant role in diversifying the energy mix, reducing reliance on fossil fuels, and enhancing the economic attractiveness of renewable energy projects. By providing financial incentives linked to the production of clean energy, green certificates encourage both established utilities and new market entrants to invest in technologies such as wind, solar, and biomass, thereby accelerating the overall energy transition [20].

Despite their benefits, the implementation of green certificate systems is not without challenges. Price volatility remains a persistent concern, as fluctuations can affect investor confidence and market stability. Additionally, risks of greenwashing—where certificates are used to claim environmental benefits without corresponding renewable generation—can undermine the credibility of the mechanism. Consumer impact is also a critical consideration, since certificate costs are often partially passed on to end-users.

Addressing these challenges requires flexible and adaptive regulatory frameworks, including regular adjustment of quotas and certificate prices, transparent monitoring mechanisms, and integration with broader energy policies. Effective oversight ensures that certificates reflect genuine renewable generation, maintain market balance, and support long-term sustainability objectives.

In conclusion, while green certificates are not a standalone solution, they are a powerful component of comprehensive renewable energy strategies [21]. When combined with complementary measures such as investment incentives, grid modernization, and long-term de-carbonization goals, they can significantly accelerate the shift toward a sustainable and diversified energy system, simultaneously fostering economic growth, energy security, and environmental protection.

REFERENCES

1. National Energy Regulatory Authority (ANRE). (2025). Estimated average impact of green certificates on end consumers' electricity bills for 2025. https://anre.ro
2. European Commission. (2022). Renewable Energy Directive (RED II) Implementation Report. https://ec.europa.eu/energy
3. https://www.chinadaily.com.cn/a/202503/18/WS67d8de49a310c240449db6cd.html
4. Ragwitz, M., et al. (2007). *The impact of green certificates on renewable energy investments: Evidence from European markets*. Energy Policy, 35(1), 247–257. https://doi.org/10.1016/j.enpol.2005.11.022
5. del Río, P., & Linares, P. (2014). *Back to the future? Rethinking the policy mix for promoting renewable electricity in Europe*. Energy Policy, 69, 234–247. https://doi.org/10.1016/j.enpol.2014.02.025
6. European Commission. (2019). *Renewable energy financing and investment: Green certificates and quota obligations*. Brussels: European Union. Retrieved from https://ec.europa.eu/energy

7. del Río, P., & Mir-Artigues, P. (2014). *Support for solar PV deployment in Spain: Some policy lessons*. Renewable and Sustainable Energy Reviews, 37, 393–407. https://doi.org/10.1016/j.rser.2014.05.016
8. Marcantonini, C., & Valero, V. (2017). Renewable energy and CO_2 abatement in Italy. Energy Policy, 106, 600–613. https://doi.org/10.1016/j.enpol.2016.12.029
9. PricePedia. (2024, November 11). The impact of renewable sources on Italian electricity reference price. https://www.pricepedia.it/en/magazine/article/2024/11/11/the-impact-of-renewable-sources-on-the-italian-pun
10. Marcantonini, C., & Valero, V. (2017). Renewable energy and CO_2 abatement in Italy. Energy Policy, 106, 600–613. https://doi.org/10.1016/j.enpol.2016.12.029
11. Corboş, R.-A., Zamfir, A., & Colesca, S. E. (2016). Public policies to support the development of renewable energy in Romania: A review. Renewable and Sustainable Energy Reviews, 58, 87–106. https://doi.org/10.1016/j.rser.2015.12.235
12. Wolf Theiss. (2020, August 3). Romanian Energy Regulatory Authority (ANRE) has set the mandatory quota for the acquisition of green certificates. Retrieved from https://www.wolftheiss.com/insights/romanian-energy-regulatory-authority-anre-has-set-the-mandatory-quota-for-the-acquisition-of-green-certificates/
13. Cleantech Law. (2016, October). Major change in Romania's renewable market. https://cleantechlaw.com/2016/10/major-change-in-romanias-renewable/
14. Eco-Business. (2025, June 25). As prices surge, what next for China's green power certificates? https://www.eco-business.com/news/as-prices-surge-what-next-for-chinas-green-power-certificates/
15. Ecohz. (2024, December 4). How to buy Green Electricity Certificates (GECs) in China. Retrieved from https://www.ecohz.com/blog/buy-gec-china
16. TERNA. (2024). Statistical data and publications: Electricity consumption and generation in Italy (2023–2024). https://www.terna.it
17. Green Forum. (2024, July 18). Renewable energy production in Italy surges 27.3% in 2024.
18. Sensfuß, F., Ragwitz, M., & Genoese, M. (2007). The merit-order effect: A detailed analysis of the price effect of renewable electricity generation on spot market prices in Germany. **Energy Policy**, 36(8), 3076–3084.
19. https://dialogue.earth/en/energy/qa-how-do-chinas-green-energy-certificates-work.
20. World Bank. (2022). Green Certificates and Renewable Energy Policy: Evidence from Europe. https://www.worldbank.org.
21. REN21. (2023). Renewables Global Status Report. https://www.ren21.net
22. Nature Climate Change. (2022). Corporate science-based targets and the risk of greenwashing. https://www.nature.com/articles/s41558-022-01379-5

THE DUAL IMPACT OF ROMANIAN MIGRATION TO ITALY: ECONOMIC BENEFITS AND SOCIAL INTEGRATION CHALLENGES

Ileana MĂRGINEAN[2]
National Institute of Economy, Romanian Academy

Anca CRISTEA[3]
Institute for World Economy, Romanian Academy

Larisa POPA[4]
Romanian Academy, School of Advanced Studies of the Romanian Academy, Doctoral School of Economic Sciences,
National Institute for Economic Research "Costin C. Kirițescu",

ABSTRACT: *This study examines the economic and social dimensions of Romanian migration to Italy, one of the most significant intra-European mobility flows since Romania's accession to the European Union. Drawing on statistical data from ISTAT, Eurostat, the International Organization for Migration (IOM), and the National Bank of Romania, the paper analyzes the dual impact of migration—its economic contributions to the Italian labor market and public finances, and its social implications for migrants' integration and well-being.*

Economically, Romanian migrants play a vital role in sustaining Italy's productivity, particularly in labor-intensive sectors such as construction, agriculture, and care services. Their contributions to taxation and social security, estimated at €4 billion in 2024, underscore their importance to the Italian welfare system. Simultaneously, remittances from Italy—exceeding €3 billion annually—have become a key source of economic stability and local development in Romania.

Socially, the paper highlights persistent integration challenges, including language barriers, cultural adaptation, and experiences of discrimination that affect migrants' participation in host communities. While national and local policies have introduced linguistic, vocational, and legal support programs, their impact remains uneven across regions and social groups.

The findings reveal that Romanian migration to Italy has evolved from temporary labor mobility to a stable transnational system that fosters mutual economic interdependence within the European Union. However, sustainable integration requires policies that balance economic benefits with social inclusion, ensuring that migration remains a catalyst for both growth and cohesion in the European context.

Keywords: *Romanian Migration; Italy; Economic Benefits; Social Integration; Remittances; Labor Market; European Migration*

JEL Classification: *F22; J61; J21; Z13*

---

[2] Research Assistant, ileanamarginean40@gmail.com
[3] Ph.D., Scientific Researcher III, anca.cristea@iem.ro
[4] PhD student, larisa.popa23@yahoo.com

1. INTRODUCTION

Migration represents a multifaceted and dynamic phenomenon that intertwines economic, social, and cultural dimensions, profoundly influencing both sending and receiving countries [1]. Within the European Union, Romanian migration to Italy constitutes one of the most significant and sustained intra-EU mobility flows [2]. This process has reshaped labor markets, affected household income structures, and challenged existing models of social cohesion and integration.

From an economic standpoint, Romanian migrants have contributed substantially to the Italian economy by filling labor shortages in sectors such as agriculture, construction, healthcare, and domestic services [3,4]. The remittances they send home have become an essential component of Romania's economic stability, fostering household consumption, reducing poverty, and stimulating regional development [1,6].

At the same time, migration entails important social implications. Many Romanian migrants face difficulties related to integration, social acceptance, and identity adaptation, often encountering barriers such as discrimination, language challenges, and limited access to public services [3,7]. These experiences influence not only the migrants themselves but also the host communities, which must adapt to increased cultural diversity and the changing dynamics of social interaction.

This paper therefore seeks to analyze the dual impact of Romanian migration to Italy, exploring both the economic advantages generated by labor market participation and remittance flows, and the social integration challenges that arise in the process. By combining these two perspectives, the study aims to provide a comprehensive understanding of how migration contributes to economic growth while simultaneously reshaping patterns of social cohesion within the European context [7,8].

2. MIGRATION TRENDS AND DEMOGRAPHICS

Since Romania's accession to the European Union in 2007, migration to Italy has grown steadily, transforming into one of the most significant patterns of intra-European mobility [2,3]. The lifting of labor restrictions and the consolidation of freedom of movement within the EU facilitated the large-scale relocation of Romanian citizens in search of better employment opportunities and improved living standards. Over time, Romanian nationals have become the largest foreign population residing in Italy, shaping both the demographic composition and the labor dynamics of the host country [4].

Employment among Romanian migrants is predominantly concentrated in labor-intensive and low-skilled sectors such as construction, domestic and care services, agriculture, and manufacturing [3,4]. These fields are often characterized by precarious working conditions, limited job security, and relatively low wages, yet they remain essential to the functioning of the Italian economy, particularly in regions facing labor shortages [5]. Romanian workers have thus filled critical gaps in sectors that are less attractive to local labor forces, contributing significantly to Italy's economic productivity and the sustainability of its welfare system [5,7].

Beyond their economic role, Romanian migrants have also influenced the social and cultural dimensions of Italian society. Their presence has contributed to the diversification of local communities, fostering transnational networks and new cultural interactions, while also highlighting challenges related to integration, social mobility, and recognition [7,8]. The increasing visibility of Romanian communities across Italy reflects not only economic interdependence within the European Union but also broader processes of European integration and identity negotiation that accompany contemporary migration flows [2,3].

Table 1: Romanian Migrants in Italy (2015-2024)

Year	Number of Romanian Migrants	Annual Growth (%)
2015	1,100,000	3.2
2016	1,120,000	1.8
2017	1,150,000	2.7
2018	1,180,000	2.6
2019	1,210,000	2.5
2020	1,200,000	-0.8
2021	1,220,000	1.7
2022	1,250,000	2.5
2023	1,280,000	2.4
2024	1,310,000	2.3

Source: ISTAT Italy (2024)

Table 1 presents the evolution of the Romanian migrant population in Italy, over the period 2015–2024, based on data provided by ISTAT (2024). The figures indicate a steady upward trend in the number of Romanian migrants, reflecting the sustained nature of this intra-European migration flow following Romania's EU accession. Between 2015 and 2019, the Romanian migrant population increased from approximately 1.1 million to 1.21 million, representing an overall growth of around 10% in five years. Annual growth rates fluctuated modestly between 1.8% and 3.2%, suggesting a phase of consolidation and gradual expansion rather than rapid migration surges. This steady increase can be associated with favorable labor market conditions in Italy, continued demand for foreign labor in low-skilled sectors, and established migrant networks that facilitated new arrivals.

The year 2020 marks a significant deviation from this upward trajectory, with a 0.8% decline in the Romanian migrant population. This contraction is likely linked to the COVID-19 pandemic, which disrupted international mobility, led to temporary job losses, and prompted some migrants to return to Romania. Despite this short-term setback, the data show a quick recovery beginning in 2021, with subsequent annual growth rates ranging from 1.7% to 2.5%, signaling the resilience of the Romanian diaspora and the enduring structural demand for migrant labor in Italy.

By 2024, the number of Romanian migrants reached approximately 1.31 million, the highest figure recorded in the observed period. This continued growth underscores the stability and permanence of the Romanian community in Italy, which now represents a well-established component of the country's social and economic fabric. The consistent post-2021 growth also reflects post-pandemic economic recovery, normalization of mobility patterns, and possibly new migration strategies oriented toward long-term settlement rather than temporary labor migration.

Overall, the data reveal that Romanian migration to Italy has evolved from a temporary labor movement into a stable migratory system, characterized by gradual demographic consolidation and increasing social integration. The persistence of positive growth rates, even in the face of global disruptions, highlights both the structural dependence of the Italian labor market on migrant labor and the transnational resilience of Romanian communities within the EU context.

3. ECONOMIC BENEFITS

3.1 Labor Market Contributions

Romanian migrants represent a key component of the Italian labor market, particularly in sectors facing persistent labor shortages and a declining domestic workforce [3,4]. Since Romania's accession to the European Union in 2007, the removal of labor mobility barriers has facilitated a steady inflow of Romanian workers who have filled essential roles in the Italian economy [2,3].

A significant share of Romanian migrants is employed in labor-intensive and low-skilled sectors, which are generally less attractive to Italian nationals. According to ISTAT data, approximately 35% of Romanian migrants work in construction, 25% in domestic and care services, 20% in agriculture, and the remaining 20% across manufacturing, hospitality, and logistics [4,5]. These occupations are crucial to Italy's economic structure, ensuring the continuity of vital services and production cycles that might otherwise face disruption due to labor shortages.

Romanian workers have thus contributed to enhancing Italy's overall productivity and economic stability [3,5]. In construction, they support urban expansion and infrastructure renewal, while in domestic and care services, their presence is essential in assisting Italy's aging population and maintaining the functionality of private households [3,7]. In agriculture—particularly in southern regions—their participation sustains seasonal production and export capacity, demonstrating their indispensable role in the agri-food chain [8].

Beyond these quantitative aspects, Romanian migrants also have a qualitative impact, offering a flexible and reliable workforce that supports competitiveness and mitigates demographic decline [5,7]. Their involvement strengthens public finances through tax and social security payments, reflecting a broader European trend of economic interdependence where labor mobility fosters both national growth and regional cohesion [2,3,8].

In conclusion, Romanian migration has transitioned from a temporary labor phenomenon to a structural component of Italy's workforce, characterized by long-term settlement, occupational diversification, and socioeconomic integration [5,8].

3.2 Fiscal Contributions

Romanian migrants make a substantial fiscal contribution to the Italian economy through taxes, social security, and indirect revenues [3,5]. Despite concentration in low- and medium-skilled sectors, the aggregate fiscal impact of Romanian workers remains positive, driven by their participation in formal employment and low dependency on welfare benefits [3,9].

Data from ISTAT and IOM indicate that Romanian migrants contribute significantly to Italy's pension and social protection systems via the *Istituto Nazionale della Previdenza Sociale* (INPS) [4,5]. These contributions help offset demographic pressures associated with population aging and declining birth rates, ensuring the sustainability of Italy's welfare framework [5,9].

Additionally, Romanian migrants pay income taxes and value-added taxes (VAT), generating fiscal revenues that benefit both national and local budgets [5,6]. Their role as taxpayers highlights their integration into Italy's formal economy, while their indirect contributions through consumption support local businesses, particularly in regions with high migrant concentrations [7,8].

Table 2: Estimated Fiscal Contribution of Romanian Migrants in Italy (2024, million EUR)

Category	Amount (EUR million)
Income Tax	1,200
Social Security	2,000
VAT and Other Taxes	800
Total Contribution	4,000

Source: Italian Ministry of Economy (2024)

Table 2 provides an overview of the **estimated fiscal contributions of Romanian migrants in Italy for the year 2024**, based on data from the **Italian Ministry of Economy (2024)**. The figures highlight the **substantial and multifaceted role** played by Romanian workers in supporting Italy's public finances and welfare systems.

According to the data, Romanian migrants contributed an estimated **€4 billion** to the Italian economy in 2024 through various fiscal channels. The largest share of this amount stems from **social security payments**, totaling approximately **€2 billion**, which represents **50%** of the overall fiscal contribution. These payments include mandatory contributions to Italy's national pension and healthcare systems (INPS and INAIL), underscoring the importance of migrant labor in sustaining the **long-term financial balance** of Italy's welfare institutions. In the context of an aging population and a shrinking domestic labor force, such contributions are critical for maintaining the viability of social protection mechanisms [5,6].

The second major category is **income tax**, amounting to **€1.2 billion**, or roughly **30%** of the total contribution. This reflects the significant share of Romanian migrants employed under formal labor contracts, particularly in construction, manufacturing, and care services. Despite the prevalence of low- to medium-wage employment among migrants, the aggregate income tax contribution illustrates their **integration into the formal economy** and their role as consistent taxpayers [4].

Furthermore, **VAT and other indirect taxes** contribute an additional **€800 million**, equivalent to **20%** of the total fiscal input. This category encompasses taxes generated through everyday consumption, housing, transportation, and other services used by migrant households. It demonstrates that Romanian migrants contribute not only through labor-based taxation but also as active **participants in domestic demand**, sustaining local economies and small businesses in areas with high migrant populations [8].

Taken together, these figures confirm that the **net fiscal impact of Romanian migration is positive**, contradicting common misconceptions that migrants are a burden on host countries' welfare systems. The scale and structure of contributions show that Romanian workers, while concentrated in lower-income sectors, make **disproportionately high contributions relative to their access to social benefits** [5].This finding aligns with broader European evidence indicating that intra-EU migrants are generally net contributors to public finances [2].

In conclusion, the 2024 fiscal data underscore the **economic indispensability of Romanian migrants in Italy**. Their contributions help offset demographic and fiscal imbalances, stabilize the pension system, and strengthen the sustainability of Italy's welfare state. Beyond their quantitative impact, these fiscal flows reflect a deeper process of **economic integration and mutual benefit** within the European Union, where labor mobility enhances not only individual livelihoods but also collective fiscal resilience.

3.3 Remittances

Remittances represent one of the most tangible and sustained economic links between Romanian migrants in Italy and their families in the country of origin. These monetary transfers have become a **critical component of Romania's macroeconomic stability**, influencing household consumption, poverty reduction, and local development. According to the National Bank of Romania and the International Organization for Migration [3], Italy has consistently ranked among the **top sources of remittance inflows** to Romania since 2007, accounting for a substantial share of total remittances received annually.

At the **household level**, remittances serve multiple purposes that directly improve living standards and social well-being. A significant portion of these funds is directed toward **basic consumption needs**—such as food, clothing, and daily expenses—which helps stabilize family income and reduces vulnerability to economic shocks [8]. Another important share is allocated to **education and healthcare**, enabling families to invest in the long-term human capital of younger generations and improve access to quality medical services. In many rural areas of Romania, where public infrastructure and income opportunities remain limited, remittances are often the **primary source of disposable income**, offering a social safety net in the absence of robust state support [7].

In addition to covering immediate needs, remittances also contribute to **housing improvements and small-scale investments**. Many migrants use their savings to build or renovate family homes, purchase agricultural land, or establish micro-enterprises in construction, retail, or local services. These investments have generated **localized economic multipliers**, stimulating demand for goods, labor, and services within rural communities [2]. Over time, such activities contribute to **regional economic diversification**, although their impact varies depending on local governance and infrastructure conditions [4].

From a **macroeconomic perspective**, remittances have played an essential countercyclical role in Romania's economy, particularly during periods of domestic economic instability or external crises. For instance, following the 2008 financial downturn and the COVID-19 pandemic, remittance flows helped sustain private consumption and mitigate the social effects of unemployment [3]. In 2024, remittances from Italy to Romania were estimated to exceed **€3 billion**, highlighting their enduring relevance as a source of financial resilience [2].

However, while the economic benefits are clear, scholars have also noted that **dependence on remittances may reinforce structural inequalities** between migrant and non-migrant households, and may contribute to labor shortages in certain Romanian regions[7,8].This dual effect underscores the complexity of remittances as both a tool for empowerment and a factor influencing long-term socioeconomic dynamics.

In summary, remittances from Romanian migrants in Italy play a **multidimensional role**—alleviating poverty, improving living standards, and supporting education and health, while also stimulating investment and local entrepreneurship. They represent not only financial transfers but also a **form of transnational engagement** that reinforces family bonds and contributes to Romania's ongoing social and economic transformation within the broader European context.

Table 3: Remittance Allocation in Romania (2024, %)

Category	Share (%)
Consumption	55
Education	15

Category	Share (%)
Healthcare	10
Housing	15
Investment	5

Source: National Bank of Romania (2024)

Table 3 presents the **distribution of remittances received by Romanian households in 2024**, based on data from the **National Bank of Romania (2024)**. The figures illustrate the **multifunctional role** of remittances in shaping household behavior, social welfare, and local development. They provide valuable insight into how financial transfers from abroad—particularly from Italy, one of Romania's main remittance sources—are utilized within the domestic economy.

The largest portion of remittances, approximately **55%**, is allocated to **consumption expenditures**, encompassing food, clothing, utilities, and other daily necessities. This dominant share reflects the immediate economic role of remittances as a **stabilizing mechanism for household income**, especially in rural and economically disadvantaged areas [7,8]. By supplementing limited domestic earnings, remittances help maintain a minimum standard of living and reduce income inequality between migrant and non-migrant families.

A further **15%** of remittances is directed toward **education**, highlighting migrants' commitment to improving the long-term human capital of their families. Funds are typically spent on tuition fees, school supplies, and higher education expenses, particularly for children and young adults. This allocation underscores the **intergenerational impact** of migration, as financial resources earned abroad translate into better educational attainment and skill development at home [2].

Another **10%** is devoted to **healthcare**, covering medical treatments, insurance, and medication. This category is particularly relevant in the Romanian context, where disparities in access to public healthcare remain significant, especially in rural regions. Remittances thus serve as a **private substitute for insufficient public welfare**, enabling families to secure health services that might otherwise be inaccessible [3].

The share assigned to **housing**, representing **15%** of total remittances, indicates the importance of migration as a driver of physical and social mobility. Many return migrants and their families invest in the **construction, renovation, or purchase of homes**, both as a means of improving living conditions and as a symbol of social status and permanence. These expenditures generate secondary economic effects, such as increased demand in the construction and materials sectors, thereby **stimulating local economies** [4].

Finally, **5% of remittances** are allocated to **investment activities**, including small businesses, agriculture, or other income-generating projects. Although this is the smallest share, it represents an **emerging trend toward productive remittance use**, particularly among second-generation migrants or returnees with entrepreneurial experience acquired abroad. However, the limited proportion suggests that the **transformative potential of remittances** for long-term development remains underutilized, due to structural barriers such as bureaucratic constraints, limited financial literacy, and insufficient local infrastructure [8].

Overall, the data reveal that remittances play a **predominantly consumption-oriented role** in Romania's economy, but also contribute to the accumulation of human capital, improved living standards, and incremental local investments. The pattern of allocation underscores the **dual function** of remittances: as a **short-term poverty alleviation mechanism** and as a **potential catalyst for development**, depending on the socioeconomic context and the institutional capacity to channel funds productively [3,7].

3.4. Cultural and Language Barriers

Despite their significant economic contributions, Romanian migrants in Italy face multiple **social integration challenges**, with language proficiency and cultural adaptation among the most prominent obstacles. Limited knowledge of Italian often hinders migrants' ability to access essential public services, such as healthcare, education, and legal assistance, as well as to navigate bureaucratic procedures required for residence permits, taxation, and social benefits [2,7].

Language barriers also impact **employment opportunities and career advancement.** While many Romanians are employed in sectors that do not require advanced Italian proficiency, such as construction, domestic work, and agriculture, those seeking better-paying or skilled positions often encounter difficulties in communication, professional networking, and vocational training. Consequently, limited language skills can **perpetuate occupational segregation,** confining migrants to low-skilled jobs despite their potential for broader labor market participation [8].

Cultural adaptation represents a parallel challenge. Differences in social norms, values, and expectations can affect **interpersonal relationships, workplace integration, and community participation.** Romanian migrants may experience feelings of social exclusion, isolation, or discrimination, particularly in areas with limited exposure to foreign communities. These experiences can hinder the development of trust and reciprocal relationships between migrants and host communities, thereby slowing the process of social cohesion [2].

Accessing social services presents another layer of difficulty. Migrants may be unaware of available resources or face bureaucratic and linguistic obstacles when seeking healthcare, housing assistance, or educational support for their children. These barriers can exacerbate **socioeconomic vulnerabilities** and limit the effectiveness of public policies aimed at facilitating integration ([3].

In response, various integration initiatives have been implemented at both local and national levels. Language courses, cultural orientation programs, and community-based support networks aim to **enhance migrants' social participation and mobility**, reduce discrimination, and foster intercultural understanding. However, the effectiveness of such programs varies, often depending on local resources, administrative capacity, and migrants' own engagement [7,8].

In summary, while Romanian migrants in Italy demonstrate strong economic adaptability, **cultural and language barriers remain central challenges to full social integration.** Addressing these obstacles is critical not only for the well-being of migrants but also for promoting inclusive communities, mutual understanding, and long-term social cohesion within Italian society [2].

3.5. Discrimination and Social Exclusion

In addition to linguistic, cultural, and structural barriers, **Romanian migrants in Italy frequently face social discrimination and exclusion**, which can significantly impede their integration and overall well-being. Reports and studies indicate that stereotypes and negative perceptions about migrant populations—such as assumptions regarding work ethic, social behavior, or cultural values—persist in both urban and rural contexts [3,7]. These prejudices can manifest in subtle or overt forms, including limited access to employment opportunities, unequal treatment in public services, or exclusion from local decision-making processes.

Discrimination has a **direct impact on migrants' mental health, social participation, and economic mobility**. Experiences of social exclusion, whether through marginalization in workplaces, neighborhoods, or educational institutions, can generate feelings of isolation,

stress, and insecurity. For Romanian migrants, particularly those employed in low-skilled sectors, discrimination may reinforce occupational segregation, confining them to precarious or informal employment despite their skills and qualifications [8].

Social exclusion also undermines **community cohesion**. When migrant groups are perceived as outsiders or are limited in their participation in civic life, trust between communities erodes, and mutual understanding is hindered. This dynamic can exacerbate social tensions and reinforce barriers to intercultural dialogue, affecting both migrants and host society members [2]. For instance, children of Romanian migrants may face stigmatization in schools, limiting their educational outcomes and social integration, while adults may encounter barriers in accessing cultural, recreational, or political participation opportunities.

Policy responses to discrimination and exclusion have been implemented at multiple levels. Local governments, NGOs, and community organizations provide programs aimed at **promoting inclusivity, intercultural dialogue, and anti-discrimination awareness**, such as language courses, mentorship programs, and cultural events. However, the **effectiveness of these interventions varies**, often constrained by limited resources, inconsistent enforcement of anti-discrimination laws, and persistent societal biases [3,7].

In conclusion, discrimination and social exclusion remain **critical challenges** for the social integration of Romanian migrants in Italy. Addressing these issues is essential not only for protecting migrants' rights and well-being but also for fostering **social cohesion, mutual trust, and sustainable community development**. Comprehensive integration strategies that combine legal protections, educational initiatives, and intercultural engagement are required to reduce prejudice, enhance participation, and create inclusive environments where migrants and host communities can thrive together [2,8].

Table 4: Experiences of Social Discrimination and Participation among Romanian Migrants in Italy (2024)

Indicator	Percentage (%)	Source
Reported experience of discrimination at work	18	IOM, 2023
Reported experience of discrimination in housing	12	IOM, 2023
Limited participation in local community activities	25	Eurostat, 2024
Limited access to public services due to language/cultural barriers	30	ISTAT, 2024
Participation in migrant associations or networks	40	Sandu, 2020

Source: Compiled from IOM (2023), Eurostat (2024), ISTAT (2024), and Sandu (2020).

This table has been included in the study to support the sections addressing **discrimination, cultural barriers, and social integration**, providing concrete data for academic analysis. Approximately **18% of migrants report experiencing discrimination in the workplace**, which may limit their professional mobility and economic integration. With regard to housing, **12% have encountered difficulties** due to prejudice or language barriers. **About 25% report limited participation in local community activities,** suggesting a low degree of social integration. **Access to public services is affected for 30% of migrants**, primarily due to language difficulties or a lack of understanding of bureaucratic procedures. In contrast, **40% participate in migrant associations or community networks**, highlighting the role of social networks as mechanisms of support and integration.

4. POLICY AND INSTITUTIONAL SUPPORT

Effective social integration of Romanian migrants in Italy depends not only on individual adaptability but also on **policy frameworks and institutional support** designed to facilitate inclusion. Italian authorities, in cooperation with non-governmental organizations (NGOs) and European Union initiatives, have implemented a variety of programs aimed at improving migrants' **linguistic skills, vocational capabilities, and legal awareness** [3,8].

Language courses constitute one of the core components of integration policy. These programs aim to enhance migrants' **Italian proficiency**, enabling them to access public services, engage in formal employment, and participate more fully in social and civic life. Evidence suggests that migrants who attend structured language courses experience **faster integration and greater labor market mobility**, particularly when combined with vocational training [7].

Vocational training and skills development programs are also critical. These initiatives target both entry-level employment and skill upgrading, supporting migrants' adaptation to sectoral labor demands such as construction, domestic care, agriculture, and manufacturing. By aligning training with labor market needs, these programs improve **employability, income potential, and job stability**, while simultaneously addressing sectoral labor shortages in Italy [4,8].

Legal aid and social assistance programs aim to protect migrants' rights, facilitate access to healthcare, housing, and education, and support procedural navigation for residency permits, taxation, and employment contracts. Such services are essential in reducing bureaucratic obstacles and safeguarding migrant well-being, particularly for vulnerable groups such as women, children, and irregular workers [3].

Despite these measures, **gaps remain in reaching all migrant populations effectively**. Language and cultural barriers, geographic dispersion, limited awareness of available programs, and insufficient funding can reduce program accessibility and impact. Additionally, certain subgroups—such as undocumented migrants or those employed in informal sectors—are less likely to benefit from formal support structures, reinforcing social and economic disparities [2,7].

To enhance the effectiveness of integration policies, scholars and policymakers emphasize the importance of **comprehensive, multi-level strategies** that combine language training, vocational education, legal support, and community engagement. Collaboration between central and local governments, NGOs, migrant associations, and employers can create **inclusive and sustainable pathways for integration**, addressing both immediate needs and long-term social cohesion objectives [8].

In conclusion, while Italy has developed a range of **institutional supports and policy interventions** to facilitate the integration of Romanian migrants, significant challenges remain. Closing gaps in coverage, improving program accessibility, and fostering collaboration among stakeholders are essential steps to ensure that all migrant populations can fully participate in social, economic, and civic life, thereby strengthening both individual well-being and societal cohesion [2,3].

5. POLICY IMPLICATIONS

Policies aimed at managing Romanian migration to Italy should strike a balance between economic efficiency and social cohesion. The integration of migrants must be viewed not merely as a labor market issue but as a multidimensional process encompassing education, language acquisition, community participation, and long-term inclusion [3,5,7].

First, governments should facilitate labor market integration through policies that promote fair employment practices, recognition of professional qualifications, and access to vocational training programs. Such measures enhance migrants' productivity and reduce occupational segregation in low-skilled sectors [3,4,5]. Collaboration between Italian and Romanian institutions could further improve labor matching mechanisms and promote circular migration schemes beneficial to both economies [2,3].

Second, it is essential to expand language and cultural programs designed to foster intercultural understanding and civic engagement. As studies indicate, linguistic barriers remain one of the most significant obstacles to full participation in Italian society [7,8]. Strengthening language instruction and cultural orientation initiatives would accelerate integration, reduce social isolation, and enhance migrants' sense of belonging [3,5,7].

Third, encouraging migrant participation in community activities is crucial for building trust and mutual understanding. Community-based organizations and migrant associations serve as vital platforms for cultural exchange, representation, and advocacy [7,8]. Supporting these structures through funding and local partnerships can improve migrants' visibility and influence in civic life, mitigating discrimination and exclusion [3,7,8].

Finally, supporting the productive investment of remittances offers a means of transforming migration into a catalyst for sustainable development. Remittance flows from Italy remain one of Romania's most stable financial inflows, exceeding €3 billion annually [6,9]. Policies encouraging the channeling of these funds toward entrepreneurship, education, and regional development would enhance their developmental impact and reduce economic disparities between regions [1,6,9].

Overall, the implementation of such integrated policy measures would reinforce both the economic and social dimensions of migration, ensuring that mobility functions as a source of shared prosperity and resilience within the European Union [2,3,5,7,9].

6. CONCLUSIONS

Romanian migration to Italy generates substantial economic benefits for both countries, contributing significantly to labor market stability, fiscal revenues, and cross-border financial flows [3,4,5]. Romanian migrants fill critical labor shortages in key sectors such as construction, agriculture, manufacturing, and domestic care services, ensuring the continuity of production cycles and supporting Italy's aging population [3,4,7]. Their participation enhances economic productivity, sustains the welfare system through tax and social security payments, and strengthens the overall competitiveness of the Italian economy [5,9].

At the same time, remittances sent by Romanian migrants represent a vital source of income for households in Romania, exceeding €3 billion annually [6,9]. These funds reduce poverty, stimulate local consumption, and foster investment in education, housing, and small enterprises [1,6]. In macroeconomic terms, remittances have a countercyclical effect, stabilizing Romania's economy during crises and contributing to long-term development [6,9].

However, despite these tangible economic benefits, social integration challenges persist. Many Romanian migrants face difficulties in cultural adaptation, language acquisition, and overcoming discriminatory attitudes in host communities [3,7,8]. These obstacles limit their social participation, restrict upward mobility, and create barriers to achieving full inclusion in Italian society [7,8]. Discrimination in employment and housing, coupled with limited access to public services, undermines the potential for migrants to fully contribute to and benefit from European integration [3,7].

Addressing these challenges requires coordinated policies that balance economic and social objectives. Expanding language and cultural programs, enhancing legal protection, and fostering community engagement can promote social cohesion and equality [3,5,7,8].

Moreover, encouraging productive investment of remittances can transform migration into a sustainable development mechanism that benefits both sending and receiving countries [1,6,9].

As a last conclusion, Romanian migration to Italy embodies both an economic opportunity and a social responsibility. By addressing integration barriers and reinforcing cooperation between national and European institutions, migration can evolve into a long-term driver of shared growth, stability, and solidarity within the European Union [2,3,5,7,9].

REFERENCES

1. Anghel RG, Munteanu S. The role of remittances in the Romanian economy. Romanian Economic Journal. 2020;23(77):101–120.
2. Eurostat. Employment and mobility of EU citizens in Italy. Luxembourg: Publications Office of the European Union; 2024. Available from: https://ec.europa.eu/eurostat
3. International Organization for Migration (IOM). Migration in Italy: Country profile 2023. Geneva: IOM; 2023. Available from: https://www.iom.int
4. Istituto Nazionale di Statistica (ISTAT). Foreign residents by citizenship and labour sector in Italy, 2024. Rome: ISTAT; 2024. Available from: https://www.istat.it
5. Italian Ministry of Economy. Fiscal impact of foreign workers in Italy: 2024 report. Rome: Department of Finance; 2024. Available from: https://www.mef.gov.it
6. National Bank of Romania. Remittances and household financial behavior: Annual report 2024. Bucharest: NBR; 2024. Available from: https://www.bnr.ro
7. Sandu D. Romanian migration within the European Union: Patterns, networks, and impacts. Journal of Ethnic and Migration Studies. 2020;46(4):655–672. doi:10.1080/1369183X.2020.1719432
8. Țoc S. Labour migration and social change in Romania: Patterns of adaptation in Italy and Spain. Central and Eastern European Migration Review. 2022;11(1):45–62. doi:10.17467/ceemr.2022.03
9. World Bank. Migration and remittances data. Washington, DC: World Bank; 2024. Available from: https://www.worldbank.org

THE PHENOMENON OF DEMOGRAPHIC AGEING AT THE NATIONAL LEVEL AND THE BIG CITIES OF ROMANIA

Brînduşa Mihaela RADU[5]
Institute for Economic Forecasting-INCE, Romanian Academy,
Athenaeum University of Bucharest

ABSTRACT: *A particular case of the evolution of population aging at a global level is represented by the developments in Central and Eastern Europe where a brutal decline in fertility is recorded as a result of the economic and political changes that followed the fall of the communist regimes.*

Romania is part of this general picture, facing demographic changes that have medium and long-term implications. The country's population decreased between 1990 and 2024, by approximately one million people and continues to decline constantly. This trend is determined on the one hand by low fertility, but also by high external migration.

In the long term, a negative factor on the demographic evolution in Romania is the emigration of the female population of childbearing age, and in the short and medium term, the large influx of young workers contributes to the aging of the workforce, reducing the size of the active population and the number of contributors to social assistance budgets and thus increasing the pressure on social security expenditures.

The paper aims to analyse the evolution, size and structure of the demographic phenomenon in metropolitan areas in Romania.

Keywords: *metropolitan area, population aging, aging factors*

JEL Classification: *H70, H83, J10, J11,*

1. INTRODUCTION

Romania has experienced significant changes in the population structure in recent decades. The specific component of Romania, which had and continues to have the greatest negative impact on social and economic levels, was due to political decisions during the communist period that strongly influenced the evolution of demographic phenomena, especially the birth rate.

The transformations that occurred after 1989 in the political system, in the economy and in social life produced changes in the demographic behaviour of the population. Starting from 1990, the population of Romania has decreased constantly, from 22,810,035 inhabitants at the 1992 census, to 19,053,815 inhabitants at the 2021 census. This decrease was due mostly to the negative natural increase of the population, as a result of the decrease in fertility and the low birth rate per 1,000 inhabitants. The birth rate decreased from 13.6‰ in 1990 to 6.8‰ in

[5] Associate Prof. PhD. Scientific Researcher III, e-mail: bmradu@yahoo.com

2024, while the death rate increased from 10.6‰ (1990) to 11.2‰ (2024)[6]. From the analysis of statistical data, it can be said that compared to 1990, in January 2024, the share of the young population (0-14 years old) decreased from 23.7% to 16.1% and the share of the elderly (65 years old and over) increased from 10.3% to 19.6%[7].

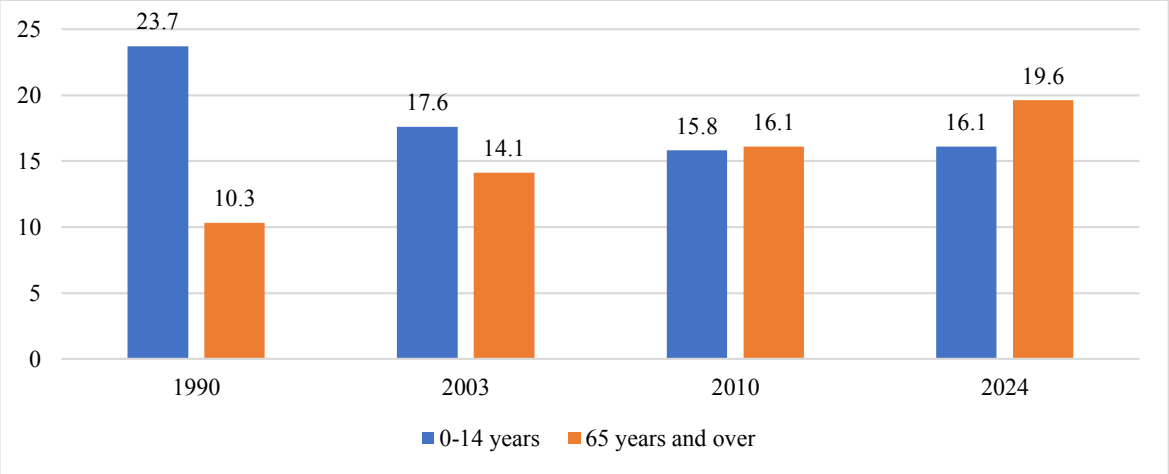
On July 1, 2024, the population of Romania was 19,055,961 thousand inhabitants. The female population, 9,796,206 thousand people, represented 51.4% of the country's population, and the male population, 9,271,370 thousand people, respectively, 48.6%.

Intensive emigration, the decrease in birth rate and the increase in mortality have led to a natural population deficit, which is even older than 25 years ago. The population over 65 years old represents 19.6% of the total population on July 1, 2024.

The deterioration of Romania's demography in the 1990s and in the early years of the 21st century is determined by multiple causes, being the direct or indirect product of the entire political, economic and social context of the transition. The economic factor has its role, but the contribution of other factors, of a non-economic nature, with independent, objective action or shaped by the new economic and social realities of Romanian society, cannot be omitted or underestimated.

The population of Romania has "aged" at an accelerated pace after 1990, taking into account the pace of the process and its mechanisms, it can be stated that in just a few years the population of Romania will be demographically older than that of developed countries. Romania is part of a demographically sick, aging Europe, with a population that no longer ensures its own replacement, through voluntary subfertility and which is not far from the onset of generalized demographic decline.

Figure 1 Evolution of the share of the population aged 0-14 compared to that of over 65 in Romania, during the period 1990-2024



Source: Own calculations based on TEMPO-online Database, http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table

During the period 1990–2024, the population of Romania decreased by 4,143,819 thousand people (from 23,211,395 thousand people on 1 January 1990, to 19,067,576 thousand

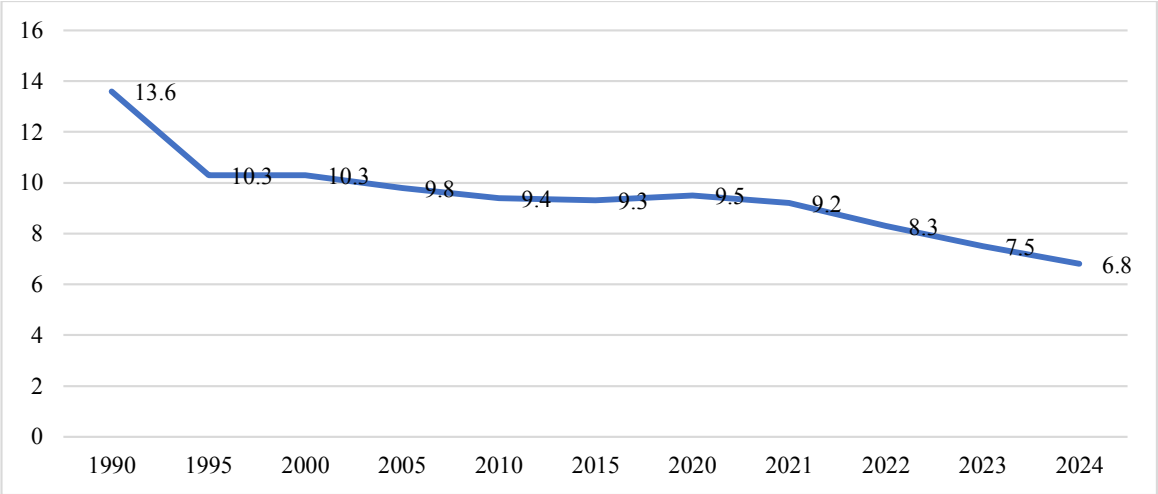
[6] According to INSSE, TEMPO-online Database, http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table

[7] Own calculations on the TEMPO-online Database, http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table

people on 1 January 2024)[8]. Also, in Romania, the demographic aging process has intensified in the last decade. While in 2024, the total population was about 17.9% smaller than in 1990, the share of the population aged 65 and over increased from 10.3% to 19.6%, in the same period, corroborated with the decrease in the population aged 0-14 from 23.7% to 16.1% (Figure 1). The decline in the number and share of the young population (at the base of the pyramid) and the corresponding increase in the elderly population constitute the most striking shift in the structure of the Romanian population in the last 25 years. Demographic aging, complemented by the low birth rate, will produce some of the most severe effects on the future size and structure of the labor force, on the economic dependency ratio and schooling, as well as on the budget and the social security system. The deterioration of demographic phenomena in Romania is characterized by a decrease in the number of live births, an increase in mortality and the registration of a negative natural increase.

The decline in the birth rate plays an important role in the decline of the Romanian population. This negative trend was especially accentuated in the period 1990-1995, with a slight stagnation in the period 1995-2020, in recent years it has been especially accentuated after 2021, reaching a dramatic value of 6.8‰ live births per 1000 inhabitants in 2024 (Figure 2).

Figure 2 Evolution of the birth rate in the period 1990-2024



Source: INSSE, TEMPO-online Database, http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table

The general fertility rate is reduced from 56.2 (live births per 1000 women) in 1990, to 39.3 (live births per 1000 women) in 2024.

The dynamics of Romania's demographic indicators in the last decade is the effect of two processes of a different nature. On the one hand, it is the sudden reaction of the population to a series of previous constraints, which was directly reflected in: i) the severe decrease in the birth rate after 25 years of evolution imposed by force of law, ii) the explosion of external migration in 1990-1991, on the other hand, it is an effect of economic and social changes.

[8] According to INSSE, TEMPO-online Database, http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table

The general demographic evolution of Romania is also found at the level of its 8 major regions, but the analysis of statistical data also highlights differences, sometimes significant, due to the particularities of the regions.

Thus, in 2024, the North-East development region (with the counties: Bacău, Botoşani, Iaşi, Neamţ, Suceava, Vaslui) had the largest number of inhabitants, with a share of 16.9% in the total population of the country, and the West development region (counties of Arad, Caraş-Severin, Hunedoara, Timiş) was at the other extreme with a share of 8.8% in the country's population[9]. The Bucharest-Ilfov development region is the most urbanized region, the urban population representing over 90% of the total population of the region.

2. THE PHENOMENON OF DEMOGRAPHIC AGING BY AREA OF RESIDENCE

In Romania, the administrative-territorial structure includes a regional level with the 41 counties and the municipality of Bucharest, corresponding to the EU NUTS 3 statistical level, and a local level with 320 cities, of which 103 municipalities and 2862 communes.

On 1 July 2024, 9,896,535 thousand people lived in urban areas, representing over half of the country's population (51.9%).

Of the 3 municipalities and cities, more than 86% have a population of under 50 thousand inhabitants (32.5% of the urban population). The population of cities with over 100 thousand inhabitants, although decreasing, represents 56.0% of the urban population. Bucharest (1,721,784 inhabitants), the capital of the country, has 17.3% of the urban population and 9.1% of the country's population.

According to the latest release of the National Institute of Statistics from 2025, the cities with over 200,000 inhabitants are: Bucharest (2,123,457 inhabitants), Iași (379,010 inhabitants), Cluj Napoca (325,353 inhabitants), Brașov (317,899 inhabitants), Timişoara (296,869 inhabitants), Constanța (295,695 inhabitants), Galați (294,905 inhabitants), Craiova (280,834 inhabitants), Oradea (213,549 inhabitants) and Ploiești (207,886 inhabitants)[10].

According to demographic size, the current system of cities in Romania includes the following categories:

1. Bucharest, with 2,123,457 inhabitants, is a capital city with complex functions;

2. cities with a population of between 200,000 and 400,000 inhabitants: Iași, Cluj Napoca, Brașov, Timișoara, Constanța, Galați, Craiova, Oradea and Ploiești – all of which also have a regional metropolitan function for Romania;

3. cities with a population of between 100,000 and 200,000 inhabitants: Bacău, Brăila, Arad, Pitești, Sibiu, Vaslui, Târgu Mureş, Baia Mare, Buzău, Suceava, Râmnicu Vâlcea, Botoșani, Satu Mare, Piatra-Neamț;

4. cities with a population between 50,000 and 100,000: Drobeta-Turnu Severin, Bistrița, Târgu Jiu, Focșani, Târgoviște, Tulcea, Slatina, Reșița, Alba Iulia, Călărași, Zalău, Hunedoara, Bârlad, Roman, Deva, Giurgiu, Sfântu Gheorghe, Mediaș, Turda – are cities of balance with county and inter-county influence;

5. most cities are small and very small cities with local influence in the territory.

Approximately 9,171,223 thousand people live in rural areas, representing 48.1% of the country's population. The average size of a commune is 3,397 inhabitants. Communes with a

[9] Own calculations on the TEMPO-online Database, http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table

[10] https://insse.ro/cms/, Population by residence on 1 January 2025, at the ATU level

population between 1000 and 5000 inhabitants represent 81.7% of the total number of communes, and their population 68.3% of the rural population.

Studies developed by various bodies, governmental or not, indicate that the majority of Romanians will live in large cities by 2050. This means that large cities will represent the vital space for the majority of Romanians. The quality of their lives will directly depend on the quality and structure of large congested areas called cities: from the restrictions imposed by these areas to the way of life and the opportunities offered for a pleasant life. In a way, large cities constitute societies condensed in a relatively small geographical space. The relationships between various segments of society depend greatly on the physical structure of the city.

People, institutions and businesses in large cities are linked to their partners in large cities around the world. In a way, globalization emerges from such a network of interconnected "global" cities.

Among the problems facing Romanian cities can be listed:

• inherited problems, including: i) large-scale economic activities and low productivity, technologically backward and with a reduced capacity for adaptation, ii) limited orientation of economic activities, iii) unskilled or poorly skilled workforce, iv) centralized public services (facilities) in terms of financing and operation, v) economically inefficient and technically ineffective public services (utilities), in a deplorable state, vi) centralized, ineffective public administration, etc.;

• problems due to the transition process, including: i) the requirements of new economic agents, ii) increased demand for utilities in the context of the slow and uneven improvement of public services, iii) the dramatic situation of local public finances, iv) environmental deterioration, v) lack of experience in the field of urban planning, vi) the absence of an adequate legal framework at the local level;

• social, economic and environmental problems;

• problems concerning the legal and institutional framework;

• problems concerning the physical framework;

• problems related to human, material, financial and technological resources;

• problems regarding urban form.

On urban development under current conditions, a series of pressures appear that can be grouped into i) external pressures, which come from the processes that accompany the globalization of the economy, the establishment and expansion of the European Union, the increasing importance of the knowledge-based economy, the emphasis on competition between regions, the phenomena of international migration and

ii) internal pressures, resulting from processes related to transition, decentralization, regionalization policies, social and economic imbalances and distortions, competition between cities, environmental problems.

The consequences of these pressures are translated into relationships that unite and separate the city from the surrounding area: i) distortions in the demand and supply of land for development, ii) imbalances in economic development, iii) degradation of housing and living conditions, iii) lack of physical accessibility and equipment adequate to new requirements, iv) low level and lack of diversity of services, v) social disruption, decreased living standards and vi) degradation of environmental conditions.

Specialists believe that in order to solve these problems, a development approach at the metropolitan level is necessary. This aims to take over and solve the multiple pressures arising from the change in the economic system, development planning and implementation, distortions and varied needs both in the urban environment and in the adjacent rural areas, in order to structure a development pole in a coherent network at a territorial scale.

Analyzing the evolution of the share of the population aged 0-14 compared to that of over 65 by residence area 2024 compared to 1990 (Table no. 1), we find that the largest

differences were recorded in urban areas: a decrease of -9.3% in the share of the population aged 0-14 in total, corroborated with a +12.8% increase in the share of the population aged 65 and over. In rural areas, these values were much lower: a decrease of -4.3% in the share of the population aged 0-14 in total, corroborated with a +4.8% increase in the share of the population aged 65 and over. This led, at the national level, to: a decrease of -7.6% in the share of the population aged 0-14 in total, corroborated with a +9.3% increase in the share of the population aged 65 and over.

Table no. 1 Evolution of the share of the population aged 0-14 compared to that of over 65 by areas of residence 2024 compared to 1990 - %

	1990	2024	Difference 2024 compared to 1990
TOTAL			
0-14 years	23.7	16.1	-7.6
65 and over	10.3	19.6	9.3
URBAN			
0-14 years	24.8	15.5	-9.3
65 and over	7.7	20.5	12.8
RURAL			
0-14 years	20.6	16.4	-4.3
65 and over	14.7	19.5	4.8

Source: Own calculations based on the TEMPO-online Database, http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table

The analysis of Table no. 1 leads us to the conclusion that the urban environment will have a much faster population aging than the rural environment. At the national level, as a general assessment of the characteristics of the resident population, we mention: its continuous reduction over the past thirty years and the change in its structure across important age groups. If the decrease in the resident population, by over 4.2 million people over the past thirty years, is well known to public opinion, the changes in its distribution across important age groups have long been overlooked.

The demographic phenomena manifested after 1989 have led to an increase in the phenomenon of the aging of the resident population. Thus, during this period, the number of live births has continuously decreased, the registered international migration is characterized by the highest annual flows in the country's history, and life expectancy has increased. Under these conditions, major imbalances have been generated between the three important age groups and the phenomenon of aging of the resident population has intensified.

The causes that led to the aging of the resident population are multiple, of which we specify only a few: the continuous decrease in the birth rate (if in 1989 the number of live births was 369.5 thousand, it decreased in 2022 to 182.1 thousand); the continuous decrease in the share of the young population in the resident population; international migration, generally from the young population; the increase in life expectancy, etc.

There are significant differences between counties in relation to the average age of the resident population. According to the data recorded in the last census, the average age of the population at county level varies between 46.9 years in Teleorman County and 39.0 years in Iași County. It should be noted that the average age of women in Teleorman County is 47.9 years, which is 2.1 years higher than the average age of men in this county. These data show us that in counties where the average age is high, it is difficult to anticipate a recovery of the

resident population in a short or medium period of time. Moreover, in counties where the average age is high, we estimate that in the coming period we will witness a decrease year by year in the number of births and, implicitly, we will witness, in the following years, an increase in imbalances in the distribution of the resident population across the three major age groups.

3. METROPOLITAN DEVELOPMENT IN ROMANIA AND DEMOGRAPHIC AGING IN LARGE CITIES

According to the data, there are officially 22 metropolitan areas in Romania. They were established and have the following composition:

1. Bucharest Metropolitan Area - year of establishment 2016. Composition: Bucharest Municipality, Ilfov County - total population: 2.2 million inhabitants;

2. Alba Iulia Metropolitan Area - year of establishment: 2007. Composition: Alba Iulia and Sebeș Municipalities, Teiuș City; Municipalities: Vințu de Jos, Sântimbru, Ciugud, Ighiu, Galda de Jos, Cricău, Berghin, Meteș - total population: 124,626 inhabitants;

3. Bacau Metropolitan Area - year of establishment: 2007. Composition: Bacau Municipality, Buhuși City, Communes: Berești-Bistrița, Buhoci, Faraoani, Filipești, Gioseni, Hemeiuș, Iteşti, Izvoru Berheciului, Letea Veche, Luizi-Călugăra, Măgura, Mărgineni, Gârleni, Odobești, Prăjești, Sărata, Săucești, Secuieni, Tamași, Blăgești, Horgești and Traian - total population: 241,619 inhabitants;

4. Baia Mare Metropolitan Area - year of establishment: 2006. Composition: Baia Mare Municipality, Cities: Baia Sprie, Cavnic, Seini, Șomcuta Mare and Tăuții Măgherăuș; Municipalities: Cernești, Cicârlău, Coaș, Coltău, Copalnic Mănăștur, Dumbrăvița, Groși, Mireșu Mare, Recea, Remetea Chioarului, Satulung, Săcălășeni and Valea Chioarului - total population: 215,932 inhabitants;

5. Botoșani Metropolitan Area - year of establishment: 2012. Composition: Botoșani Municipality, Bucecea City, Municipalities: Vlădeni, Mihai Eminescu, Roma, Răchiți, Stăuceni, Bălușeni and Curtești - total population: 143,193 inhabitants;

6. Brasov Metropolitan Area - year of establishment: 2006. Composition: Brasov Municipality, Brasov County Council, Săcele and Codlea Municipalities, Cities: Râșnov, Ghimbav, Predeal and Zărnești, Communes: Sânpetru, Hărman, Prejmer, Tărlungeni, Bod, Hălchiu, Cristian, Crizbav, Feldioara, Vulcan and Budila - total population: 410,808 inhabitants;

7. Cluj Napoca Metropolitan Area - year of establishment: 2008. Composition: Cluj Napoca Municipality, Municipalities: Aiton, Apahida, Baciu, Bontida, Borsa, Jucu, Căianu, Chinteni, Ciurila, Cojocna, Feleacu, Florești, Gîrbău, Petreștii de Jos, Tureni, Vultureni, Sânpaul, Săvădisla and Gilău - total population: 418,153 inhabitants;

8. Constanța Metropolitan Area - year of establishment: 2007. Composition: Constanța Municipality, Constanța County Council, Cities: Eforie, Murfatlar, Năvodari, Ovidiu and Techirghiol, Municipalities: 23 August, Agigea, Corbu, Costinești, Cumpăna, Lumina, Mihai Kogălniceanu, Poarta Alba, Tuzla and Valu lui Traian - total population: 434,265 inhabitants;

9. Craiova Metropolitan Area - year of establishment: 2009. Composition: Craiova Municipality, Cities: Filiași and Segarcea, Communes: Almaj, Brădești, Breasta, Bucovăț, Calopăr, Cârcea, Coșoveni, Coțofenii din Față, Ghercești, Işalnița, Malu Mare, Mischii, Murgași, Pielești, Predești, Șimnicu de Sus, Teasc, Terpezita, Țuglui, Vârvoru de Jos and Vela - total population: 356,544 inhabitants;

10. Deva - Hunedoara Metropolitan Area - year of establishment: 2008. Composition: Deva and Hunedoara Municipalities, Hunedoara County Council, Cities: Simeria and Călan, Communes: Băcia, Cârjiți and Pestișu Mic - total population: 149,198 inhabitants;

11. Iași Metropolitan Area - year of establishment: 2004. Composition: Iași Municipality, Iași County Council, Municipalities: Aroneanu, Bîrnova, Ciurea, Holboca, Letcani, Miroslava, Popricani, Rediu, Schitu Duca, Tomești, Ungheni, Valea Lupului and Victoria, Movileni, Comarna, Prisăcani, Țuțora, Mogoșești, Dobrovăț - total population: 403,572 inhabitants;

12. Oradea Metropolitan Area - year of establishment: 2005. Composition: Oradea Municipality, Municipalities: Biharia, Borș, Cetariu, Girișu de Criș, Ineu, Nojorid, Oșorhei, Paleu, Sînmartin, Sîntandrei and Toboliu - total population: 245,537 inhabitants;

13. Pitești Metropolitan Area - year of establishment: 2012. Composition: Argeș County Council, Pitești Municipality, Ștefănești City, Communes: Albota, Bascov, Băbana, Budeasa, Mărăcineni, Micești and Moșoaia - total population: 206,082 inhabitants;

14. Ploiești Metropolitan Area - year of establishment: 2009. Composition: Ploiești Municipality, Prahova County Council, Cities: Băicoi, Boldești Scăieni, Bușteni and Plopeni, Communes: Ariceștii-Rahtivani, Bărcănești, Berceni, Blejoi, Brazi, Bucov, Dumbrăvești, Păulești, Târgșorul Vechi and Valea Călugărească - total population: 336,203 inhabitants;

15. Resita Metropolitan Area - year of establishment: 2013. Composition: Resita Municipality, Bocsa City, Municipalities: Ocna de Fier, Dognecea, Goruia, Târnova, Văliug, Brebu Nou, Lupac and Caraşova - total population: 100,957 inhabitants;

16. Roman Metropolitan Area - year of establishment: 2009. Composition: Roman Municipality, Municipalities: Gherăești, Ruginoasa, Botești, Ion Creangă, Văleni, Poienari, Icușești, Moldoveni, Bahna, Dulcești, Horia, Sagna, Făurei, Pâncești, Boghicea, Bozieni, Doljești, Gâdinți, Oniceni, Secuieni, Valea Ursului, Tămășeni, Bîra and Stănița - total population: 129,507 inhabitants;

17. Satu Mare Metropolitan Area - year of establishment: 2013. Composition: Satu Mare and Carei Municipalities, Cities: Ardud and Tășnad, Communes: Agriș, Apa, Beltiug, Berveni, Căpleni, Craidorolț, Culciu, Doba, Dorolț, Foieni, Gherța Mică, Lazuri, Medieșu Aurit, Micula, Moftin, Odoreu, Orașu Nou, Păulești, Terebești, Turț, Valea Vinului and Viile Satu Mare - total population: 217,403 inhabitants;

18. Suceava Metropolitan Area - year of establishment: 2011. Composition: Suceava Municipality, Salcea City, Municipalities: Adâncata, Bosanci, Ipotești, Mitocu Dragomirnei, Moara, Pătrăuți, Verești, Siminicea, Stroiești, Dumbrăveni, Udești, Hânțești and Dărmănești - total population: 167,095 inhabitants;

19. Timișoara Metropolitan Area - year of establishment: 2008. Composition: Timișoara Municipality, Timiș County, Municipalities: Becicherecu Mic, Bucovăț, Dudeștii Noi, Dumbrăvița, Ghiroda, Giarmata, Giroc, Moșnița nouă, Orțișoara, Pișchia, Remetea Mare, Săcălaz, Sânmihaiu Român and Şag - total population: 387,604 inhabitants;

20. Târgu Mureș Metropolitan Area - year of establishment: 2006. Composition: Târgu-Mureș Municipality, Ungheni City, Communes: Acățari, Ceuașu de Câmpie, Corunca, Crăciunești, Cristești, Ernei, Gheorghe Doja, Livezeni, Pănet, Sâncraiu de Mureș, Sîngeorgiu de Mureș and Sînpaul - total population: 204,158 inhabitants;

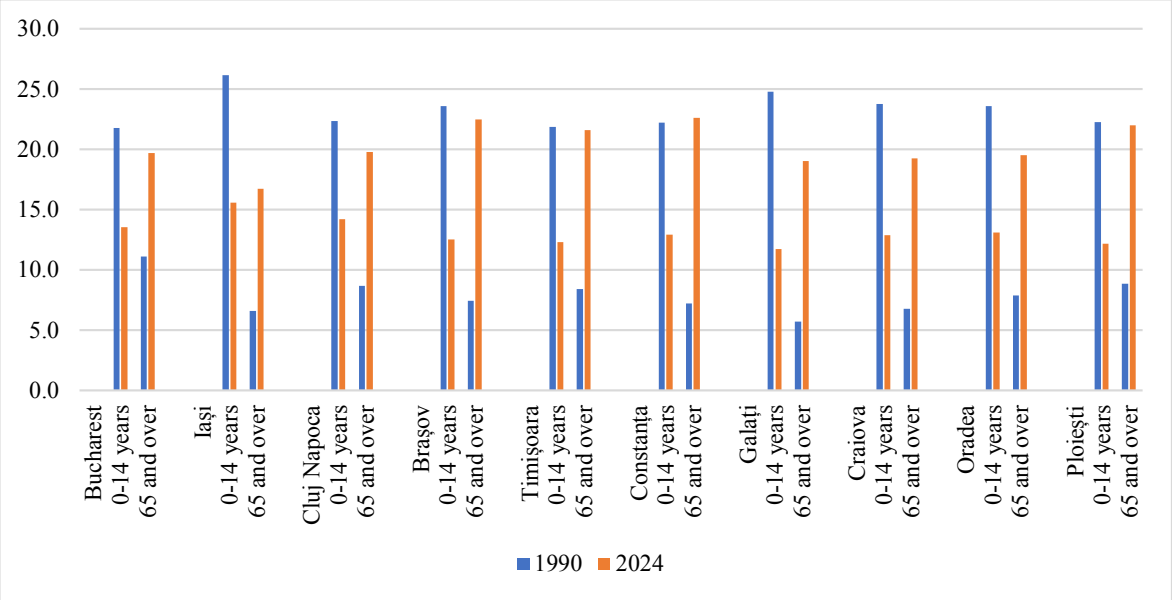
21. Vaslui Metropolitan Area - year of establishment: 2015. Composition: Vaslui Municipality, Vaslui County Council, Communes: Bălteni, Deleşti, Laza, Lipovăț, Muntenii de Jos, Muntenii de Sus, Pușcasi, Ștefan cel Mare, Văleni and Zăpodeni - total population: 86,943 inhabitants;

22. Zalău Metropolitan Area - year of establishment: 2015. Composition: Zalău Municipality, Cities: Cehu Silvaniei, Jibou, Șimleu Silvaniei, Communes: Agrij, Crasna, Creaca, Crișeni, Dobrin, Hida, Meseșenii de Jos, Mirșid, Pericei, Sălățig, Sărmășag, Vârșolț, Hereclean and Bocșa - total population: 133,044 inhabitants.

Next, we will analyze demographic aging and, in particular, the evolution of the population by age group in the 10 cities in Romania whose population exceeds 200,000

inhabitants, namely: Bucharest (2,123,457 inhabitants), Iași (379,010 inhabitants), Cluj Napoca (325,353 inhabitants), Brașov (317,899 inhabitants), Timișoara (296,869 inhabitants), Constanța (295,695 inhabitants), Galați (294,905 inhabitants), Craiova (280,834 inhabitants), Oradea (213,549 inhabitants) and Ploiești (207,886 inhabitants).

Figure 3 Evolution of the share of the population aged 0-14 compared to that of over 65 in Romanian cities with over 200,000 inhabitants, 2024 compared to 1990



Source: Own calculations based on TEMPO-online Database, http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table

Among the 10 large cities, the highest share of the population over 65 years old (in 2024) was found in: Constanța (22.6%), Brașov (22.5%), Ploiești (22.0%) and Timișoara (21.6%), and the lowest share of the population 0-14 years old (in 2024) was found in: Galați (11.6%).

The highest increase in the share of the population 65 years old and over (2024 compared to 1990) was recorded in Constanța, from 7.2% to 22.6% (+15.4%), and the lowest increase in Bucharest, from 11.1% to 19.7% (+8.6%) – (Figure 3). At the same time, the largest decrease in the share of the population aged 0-14 (2024 compared to 1990) was recorded in Galați, from 24.8.2% to 11.7% (-13.1%), and the smallest decrease in Bucharest, from 21.8% to 13.6% (-8.2%) and Cluj Napoca from 22.3% to 14.2% (-8.2%).

4. CONCLUSIONS

In the absence of a policy that encourages fertility growth, Romania's population aging will increase in the next half century. In order for the decrease in mortality not to generate an increase in the share of the elderly, fertility needs to be sufficiently high (over 3 children/woman), a level that current advanced populations can no longer support either from a global demographic point of view (it would generate an unsustainable population growth) or from an individual perspective, of individuals or couples, for whom such a progeny is far beyond current conceptions, values and lifestyles.

A major consequence of population aging is the increase in the cost of elderly health, which puts more financial pressure on the sustainability of the pension system, health and social assistance services. Public health spending also plays an important role in maintaining the

health of the elderly, as well as in the general perception of the population on the health system. Labor productivity is significantly influenced by the demographic aging process and the health conditions of the population. The aging of the population, including the economically active population, correlated with the need for labor, requires a discussion on how to bring into the workforce those human resources formed by the elderly who have the physical and mental capacity necessary to carry out activities in the sectors of the national economy. In the Romanian public space, discussions have long been taking place about the reform of the pension system, the so-called "special pensions" (non-contributory, based on transfers/subsidies from the state budget for their financing), and about raising the retirement age. Obtaining the financing tranches from the National Recovery and Resilience Program (PNRR) is conditioned, among other things, by the reform of special/non-contributory pensions. Recently, the legal framework was outlined so that people of retirement age can opt to continue their professional activity, but without cumulating the pension with the salary obtained in the public sector.

Demographic aging means not only a decrease in fertility, but also an increase in life expectancy by reducing mortality in all age groups. In this sense, sociologist Traian Rotariu said that population aging is not necessarily a negative phenomenon, but can be considered a consequence of human progress: social welfare, economic growth, the development of science and technology, along with increased access of the population to quality health services.

In conclusion, it can be said that, even at the level of Romania's major cities, one of the main causes of population decline is the decrease in birth rates and the increase in mortality. The main causes of the decline in birth rates are considered to be socio-economic. Low income levels, insufficient job opportunities and the difficulty of finding housing are most often cited as reasons why people do not have children. However, the decline in birth rates cannot be fully explained without also taking into account the cultural factor, changes in values and mentalities.

Mortality is the expression of the health status of the population and the state of medical services. Insufficient and unhealthy nutrition, stress, poor health education, poor concern for disease prevention, reduced treatment options, along with environmental pollutants are the main causes of mortality. Regarding infant mortality, Romania continues to be among the European countries with high infant mortality.

REFERENCES

1. Albu L.-L. (2002): *Macroeconomie non-lineară şi prognoză*, Editura Expert, Bucureşti;
2. Alho J., Spencer B.D (2005), *Statistical demography and forecasting*, Springer;
3. Anderson, J. E. (2011). *The gravity model*. Annual Review of Economics, 3, 133–160;
4. Anderson, J. E., & van Wincoop, E. (2003). *Gravity with gravitas: A solution to the border puzzle.* American Economic Review, 93(1), 170–192;
5. Ang, A., Maddaloni, A. (2003) *Do demographic changes affect risk premiums?*, Working Paper 9677, NBER Working Paper Series;
6. Beyer, R. M., Schewe, J., & Lotze-Campen, H. (2022). *Gravity models do not explain, and cannot predict, international migration dynamics*. Humanities and Social Sciences Communications, 9, 56;
7. Bijak, J. et al (2007). *Population and labour force projections for 27 European countries, 2002052: impact of international migration on population ageing,* European Journal of Population, (23) 1, March 2007, 131;

8. Blanchard, P. and Cummings, P. (2015), *Introduction to Differential Equations, retrieved* info from https://courses.edx.org/courses/BUx/Math226;
9. Cai, J., Stoyanov, A. (2016). *Population aging and comparative advantage,* Journal of International Economics, 102, 121;
10. Cameron, M. P. (2018). *Climate change, internal migration, and the future spatial distribution of population: A case study of New Zealand*. Population and Environment, 39, 239–260;
11. Chéron, A., Hairault, J.O., Langot, F. (2013). *LifeCycle Equilibrium Unemployment*, Journal of Labor Economics, 31 (4), 843882;
12. Evgenidis, A.; Papadamou, S.; Siriopoulos, C. (2020), *The yield spread's ability to forecast economic activity: What have we learned after 30 years of studies*? J. Bus. Res;
13. Headey, D., Hodge, A. (2009). *The Effect of Population Growth on Economic Growth: A MetaRegression Analysis of the Macroeconomic Literature*. Population and Development Review, 35 (2), 221248;
14. Lutz W., Sanderson W. & Scherbov S. *Global and regional population ageing: HoW Certain Are We of its dimensions?* Population Ageing, 2008, nr.1, p. 75-97;
15. Lutz, W., Sanderson, W. and Scherbov S. (2010), *The coming acceleration of global population ageing*, Nature, No. 451, pp. 716–719;
16. Maestas, N., Mullen, K., Powell, D. (2016). *The effect of population ageing on economic growth, the labor force and productivity.* National Bureau Of Economic Research, Cambridge, Working Paper no. 22452;
17. Malthus, T. (2000), *An Essay on the Principle of Population, Library of Economics (description),* Liberty Fund, Inc., retrieved from http://www.econlib.org/library/ Malthus/malPopCover.html;
18. Mason Andrew. *Demographic transition and demographic dividends in developed and developing countries. United Nations Expert group meeting on social and economic implications of changing population age structure*. Population Division DESA, Mexico City, Mexico 31 August – 2 September 2005;
19. Nistor L. Ioan (2009), *Prognoza macroeconomică*, Ed. Alma Mater, Cluj-Napoca;
20. RossiHansberg, E., Wright, M.L.J. (2007). *Urban Structure and Growth*. Review Economic Studies, 74, 597–624;
21. Sora V., Hristache I., Mihăescu C., (1996), *Demogragfie şi statistică socială*. − Bucureşti, Editura economică;
22. Walker, A., Maltby, T. (2012). *Active ageing: A strategic polity solution to demographic ageing in European Union*. International Journal of Social Welfare;
23. United Nations (UN). World Population Ageing: 1950-2050. www.un.org/esa/population/publications/ worldageing19502050;
24. INSSE – Proiectarea populației României – la orizontul anului 2060
25. http://ro.wikipedia.org/wiki/Pagina_principal%C4%83;
26. http://www.reuters.com/article/2012/03/29/europe-population-idUSL6E8ER7J420120329?rpc=401;
27. http://www.financiarul.ro/2012/02/17/efectele-imbatranirii-populatiei-una-din-opt-femei-ajunge-sa-munceasca-si-dupa-70-de-ani/;
28. http://www.adevarul.ro/;
29. http://www.zf.ro/;
30. http://www.businessinsider.com/;
31. http://www.insse.ro/cms/rw/pages/index.ro.do;
32. http://www.realitatea.net/avertismentul-sumbru-al-fmi-pentru-intreaga-lume_932295.html.

THE DYNAMICS OF POST-COMMUNIST ROMANIAN FAMILIES IN THE CONTEXT OF LABOUR MARKET CHALLENGES

Cristina Mariana GROZAVU[11],
School of Advanced Studies of the Romanian Academy

Constanța COSTACHE[12]
School of Advanced Studies of the Romanian Academy

Simona Maria STĂNESCU[13]
Research Institute for Quality of Life, Romanian Academy

ABSTRACT: *Within the increased globalised world, labour market configuration is deeply influenced by demographic trends. Starting from the premise that the family, in all its complexity, continues to be a key element of current society, this paper analyses its evolution in post-communist Romania. Consequently, firstly the dynamic configuration of family is analysed from a demographic point of view, while the second part overviews key characteristics of the labour market mainly by places of residence, by age, and by gender. From a methodological point of view, the paper is based on the literature review alongside the secondary analysis of statistical data gathered at European level (Eurostat) as well as domestic one (National Institute of Statistics). The paper supports the development of appropriate sustainable social policies to support the development of families in the current context and challenges of the labour market.*

Keywords: *family, post-communist Romania, marriage, divorce, labour market*

JEL Classification: *E24, J12, J13, J16, J21*

1. INTRODUCTION

Understanding the challenges faced by contemporary Romanian families requires an in-depth analysis of their post-communist evolution. Demographic indicators-based analysis supports this scientific approach doubled by an overview of the labour market also based on statistical relevant key indicators. Compared EU Romania labour market related indicators were included. The first part of the paper looks at what family continue to be in the contemporary society, while the second one is focus on findings related to family dynamics from demographic point of view as well as to the labour market characteristics. Official European Union and domestic statistics were used within the paper. Main conclusions are referred within the last part.

[11] PhD student, cristina.grozavu@iccv.ro
[12] PhD student, tcostache@yahoo.com
[13] PhD habil., Research Professor, Research Institute for Quality of Life, Romanian Academy, simona.stanescu@iccv.ro

2. What is family nowadays?

We start this section by two complementary questions: what is a family, and what is meant by family dynamics? The answer, although seemingly simple, is in fact quite complex, as this question itself serves as a source of inquiry for other topics within the broader subject. Social dynamics from this perspective have been—and continue to be—surprising, although clearly, they are also enduring and adaptive to the era in question. However, in order to study the social behaviour of families—their social, economic, and emotional interactions—it is imperative to ask, first of all, whether the transformation of traditional family dynamics represents a social problem, or rather a new social construct that threatens the equity and social stability of individuals and society as a whole. Although at first glance we might be tempted to affirm, "Yes, this is a social problem," a more detailed analysis reveals that the transformation of the family nucleus (as we have known it through the traditional model) could, in fact, help us answer more precisely targeted questions that may lead to a better understanding of the phenomenon, rather than merely criticizing the process. For instance, we might instead turn our attention to questions such as: what are the historical and social contexts that have led to or continue to lead to the development of family alternatives? what are the causes and effects of the changing family behaviours? To what extent and in what ways are social structures affected by the new configurations of the family unit? What are the social and behavioural consequences of these new alternative family models? What are the adaptive social models toward which the actors involved in this process are moving?

As Goode pointed out, 'the family is the fundamental instrumental nucleus of the broader social structure, in the sense that all other social structures depend on its influence. The role behaviours learned within the family become the core or prototype for the role behaviours required in other segments of society. The content of the socialization process constitutes the cultural traditions of society; by transmitting these to the new generation, the family acts as a channel or conveyor belt through which the viability of culture is ensured' (1964, pp. 4–5).

Social patterns influence the behaviour of the family system and, consequently, the behaviour of society. Likewise, family behaviour influences the modes and patterns of conduct that derive from various layers of society (such as social policies, economic strategies, public policies, and institutional reforms).

Influences within the socio-cultural and economic context changes over time. As a general observation within the contemporary context, the so-called "Second Wave Family" (Thaxton & L'Abate, 1982)—is no longer the defining model for society. However, this is not to say that it has disappeared in the classic sense. Rather, it has evolved, giving rise to various alternative models of traditional marital relationships.

Starting from the period of industrialization, with the continuous changes in societal structures, migration, the proliferation of employment opportunities, and the dramatic rise of feminism (which itself was partly a consequence of industrialization), alternatives to the traditional family have steadily developed. These alternatives, somewhat surprisingly, prioritize personal fulfilment over economic or financial comfort.

Types of Families

The traditional family model was widespread at the end of the 19th century, especially in Western Europe. Its general characteristic is that of a conservative microsystem. Values were shaped by religious affiliation, strict rules, inherited traditions, and values. Within this context, the core of the family was primarily driven by economic factors. Preserving or increasing material wealth was a key indicator of success in marriage. This was a patriarchal family structure, where the husband was the primary breadwinner, a role that also gave him the status

of "head/decision-maker of the family." Decisions were not made collaboratively or based on the shared interests of all family members but rather at the discretion of a single decision-maker. The woman's status was aligned with this role; her fulfilment was experienced through her husband's success and status.

The modern family type emerged as a result of changes brought about by industrialization, especially after World War II. Once education became a constant, even among women, some institutions began to take on roles that were previously exclusive to the family. Profound social, financial, conceptual, and spiritual changes began to unfold. We are beginning to witness profound social, financial, conceptual, and spiritual changes. The modern family emerged alongside post-industrial and postmodern development. A defining element that contributed to this transformation is considered to be globalization. Economic growth, advancements in modern technology, and the expansion of multinational corporations were all essential factors that reshaped the concept of the family and familial union. With this transformation came an increased emphasis on individualization. The well-being of the individual has gradually replaced the well-being of the group or the family. At the same time, the network of friendships and references to traditional family norms has been recalibrated. Social interaction and play—entertainment in general—have also come to play an essential role in the pursuit of self-fulfilment.

All of this has come at the expense of the role previously fulfilled by the traditional family. As a result, new forms of cohabitation and alternative family structures have emerged. Thus, currently, "the family represents a major issue in our culture because we expect it to fulfil psychological and symbolic functions through a structure that has become fragile and disconnected from the political and economic realities of contemporary society" (Nisbet, 1953, p. 62). Consequently, the family is no longer the sole source of personal satisfaction. Through the development of social alternatives and new forms of entertainment, people are seeking—and finding—fulfilment within broader and more socially diverse networks. Nisbet argued that there can be no single model of the family, just as there can be no single religion, both being essential for personal security and collective prosperity (1953, p. 70).

The essential turning point in this shift lies in the fact that the individual begins to live for themselves. Even though relational alternatives are now far more varied than traditional perceptions of the family structure, social actors still value marriage, at least theoretically, as one of the preferred ways to develop and maintain a partnership.

Referring to the evolution of family related social-policy in Romania, their accent towards 'familialisation' reflects 'a scarcity in the model of policy' ((Popescu, 2014, p. 109). The representation of family within related governmental strategies adopted in post EU accession Romania (2007-2014) reflects a 'nuclear, heterosexual family as the fundamental origin of the patriarchal gendered roles' (Dohotariu, 2024, p. 14). At the same time, the family related policy in Romania fits into the general European tendency but with a specific accent on the relation between family and poverty (idem, p. 16).

Work versus Family

The framework for increasing women's visibility and for challenging their identification with 'nature' has been the redefinition of their role in the labour market. Activities that were once considered "natural"—and thus uninteresting from a theoretical or historical perspective—such as childcare and domestic tasks, have begun to be recognized as actual *work*. Labelling these activities as 'work' had a significant impact, leading to a fundamental shift in the understanding of the boundaries between work and family, as well as between work and leisure time. Part-time jobs are preferred by member of families with various in-house responsibilities such children education, caring for depending persons and health related issues

(Ilie, Preoteasa, 2017, p. 246) due to their time- management incapacity to assume a full time job.

Deep understating of the family potential role within the labour market contributes to support of economic resilience in terms of 'identifying the ways and manners of solving the issues related to increasing the capacity of averting or recovering the negative effects of external shocks' (Zaman, Vasile, 2014, p. 5).

In the dominant tradition, the family was seen as a space where women carried out labour in an unrecognized and unrewarded way, while men's leisure time was in fact earned through the *invisible labour* of women. The idea of "working men" and "dependent women" was widespread but did not reflect the reality of care work that women performed daily to support both men and society as a whole.

The history clearly shows that the gender-based division of labour has been—and continues to be—a hierarchy of labour that produces and perpetuates inequalities between men and women, both in terms of the *value* placed on labour and its *remuneration*. These inequalities are visible even in contemporary contexts, in many countries including Romania, where female-dominated fields such as social work, education, or the textile industry are paid significantly less than male-dominated fields like the military, police, or mining industry. This structure reflects not only an economic disparity, but also a deep cultural devaluation of the work performed by women—a phenomenon that remains a global reality. Labour vulnerability is directly reflected within the family by restricting options for personal development, hobbies, and even everyday consumption (Ilie, Preoteasa, 2017, p. 254). Besides, economic shocks such as the ones induced by unemployment due to COVID-19 outbreak impacted on vulnerable children from poor families (UNICEF, 2024, p. 70).

These inequalities highlight a crucial aspect of gender relations and the economic system, where women's work is often seen through a lens of *lesser value*, reflecting gender stereotypes about traditional roles assigned to women in society. By recognizing women's labour as *real work*, the old hierarchy—where women's labour was considered inferior and less valuable—has been directly challenged. These new conceptualizations have been essential in better understanding gender relations and in building a discourse that includes women's contributions in *all areas* of work. All of this has contributed, not least, to the redefinition of traditional family values.

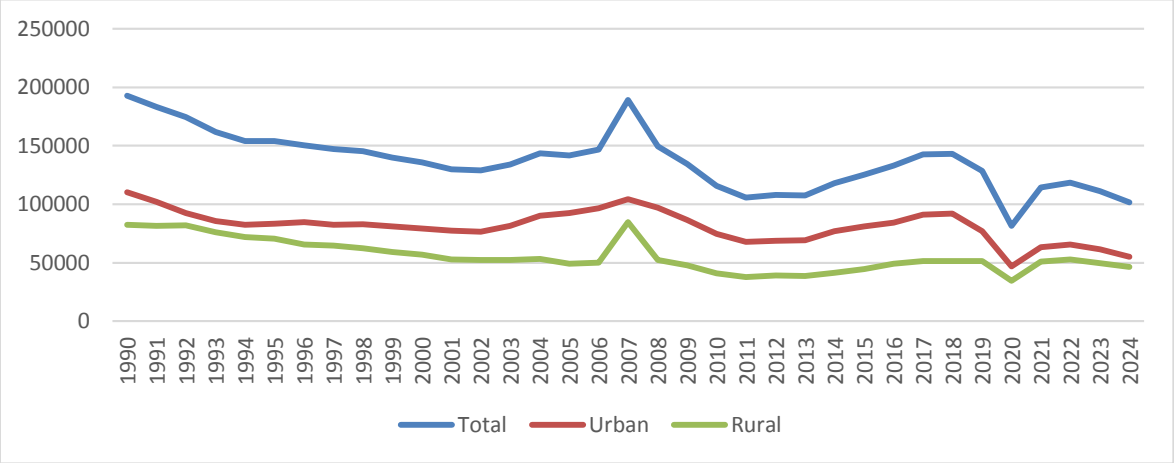
3. CHARACTERISTICS OF FAMILY IN ROMANIAN

This section of the paper overviews Romanian post-communist family related dynamic based on relevant demographic indicators concerning marriage (marriage by place of residence, marriage rates) or divorces (divorces by place of residence, divorce rates, divorces by number of children left behind). Other indicators refer to average age of mothers at both first birth and all births by place of residence. The last section of the paper includes EU Romania comparisons focus on crude marriage and crude divorce rate, both for selected years 1964-2023. The last part of this section includes analysis referring to live births outside marriage for 2000-2023 selected years.

The total number of marriages in post-communist Romania has fluctuated for the period 1990-2024. Comparison between urban and rural areas highlights a constant higher number of marriages in urban area. Top three smallest differences between marriages in urban versus rural areas has been registered in 2024 (with 8558 more marriages in urban area), in 1993 (with 9415 more), and in 1994 (with 10305 more) slightly different than 1992 (with 10733 more). Ot the opposite side, top three higher differences between marriages in urban versus rural areas has been registered in: 2006 (with 46573 more marriages in urban area), in 2018 (with 44487 more), and in 2005 (with 43470 more). In the same time, evolution of marriages in rural area

was marked by a higher 2006-2007 difference than urban one: 34763 marriages compared with 7840 respectively. By contrast, the 2019-2020 difference in urban area was felt more strongly than in rural: 30199 marriages compared with 17068 respectively. The 2019-2020 gap marriage was directly influenced by public restrictions imposed within COVID-19 pandemic period. For more details, please see the figure below.

Figure 1. Marriages by place of residence in post-communist Romania (total number)

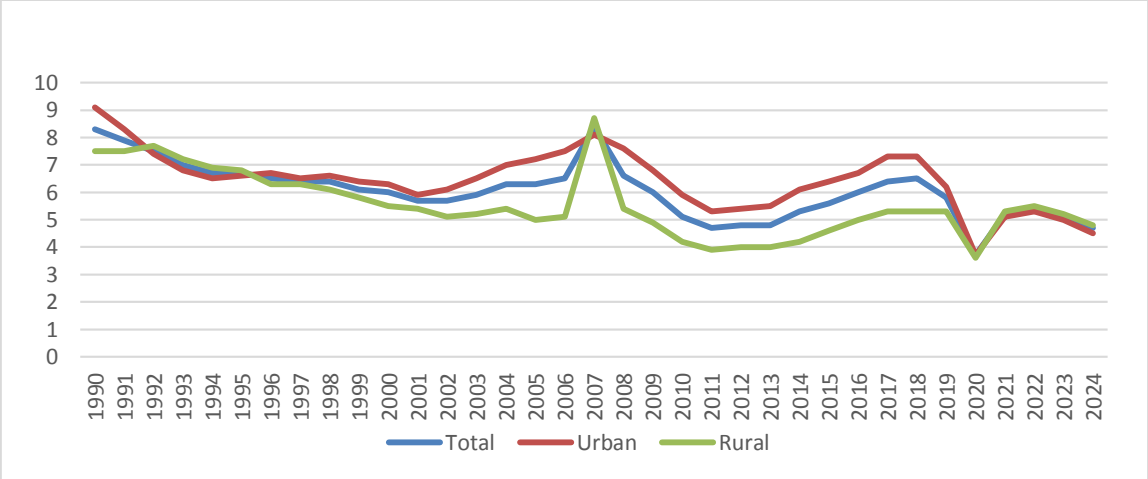


Source: National Institute of Statistics

The Romanian post-communist dynamic of marriage rate highlights a fluctuation between urban and rural areas. In the case of nine partially consecutive years (1992-1995, 2007, 2021-2024) out of 25 analysed, the marriages rate in rural area has been registered as higher. Looking closer, the highest difference has been recorded in 2007 (0.6), while the lowest in 1995, as well as 2021-2023 (0.2). Ot the opposite side, the marriage rate has been recorded by its smallest vale in 2020 (0.1) and the highest in 2008 (2.2).

Year of 2020 registered the lowest values of the marriage rate: 3.7 in total, 3.7 for urban area, and 3.6 for rural area. The opposite highest value has been registered in 2007 for both the total (8.4), and rural area (8.7), and in 1990 for the urban area (9.1). For more details, please see the figure below.

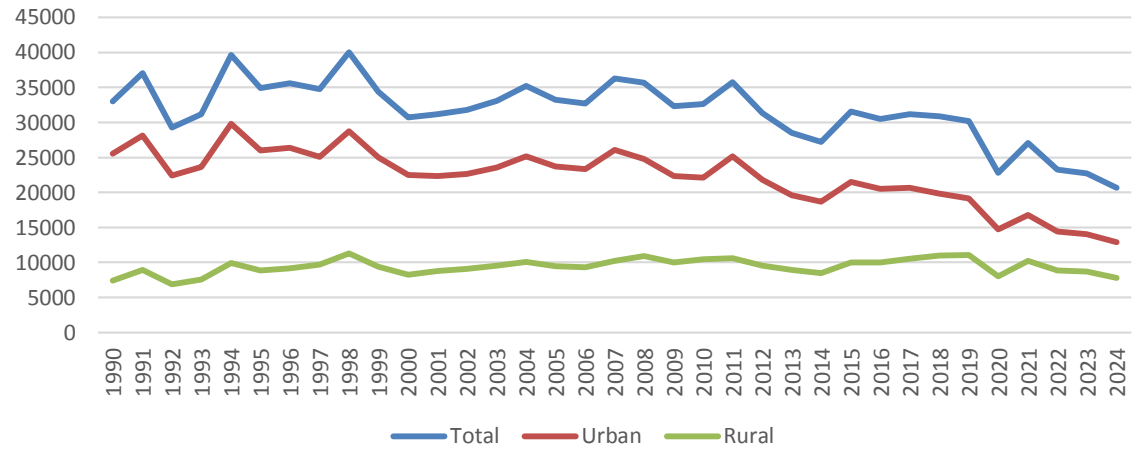
Figure 2. Marriage rate by place of residence in post-communist Romania (at 1000 inhabitants)



Source: National Institute of Statistics

Nominal difference analysis between urban-rural divorces shows a constant higher number of divorces in urban area. As time passes, the urban-rural post-communist difference has diminished with the lowest value registered in 2024: with only 5154 more divorces in urban area. Top three smaller urban-rural differences also includes the year of 2023 (with 5367 divorces) as well as 2022 (with 5581 divorces). By contrast, first three higher urban-rural divorce differences were listed in: 1994 (with 19871 more divorces in urban area), 1990 (with 18140 more), and in 1998 (with 17419 more). For more details, please see the figure below.

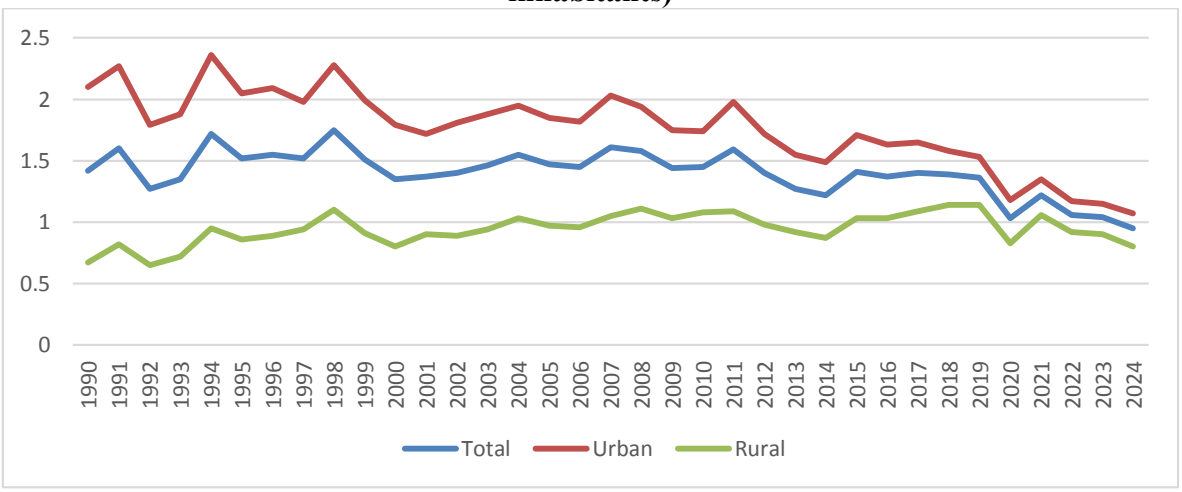
Figure 3. Divorces by place of residence in post-communist Romania (total number)



Source: National Institute of Statistics

The overview of divorces rate in post-communist Romania stands out for a higher number of divorces registered in urban zone compared with rural. The highest difference has been recorded in 1991 (1.45) while the smallest in both 2022 and 2023 (0.25). Looking closer, the smallest divorce rates have been registered in 2024 for the total (0.95), for urban area (1.07), and also for rural area (0.8). The highest divorce rates have been recorded in 1998 for the total (1.75), in 1994 for the urban (2.36), and in 2018 as well as 2019 for the rural (1.14). For more details, please see the figure below.

Figure 4. Divorce rate by place of residence in post-communist Romania (at 1000 inhabitants)

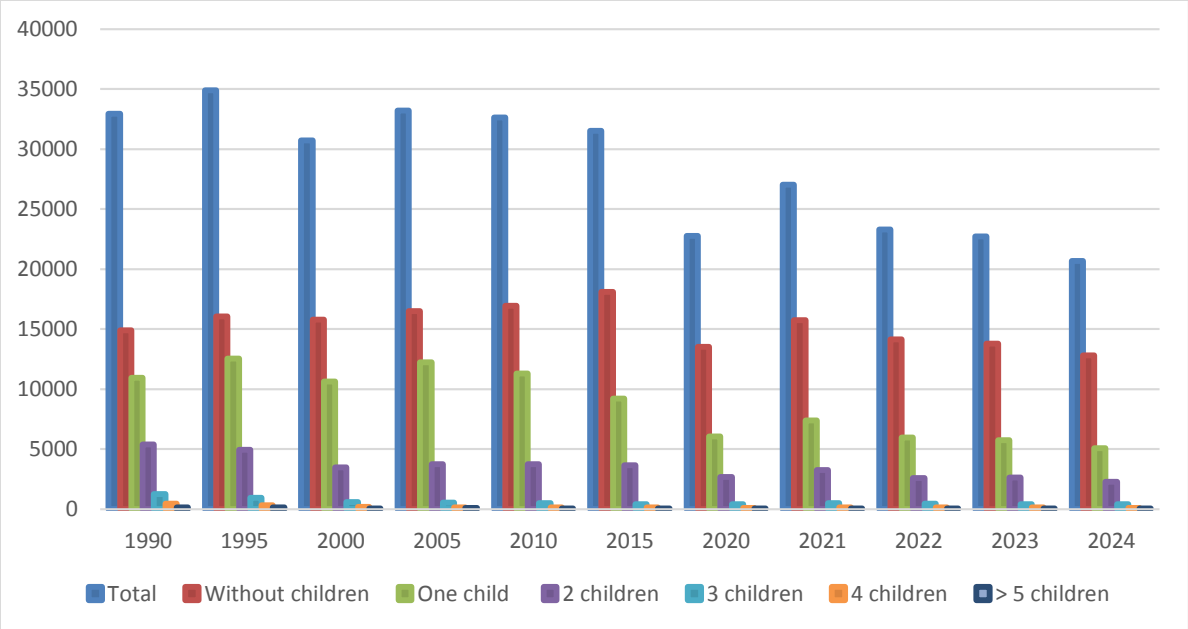


Source: National Institute of Statistics

The next demographic indicator selected for our analysis is divorces by number of minor children left behind after the dissolution of marriage. For the whole 1990-2024 period the highest number of divorces was registered in 1998 (with a total of 39985 divorces), while the lowest in 2024 (with a total of 20692 divorces). In terms of dynamic, the highest number of divorces in the case of families without children was registered in 2011 (19626 divorces), and in 1994 for families with one child (14672 divorces). The year of 1991 has been scoring the highest number of divorces for families with two children (5876 divorces), with three children (1369 divorces), with four children (477 divorces), and for five children and more (158 divorces).

On the opposite side, the lowest number of divorces by children left behind has been registered in 2024 in terms of total (20692 divorces) as well as for families without children (12819 divorces), with one child (5070 divorces) and with two children (2264). The year of 2014 has been listed the lowest number for both families with three children (347 divorces), four children (83 divorces similar with 2020), and for families with five or more children (39 divorces). Due to space limitations within the article, we have chosen to present below an analysis of the selection for the years 1990-2024. For a detailed overview, please see the annex 1.

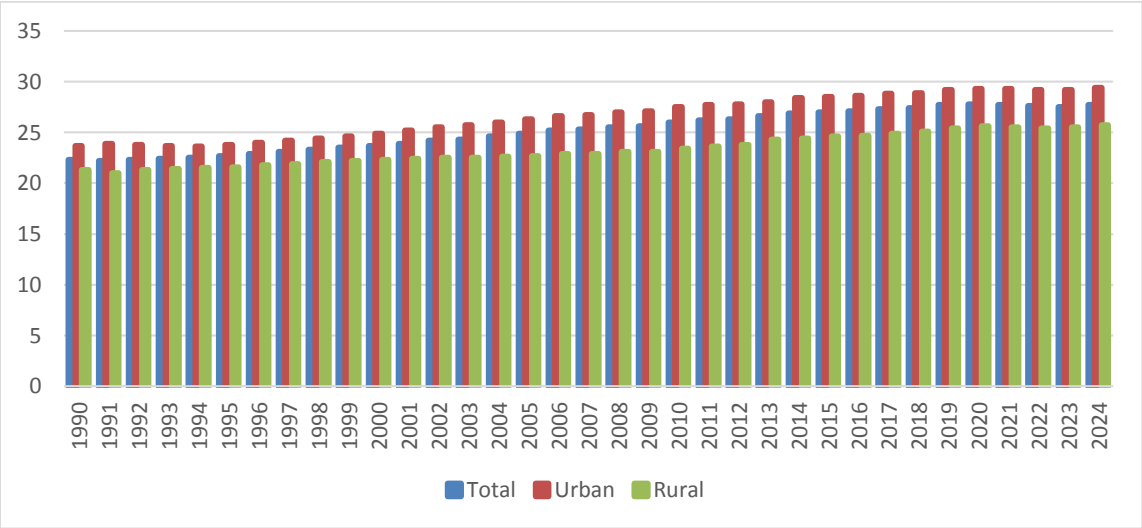
Figure 5. Divorces by number of minor children left behind after the dissolution of marriage in post-communist Romania, selected years 1990-2024 (number)



Source: National Institute of Statistics

The average age of mothers at first birth by place of residence in post-communist Romania constantly increased since 1990 with an urban higher degree in all selected and analysed years. The total lowest value was registered in 1991 as 22.2 years., while the highest was in 2020 as 27.8 years (comparably with 2024 as 27.7 years). Concerning urban average age, the smallest value was registered in 1992: 23.8 years as the higher in 2024: 29.4 years. In rural area, the smallest average year of mothers at first birth was listed as 21 years in 1991 and the highest 25.7 years in 2024. Looking at the whole 1990-2024 period of time, the smallest urban-rural average age difference was recorded in 1994 as 2.1 years, while the highest in both 2010 and 2011 as 4,1 years. For more details, please see the figure below.

Figure 6. Average age of mothers at first birth by place of residence in post-communist Romania



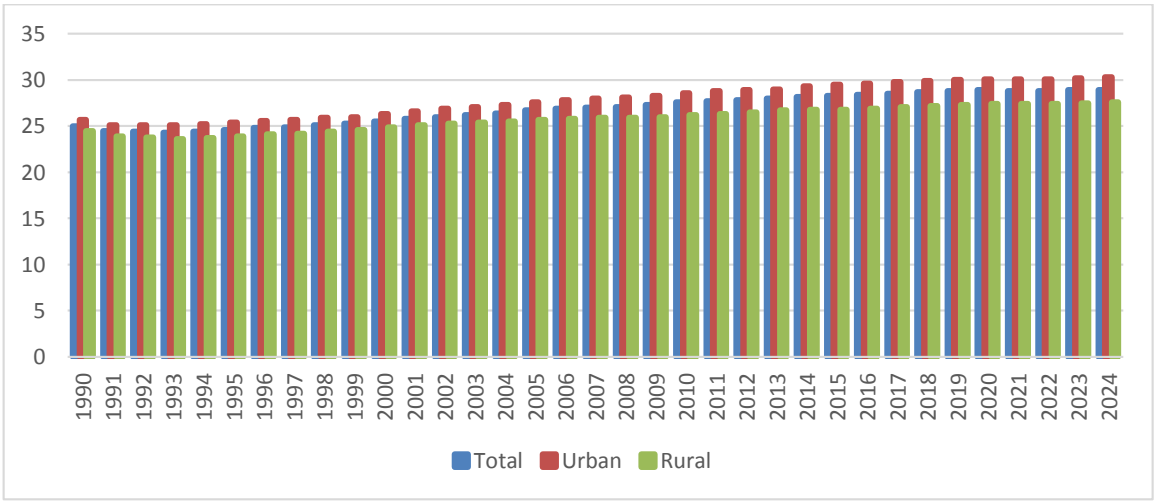
Source: National Institute of Statistics

Deficient access to proper medical services especially in rural area determinate a high rate of minor pregnancies and mothers (Alexandrescu, 2024). Compared with other EU member states, Romania registered in 2025 the second position in the top of youngest first time mothers: 27.1 years following Bulgaria with 26.9 years (European Commission, 2025).

Following the same trend as detailed above, the urban-rural comparison between average age at all births by place of residence in post-communist Romania reflects higher values in urban area for the whole analysed period. The smallest urban-rural difference was recorded in early '90s: more precisely 1.2 years in both 1990 and 1991, while the highest was registered starting with 2015: 2.7 years.

At the same time, the average age constantly increased with slightly common values starting with 2020. Going in more details, the lowest values of average age were registered in early '90s: in 24.3 years for 1993 as total, 25.1 years for the period 1991-1993 as urban area, and 23.6 years in 1993 as rural area. The highest values were registered in 2020, 2023 and 2024 as total: 28.9 years, in 2024 as urban area: 30.3 years, and in 2024 as rural area: 27.6 years. For more details, please see the figure 7.

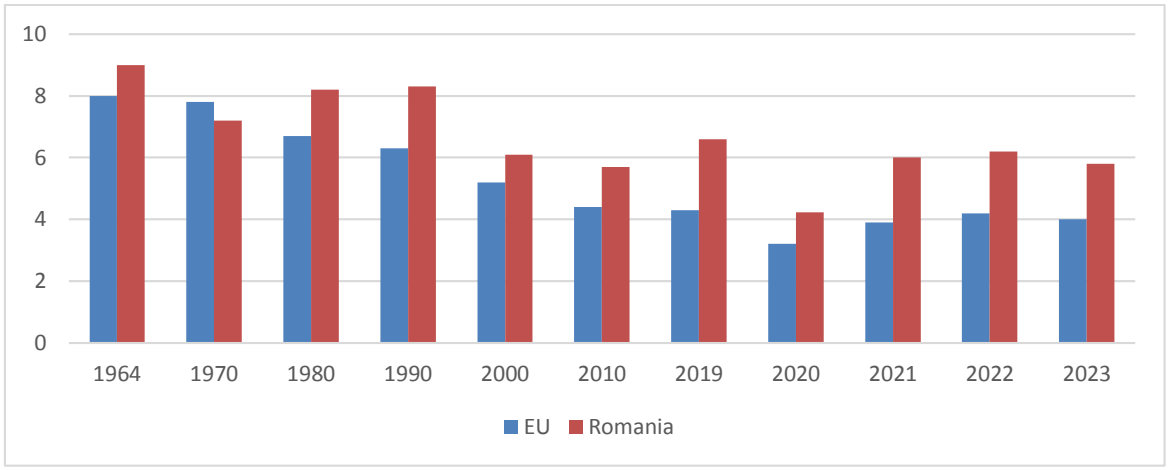
Figure 7. Average age of mothers at all births by place of residence in post-communist Romania



Source: National Institute of Statistics

2023 Romania registered the highest crude marriage rate among EU member states[14]. The comparison of EU-Romania crude marriage rate (per 1000 persons) for selected years 1964-2023 reflects a constant higher Romania value with the exception of the year 1970 (EU rate was 0.6 years higher than Romania). For the rest of selected analysed years, the highest difference was registered in the year of 2019: Romania scoring 2.3 years more than EU average. Asa whole, the smallest crude marriage rates for both EU and Romania were registered in 2002 due to the outbreak COVID-19 safety restrictions imposed: 3.2 years for EU, respectively 4.2 years for Romania. For more details, please see the figure below.

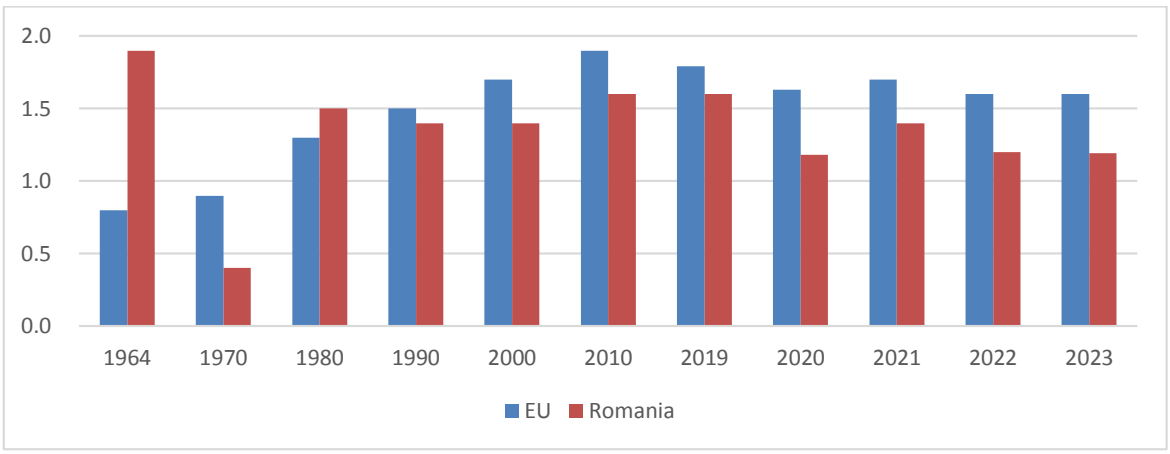
Figure 8. Crude marriage rate EU Romania, selected years, 1964-2023 (%)



Source: Eurostat

EU Romania comparison of crude divorce rate for 1964-2023 selected years reflects higher EU values starting with 1990. The smallest difference in this respect was registered in the year of 1990 with 0.1 years, while the highest in the year of 2010 with 0.3 years. Romania scored highest crude divorce rate in 1964 with a difference of 1.1 years, followed by 1980 with 0.2 years. For more details, please see the figure below.

Figure 9 Crude divorce rate EU Romania, selected years, 1964-2023 (%)

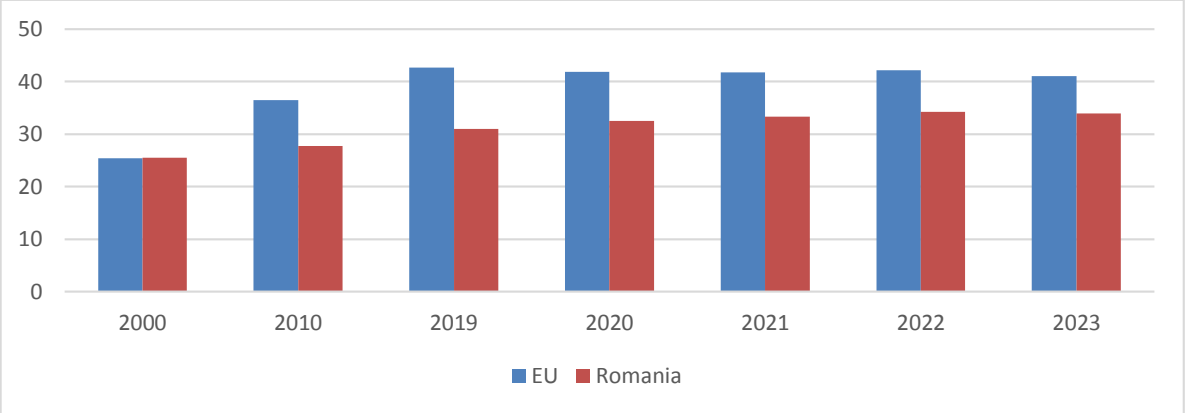


Source: Eurostat

[14] https://ec.europa.eu/eurostat/statistics-explained/

EU Romania comparison on live births outside marriage for selected years 2000-2023 as % of total live births shows a constant EU higher value except for the year of 2000 (slightly 0.1 % higher percent registered in Romania). The highest EU Romania difference was recorded in 2019 with 11.7%. Also for compared selected years, the smallest values were registered in the year of 2000 for both EU (25.4%) and Romania (25.5.%). On the opposite side, the highest values were registered in: 2019 in EU (42.7%), and in 2023 in Romania (33.9%). For more details, please see the figure below.

Figure 10. Live births outside marriage EU Romania, selected years, 2000-2023 (share of total live births, %)



Source: Eurostat

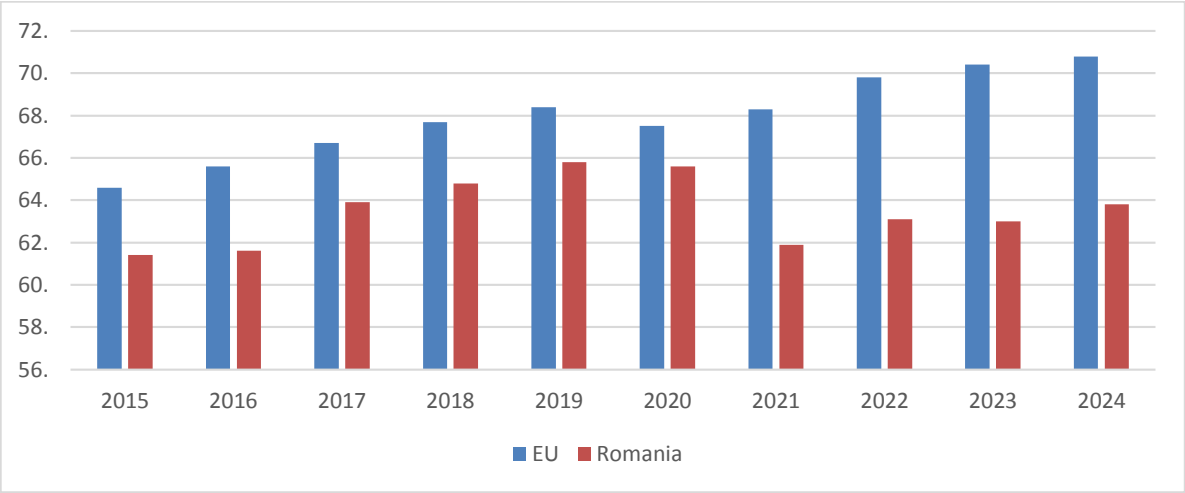
This section provided an overview of dynamics of family in post-communist Romania based on statistical indicators available at EU level as well as domestic ones. Emerging scientific literature is developed towards more nuanced family aspects, especially within the context of recent crises such as the sanitary one. For example, the COVID-19 pandemic related challenges impacted on transnational families in terms of 'their resilience and ability to reinvent family connections' (Végh et all, 2025, p.18). Besides, as its potential impacts on fertility 'biological reduction of fertility is less likely to occur, while behavioural mechanisms involving couples' decisionmaking will impact fertility intentions' (Voicu, Deliu, 2021, p. 209).

4. TRENDS ON THE ROMANIAN LABOUR MARKET

This section of the paper includes EU Romania comparisons focused on employment rates by citizenship and gender, as well as Romania employment related indicators (total 2024 activity versus employment rates by age, 2024 labour force participation by gender and place of residence). The last part of the section includes 2016-2024 evolution of the employment rate of the population aged 15074 years by age group.

EU Romania comparison on employment rates by citizenship (% from 15 to 64 years) reflects a higher value for EU. The smallest values were registered for both EU and Romania in the year of 2015: 64.6%, respectively 61.4%. EU Romania lower difference in term of employment rate was recorded in 2017 with 2.8%. On the opposite side, the highest percent was registered for EU in 2024 with 70.8%, while in 2019 Romania was 65.8%. Eu Romania higher difference was in 2023: 7.4%. Figure Employment rates by citizenship EU Romania (%). For more details, please see the figure below.

Figure 11. EU Romanian employment rate by citizenship (% from 15 to 64 years)



Source: Eurostat lfsa_ergan$defaultview

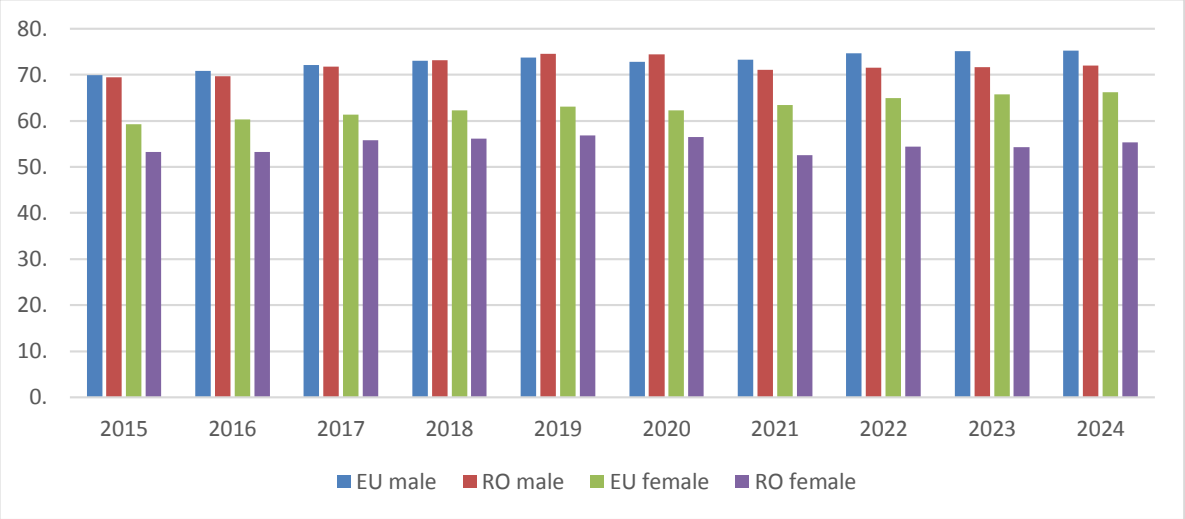
Both EU and Romanian labour markets have contracted due to the COVID-19 pandemic and progressively recovered after. At the EU member states level, the health-related shock had a temporary effect on the labour market (European Commission, 2023, 13-14). Referring particularly to Romania, socio-economic measures oriented towards affected labour segments were doubled by the public policy need to address large flows of migrants returning to their home country, especially from Western European countries. With respect to labour related effects on employees, we mention: 'the obligation to comply with hygiene and social distancing measures, changes to working arrangements (working from home/teleworking), a significant number of individual employment contracts suspended or terminated, reduction in working hours' (Chivu, Georgescu, 2020, 27).

With reference to COVID-19 pandemic impact on Not in Education, Employment, or Training (NEETs) young people, the most exposed ones were the ones from rural areas rural areas, 'with disadvantaged backgrounds or from marginalized communities' for which an increase in the school dropout rate is expected alongside unemployment rate (Bălan et all, 2022, 25). Romanian significantly decrease of 2020 as well as 2021 employment due to COVID-19 pandemic period and its 2020 labour market related regulations 'confirm the hypothesis that deregulatory labour market interventions have a negative short-term effect when implemented in times of crisis' (Adăscălței & Pignatti Morano, 2016, 24).

EU Romanian comparison on employment rate by citizenship and gender (% from 15 to 64 years) reflects a higher employment of EU men compared to women. Among women, the Romanian ones show smallest employment values. The smallest values for men employment rate were registered for both EU and Romania in the year of 2015: EU 69.9%, respectively 69.5 in Romania. On the opposite side, the highest values were recorded in 2024 in EU with 73.8%, and in Romania in 2019 with 74.6%. The smallest compared EU Romania values was noticed in 2020 with - 1.6%, while the highest was in 2023 with 3.4%.

Concerning EU Romanian women employment rate, the lowest EU and Romanian rates were registered in the year of 2015: 59.3%, 53.2% respectively. On the opposite side, the highest values were recorded in 2024 for EU with 66.2%, and in 2019 for Romania with 56.8%. Comparatively, EU Romanian employment rate registered the smallest value in 2020 with 5.8%, while the highest was in 2023 with 11.4%. For more details, please see the figure 12.

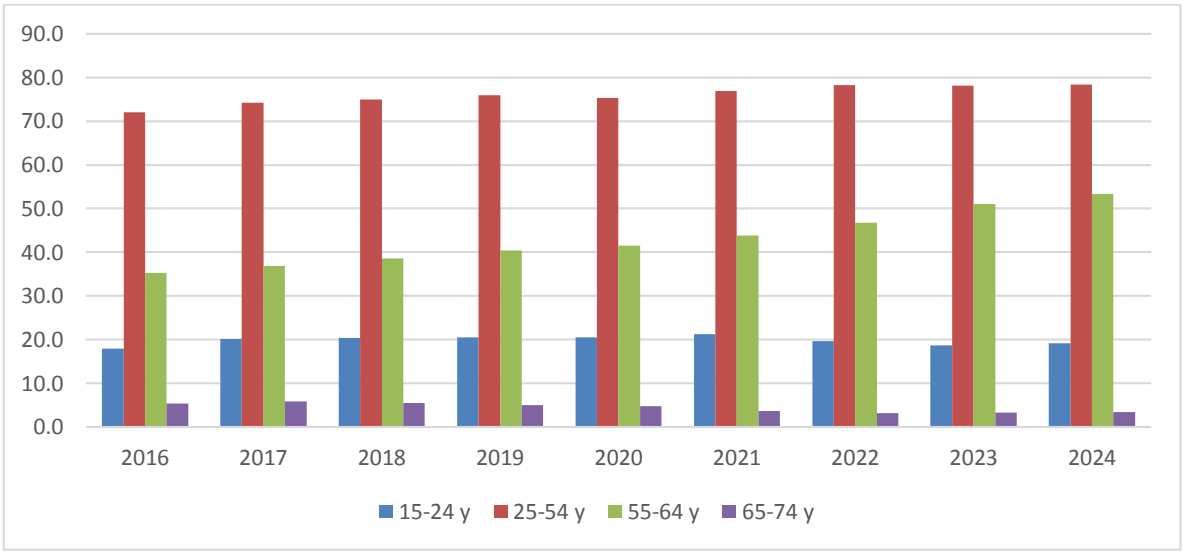
Figure 12. EU Romanian employment rates by citizenship and gender (% from 15 to 64 years)



Source: Eurostat lfsa_ergan$defaultview

The analyse of 15-74 years employment rates for the period 2016-2024 shows the constant highest value for the 25-54 years followed by increasing employment rate for the category 55-64 years. For more details, please see the figure below.

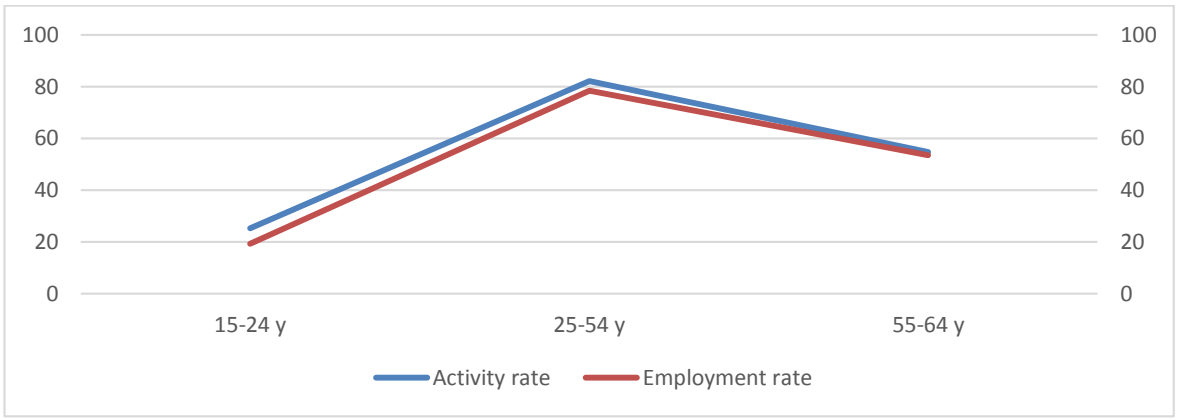
Figure 13. Evolution of the employment rate of the population aged 15-74, by age group in Romania (%)



Source: National Institute of Statistics

Activity rate in 2024 Romania is higher than employment one for all three age analysed categories which reflect a vacant labour related potential, especially for the category 25-54 years. Comparing the three age categories, the 15-24 years are the less represented on labour market. For more details, please see the figure below.

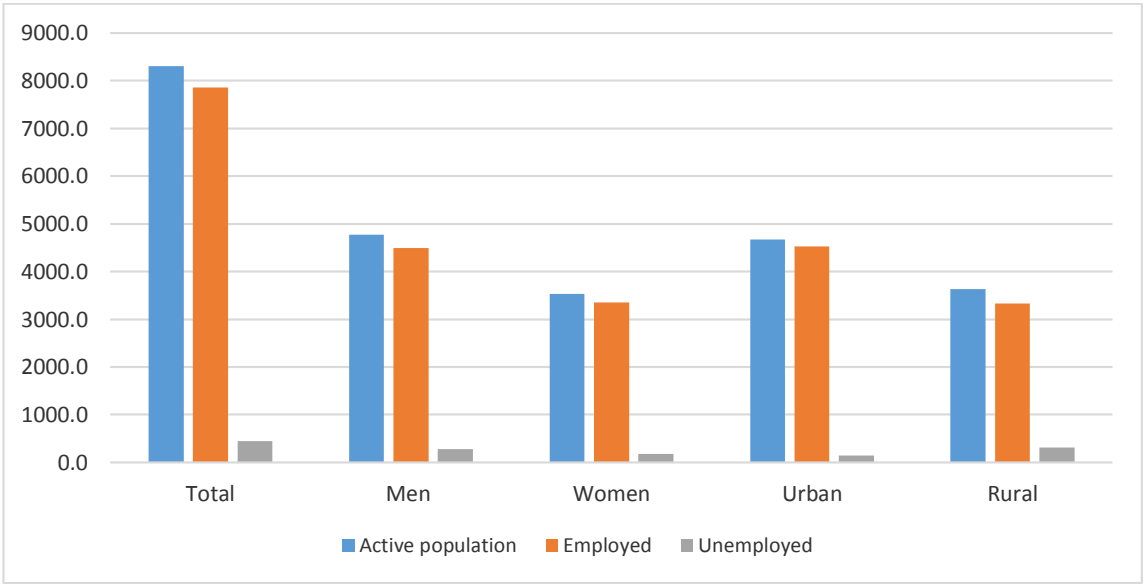
Figure 14. Total activity versus employment rates by age in 2024 Romania (%)



Source: National Institute of Statistics

Looking closer to active 2024 Romanian population, one can notice a higher value for men compared with women both as total and as employed. People living in rural areas are more employed than in rural. For more details, please see the figure below.

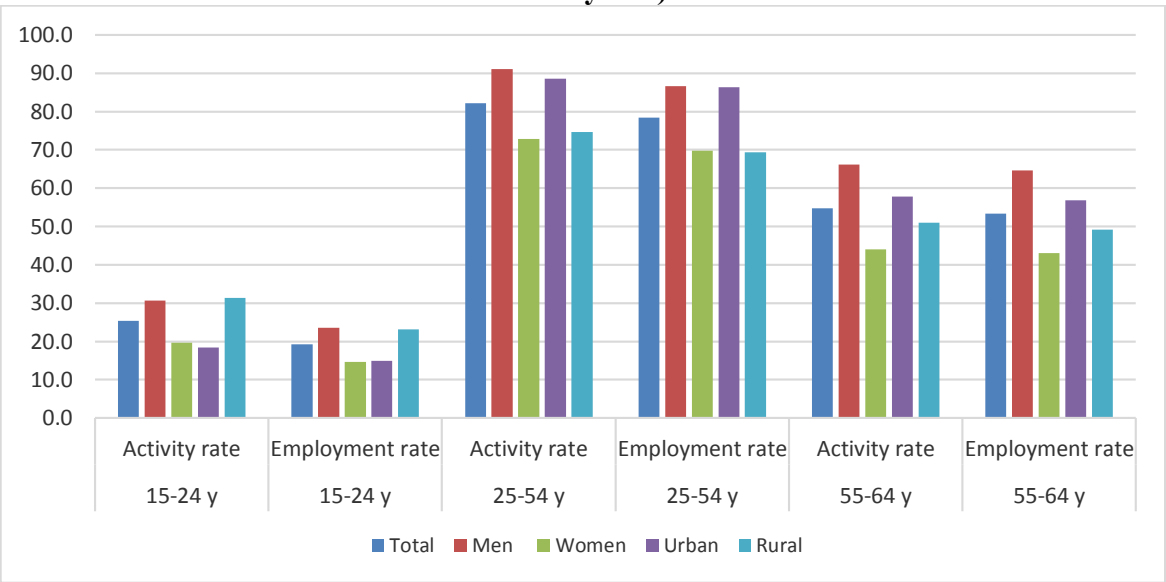
Figure 15. Labor force participation by gender and place of residence in Romania 2024 (thousands of people)



Source: National Institute of Statistics

A more detailed 2024 picture on labour force participation by age and place of residence shows concern for young women (15-24 years) as well as people living in rural area for all age categories. Highest rates of employment were registered in the case of men and urban area (except for the category of 15-24 years). The highest difference between employed men and women was registered in the category 55-64 years (21.6%) followed by 25-54 years (16.9 %), and by 15-24 years (8.8%). In respect to urban-rural difference, the highest was registered for the category 25-54 years (17%), and 55-64 years (7.7%). In the case of the category 15-24 years, the employment rate was 8.3% in rural area compared to urban. For more details, please see the figure below.

Figure 16. Labor force participation by age and place of residence in 2024 Romania (% 15-64 years)



Source: National Institute of Statistics

5. CONCLUSIONS

1990-2024 dynamic of Romanian marriages officialised in urban *versus* rural areas reflects higher values in urban area with the smallest difference registered in 2024 while the highest was listed in 2006. The same urban-rural trend has been maintained in what regards the total number of divorces: with higher differences in early 1990s (namely 1994, 1990 and 1998) and smaller in recent years (namely 2024, 2023, and 2022). In respect to the children left behind the dissolution of a marriage, the families without children tend to divorce more for the selected 1990-2024 years. The year of 1991 has been registered the highest number of divorces for families with two or more children. On the opposite side, the year of 2024 recorded the lowest values of divorces for families with three and more children. Concerning the average age of mothers at first birth for the whole post-communist period in Romania, the value continuously increased, while the urban area scores higher values than rural. The same trend has been followed in the case of average age of mothers at all births.

The 2023 highest crude marriage rate within EU was registered in Romani. In the same time, EU Romania comparison on crude marriage for selected 1964-2023 years indicates a constant higher Romanian value except for the year of 1970. In what regards the crude divorce rate, EU Romania comparison for selected 1964-2023 years emphasizes a higher EU value for the post-communist period. Similarly, EU Romania comparison regarding live births outside marriage for selected 2000-2023 years, shows a constant higher EU value followed by a constant decrease of the EU Romania difference.

Compared 2015-2024 EU employment rate has been recorded higher values compared to Romanian one. By gender, both EU and Romanian men are better represented on the labour market than women.

With respect to Romanian activity rate compared to the employment one, the highest 2024 value has been recorded for the age category 25-54 years with a better representation of 55-64 years compared to 15-24 years. NEETs young people as a ‘very heterogeneous group’ (Bălan, 2015, 12) records higher representation of women compared to men and of youth with low education level (Bălan, 2015 idem, Bălan et all 2022) Their research scientifically supports the tailoring of specific labour insertion policies.

Looking closer at 2024 labour force participation by gender and place of residence, men are better represented than women, and urban are than rural. This follows previous literature as less women presence on the labour market also means that households run by women are more exposed to poverty comparative with the ones managed by men. In the same time, larger households are more exposed to poverty than the ones composed by a person (Bălan, 2013). Poverty in rural areas continue to be high due to access to formal jobs (Bălan, 2013, Bălan et all 2017).

In line with in depth analyse of 2024, young women and people living in rural area are the most vulnerable ones. 2016-2024 analyse of employment rate evolution for the population aged 15-74 years by age group, reflects a higher proportion of 25-54 years followed by 55-64 years. This conclusion followed the trend of higher employment representation of older people, especially with higher education (Bălan et all, 2017). On the other hand, difficult labour market insertion is noticed for the youngest category: 15-24 years. In other words, youth continue to be vulnerably exposed to poverty due to exclusion from the labour market (Bălan, 2013), reality reconfirmed for the year of 2024 with the highest unemployment rate registered for this age category (National Institute of Statistics, 2025).

The paper outputs are in line with previous literature connecting deep understanding of demographic trends with potential for economic growth (Stupariu et all, 2024; Ikhlef & Aziez, 2025). Furthermore, the paper supports the progress of socio-economic policies more suitable to the current demographic tendencies. Development of more nuanced social indicators focus on connection between family and labour market would be useful in this respect. Future research on the post-communist Romanian family dynamic provides the scientific basis for launching adaptative and inclusive long-time related programs.

REFERENCES

1. Adascalitei, Dragoș & Pignatti Morano, Clemente (2016) Drivers and effects of labour market reforms: Evidence from a novel policy compendium. *IZA J Labor Policy* 5, 15. https://doi.org/10.1186/s40173-016-0071-z
2. https://izajolp.springeropen.com/articles/10.1186/s40173-016-0071-z
3. Alexandrescu G. (editor), Roman G. & Burcea S. (2024) *Studiu privind mamele minore și gravidele minore* – raport de cercetare, Save the Children Romania
4. https://www.salvaticopiii.ro/sites/ro/files/2024-04/studiu-privind-mamele-minore.pdf
5. Bălan Mariana (2013) A Multidimensional Analysis of Social Vulnerabilities, *Hyperion Economic Journal*, Year I, no. 3(1), September, pp. 30-39
6. https://hej.hyperion.ro/component/content/article/11-hej-volume-1-issue-3-2013/47-a-multidimensional-analysis-of-social-vulnerability
7. Bălan Mariana (2015) Youth condition in the labour market during the post-crisis period, *Hyperion Economic Journal*, Year III, no. 2(3), June, pp. 3-13
8. https://hej.hyperion.ro/component/content/article/20-hej-volume-3-issue-2-2015/103-youths-condition-in-the-labour-market-during-the-post-crisis-period
9. Bălan Mariana, Uzlău Carmen & Ene Corina Maria (2017) Characteristics of the labor market in Romania between 2008-2016, *Hyperion Economic Journal*, Year V, issue 3. September, pp. 3-14 https://hej.hyperion.ro/component/content/article/27-hej-volume-5-issue-3-2017/152-characteristics-of-the-labor-market-in-romania-between-2008-2016
10. Bălan Mariana, Lungu Liviu & Vornicescu (Niculescu) Mihaela Daniela (2022) The impact of the COVID-19 pandemic on the EU-27 NEET young people, *Hyperion Economic Journal,* year IX, issue 2, June, pp. 18-26

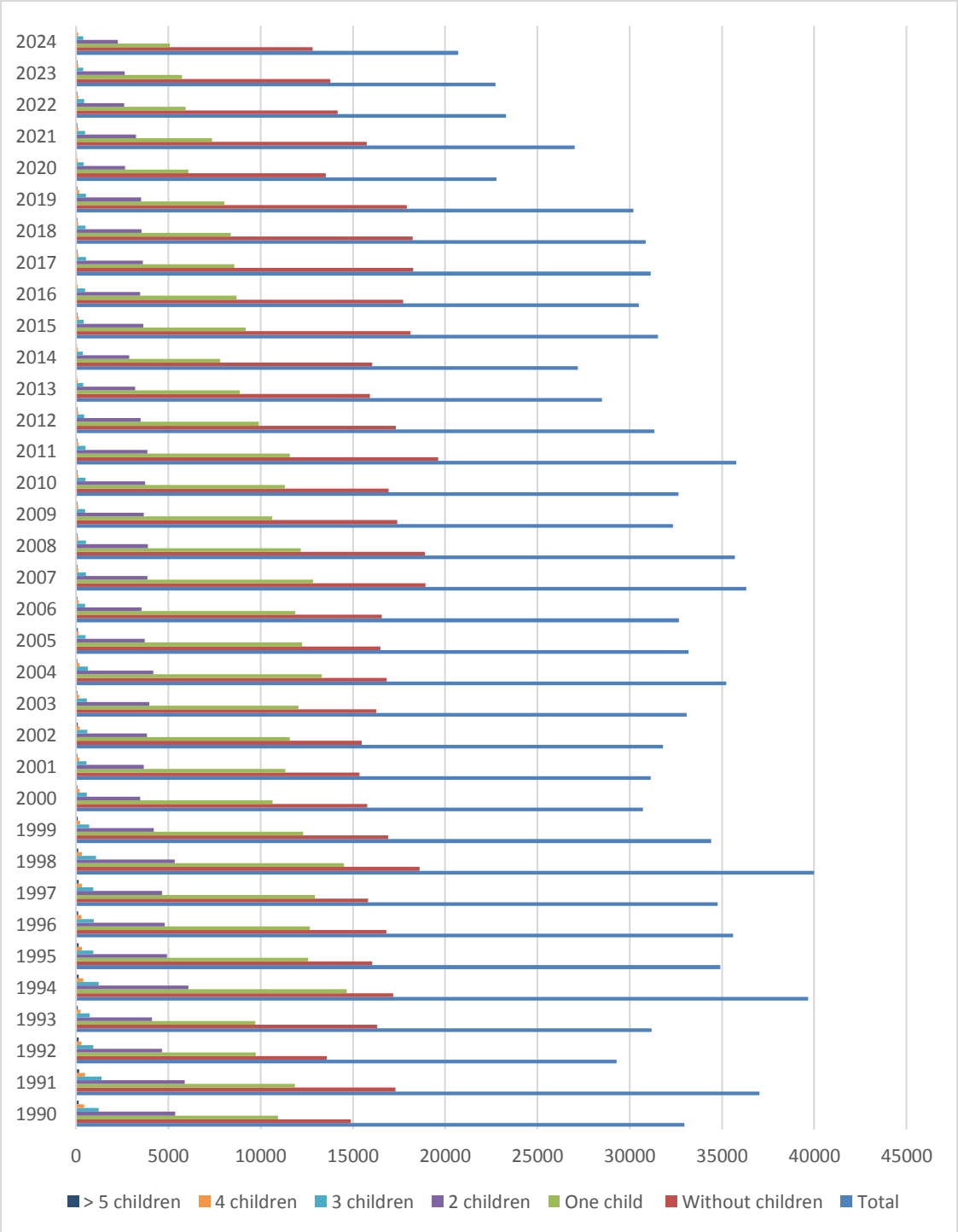
https://hej.hyperion.ro/component/content/article/39-hej-volume-9-issue-2-2022/233-the-impact-of-the-covid-19-pandemic-on-eu-27-neet-young-people
11. Chivu Luminița & George Georgescu (2020) *Vulnerabilități ale pieței muncii și ocupării în contextual pandemiei COVID-19. Posibile soluții,* Institutul Național de de Cercetări Economice „Costin C. Kirițescu", Academia Română
12. https://academiaromana.ro/SARS-CoV-2/doc/d04-Vulnerabilitati_ale_pietei_muncii.pdf
13. Dohotariu Anca (2024), Family framing in Romania after EU accession: an analysis of silenced problems within strategic policy documents, *Journal of Family Studies*, DOI: 10.1080/13229400.2024.2401587
14. European Commission (2023) *The impact of demographic change – in a changing environment,* Commission staff working document, Brussels, 17.1.2023 SWD, 21 final
15. https://commission.europa.eu/system/files/2023-01/the_impact_of_demographic_change_in_a_changing_environment_2023.PDF
16. European Commission (2025) *Demography of Europe – 2025 edition,* interactive publications https://ec.europa.eu/eurostat/web/interactive-publications/demography-2025
17. Goode, W. J. (1963). *World revolution and family patterns.* Free Press Glencoe
18. Ilie, S., & Preoteasa, A. M. (2017). O perspectivă asupra ocupării atipice: România în comparație europeană. *Calitatea Vieții*, *28*(3), 243–266.
19. https://www.revistacalitateavietii.ro/journal/article/view/394
20. Ikhlef, F. M., & Aziez, N. (2025). The economic impact of demographic change: trends, challenges, and opportunities. *International Journal of Economic Perspectives*, *19*(4), 1222– 1227. https://ijeponline.org/index.php/journal/article/view/950
21. National Institute of Statistics (2025), *Employment and unemployment*, Press release, 95/ 22.04.2025, https://insse.ro/cms/sites/default/files/com_presa/com_pdf/somaj_2024r.pdf
22. Nisbet, R. A. (1953). *The Quest for Community: A Study in the Ethics of Order and Freedom.* New York: Oxford University Press
23. Popescu, R. (2014) Family policies in Romania within the European framework, *Journal of Community Positive Practices*, 14(3), pp. 99-113. Available at: https://jppc.ro/index.php/jppc/article/view/251
24. Stupariu, M. I., Stașac, M. S., Linc, R. (2025). Structural Evolution of Demographic Indicators on Divorces in Romania: A Comparative Analysis by Residence, Regions, and Socio-Demographic Characteristics. *Analele Universității din Oradea, Seria Geografie*, *34*(2), 148-174. https://doi.org/10.30892/auog.34205-923
25. Thaxton, L., & L'Abate, L. (1982). The "second wave" and the second generation: Characteristics of new leaders in family therapy. *Family Process, 21*(3), 359–362. https://doi.org/10.1111/j.1545-5300.1982.00359.x
26. UNICEF (2024) Rapid assessment of the situation of children and their families, with a focus on the vulnerable ones, in the context of the COVID-19 outbreak in Romania,
27. https://www.unicef.org/romania/documents/rapid-assessment-situation-children-and-their-families-focus-vulnerable-ones-context-2
28. Végh, J., Voicu, B., Barroso, M. M., Deliu, A., Heiman, T., Hossu, I.-E., Karpava, S., Maxhelaku, A., Olenik-Shemesh, D., ´Slusarczyk, M., Wilsch, M., Wojty_nska, A., & Zenelaga, B. (2025). Emerging Ideas. Transnational family dynamics during

the COVID-19 pandemic: A scoping review. *Family Relations,* 1–22. https://doi.org/10.1111/fare.70019

29. Voicu, M. & Bădoi D. (2012) Fertility and the COVID-19 crisis: do gender roles really matter?. *European Societies*; 23 (S1): 199–214, https://doi.org/10.1080/14616696.2020.1822537
30. Zaman, G. & Vasile V. (2014) Conceptual framework of economic resilience and vulnerability, at national and regional levels, *Romanian Journal of Economics*, (3), 5-18
31. https://revecon.ro/articles/2014-2/2014-2-1.pdf

Annex 1

Figure: Divorces by number of minor children left behind after the dissolution of marriage in post-communist Romania, 1990-2024 (number)



Source: National Institute of Statistics

TRENDS AND TRANSFORMATIONS IN THE INTERNATIONAL TRADE OF THE LAST DECADE (2013-2023)

Dalina-Maria ANDREI[15]
Institute for Economic Forecasting, Romanian Academy

ABSTRACT: *International goods trade went through major turbulences between 2013 and 2023. In the first half of this interval, global trade grew at a fairly steady pace but recent years brought major disruptions. The Covid19 Pandemic and growing geopolitical tensions (most notably the war in Ukraine) has all significantly reshaped world trade flows. The analysis of the main twelve players in world trade highlights both resilience and structural changes in the trade matter. China and the European Union consolidate their status as global leaders in goods exports while the United States maintains its dominant position in goods imports. In parallel, emerging economies such as India and Mexico have strengthened their presence on the global market. The evolution of trade balances was asymmetric: constant surpluses of China and the EU have contrast with growing deficits of the US. These trends see the reconfiguration of supply chains, the emphasis on strategic dependencies in critical sectors, and the gradual shift from hyper-globalization to a more fragmented and regionalized trade order.*

Keywords: *international trade in goods, trade policies, trade balance*

JEL Classification: *F10, F13, F15, F40*

1. INTRODUCTION

The core of world trade is currently made by the European Union, China and the United States, together accounting for over 40% of this (Eurostat,2024a). Over the past decade, China has consolidated its position as the world's largest exporter, the European Union has remained a diversified and competitive player, and the United States has increased its dependence on imports in strategic areas (Eurostat,2024a). At the same time, emerging countries such as India, South Korea and Mexico have increased their share in global trade, reflecting the repositioning of production networks and the intensification of regional integration.

Three questions are searched to be answered by this paper:

- which were the main trends in exports and imports during the 2013–2023 period for the world's top 12 economies in international trade;
- how did the trade balances of these economies evolve in the context of global shocks;
- which might be the regularities and the structural changes that can be identified in relation to the beginning and end of the analysed period (Eurostat,2024a).

[15] Ph.D., Scientific Researcher III, dalinaandrei@yahoo.com

2. METHODOLOGY AND DATA COLLECTION

Statistical data provided by international organizations, such as the World Trade Organization (WTO), the World Bank, Statista and Eurostat (Eurostat,2024a, b), on the evolution of world exports and imports were used to analyse the international trade relations and economic developments of the world's main trading powers during 2013-2023. The statistical data were organized in tables that include the absolute values of exports and imports, as well as their shares in world trade for the main countries (China, the United States, the European Union, Japan, Russia, etc. The percentage increases in the absolute values of exports and imports for the world's main trading powers during the studied period were also calculated, so highlighting significant changes (Eurostat,2024a). Trends and annual variations in absolute values and shares in world trade were identified. Major economic and political factors that influenced international trade were considered, such as economic reforms, trade policies, free trade agreements, economic sanctions and geopolitical events. The positions of the EU and Russia in this general picture of world trade so have been identified (see Tables 1, 2).

3. RESULTS AND DISCUSSIONS

3.1 World exports in the 2013-2023 interval

The main players in international goods trade are the world's major economies: the United States, the European Union, China and Japan which dominate trade flows due to the size of their economies, strategic position and advanced infrastructure. The European Union is one of the largest global exporters and importers, keeping close trade relations with economies such as the United States, China, but also with closer partners such as Russia. Economic, geopolitical and pandemic factors in particular influenced the dynamics of global exports between 2013 and 2023.

Table 1. Share of national exports in total World exports (%)

Country/ Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
China (excl. Hong Kong)	14.4	15.3	17.	16.3	16.	16.	16.6	18.8	18.8	18.1	18.1
European Union - 27	15.4	15.6	15.6	16.0	15.9	15.7	15.8	16	14.7	13.7	14.8
United States	10.3	10.6	11.2	11.3	10.9	10.7	10.9	10.4	10.	10.4	10.8
Japan	4.7	4.5	4.7	5.	4.9	4.8	4.7	4.7	4.3	3.8	3.8
South Korea	3.7	3.7	3.9	3.8	4.1	3.9	3.6	3.7	3.7	3.4	
Canada	3.	3.1	3.1	3.	3.	2.9	3.	2.8	2.8	3.0	3.0
mexico City	2.5	2.6	2.8	2.9	2.9	2.9	3.1	3.	2.8	2.9	3.2
Russia	3.4	3.3	2.6	2.3	2.7	2.9	2.8	2.4	2.8	2.9	
Great Britain	3.6	3.3	3.5	3.2	3.1	3.2	3.1	2.9	2.7	2.7	2.8
Singapore	2.7	2.7	2.7	2.6	2.6	2.7	2.6	2.7	2.6	2.6	
India	2.2	2.1	2.	2.	2.1	2.1	2.1	2.	2.2	2.3	2.3
Brazil	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.6	1.7	1.8
Other	32.6	31.8	29.5	30.2	30.3	30.7	30.2	29.1	31.	32.5	39.4
Total	100.0	100.0	100.0	100.0	100.	100.0	100.0	100.0	100.0	100.0	100.0

Source: Eurostat,2024a. Share of European Union EU27 (from 2020) in the World Trade. https://doi.org/10.2908/EXT_LT_INTROEU27_2020

China consolidates its world's leading goods exporter position, growing both in absolute terms and as a share of global exports between 2013 and 2023, according to Eurostat data (Table 1). Its exports increased in this interval by 88% (from 1663.2 bill. Euros in 2013 to a

peak of 3412.7 bill. euros in 2022) and then slightly decreased to 3125.6 bill. Euros in 2023. China's share of world goods exports increased from 14.4% in 2013 to 18.8% in 2020 and 2021 and then stabilizing at 18.1% in 2022 and 2023 (Table 1). This upward trend can be attributed to the rapid expansion of production capacities, technological innovation and competitiveness in international markets (Eurostat,2024b). Government support through favourable trade policies and massive infrastructure investments also contribute to such a performance. Fang, Ou and Yao (2022) find that China's goods exports to its main trading partners have recovered after the decline from the Covid19 Pandemic. The mechanical, electrical and high-tech industries have made a significant contribution to this recovery. In 2023, a slight decrease is observed compared to 2022, but exports remain at a very high level (Eurostat, 2024b).

European Union (EU) recorded a significant increase in goods exports value of approximately 43.50% over the last decade. Goods exports ranged from 1,780.13 bill. Euros in 2013 to a peak of 2,570.18 bill. Euros in 2022, then slightly decreasing to 2,554.48 bill. Euros in 2023 (Eurostat, 2024a). The EU's share of world exports remained relatively constant at about 15-16% until 2019, then decreasing to 13.7% in 2022 and returning to 14.8% in 2023 (Table 1). This is likely to resent the increased competitiveness of European products on the world market and the effectiveness of the bloc's common trade policies. The EU's relative economic stability and favourable trade agreements with international partners have contributed to this positive performance.

The US' exports have grown by 57% over the past decade. But actually, the growth period was between 2013 (1187.85 bill. Euros) and 2019 and was followed by a significant decline in 2020 due to the impact of the COVID-19 pandemic on the global economy (Eurostat, 2024b). However, in 2021 exports recovered and reached a peak of 1958.30 billion euros in 2022. In 2023 exports slightly decreased as compared to 2022 (1866.77 billion euros). The stability and economic influence of the US as a global technological and economic leader were maintained and reflected in the increase in the share in world exports from 10.3% in 2013 to 11.3% in 2016, stabilizing around 10-10.8% in the following years. (Eurostat, 2024b).

Japan, in its turn, sees its share of world exports decline, despite a yet increase in absolute value, as correspondingly (table 1). Japan's goods exports raised from 538.44 bill. Euros in 2013 to a peak of 709.09 bill. Euros in 2022 with a slight decrease in 2023 to 663.97 bill. Euros (an increase of 23.3% over the entire period 2013-2023). Japan's share of world exports fallen from 4.7% in 2013 to 3.8% in 2022 and 2023 reflecting domestic economic challenges and an increased global competition to face (Eurostat, 2024b). Competition from countries like China and South Korea, has increased significantly despite that Japan had previously been a leader in technology and innovation for long enough (Profit.ro, 2024).

South Korea's exports ranged from 421.37 bill. Euros in 2013 to a peak of 649.15 bill. Euros in 2022 (a 54% increase) (Eurostat, 2024b). Over our period under review, South Korea's share of world exports remained relatively stable, in its turn, i.e. ranging from a low of 3.4% (in 2022) to a high of 4.1% (in 2017). This stability suggests that while its exports have grown, they have been at a similar pace to global export growth, thus maintaining its market share (Eurostat,2024b).

*Canada's e*xports increased in absolute value between 2013 and 2023 from 343.80 billion Euros to 524.05 bill. Euros (approx. 52.44% according to Eurostat). However, despite such this absolute increase, Canada's share of world goods exports remained constant at around 3%. International trade agreements such as the United States–Mexico–Canada Agreement (USMCA) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) create favourable conditions for Canada's trade of goods.

During the same interval *Mexico's* exports grew by a substantial 91.67%, from 286.08 bill. Euros in 2013 to 548.41 bill. Euros in 2023 (Eurostat, 2024b). This development reflects

the diversification and expansion of its production and export capacities, as well as its deep integration into international supply chains (International Trade Administration, 2023).

In the same interval, the *United Kingdom* goods exports grew by 16.7% (Eurostat, 2024b). This was influenced by multiple economic and political factors as Brexit and the Covid-19 Pandemic. The UK has trade agreements with the EU and non-EU member countries as well as with more distant countries such as Australia, New Zealand or Singapore (UK Parliament, 2024). The impact of the Covid-19 Pandemic on UK goods trade has been significant enough. However, by the end of 2022, the gap between UK exports and those from other advanced economies appeared to have narrowed, suggesting that the disruptions related to the post-Brexit transition were starting to dissipate.

The growth of Russian exports during 2013-2022 was about 40.73% (i.e. final data not available for 2023). This period was initially characterized by a downward trend, with exports falling steadily until 2016. After this low point, exports began to also steadily recover, a recovery looking like coming from the whole Russian economy. That was until 2022 when Russian exports reached a peak of 558.72 bill. Euros (Eurostat, 2024b). Also, the share of Russian goods exports in total world exports, it has steadily decreased but still remains around an average value of 3.0% (Eurostat, 2024b). The data thus highlights the resilience of the Russian economy and its ability to adapt its trade strategies to face external and internal challenges.

The value of Singapore's exports evolved from 316.19 billion euros in 2013 to a peak of 489.05 bill. Euros in 2022, then a slight decline. This means a total growth of about 54.7% over the decade. Singapore's share in total world exports of goods, remained relatively stable around 2.6-2.7% until 2022 (Eurostat, 2024b). Singapore improvement of its ports and logistics has boosted exports by lowering transport costs, speeding up delivery and strengthening Singapore’s role as a global trade hub (Opengov Asia, 2024).

India's exports of goods were around 253.45 bill. Euros in 2013, rising modestly to 273.07 bill. Euros in 2018 to 429.90 bill. Euros in 2022 and stabilizing at 398.98 bill. Euros in 2023(Table 1). This represents an increase of about 57.4% over the 2013-2023 decade. As about India's export share in world trade, this varied between 2.0% and 2.3% during 2013-2023 (Eurostat, 2024b). India’s export growth has been supported by various economic reforms and export promotion policies. However, underdeveloped infrastructure and bureaucratic and regulatory challenges have limited the pace of growth (Reuters, 2023).

Brazil's exports of goods raised from 175.10 bill. Euros in 2013 to 317.63 bill. Euros in 2022 with a slight decrease in 2023 to 314.16 bill. Euros (79.4% over the decade). Brazil's share of world goods exports remains relatively low, fluctuating between 1.4% and 1.8% between 2013 and 2023 (Eurostat, 2024b). This shares highlights Brazil's role as an important supplier of raw materials and agricultural products, but also its limitations in diversifying and increasing exports of value-added products (OECD, 2020).

3.2 World imports in the 2013-2023 interval

Eurostat statistical data indicate that the world's main economies recorded significant increases of imports in absolute value between 2013-2023 with different trends depending on domestic and external economic conditions (Eurostat,2024b). The United States, the European Union and China remained the largest importers while countries such as Japan and Russia experienced more modest growth or even a decline in their share of world imports. This dynamic reflects the complexity of global trade relations and the strategic adjustments of each individual economy (Eurostat,2024a, b).

Table 2. Share of national imports in world imports (%)

Country/ Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
United States	15.1	15.6	17.1	17.1	16.5	16.3	16.4	17.0	16.3	16.3	16.4
European - 27 Union	14.0	14.0	13.5	13.5	13.8	14.1	13.9	13.8	13.9	15.3	14.1
China (excl. Hong Kong)	12.6	12.7	12.4	12.1	12.7	13.3	13.3	14.6	14.9	13.1	13.3
Japan	5.4	5.2	4.6	4.6	4.6	4.7	4.6	4.5	4.3	4.3	3.9
Great Britain	4.3	4.5	4.7	4.8	4.4	4.2	4.4	4.5	3.8	4.0	4.1
South Korea	3.3	3.4	3.2	3.1	3.3	3.3	3.2	3.3	3.4	3.5	
India	3.0	3.0	2.9	2.7	3.1	3.2	3.1	2.6	3.2	3.5	3.5
Mexico	2.5	2.6	2.9	2.9	2.9	2.9	2.9	2.7	2.8	2.9	3.1
Canada	3.0	3.0	3.1	3.1	3.0	2.9	2.9	2.9	2.7	2.8	2.9
Singapore	2.5	2.4	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	-
Brazil	1.6	1.6	1.3	1.1	1.1	1.2	1.2	1.2	1.3	1.4	1.3
Russia	2.0	1.9	1.3	1.6	1.8	1.5	1.6	1.6	1.6	1.3	-
Other	30.7	30.1	30.7	31.2	30.5	30.1	30.2	29.0	29.5	29.3	37.4
Total	100.0	100.0	100.0	100.0	100.	100.0	100.0	100.0	100.0	100.0	100.0

Source: Eurostat,2024a. Share of European Union EU27 (from 2020) in the World Trade. https://doi.org/10.2908/EXT_LT_INTROEU27_2020

Meanwhile, the *US* continued to be the world's largest importer, with a constant advance in its value of imports due to strong domestic demand and post-pandemic economic stimulus. That was from 1751.82 bill. Euros in 2013 to 2930.24 bill. Euros in 2023, so an increase of about 67.3% (Eurostat,2024b, Investopedia, 2024a). In 2020, the pandemic caused a temporary decline in imports due to supply chain disruptions and reduced demand. However, the rapid recovery of the US economy led to a significant increase in imports in 2021 and 2022. Trade policy decisions, including trade agreements and tariffs, have influenced trade flows. For example, the renegotiation of NAFTA into the USMCA had implications for imports from and to Canada and Mexico (Statista, 2024b). The US' share of world imports went from15.1% in 2013 to a maximum of 17.1% in 2015 and 2016, before stabilizing around 16.3-16.4% in recent years (Eurostat,2024b).

The imports of the *European Union (EU-27)* between 2013 and 2023 substantially increased in absolute value from 1630.76 bill. Euros in 2013 to 2518.96 bill. Euros in 2023, an increase of 54.5% (Eurostat,2024b). In 2020 the pandemic disrupted the region's foreign trade and supply chains more significantly than elsewhere in the world so here leading to a decrease in imports to 1715.37 bill. Euros. Then, however, the rapid recovery in 2021 and 2022 led to a spectacular increase in imports up to a peak of 3006.15 bill. Euros in 2022 (Eurostat,2024b). Increased demand for energy, especially liquefied natural gas (LNG), and for technological products contributed to this increase in the Europe's value of imports (Statista, 2024d). The EU-27 share of world imports fluctuated over the period under review. The share remained constant at 14.0% in 2013 and 2014, then decreased slightly to 13.5% in 2015 and 2016. Since the next 2017 the share gradually increased, reaching a peak of 15.3% in 2022, before returning to 14.1% in 2023(Eurostat,2024b; Statista, 2024d).

During 2013-2023 *China's* imports also significantly increased from 1468.26 billion euros in 2013 to 2364.53 bill. Euros in 2023, so for about 61.1%. The China's share in world imports varied between 12.1% and 14.9% during the same period (Eurostat,2024b). The country's share in world imports fluctuated with a maximum of 14.9% in 2021 followed by a slight decrease to 13.1% in 2022 and 13.3% in 2023. So, China remains a major player on the international trade scene. Factors like rapid economic growth, diversification of import sources

and adoption of advanced technologies have contributed to maintaining its dominant position (Statista,2024e).

Japan's imports increased from 627.34 bill. Euros in 2013 to a peak of 853.37 bill. Euros in 2022, before declining to 695.23 bill. Euros in 2023 (Statista, 2024f). This makes a total increase of around 10.8% over this decade. Japan is a major importer of energy resources, especially oil and natural gas (ANGEA, 2024). Although the absolute value of Japan's imports increased, its share of world imports fell from 5.4% in 2013 to 3.9% in 2023(Eurostat,2024b). Fast growth in imports in other emerging and developed economies, especially China and other Asian countries, has reduced Japan's relative share of global trade.

The *UK's* imports increased from 494.86 bill. Euros in 2013 to 731.88 bill. Euros in 2023, marking an increase of 47.9%. The share in world imports fluctuated between 4.0% and 4.8%, with 4.1% in 2023 (Eurostat,2024b).

India is one of the world's fastest growing economies and is poised to continue on this trajectory, with some agenda to achieve upper-middle-income status by 2047 (World Bank, 2024a). In 2013, India's imports were worth 350.91 bill. Euros and by 2023, they had grown to 621.60 bill. Euros, an increase of about 77%. India has maintained a relatively stable share of world imports, ranging between 2.7% and 3.5% between 2013 and 2023(Eurostat,2024b Statista,2024h).

South Korea, in its turn, establishes itself as joining the group of the most important countries for international trade and has established numerous trade partnerships and trade agreements. South Korea's imports have increased from 388.20 bill. Euros in 2013 to a peak of 694.55 bill. Euros in 2022, an increase as high as 78.93% in absolute value of imports over a decade. South Korea's import shares in world imports have been relatively stable: between 3.1% and 3.5%, with a value of 3.5% in 2022 (Eurostat,2024b). This stability shows the country's ability to maintain its competitiveness in the global market over time.

Mexico is the 14th largest economy in the world. Mexico's imports obviously increased from 287.03 bill. Euros in 2013 to 553.48 bill. Euros in 2023, as an increase of approximately 92.8% (Eurostat,2024b). Its share in world imports has increased slightly from 2.5% in 2013 to 3.1% in 2023. Mexico is party to several regional and international trade agreements, such as the United States-Mexico-Canada Agreement (USMCA) and agreements with the European Union and Japan (International Trade Administration,2023). Although proximity to the United States is an advantage, it also creates a significant dependence on the American economy (Britannica,2024).

Canada's imports in 2013 were 347.70 bill. Euros and in 2023 this value increased to 516.47 bill. Euros, a percentage increase of 48.6% over the past decade (Eurostat,2024b). Canada's share of world imports has stayed pretty stable, hovering around 3% over the decade (Eurostat,2024b). Canada is party to number of trade agreements, including the United States-Mexico-Canada Agreement (USMCA), the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), and the Comprehensive Economic and Trade Agreement (CETA) with the European Union. The United States is one of Canada's most important trading partners (Government of Canada, 2023).

Singapore is a key trade, transport and financial hub in Asia. With an extensive network of trade agreements with over 30 partners, the country trades over 550 bill. Euros with the rest of the world each year (EC, 2024b). Singapore's imports have grown significantly over the past decade, reflecting not only its domestic economic growth but also its important role in international trade. In absolute terms, Singapore's imports raised from 292.18 bill. Euros in 2013 to 451.48 bill. Euros in 20223, an advance of 54.5%. Its share in world imports has got stable at around 2.2-2.5% (Eurostat,2024b). Strategic positioning, effective trade policies, economic diversification and a stable business environment have been key factors contributing to this growth (World Bank, 2024b).

Despite being the largest economy in Latin America and the 9th largest in the world, *Brazil* stays relatively closed compared to other large economies, with low trade penetration and a small number of exporters relative to population (213 million) (Banco Santander, 2023). Between 2013 and 2023, Brazil's imports increased from 189.96 bill. Euros in 2013 to 233.71 bill. Euros in 2023 (Eurostat,2024b). This increase translates into an absolute increase of 43.75 billion, a percentage increase of 23%. Its share in world imports decreased from 1.6% in 2013 to 1.3% in 2023. Trade agreements with numerous countries, either bilaterally or through Mercosur, are recorded to this country ((Eurostat,2024b)

Finally, *Russia's* imports showed variable dynamics between 2013 and 2023, increasing from 237.14 bill. Euros in 2013 to 266.24 bill. Euros in 2022 (Eurostat,2024b). This is an absolute increase of 29.1 bill. Euros equivalent to a percentage increase of 12.3% (Table 2). Despite modest, such a growth spurt gets significant in the context of economic sanctions imposed by Western countries and countermeasures adopted by Russia. Its share in world imports decreased from 2.0% in 2013 to 1.3% in 2023. Imports focused on essential goods, technologies and equipment for the modernization of industrial and energy infrastructure (Eurostat,2024b).

3.3 Dynamics of trade balances of the main world economies in the 2013 - 2023 interval

Between 2013 and 2023, the dynamics of the trade balances of the world's major economies revealed major structural differences (Eurostat,2024b).

During this period the *United States* recorded the largest trade deficit globally, maintained throughout the period 2013-2023. The trade balance of goods deficit increased from (-)563.97 bill. Euros in 2013 to a peak of (-) 1244.84 bill. Euros in 2022 before partially improving in 2023 (-1063.47 billion euros). This development reflects a combination of factors: high domestic demand for imports, trade tensions with China and the impact of the pandemic, and subsequently global inflation and rising energy prices, including those generated by the war in Ukraine, amplified the external imbalance (KPMG, 2023).

The *United Kingdom's* situation was similar to that of the US in that it continued to have a constant trade deficit, which widened sharply after Brexit. From -82.21 bill. Euros in 2013, the deficit rose to -272.08 bill. Euros in 2022, remaining at -250.26 bill. Euros in 2023. (Eurostat,2024b). Leaving the European Union introduced trade barriers and uncertainties that eroded the external competitiveness of the British economy (Centre for Economic Performance 2024).

In the *India's* case, the trade balance remained negative throughout the period, fluctuating depending on international energy and commodity prices. The deficit peaked at -265.79 bill. Euros in 2022 before declining to -222.63 bill. Euros in 2023 (Eurostat,2024b). Rapid industrialization and economic growth boosted imports, while high energy costs, especially after the invasion of Ukraine, maintained pressure on the external account (Statista, 2024h).

As for *Japan*, it has experienced a more volatile evolution, going through a short period of surplus in 2016-2017 (+34.34 bill. Euros and +23.20 bill. Euros respectively) followed by a return to increasing deficits, culminating in -144.28 bill. Euros in 2022 and -31.26 bill. Euros in 2023(Eurostat,2024b). Dependence on energy imports and demographic stagnation have limited its export potential, making the economy vulnerable to external shocks (Energynomics, 2021; WEF, 2023).

For *Mexico* the goods trade balance remained relatively balanced, with moderate deviations between surplus and deficit. The highest deficit was recorded in 2022 (-25.53 billion euros), but this decreased to only -5.07 bill. Euros in 2023 (Eurostat,2024b). The geographical

position and integration into North American supply chains have provided stability, and recent trends in "nearshoring", accelerated by the COVID-19 pandemic, have further strengthened this regional integration (International Trade Administration, 2023).

Canada also experienced a fluctuating goods trade balance between 2013 and 2023, alternating between deficits and surpluses. The first significant surplus occurred in 2014 (+9.10 bill. Euros), supported by exports of natural resources and stable import levels. After a period of deficits between 2015 and 2020, the balance improved considerably starting in 2021, with the global economic recovery after the pandemic (Eurostat,2024b). The largest surpluses were recorded in the period 2021–2023, with a peak of +23.91 bill. Euros in 2022 (Statistics Canada, 2023). The increase in external demand for energy and raw materials here was the main factor, to which were added the diversification of trading partners and the entry into force of the USMCA, which provided additional stability to trade relations (WEO, 2023). However, deficit years - such as 2013 and the period 2015–2020 - have shown the economy's vulnerability to high imports of manufactured goods and technology, which have consistently exceeded export revenues (Eurostat, 2024b).

European Union (EU27) recorded during the same 2013-2020 interval a constant and robust trade surplus, rising from 149.37 bill. Euros in 2013 to a peak of 264.39 bill Euros in 2016. In 2020, as already mentioned above, the COVID-19 pandemic affected this region and countries group´s foreign trade, with exports falling by 9.3% and imports by 11.5% (Eurostat, 2024a). In 2021 the trade surplus narrowed sharply to 56.82 bill. Euros reflecting disruptions to supply chains and a slow recovery of international demand (Eurostat, 2024a, b). The situation deteriorated in 2022, when the EU moved to a record deficit of -435.97 bill. Euros, driven by the sharp increase in energy prices and the impact of sanctions imposed on Russia after the invasion of Ukraine, which increased of the cost of gas and oil imports. In 2023 the balance returned to surplus (35.53 billion euros) due to the stabilization of energy prices, diversification of suppliers and focusing on alternative energy sources (Eurostat, 2024a).

During the last decade *Brazil's* trade balance of goods shifted from a moderate deficit to significant surpluses. In the early years, economy was affected by the 2014-2016 recession which generated a trade deficit of approx. –15 bill. Euros annually (Vartanian & de Souza, 2019). However, the increased competitiveness of agricultural and mineral exports led to a rapid recovery from 2015, culminating with a surplus of 30.97 bill. Euros in 2016 (Valdes, Hjort & Seeley, 2020). Since 2017, Brazil has consistently recorded surpluses, supported by exports of soybeans, coffee and iron ore (OECD, 2020). Even during the Covid-19 Pandemic the surplus remained at 37.51 bill. Euros (IMF, 2021) confirming the country's role as a global supplier of raw materials. In the following years, the balance strengthened, reaching a record of 80.45 bill. Euros in 2023 due to a high international demand and the diversification of export markets, especially to Asia (Government of Brazil, 2022).

Over the same last decade *China* has consolidated its dominant position in world trade, maintaining a large and growing trade surplus. From 195 bill. Euros in 2013, it is expected to rise to over 760 bill. Euros in 2023, after peaking at 833 bill. Euros in 2022 (Eurostat, 2024b, Statista, 2024k). Such a growth was driven by exports of high-value-added manufactured goods – electronic equipment, integrated circuits, computers and electric batteries – mainly destined for the United States, the European Union and other Asian markets (OEC, 2023). In parallel, imports have focused on critical raw materials such as crude oil, iron ore, copper and agri-food products (e.g. soybeans, meat), reflecting China's dependence on external resources to support industrial production (Statista, 2024e; OEC, 2023). The COVID-19 pandemic has highlighted the resilience of the Chinese economy, which has maintained its trade surplus by increasing exports of medical equipment and electronics (BBC, 2020).

During the period 2013–2022 *South Korea* maintained a positive trade balance, supported by export performance in the technology and manufacturing sectors (Eurostat,

2024b, Statista, 2024g). However, in 2022, the balance turned into a deficit, reaching - 45.40 bill. Euros due to dependence on energy imports and the effects of the war in Ukraine, which pushed up the costs of oil and food imports (Trading Economics, 2023).

Singapore has maintained a steady trade surplus, peaking at 44.90 bill. Euros in 2015 stabilizing at 37.56 bill. Euros in 2022(Eurostat, 2024b). This performance reflects its integration as a global logistics and financial hub, its strategy of diversifying import and export sources, a favourable business environment and effective trade policies (EDB, 2023; Singapore Food Agency, 2022; Allianz Trade, 2023). Its main trading partners are China, the US, Indonesia, Malaysia, and Japan (Singapore Department of Statistics, 2024).

Russia has recorded a substantial trade surplus, increasing from 159.87 bill. Euros in 2013 to a peak of 292.47 bill. Euros in 2022 (Eurostat, 2024b). The decline to 85.23 bill. Euros in 2016 was caused by international sanctions and the decline in global oil prices, caused by excessive supply and weaker demand including from China, as well as OPEC decisions and increased shale oil production in the US (Mead & Stiger, 2015; Stocker et al., 2018; Hotnews, 2019; WEF, 2016; BBC, 2016). The COVID-19 pandemic had a mixed impact on the trade balance, initially causing a decline in global energy demand and oil and gas export revenues in 2020. However, the trade balance recovered in 2021, reaching a surplus of 168.10 bill. Euros (Eurostat, 2024bDespite the intensification of sanctions and geopolitical tensions in 2022, Russia's trade of goods surplus continued to grow, reaching a new high (292.4 bill. Euros). Russia has sought to diversify its trading partners, exporting more energy to India and China, although in 2022 the European Union continued to be the main buyer, generating over half of Russia's energy export revenues (Darvas and Martins, 2022).

4. CONCLUSIONS

During the 2013-2023 interval, the international trade in goods was marked by the consolidation of traditional economic poles- i.e. China, the European Union and the United States and by the increasing role of emerging economies such as India, South Korea and Mexico (Statista, 2024g, Eurostat, 2024b).This development highlights the structural asymmetries of the global system - the United States maintained a persistent trade deficit while China and the EU accumulated substantial surpluses(Statista, 2024g). Major non-economic events such as the Covid-19 Pandemic and the war in Ukraine have highlighted the vulnerability of goods trade flows, affecting energy and commodity prices as well as logistics chains.

Energy exporting countries such as Russia, have benefited from rising prices, while economies dependent on energy imports, such as South Korea and Japan, have seen additional pressures on their trade balances (Darvas & Martins,2022; Energynomics,2021). Diversification and global integration strategies, e.g. Singapore, have showed that it is possible to maintain a stable surplus even vis-a-vis external volatility (EDB, 2023; Allianz Trade, 2023). Conversely, domestic policies and geopolitical tensions as Brexit in the UK or trade conflicts with China in the US, have soared the deficits and vulnerabilities (KPMG, 2023). Recent trends point to a gradual regionalization of trade flows and an increased focus on economic resilience through diversification of partners and adaptation to external shocks, essential for long-term stability and competitiveness.

REFERENCES

1. Allianz Trade (2023). *Resilient growth in a roaring business environment*. https://www.allianz-trade.com/en_global/economic-research/country-reports/Singapore.html

2. Asia Natural Gas and Energy Association ANGEA (2024). *Japan was the world's fifth-largest energy consumer in 2023, while importing almost 90% of its energy needs*. https://angeassociation.com/location/japan/
3. Banco Santander (2023). *Brazilian foreign trade in figures.* https://santandertrade.com/en/portal/analyse-markets/brazil/foreign-trade-in-figures
4. Britannica (2024). *Trade of Mexico*. https://www.britannica.com/place/Mexico/Trade
5. BBC (2016). *Russian economy hit by oil price slid*e. https://www.bbc.com/news/business-35398423
6. European Commission (CE 2024b). *Acordul de liber schimb UE-Singapore*. https://trade.ec.europa.eu/access-to-markets/ro/content/acordului-de-liber-schimb-ue-singapore
7. Centre for Economic Performance (2024). Brexit and UK trade. London School of Economics. https://cep.lse.ac.uk/pubs/download/ea058.pdf
8. Economic Development Board (EDB,2023). *Singapore*. https://www.edb.gov.sg/en/our-industries/logistics-and-supply-chain-management.html
9. Energynomics (2021). *Decarbonizarea sectorului energetic este premisa principală in Japonia*.https://www.energynomics.ro/e-s-hiroshi-ueda-ambasadorul-japoniei-decarbonizarea-sectorului-energetic-este-premisa-principala/
10. Eurostat (2024a). *Share of European Union EU27 (from 2020) in the World Trade.* https://doi.org/10.2908/EXT_LT_INTROEU27_2020
11. Eurostat (2024b). *International trade in goods*. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=International_trade_in_goods
12. Fang, J., Ou, J., & Yao, S. (2022). On COVID-19 pandemic and China's foreign trade. *World Economy*, 45(1), pp. 3507-3533. https://doi.org/10.1111/twec.13269
13. Government of Brazil (2022). In 2021, the largest trade surplus in Brazil's history: US$ 61,2 billion. https://www.gov.br/en/government-of-brazil/latest-news/2022/in-2021-the-largest-trade-surplus-in-brazil2019s-history-us-61-2-billion
14. Government of Canada (2023). *Canada-United States relations.* https://www.international.gc.ca/country-pays/us-eu/relations.aspx?lang=eng
15. Hotnews (2019). *Starea energiei americane în 2019: Mai abundentă, mai sigură, mai curată datorită fracturării hidraulice.* https://hotnews.ro/starea-energiei-americane-n-2019-mai-abundenta-mai-sigura-mai-curata-340964
16. Investopedia (2024a). U*.S. COVID-19 Stimulus and Relief*. https://www.investopedia.com/government-stimulus-efforts-to-fight-the-covid-19-crisis-4799723
17. International Trade Administration (2023). *Mexico - Country Commercial Guide*. https://www.trade.gov/knowledge-product/exporting-mexico-market-overview
18. IMF (2021). Brazil: Selected Issues. Volume 2021: Issue 218 „While imports fell sharply, exports were less affected thanks to Brazil's trade exposure to China" https://doi.org/10.5089/9781513597386.002
19. KPMG (2023). *Russia-Ukraine war impact on supply chains and inflation.* https://kpmg.com/us/en/articles/2022/russia-ukraine-war-impact-supply-chains-inflation.html

20. Mead, D., & Stiger, P. (2015a). The 2014 plunge in import petroleum prices: What happened? Beyond the Numbers. *Global Economy*,4(9). U.S. Bureau of Labor Statistics. Retrieved from https://www.bls.gov/opub/btn/volume-4/the-2014-plunge-in-import-petroleum-prices-what-happened.htm
21. Observatory of economic complexity (OEC, 2023). *China, latest trends.* https://oec.world/en/profile/country/chn
22. OECD (2020). Responsible Business Conduct Country Fact Sheet - *Brazil, OECD Paris*. https://mneguidelines.oecd.org/final-brazil-fact%20sheet.pdf
23. Opengov Asia (2024). *Singapore's Future-Ready Logistics: Innovation and Infrastructure*. https://opengovasia.com/2024/10/04/singapores-future-ready-logistics-innovation-and-infrastructure/
24. Profit.ro (2024). *China a depăşit Japonia şi a devenit cel mai mare exportator de autovehicule din lume.* https://www.profit.ro/povesti-cu-profit/auto-transporturi/china-a-depasit-japonia-si-a-devenit-cel-mai-mare-exportator-de-autovehicule-din-lume-21456603
25. Reuters (2023). *Policy barriers, bureaucracy could slow pace of investment in India.* https://www.reuters.com/world/india/policy-barriers-bureaucracy-could-slow-pace-investment-india-moodys-2023-05-23/
26. Singapore Department of Statistics (2024). *Singapore's international trade*. https://www.singstat.gov.sg/modules/infographics/-/media/Files/visualising_data/infographics/trade_and_investment/singapore-international-trade.pdf
27. Statista (2024b). *The USMCA trade agreement is the replacement to the North American Free Agreement (NAFTA), and is due to take effect on July 1, 2020.* https://www.statista.com/topics/3840/us-imports/#topicOverview
28. Statista (2024d). *Annual share of world goods imports and exports of the European Union from 2002 to 2023*. https://www.statista.com/statistics/1364008/eu-international-trade-world-exports-imports/
29. Statista (2024e). *Imports to China - statistics & facts.* https://www.statista.com/topics/1471/imports-to-china/#topicOverview
30. Statista (2024f). *Import value of goods to Japan from 2014 to 2023.* https://www.statista.com/statistics/648619/japan-total-import-value/
31. Statista(2024g). *Imports to South Korea - statistics & facts,* https://www.statista.com/topics/11969/imports-into-south-korea/
32. Statista(2024h). *Imports to India - statistics & facts. The major import commodities are petroleum products, electronic goods, gold, and machinery goods.* https://www.statista.com/topics/6711/imports-to-india/#topicOverview
33. Statista(2024k). *The 20 countries with the highest trade surplus in 2023. "In 2022, China was the country with the highest trade surplus".* https://www.statista.com/statistics/256642/the-20-countries-with-the-highest-trade-surplus/
34. Singapore food agency (2022). *Singapore diversifies Import Sources.* https://www.sfa.gov.sg/singaporefoodstory/diversification-of-import-sources
35. Statistics Canada (2023). *Canadian international merchandise trade: Annual review 2022.* https://www150.statcan.gc.ca/n1/daily-quotidien/230509/dq230509a-eng.htm
36. Stocker, M., Baffes, J., & Vorisek, D. (2018). *What triggered the oil price plunge of 2014-2016 and why it failed to deliver an economic impetus in eight charts*. Retrieved from : https://blogs.worldbank.org/en/developmenttalk/what-triggered-

oil-price-plunge-2014-2016-and-why-it-failed-deliver-economic-impetus-eight-charts
37. Trading Economics (2023). *South Korea Balance of Trade.* https://tradingeconomics.com/south-korea/balance-of-trade
38. UK Parliament (2024). *Progress on UK free trade agreement negotiations.* https://commonslibrary.parliament.uk/research-briefings/cbp-9314/
39. Vartanian, P.R., de Souza G.H. (2019). The Brazilian economic crisis during the period 2014–2016: Is there precedence of internal or external factors? *J. Int. Glob. Econ. Stud*., 12, pp. 66–86.
40. Valdes, C. & Hjort, K. & Seeley, R. (2020). Brazil's Agricultural Competitiveness: Recent Growth and Future Impacts under Currency Depreciation and Changing Macroeconomic Conditions*, Economic Research Report 327206*, United States Department of Agriculture. http://dx.doi.org/10.22004/ag.econ.327206
41. World Bank (2024a). *The World Bank in India.* https://www.worldbank.org/en/country/india/overview
42. World Bank (2024b). *The World Bank in Singapore.* https://www.worldbank.org/en/country/singapore/overview
43. World Economic Observatory (WEO,2023). *Canada,* https://oec.world/en/profile/country/can
44. WEF (2016). *What's behind the drop in oil price?* https://www.weforum.org/agenda/2016/03/what-s-behind-the-drop-in-oil-prices/
45. WEF (2023). *More than 1 in 10 people in Japan are aged 80 or over. Here's how its ageing population is reshaping the country.* https://www.weforum.org/stories/2023/09/elderly-oldest-population-world-japan/

CHANGE MANAGEMENT FOR THE SUSTAINABLE DEVELOPMENT OF ORGANIZATIONS

Mădălina TOCAN[16],
Institute for World Economy, Romanian Academy; Faculty of Financial Management, Ecological University of Bucharest

ABSTRACT: *Sustainable development has become a strategic imperative for organizations, governments, and societies, requiring structural transformation and long-term commitment. The integration of sustainability into business models entails profound organizational changes, affecting processes, culture, and stakeholder relationships. Consequently, effective change management emerges as a critical enabler for embedding sustainability into organizational practice and plays a central role in ensuring that sustainability strategies are effectively implemented, accepted, and embedded into organizational culture.*

This paper explores the interdependence between sustainable development and change management, arguing that their synergy is essential for achieving systemic transformation. It examines the theoretical foundations of both domains, highlights practical approaches for aligning change management strategies with sustainability objectives, The analysis concludes that only through integrated and adaptive change management approaches can organizations successfully balance economic, social, and environmental objectives, ensuring sustainable growth and long-term viability.

Keywords: *Sustainable development, sustainability, change management.*

JEL Classification: *M10; M14; Q01.*

1. INTRODUCTION

The concept of sustainable development has become one of the central paradigms of the 21st century, shaping not only global economic and environmental policies but also the strategic orientation of organizations across sectors. Triggered by accelerating climate change, rising inequality, and resource scarcity, sustainability has transcended the boundaries of environmental activism and has entered the mainstream of corporate governance, public administration, and civil society initiatives.

The United Nations 2030 Agenda for Sustainable Development, through its 17 Sustainable Development Goals (SDGs), emphasizes the interconnectedness of economic growth, social inclusion, and environmental protection. This global framework has been adopted by governments and organizations worldwide as a roadmap for inclusive and sustainable futures. However, translating the SDGs from political commitments into

[16] PhD. Scientific Researcher III, Associate Prof, madalina.tocan@gmail.com madalina.tocan@gmail.com

operational strategies at organizational and societal levels has proven challenging. This is because sustainability initiatives often disrupt existing practices, challenge entrenched interests, and require reallocation of resources. As a result, resistance to change, organizational inertia, and lack of clarity regarding implementation pathways frequently undermine sustainability efforts.

Against this backdrop, change management emerges as an indispensable tool for operationalizing sustainable development principles in organizations. Traditionally, change management has been defined as the structured approach to transitioning individuals, teams, and organizations from a current state to a desired future state. Models such as Lewin's unfreeze–change–refreeze cycle or Kotter's eight-step model emphasize leadership, communication, and stakeholder engagement as critical enablers of successful transformation. These theoretical underpinnings are directly applicable to the sustainability agenda, which requires organizations to adopt new processes, embrace innovation, and foster a culture of responsibility and resilience.

2. THEORETICAL BACKGROUND

Sustainable development has evolved from a marginal discourse in environmental movements during the 1970s to a global paradigm of governance, business strategy, and social responsibility. Its most cited definition, introduced in the Brundtland Report (1987), describes it as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" [11] Sustainable development is often framed as a universal solution to balancing economic growth, social inclusion, and environmental protection [2].

The United Nations Sustainable Development Goals provide a concrete framework for operationalizing this vision. They reflect the complexity of sustainability by linking poverty reduction with climate action, economic growth with social inclusion, and technological progress with environmental stewardship [12]. These objectives emphasize the need for sustainable business practices, urging companies to integrate economic, environmental and social (known as triple bottom line) considerations into their strategies [9]. From a managerial perspective, sustainable development demands more than compliance with environmental standards. It involves rethinking organizational purpose, redesigning production and supply chains, and adopting circular economy principles. In this sense, sustainability becomes a strategic orientation that redefines competitiveness, legitimacy, and long-term survival of organizations.

The sustainable development of companies has, in recent years, become a subject of increasing attention from both management theorists and business practitioners. When properly integrated into corporate strategies, organizational sustainability becomes a development model that offers multiple advantages. At the same time, a sustainable approach to business development proves to be an intelligent method for simultaneously addressing social, environmental, and economic challenges, which are particularly pressing today [3].

Organizational sustainability has been defined through a triple concept that addresses environmental issues, economic aspects, and social concerns. In this regard, it becomes imperative for organizations to evaluate the role of human, operational, and technological dimensions in the application of sustainable business practices. Sustainable operational practices are expected to deliver products to the market with zero defects and zero environmental impact [10].

Change management refers to the systematic process of guiding individuals, teams, and organizations through transformation [13]. Its theoretical foundations can be traced back to Kurt Lewin's change theory (1951), which conceptualized change as a three-step process:

unfreezing the status quo, implementing change, and refreezing new behaviors [8]. Although simplistic, this model highlighted the psychological and organizational mechanisms involved in overcoming inertia and embedding new practices.

Subsequent approaches have refined and expanded these insights. Kotter's 8-Step Model (1996) emphasizes leadership, vision, and stakeholder alignment as critical drivers of successful change. His model highlights the necessity of creating a sense of urgency, building guiding coalitions, and anchoring new behaviors in organizational culture. Similarly, Prosci's ADKAR model focuses on individual transitions, recognizing that organizational change is the cumulative result of personal adoption [13].

3. MANAGING SUSTAINABLE DEVELOPMENT THROUGH CHANGE MANAGEMENT

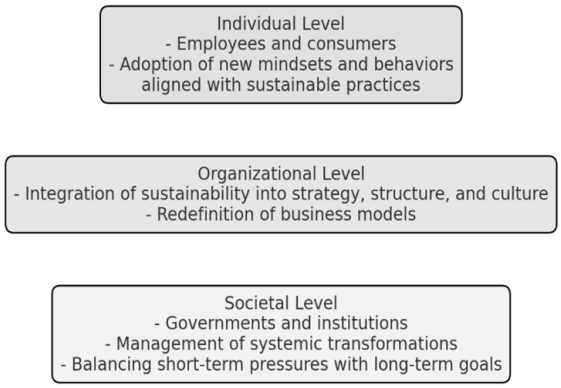
In today's dynamic world, organizational change and development management are fundamental elements of business success and, at the same time, sustainable development has emerged as an essential paradigm for businesses seeking to balance economic growth with social justice and environmental protection [4].

Adapting sustainability to existing business models may require a fundamental rethinking of operations and strategy, as the path toward sustainability entails very real challenges of change. For this reason, integrating sustainability demands profound transformations within operational processes and organizational structures [10] and, to varying degrees, all aspects of change management will have a substantial impact on sustainable development of organizations [1].

However, while some organizations are beginning to recognize the necessity of adopting ecological processes and behaviors as an essential component of sustainability practices, they are confronted with the dilemma of determining the most effective ways to implement them. The management of sustainable organizations, in fact, requires a comprehensive review of the entire system, as all aspects of the organization are subject to change. Consequently, the role of change management becomes inevitable [7].

The intersection of sustainable development and change management lies in the recognition that sustainability initiatives are inherently transformative. Unlike traditional efficiency-driven projects, sustainability often challenges fundamental assumptions about value creation, growth models, and stakeholder relations.

Figure no.1. Sustainable development as a multi-level change process



Source: Author's own processing

For instance, transitioning to renewable energy, reducing carbon emissions, or adopting circular economy practices requires not only technological innovation but also behavioral and

cultural shifts across the organization and its stakeholders. From this perspective, sustainable development can be understood as a change process on multiple levels.

Lozano argues that in order to effectively address sustainability, organizations must anticipate, prepare for, and manage change [6].

Other authors argue that, in order to build organizational sustainability, companies should: develop and maintain an organizational culture oriented toward sustainability, integrate sustainability objectives into the overall organizational strategy, and actively involve employees in the decision-making process and in the implementation of sustainable initiatives [5].

Recent researches emphasize the need for integrative frameworks that combine sustainability and change management. For example, Lozano's holistic approach to corporate sustainability argues that sustainability drivers must be embedded into organizational systems through iterative cycles of change. Similarly, concepts such as the triple bottom line and environmental, social, and governance (ESG) frameworks highlight the necessity of aligning financial performance with social and environmental accountability.

Adapting John Kotter's framework (1996) to the specific requirements of sustainability within organizations we propose a change management model for adopting sustainable development in organizations, structured in eight sequential steps.

1. Create urgency – The process begins by emphasizing the environmental, social, and economic challenges that necessitate immediate action. Establishing urgency highlights the risks of inaction and the opportunities of sustainable transformation.
2. Build a guiding coalition – Effective change requires a coalition of leaders, and key stakeholders who can champion sustainability initiatives and drive collective momentum.
3. Develop a vision and a strategy – Organizations must articulate a clear sustainability vision aligned with their mission and long-term strategy. This includes defining measurable goals and actionable pathways to integrate sustainability into operations.
4. Communicate the vision – Transparent and consistent communication is essential for reducing resistance and fostering buy-in across all organizational levels. The sustainability vision must be embedded into internal and external communications.
5. Empower action – Employees and managers need training, resources, and incentives to adopt sustainable practices. Barriers must be removed, and opportunities for innovation should be encouraged.
6. Generate short-term wins – Early achievements, such as reductions in energy use or successful recycling programs, demonstrate progress and strengthen organizational commitment to sustainability.
7. Consolidate gains – Building on initial successes, organizations should scale sustainable practices and expand their integration into business processes, supply chains, and governance structures.
8. Anchor sustainability in culture – Finally, sustainability must become part of the organizational culture. Embedding sustainability values into culture ensures long-term resilience, legitimacy, and continued commitment.

Figure no.2. Change management model for sustainable development in organizations

Source: Author's own processing

This model emphasizes that sustainability is not a one-time project but a continuous change process that requires leadership, stakeholder engagement, and cultural transformation. By following these steps, organizations can successfully transition towards sustainable development while ensuring employee alignment, stakeholder trust, and organizational resilience.

4. CONCLUSIONS

In today's context, marked by unprecedented economic, social, and environmental challenges, organizational change management stands out as a critical enabler of the transition toward sustainable development practices. Integrating sustainability into corporate strategy is no longer optional but has become a structural necessity for the long-term survival, competitiveness, and legitimacy of organizations.

Managing sustainable development through change management represents a dual challenge: achieving ambitious sustainability goals while orchestrating organizational and cultural transformations.

The organizational change required to embed sustainability principles is profound and systemic. Transformation cannot be achieved through isolated or short-term initiatives; rather, it requires a continuous process of renewal, adaptation, and cultural alignment. Effective change management must be orchestrated from both directions: top-down, by providing vision, leadership, and institutional structures, and bottom-up, by actively engaging employees and fostering ownership of sustainability initiatives.

Equally important, change should not be perceived solely as a disruption, but as an opportunity for innovation, value creation, and resilience building. Organizations that embrace change and develop adaptive capacities are better positioned to thrive in volatile environments and to contribute meaningfully to the construction of a sustainable society.

In conclusion, achieving sustainable development requires that companies implement integrated change management approaches grounded in leadership, stakeholder engagement, and cultural transformation. Only through such comprehensive strategies can organizations

simultaneously pursue economic, social, and environmental objectives, while ensuring resilience and long-term success.

REFERENCES

1. Al-Hadrami, A., Al-Aabri, L. S. S., Al Maawali, I., Al Habsi, K. S., & Alyaarubi, A. S. S., 2023, *Dimensions of Change Management and its Effect on Achieving Sustainable Development Goals in Oman*, Migration Letters, Volume. 2, no.5, available at: https://migrationletters.com/index.php/ml/article/view/3549 .
2. Bora, l., 2025, *Leveraging leadership and digital transformation for sustainable development: Insights from Cambodia's public sector*, Sustainable Futures, Volume 9, available at: https://www.sciencedirect.com/science/article/pii/S2666188825001157#bib0050
3. Covaș, L. 2019, *Cultura organizațională și dezvoltarea durabilă a întreprinderii-Monografie*, ASEM, ISBN 978-9975-75-954-0. available at: https://irek.ase.md/xmlui/bitstream/handle/123456789/2094/Covas%20Lilia%20Monografie%202019.pdf?sequence=1&isAllowed=y.
4. Faraj, T., Alwetwat, S., 2023. *The Effect of Organizational Change and Development Management on Sustainable Development*, Quantrade Journal of Complex Systems in Social Sciences 5(1), available at: *https://dergipark.org.tr/tr/download/article-file/3174999*
5. Kondratieva, H., 2025, *Formation of organizational sustainability in organizations in the context of sustainable development goals*, Economic Scope, 196, available at: https://doi.org/10.30838/ep.196.244-248.
6. Lozano, R., 2022, *Organizational Change Management for Sustainability*, Springer eBooks, available at: https://doi.org/10.1007/978-3-030-99676-5_5
7. Muo, I., Azeez, A. A., 2020, *Organizational green behavioral change: the role of change management*, International Journal of entrepreneurial knowledge, Issue X, Volume X, ISSN 2336-2960, available at: https://www.ijek.org/index.php/IJEK/article/view/98/93
8. Ogochi K., D. 2018, *Lewin's Theory of Change: Applicability of its Principles in a Contemporary Organization*, *Journal Strategic Management, Vol* 2(5) pp. 1-11. available at: https://stratfordjournalpublishers.org/journals/index.php/journal-of-strategic-management/article/download/229/274.
9. Sedovs, E., Volkova T., Ludviga I., 2025, *Sustainable development and strategic management - what is on the horizon in our non-ergodic world research?,* Sustainable Futures, Volume 9, 2025, available at: https://www.sciencedirect.com/science/article/pii/S2666188824002624.
10. Thakur, V., Mangla, S., 2019, *Change management for sustainability: Evaluating the role of human, operational and technological factors in leading Indian firms in home appliances sector*, Journal of Cleaner Production, Volume 213, 2019, Pages 847-862, ISSN 0959-6526, available at: https://www.sciencedirect.com/science/article/abs/pii/S0959652618339179
11. United Nations, 1987, *Report of the World Commission on Environment and Development: Our Common Future*, available at: http://www.un-documents.net/our-common-future.pdf
12. United Nations, 2015, *Sustainable development goals*, available at: https://www.un.org/sustainabledevelopment/development-goals/e.
13. University of Arizona, 2025, *What is Change Management?* available at: https://www.uagc.edu/blog/what-is-change-management,

ANALYSIS OF ROMANIA'S EXPORTS DURING 2020–2024: TRENDS AND ECONOMIC IMPACT

Oana CHINDRIȘ-VĂSIOIU[17]
Institute for World Economy, Romanian Academy

ABSTRACT: *The paper aims to analyze the evolution of Romania's exports during the 2020–2024 period, with the main objective of identifying key trade trends and assessing the resulting economic impact. The study is based on the premise of an economy affected by the COVID-19 pandemic in 2020, followed by a phase of recovery and consolidation in the subsequent years. The dynamics of export value are highlighted, along with the influence of global factors on Romania's external trade performance. The analysis reveals a significant post-pandemic recovery in exports, followed by a deceleration in growth during 2023–2024, driven by external uncertainties and adjustments in the international market.*

Keywords: *Competitiveness, international trade, exports, Romania.*

JEL Classification: *F10; O24.*

1. INTRODUCTION

In the context of accelerated globalization and European economic integration, exports represent a key driver of sustainable economic development, contributing directly to GDP growth, the balancing of the trade account, and the stimulation of foreign direct investment [1]. Romania, as an emerging economy, has undergone significant structural transformations, marked by a shift from a consumption-driven model to one increasingly focused on external competitiveness.

Romania's accession to the European Union (EU) in 2007 accelerated economic convergence processes and led to a strategic repositioning of its exports, both in terms of product composition and geographical destination. Simultaneously, investments in industrial sectors such as the automotive industry, electrical equipment, and information technology services have increased the value added in exports and reinforced Romania's role within European value chains [2].

However, this positive trajectory has not been without vulnerabilities. Events such as the 2008–2009 global financial crisis and the economic shocks caused by the COVID-19 pandemic have highlighted the economy's high dependence on external demand and its exposure to Western European markets [3]. In this context, analyzing export dynamics becomes essential to understanding both the trajectory of national economic development and its capacity for resilience and adaptation to external challenges.

This paper aims to examine the evolution of Romania's exports between 2020 and 2024, by identifying key structural trends, assessing the macroeconomic and sectoral impact, and outlining development perspectives considering emerging geo-economic challenges.

[17] Ph.D. Scientific Researcher III, oana.vasioiu@gmail.com

2. EVOLUTION AND GENERAL CONTEXT OF ROMANIA'S EXPORTS (2020–2024)

Exports are a key indicator of a country's external economic performance, reflecting its level of competitiveness, production capacity, and degree of integration into international value chains. In Romania's case, export performance over the past two decades has followed an upward trajectory, driven by EU integration, the development of industrial infrastructure, and the country's growing attractiveness as a destination for foreign direct investment.

During the post-accession period (2007–2024), Romania recorded a sustained pace of export growth, supported by the liberalization of the European single market, alignment with EU standards, and the relocation of production capacities from Western Europe to Central and Eastern Europe. According to Eurostat data [4], the value of Romanian exports rose from approximately €29 billion in 2007 to over €90 billion in 2023. This growth was accompanied by a diversification in the export structure, with an increasing share of industrial goods, particularly electrical equipment, automotive components, electronics, and metallurgical products.

Between 2020 and 2024, global conditions significantly influenced the trajectory of Romanian exports. The COVID-19 pandemic led to a sharp contraction in global demand in 2020, followed by a strong recovery in 2021–2022. However, the 2023–2024 period was marked by geopolitical instability (such as the war in Ukraine and rising global trade tensions) and disruptions in supply chains, which negatively impacted both the volume and growth rate of exports.

Structurally, Romania's main trading partners remain EU member states, especially Germany, Italy, France, and Hungary, which together account for over 70% of total exports. Meanwhile, exports to non-EU markets (such as the United States, Turkey, the Republic of Moldova, and the United Kingdom) have shown positive developments but remain marginal in total volume. Noteworthy is the increasing share of agri-food and energy exports, supported by regional comparative advantages and the development of port infrastructure (e.g., Constanța Port).

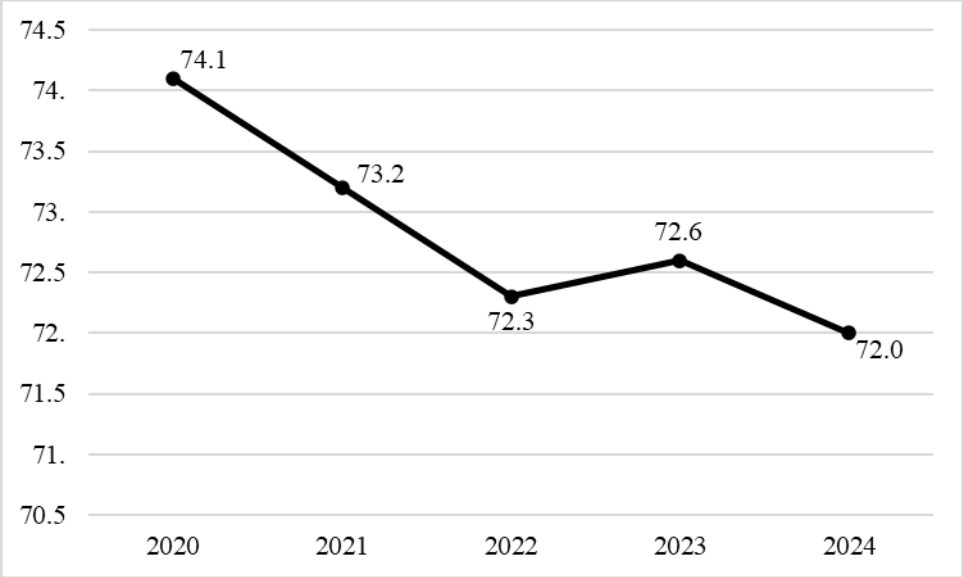
Exports play a multifaceted role in the Romanian economy: they help balance the trade account, contribute to GDP formation, stimulate industrial investment, and generate employment. Nevertheless, Romania remains vulnerable to external shocks, global market volatility, and shifts in international trade policy. The persistent trade deficit and dependence on imports for basic industrial components are structural challenges that call for coherent rebalancing strategies.

Romania's exports have followed a robust upward trend over the last two decades, shaped by both internal factors (industrial development, investment) and external drivers (European integration, global demand dynamics). The sustainability of this growth model will continue to depend on Romania's ability to innovate, diversify export markets, and maintain a competitive framework for its export-oriented sectors.

Within international trade, the European Union remains Romania's primary economic partner, accounting for over 70% of the country's total exports. This share reflects not only geographical proximity and access to the single market but also the structural dependence of the Romanian economy on European value chains.

The following section will analyze the share of intra-EU exports in Romania's total exports after 2020, when the pandemic context triggered significant contractions in global demand.

Figure no.1. The share of Romania's intra-EU exports in total exports during the 2020–2024 period



Source: Author owns processing based on Eurostat data (2025)

In 2024, the share of Romania's exports directed to the European Union stood at 72.0% in December, according to Eurostat data[0] . During the first half of 2024, total exports declined by 15.1%, significantly impacting trade with EU partners. In 2023, Romania's exports reached €93.09 billion, of which €67.574 billion were destined for EU member states, representing 72.6% of total exports [5].

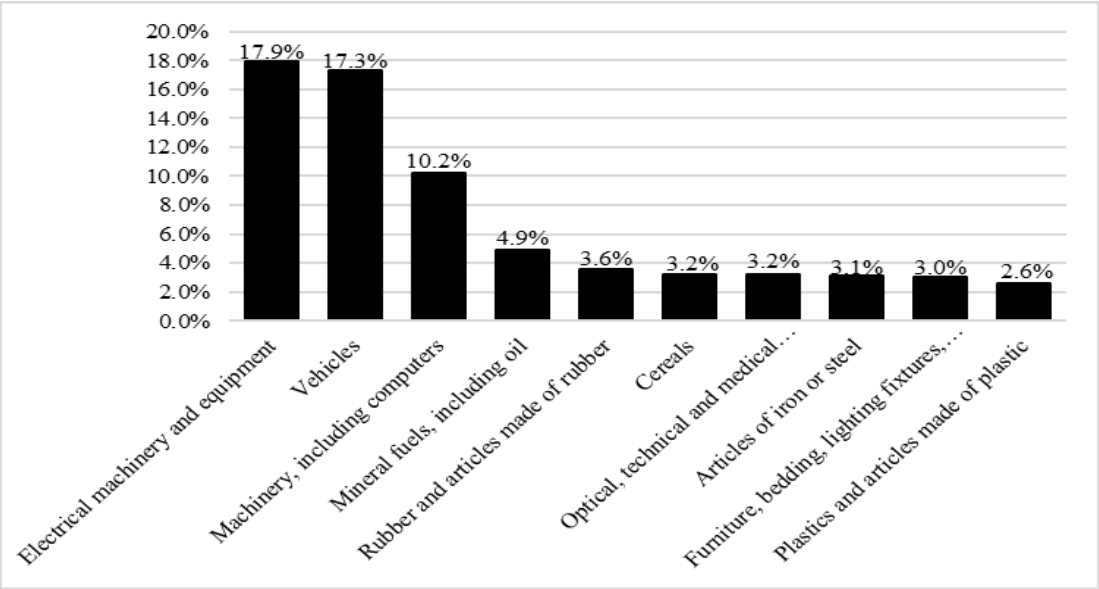
Germany remained Romania's top export partner, accounting for approximately 20% of total exports in June 2024. Italy ranked second, with an estimated share of 10.3%. France and Hungary also held notable shares, with 6.33% and 5.32%, respectively, in Romania's total exports in June 2024. Other significant EU destinations included Bulgaria (4.05%), the Netherlands (4%), Poland (3.81%), and Spain (3.41%). These figures clearly reflect Romania's strong orientation toward Western European markets, reaffirming the roles of Germany and Italy as regional hubs for automotive products, electrical equipment, and high-value-added manufactured goods [6].

While the European Union remains the primary destination for Romania's exports, extra-EU markets represent a strategic component of the country's trade balance. A recent report (July 2025) indicates that 12.3% of Romania's total exports were directed toward non-EU European countries, 9.7% to importers in Asia, 3% to North America, 2.5% to Africa, 0.4% to Latin America, and 0.1% to Oceania [7].

Romania's exports reflect an industrialized economy integrated into European and global production networks, though still characterized by a significant share of assembly and processing activities. Future challenges center around increasing value-added, promoting innovation, and diversifying export markets. In other words, Romania primarily produces parts, components, and subassemblies rather than finished branded goods, with many factories operating under outsourcing or lohn (contract manufacturing) models, limiting the potential gains from value-added.

Romania possesses a solid industrial base and significant agricultural potential; however, to achieve sustainable growth, exports must become more diversified, more innovation-driven, and more focused on high value-added products.

Figure no.2. The share of Romania's main commodity groups in total exports in 2024



Source: Author owns processing based on World's Top Exports data (2025)

In macroeconomic terms, the total value of goods exported by Romania accounted for 11.3% of the country's Gross Domestic Product (GDP) in 2024 and 12.9% of total GDP in 2023. These percentages suggest a relatively lower dependence on goods sold in international markets for Romania's overall economic performance, although the analysis is based on a short time frame.

3. TRENDS IN ROMANIA'S EXPORTS

European forecasts suggest a gradual improvement in external demand as the EU economy returns to a growth trajectory; however, the net contribution of exports to GDP may remain slightly negative in the short term [6].

The European Commission projects modest growth for the EU/euro area in 2025, with only a gradual recovery in external demand. For Romania, the net export contribution is also expected to remain negative, though less so than in 2024, as the slowdown in domestic demand curbs imports and certain sectors (e.g., services, agri-food) show better prospects.

Domestically, high-frequency indicators point to a mixed picture: the manufacturing PMI remains below the 50-point threshold (indicating contraction) by mid-2025, suggesting cautious external orders and underperforming production in export-oriented industries [8].

Disruptions in the Red Sea and the Suez Canal in 2024 extended transit times and increased transportation costs; their aftershocks may still appear intermittently in 2025, affecting inventory turnover and CIF/FOB pricing structures.

Ongoing modernization projects in the Port of Constanța, such as EU-funded upgrades to the electrical distribution infrastructure (phase II), are enhancing operational resilience and may lower logistics costs over the medium term. The impact is gradual but positive, particularly for non-containerized cargo and sustainable quay operations.

The transition to the full implementation of the Carbon Border Adjustment Mechanism (CBAM) in 2026 will target imports into the EU, representing an opportunity for "greener" European producers but also potential friction in value chains. As of May 2025, the European Parliament has supported adjustments that ease the administrative burden for small importers and may delay the start of certificate trading until 2027 (currently under negotiation with

member states). For Romanian exporters, the effects are mostly indirect, reshaping competition in the EU and in third markets (including the UK, which is planning its own CBAM for 2027) [9].

Global economic forecasts point to modest growth in 2025–2026, alongside a gradual recovery in trade flows. Within the EU, declining inflation and the resumption of public investment may support demand for industrial goods, though the pace remains moderate. Logistically, maritime routes continue to face episodic volatility (e.g., traffic rerouting through the Red Sea corridors), impacting transit times and shipping costs for goods originating from or destined for Asia [10].

Romania's export structure is dominated by capital goods and the automotive sector, including wiring systems, electrical equipment, machinery, and appliances, alongside relevant segments from metallurgy, chemicals, and agri-food. The country's integration into European value chains has amplified its correlation with the EU industrial cycle [11].

In the baseline scenario, Romania's exports are expected to grow slowly, in line with the gradual recovery of EU demand and normalization of logistics costs. Services (notably IT&C and transport) may partially offset goods volatility. In a favorable scenario, increased investment and better absorption of EU funds in infrastructure could expand delivery capacity and attract new OEM projects. In an adverse scenario, stagnation in European industry and renewed logistical disruptions could suppress external orders. Over two-thirds of Romania's exports are directed to the EU single market, with Germany, Italy, and France as top partners; diversification toward non-EU markets with logistical proximity (e.g., the Balkans, Caucasus, MENA region) could reduce cyclical vulnerability. In terms of products, Romania retains competitive advantages in automotive components, electrical equipment, and industrial intermediates, while expansion into "green" segments (e.g., electric mobility parts, energy efficiency technologies) could support a qualitative upgrade.

Strengthening Romania's export performance requires an integrated approach capable of addressing logistical, industrial, and trade challenges while aligning with green transition imperatives. Modernizing port and transport infrastructure, by completing major projects in the Port of Constanța and improving rail and road connectivity to European hubs, can transform logistics from a vulnerability into a competitive edge. More effective risk management for trade routes, supported by alternative transport solutions and digital tracking technologies, could help mitigate delays and losses from global trade disruptions.

On the industrial side, Romania's external competitiveness increasingly depends on the ability of energy-intensive sectors to reduce their carbon footprint: this includes energy efficiency measures, electrification of processes, long-term renewable energy contracts, and decarbonization projects, especially as the full CBAM regime approaches. These efforts should be complemented by support schemes for Romania's extra-EU suppliers, ensuring that input flows remain both competitive and compliant.

At the same time, developing human capital, expanding vocational training programs, and offering incentives for digitalization and automation could enhance the value-added of exports, facilitating access to new markets both within and beyond the EU. Strengthening financial instruments and credit guarantees, especially for SMEs, can broaden the base of internationally competitive firms. Finally, the establishment of a national monitoring system for foreign trade indicators, integrated with global cycle signals, would allow for timely adjustments in public and corporate strategies.

Looking toward 2025–2026, Romania's exports are expected to grow at a moderate pace, in line with the gradual rebound in European demand. Shifting from cost-based to quality-based competitiveness, via technology, environmental standards, and delivery reliability, will be key to differentiating high performers. A coherent mix of public policies and private

investments can enhance Romania's export competitiveness and contribute to a gradual correction of external imbalances.

4. CONCLUSIONS

Over two-thirds of Romania's exports are directed toward the EU, anchoring national trade performance to the European industrial cycle. This integration provides institutional stability and standardization, but also increases pro-cyclicality: the slowdown in Germany, Italy, and France quickly translated into reduced Romanian export orders in 2023–2024.

Romanian exports have been dominated by capital goods and vehicles, reflecting the country's positioning within European value chains. This specialization supports productivity and technology transfer, but also creates dependence on OEM cycles and core EU industrial policies.

Export growth in 2021–2022 was heavily influenced by international price dynamics (energy, transport, inputs), which boosted the nominal value of exports without a proportional increase in volume. In 2023–2024, as prices corrected, export performance softened—highlighting the need for a qualitative upgrade (economic complexity, product and process innovation).

Increasing the value added of Romanian exports increasingly depends on the adoption of digital technologies (automation, data-driven quality control) and the availability of technical skills (mechatronics, industrial software). The 2020–2024 period revealed both progress in some clusters and skills shortages in medium-to-high-tech sectors.

The EU green transition, including the implementation of mechanisms like CBAM and stricter emission reporting across supply chains, is changing the rules of the game. For Romanian exporters, competitive advantage will increasingly rely on energy efficiency, decarbonization, and supply chain traceability. Energy-intensive sectors will require accelerated investment to avoid margin erosion and loss of orders.

Despite medium-term export growth, Romania's trade deficit has remained high, particularly in years of strong domestic demand and elevated external prices. The macroeconomic implications are twofold: pressure on the current account and increased reliance on portfolio inflows and foreign investment, making the economy more vulnerable to shifts in global financial conditions. A sustainable correction requires both boosting net exports and managing imports through efficient domestic substitution where feasible.

Expansion toward non-EU markets (Balkans, MENA, Caucasus) has progressed gradually, but EU market concentration remains dominant. The key lesson from 2020–2024 is that smart diversification, anchored in logistical proximity and trade risk mitigation tools, can buffer against cyclical shocks in core European markets.

Service exports (IT&C, industrial support services, transport) have shown relatively higher resilience compared to goods during periods of volatility. Expanding and integrating these services with product offerings can smooth out business cycles and improve exporters' overall margins.

Export-oriented SMEs have faced financing constraints during periods of high interest rates and elevated input costs. Strengthening frameworks for guarantees, factoring, and export credit insurance is essential to consolidating the exporter base and reducing the order-to-delivery cycle.

The 2020–2024 period demonstrated that cost-based advantages are fragile. Competition is shifting toward reliability, compliance, innovation, and after-sales services. Exporters that invested in certifications, traceability, and automation navigated periods of stress more effectively.

Positive export performance is maximized when infrastructure investments, workforce training, decarbonization programs, and financial tools are aligned in a predictable package, with measurable targets (delivery times, logistics density, specific energy consumption, share of medium/high-tech products in exports).

In conclusion, 2020–2024 served as a stress test for Romania's export model. The results point to overall resilience, but also a clear need for modernization—ranging from infrastructure and human capital to decarbonization and supply chain governance. Transitioning from nominal growth (price-driven) to real growth with higher economic complexity is key to reducing the external deficit and anchoring Romania in high-productivity European value chains over the long term.

REFERENCES

1. Bălăceanu, C., 2015, *Economia internațională și politicile comerciale*, ASE Publishing House, Bucharest.
2. Eurostat, 2025, *EU trade flows and market integration*, available online https://ec.europa.eu/eurostat/
3. International Monetary Fund, 2023, *World Economic Outlook: Navigating Global Shocks*, available online https://www.imf.org/en/Publications/WEO/weo-database/2023/April/groups-and-aggregates
4. Eurostat, 2025, *International Trade in Goods – Romania, 2024*, available online https://ec.europa.eu/eurostat/
5. Eurostat, 2025, *Share of trade with the EU27 (from 2020)*, available online https://ec.europa.eu/eurostat/databrowser/view/tet00037/default/table?lang=en
6. Trend Economy, 2025, *Romania Exports*, available online https://trendeconomy.com/data/export_hsm/Romania/TOTAL
7. World's Top Exports, 2025, *Romania's Top 10 Exports*, available online https://www.worldstopexports.com/romanias-top-10-exports/
8. Trading Economics, 2025, *Romania Manufacturing PMI*, available online https://tradingeconomics.com/romania/manufacturing-pmi
9. European Commission, 2025, *Carbon Border Adjustment Mechanism*, available online https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en?utm_source=chatgpt.com
10. European Commission, 2025, *Spring 2025 Economic Forecast: Moderate growth amid global economic uncertainty*, available online https://economy-finance.ec.europa.eu/economic-forecast-and-surveys/economic-forecasts/spring-2025-economic-forecast-moderate-growth-amid-global-economic-uncertainty_en
11. INSSE, 2025, *Comerțul internațional cu bunuri – structură pe secțiuni CAEN și grupe de produse*, available online https://insse.ro/cms/ro/tags/comunicat-comertul-international-cu-bunuri

THE LIMITS OF RESILIENCE OF TRADE IN SERVICES UNDER THE IMPACT OF POST-PANDEMIC GEOPOLITICAL TENSIONS

Georgeta ILIE[18]
Institute for World Economy, Romanian Academy

ABSTRACT: *The end of the pandemic has brought new geopolitical challenges to the world economy, namely the Russian-Ukrainian conflict and the tensions in the Middle East. In addition, the new United States' administration is complementing the list of geopolitical challenges with a series of measures, among which those related to trade relations stand out. All these overlapping geopolitical tensions have considerably increased the vulnerabilities in the global economy, affecting many international businesses, including those in service industries. The conflict in Ukraine, which has been going on for more than three years, has managed to disrupt all economic sectors, including trade in services. The two conflicts have had a major impact on trade in maritime transport services. Although it is not directly targeted by United States' trade measures, trade in services is going to be affected due to the strong relationships between trade in goods and some services such as transport and logistics, as well as insurance, financial and business services. At the same time, possible distortions are anticipated, due to the fact that trade in services could be the subject of some retaliation measures of trading partners, such as those that could limit access for United States' service providers to certain markets. The research identifies that trade in services is increasingly exposed to geopolitical instabilities, making it harder for businesses to operate across borders. At the same time, geopolitical tensions can generate disruptions to trade in digital services related to data flows, amplifying the risk and uncertainty for service businesses. Moreover, the increased level of interconnectivity and reliance on intangibles, such as trust, makes trade in services susceptible to the ripple effects of geopolitical instabilities.*

Keywords*: trade in services, geopolitical tensions, United States' tariffs, retaliatory measures.*

JEL Classification: *F13, F43, L8, O24*

1. INTRODUCTION

After the end of the pandemic, the global economy has been marked by a multitude of geopolitical influential factors, highlighting conflicts and military tensions. The Russian-Ukrainian conflict triggered in February 2022 and the tensions in the Middle East started in October 2023 had generated effects on the dynamic of international trade and investment, in the process of recovering from the shock of the pandemic. The particular case of trade in services emphasises the reconfiguration of certain service flows, as the case of maritime transport, as well as some impacts on the value of service transactions caused by the economic

[18] PhD, Scientific Researcher III, georgeta.ilie@iem.ro.

changes of increasing energy prices and implicitly inflation generating the growth of service prices.

In addition, the recent major changes in trade policy adopted by the United States' administration under the President Donald Trump's second term (Trump 2.0) have reactivated the older tensions between the United States (US) and China, but this time extended to all US trade partners. If previously, US trade policy measures mainly targeted the Chinese economy and certain imported products (such as steel and aluminium), since April 2025, the US has extended its tariffs to all major trading partners for almost all products. Moreover, this has been the subject of a succession of announcements regarding their increases and changes in the application deadlines (White House, 2025). Trade policy tensions caused by the increased tariffs on US goods imports from major partners, as well as retaliatory measures taken by the latter, are fuelling a real trade war, amplifying uncertainty in the global economy (WTO, 2025a; UNCTAD, 2025). As a leading global economic and trading partner, any economic measure adopted by the US has the potential to affect international business environment. Even if at first glance the US tariff measures have only targeted trade in goods, given their high degree of interdependence with services, these measures will also affect trade in services.

Rising geopolitical tensions affecting trade in services are crucial as services have become a significant part of the global economy (emphasised by the share of services of GDP reaching 61.8%, in 2024) (WBG, 2025). Besides, during the last years, besides business models based on global value chains, services have stood out as a much more promising path to prosperity (Gill and Mattoo, 2024), the services sector performances considerably improving the global economic indicators, mainly gross domestic product, employment and trade (in 2024, the service trade of GDP reached 14.24%, the services sector provided more than 50% of total employment at the global level, as well as the services exports exceeded 26% of global exports of goods and services). Given the uncertainty regarding the outlook for trade in goods, amplified by the protectionist trend fuelled by the recent US trade measures, the Director-General of the World Trade Organization stressed that the US administration should consider not only the goods trade deficit, but especially the benefits of the trade surplus with all trading partners in services (Okonjo-Iweala, 2025).

2. LITERATURE REVIEW

As geopolitics has become increasingly complex, international organizations and academic researchers have devoted extensive studies to its influences on the international trade. In recent years, researchers have dedicated studies to how global trade is affected by geopolitical conflicts caused by sanctions, along with tariff barriers and trade wars (Prasanna Kumar et al.,2025). In this regard, in their study, Yan and Piao (2025) demonstrated that geopolitical risks significantly suppress trade openness, confirming the negative effects of geopolitical shocks on the level of external economic liberalization of a country.

The World Trade Organization's experts have analysed the possible effects of geopolitical tensions based on foreign policy divergence generating the decoupling of the global economy, where trade in services is also impacted, especially those related to technologies (Goes & Bekkers, 2022). After the outbreak of the war in Ukraine, Ruta (ed.) (2022) developed a detailed analysis of the direct impact of the war on trade and investment, identifying the main channels through which global economy and countries will be affected, including trade in services. Li and Zymek (2025) found that services related to intellectual property and telecommunications are proving to be more sensitive to geopolitical alignment trends than traditional services such as transportation and travel, suggesting potential vulnerabilities as these sectors expand.

US foreign policy plays a crucial role in the performance of the global economy, with some measures being sources of tensions in recent years, such as the relationship between the US and China (Cai, 2025). Even more of them are focused on trade in goods, World Economic Forum's experts noted that services are the less visible side of the US-China trade war (WEF, 2019).

Focusing on the solutions related to the impact of geopolitical tension and conflict dynamics on international trade, Cevik (2023) found that geopolitical shocks can initially slow down trade, but countries subsequently take measures and seek to adapt by diversifying partners and trade paths, demonstrating the ability of international trade to deal with geopolitical uncertainty. In the same direction, Nair and Tripathi (2025) identified that the negative influence of geopolitical disruptions on trade in services can be mitigated through an effective regulatory system, diversification of trading partners, and openness to regional trade agreements. A similar perspective is seen by Seong et al. (2025), with US trade changes in 2025 highlighting the trend of reconfiguring global trade relations according to national political similarities.

Given the complexity and recent nature of the topic related to the impacts of geopolitical tensions generated by conflicts and the policy changes on world economy, our paper aims to contribute to specialized studies dedicated to the effects of the recent geopolitical challenges on trade in services, in the context in which, to date, most studies have been focused on analyses of trade in goods.

3. RESEARCH METHODOLOGY

Throughout the article, we used a qualitative analysis of the relevant documents and reports released by international organizations (such as World Trade Organization/ WTO, United Nations Conference on Trade and Development/ UNCTAD, Organisation for Economic Co-operation and Development/ OECD, and World Bank Group/ WBG) related to the impact of post-pandemic geopolitical evolutions on trade flows in goods and services, along with personal considerations. In order to support our explanations, quantitative analysis is considered, mainly of statistical data published by international organizations (such as WTO, WBG, and OECD) and Office of the US Trade Representative (OUSTR), to highlight some relevant aspects related to the evolution of trade in services, by main service categories and trading partners, globally and in the US. The research aims to analyse the impact of political tensions generated by the conflict between Russia and Ukraine, tensions in the Middle East and changes in US trade policy on global trade in services, as well as its main components. Considering the latest geopolitical challenge of 2025, within the analysis, an important part is allocated to the impact of the US tariffs measures on global trade in services. In this regard, a more detailed analysis of US foreign trade in services is considered, in terms of its volume, structure and partners in order to emphasise potential impact of trade policy changes on both US and global trade in services.

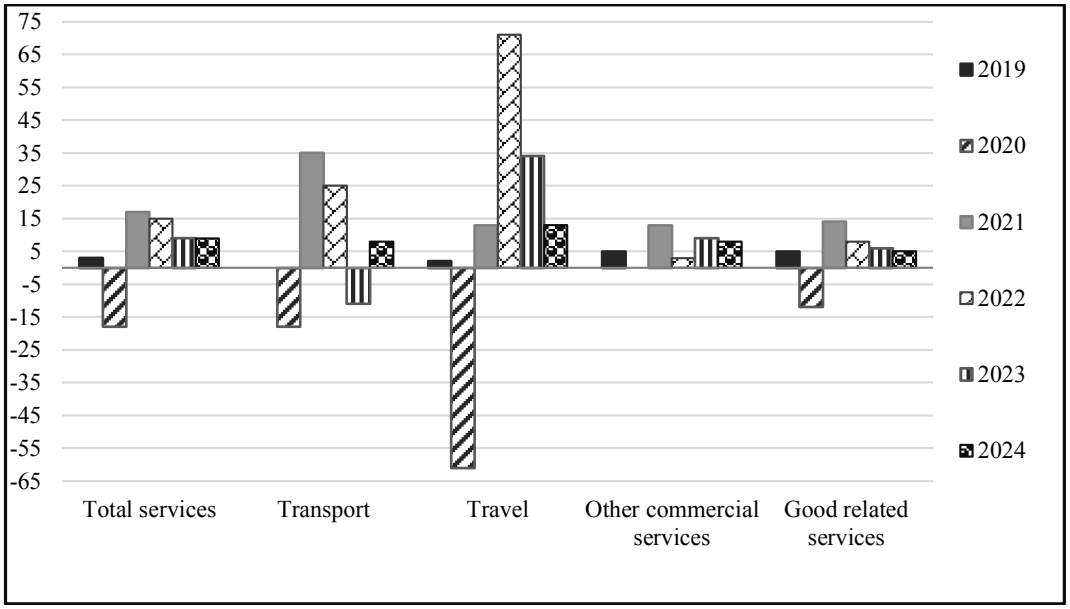
4. MAIN RESULTS

4.1. Post-pandemic geopolitical tensions and their impact on trade in services

Geopolitical factors are recognized as having a significant disruptive impact on global businesses, with varying intensities depending on the geographical region, the partners involved, or the industry. Data on the evolution of global trade in services during the period 2019-2024 (Figure 1) reveals that, overall, the two major conflicts that took place during this period (the invasion of Ukraine by the Russian Federation, started in February 2022, and the

tensions in the Middle East started in October 2023, generating the Red Sea crisis following attacks by rebel groups on ships in transit).

Figure 1. International trade in services, total and by components, during the period 2019-2024 (annual % change)



Note: Data represents the average annual growth rates of services exports and imports.
Source: Author's representation based on WTO (2025b).

As revealed in Figure 1, the analysis on certain segments, such as maritime transport, highlights the global disruptive impact of geopolitical tensions, in 2023 trade in transport services decreasing by 11%, as a result of the international sanctions against Russian Federation and transit restrictions in the Black Sea and the Red Sea. The Black Sea transit has been significantly disrupted by the Ukrainian conflict, causing port blockades, increasing navigation risks due to mines, and forcing rerouting, which led to higher shipping costs, disruptions in global energy and food supplies, and altered maritime logistics. While the United Nations plan, Black Sea Grain Initiative, facilitated some exports by establishing safe corridors, overall transit remains impacted by ongoing conflict and security concerns (Cenusa, 2025). Middle Eastern tensions also have affected Red Sea transits by leading to major rerouting of vessels away from the Suez Canal and through the longer, more expensive Cape of Good Hope route, resulting in increased shipping costs (the use of detours generating increases in crew and fuel costs), longer transit times, and potential disruptions to global supply chains. Attacks by groups like the Houthi rebels have directly impacted shipping, with major carriers rerouting hundreds of vessels to avoid the conflict zone (Kamaly et al., 2024).

Although the growth rate of trade in transport services is positive in 2024, it is far from being able to cover the drastic reduction in the previous year. The growth in 2024 was supported by the increase in transport rates, especially in the second half of the year, caused by the persistence of disruptions to major trade routes in the context of regional geopolitical tensions. Thus, global freight prices continued the trend of extreme volatility of recent years, in 2024 reaching levels four times higher than in the previous year (in mid-July, the maritime transport rate reached the value of almost USD 6,000 for a 40-foot equivalent container) (DSCL, 2025). The good related services segment has slowed its growth rate since 2022, amid disruptions to global supply chains, mainly caused by geopolitical tensions.

Despite these major turbulences for the maritime transport segment, overall trade in services has not been significantly destabilized, with global service flows undergoing a broad recovery process after the pandemic crisis.

At the same time, the international trade in digitally supplied services appears not to be affected by the post-pandemic geopolitical tensions considered in our analysis. In recent years, services traded across borders via digital networks have shown a positive trend, with global exports of digital services reaching historic highs (USD 4,640 billion, 53.4% of total services exports and 14.5% of total goods and services exports, in 2024) (WTO, 2025a). Thus, to date, tensions have not had a major impact on the global trend of digitalization of the wide range of services, from financial, professional and management services to music and video streaming.

4.2. Geopolitical tensions reflected in the trade in services restrictiveness

After the pandemic, the pace and scope of national reforms adopted in the field of trade in services have been moderated, with barriers to market access to trade flows in services. The results of the regulatory framework monitoring process of WTO and OECD have highlighted that impediments to trade in services remain at high levels, with some countries continuing to increase their market access barriers. According to the WTO (2024), between October 2023 and October 2024, one third of the measures introduced by WTO member countries were restrictive. Also, in recent years, the OECD has highlighted an increase in the overall score of restrictive measures for all services from 0.202 in 2019 to 0.214 in 2024 (where 0 is considered the maximum level of liberalization and 1 the maximum level of restrictiveness of trade in services) (OECD, 2025).

Regarding the global regulatory environment in the field of international trade in digitally traded services, in 2024, an increasingly restrictive level is noted in over 100 countries, in the context where, in the last decade, barriers to this category of services have increased by 25%, driven by a growing number of measures affecting communications infrastructure and connectivity (OECD, 2024). Among the multiple causes of these developments are also geopolitical tensions, although their contribution to this evolution is difficult to be exactly determined. However, the influence of geopolitical factors on trade in services is expected to become more pronounced and to be a major determinant of future trade patterns (WTO, 2025a).

Geopolitical tensions are leading to greater restrictiveness in the trade of services. Therefore, geopolitical conflicts, security concerns, and economic rivalries are going to act as non-tariff barriers to services trade flows. All these causes can be appealed by national authorities to adopt and implement protectionist policies to diminish the access of certain service providers, and also reducing dependence on some trade partners. In the case of trade in services, there are used measures such as limitations on foreign ownership, stricter licensing rules, and data localization requirements (Cory & Dascoli, 2021; WTO, 2024; OECD, 2025).

4.3. US trade policy changes - a new source of geopolitical tensions

In 2025, geopolitical factors have been complemented by a new one, namely the major changes in US trade policy. Apparently trade in services can be considered outside the applicability of the new tariffs adopted by the US administration in the first part of the Trump 2.0 mandate. However, a detailed analysis emphasises that the tariffs will affect not only trade in goods, but also trade in services, along with other areas of cooperation between US and its main partners. In the first stage, the most affected services would be those related to trade in goods, specifically transport and logistics services, the decrease in demand of imported goods on US market as well as on their partners (considering the retaliatory measures) could lead to a slowdown in trade in these services.

The increase in customs duties will directly affect the volume of goods traded worldwide (which is expected to contract by 0.2% in 2025), leading to a decrease in demand for freight transport services and, respectively, for logistics services associated with transport. Consequently, for 2025, an increase in the volume of trade in transport services is estimated at only 0.5% (compared to the rates foreseen in the baseline scenario in which growth rates of 2.9% were expected), and for 2026 at 1.7% (compared to 3.3% in the baseline scenario) (WTO, 2025a).

Given the high level of integration of services in all economic activities, other services cannot be excluded from the effects of these measures. A wide range of intermediary services that support trade in goods or other service categories, such as professional, engineering and research and development services, IT and various business services, are expected to be affected, facing declines in their demand. Financial services could also be affected, as the uncertain economic context will lead to a decrease in transactions and reschedule of investments.

Trade tensions could result in stricter intellectual property licensing regulations, limiting the growth of trade in digitally delivered services, such as those distributed through streaming, online games or distance learning platforms, thus reducing exports for their suppliers. However, digitally delivered services are projected to maintain strong growth, at 5.6% in 2025 (compared to 6.6% in the baseline scenario) and 4.7% in 2026. Thus, the category of other commercial services will be the least affected compared to the other service segments, for which a 5.3% increase in their volume is estimated (with a deviation of 0.8 percentage points compared to the baseline scenario in which a 6.1% increase is envisaged) (WTO, 2025a).

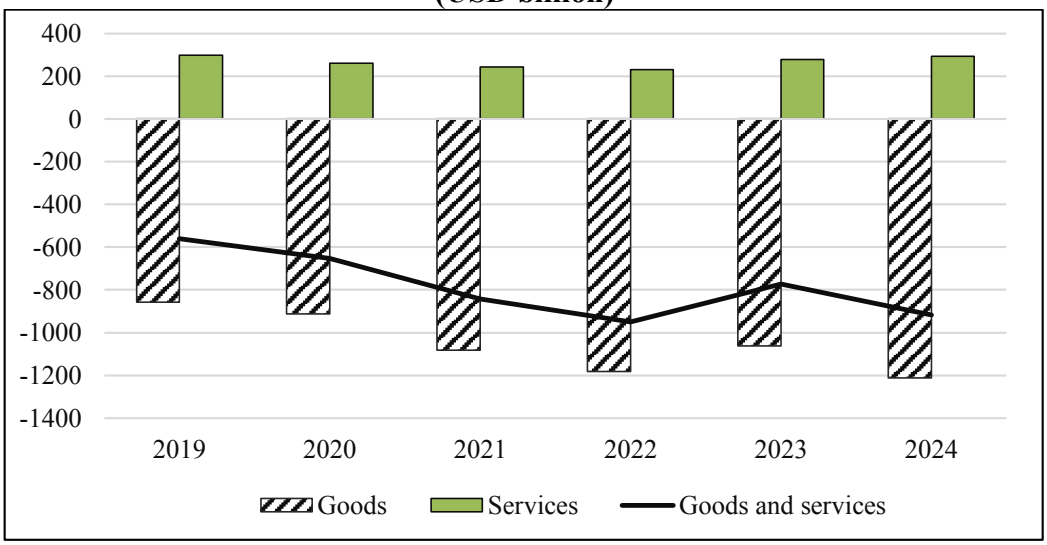
According to WTO (2025a), the increased tariffs are expected to contract the volume of traded goods by 0.2% in 2025. Consequently, for 2025, an increase in the volume of trade in transport services of only 0.5% is estimated (compared to 2.9% in the baseline scenario), and of 1.7% in 2026 (compared to 3.3% in the baseline scenario). However, a possible favourable evolution could be created by the successful reorientation of trade in goods to other partners or by the increase in services prices.

4.4. The importance of trade in services for the US and global economies

The US ranks first in the world's top exporters and importers of services, being the only country that trades the largest values of services in both directions. According to WTO (2025b), in 2024, US carried out 12.4% of total global service exports (and 15.2% for digitally delivered services), and 9.9% of total global service imports (and 10.9% for digitally delivered services). Thus, trade in services can be considered a major source of economic power of the US (Okonjo-Iweala, 2025), by the trade surplus in services registered with major economic and trade partners in Europe, Asia and the Americas. As the surplus in trade in services failing to cover the US deficit in trade in goods with its partners (Figure 2), by increasing the import tariffs, US administration hopes to diminish the total trade deficit, and also to support the development of domestic manufacturing industries (White House, 2025).

In 2024, US service trade flows reached new records, with the services exports of USD 1,107 billion (7.9% annual increase, accounting for 34.7% of total US goods and services exports), and the services imports of USD 814.4 billion (8.9% annual increase, accounting for 19.8% of total US goods and services imports) (OUSTR, 2025a).

Figure 2. Trade balance of US, during the period 2019-2024 (USD billion)



Source: Author's representation based on OUSTR (2025a).

The data presented in Table 1 highlights the US specialization in services with high value added such as the other business services (representing 24.3% of total service exports and 19% of total service imports), followed by financial services and services related to the use of intellectual property.

Table 1. Structure of US services export-import flows, in 2024 (USD billion, % of total)

Categories of services	Exports		Imports	
	USD billion	% of total	USD billion	% of total
Other business services	269.2	24.30	154.9	19.02
Travel	215.4	19.44	177.9	21.84
Financial services	187.1	16.89	61.6	7.56
Charges for the use of intellectual property	142.7	12.88	59.8	7.34
Transport	103.3	9.32	154.6	18.98
Telecom, computer, and information services	82.6	7.46	61	7.49
Government goods and services	31.8	2.87	25.6	3.14
Insurance services	27.4	2.47	76.2	9.36
Personal, cultural, and recreational services	26.6	2.40	34.6	4.25
Maintenance and repair services	19.5	1.76	6.6	0.81
Construction	2.4	0.22	1.8	0.22
Total services	1107.8	100	814.4	100

Source: Author's calculation based on OUSTR (2025a).

What is noteworthy is that the main partners in trade in services of US are the countries to which increased import tariffs are applied. Thus, the UK was the largest destination for US services exports in 2023 (latest available full-year data), accounting for 8.8% of total US services exports (USD 90.8 billion), followed by Canada, Ireland, Switzerland, and China. The largest international service provider to the US market in 2023 is also UK, accounting for 11.5% of total US services imports (USD 86 billion), followed by Canada, Germany, Mexico, and Japan (Table 2).

Tabel 2. The main partners in the trade of services of the US, in 2023 (USD billion, %)

Trade flows in services	Countries	USD billion	% of total
US exports of services	United Kingdom	90,8	8,8
	Canada	86,0	8,4
	Irland	84,3	8,2
	Switzerland	49,7	4,8
	China	46,7	4,5
US imports of services	United Kingdom	86,0	11.5
	Canada	54,3	7.3
	Germany	45,8	6.1
	Mexico	44,8	6.0
	Japan	37,9	5.1

Source: Author's calculation based on OUSTR (2025a)

Service industries play a major role in the US economy, in 2024, contributing 76.4% to GDP and providing 79% of jobs in the economy (WBG, 2025). The service sector companies support US service exports that generate the trade surplus of the services balance, the activities of their foreign subsidiaries doubling the foreign sales of services of US companies (OUSTR, 2025a). Service exports also represent a third of total US exports, and in terms of value added (which mainly reflects the high level of integration of research and development services, information and communications technology, logistics and other services as inputs into production processes), the value of US exports attributed to services amounts to half (OUSTR, 2025a).

Trade in services is supported by the US administration, in this regard the Office of the US Trade Representative (OUSTR) promoting open and transparent services trade flows, by US active participation in multilateral agreements (such as the General Agreement on Trade in Services/ GATS within the WTO) and the conclusion of free trade agreements (currently 20 bilateral agreements are in force), including the US Agreement with Mexico and Canada in force since January 1, 2020 (USMCA, which replaces NAFTA) (OUSTR, 2025b).

However, in recent years, the services trade regulations have not been bypassed by the adoption of restrictive measures by US, mainly for China and related to the new technologies (Bateman, 2022). Political tensions between the two countries have also been reflected in their mutual trade in services, mostly in high-tech intensive services. In this area, the US has imposed extraterritorial sanctions aimed at blocking the interaction of the main suppliers of microelectronics production systems (such as ASML, originating from the Netherlands), chips and services (such as TSMC from Taiwan, Samsung from South Korea, Flextronics from Singapore) and other technology companies with Chinese corporations (Danilin, 2020). Also, the rise of the Chinese online businesses and its emergence as a new high-tech actor, as well as the support of China's services trade through China's Digital Silk Road Initiative, have generated new challenges in US-China services trade.

Therefore, even if trade in services is not subject to customs duties, it is subject to non-tariff trade regulations, their diversity and complexity as well as their opaque or arbitrary nature standing out as obstacles to the exploitation of the services trade potential. Overall, US services trade regulations are not characterized by a high level of restrictiveness, registering a level below the average of OECD countries, both for trade in services and for trade in digitally delivered services (OECD, 2025).

Taking into account that the US registers a surplus in trade in services with its major partners, the last ones could use some obstacles for service imports from of US, even for digitally delivered services. This response has been put into discussion by many representatives

of business environment, suggesting the possibility of using trade policy instruments targeting the imports of services from the US, as retaliatory measures for US tariffs (GSGIR, 2025). The trade in services are considered to be a real power of negotiation, especially for European countries, as major trade partners of US (Cohen, 2025).

However, considering a certain vulnerability given the dependence of many trade partners on US for the provision of certain services, such as research and development, professional and business services, in case of European Union, it is difficult to predict how all these partners will act in services trade area. Such response measures would worsen not only the trade relations with US, but also their national economies. Eventually, the tariff dispute would escalate with services, technology and investments coming into conflict, affecting the economic relationships between the major global partners.

The service trading partners could have a certain influence in trade negotiations. Therefore, the arguments of the US representatives related to the tariff measures for reducing the trade deficit in goods and sustaining the domestic manufacturing industries and their jobs have to be seen from the perspective of the advantages of the US economy generated by the trade surplus in services. In 2022, service exports directly generated almost 4.1 million jobs and indirectly another approximately 5.1 million jobs, the last ones supporting exports of goods and services associated with productive processes (ITA, 2025). The US dominance in services trade may provide other countries with some leverage in negotiations, namely the ability of some, such as the EU, to impose a certain direction on the US economy, in an attempt to retaliate against unilateral tariff measures imposed by the US administration. In this context, international trading partners could in turn apply some measures with the effect of restricting the access of US services providers to their markets. The application of protectionist measures by the US, with the aim of protecting the interests of national companies in manufacturing industries and implicitly the jobs provided by them, may affect local companies and emplyment in service industries, given that trading partners in services would introduce measures with the effect of restricting imports of services from the US. In this context, some countries impose stricter regulations on foreign service providers, such as those in the technology, telecommunications or finance sectors, motivating it with the need to secure local industries and defend national security interests (Aka, 2025). In this regard, the Digital Markets Act, adopted in 2022 in order to guarantee a fair level of competition in the European Union market stands out (EC, 2022).

5. CONCLUDING REMARKS

After the end of the pandemic, a series of concerns regarding vulnerabilities generated by geopolitical factors, with the capacity to reshape the nature of cross-border economic interactions, have come to the fore. Even it is about military conflicts, political instability, or changes in trade and economic policies of some countries, these have caused shortages or disruptions leading to economic damage. Geopolitical factors have a significant impact on global businesses by altering economic environment stability, disrupting the relationships between international partners, especially when their businesses are integrated in supply chains, discouraging investment and generating operational challenges for companies. Geopolitical disputes regularly escalate into trade wars, in which countries impose trade barriers, using economic instruments such as sanctions and retaliatory measures to achieve foreign policy objectives. In the context of the expansion of the services sector and trade in services, difficulties may arise in ensuring access to certain essential services, including digital ones, affecting global economic stability.

Even the overall trade in services has continued its pre-pandemic positive evolution, remaining robust and expanding year after year, generating major benefits for many economies,

certain segments of services trade have been affected by recent geopolitical factors. A relevant example is maritime transport, where disruptions to sea routes caused by the Russian-Ukrainian war or tensions in Middle Eastern countries have led to declines in trade in transport services, affecting many economies. The new policies implemented by the US administration since April 2025 add to these, with experts stressing that they will destabilize the business environment already weakened by the pandemic and ongoing conflicts. This is mainly due to the fact that the US is the world's leading economy, so any measure adopted by it affects the global economy. The new tariffs applied to all its major partners bother not only trade in goods, but also in services. In this case, all services related to trade in goods could be targeted, from transport to distribution, but also financial and insurance services. In addition, there is a risk of retaliatory measures by trading partners against the US for services, given that the US is a major exporter of services. These measures could significantly affect all economies, given the increasing role of services in sustaining economic developments. Therefore, beyond the vulnerability of the link between trade in goods and services, there is the possibility of using trade in services for retaliatory measures, affecting its latest positive evolution.

In the context of recent challenges in the world economy, with an impact on economic globalization, trade in services has proven to be resilient, registering lower fragmentation trends compared to trade in goods. One of the reasons is the ability of the services sector to implement new technologies that have considerably diversified the categories of services and, in addition, facilitated cross-border services trade. However, experts argue that the prospects for growth in technology-intensive services trade in the future are vulnerable, as the amplification of geopolitical divisions may create a new category of barriers, although previously technologies had the ability to eliminate old obstacles to trade in services.

Summarising, the prospects of trade in services are influenced by the persistence of uncertainties caused by the tense global economic climate, under the effect of trade measures adopted by the main economic partners worldwide (increase in import tariffs by the US and retaliation by their partners, including possible measures affecting services trade) overlapped with ongoing regional geopolitical conflicts worsening the global economic perspectives. Services trade flows will be affected in terms of growth rate, structure and geography, in the context of the realignment of global business interests under the impact of geopolitical tensions.

REFERENCES

1. Aka, H. (2025). The Global Spread of Protectionist Policies That Squeeze American Tech Companies. Available at: https://itif.org/publications/2025/03/07/the-global-spread-of-protectionist-policies-that-squeeze-american-tech-companies/.
2. Bateman, J. (2022). U.S.-China Technological "Decoupling": A Strategy and Policy Framework. April 22. Available at: https://carnegieendowment.org/2022/04/25/u.s.-china-technological-decoupling-strategy-and-policy-framework-pub-86897.
3. Cai, Y. (2025). US-China tensions, global supply chains pressure, and global economy. Available at: https://www.sciencedirect.com/science/article/pii/S016517652500120X.
4. Cenusa, D. (2025). The Black Sea Region and the Impact of the War: geopolitics, geoeconomics and security 'transversal costs' and 'unintended benefits'. Available at: https://www.gssc.lt/en/publication/the-black-sea-region-and-the-impact-of-the-war-geopolitics-geoeconomics-and-security-transversal-costs-and-unintended-benefits/.

5. Cevik, M. S. (2023). Long live globalization: Geopolitical shocks and international trade. IMF Working Papers. Available at: https://www.imf.org/en/Publications/WP/Issues/2023/10/27/Long-Live-Globalization-Geopolitical-Shocks-and-International-Trade-540832.
6. Cohen, P. (2025). Countries Targeted by Trump's Tariffs May Strike Back at U.S. Services. Available at: https://www.nytimes.com/2025/04/02/business/economy/tariffs-foreign-goods-tariffs-us-services.html.
7. Cory, N. & Dascoli, L. (2021). How Barriers to Cross-Border Data Flows Are Spreading Globally, What They Cost, and How to Address Them. Available at: https://www2.itif.org/2021-data-localization.pdf.
8. Danilin, I. V. (2020). The U.S.-China Technological War Digital Technologies as a New Factor of World Politics? Available at: https://eng.globalaffairs.ru/wp-content/uploads/2021/12/078-096.pdf.
9. Drewry Shipping Consultants Limited [DSCL]. (2025, April 10). Drewry World Container Index (World Container Index/WCI). Accessed at: https://www.drewry.co.uk/supply-chain-advisors/supply-chain-expertise/world-container-index-assessed-by-drewry.
10. European Commission [EC]. (2022). Digital Markets Act (DMA). Available at: https://digital-markets-act.ec.europa.eu/index_en.
11. Gill, I. & Mattoo, A. (2024). Services are the New Road to Development. Available at: https://www.project-syndicate.org/commentary/services-led-development-model-now-more-promising-than-manufacturing-by-indermit-gill-and-aaditya-mattoo-2024-12.
12. Goes, C. & Bekkers, E. (2022). The Impact of Geopolitical Conflicts on Trade, Growth, and Innovation. Available at: https://www.wto.org/english/res_e/reser_e/ersd202209_e.pdf.
13. Goldman Sachs Global Investment Research [GSGIR]. (2025). Trump Tariffs: Mostly Talk, or Big Action? Available at: https://www.goldmansachs.com/pdfs/insights/goldman-sachs-research/trump-tariffs-mostly-talk-or-big-action/TOM_tariffs_REDACTED.pdf.
14. International Trade Administration [ITA]. (2025). Jobs Supported by Exports. Available at: https://www.trade.gov/jobs-supported-exports-home-page.
15. Kamaly, P. et al., (2024). Red Sea Attacks Disrupt Global Trade. Available at: https://www.imf.org/en/Blogs/Articles/2024/03/07/Red-Sea-Attacks-Disrupt-Global-Trade.
16. Li, N. & Zymek, R. (2025). Geoeconomic fragmentation in services? Evidence from a new database. The State of Globalisation, Baldwin, R. & Ruta, M. (Eds). Centre for Economic Policy Research. Available at: https://cepr.org/system/files/publication-files/255049-the_state_of_globalisation.pdf.
17. Nair, A & Tripathi, S. (2025). Geopolitical Instability and its Ripple Effects on Service Trade. Available at: https://mpra.ub.uni-muenchen.de/124670/1/MPRA_paper_124670.pdf.
18. Organisation for Economic Co-operation and Development [OECD]. (2025). OECD Services Trade Restrictiveness Index. Policy Trends up to 2025. Available at: https://www.oecd.org/en/publications/oecd-services-trade-restrictiveness-index_9953845b-en/full-report.html.
19. Office of the United States Trade Representative [OUSTR]. (2025a). 2025 Trade Policy Agenda and 2024 Annual Report. February. Available at:

https://ustr.gov/sites/default/files/files/reports/2025/2025%20Trade%20Policy%20Agenda%20WTO%20at%2030%20and%202024%20Annual%20Report%2002282025%20--%20FINAL.pdf

20. Office of the United States Trade Representative [OUSTR]. (2025b). Free Trade Agreements. Available at: https://ustr.gov/trade-agreements/free-trade-agreements.
21. Okonjo-Iweala, N. (2025). America's Big Trade Win. Available at: https://www.project-syndicate.org/commentary/us-government-should-recognize-promote-booming-services-trade-by-ngozi-okonjo-iweala-2025-03.
22. Organisation for Economic Co-operation and Development [OECD]. (2024). Revitalising Services Trade for Global Growth: Evidence from Ten Years of Monitoring Services Trade Policies through the OECD STRI. Available at: https://www.oecd.org/en/publications/revitalising-services-trade-for-global-growth_3cc371ac-en.html.
23. Organisation for Economic Co-operation and Development [OECD]. (2025). OECD Services Trade Restrictiveness Index. Policy Trends up to 2025. February 11. Available at: https://www.oecd.org/en/publications/oecd-services-trade-restrictiveness-index_9953845b-en/full-report.html.
24. Prasanna Kumar, G. et al. (2025). Sanctions, tariffs, and trade wars: The role of geopolitical tensions in global business dynamics. Available at: https://www.managementpaper.net/archives/2025.v7.i1.I.353/sanctions-tariffs-and-trade-wars-the-role-of-geopolitical-tensions-in-global-business-dynamics.
25. Ruta, M. (ed.) (2022). The Impact of the War in Ukraine on Global Trade and Investment, World Bank Group. Available at: https://documents.worldbank.org/pt/publication/documents-reports/documentdetail/099750104252216595?cid=ECR_LI_worldbank_EN_EXT.
26. Seong, J. et al. (2025). Geopolitics and the geometry of global trade: 2025 update. Available at: https://www.mckinsey.com/mgi/our-research/geopolitics-and-the-geometry-of-global-trade-2025-update.
27. United Nations Conference for Trade and Development [UNCTAD]. (2025). Global trade Update plus. Policy insights: Escalating tariffs: the impact on small and vulnerable economies. Available at: https://unctad.org/system/files/official-document/ditcinf2025d3.pdf.
28. White House. (2025). Presidential Actions: America First Trade Policy. Available at: https://www.whitehouse.gov/presidential-actions/2025/01/america-first-trade-policy/.
29. World Bank Group [WBG]. (2025). World Development Indicators [online]. Available at: https://databank.worldbank.org/source/world-development-indicators.
30. World Economic Forum [WEF]. (2019). Services are the hidden side of the US-China trade war. Available at: https://www.weforum.org/stories/2019/09/us-china-trade-war-disrupting-services/.
31. World Trade Organization [WTO]. (2024). Overview of Developments in the International Trading Environment. Annual Report by the Director-General. Trade Policy Review Body, WT/TPR/OV/27*. Available at: https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/TPR/OV27.pdf&Open=True.
32. World Trade Organization [WTO]. (2025a, April 16). Global Trade Outlook and Statistics April 2025: Temporary tariff pause mitigates trade contraction, but strong

downside risks persist. Available at: https://www.wto.org/english/res_e/booksp_e/trade_outlook25_e.pdf.
33. World Trade Organization [WTO]. (2025b). Global Services Trade Data Hub. Available at: https://www.wto.org/english/res_e/statis_e/services_trade_data_hub_e.htm.
34. Yan, X. & Piao, L. (2025). The effect of global geopolitical risks on trade openness. International Review of Economics & Finance, Volume 102, September 2025, 104366. Available at: https://www.sciencedirect.com/science/article/pii/S1059056025005295.