THE MIDDLE-INCOME TRAP IN THE CONTEXT OF INTRA-EUROPEAN FACTOR MOBILITY: GROWTH PROSPECTS IN THE REPUBLIC OF MOLDOVA

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Abstract: *The Republic of Moldova is officially classified by the World Bank as a lower-middle income economy in 2005, the year in which it signed the EU-Moldova Action Plan, after which it signed the Moldova-European Union Association Agreement in 2014 and in 2021 it becomes officially classified as an upper-middle income economy. European integration is becoming the central development paradigm of the Republic of Moldova, while political association and increased trade are accompanied by increased factor mobility, implicitly by net inflows of private capital from Western European economies into the Moldovan economy, while the labour circulates in the opposite direction, reducing unemployment and fueling consumption through remittances.*

Although this development paradigm facilitates reindustrialization and stimulates economic growth, in the long term it fuels a series of chronic structural imbalances and places the economy of the Republic of Moldova in the "middle income trap", which may obstruct socio-economic convergence in relation to the European Union states and, as a consequence, requires adjustment policies based on comprehensive research.

This article represents a synthesis of this comprehensive research and uses the World Bank methodology for assessing the "middle income trap" and the related strategies for overcoming this trap, relating the existing mechanisms at the international level to the realities of the Republic of Moldova.

Key words: *European integration, factor mobility, economic growth, middle-income trap.*

JEL: E61, F22, F23, J11, L52

Introduction

The World Bank currently classifies 108 countries as "middle-income" – that is, countries with an annual per capita income of between 1,136 and 13,935 US, further divided into upper-middle-income and lower-middle-income economies (Table 1). As they account for half of the world's countries, they are essential for long-term global prosperity, as evidenced by the fact that they account for over 75 percent of the global population, nearly 40 percent of global economic activity, over 60 percent of people living in extreme poverty, and over 60 percent of global carbon dioxide (CO_2) emissions (World Bank, 2024).

The Republic of Moldova was officially classified as a middle-income country on July 1, 2005 (lower-middle income), after which on July 1, 2021 it was classified as an upper-middle income country. European integration and related reforms, even if they had a cyclical dynamic, have contributed to a large extent to economic growth and, implicitly, to the increase in population incomes. The first stages of European integration are associated with institutional modernization and the consolidation of the legal framework in accordance with the commitments of the Moldova-European Union Action Plan or the Moldova-European Union Association Agreement, implicitly complex reforms in the judiciary, the consolidation of a functional market economy, the consolidation of the rule of law and participatory democracy. Also, macro-financial assistance and financing of various sectors of society have contributed to macroeconomic stability and the development of infrastructure projects in localities in the Republic of Moldova.

The European Union is becoming the main trading partner of the Republic of Moldova, while intra-European capital and labour flows are becoming important engines of economic growth and directly responsible for the increase in population incomes and the classification at the upper-middle income country level.

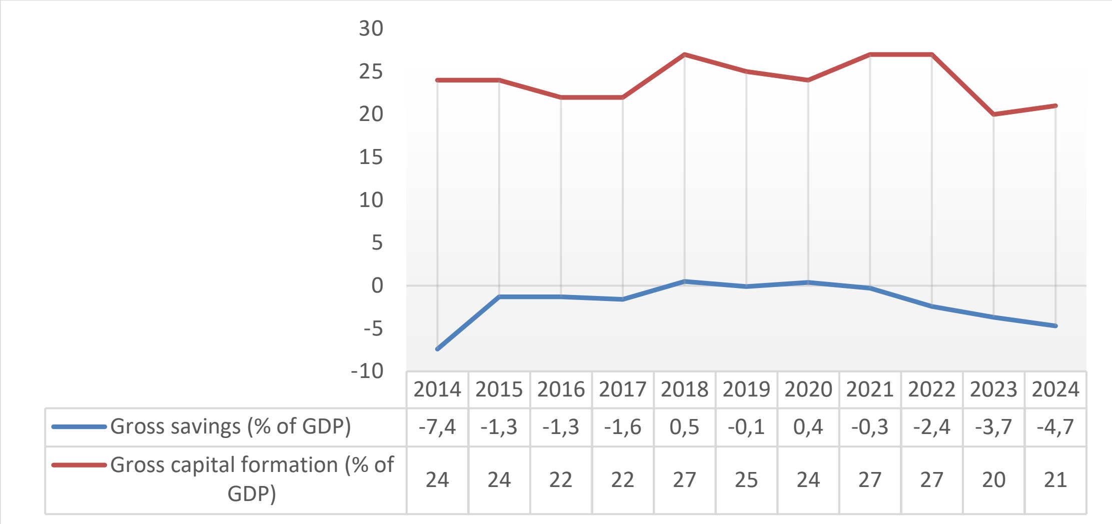
However, long-term growth and economic convergence cannot be sustainable in such an economic model. Growth data prove that the Republic of Moldova is already in the "middle income trap" while intra-European factor mobility represent distinct peculiarities of the context, which require distinct strategies and policies.

European integration and factor mobility: the peculiarities of convergence and middle-income

Both exogenous and endogenous economic growth models articulated within economic growth theories have been derived from the neoclassical production function – Y= AF(K, L) – which considers economic growth (Y_t) as a function of current capital stocks (K_t) and labor (L_t), as well as technological progress/total factor productivity (A_t), but have failed to integrate the international mobility of production factors into a complex model. Economic growth models have most often developed independently and separately from migration theories, which is why most growth models have the variable (L) constant or exogenous and do not consider international labor migration.

Extrapolating neoclassical growth models, however, allows us to conclude that labor migration (L), or the reduction in supply, will reduce global output or Gross Domestic Product (GDP), although it may initially lead to an increase in GDP per capita. Also, the endogenous growth theory starts from the premise that the exodus of human capital (skilled labor) has a positive impact on the growth of host economies and a negative impact on the growth of home economies (World Bank, 2009). The growing body of empirical studies conducted on emerging and/or developing European economies find predominantly negative repercussions of emigration on labor markets, economic growth or public finances. After a series of studies on Eastern European economies investigate the impact of emigration through remittances or brain drain (Ragl, 2017; Leon-Ledesma and Piracha, 2004; Ienciu and Ienciu, 2015), the International Monetary Fund (IMF) models the repercussions of emigration in Eastern Europe, implicitly: the reduction of labor supply (by 10-20%) and the exacerbation of the skilled labor deficit (brain-drain); the reduction of the appetite to work, generated by remittances; the reduction of competitiveness, by increasing the unit cost of labor and, at the same time, by the appreciation of national currencies thanks to remittances; pressure on public finances or; the reduction of the potential for economic growth and convergence with Western European states in the EU (Atoyan et al., 2016). The pressures on growth are quite significant, as evidenced by IMF estimates that migration reduced annual growth rates by 0.6-0.9 percentage points in some countries in the south-east of the European continent in the period 1999-2014, while simulations assume that net migration will continue until 2030 and will reduce GDP and GDP per capita in all countries in the region (Atoyan et al., 2016).

The Republic of Moldova has gradually liberalized the financial and capital account and gradually aligned the national framework on the free movement of persons, including relevant regulations on labor migration. Intra-European mobility of capital and labor has always followed the neoclassical model in the Republic of Moldova, implicitly Western European capital in the form of direct investments (FDI) entered the national economy and, along with other types of financial flows, greatly stimulated public and private investments in gross fixed capital formation and quantitative economic growth. Thus, data on domestic savings and gross fixed capital formation in the Republic of Moldova show that there is a large gap between gross domestic savings and long-term investments, proof that these investments are financed predominantly by savings from the European Union, implicitly through the net increase in external liabilities (Figure 1).



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Gross savings (% of GDP)	-7,4	-1,3	-1,3	-1,6	0,5	-0,1	0,4	-0,3	-2,4	-3,7	-4,7
Gross capital formation (% of GDP)	24	24	22	22	27	25	24	27	27	20	21

Figure 1. Gross savings and gross capital formation in the Republic of Moldova.
Source: data.worldbank.org

The dynamics of liabilities in the form of direct investment also confirm neoclassical assumptions about international capital flows. Thus, from non-existent or insignificant volumes in the years of independence and gradual growth during the difficult transition in the 1990s, there follows the growth of FDI associated with the growth of the global economy until the Great Recession of 2008-2009, when inflows of liabilities in the form of direct investment reach the value of 711 million USD (UNCTAD, 2025). Two more cycles of fall and recovery follow, implicitly in the years 2016 and 2020, after which a new investment peak in 2023 with FDI of almost 600 million USD and the moderation in 2024, when direct investment amounted to about 344 million USD (Figure 2). Data from the National Bank of Moldova show that liabilities in the form of direct investments amounted to EUR 5,373.3 million at the end of 2025, of which equity amounted to EUR 3,720.8 million and debt instruments amounted to EUR 1,652.5 million. In the geographical distribution of direct investments in the form of accumulated participations and shares (equity), including reinvested income/losses, those in EU countries totaled EUR 3,143.6 million, or approximately 85% (NBM, 2026). Empirical studies conducted in the Republic of Moldova, based on econometric models, show a positive relationship between FDI and economic performance (Macovei and Pârțachi, 2025).

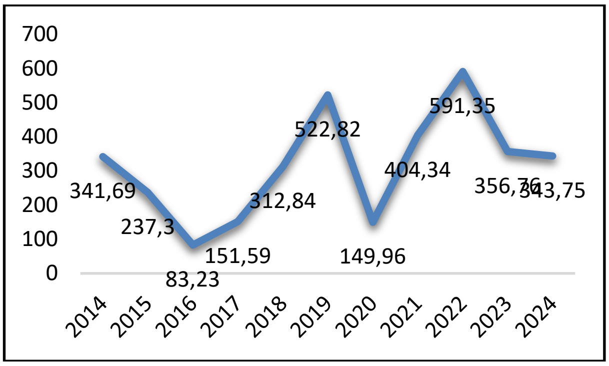


Figure 2. FDI in the Republic of Moldova (thousand USD).
Source: adapted from UNCTAD World Investment Report 2025 data.

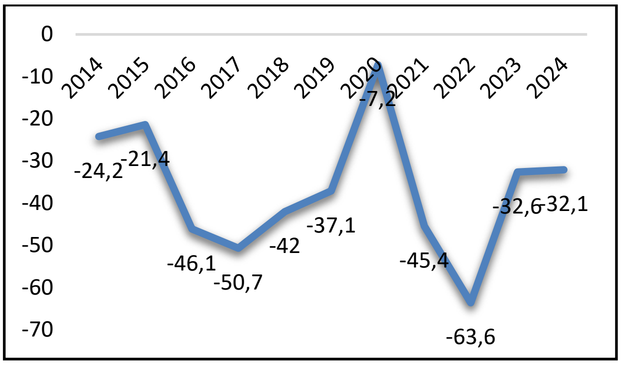


Figure 3. Net international migration (thousands of people)
Source: adapted by the author according to NBS data.

Labor flows have been predominantly in the opposite direction to capital flows, in the context of wage differences existing on the European continent, implicitly in the EU internal market. Contrary to neoclassical assumptions that argue that, internationally, labor is less mobile than capital, labor is more mobile in Eastern Europe and in the Republic of Moldova, evidence that European capital employs more Eastern European workers in Western Europe, in the countries of origin of capital, than in Eastern Europe, the countries of origin of workers. Thus, net international migration, which although experiencing a cyclical evolution, is consistently negative in the Republic of Moldova (Figure 3).

Net migration has become part of the development paradigm of the Republic of Moldova, largely absorbing negative shocks to external demand by reducing the unemployment rate, which has fluctuated between 3-5% in the last decade, and, most importantly, through remittances received by residents of the Republic of Moldova, which were comparable to exports and largely supported private consumption, respectively economic growth. Although decreasing, from a peak of 34.5% of GDP in 2006 to 10.5% of GDP in 2024, external remittances remain crucial for covering the current account deficit, as well as for the consumption-driven growth model, since on the use side, about 86% of GDP is formed by household consumption. Not only economic growth but also the convergence and increase in average incomes of the population is determined predominantly by negative net migration from the Republic of Moldova, implicitly qualifying for the status of upper-middle income country (Figure 4).

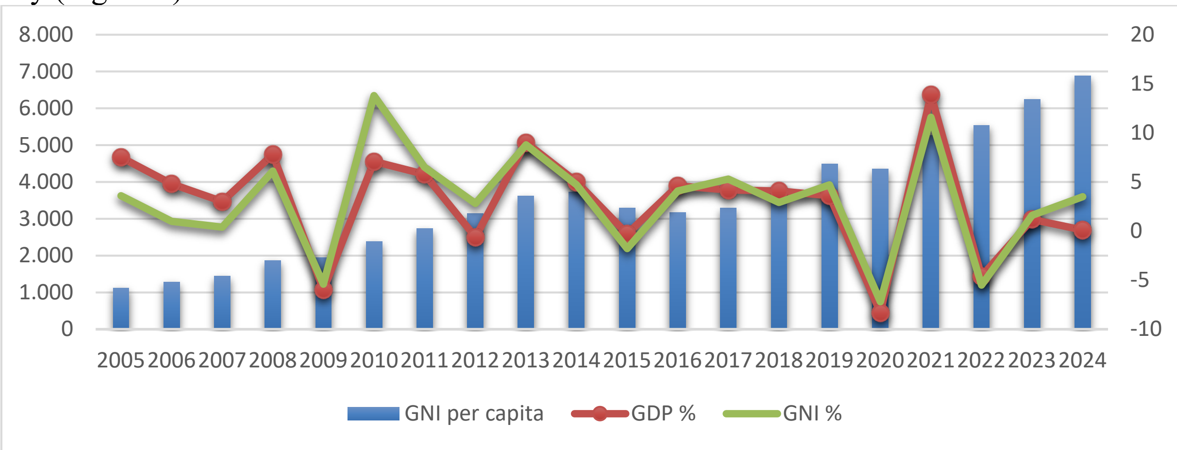


Figure 4. GDP, GNI and GNI per capita growth in Republic of Moldova

Source: data.worldbank.org

Economic growth has been cyclical in the Republic of Moldova for the two decades since it entered the category of middle-income countries. At the same time, the data in Figure 4 show that, during the period 2005-2024, GDP increased in real terms and GNI per capita in the Republic of Moldova increased by more than six times. Therefore, the dynamics of GNI per capita reflects the cumulative effect of several factors, implicitly real economic growth, changes in net income from abroad (especially remittances), as well as demographic contraction mainly determined by negative net migration, processes particularly supported by the European integration of the Republic of Moldova, implicitly by intra-European factor mobility.

Overcoming the middle-income trap: strategies and reforms

The notion "middle-income trap" was first defined by the World Bank in 2007, in the context of income classifications of the world's countries and recommendations to avoid this status for East Asian countries (Gill, 1997). Starting from the income classification of countries, whose thresholds for 2026 are presented in Table 1, subsequent research has further developed the criteria by which an economy is in the "middle-income trap" state and the strategies to overcome this condition.

Table 1. World Bank income classifications (U.S. dollars)

	Low Income	*Lower-Middle income*	*Upper-Middle Income*	*High Income*
July 1, 2025 (new, for FY26)	≤ 1,135	1,136 - 4,495	4,496 – 13,935	> 13,935
July 1, 2024 (previous, for FY25)	≤ 1,145	1,146 - 4,515	4,516 – 14,005	> 14,005

Source: World Bank Group income classifications for FY26

According to the World Bank methodology, an economy can be considered to be in the "middle-income trap" when, after entering the middle-income club (currently GNI per capita between USD 1,136 and USD 13,935), it experiences a persistent slowdown in economic growth and fails to converge towards advanced economies within a reasonable time horizon. The phenomenon is associated with the maintenance of a growth model based predominantly on capital accumulation, without an adequate transition to technological diffusion and innovation, as well as with institutional constraints and high vulnerability to external shocks (World Bank, 2024).
The data on the Republic of Moldova are close to the World Bank diagnosis. Thus, the economy of the Republic of Moldova recorded an average annual growth rate of approximately 3.5% for real GDP and about 3.7% for GNI, but beyond the average of the two decades of a middle-income economy, the analysis of data for each decade demonstrates a slowdown in growth:

- 2005-2014 – 4.3% average GDP growth rate and 4.2% average GNI growth rate. The most dynamic period of economic activity in the history of the Republic of Moldova, supported on the demand side by the increase in household consumption fueled by the increase in remittances.
- 2015-2024 – 1.9% average GDP and GNI growth rate. The moderation of the growth rate, caused not only by repeated external shocks (COVID-19 pandemic, energy crisis, regional geopolitical instability), but also by the exhaustion of the growth model.

Therefore, the analysis by sub-periods highlights a significant slowdown in the economic growth rate in the Republic of Moldova, from approximately 4.2%-4.3% annually in the period 2005-2014 to approximately 1.9% after 2015. This deceleration cannot be explained only in terms of overlapping crises, but suggests the existence of internal imbalances and the partial exhaustion of initial convergence factors and indicates the existence of structural constraints on medium and long-term economic growth - the "middle-income trap".
After the authors of the term "middle-income trap" propose Schumpeterian growth models, which emphasize creative destruction and institutional change, as the basis for strategies to overcome the trap, the World Development Report 2024 presents a strategy structured in three stages, which must also be considered for the case of the Republic of Moldova (Figure 5).

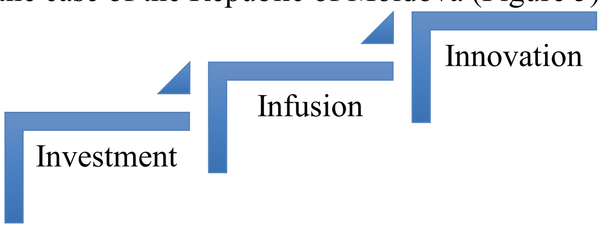


Figure 5. Strategy „3i"

Source: World Bank. 2024. World Development Report 2024: The Middle-Income Trap. Washington, DC: World Bank

Thus, according to the WB, overcoming the middle-income trap requires a sequential strategy based on three interdependent pillars: efficient investments; diffusion of existing technology and development of innovation capacities. The WB report emphasizes that these three dimensions are not substitutable, but complementary, but the transition between these stages reflects the move from an extensive growth model, based on the quantitative increase of factors (especially capital), to an intensive model of efficiency growth, oriented towards productivity and endogenous technological progress (World Bank, 2024).
The reforms in recent years and the policy documents approved by the Government of the Republic of Moldova have mainly targeted the first two i, in the context of attempts to change the development paradigm from a consumption-driven model to an investment-driven model, respectively investments and the infusion of technology by attracting foreign direct investment, recommended by the World

Bank for lower-middle income countries (World Bank, 2024). In this context, the Ministry of Economic Development and Digitalization has developed and is implementing the first mechanism to stimulate investments in the manufacturing industry aligned with European Union rules on state aid, the Regional State Aid Scheme for Investments, approved by Government Decision no. 875/2024. State aid is granted through two complementary instruments: a grant, in the proportion of 25% of the total value of the approved aid, and a partial exemption from income tax, in the proportion of 75%. On May 1, 2026, 28 companies were beneficiaries of the pre-booked state aid scheme, with an expected investment volume of approximately 2.76 billion lei and the total number of jobs expected to be created is 1,572 (MEDD, 2026).

At the same time, the realities of the Moldovan economy, along with the World Bank's set of recommendations for overcoming the middle-income trap, require the development and implementation of the second stage of transformations, transformations recommended for successful upper-middle income countries, namely the transition to an innovation strategy. With R&D investments of 0.22% of GDP, the Republic of Moldova invests ten times less in research and development than the European Union member states, which in turn are less competitive internationally, according to The Draghi report on EU competitiveness (Draghi, 2024). In this context, attracting private capital in research and development becomes imperative, while the interest of domestic companies in the above-mentioned state aid scheme for investments recommends the development and implementation of a state aid scheme for research, development and innovation. The development and implementation of this mechanism initially requires the updating of the Regulation on aid for research, development and innovation, approved by the Competition Council Decision no. 8/2013, after which the Ministry of Economic Development and Digitalization developed and the Government approved a state aid scheme for research, development and innovation.

Also, in order to streamline the support mechanism and capitalize on the potential of the private sector, the state aid scheme for research, development and innovation must be implemented in parallel with the development of Innovation Intermediaries. Marked by a dynamic development in recent decades, implicitly different names and functions (Caloffi, 2023), Innovation Intermediaries are essential for the digital transition of contemporary economies and, consequently, become crucial for stimulating innovation and its commercialization in the Republic of Moldova. Innovation intermediaries are involved on both the demand and supply sides of innovation and technological solutions, as they mediate between organizations that request innovation and technology (large companies, SMEs or public authorities) and organizations that provide technology or innovation (large companies, SMEs, universities and public research organizations) (Rossi et al., 2020).

Beyond understanding the needs and developing the strategies recommended by the World Bank, the growth in the context of intra-European mobility of capital and labor has accentuated a series of internal imbalances that require structural reforms and additional institutional modernizations to successfully overcome the middle-income trap. Constantly negative net migration has generated a skilled labor shortage that puts pressure on the country's sustainable growth and does not allow the activation of the internal depreciation mechanism, as a mechanism to cushion external shocks. Also, vertical foreign investments, attracted by cheap labor, cannot continue to constitute a feasible mechanism for technology infusion and the engine of economic growth, while increased electricity costs put pressure on existing economic sectors and obstruct the development of new, energy-intensive economic sectors.

Therefore, forced by the context to accelerate or even skip growth stages – from a consumption-driven model to an investment model –, faced with a series of structural imbalances and affected by regional geopolitical instability and overlapping crises, the Republic of Moldova must rethink its development model and capitalize on the opportunities existing in the European integration process.

Conclusions

Capital and labor flows are complementary in an integrated market where there are differences in profit margins and wages, while labor is more mobile than capital, contrary to neoclassical assumptions. In the context of reduced domestic savings, the financing of investments and gross fixed capital formation in the Republic of Moldova is predominantly ensured by capital inflows, implicitly in the form of direct investments. Capital inflows, particularly liabilities in the form of direct investments, are not yet sufficient to stimulate sustained growth in the Republic of Moldova and/or to employ the entire economically active population with competitive wages, while a large part of the labor force emigrates to the Western European labor market, generating imbalances in the labor market and limiting the adjustment mechanism to external shocks. At the same time, after European integration stimulated economic growth and development in the Republic of Moldova, implicitly through intra-European factor mobility, stimulating entry into the club of upper-middle income states, there is a significant slowdown in the pace of economic growth, from approximately 4.2%-4.3% annually in the period 2005-2014 to approximately 1.9% after 2015. This deceleration cannot be explained only in terms of overlapping crises, but suggests the existence of internal imbalances and the partial exhaustion of initial convergence factors and indicates the existence of structural constraints on medium and long-term economic growth – the “middle-income trap”. Sustainable economic growth requires targeted policies to stimulate investment, mitigate imbalances on the labor market and policies to stimulate efficiency and productivity – structural reforms and innovation.

References

1. Atoyan R., Christiansen L., Dizioli A., Ebeke Ch.,Ilahi N., Ilyina A., Mehrez G., Qu H., Raei F.,Rhee A. and Zakharova D., 2016. Emigration and Its Economic Impact on Eastern Europe, *IMF SDN*/16/07.
2. Caloffi A., et al., 2023. Innovation intermediaries' types and functions: A computational analysis of the literature, Technological Forecasting and Social Change Volume 189, April 2023. https://www.sciencedirect.com/science/article/pii/S0040162523000367
3. Draghi, M, 2024. *The Future of European Competitiveness—A Competitiveness Strategy for Europe*. European Commission.
4. Gill, I., 1997. *An East Asian renaissance: ideas for economic growth*, DC: World Bank.
5. Ienciu N., Ienciu I., 2015. Brain drain in Central and Eastern Europe: new insights on the role of public policy, *Journal of Southeast European and Black Sea Studies*, 15(3):1-19.
6. Leon-Ledesma M., Piracha M., 2004. International migration and the role of remittances in Eastern Europe, *International Migration*, 42(4): 65-83;
7. Macovei A., Pârțachi I. Assessing the links between FDI and economic performance through econometric models, *”DEVELOPMENT THROUGH RESEARCH AND INNOVATION” IDSC-2025. Collections of scientific articles, pp.21-28.*
8. MEDD. State aid scheme for investments. [online] Available at: https://mded.gov.md/domenii/ajutor-de-stat/ajutor-de-stat-regional-pentru-investitii/ [Accessed 1 May 2026].
9. *NBM, 2026. International Investment Position.* [online] Available at: https://www.bnm.md/files/01_NA_CI_q4_2025_CI__4.pdf#page=25 [Accessed 1 May 2026].
10. Raggl A., 2017. The relevance of remittance inflows to CESEE countries: evidence from macro- and micro- level data, *ONB Focus on European Economic Integration*, Q2/17: 80-103;
11. Rossi, F., Caloffi, A., Colovic, A., Russo, M., 2020. ,”Public innovation intermediaries and digital co-creation. Research contribution to the OECD TIP Co-creation project”. [online] Available at: https://stip.oecd.org/stip/knowledge-transfer/casestudies [Accessed 1 May 2026]
12. *UNCTAD, 2025. World Investment Report 2025 data.*
13. World Bank, 2009. *World Development Report: Reshaping Economic Geography*. Washington.
14. World Bank. 2024. *World Development Report 2024: The Middle-Income Trap. Washington*, DC: World Bank.