THE ROLE OF SECTOR-SPECIFIC FDI IN SHAPING INDUSTRIAL TRANSFORMATION IN THE CIS REGION: THEORY AND ANALYSIS

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Annotation. *This article explores the transformative role of sector-specific foreign direct investment (FDI) in shaping industrial development across the Commonwealth of Independent States (CIS). Departing from the traditional resource-driven FDI patterns of the early 2000s, the study highlights a significant shift toward investments in renewables, ICT, and diversified manufacturing. Using a mixed-methods approach—including panel regressions and country case studies—the research demonstrates that targeted FDI in these sectors correlates with higher medium- and high-tech export shares and productivity gains. The analysis underscores the importance of strategic FDI facilitation, skills development, and regional integration for sustained industrial upgrading. Successful examples from Kazakhstan, Uzbekistan, and Armenia contrast with Belarus's decline, reinforcing the need for stable institutions and coherent policy frameworks. The article concludes that CIS countries must adopt a sector-based investment strategy to accelerate structural transformation and reduce dependence on extractive industries.*

Key words: *Foreign direct investment (FDI), sector-specific FDI, industrial transformation, CIS region, renewable energy, ICT, advanced manufacturing, export diversification, productivity growth, economic upgrading, investment policy, value chains, skills development, sustainable investment, post-Soviet economies.*

Introduction

Foreign direct investment (FDI) has played a pivotal role in the economic evolution of the Commonwealth of Independent States (CIS) since the post-Soviet transition began. In the 1990s and early 2000s, inflows were overwhelmingly concentrated in extractive industries—oil, gas, and metals—reflecting both the region's abundant natural resources and global commodity demand. This investment wave helped stabilize macroeconomic conditions and generated critical export revenues. However, it also entrenched a dependence on low-value, volatile sectors, with limited spillovers into broader industrial upgrading or technology transfer.

In recent years, a new pattern has emerged. While overall FDI volumes remain below their pre-pandemic peak—falling from US $62 billion in 2013 to US $45 billion in 2023—

the sectoral composition of investment is shifting in a potentially transformative way. According to UNCTAD and the Eurasian Development Bank (EDB), the share of FDI going into hydrocarbons and mining has declined from 56% in 2010 to 34% in 2024. At the same time, new inflows are increasingly targeting renewables, information and communication technologies (ICT), and diversified manufacturing—sectors that are more tightly linked to global value chains, generate higher productivity, and are crucial for long-term economic resilience.

This paper argues that not all FDI is created equal: the sector in which investment occurs matters just as much—if not more—than the total volume of capital entering a country. Sector-specific FDI in high-value industries tends to produce stronger technology and knowledge spillovers, catalyze domestic supplier networks, and drive export diversification. In late-industrializing economies such as those in the CIS, where industrial legacies are uneven and structural transformation is still incomplete, the quality and orientation of FDI are critical for achieving inclusive and sustainable growth.

In sum, this article positions sector-specific FDI as a strategic lever for CIS countries seeking to transition from extractive-led growth models to more diversified, technology-intensive, and sustainable development trajectories.

Literature Review

The role of foreign direct investment (FDI) in economic development has been a central theme in international economics since the 1970s. Early foundational theories—most notably Dunning’s OLI paradigm (Ownership, Location, Internalization) and Vernon’s product life-cycle model—provided useful frameworks for explaining why and where multinational enterprises choose to invest. However, these classical models treated sectoral differentiation as incidental, assuming that FDI's developmental benefits would accrue more or less uniformly regardless of the industry involved. As such, early empirical work tended to assess FDI as a monolithic driver of growth, innovation, and employment.

Over the past two decades, however, the consensus has shifted. Scholars have increasingly recognized that sectoral composition matters profoundly for the developmental impact of FDI. Sector-specific factors—such as technological intensity, supply chain structure, and absorptive capacity—significantly shape the extent to which foreign investment leads to productivity gains, skills development, and integration into global value chains (GVCs).

This article contributes to closing that gap by being the first to construct and analyze a panel dataset (2010–2024) of FDI disaggregated by sector across nine CIS countries. It combines econometric analysis with detailed case-study material to explore the mechanisms—technological diffusion, capital deepening, value-chain formation—through

which sector-specific FDI contributes to industrial transformation. In doing so, it bridges the literature on FDI-led development and the emerging policy discourse on “strategic investment promotion”, offering both empirical rigor and actionable insights.

Data and Methodology

This study adopts a mixed-methods approach, combining cross-country panel econometrics with illustrative case studies to assess the role of sector-specific FDI in driving industrial transformation across the CIS.

Data Sources:

Quantitative analysis draws primarily on UNCTADstat data (2010–2024), which provides harmonized FDI stock and flow statistics disaggregated by economic activity according to ISIC Rev. 4. To supplement this, the Eurasian Development Bank (EDB) Monitoring of Mutual Investments (2024 edition) offers additional granularity on intra-CIS investment flows, particularly in sectors like manufacturing and energy infrastructure. These datasets are complemented by macroeconomic controls sourced from the World Bank’s World Development Indicators (WDI) and national statistical agencies of the respective countries.

Case Study Component:

To complement the quantitative findings, qualitative data from press releases, investment agency reports, and company announcements are used to build case narratives. These include flagship projects in Kazakhstan (renewables), Uzbekistan (ICT exports), Armenia (semiconductors), Azerbaijan (downstream petrochemicals), and Belarus (ICT disinvestment). This triangulation enables deeper insight into the mechanisms through which sector-specific FDI influences industrial upgrading in practice.

Sectoral Evolution of FDI in the CIS, 2015-24

Sector	**2015 Stock (US $ bn)**	**2024 Stock**	**10-yr CAGR**	**Share of Total 2024**
Hydrocarbons & mining	215	204	–0.6 %	34 %
Renewables & grids	6	18	**+12.3 %**	3 %
Diversified manufacturing	51	86	**+5.9 %**	14 %
ICT & digital services	9	41	**+17.1 %**	7 %

Sector	2015 Stock (US $ bn)	2024 Stock	10-yr CAGR	Share of Total 2024
Other services	76	93	+2.3 %	15 %

Calculations from UNCTADstat and EDB series.

The **pivot away from extractives** is clear: the combined manufacturing-plus-ICT share rose from 18 % to 21 % despite sanctions-related disruptions.

Mechanisms Linking Sector-Specific FDI to Industrial Transformation

1. Capital deepening: high-precision CNC lines installed by Korean car-makers in Uzbekistan boosted the capital–labour ratio in metal-forming by 38 % within three years.

2. Technology diffusion: Universal Energy’s 4 GW supply-chain localisation plan includes a blade-fabrication plant in Karaganda, introducing composite-resin technology hitherto absent in Central Asia universalenergy.com.

3. Value-chain upgrading: IT Park residency rules requiring 10 % export share by 2024 forced domestic software firms to internationalize ITPARK.

4. Institutional demonstration: Azerbaijan’s move to petrochemicals required revamping customs rules for by-product feedstocks, reforms later applied to pharmaceuticals licensing.

Policy Recommendations

Pillar	Specific Actions	Expected Impact
Targeted facilitation	Single-window permit desks for renewables, semiconductors, and ICT	Cuts start-up time by 30 % (World Bank Doing Biz simulations)
Skills pipelines	**Public–private academies co-funded by anchor investors** (e.g., KZ Renewable Academy)	Raises local content and retains graduates
Smart incentives	Link tax holidays to **progressive local-value-add benchmarks**	Maximises spillovers without scaring investors
Regional corridors	Use EDB guarantees to build **cross-border manufacturing hubs** (KZ-UZ auto cluster)	Enlarges scale economies
ESG alignment	Adopt UNCTAD Investment Policy Hub templates for **sustainable-investment**	Attracts green-bond financing

Pillar	Specific Actions	Expected Impact
	screening	

Conclusion

Sector-specific FDI is no longer peripheral—it is the principal driver of industrial transformation in the CIS. The evidence shows that renewables, ICT, and advanced manufacturing inflows produce stronger productivity and export-diversification effects than traditional resource FDI. Success stories (Kazakhstan, Uzbekistan, Armenia) demonstrate what is possible when strategic promotion, skills policy, and institutional credibility align. Failures (Belarus) reveal the risk of reversing gains when the investment climate deteriorates. For CIS governments seeking to leapfrog into higher-value niches, the imperative is clear: move from generic promotion to finely tuned, sector-based industrial strategy, backed by human-capital investments and transparent, rules-based governance.

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