

STRUCTURAL CHANGE TRENDS IN THE HUNGARIAN LOGISTICS SECTOR BETWEEN 2022-2024

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Abstract: *The study examines logistics sector trends between 2022 and 2024 based on a dashboard summary prepared by the National Data Assets Agency (NAVÜ). The presented data, extracted from the public data register, indicate that net sales revenue increased across the logistics sector as a whole, while the number of companies essentially stagnated. This suggests that the growth did not stem from the mass emergence of new players, but from the higher performance of existing companies and the strong concentration of certain sub-areas. In the breakdown according to the Unified Economic Activity Classification System (TEÁOR 2 is a Hungarian acronym that stands for Tevékenységek Egységes Ágazati Osztályozási Rendszere), warehousing, storage and ancillary activities related to transport remain the largest players, accounting for approximately 76-77 percent of companies. However, its share of sales revenue decreased between 2022 and 2024, indicating a structural transformation. In parallel, air transport has strengthened spectacularly: its revenue has almost doubled and its share of sales revenue has increased from approximately 18 percent to approximately 29 percent. Based on more detailed sectoral data, “Other auxiliary transport services” (code 5229) remained the sub-sector with the broadest entrepreneurial base, with around 41 percent of companies in 2024. The most important conclusion is that logistics performance is increasingly concentrated: many companies operate in auxiliary services, but some high-revenue sub-sectors, especially air passenger transport, represent significant economic weight even with few companies.*

Key words: *logistics, TEÁOR, sales, working capital, sectoral concentration, warehousing, air transport, corporate performance.*

1. INTRODUCTION: WHY IS IT IMPORTANT TO EXAMINE THE LOGISTICS INDUSTRY?

Logistics is one of the fundamental operating systems of the modern economy. It is not just the physical movement of goods, but also connects production, trade, warehousing, supply chains, customer service and international economic relations. A country's logistics performance directly influences the competitiveness of companies, the efficiency of foreign trade, inventory costs and the level of service perceived by consumers.

The period between 2022-2024 is particularly suitable for examining structural changes, because cost pressure, digitalization, supply chain reorganization and changes in demand structure appeared simultaneously in the economic environment. In this environment, logistics companies not only had to ensure capacity, but also had to make financing, inventory management and technology decisions.

The aim of this study is to interpret the internal reorganization of the logistics industry based on the main indicators included in the dashboard. The study is not based on the analysis of company-level reports, but on the identification of sectoral trends. The main question is

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which sub-areas have strengthened, which have weakened, and what economic conclusions can be drawn from the revenue, number of businesses, and working capital data.

2. LITERATURE REVIEW

The literature review aims primarily to facilitate the creation of a dashboard specifically relevant to the logistics industry subsector. Therefore, it examines two areas: the role of dashboards in economic analysis in general, and specifically in the field of logistics services.

2.1 The Significance of Dashboards in the Analysis of Economic Sectors

Dashboards play a crucial role in the analysis of economic sectors by transforming complex, large-scale data into clear, interactive, and actionable visual insights. In today's data-driven economy, they have become indispensable tools for economists, analysts, policymakers, investors, and business leaders:

- **Real-Time Monitoring and Decision-Making.** Economic sectors generate massive amounts of data from various sources (e.g., GDP contributions, employment rates, production indices, and trade flows). Dashboards aggregate this data and update it in real time, enabling stakeholders to detect trends, anomalies, or emerging crises faster than with traditional static reports [1].
- **Improved Data Visualization and Cognitive Efficiency.** Dashboards use charts, graphs, heat maps, and trend lines to make intricate economic relationships accessible. A single view can display sector growth rates, GDP contributions, employment trends, and competitiveness simultaneously. Research shows that well-designed visualizations reduce cognitive effort, increase decision accuracy, and support more assertive choices [2].
- **Comparative and Industry-Level Analysis.** Dashboards facilitate benchmarking across sectors, regions, or countries. Studies highlight the value of business intelligence systems that integrate company profiles, value-chain data, and other sources to support industry analysis and innovation policy [3].
- **Early Warning, Risk Management, and Performance Improvement.** By tracking key performance indicators (KPIs) and risk indicators, dashboards help identify sector slowdowns, supply chain issues, or inflationary pressures. Empirical evidence from industrial companies shows that dashboard integration leads to higher productivity, lower costs, and improved financial performance [4].
- **Strategic Alignment and Organizational Performance.** Dashboards promote alignment between strategy and operations. Research confirms that strategy-aligned dashboards with interactive controls significantly enhance managerial and organizational performance [5].
- **Support for Policy and Investment Decisions.** Governments, central banks, and investors use sector dashboards for evidence-based policymaking, stimulus design, and opportunity identification. Specialized dashboards, such as those for digitization in the ICT sector, demonstrate their utility in understanding industry dynamics and forecasting growth [6].
- **Accessibility, Collaboration, and Democratization of Data.** Modern platforms make insights shareable, bridging gaps between executives (high-level views) and analysts (detailed drill-downs).

In economic sector analysis, dashboards function as a strategic command centre. They reduce information overload, accelerate insight generation, support evidence-based decisions, and bridge the gap between complex data and practical action. Academic and practitioner literature consistently demonstrates their positive impact on decision speed, productivity, and performance across industries [7].

2.2. Specific Relevance to the Logistics Sector and Its Sub-Sectors

The logistics sector (transportation, warehousing, freight forwarding, last-mile delivery, etc.) is highly data-intensive and directly influences global trade efficiency, costs, and competitiveness. Dashboards are particularly valuable here because they enable:

- **Performance Measurement (Efficiency & KPIs).** Tracking metrics such as on-time delivery (OTIF), perfect order rate, order cycle time, inventory turnover, warehouse utilization, and freight cost per unit. Real-time dashboards help identify bottlenecks and improve operational efficiency [8].
- **Profitability and Cost Analysis.** Monitoring transportation costs as % of revenue, margin by route/customer, fuel/operational expenses, and overall financial ratios (ROA, ROE, liquidity). Studies on logistics companies (e.g., in Saudi Arabia or Turkey) use multi-criteria methods (Entropy, TOPSIS, MOORA) to evaluate how cost-revenue structures affect profitability [9].
- **Growth and Capacity Trends.** Visualizing sector expansion via indices like the Logistics Manager's Index (LMI), warehousing utilization, inventory levels, and sub-sector growth (e.g., express/courier vs. traditional freight). Reports show strong expansion signals in warehousing and transportation utilization [10].
- **Competitiveness and Benchmarking.** Comparing sub-sectors (road, rail, air, maritime, warehousing) on connectivity, speed, reliability, and international benchmarks (e.g., World Bank's Logistics Performance Index 2.0 - LPI 2.0, based on objective shipment data) [11].
- **Strengthening Role in the Economy.** Dashboards highlight logistics' growing strategic importance (e.g., contribution to GDP, resilience in global supply chains, sustainability via carbon footprint per shipment). They support analysis of diversification, technology adoption (AI, IoT), and sub-sector shifts (e.g., last-mile and e-commerce logistics growth) [12].

In economic sector analysis - and particularly in logistics - dashboards function as a strategic command centre. They reduce information overload, accelerate insight generation, and directly support improvements in performance, profitability, growth, and competitiveness. For logistics sub-sectors, they are essential for navigating volatility, optimizing costs, enhancing service levels, and strengthening the sector's macroeconomic role. Academic literature and industry reports (World Bank LPI, LMI, financial efficiency studies) consistently affirm their value in evidence-based decision-making.

3. THE NAVÜ LOGISTICS DASHBOARD

Recognizing the growing role of logistics, the National Data Asset Agency facilitates the preparation of analyses that can help the competitiveness and prosperity of individual

logistics sub-sectors with a dashboard specially designed for this economic sector (“The NAVÜ Logistics Dashboard”).

3.1. Data source and methodological approach

The data used in the analysis are derived from the GSZR database maintained by the Hungarian Central Statistical Office. GSZR stands for *Gazdasági Szervezetek Regisztere*, which can be translated as the *Register of Economic Organizations*. The database contains annual aggregated data on enterprises, classified by sector and type of economic activity. It includes variables such as the number of enterprises, their total assets, profit after tax, intangible assets, securities and equity, among other financial and organizational indicators. The analysis is based on a dashboard summarization of the data, which presents the logistics sector at two levels: on the one hand, according to TEÁOR level 2, aggregated sector groups, and on the other hand, in a more detailed sub-sector breakdown. The data refer to the years 2022, 2023 and 2024.

The method is descriptive and comparative. The study interprets changes over time, sector shares and relative shifts in the centre of gravity. The findings should therefore not be treated as causal evidence, but as a decision-supporting sector situation assessment. Special attention is paid to indicators that indicate structural restructuring: such as the growth rate of net sales, the change in the number of companies, revenue concentration and the development of working capital (Table I).

Table I.
Featured dashboard findings between 2022-2024

Indicator/area	Observed trend	Interpretation
Total net sales	4.30 -> 4.93 -> 5.16 in datasheet units	The sector has grown, but the rate of growth has slowed.
Number of companies	3690 -> 3704 -> 3673	Sales revenue! Growth does not come from an increase in the number of companies ???
TEÁOR 52	Approximately 76-77% of companies; revenue share from 64.8% to 56.4%	It is dominant, but its relative weight in sales is decreasing.
Air transportation	Sales approx. +93.6%; share increased from approx. 18% to 29%	One of the main growth engines.
Current assets	Between 2022-2024 approx. +25.8%	Growing operational and financing needs.

3.2. TEÁOR 2-level tendencies: dominance and rearrangement

One of the most important messages of the TEÁOR level 2 dashboard is that the largest sector group is still 52 Warehousing, storage, and ancillary activities to transportation. This group accounts for the vast majority of businesses, with a rate of approximately 76-77 percent each year. This high number of businesses indicates that the basis of the logistics ecosystem continues to be warehousing, storage, and related ancillary services.

However, dominance does not mean an unchanged structure. The share of sector 52 in sales revenue was approximately 64.8 percent in 2022 but decreased to 56.4 percent by 2024. This does not necessarily mean an absolute decline, but rather a relative loss of weight: other sectors, primarily air transport, grew faster. The logistics sector is therefore not shrinking, but its internal centres of gravity are being rearranged (Fig. 1).

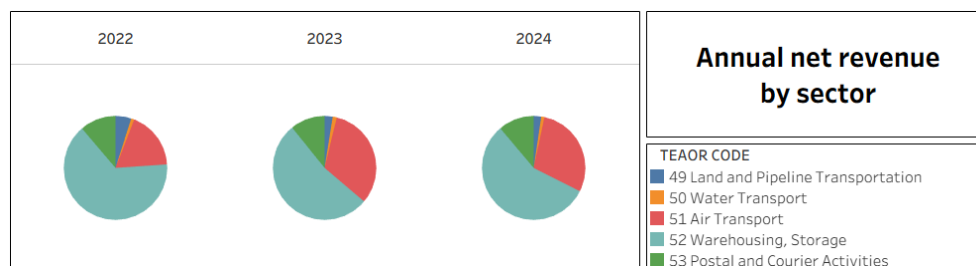


Figure 1. Annual net revenue by sector

Air transport shows an outstanding growth trajectory. Its revenue increased by approximately 93.6 percent between 2022 and 2024, and its revenue share increased from around 18 percent to 29 percent. This suggests that air transport has become a growth engine of strategic importance in the period under review. The rapid growth may be due to a recovery in demand, higher unit revenue, capacity expansion or a shift in the service structure towards higher value-added activities.

Postal and courier activities, on the other hand, show stable, moderate growth. Its revenue increased by approximately 19.1 percent between 2022 and 2024, while its share remained relatively stable at around 11 percent. This sub-sector is less spectacular, but it plays a lastingly important role in the everyday functioning of the economy, especially in relation to e-commerce, parcel logistics and urban delivery.

Land and pipeline transport, on the other hand, appears as a declining sector. Its revenue decreased by approximately 43 percent between 2022 and 2024, and the number of companies fell from 5 to 3. The significant decrease in current assets also indicates that this sub-sector is on a weakening or transforming path in the data set examined. The revenue weight of water transport is very low throughout, around 1 percent, so the trends of the sector as a whole are not significantly determined by this area.

3.3. Detailed sub-sector picture: revenue concentration and entrepreneurial structure

A more detailed breakdown provides a more nuanced picture of the logistics sector. The activity with the highest turnover in 2024 was 5229 Other services supporting transport, which accounted for approximately 31 percent of total turnover. However, according to the dashboard, the turnover of this sub-sector decreased compared to 2022, which suggests that although it remains dominant, its former dominance has weakened.

Sub-sector 5229 also stands out in terms of the number of companies: in 2024, 1,508 companies belonged to this sector, which is approximately 41 percent of all companies. This sub-sector therefore has the broadest entrepreneurial base. From an economic perspective, this shows a double picture: on the one hand, a significant market size and many players, and

on the other hand, probably stronger competition, a more fragmented corporate structure and different levels of efficiency.

The second largest turnover item is 5110 Passenger air transport. This approximately doubled its revenue between 2022 and 2024, and in 2024 it already accounted for about 28.9 percent of total revenue. It is particularly important that only 70 enterprises were involved in this, or about 1.9 percent of companies. This indicates a strong concentration: a few companies generate almost a third of the sector's revenue.

The detailed breakdown also shows other growing sub-areas. The revenue of 5221 Services supporting land transport increased by about 72 percent between 2022 and 2024, and the number of companies also increased. 5223 Services supporting air transport is also on a growing path, with a revenue increase of about 44 percent and a strong expansion of current assets. 5210 Warehousing and storage showed stable but not exceptional growth: its sales revenue increased by approximately 7 percent, and the number of companies decreased to 599 by 2024 (Table II).

Table II.

Detailed sub-sector conclusions

Sub-Sector	Roal Change in 2024	Change between 2022-2024	Main conclusion
5229 Other services supporting transportation	approx. 31% revenue growth; at approx. 41% of companies	sales revenue decreased compared to 2022	broad base but weakening dominance
5110 Air passenger transportation	approx. 28.9% revenue growth for seventy companies	sales revenue approximately doubled	strong concentration and high output per company
5221 Additional land service	growing activity	sales revenue approx. +72%	dynamic market expansion
5223 Air supplementary service	growing role	sales revenue approx. +44%	The air logistics ecosystem is expanding
5210 Warehousing, storage	599 companies in 2024	sales revenue approx. +7%	stable but moderate growth

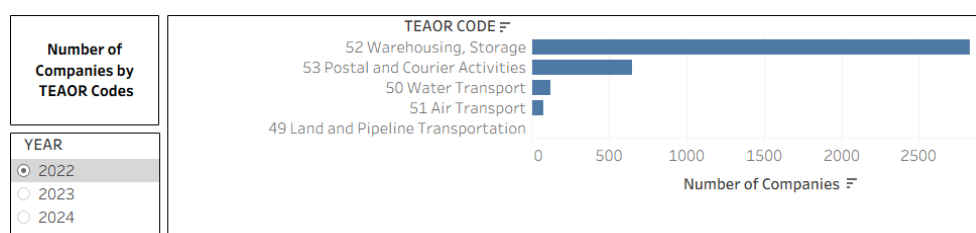


Figure 2. Dashboard query by TEAOR code: Number of companies performing logistics activities in a given year

3.4. Current assets, financing needs and corporate operations

One of the important financial messages of the dashboard is the development of current assets. The value of current assets increased by approximately 25.8 percent between 2022

and 2024, especially in 2024. This means that logistics companies are increasingly connected to the operation of short-term assets: in the form of inventories, receivables, cash or other operational assets. The increasing need for current assets also raises financing issues, as companies need to ensure liquidity for daily operations.

The largest change in current assets is seen in air transport, where the current assets more than doubled between 2022 and 2024. By 2024, it was almost as large as that of the warehousing and ancillary sector. This is in line with the growth in sales and indicates that air transport has appreciated not only in terms of revenue, but also in terms of operational resource requirements.

From a corporate perspective, the increase in current assets can be both favourable and risky. It is beneficial if the expanding asset base supports higher service levels, faster delivery, greater capacity or higher sales. However, it is risky if the increase in current assets is accompanied by slow returns, deteriorating receivables collection, excessive inventory levels or liquidity stress. For logistics management, therefore, operational indicators and financial indicators should be interpreted together.

According to the dashboard, total net sales were approximately 4.30 billion in 2022, 4.93 billion in 2023, and 5.16 billion in 2024, in the data table unit. However, growth slowed down: from 2022 to 2023, an expansion of approximately 14.6 percent is seen, and from 2023 to 2024, only approximately 4.6 percent is seen. This suggests that after the initial stronger growth, the sector has started to take a more moderate path. The number of companies has essentially stagnated: it changed from 3,690 to 3,704, and then to 3,673. This is particularly important because it means that the growth in sales was not due to a significant increase in the number of companies. Rather, it may be that existing businesses generated higher revenues, or that certain subsectors - especially air transport - contributed disproportionately to overall performance.

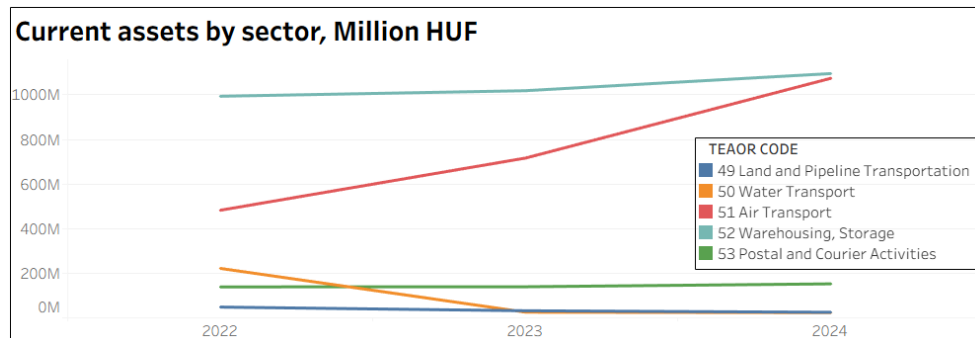


Figure 3. Dashboard query by TEAOR code: Annual change in the current assets of logistics sectors over a given period

The main strategic question for logistics businesses is how to manage growth in a sustainable way. In warehousing and ancillary services, the large number of businesses may indicate strong competition and efficiency pressures. Here, the keys to success may be capacity utilization, digitalization, inventory accuracy, automated warehouse processes and service quality. In areas related to air transport, however, growth may mean higher capital requirements, higher working capital requirements and more concentrated market risk (Fig. 3).

The data shows that the logistics sector is not growing uniformly, but rather in a differentiated manner. In addition to stable, multi-player sub-sectors, there are also fast-growing, concentrated sub-sectors and areas with declining or marginal weight. It is therefore not enough for business leaders to monitor the average growth of the industry as a whole: they must base their decisions on sub-industry-level data, capacity and asset requirements, and financial return analyses.

3.5. Profitability trends across sectors

The profit-after-tax figures reveal substantial shifts across the sectors during the period under review. The most significant change occurred in air transport. At the beginning of the period, the sector recorded a relatively small net loss of approximately HUF 4.3 million. In the following year, however, its financial performance deteriorated considerably, as the deficit increased to approximately HUF 154.8 million. This means that the loss became more than 36 times larger, representing an increase of approximately 3,506% in absolute terms. The trend reversed dramatically in 2024, when the sector generated a positive result of more than HUF 250 million (Fig. 4).

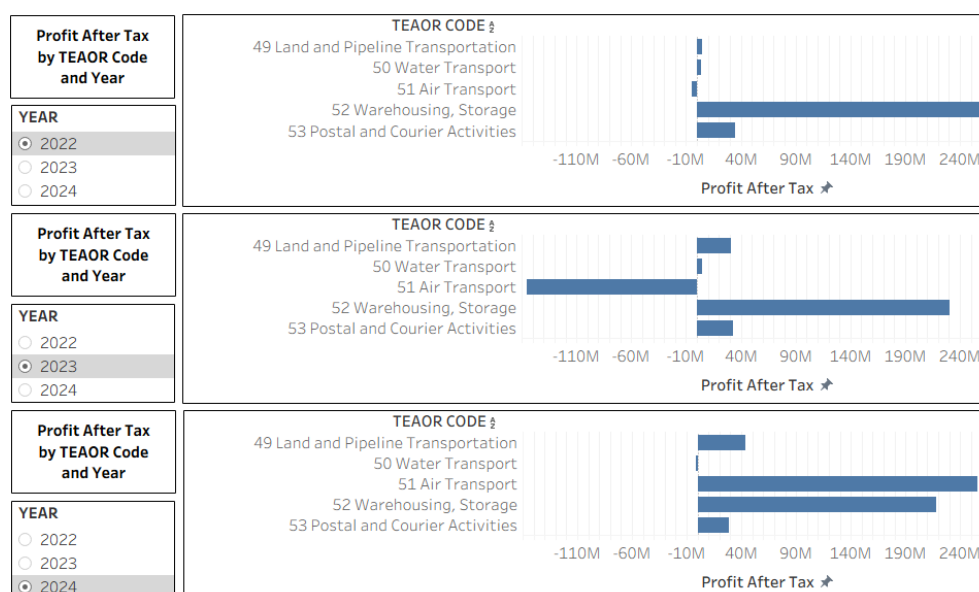


Figure 4. Dashboard query by TEÁOR code: Annual change in the profit after tax index of logistic sectors over a given period

More moderate changes were observed in other areas, including warehousing and storage. In 2022, this sector clearly achieved the strongest financial result, amounting to HUF 264.5 million. Its profitability subsequently declined, reaching approximately HUF 218 million by the end of the period under review.

Another notable development occurred in land transport and transport via pipelines. Over the three-year period, the sector's net earnings increased by 881%, meaning that the final value was almost ten times higher than two years earlier.

Finally, water transport became loss-making during the period, while the financial performance of postal and courier activities remained broadly stable.

3.6. Economic evaluation and strategic conclusions

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3.7. Business management and logistics conclusions

The dashboard results support several practical business management conclusions. First, competition is expected to be strong in the warehousing and ancillary services sectors due to the large number of companies. In such an environment, companies can gain a lasting advantage not only by expanding capacity, but also by improving processes, digitizing, more accurate inventory records and faster service. Warehouse efficiency should therefore not only be measured in square meters, but also in turnover speed, picking accuracy, lead time and labour productivity.

Second, the increasing weight of air transport in terms of sales and working capital suggests that the role of logistics services that require higher value or faster delivery may increase. This is an opportunity for companies, but it is not a risk-free path. Rapid growth often comes with higher financing needs, higher customer demand, stronger capacity commitments and more sensitive operational risks. For this reason, growth should be accompanied by a liquidity plan, a working capital financing plan and a sensitivity analysis.

Thirdly, the stagnation of the number of companies and the increase in sales together indicate that the improvement in performance may be partly due to economies of scale and partly due to market concentration. This may be beneficial in terms of productivity, but may mean a need for adaptation for smaller companies. For smaller logistics players,

specialization, service quality, regional presence or serving a niche market may be realistic strategies.

Fourthly, due to the increase in working capital, the performance of logistics companies cannot be evaluated solely in terms of sales. The same sales can have different financial qualities depending on how much inventory, receivables, pre-financing or short-term credit it requires. Therefore, efficient corporate operations require continuous measurement of inventory turnover, customer payment terms, supplier financing and the working capital cycle.

Fifth, the industry dashboard is also a useful educational and decision-support tool. It clearly demonstrates to students that revenue, number of businesses, and assets can tell different stories about the same industry. One area may have many players but a moderate revenue weight; another may have few players but an extremely high revenue concentration. This difference is important for understanding strategy, financing, and investment decisions.

3.8. Limitations and further analysis directions

The limitation of the analysis is that the dashboard is summary in nature and therefore does not contain all the details that would be necessary for a complete sector diagnosis. For example, we do not know the cost structure, efficiency, investments, workforce or regional location of individual companies. Therefore, revenue growth in itself is not the same as improved profitability. A sector can grow while the cost level or financing burden also increases.

As a further analysis direction, it would be useful to link revenue data with performance indicators, such as operating profit, EBITDA, ROA or profit-to-sales ratio. It would also be useful to examine revenue per company, current assets per company and revenue per current assets. These indicators would help to distinguish real efficiency improvements from mere growth in size.

In terms of future dashboard development, it would be worthwhile to treat growth, efficiency and risk indicators separately. Growth indicators would indicate changes in sales and the number of businesses, efficiency indicators would indicate performance per company, and risk indicators would indicate working capital requirements and possible concentration. Thus, the dashboard would not only have a descriptive but also a decision-support function.

4. SUMMARY AND CONCLUSION

Based on the dashboard data for 2022-2024, the logistics sector shows an overall growth but a restructuring in its internal structure. Activities complementary to warehousing, storage and transport continue to form the backbone of the entrepreneurial base, but their share of revenue has decreased. The rapid growth and high revenue weight of air transport indicate that logistics performance is increasingly shifting towards certain high-value-added and concentrated sub-areas.

The most important structural trend is the concentration of performance. Many companies operate in ancillary services, but sub-sectors related to a few companies are also able to generate a significant part of the revenue. This phenomenon is also important from a management and economic policy perspective: competition, investment needs, liquidity, capacity development and the resilience of supply chains appear differently in each sub-area.

Overall, for logistics companies, the coordination of efficiency, working capital management, capacity expansion and digitalization can be the basis for competitiveness in the coming years. The dashboard also points out that revenue alone is not enough for corporate decisions: the number of companies, assets, subsector share and changes in growth rate must be evaluated together.

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