ECONOMIC EFFICIENCY OF IMPLEMENTING DIGITAL PLATFORMS IN THE MANAGEMENT OF AUTOMOBILE TRANSPORT ACTIVITIES IN THE CONDITIONS OF THE DIGITAL ECONOMY

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ABSTRACT: *This thesis comprehensively examines the economic aspects and performance indicators of implementing digital platforms in the management of automobile transport enterprises within the modern digital economy. The study analyzes innovative mechanisms for optimizing operational costs, monitoring fuel consumption, and reducing empty runs through the digitalization of transport logistics. Furthermore, the role of digital ecosystems in enhancing competitiveness within the transport services market under global transformation conditions is scientifically substantiated and evaluated.*

Keywords: *digital economy, automobile transport, digital platforms, economic efficiency, logistics chain, automation, transport management, innovative management.*

ANNOTATSIYA*: Ushbu tezisda zamonaviy raqamli iqtisodiyot sharoitida avtomobil transporti korxonalarini boshqarishda raqamli platformalarni joriy etishning iqtisodiy jihatlari va samaradorlik ko‘rsatkichlari atroflicha tadqiq etilgan. Tadqiqot davomida transport logistikasini raqamlashtirish orqali operatsion xarajatlarni optimallashtirish, yoqilg‘i sarfini nazorat qilish va bo‘sh qatnovlarni kamaytirishning*

innovatsion mexanizmlari tahlil qilingan. Shuningdek, raqamli ekotizimlarning transport xizmatlari bozoridagi raqobatbardoshlikni oshirishdagi o‘rni ilmiy asoslab berilgan.

Kalit so’zlar: *raqamli iqtisodiyot, avtomobil transporti, raqamli platformalar, iqtisodiy samaradorlik, logistika zanjiri, avtomatlashtirish, transport menejmenti, innovatsion boshqaruv.*

АННОТАЦИЯ: *В данной тезисе всесторонне исследуются экономические аспекты и показатели эффективности внедрения цифровых платформ в управление автотранспортными предприятиями в условиях современной цифровой экономики. В ходе исследования проанализированы инновационные механизмы оптимизации операционных затрат, контроля расхода топлива и сокращения порожних пробегов за счет цифровизации транспортной логистики. Также научно обоснована роль цифровых экосистем в повышении конкурентоспособности на рынке транспортных услуг в условиях глобальной трансформации.*

Ключевые слова: *цифровая экономика, автомобильный транспорт, цифровые платформы, экономическая эффективность, логистическая цепочка, автоматизация, транспортный менеджмент, инновационное управление.*

INTRODUCTION

The modern global economy is undergoing a radical transformation driven by the rapid penetration of information and communication technologies into all sectors of material production and services. In the context of the digital economy, the automobile transport sector acts as a vital artery, where the speed of data processing and the optimization of resource allocation directly determine the competitiveness of national logistics systems. The integration of digital platforms—ranging from Cloud-based Transport Management Systems

(TMS) to Blockchain-enabled freight matching—is no longer a luxury but a fundamental necessity for survival in an increasingly volatile market. The relevance of this study lies in the need to transition from traditional, fragmented management models to integrated digital ecosystems that minimize the "human factor" and maximize asset utilization. According to recent global trends, digital maturity in transport is highly correlated with long-term profitability and sustainable development goals [1, B. 12].

LITERATURE REVIEW AND METHODOLOGY

The theoretical foundation of digital transformation in logistics has been extensively discussed by scholars such as Brynjolfsson and McAfee, who argue that the "second machine age" is redefining productivity through the decoupling of labor and output via digital intervention. In the specific context of transport, researchers emphasize that digital platforms function as multi-sided markets that reduce transaction costs significantly [2, B. 45]. The methodology of this research is based on a systematic analysis of economic indicators from transport enterprises that have adopted digital management tools over the past three years. We utilize quantitative modeling to estimate the reduction in "deadhead" miles (empty runs) and qualitative comparative analysis to assess the impact of real-time monitoring on fuel consumption and maintenance cycles. By synthesizing empirical data from regional logistics hubs, the study identifies a direct linear correlation between the level of platform integration and the reduction in specific gravity of overhead expenses [3, B. 88].

DISCUSSION AND RESULTS

The implementation of digital platforms allows for the synchronization of supply and demand in real-time, which is critical for the automobile transport sector characterized by high overheads and low margins. Our findings suggest that the primary economic effect is achieved through three channels: the

optimization of routing, the automation of documentation (e-CMR, e-invoicing), and the predictive maintenance of the fleet.

One of the key metrics observed is the reduction in administrative costs. Traditional paper-based management requires significant labor resources for manual data entry and error correction. Digital platforms automate these processes, leading to a 15-20% reduction in administrative overhead within the first year of full implementation [4, B. 21]. Furthermore, the use of IoT (Internet of Things) sensors integrated into these platforms provides precise data on fuel consumption, preventing unauthorized usage and optimizing driving behavior.

Table 1.

Comparative analysis of operational indicators before and after digital platform integration

Indicator	Before Implementation	After Implementation	Change (%)
Average Vehicle Utilization Rate	65%	82%	+26.1%
Empty Run Ratio (Deadhead)	28%	12%	-57.1%
Documentation Processing Time (Hours)	4.5	0.8	-82.2%
Annual Maintenance Costs per Vehicle ($)	3,200	2,750	-14.1%

As shown in Table 1, the most dramatic improvement is seen in the reduction of documentation processing time and the minimization of empty runs. This efficiency gain directly translates into higher revenue per vehicle.

Table 2.

Economic impact of digitalization on fuel and logistics costs (Per 100,000 km)

Cost Component	Traditional Management (USD)	Digital Platform Management (USD)	Savings (USD)
Fuel Expenditures	42,000	36,500	5,500
Dispatching & Communication	2,500	800	1,700
Penalties for Delays	1,800	400	1,400
Total	46,300	37,700	8,600

The data in Table 2 illustrates that for every 100,000 kilometers of operation, an enterprise can save approximately $8,600 simply by utilizing digital dispatching and fuel monitoring systems. These savings can then be reinvested into fleet modernization or employee training, creating a virtuous cycle of economic growth.

CONCLUSION

In conclusion, the transition to digital platforms in the management of automobile transport activities represents a structural shift that enhances the overall economic resilience of the sector. The study demonstrates that digital platforms do not merely provide a technical upgrade; they fundamentally alter the cost structure of transport enterprises by converting fixed costs into variable ones and significantly lowering the barriers to information flow. The economic efficiency is manifested through increased asset turnover, reduced fuel waste, and the elimination of redundant administrative layers.

However, the full realization of these benefits requires a supportive regulatory framework and a robust digital infrastructure. For Uzbekistan and other emerging economies, the prioritization of digital transport corridors will be the deciding factor in their integration into the global value chain. The investment in digital platforms pays for itself within a relatively short period (typically 18-24 months), making it a high-yield strategy for both private firms and state-owned transport operators. Future research should focus on the

impact of Artificial Intelligence and autonomous driving technologies as the next evolutionary step in this digital progression.

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