DYNAMIC PRICING IN ROAD FREIGHT LOGISTICS OF UZBEKISTAN BASED ON FUEL, DISTANCE, AND DEMAND INDICATORS

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Abstract

Dynamic pricing is becoming an important tool for improving efficiency in road freight logistics. In Uzbekistan, this approach is especially relevant because road transport carries the dominant share of cargo, while transport policy increasingly emphasizes digitalization, cost optimization, and faster delivery. In 2025, road transport carried 1,434.5 million tons of freight, and official statistics reported that the consumer price index for vehicle fuels and lubricants reached 115.4 percent in January–September 2025. This article examines how freight pricing can be formed more accurately through the combined use of fuel, distance, and demand indicators. It argues that digital logistics platforms can support more transparent and adaptive price formation, reduce operational uncertainty, and improve decision-making in the Uzbek freight market.

Keywords

dynamic pricing, road freight logistics, Uzbekistan, fuel costs, transport demand, digital logistics platforms, freight pricing.

Introduction

Uzbekistan has made transport and logistics reform a strategic priority. Official policy highlights the digitalization of the logistics chain, the reduction of barriers to cargo movement, optimization of transport costs, and the acceleration of goods delivery. These goals are highly relevant because the transport sector is economically significant. According to the World Bank, Uzbekistan's transport sector contributes nearly 8 percent of national GDP and employs about one million people. The country has also improved from 129th place in 2014 to 88th place in the 2023 Logistics Performance Index, showing progress but also the need for more advanced logistics tools.

Pricing Factors and Practical Benefits

Traditional freight pricing is often based on rough negotiation rather than structured data. A more effective model can be built around three core indicators: fuel, distance, and demand. Fuel directly affects trip cost, and official statistics show that the consumer price index for vehicle fuels and lubricants in Uzbekistan reached 115.4 percent in January–September 2025, with especially strong increases for methane. Distance influences not only fuel use, but also driver time, maintenance burden, and delay risk. Demand affects pricing through seasonality, regional concentration of shipments, and market pressure when freight volumes rise. Since road transport remains the main cargo mode in Uzbekistan, demand-based pricing is especially relevant for the local market.

A dynamic pricing system can help logistics platforms calculate rates more transparently and adjust them when operating conditions change. For example, a route with longer distance, rising fuel cost, and high shipment demand should not be priced the same way as a short route with low congestion and stable fuel conditions. In practice, this model can improve fairness for carriers, predictability for cargo owners, and efficiency for dispatchers. It is also highly relevant

for digital freight platforms such as Yool, where real-time route information and operational data can support more adaptive price formation.

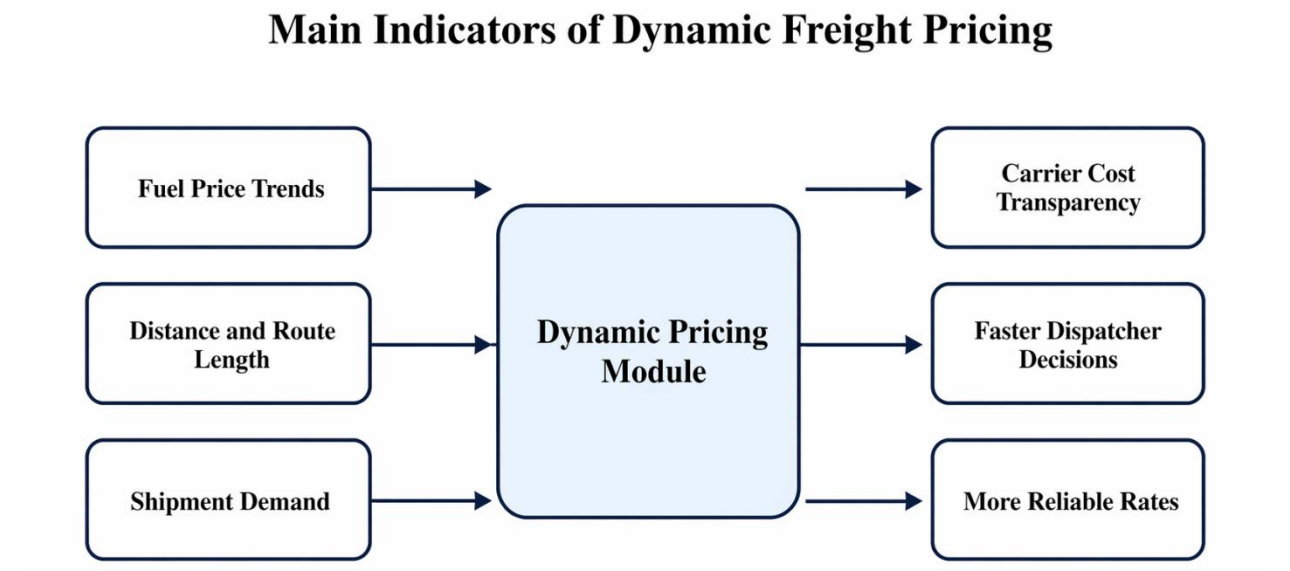

Figure 1. Main indicators of dynamic freight pricing in Uzbekistan

Source: Prepared by the author.

Challenges and Limitations

Despite its advantages, dynamic pricing also has limitations. Reliable implementation requires high-quality data on routes, fuel trends, shipment demand, and operational performance. Price changes must remain understandable to users; otherwise, carriers or customers may see the system as unfair. In addition, digital pricing models depend on broader logistics modernization, including stable connectivity, better data collection, and stronger digital platforms. These challenges are particularly important in a market that is still moving from traditional coordination methods toward more data-driven logistics management.

Conclusion

Dynamic pricing based on fuel, distance, and demand indicators offers a practical path toward more efficient road freight logistics in Uzbekistan. It can reduce arbitrary pricing, improve cost transparency, and support better planning for both carriers and cargo owners. As Uzbekistan continues to prioritize digital logistics and transport-sector reform, such pricing models can become an important component of modern freight platforms and a strong foundation for smarter logistics ecosystems.

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