

## **Mechanisms for Increasing the Convenience of Service for Passengers and Economic Efficiency through Optimizing the Tariff Policy in Public Transport**

***Mansurov Hamrokul Ilhomovich***

*Head of the Department of Tashkent State Transport University*

**Abstract.** *Public transport is the most widely used type of transport by the population, which is considered the most widely used type of transport by the population due to its low cost, speed and convenient payment system, as well as reducing traffic congestion on the moving road.*

**Key words:** *Public transport, payment system, economic efficiency, convenience of service prices, passenger capacity, risk of damage, maintaining balance, comfort, reliability, stability.*

Definition policy in public transport. On the one hand, the public transport system should be convenient, cheap and reliable for passengers; on the other hand, it should be economically sustainable for operators and the state. The tariff policy creates an opportunity to find a balance between these two goals - for example, if the tariff is too high, the number of passengers may decrease, the transport system may be idle, and the comfort may decrease. On the contrary, if the tariff is too low, the operator may not be able to cover its costs, the quality of service may decrease, and there may be a risk of loss.

Now, in this article, I will explain its policy to fully understand the tariff policy. Types of tariff structures and optimization mechanisms:

Flat (uniform) tariff: the same fare for all trips. This is understandable, but it does not adapt to the direction and time of the passengers.

Zonal tariff: differs depending on the distance or zones. For example, a higher price for a long trip. This system is a convenient payment system when costs differ by distance.

Time-dependent tariff or transfer privileges (discounts for transfers within an hour) - this can increase the comfort of passengers. For example, in Tashkent, a tariff system has been introduced that states that "there is a 700 soum discount for using the same mode of transport to the destination for the second time or more times within an hour."

Tariff integration: creating a common tariff zone that combines the city and other routes.

Dynamic pricing: adjusting tariffs based on demand, time, and type of transport.

Economic efficiency and service convenience. Economic efficiency refers to covering operator costs, reducing idle trips, and reducing the cost per passenger unit.

Service convenience refers to providing passengers with convenient intermodal transfers, safety, speed, and simplicity and affordability of the payment system. If the fare system is convenient, the number of passengers can increase, which increases the efficiency of the network.

For example, an orderly and understandable fare system can increase passenger use through discounts that encourage transfers, which in turn can increase the choice of public transport over the car.

In a system without fares (or too low a fare), the operator may suffer losses, which will lead to a decrease in the quality of service.

Increasing fares too quickly can reduce passenger mobility and reduce the attractiveness of the transport system. For example, in Uzbekistan, it is reported that a tariff increase is planned:

The lack of information, insufficient information on fares and costs, and passenger traffic also complicates the situation.

International experiences and studies. This article examines tariff policy from the perspective of passengers, operators, and the government. Models show that social welfare can be maximized by optimizing tariffs.

The use of differential tariffs depending on distance or type of service allows for increased revenue in public transport and maintaining social justice.

Recommendation: tariff integration and transfer incentives are important to stimulate public transport.

Local experiences —In the city of Tashkent, a new tariff plan for public transport is being introduced: a system of “one-time fare of 3,000 soums, 1,700 soums with a card, 700 soums for the second trip within an hour, and the third and fourth trips are free.”

In Samarkand, the cash fare for public transport has been changed to 3,000 soums, and by card to 2,000 soums.

These developments indicate a focus on optimizing the fare system, encouraging electronic payment, and increasing convenience through discounts through passenger cards.

## References:

1. Anhor.uz
2. Kun.uz
3. Spot.uz
4. Samshahar.uz
5. Lee, C., & Wang, J. (2024). Collaborative game-theoretic optimization of public transport fare policies: A global framework for sustainable urban mobility.
6. Bašić, M., & Čelan, Ž. (2018). Methodology of selecting optimal fare system for public transport of passengers.
7. Zhang, Y., & Xu, H. (2024). Optimal dynamic pricing for public transportation under fluctuating demand.
8. Abdurahmonov, B., & Rakhimov, S. (2023). Integrated tariff based on the ATTO transport card: Toward digital mobility in Uzbekistan.
9. Evaluating Germany's 9-Euro Ticket: Impacts on public transport use and mobility behavior.
10. El-Sharkawy, A., & Han, D. (2023). Optimizing limited-stop bus services along a public transit corridor with a differential fare structure.