

Research on the integrated countermeasures of county public transportation from the perspective of holistic governance

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ABSTRACT

Urban public transportation, with its intensive, efficient, green and low-carbon characteristics, constitutes the core part of the urban comprehensive transportation system, among which large-capacity rail transit is the main form of the development of public transportation in recent years. With the continuous development of rail transit, the concept of "integration of public transport" arises as The Times require. How to build a perfect integrated system of public transport has gradually attracted close attention from the society. At present, many cities are committed to opening the "last kilometer" through public bicycles in an attempt to build the integration of public transportation, so as to alleviate the urban traffic congestion and improve the road service level. However, it is difficult to play the overall function of public transport integration by a single means of transportation. With the continuous maturity of the concept of public management, how to further improve the efficiency and level of public transport integrated management has become a hot issue in the research of public transport integration. On the basis of the investigation on the integrated development of public transportation in counties, this paper analyzes the problems in the fragmentation of interest expression, overall governance and top-level planning behind them, and puts forward the development countermeasures of the integration of public transportation from the perspective of holistic governance.

KEYWORDS

holistic governance; integration of public transport; urban integrated transportation system

Transportation is the economic context of culture and culture, is the foundation of social development and vanguard. With the rapid development of social economy in our country, the improvement of peoples living standards, the people are no longer simply satisfied with a single bus travel security, in the public transportation coverage accessibility, travel timeliness, service convenience, information sharing, are the integration of public transportation development and public transportation put forward higher and better requirements, the integration of public transportation system development and build a core part of the overall development of the city.

1 Current situation of public transport integration in counties

With the rapid development of intercity railway, public bicycle and other integrated transportation tools, many counties have built intercity railways, but the integrated development of public transportation in counties has not kept up with the pace.

From the perspective of overall development, a variety of public transportation modes have not been comprehensively planned. From the perspective of resources, with the acceleration of urbanization and the improvement of urban motorization, the contradiction between the imbalance between supply and demand of public transport has become increasingly prominent.

From the perspective of transport capacity input and actual passenger flow, the urban bus has appeared the unsustainable development problem caused by the imbalance of supply and demand. From the perspective of financial balance, the demand decreases year by year, but the cost index continues to increase.

At present, in view of the development of public transport integration, from the professional technical level mainly focus on how to use technology model to effectively integrate rail transit, ground bus and taxi public transportation way, from the management level mainly in the appropriate evaluation system by constructing the present situation of public transport development evaluation and put forward development countermeasures.

2 Analysis of the problems existing in the integrated construction of county public transport and its causes

With the rapid development of intercity railways, public bicycles and other comprehensive transportation means, the integrated development of public transportation has not kept pace. Various public transportation modes have not been planned in a coordinated way, and the contradiction of imbalance between supply and demand has become increasingly prominent.

2.1 Lack of cross-domain synergy leads to the fragmentation of the expression of interest

The integrated development of public transport involves cross-domain public affairs, and the local governments in the region need to have the same interests with each other, which requires the local governments in the region to work together, act uniformly, and jointly invest a large amount of various resources and elements^[1]. However, in the interconnection process of major transportation projects, local governments, as rational "brokers", tend to pursue the maximization of their own interests, leading to the phenomenon of "tragedy of Commons" and "prisoners dilemma", the fragmentation of cross-domain interest expression between local governments, difficult to realize the complementarity and integration, communication and sharing of resources, resulting in the synergistic effect and aggregation effect of resources, reducing the scale effect of resource input; and moreover, many cross-domain transportation projects are difficult to be implemented. County government administrative level is low, especially in foreign traffic connectivity major transportation facilities such as subway, whether from the early stage of the project project approval, line to and technical solutions, or from the opening of the operation management, intelligent information access "soft service", compared with the provincial capital, municipal government is in a disadvantage, system barriers restricted the Shared Shared cooperation development process, unable to give full play to the market in the decisive role in the allocation of resources.

2.2 Difficult to synchronize subjects leads to the fragmentation of overall governance

County urban railways, buses, bicycles and other public transportation vehicles belong to different operating entities. Among them, the urban railways are mostly operated and managed by the county trading group, while the buses are operated by the municipal bus company, and the daily management of public bicycles is in the subsidiaries of the county trading Group. In daily management, it is difficult for multiple departments to make overall planning and deployment in terms of operation lines, operation time and station distribution. They only adjust the lines and stations with previous management experience, resulting in the lack of simultaneous frequency and synchronous operation of multiple transportation tools. Effective coordination mechanisms and a framework for cross-sectoral cooperation among the various sectors are lacking. In the integration of public transport, it involves many departments, such as transportation, urban planning, land use, and many market entities. These departments formulate policies and plans respectively, but the lack of effective coordination mechanism leads to the incoordination of their respective actions. For example, the county transportation bureau plans new bus routes, but the lack of effective communication with the city railway operation company leads to the new routes and the city line planning, waste of resources and low efficiency; the lack of coordination mechanism leads to information asymmetry, information sharing among different departments, lack of comprehensive information, and decision makers; various departments take contradictory actions due to information asymmetry or inconsistent ideas, This further hindering the implementation of the overall plan.

2.3 Unfavorable departmental coordination leads to the fragmentation of top-level planning

The integrated development of public transport requires the systematic redevelopment and utilization of all bus resources^[2]. In counties, there are a large number of stations, many categories and a wide range, and a lack of systematic planning and integration, resulting in the development chaos due to the lack of top-level design in the reform and development of public transport integration. First, the fragmentation of early planning and design. In many plans, the phenomenon of each party and each party. In the actual implementation process, there are project planning fights and conflicts between elements. Second, the medium-term factor guarantee fragmentation. The integrated reform and development of the city's public transportation indispensable needs the guarantee of funds and land elements. However, due to the lack of preliminary planning basis, it is difficult for the funds and land to be fully guaranteed in the construction process. Third, the fragmentation of the later assessment and evaluation. Many counties implement different assessment systems for rail transit, passenger buses and public bicycles. For example, for rail transit, the government shall assess and subsidize the project annually on the project operation data, service satisfaction, safety production completion, etc.; for passenger public transit, the government shall purchase bus operation service, newly purchased vehicles and charging pile construction. Each assessment system has not formed a whole, and the assessment method does not involve the integrated use of other vehicles The correlation number.

3 Suggestions and countermeasures for the development of county public transportation

In response to the predicaments faced by integrated public transportation in county areas, this paper puts forward a series of systematic development suggestions and countermeasures, mainly including three aspects: forming a management consensus of holistic governance, building an integrated transportation infrastructure, and optimizing the overall transportation organization.

3.1 Form the management concept of overall governance

It is suggested that counties should establish a cross-regional public transport service joint conference system. The system should cover the transportation authorities, public transport enterprises and relevant stakeholders in counties and surrounding areas, hold regular meetings to discuss major issues in the integrated development of public transport, and ensure the coordination of all parties in policy formulation, planning and layout, operation management and other aspects. Through joint meetings, promote information sharing, avoid duplication of construction and waste of resources, and improve the overall efficiency of public transport services^[3]. In view of the problem of different service standards of county public transportation system, unified bus service standards should be jointly formulated and implemented with surrounding areas, including vehicle configuration, station setting, operation time, fare policy and other aspects. Through standardization construction, the standardization and consistency of public transport services should be improved, and passengers travel experience should be enhanced. It is necessary to strengthen the construction of cross-regional emergency response linkage mechanism. In view of the possible emergencies in the bus operation, a cross-regional emergency linkage mechanism should be established to clarify the responsibilities and response measures of all parties, so as to ensure the rapid response and effective response in emergency cases. Through emergency drills and training, the emergency management capacity of the cross-regional public transport system will be improved, and the safety and stability of public transport services will be guaranteed. It is suggested that the county should clarify the division of responsibilities of various departments in the integration of public transport, and refine the responsibility scope and work requirements of various departments by issuing relevant policy documents, so as to ensure that all departments can perform their own duties and cooperate in the process of promoting the integration of public transport.

3.2 Construction of integrated transportation infrastructure

It is suggested that the layout of rail transit network should be scientifically planned, and the scale, structure and layout of rail transit network should be reasonably determined according to the overall urban planning and transportation development strategy, so as to ensure the coordination of rail transit with the urban spatial structure, land use and economic and social development. At the same time, we will strengthen the connection with conventional buses, taxis and other modes of transportation to form a convenient and efficient comprehensive transportation system. The connectivity of the road networks should be strengthened. By building or rebuilding roads, the interconnection between different regions should be strengthened to form a more convenient road network. In particular, the road connection of important nodes such as bus hubs and subway stations should be strengthened, so as to ensure the seamless connection between various modes of transportation and improve the overall transportation efficiency. From the perspective of overall governance, it is necessary to comprehensively consider the comprehensive optimization of the station elements to ensure that the bus station can not only meet the needs of passengers, but also promote the smooth operation of the bus system. The site layout should be optimized. According to the urban development and population distribution, the location of bus stops should be reasonably planned to ensure the moderate distance between bus stations, which can not only facilitate passengers to travel, but also avoid the waste of resources. At the same time, the accessibility of the station should be considered, and the station should be set in the crowded areas and near the transportation hub as far as possible to improve the coverage and service efficiency of the public transportation system. Should pay attention to the introduction of social capital and advanced technology, improve the wisdom of the site Energy transformation and information technology level. Through the continuous improvement of the site facilities, optimizing the site layout, strengthening the site safety management and promoting the development of multi-mode combined transportation, the site construction is matched with the overall planning and factor supply.

3.3 Optimize the overall transportation organization

It is suggested to adjust the integrated construction plan of intercity railway connecting to public transport^[4]. With industry sustainable and passenger satisfaction as the dual goal, follow the thought of inter-city railway "one line", from the space ("complete coverage of township passenger hot spots") and time (shift interval supporting inter-city railway departure time) two dimensions, for the inter-city railway along the township shuttle bus demand, by form a complete set of bus network optimization and new bus service innovation, promote the county global bus seamless inter-city railway. On the one hand, the direct access of towns along the intercity railway will be implemented to ensure the convenience and comfort of passengers in space. By adjusting the conventional bus network and community bus (micro bus) along the intercity railway, the full coverage of hot spots along the towns will be realized. On the other hand through the "one line" new or optimized inter-city railway shuttle bus line, guarantee the towns along the intercity railway township passenger travel timeliness and reliability requirements, through dynamically adjusting the bus departure interval and operation mode, to ensure the inter-city railway bus shuttle service in high passenger flow "fast", "guaranteed" when low

passenger flow, realize the inter-city railway and bus service "integration" seamless. Affected by the shortage of financial funds, it is suggested that the county level should also consider the financial affordability simultaneously, and start the development and reform of public transport transformation, so as to alleviate the local financial pressure to promote public transport cost reduction, efficiency and improve quality. It is suggested to promote the high-quality, high-standard and high-level development of public transportation through the county ride-hailing platform, "big change to small" bus, "multi-use" bus network integration, and the whole process of public transportation.

References

- [1] Qilin L , DH. Accessibility of Urban Rail Transit in Post-Winter Olympics Period Based on Internet Map: A Case Study of Beijing[J]. Landscape Research: English Edition, 2022, 14(5): 16-18.
- [2] Li X , Gao Y , Zhang H , et al. Passenger Travel Behavior in Public Transport Corridor After the Operation of Urban Rail Transit: A Random Forest Algorithm Approach[J]. IEEE Access , 2020 , 8: 211303-211314.
- [3] Hu Haibo. Understanding the overall government data governance: the interaction between government and society[J]. Intelligence Magazine, 2021, 40 (3): 9-15.
- [4] Miao Lijun. Zhengzhou metropolitan area intercity railway bus operation mode[J]. China Railway, 2023 (3): 103-109.