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Larysa MARTSENIUK©
D.Sc. in Economics, Professor
(Ukrainian State University of Science and Technology),
Ukraine

Bijay Kumar KANDEL©
Ph.D. (Management)
(Kathmandu University, University of the South Pacific),
Great Britain

Yevheniia KOVALENKO-MARCHENKOVA©
Ph.D. (Economics)
(Dnipropetrovsk State University of Internal Affairs),
Ukraine

PASSENGER TRANSPORT HUBS: THEMATIC OVERVIEW

Abstract. We consider in the study that many scientists from different countries in their studies have paid attention to the organization of multimodal passenger transport. Some focused on building a smart city with convenient transport infrastructure and interchanges, while others focused not only on locals but also on tourists. Methods and methods of research were to varying degrees and the same and different. But we can say that the common feature of their research is that all research is aimed at improving the basic service provided to passengers – transportation. Attention is also paid to additional related services, and potential benefits to investors and some other issues. Passenger rail transport brings significant public benefits in the form of rapid movement, reduction of congestion on the roads, reduction of environmental pollution.

The article has investigated in which way at the present stage of economic development a

© Martseniuk L., 2022
ORCID iD: https://orcid.org/0000-0003-4121-8826
rwinform1@ukr.net

© Kandel B., 2022
ORCID iD: https://orcid.org/0000-0003-3793-2410
bijaykkandel@gmail.com

© Kovalenko-Marchenkova Ye., 2022
ORCID iD: https://orcid.org/0000-0001-7350-7740
kovalenko.marchenkova@gmail.com

key role in the effective functioning of the passenger complex of railway transport is played by the construction of modern transport interchanges – HUBs, which will provide interaction between railway carriers and other participants in the passenger industry. The article states that the mechanism developed by scientists for the implementation of multimodal passenger transport by rail in cooperation with other participants in the service process and the model of institutional support for the development of multimodal passenger transport by rail should be used in different countries.

Keywords: *multimodal transportations, HUBs, passenger transportations, railway transport, tourist transportations*

Introduction. According to the transport White Paper "better modal choices will result from greater integration of the modal networks: airports, ports, railway, metro and bus stations, should increasingly be linked and transformed into multimodal connection platforms for passengers".

The purpose of the article is to make a thematic review of research by world scientists on the implementation of transport hubs in their countries.

Analysis of recent research and publications. Some scientists write about the transport problems of their country, suggest ways to solve them. Thus, a scientist from Indonesia, considering the modes of transport that are most used by the local population, found that the greatest demand is for water transport. Most passengers use river transport to get to work and home. It is necessary to take into account the fact that in order to get to the place of work, passengers need to use not only river, but also road or rail transport. At the same time, the infrastructure of other modes of transport, such as road transport, is in a deplorable state. The author assessed the level of connectivity between the transport infrastructures of the region, and also developed recommendations on the level of service of the existing transport infrastructure, which should meet the minimum standards (Said, 2015).

Scholars from India describe India's public transport system as underdeveloped in most Indian cities. Lack of developed transport infrastructure and convenient transport links between cities is one of the main problems in this area.

Cities lack infrastructure for the creation of physical integration between the modes of transport. The transit services introduced at different point of time are designed in such a way that it becomes challenging to design facilities for vehicle pick-up and drop-off points, auto-rickshaw stands, parking spaces, and Foot Over Bridges to access transit stops/stations. The retrofitting to the existing facilities incurs a high cost of infrastructure. Construction of infrastructure like sky walks, foot over bridge, redesigning of urban roads and provision of continuous footpaths will help to design a physically integrated multimodal transport system.

City bus service provider operates the public transport in urban areas of Indian cities along with the multiple private operators. The para-transit mode of transport competes with the city's standard mode of public transport. The private and para-transit operators' unwillingness to formalize their operations with the city bus/metro/sub-urban rail services is the significant barrier to an operationally integrated multimodal transport system in Indian cities (Arora et al., 2016).

Some scientists write about the need for "smart transport systems" to ensure the safety of passengers. Many scientists from around the world have paid attention to the planning of both the transport hubs themselves and the forecast of passenger traffic. For example, scientists from Russia in their study point out that the rapid growth of different types of vehicles requires the construction of intelligent transport systems. The global transport system, consisting of heterogeneous transport flows, is in dire need of intellectualization of vehicles and transport infrastructure to ensure their effective management and improve the quality of transport services. The authors write that the creation of a cognitive multimodal transport system will not only significantly reduce the average time of passenger transport, but also increase safety (Komashinskiy et al., 2020).

Researchers from Spain rightly point out that tourism is developing rapidly and as a result the needs of tourists are growing, and therefore the tourism industry needs more and more innovation. Researchers on the example of the Spanish city of Gandia suggest making other cities of interest to tourists "smart", increase the mobility of the population, align transport infrastructure with existing attractions and places of recreation (Sigalat-Signe et al., 2020).

Policy measures like "Development of regulatory framework for routes operation of IPT system" and "integration of IPT with PT system based on the passenger demand" may help cities to achieve operationally integrated multimodal transport system. Inclusive integration of urban transport and land use planning systems is needed so that cooperation and coordination among different agencies is harnessed. Interconnections need to be promoted and functionality of urban transport system can be improved through multimodal mobility solutions for Indian cities.

The authors from India suggests that integrated multimodal transport systems in Indian cities can only be evolved when enthusiastic, united, and involved institutions are formed and permitted through clear responsibilities, lawmaking authority, monetary independence, and proficient competence. This will eventually enhance the accessibility and mobility of Indian cities (Dawda et al., 2021).

Scientists from France have developed A Hybrid-Dynamical Model for Passenger-flow in Transportation Systems, which is intended as a building block for obtaining supervisory control, via transport operator actions, to mitigate congestion (S. Haar, & S. Theissing, 2015).

A study by French researchers has developed a utility model for the organization of multimodal passenger transport, which allows to take into account the two most important flows: passengers and vehicles (J. Lebacque, & M. Khoshyaran, 2018).

The study presents scientists from Latvia a comprehensive analysis of the planned multimodal public transportation HUB. The authors offered the way the authorities could move the urban transportation system to sustainability and to study a particular aspect of decisions on the passenger planning network in the city of Riga in the frame of the Rail Baltic project – Riga Central Multimodal Public Transportation HUB. The main question in this case study – how multi-modal transportation planning requires evaluation of factors affecting accessibility and how they are currently considered in planning (A comprehensive analysis of the planned multimodal public transportation HUB. 3rd Conference on Sustainable Urban Mobility, 3rd CSUM 2016, 26-27 May, 2016).

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The authors from USA analyzing the Potential for High-speed Rail as Part of the Multimodal Transportation System in the United States' Midwest Corridor. Only the maximum utility path for each mode (road, passenger train, and commercial air) is used in the discrete choice model. This assumption implies that the user focus is on the mode choice and not a route choice. A multinomial logit (MNL) model is used to determine the ridership distribution on each mode. The authors develops a systematic model (LUCIM) which provides robust predictions of long-term modal ridership shares due to sensitivities to economic, demographic, and technological trends. The model is validated against actual data at a systemwide level and reasonably captures ridership responses to evolving exogenous stimuli such as fuel prices. This provides planners and policymakers with a robust, systematic methodology for analyzing the viability of a proposed HSR network over the long term. Experimental results show that if operational characteristics were improved to match that of air service in terms of frequency, comfort, etc., HSR has the potential to see ridership on the order of 50 to 60 million riders annually. Furthermore, the results demonstrate that there will be a continual ridership shift to passenger train as fuel costs increase for the alternative modes in the long-run until there reaches a point when vehicle efficiency can offset these costs (Peter et al., 2014).

Formulation of the main material. The researchers from Romania say that the problem of reducing the transit time through these intermodal terminals is the key in making the public transport more attractive; the way the terminals are designed and organized leads to their intensive use or not. Their paper presents a model for designing intermodal passenger terminals that encourage modal transfer. The model's framework suppose the correlation of the transport modes timetables, placing the platforms so that the movements between them are as small as possible, tariff integration and the use of an unique ticket, etc. (Roşca et al., 2020).

The authors from Portugal present the assessing multimodal mobility trends using heterogeneous data sources. The authors proposes integrated autoregressive models and moving averages for series with seasonality were successful in the prediction of passenger flows using time-series data gathered by the regional authority from transport operators and other entities.

The main research questions can be described as follows: What mobility patterns are observed in the various transport modes in the Algarve region? What trends can be expected in the coming years? The focus of the authors is made on prediction models estimated for the case of regional collective transport (bus and rail) and road traffic only (Arsenio, 2019).

The authors from China describe tree big HUBs: Lanzhou, Ningbo and Chongqing rail station in China. Besides high – speed rail, a transport HUB usually integrates other transport modes including subway, bus, taxicab, and even flight. The transport HUB is usually regarded as an important "city flagship", where passengers and cargo are exchanged between multiple transport modes. Therefore, according to the routine passenger volume, the associated service facilities are also developed around the transport HUB. While focusing on the high – speed rail station, the design of the transport HUB should consider incorporating urban renewal, connecting underground and ground transportations; and fusing high –

speed rail, subway, and ground transportations. One the basis of the concept "zero transport interchange" and "seamless linkage", utilizing and developing underground space in transport hub will maximize the social benefit. As development of high – speed rail network, besides Beijing, Shanghai, Guangzhou, and Shenzhen, the other major cities in China are constructing transport HUBs centered around high – speed rail station. The underground space development in transport hub has many benefits such as maximize the land use efficiency; optimize the layout of various facilities; increase the transport interchange efficiency; improve the ground environment; enhance the connection of split urban areas by railway; foster a convenient and comfortable travel experience; improve the functionality of transportation HUB and benefit the society. The researches propose an Passenger Transportation Structure Optimization Model Based on User Optimum in the premise of meeting the demand of regional passenger transportation was put forward. From the perspective of user optimum, combined with cost, time, safety, comfort and convenience of passengers, the generalized cost function is established (Y. Ma, & Yu. Gao, 2016).

As say the researches from Spain, there is a need for integration in order to achieve effective seamless mobility. One dimension of integration is to reduce the disruption of transfer among modes and interchanges appear as the best solution when big number of travellers has to transfer. The City-HUB 7FP project1 has developed a three years research for deploying new interchanges and improving existing ones. It starts by identifying two groups of dimensions that define Interchange key features. The first dimension is related to Physical&Size, including passenger demand, modes of transport, services and facilities and location in the city. The second dimension is related to Local Impacts such as developing of new activities – housing, offices, nearby shopping-, jobs creation and its connection with the local Development Plan. The combination of the elements of the two dimensions define the following key features: building design, stakeholders' involvement and the type of business model. The authors says that the key identified factors for passengers or tourists were: Information, Transfer conditions, Safety & Security, Emergency situations, Design & Image, Environmental quality, Services & Facilities, and Comfort of waiting time. These factors define an efficient transport interchange (i.e. an interchange competitive and, at the same time, attractive for users), considering them not only "as nodes" within the transport network, but also "as places". Factors that better define an interchange "as a transport node" are aspects related to information provision – travel information and signposting – and transfer conditions – distances and coordination between operators. In contrast, design & image, indoor environmental quality, services & facilities and elements addressed to improve the comfort of waiting time are directly linked the quality of the interchange "as a place". The recommendation from the City-HUB Model is to involve all stakeholders in the earliest stage of an interchange building or refurbishment project. Consideration should be given to the needs of different stakeholders, especially interchange users, with potential conflicts discussed and mitigated early in the planning or development process. According to these key features, the interchange should organize the space among three different zones: access-egress zone; facilities zone; and arrival-departure-transfer zone (Monzón et al., 2016).

Key factors identified to make urban transport interchanges attractive for users (S. Hernandez, & A. Monzon, 2016).

The authors from Latvia propose a methodology for multimodal transport management support systems development. The proposed methodology includes three subsystems: transport traffic control support system, transport cruising time synchronization system, and user support system (A. Bolkovska, & J. Petuhova, 2017).

The authors was employed the probability theory with principal component analysis to create a new indicator based on both demand (modal shares) and supply (monetary investment for each mode). The indicator offers three main benefits in the area of performance measurement: it is applicable in cases when some data are missing; it provides a way of comparing multimodality from diverse projects such as high-occupancy toll lanes or multimodal centers; and it can help decision-makers quantify how multimodality has changed over time (C. Lee, & J. Miller, 2017).

Consumers' valuation of bundling and service integration was calculated. Several discrete choice experiments were conducted to indirectly estimate consumers' WTP for stand-alone transportation services and service bundles. Consequently, subscription-based pure bundles for all transportation modes may not be the optimal strategy for mobility providers. A model is proposed to optimize coastal transportation sustainability policy. The model can optimize the shipping network design policy and toll policy. A coastal container multimodal transportation system has two modes of transportation, i.e., land and water. Due to economies of scale, the latter has become an emerging way to decrease the pollution of the system. This paper establishes a programming model to improve the system's sustainable transportation policy. The model aims to minimize the carbon dioxide emissions (Guidon et al., 2020).

The authors determines a Pareto-improving pricing scheme for alleviating congestion in a multimodal transportation network that includes, e.g., transit services, high-occupancy/toll and general-purpose lanes. In this setting, a pricing scheme refers to a strategy for tolling roads and highways as well as adjusting fares on various transit lines. In addition, such a scheme is Pareto-improving if it maximizes the social benefit without increasing travel-related expense of stakeholders that include individual road users, transit passengers, transit operators, transportation authorities, etc. The user equilibrium and system optimum problem in the multimodal transportation network are discussed along with a model for determining Pareto-improving tolls (Wu et al., 2011).

Recent advances in the network-level traffic flow modeling provide an efficient tool for analyzing traffic performance of large-scale networks. A relationship between density and flow at the network level is developed and widely studied, namely the macroscopic fundamental diagram (MFD). The authors propose a novel algorithm for partitioning bimodal network considering the homogeneous distribution of link-level car speeds and bus speeds. The authors propose an algorithm to estimate alighting passenger flow and passenger density on bus, by fusing smart card data (i.e. records for boarding passengers) and bus GPS data. They analyze the complexities of passenger flow and the impact of weather on traffic demand and bus occupancy. The results provide an empirical knowledge on multimodal traffic performance with respect to passenger flow (Fu et al., 2020).

Efficient multimodal public transport has been recognized as an effective solution for realizing sustainable intercity transport. But now there is the poor coordination among transport modes, inconvenience caused by transfers, difficulties on route planning, etc. So to address the problem and facilitate the popularity of multimodal intercity travel, researches proposed the design of personalized multimodal travel service based on SPSS (Smart Product Service System). The influencing factors of multimodal intercity travel is investigated, based on which the travel choice model is developed (Xu et al., 2021).

Urban rail transit (URT) provides efficient and low-cost services for passengers. It is a common issue for operators to coordinate the last trains of a URT network. This paper discusses three models in a progressive fashion to optimize the last train timetable incorporating multimodal coordination. The first model maximizes the transferability at transfer stations without the distinction of the stations. The second model, based on a refined classification of stations and lines, optimizes the transferability at transfer stations between different transport modes. The third model maximizes the multimodal coordination taking into account the space-time distribution of the arrivals and departures of the connecting modes. The proposed models are tested in the Beijing URT network connecting three railway stations and two airport terminals. The proposed models can effectively improve the coordination among the last trains within the URT network and between the URT and the connecting modes (Huang et al., 2021).

The authors presents a case study of stakeholder engagement in transportation decision making pertaining to decisions of investments in passenger rail and state and local fund allocation, using a focus group approach. The findings verify that stakeholder involvement can provide states and other decision-makers with valuable insights on several topics supporting future policy and funding decisions. For example, in the case explored, the engagement of the stakeholders revealed that public investments towards the continuation and potentially improvement of the intercity passenger rail services are in line with the communities' goals and are viewed as more beneficial than alternative transportation investments that can enable mobility in the area. In addition, the findings suggest that the benefits of engaging stakeholders in transportation decision making go beyond the act of gathering stakeholders' input; focus groups or similar dynamic forums can facilitate the production of innovative ideas and shared knowledge while fostering collegiality among stakeholders. Overall, the case study results indicate that stakeholder engagement can benefit smaller-size projects and/or broader policy and planning decision making, such as decisions involving the financing of an intercity passenger rail line and investment directions towards operational changes of the line and/or alternative transportation modes and infrastructure (Pyrialakou et al., 2019).

To increase the understanding of passenger choice of air-rail integrated services, the authors analyzes the profile of intermodal passengers by classifying them based on their socioeconomic and travel characteristics and uncovers any heterogeneity in passenger satisfaction with ARIS among different passenger groups. Through collecting 1.345 passenger satisfaction questionnaires about ARIS, surveyed in Shijiazhuang, China, they first apply latent class clustering to classify passengers into three groups. The results show that the three passenger groups attach similar importance to ticket services, reliability, accessibility and comfort, while some noticeable differences in perception are identified in personalized services, information services, and connectivity (Feng et al., 2021).

A hierarchical network and traffic assignment model is developed for multimodal transportation networks to meet the prediction of large-scale transportation demand in this paper. In the proposed model, the city center and transportation terminal of different modes are defined as central nodes and transfer nodes respectively to characterize travel behavior of passengers. The generalized cost function and route choice algorithm are also correspondingly improved to suit the proposed model. A computer-aided demand model is also developed to efficiently attain the analysis results for large-scale transportation networks. The applicability and availability of the demand model is illustrated by the case studies over Jing-Hu high speed railway in China (Hongqin et al., 2009).

The author aims to extend the concept of macroscopic fundamental diagram (MFD) to combine different transportation modes. Especially, he proposes a unified relationship that accounts for cars and buses because the classical MFD is not sufficient to capture the traffic flow interactions of a multimodal traffic. The concept of passenger macroscopic fundamental diagram is introduced. With this new relationship, the efficiency of the global transport system, i.e. behaviors of cars and buses, can be assessed. Thus, user equilibrium and system optimum are studied and compared. Finally, this relationship is used to design bus system characteristics and to identify the optimal domains of applications for different transit strategies (N. Chiabaut, 2015).

The authors investigates influential factors in passengers' intercity multimodal choice behaviors in a touristy city. By collecting large individual-level data through a comprehensive field survey that was carried out at the major transportation hubs in Xi'an, China, they studied four travel modes of the surveyed travelers in this touristy city, including air, high-speed rail, traditional passenger train, and express bus. The results indicate that those factors have significant and various influences on passengers' mode choices: travel distance, fare rate, intercity travel time per hundred kilometers, quality of service, accessibility of transportation hubs, and ticketing methods have influential contributions for explaining the choice decision-makings (Li et al., 2020).

Based on data of 286 Chinese cities from 2006 to 2015, the paper applies Difference-in-Difference model to investigate whether and how High-Speed Railway (HSR) influences the tourist arrivals. Empirical results suggest that HSR opening can significantly promote tourist arrivals; the positive effects of HSR opening on tourist arrivals increase gradually; improving HSR frequency helps cities to attract more tourists; the location of HSR station has no significant impact on tourist arrivals (Deng et al., 2020).

The authors analyze the impact of High Speed Rail (HSR) on the tourism market. The original and added value of this contribution is in the proposed methodology, which considers the Geographically Weighted Regression technique, incorporated within a Poisson model. This approach allows measuring the relationship between independent and dependent variables with respect to space. The case study comprises 99 Italian provinces, analyzed in the time period 2006 – 2016. The main outcome of the analysis is that HSR affects tourists 'choices of a given destination (F. Pagliara, & F. Mauriello, 2020).

The authors write that passengers with different personal and travel characteristics have different perceptions of integrated transport. Based on passengers’ travel experience, this paper establishes a conceptual framework of multimodal integration that considers nine categories of interchange performance indicators at three different levels of the “integration ladder”. This framework is illustrated by a case study of Shanghai Hongqiao Comprehensive Transport Hub in China, to identify the main barriers of multimodal integration inside the hub from a people-centered perspective. On one hand, observational survey was conducted to record the indicators about interchange facilities provision; on the other hand, 603 questionnaires were collected to reflect the passengers’ perception of interchange services. Both surveys show that the lowest level of information integration has been achieved in this hub, but the moderate level of facilities and services integration and the highest level of ticketing and fare integration are still limited. Further improvement is expected with respect to multimodal services and ticketing, such as time coordination, luggage delivery facilities, through ticketing and interchange discount. Moreover, for people with different personal and travel characteristics, their perceptions of multimodal integration have some differences, which suggest that the design, operation, and management of urban transport hubs should be people-centered in the future (L. Li, & B. Loo, 2016).

In rural regions, public transportation is often characterized by low accessibility as well as long waiting and travel times. In order to improve rural transportation systems, public decision-makers intend to implement alternative on-demand mobility modes. Herein, new intermodal travel itineraries with transfers at multimodal mobility hubs may enable faster public connections and thereby strengthen public transportation. Against this background, we present a decision support tool for locating multimodal mobility hubs to improve intermodal accessibility. As objectives, we aim at maximizing accessibility to workplaces and to places of private need. Our model decides on locations of multimodal mobility hubs and on the available on-demand mobility modes offered in addition to existing public transportation. We develop our model in an agile process together with rural decision-makers in the district of Heinsberg, Germany, and apply it in a real-world case study. As input for our model, we account for the existing public transportation system, identify points-of-interest, and estimate commuting volumes to workplaces based on official commuting data. Results promise a high potential to improve accessibility in rural areas. However, most of the improvement stems from unimodal car sharing trips (Frank et al., 2021).

Scientists from China conducted a large-scale study, focusing on the issue of ease of navigation for passengers in the transport HUB. They drew attention to the fact that thousands of passengers see a huge amount of information every day and a very important point is what exactly tourists see first, as well as how quickly they can find the information they are interested in (Xu et al., 2020)

Scientists from Colombia have done a thorough review of publications on the construction of HABs. Intermodal transportation plays a key role in modern transportation systems. There is a high interest into design efficient and low-cost intermodal networks. They review more than 100 papers on recent literature regarding intermodal network design from a hub location perspective. They found that current models lack of realism in the modeling of internal factors of intermodal hub networks like hubs and vehicles They had reviewed the recent literature on intermodal hub network design from the perspective of hub location theory. They emphasize on aspects that make models more realistic and on the applications on container transportation. But their research concerns freight, not passenger, so we will not dwell on it in detail (Basallo-Triana et al., 2021).

Conclusions. Many scientists from different countries in their research have paid attention to the organization of multimodal passenger transport. Some focused on building a smart city with convenient transport infrastructure and interchanges, while others focused not only on locals but also on tourists. Methods and methods of research were to varying degrees and the same and different. But we can say that the common feature of their research is that all research is aimed at improving the basic service provided to passengers – transportation. Attention is also paid to additional related services, and potential benefits to investors and some other issues.

Conflict of Interest and other Ethics Statements
The authors declare no conflict of interest.

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Лариса МАРЦЕНЮК, Біджай КУМАР КАНДЕЛ,
Євгенія КОВАЛЕНКО-МАРЧЕНКОВА

ПАСАЖИРСЬКІ ТРАНСПОРТНІ ХАБи: ТЕМАТИЧНИЙ ОГЛЯД

Анотація. Багато вчених з різних країн у своїх дослідженнях приділили увагу організації мультимодальних пасажирських перевезень. Деякі з них зосереджували увагу на побудові розумного міста зі зручною транспортною інфраструктурою та розв’язкою, інші орієнтувалися не тільки на місцевих мешканців, а й на туристів. Методи та способи дослідження були в різній мірі і однаковими, і різним. Але можна сказати, що спільною рисою їх досліджень є те, що всі дослідження спрямовані на покращення основної послуги, що надається пасажирам – перевезення. Увага приділяється також і додатковим супутнім послугам, і потенційним вигодам інвесторів та деяким іншим питанням. Пасажирський залізничний транспорт приносить значні суспільні блага у вигляді швидкого переміщення, скорочення кількості заторів на дорогах, зменшення забруднення навколишнього середовища. Керівництво розвинених країн інвестують значні кошти в розвиток мережі пасажирських залізничних перевезень, але залізниці не однаково розвинуті у всіх країнах світу, а деяким з них, потрібно багато зробити, щоб досягти європейського рівня. Наголошено, що прогресивним напрямом модернізації інфраструктури пасажирського комплексу залізничного транспорту є процеси формування мультимодальних комплексів за рахунок створення в країні системи залізничних пасажирських ХАБів. Авторами проаналізовано дослідження провідних вчених світу з питань запровадження транспортних пасажирських вузлів або ХАБів в їхніх країнах.

На сучасному етапі економічного розвитку ключову роль у ефективному функціонуванні пасажирського комплексу залізничного транспорту відіграє будівництво сучасних транспортно-пересадочних вузлів – ХАБів, які забезпечать взаємодію між залізничними перевізниками та іншими учасниками індустрії пасажирських перевезень, що дозволить оптимізувати сервіс і надати пасажирам комфортний пакет мультимодальних послуг. Визначено, що розроблений науковцями механізм реалізації мультимодальних перевезень пасажирів залізничним транспорту у взаємодії з іншими учасниками процесу сервісного обслуговування та модель інституціонального забезпечення розвитку мультимодальних пасажирських перевезень залізничним транспортом доцільно використовувати в різних країнах.

Ключові слова: *мультимодальні перевезення, ХАБи, пасажирські перевезення, залізничний транспорт, туристичні перевезення*

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Halyna HREBENIUK©
Ph.D. (Economics)
(Ukrainian State University of Science and Technology),
Ukraine

PERSONNEL IN TOURISM INDUSTRY OF UKRAINE AS A MEANS TO ACHIEVE COMPETITIVE ADVANTAGE

Abstract. In the context of globalization of the tourism industry, the organization of personnel management and the efficiency of its use require more and more attention, as personnel is the main resource of tourism business enterprises. The competitiveness and performance of tourism enterprises directly depend on the effectiveness of personnel management, namely on its objective assessment and proper distribution of competencies, which reflect not only the professional level but also the business and personal qualities of tourism employees. Personnel evaluation is considered as an element of management and certification of personnel used in the tourism industry, as a necessary tool for studying the quality of staff, its strengths, and weaknesses. Any assessment is the result of a comparison of a facility with certain standards, regulatory requirements, well-known parameters, and staff assessment is no exception. In the proposed approach, personnel evaluation involves comparing certain competencies of employees with the relevant reference requirements of the position held or claimed by an object of evaluation. The essence of the evaluation proposed in the article is that for each position in the tourism industry it is possible to develop a reference version of competencies, through which, after the evaluation, management makes an informed management decision, namely to train, develop, motivate or release the object of evaluation. Training is appropriate if there is a lack of knowledge, skills, and abilities; it is necessary to develop when there are basic skills and it is necessary to reveal potential; motivate, if the necessary set of knowledge and skills is available, but not used to the full extent; and an employee is fired in the event that education and training are impractical. The article proposes an approach to solving the problem of objective evaluation of tourism industry personnel. The above approach is aimed at obtaining detailed information about how a certain employee shows his professional and personal qualities and how they correspond to the position. The proposed approach is based on the theoretical and methodological instruments of the method of alternative characteristics and scoring system.

Keywords: *personnel evaluation, weighted evaluation, competencies, Google forms, online surveys, customer orientation, loyalty*

Introduction. Proper selection of staff mainly affects the implementation of the strategy of any organization in the tourism industry and to ensure that employees feel good at work place that corresponds to their abilities and

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ORCID iD: https://orcid.org/ 0000-0002-2807-0268,
galinadiit@ukr.net