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## **ANALYSIS OF THE GLOBAL DISTRIBUTION SYSTEMS ON THE INTERNATIONAL MARKET OF TOURIST SERVICES**

The problems of informatization of society and the development of information technologies is a separate direction of scientific–theoretical research. A new model of providing many kinds of services emerges in modern conditions, based on information technology and computer equipment, which leads to substantial changes in the concept of their product. The monopolization of information space is taking place through the creation of global distribution systems that concentrate international money flows from the provision of tourist services and form financial policy of transactions execution in the area of tourist business. A general approach to the study of these processes has not been discovered as yet.

The purpose of writing this article is the analysis of infrastructure provision of the development of information services in international tourism on the basis of the analytical review of international statistics and identification of general trends in the distribution of the competitive advantages of the major players in the market. We applied methods of analysis and synthesis, system analysis, comparison and generalization for the study.

Main trends of development of the global tourist infrastructure for the provision of information services were analyzed. The booking systems, common in the global information space, were characterized. We found growing competition in the international market of tourist services among the biggest global distribution systems Amadeus, Sabre and Travelport. It was proved that there is the division of areas of economic influence on the mega regions of tourist services among the global players in the market. A tendency was revealed of the creation of a globally functioning process of providing tourist services, the basis of which is the internationalized global distribution systems.

A conclusion was made about the globalization of the tourist market creating preconditions for enhancing economic relationships between countries, the growth of counter–flows of tourists, goods, services, capital and the know–how, which is constantly increasing. It was demonstrated that the key trend is the formation of a globally functioning process of providing tourist services, the basis of which is the internationalized global distribution systems that happen to be a locomotive for the world tourist industry.

The scientific novelty of the research is in determining current trends in the market of global distribution systems and the features of distribution of areas of influence among its players.

The obtained results can be applied to develop scientific–theoretical bases of strategic management of tourist business in the conditions of global innovative space.

Since telecommunication and information technologies allow obtaining information by a potential consumer of a tourist product independently from any distance and at any time, further scientific research is advisable to focus on determining the prospects of functioning for small business enterprises in the international market of tourist services.

*Keywords:* global distribution systems; booking systems; globalization of tourist market; market segmentation; mega regions of tourist business.

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## **АНАЛІЗ ДІЯЛЬНОСТІ ГЛОБАЛЬНИХ РОЗПОДІЛЬНИХ СИСТЕМ НА МІЖНАРОДНОМУ РИНКУ ТУРИСТИЧНИХ ПОСЛУГ**

Проблеми інформатизації суспільства та розвитку інформаційних технологій – окремий напрямок науково-теоретичних досліджень. У сучасних умовах формується нова модель функціонування багатьох видів послуг на основі інформаційних технологій і комп'ютерної

техніки, що приводить до істотної зміни змісту їх продукту. Відбувається монополізація інформаційного простору через створення глобальних розподільних систем, які концентрують міжнародні грошові потоки від надання туристичних послуг і формують фінансову політику здійснення трансакцій у сфері туристичного бізнесу. Загальний підхід до вивчення зазначених процесів поки що не винайдено.

Метою написання статті є аналіз інфраструктурного забезпечення розвитку інформаційних послуг у міжнародному туризмі на основі аналітичного огляду міжнародної статистики та виявлення загальних тенденцій у розподілі конкурентних переваг основних гравців ринку. Під час дослідження застосовано методи аналізу та синтезу, системного аналізу, порівняння, узагальнення.

Проаналізовано основні тенденції розвитку глобальної туристичної інфраструктури з надання інформаційних послуг. Охарактеризовано системи бронювання, поширені в глобальному інформаційному просторі. Виявлено посилення конкурентної боротьби на міжнародному ринку туристичних послуг між найбільшими глобальними розподільними системами Amadeus, Sabre та Travelport. Доведено, що між глобальними гравцями ринку є розподіл сфер економічного впливу на мегарегіони туристичних послуг. Виявлено тенденцію формування глобально функціонуючого процесу надання туристичних послуг, основою якого є інтернаціоналізовані глобальні розподільні системи.

Зроблено висновок, що глобалізація туристичного ринку створює передумови для посилення економічних взаємозв'язків між країнами, зростання зустрічних потоків туристів, товарів, послуг, капіталу та ноу-хау, що постійно збільшуються. Продемонстровано, що ключовою тенденцією є формування глобально функціонуючого процесу надання туристичних послуг, основою якого є інтернаціоналізовані глобальні розподільні системи, які є своєрідним локомотивом світової туристичної індустрії.

Наукова новизна дослідження полягає у визначенні сучасних тенденцій на ринку глобальних розподільних систем та особливостей розподілу сфер впливу між його гравцями.

Отримані результати можуть бути використані для розробки науково-теоретичних основ стратегічного керування туристичним бізнесом в умовах глобального інноваційного простору.

Оскільки телекомунікаційні та інформаційні технології дозволяють потенційному споживачу туристичного продукту самостійно отримати інформацію з будь-якої відстані і в будь-якому режимі часу, подальші наукові дослідження доцільно спрямувати на визначення перспектив функціонування підприємств малого бізнесу на міжнародному ринку туристичних послуг.

*Ключові слова:* глобальні розподільні системи; системи бронювання; глобалізація туристичного ринку; сегментація ринку; мегарегіони туристичного бізнесу.

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## **АНАЛИЗ ДЕЯТЕЛЬНОСТИ ГЛОБАЛЬНЫХ РАСПРЕДЕЛИТЕЛЬНЫХ СИСТЕМ НА МЕЖДУНАРОДНОМ РЫНКЕ ТУРИСТИЧЕСКИХ УСЛУГ**

Проблемы информатизации общества и развития информационных технологий – отдельное направление научно-теоретических исследований. В современных условиях формируется новая модель функционирования многих видов услуг на основе информационных технологий и компьютерной техники, что приводит к существенному изменению содержания их продукта. Происходит монополизация информационного пространства через создание глобальных распределительных систем, которые концентрируют международные денежные потоки от предоставления туристических услуг и формируют финансовую политику осуществления трансакций в сфере туристического бизнеса. Общий подход к изучению указанных процессов пока не изобретен.

Целью написания статьи является анализ инфраструктурного обеспечения развития информационных услуг в международном туризме на основе аналитического обзора международной статистики и выявления общих тенденций в распределении конкурентных преимуществ основных игроков рынка. В ходе исследования применены методы анализа и синтеза, системного анализа, сравнения, обобщения.

Проанализированы основные тенденции развития глобальной туристической инфраструктуры по предоставлению информационных услуг. Охарактеризованы системы бронирования, действующие в глобальном информационном пространстве. Выявлено усиление конкурентной борьбы на международном рынке туристических услуг между крупнейшими глобальными распределительными системами Amadeus, Sabre и Travelport. Доказано, что между глобальными игроками рынка происходит распределение сфер экономического влияния на мегарегионы туристических услуг. Выявлена тенденция формирования глобально функционирующего процесса предоставления туристических услуг, основой которого являются интернационализованные глобальные распределительные системы.

Сделан вывод, что глобализация туристского рынка создает предпосылки для усиления экономических взаимосвязей между странами, рост встречных потоков туристов, товаров, услуг, капитала и ноу-хау постоянно увеличивается. Продемонстрировано, что ключевой тенденцией является формирование глобально функционирующего процесса предоставления туристических услуг, основа которого – интернационализованные глобальные распределительные системы – своеобразный локомотив мировой туристической индустрии.

Научная новизна исследования заключается в определении современных тенденций на рынке глобальных распределительных систем и особенностей распределения сфер влияния между его игроками.

Полученные результаты могут быть использованы для разработки научно-теоретических основ стратегического управления туристическим бизнесом в условиях глобального инновационного пространства.

Поскольку телекоммуникационные и информационные технологии позволяют потенциальному потребителю туристического продукта самостоятельно получать информацию по любой расстояния и в любом режиме времени, дальнейшие научные исследования целесообразно направить на определение перспектив функционирования предприятий малого бизнеса на международном рынке туристических услуг.

*Ключевые слова:* глобальные распределительные системы; системы бронирования; глобализация туристического рынка; сегментация рынка; мегарегионы туристического бизнеса.

**Introduction.** The special field of scientific and theoretical research is the problems of society informational support and the development of information technology. In the current context, a new model of the functioning of many services is being formed. It is based on information and computer technology, which leads to a significant change in the content of the product. In addition, cost-cutting and expanding of the access to households in the result of computerization contribute to the development of new services.

Information technology rapidly spreads through all areas of goods and services production, causing structural changes in management, finance, marketing and innovation of the market. A wide range of scholars and practitioners carry out researches of information technology development. In particular, V. S. Hotynyan, G. P. Haluzinsky, V. A. Kvartalnov, S. V. Melnychenko, N. S. Orlenko, G. A. Papyryan, N. S. Pinchuk, A. V. Semenenko, M. M. Skopen, T. I. Tkachenko, A. V. Tomchenko and others.

The researches on the using new information technologies at the companies of tourist industry and tourism in general are done by S. Arimov, O. Vynogradov, A. Gubanova, A. Demash, M. Yefremova, Yu. Myronov, M. Skopen, T. Tkachenko and others.

Rationale for using information technologies in tourism has been the subject of research both theorists and practitioners of countries with rapidly developing markets. In particular, the Russian authors V. A. Kvartalnov, V. D. Kalachanov, L. I. Kobko make the points of the importance of IT services for the development of tourism in an increasingly competitive environment in their researches. Problems of economic justification for the introduction of new software products and innovative projects in the tourism industry were considered by O. Halinovskyi, G. Galkin and others. However, the current state of the international travel industry is based only on the use of information technology and has signs of diffusion and integration of different types of services and

industries which form the global resources of tourist services either directly or indirectly. Scientific and theoretical justification of the review of current trends in the global travel service market in terms of information society requires further study.

**Statement of the problem.** There is a process of monopolization of information space through the establishment of global distribution systems that focus on international money flows which are got from travel services and they form financial policies of transactions in the sphere of tourism. The general approach to study of these processes has not yet been formed. The objective of the article is to analyze infrastructure provision of information services in the international tourism using an analytical review of international statistics and to identify common trends in the distribution of the competitive advantages of the major players in the market.

**Results of the research.** Tourist companies, which work in international markets, use modern information technology, global distribution network, reservation system and reservation, electronic information systems, information systems management, mobile communication network and the Internet services.

Among the clients of reservation services through global distribution systems, the most popular are: air tickets reservation is of one of the three most popular web purchases; hotel; auto rentals and tours. Moreover, the recent clients have the opportunity to form a tour to their liking directly from the Internet, to choose a hotel, a way of travel, food option and additional services [1].

Fully functioning or global distribution system (GDS – Global Distribution System) is an automated system that provides not only information display about flight schedules, availability and airline fares - subscriber of the system, but it also displays information about the schedule, resources, locations and prices of other transport operators. The system provides information display about other resources and non-transport tariffs; it interacts with inventory reservation systems of air carriers and other systems. The last-mentioned is subsystems (providers) which ensure the preservation and resources display (vehicles, non-transport) and, through this cooperation, provide booking air transport, other transport and non-transport services for agents of this system, including the possibility of automated processing of shipping and other (not-transport) documents. GDS services thousands of agents around the world and give them access to airlines resources on almost all areas of air transportation.

Inventory transportation reservation system automatically provides the possibility of placing, storage, management and support resources, including airlines and access to them by agents through the distribution system and their agents directly for reservation of air carrier services. Inventory systems tend to localize and create one airline inventory system. Distributive (agent) systems, in contrast, are moving towards consolidation, winning an increasing number of agents.

Until recently, most world airlines held their resources in major computer reservation systems for collective use, since only certain large airlines could afford the development of their own systems. In recent years, due to increased efficiency of IT programming, the cost of high-tech backup, especially inventory systems has decreased significantly making them accessible to many airlines. Airlines were interested in having their own inventory systems because they ensure the independence of the company from the owner of CRS.

Amadeus, Sabre and Travelport are the largest representatives of global distribution system in the international tourism market.

The system of Amadeus was established in 1987. AirFrance, Amadeus, Lufthansa, Iberia are the founders. The company's headquarters is located in Madrid, Spain. The

main processing center is in Erding, Germany, and it is one of the world's centers for civil use databases that specializes in tourism. More than 480 million of transactions are done and over 3 million bookings are daily made at the Centre. The company has 5 regional centers around the world. The staff is over 8.9 thousand employees [2].

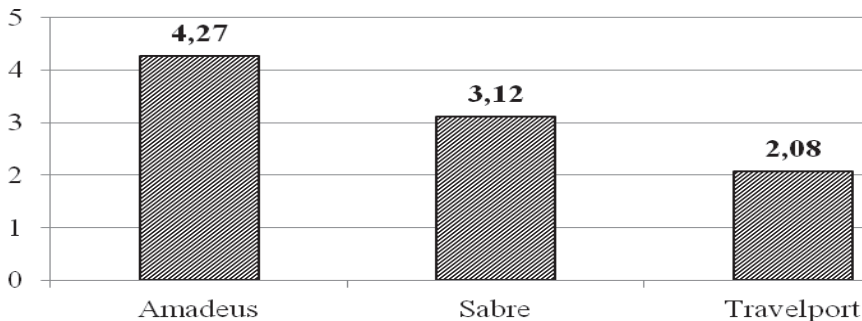
Aspects of the work of the company Amadeus are airlines, travel agencies, car rental, hotels, insurance companies, railway companies, ground handling services and airports.

A global distribution system of Sabre was established in 1960 by American Airlines. Sabre connects more than 55,000 travel agencies and more than 400 airlines, 86,000 hotels, 25 car rental companies, 12 cruise companies – all types of tourist service providers in the world [3].

Distribution system Travelport operates under the names of Travelport Apollo, Travelport Galileo and Travelport Worldspan. Travelport headquarters is located in Langley, UK. The company is represented in over 170 countries and has approximately 3,400 employees. Travelport has trading platform, through which the system links travel providers and buyers of travel services, and technical services, through which the company provides IT services to airlines [4].

Amadeus is the largest company among the major global distribution systems. In 2014 its revenue was 4.27 billion. US, which is 26% higher than the income of Sabre and 51% higher in comparison with Travelport (fig. 1).

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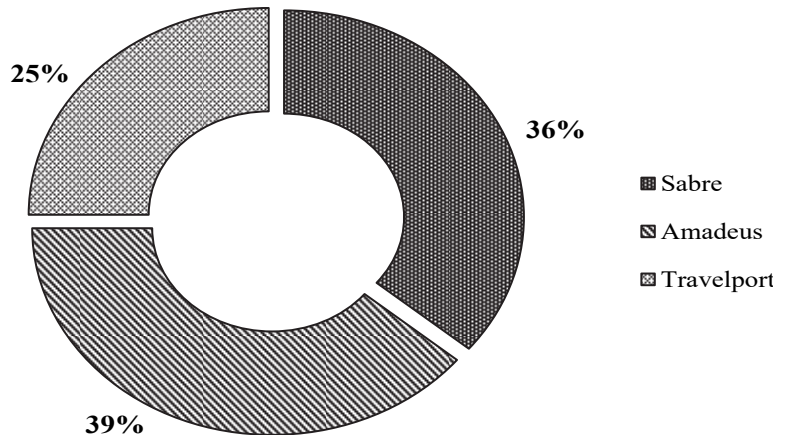
**Fig. 1. Revenue of major global distribution systems in 2014, billion dol.**

Source: compiled by the author based [5].

Analyzing information of the market shares of global distribution systems according to the volume of airline bookings in 2014, it shows that 39% of the market belongs to Amadeus, which is the largest part (fig. 2).

Despite the fact that the companies in terms of revenue of Sabre system fall far short of the leader, the volume of ticket bookings is slightly less than the figures of Amadeus. This difference in trends is the fact that Sabre provides an extensive range of services, but it offers cheaper prices than those coming from Amadeus or Travelport. That is, Sabre, using a policy of «favorable» prices as a means of economic competition in the monopoly market, provides greater user segment services. Competition between global market players is focused on winning new customer segments.

Review of the market dynamics of global distribution systems shows that there were significant changes in the position of the main players over the period during 2001 – 2013. So in 2001, Travelport was the market leader, Amadeus was in last place among the three.

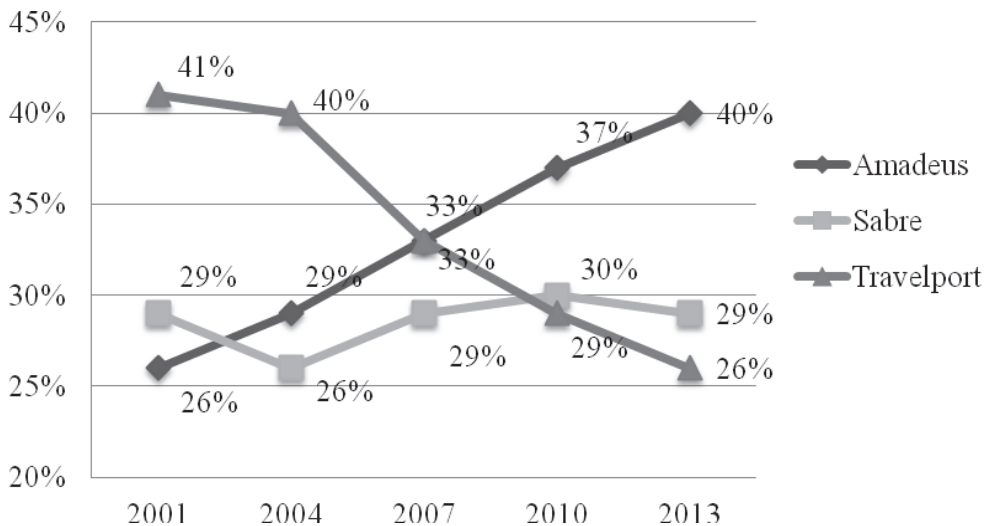


**Fig. 2. Market segmentation between global distribution systems in 2014 \***

\*Shares are determined according to the volume of airline bookings excluding other companies in the market.

Source: compiled by the author based [5].

However, there is a rising trend of the last and downward dynamics of the leader. Thus, in 2007, at 33% intersection the index of both companies was observed; invariably trend continued and in 2013, Amadeus and Travelport swapped positions in comparison with those observed in 2001 (fig. 3).



**Fig. 3. Dynamics of global distribution systems segments for the period 2001–2013, % in terms of air services**

Source: compiled on the basis of [6].

The positions of the US company Sabre changed slightly during the described period. During 2002 – 2009 the company was in the last place among the market leaders,

but in late 2009 the companies Travelport lost its position and Sabre returned to the second place, immediately after Amadeus, although followed far behind.

For regional arrangement, there is the following trend: in North and Latin America's biggest market share is owned by Sabre, namely 55 % and 57 %, respectively; Amadeus owns 63 % of Europe, Africa and the Middle East tourist market [6].

Such booking system as Trust, SRS, Utell, Start Trust are popular among travel companies and other consumer services. These distribution systems are real-time and can report redirect data backup and other information between hotels, reservation centers, travel agents, airlines, other components of the global tourism infrastructure (table). Some of them, including Utell, also include training programs for hotel and additional software applications that allow agents to receive full advance payment for placing the client, and hotels pay travel agents commission electronically.

Table

**Characteristics of operating reservation systems in the global information space\***

Booking System	Characteristics	Connection to the Global Distribution System
Trust – distribution system	In real time it can communicate redirect data backup and other information between hotels, reservation centers, travel agents, airlines and other parts of the world tourism infrastructure.	
SRS – real-time distribution system	Offers special system for hotel booking and provides information about the possibilities of teleconferencing and the availability of audio and video equipment.	Can communicate with all global distribution systems: Amadeus, Galileo, Sabre.
Utell – computer reservation system and marketing services	Main specification is booking hotels and providing information on strategic areas of development services.	
Start – information system	Provides information about tour itinerary, provides tickets for transportation, cultural activities, can enter into a contract for travel insurance.	Is connected to Amadeus, which provides access to additional services.
BeGlobal – tourism reservation system	Enables you to find and book in real time any tour, track status change requests, print reports and documents in the transaction occurred.	

\* Compiled by the author based on [7].

Globalization of the tourist market creates conditions for strengthening economic relationships between countries, the growth of oncoming flow of tourists, goods, services, capital and know-how that is constantly increasing. The main trend is the formation of a global process of functioning of tourist services, the core of which is formed internationalized distribution systems that act as a kind of growth engine of the global travel industry. Global distribution systems actually form a network in which the world's income from tourism business is formed, redistribution of which is a key strategic benchmark and the basis of the foreign policy of any state.

Thus, the level of information technology in general affects the following aspects of the tourism industry: effective monitoring and analysis of tourism, tourism industry development planning; rapid and flexible development and presentation of tourism products; offering and distribution services; reservation service and keeping active marketing activities; flexible payment services; maintaining effective advertising of tourism opportunities; creating a positive image of the state.

**Conclusions.** Creating global information distribution systems led to changes in the conditions of information transfer and created many kinds of services which are able

to trade. One of the last areas of e-commerce over the Internet indicates the actual functioning of the global economy. The USA, Japan and some Western European countries (Italy, UK, and Germany) are the leaders in using new means of communication. In the tourism business E-commerce can radically change the structure of production and distribution of tourist products, eliminating the need for auxiliary structures such as distribution networks, tour operators, wholesalers and travel agents.

The scientific novelty of the work is in identification of current trends in global distribution systems and division particularities of spheres of influence between the players.

The results can be used to develop scientific-theoretical frameworks of strategic management for tourism business in global innovation space.

As telecommunications and information technologies enable potential consumers of tourist products to obtain independently information from any distance and at any-time, further research is advisable to direct to the prospects of determining the operation of small businesses in the international tourism market.

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