

*T.V. Kniazieva,  
Doctor of Economic Sciences, Associate Professor  
(National Aviation University, Ukraine)*

*T. Cherniavska  
Doctor of Economic Sciences, professor,  
(State University of Applied Sciences in Konin, Poland)*

### **Methodology for assessing the quality of air passenger service**

*The paper presents a methodology for assessing the quality of services in the field of airport activities, which allows to give scientifically grounded recommendations for increasing the competitiveness of airports in the transport services market while maintaining the required level of passenger service efficiency*

The fundamentals of government policy in the aviation area activity determined main directions of development of the civil aviation for the period up to 2020: ensuring the improvement of the quality of air transportation, aviation works, and the provision of international services; legislative consolidation of quality standards for these works and services, as well as responsibility for their non-compliance; ensuring the rights of consumers of aviation services; increase aviation security and safety of aircraft. In the solution of these and other problems, the important role play the sphere of airport activities in general and, in particular, its main sector, airport services for passengers.

As the study showed, the first attempts to assess the quality level were undertaken in the 1920s, when statistical methods were used to control and evaluate quality level. The table summarizes the results of a comparative analysis of definitions of the term «quality», proposed by foreign researchers.

*Table*

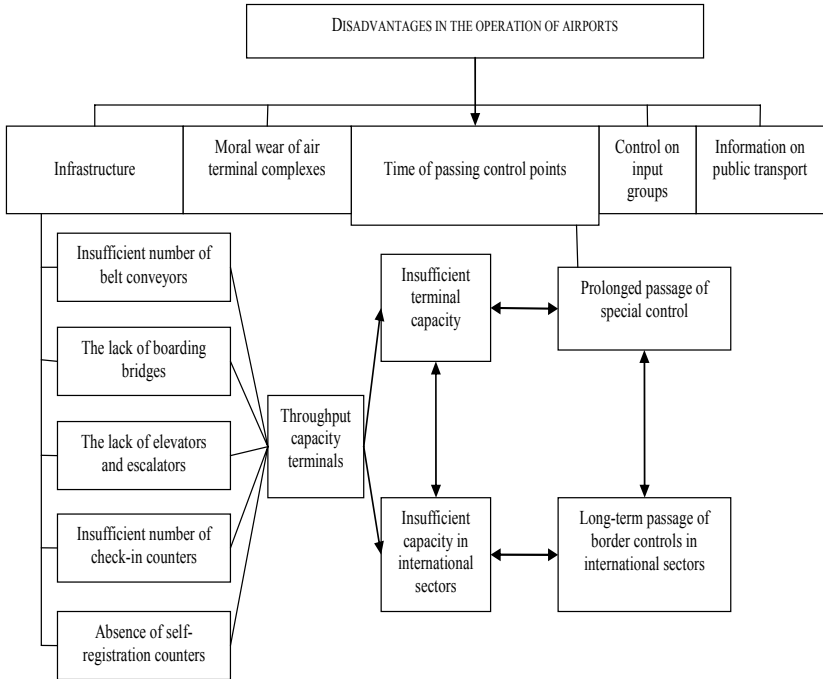
Comparative analysis of definitions of the term «quality»

<b>Author</b>	<b>Definition (term)</b>	<b>Requirement or practical application</b>
1	2	3
Walter Andrew Shewhart (1891 – 1967)	Quality – quality factor, product perfection, which is an absolute, recognized by all sign of uncompromising compliance with standards.	A control chart is a graphic tool that reflects the state of a particular process at a particular point and changes this process to ensure statistical quality control. The purpose of the control charts is to search for changes in statistical data and to provide criteria for detecting the absence of statistical controllability of the process.
William Edwards Deming (1900 – 1993)	Quality is the satisfaction of clients' needs, not only with a view to matching their expectations, but also predicting the direction of their future changes.	«14 principles of quality». The reasons for poor quality and productivity are caused, as a rule, by the work of the system itself, and not by the employees of the enterprise. Focus on: – collecting information when deviating from standards; – reduction of these deviations; – search, analysis and elimination of causes of eviations.

1	2	3
Joseph Moses Juran (1904 – 2008)	Quality - the correspondence to the purpose, that is, the ability of the service or product to perform its functions.	«Quality Spiral» is a model for determining the main stages of constantly improving work on quality management. The quality spiral involves the connection of the stages of the product life cycle with a constant desire to improve it with a constant change in the needs of the individual.
Kaoru Ishikawa (1915 – 1989)	Quality management is the development, design, production and maintenance of products that are more useful and fully meet the requirements of the consumer.	Ishikawa causal diagram («Ishikawa fish bone») - the method is based on finding causal relationships between quality factors, that is, the causes of quality variability and the establishment of interrelationships of these causes, as well as their consequences for preventing or eliminating their effects.
Armand Vallin Feigenbaum (1922 – 2014)	Quality - full compliance with the declared characteristics of products / services, including the development, production, maintenance and use of products with unchanged characteristics.	The concept of TQM, which is a comprehensive quality management at all stages of production of goods and covering all levels of the management hierarchy of the enterprise.
Gen'ichi Taguchi (1924 – 2012)	Quality - losses felt by consumers due to late delivery, as well as unproductive application of products.	The concept of quality loss function. For the least losses, both on the part of the company and on the part of consumers, it is necessary to determine the target values of the product quality level at the design stage and to strive to achieve them in the production process.
Philip Bayard Crosby (1926 – 2001)	Quality - compliance with requirements, that is, compliance with certain standards, for example, technical or technological.	14 principles of Ph. Crosby on quality assurance: - the achievement of quality through prevention, not evaluation; - price of non-compliance – quality meter; - the only acceptable quality standard – no defects.

The analysis showed that the issues of evaluation and quality management were the object of many scientific developments, but in the field of airport activities, these issues have not been sufficiently developed. There is no single system of quality indicators and a unified methodology for quantifying the level of quality of passenger service at airports.

As the study showed, the main bottlenecks in the activities of regional domestic airports, which cause passengers' dissatisfaction, are low terminal capacity; long time of passing control points; lack of the necessary infrastructure – teletraps, self-registration racks, and belt conveyors. Based on these data and analysis of foreign experience, the systematization of shortcomings in the activities of regional domestic airports with the establishment of cause-effect relationships between them has been proposed (Fig.).



*Figure. Systematization of disadvantages in the activities of regional domestic airports*

Today, the existence of various interpretations of the term «quality» still exists, which was also established by the founders of the theory of quality management. There are also new, modern definitions that characterize this concept. For example, quality is:

- one of the basic logical categories, which is the definition of an object according to its characteristics inherent in it, which makes the subject such as it is (in philosophy);
- a set of properties and attributes that determine compliance with the model, suitability for anything (about persons and things);
- the degree of value, suitability, conformity to what should be (about things);
- a set of essential features, properties, features that distinguish an object or phenomenon from others and give it certainty;
- the totality of objectively inherent products and characteristics, the level or variant of which is formed when creating products in order to meet existing needs;
- a set of properties (including a measure of utility) of services that determine their ability to meet certain social and personal needs.

The conducted research allows drawing a conclusion that with the strengthening of competition in air transport, the quality of the services provided is one of the main conditions for the competitiveness of civil aviation enterprises. According to the International Airports Council (ACI), the main forms of competition in the field of airport operations are:

- competition for attracting new customers: airlines, passengers, tenants, freight carriers;
- airport competition with overlapping coverage areas;
- competition for the role of the hub and transit traffic between hubs;
- competition of airports located in one metropolis;
- competition between terminals;
- competition for the right to provide ground handling (handling) of airlines.

The research revealed a wide variety of services rendered by airports for a wide range of consumers. The main activity of the airport is connected with the departures of passengers, cargo and mail. For passengers in airports, the following types of services are provided: information services (visual information, voice information of the customers); transport services (delivery of luggage, passengers, etc.); ground services (hotel, rest rooms, medical posts, parking, car rental, duty-free trade, etc.); consulting services; Internet services; services for passengers with disabilities and others.

As the analysis has shown, at present one of the urgent tasks for manufacturers of air transport services is to evaluate and improve the level of passenger service quality. In this regard, there is a need for a more rigorous definition of this concept in relation to airport activities in general, namely: «quality of airport services» as the airport's ability (ability) to provide publicly significant services to various groups of consumers in strict accordance with quality standards, interests of consumers and environmental factors.

Because of the conducted researches, it was established that maintenance of a necessary level of quality of service of air passengers should be carried out taking into account the accepted regulations, and also the publicly significant services revealed on the basis of the analysis of requirements of passengers at the account of factors of an environment. The regulation of the quality of passenger service at airports in Ukraine implies compliance with the requirements of international quality standards, as well as the use of positive experience of leading airports in the world.

The methodology for assessing the quality of airport services from the point of view of passengers is as follows:

1. Choice of a category of consumers.
2. Determination of a set of individual airport performance indicators for the selected consumer category.
3. Formation of complex indicators of the quality of the airport.
4. Development of a questionnaire for a specific category of consumers.
5. Conduct a survey.
6. Forming and analyzing the data table of respondents' answers.
7. Calculation of the integral index of the quality of the airport.
8. Determination of the development directions of the airport in order to improve the quality of its work.

**Conclusions:** In the airport activity, the opportunities of economically effective combination of state regulation with the effect of market mechanisms are not fully used. State regulation of aviation is a necessary condition for the successful operation of all participants in the air transport process. The activities of aviation are inseparably linked with ensuring national security, flight safety, and aviation security. Development and compliance with regulations in civil aviation requires the participation of the state and has a great impact on the quality of airport services.

The management of the airport management decisions to improve and maintain the level of quality of passenger service should be based on standards (reference), that is, legally fixed quality standards, as well as publicly-significant services identified based on an analysis of the needs of passengers, taking into account environmental factors, including number of regional features.

The developed model of quantitative assessment of the quality of services in the airport business, based on an integrated approach with the identification of: a) bottlenecks in passenger service; b) the interests of passengers and the requirements for the quality of the airport service; c) the ability of managers to improve the quality of service by the «cost-effectiveness» method.

The tools for quantifying the quality of passenger service can be used not only for passenger services, but also for airlines, tenants and other customers of the airport. This will require the development of appropriate questionnaires and surveys of clients of this category, as well as the definition of a set of private and complex quality indicators and their weights for the subsequent calculation of the integral indicator.

The main task of the management of any airport is to fully and timely meet the needs of the clientele and provide quality services. The results of the study, thus, allow the airport management to make informed decisions to improve the quality of customer service and the competitiveness of the airport.

## References

1. Black, John, Hashimzade Nigar, & Myles Gareth (2009). A Dictionary of Economics. Oxford University Press. Retrieved from [http://www.oxfordreference.com/view/10.1093/acref-9780199237043](http://www.oxfordreference.com/view/10.1093/acref/9780199237043.001.0001/acref-9780199237043).
2. Chaffee, E. (2011). Three models of strategy. *Academy of Management Review*, Vol. 10 (1), p. 89–98.
3. Chandler, A. D. (2015). *Strategy and Structure*. Cambridge MIT Press, 480 p.
4. Kotler, Ph., Roberto, E.L. (1989) *Social Marketing: Strategies for changing public behavior*. Printice Hall. [in English].
5. Isoraite, M. (2009) Theoretical aspects of marketing strategy/ *Ekonomika ir vadyba: aktualijos ir perspektyvos*, 1 (14). pp. 114–125.
6. Runielt, R. P. (2014). *Strategy, Structure, and Economic Performance*. – Boston : Harvard Business School Press. 462 p.
7. Venter, P. & Jansen van Rensburg, M. (2014). *Strategic marketing: theory and applications for competitive advantage*. Oxford University Press.