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Factors affecting the demand for air transportation

Demand for air transportation is affected by a significant number of environmental factors, analysis of which contributes to the increased accuracy of air traffic prediction

Demand is specific in its manifestation, it is tied to the place and time, services, groups of people, tariffs, cash receipts. Determining the demand for aviation passenger transportation is related to the assessment of particular market volume and capacity and the place of an airline in this market. The volume of the market is determined by the volume of sales carried out during the year, that is, the volume of consumed air passenger transportation services.

To predict the demand for air transportation it is necessary to collect and analyze data on the market, which consists of consumers who differ in their needs, the amount of money they are willing to pay for the service, and the availability of additional values that accompany airline services. Because the consumer market of air passenger transportation is not homogeneous it is expedient for the airline to hold three stages of segmentation - segment the market due to certain variables, including geographic, demographic, psychographic and behavioral, select a target segmentor segmentsand to position the service in the minds of end consumers.

Consider the segmentation variables. The geographical variable involves the consumers dividing by region, the size of the settlement, population density, and climate. By demographic variables consumers are segmented according to gender, age, family status, income level, education, stage of the family's life cycle, and religious beliefs. The psychographic variable divides the market by social classes, type of personality, lifestyle, affiliation with a particular reference group, occupation. Behavioral variable involves segmentation of consumers, first of all, by purchasing behavior, namely the motive for making a purchase, the intensity of the product use, the relation to the product, the status of the consumer (consumer, not consumer, potential consumer, past consumer).

To analyze demand for aviation passenger transportation consumer segments should be, firstly, measurable in order to be able to estimate and forecast sales, secondly, available, in order to be able to determine how much the segment is exposed and to serve, and thirdly, to have a certain level of profitability to be attractive to airlines. The consumer segment is considered attractive if its size is maximal, it has positive growth rate, is characterized by an average level of competition, which induces the airline to compete and enter the market with new offers for end-users. An airline that operates in the market or is about to enter the market should have internal capabilities to gain the competitive advantages.

World experience shows that air carriers often use segmentation in terms of flight range, the availability of additional values, the purpose of the journey, the

traditions of the country in which the consumer was born or resides. The price factor plays a significant role in market segmentation and offer forming. It is expedient and necessary to study competitors, not only airlines with similar offers, but also alternative modes of transportwhen forming a proposal. Such studies will help to improve the market situation, to compete more successfully and to meet needs of consumer target segments in the best way.

The segmentation of the consumer market for aviation passenger transportation and a deep analysis of the airline's ability to master selected segments are the basis for developing an effective strategy aimed at maximization of consumer satisfaction.

Demand for air travel depends on two groups of macroeconomic factors. The first group is associated with the dynamics of economic development of countries and regions, as well as the level of business activity between them. This distribution can be attributed to both the demand for business air travel and the demand for its own account, mainly associated with the rest. The second group relates to economical (budget) air travel for consumers who pay at their own expense.

The first group of factors takes into account the impact of macroeconomic indicators, which include the dynamics of gross domestic product GDP and foreign trade. GDP as an indicator is universal and includes indirectly both the level of business activity and the dynamics of citizen incomes.

The second group of indicators that are related to changes of the population effective demand for air transportation, includes the dynamics of real cash income of the population, the cost (average fare) of air transportationand fluctuations in exchange rates.

The dependence of demand for goods on income is described by the functions of Tornquist and Engel curves. Engel Dependent Curve for second group goods ("goods of relative luxury")that includes air transportation, has a convex appearance and is approaching the upper limit of consumption of goods of this groupwith the income growth. The function of Tornquist for "goods of relative luxury" differs from the function for the first group goods (goods of basic necessity). The demand for goods of this group appears after income reaches a certain level, after that it becomes possible to purchase goods of this group. In other words, the massive demand for air transportation services within the country arises when a certain barrier is overcome in the population income, and before it is limited mainly by business trips and other extreme necessities.

Complication lies in identifying this limit value. Some empirical observations consider that a visible level of transport mobility begins with GDP per capita of $ 15,000. The effect is not only in the size of GDP per capita, but also in the peculiarities of its distribution, that is expressed in the magnitude and inequality of cash incomes, the average tariff for air travel.

One of the most indicative indexes for any markets is the price elasticity of demand for different consumer segments and different flight directions. IATA uses a medium-term factor of 1.27, but for Ukraine it is obviously below onedue to low share of consumer demand that pay for air transportation from their own funds. In any case, the price elasticity of demand is higher than zero that indicates a relatively high sensitivity of demand from increase in airfare prices.

The increase in convenience of air traffic due to introduction of hubs at key airportscauses the increase in demand, but in the case of our realities, it is not worth to expect it in the near future.

The demandon air passenger transportation is significantly influenced by substitutesservices. The cost of transportation by rail and road transport is much lower than by air. In this case the coefficient of cross-elasticity of demand is an effective indicator of the attractiveness of air transportation.

The state regulation of the air transportation market significantly influences the demand. Restrictions for the foreign carriersmarket entering do not contribute to the development of competition and lower prices for airline tickets. According to some estimates, the full liberalization of airspace under the Open skies agreement can provide an increase in passenger traffic between two countries in 2,0 - 2,7 times.

Forecasting the volume of transportation is an integral part of the decision-making process regarding the number of flights in order to allocate airline resourcesrationally, to delete unprofitable flights, to increase air carrier rating due to maximum satisfaction of consumers' needs. The dynamics of transportation volume reflects the possibilities of developing the air transportation market and allows thoroughly choose the directions of the airline's activities.

Conclusions

Forecasting demand for air transportation is affected by a significant number of environmental factors and carried out both at the macro level with the use of economic and mathematical models, and at the micro level for determining and forecasting the market share of the airline. For this purpose quantitative and qualitative methods of analysis, methods of making optimal decisions are used. Most models to determine the elasticity of the volume of traffic from various factors is based on the percentage change in the causative factor to the percentage change in traffic.

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