

BASIC METHODS OF EXPERT ESTIMATION OF LOSSES FROM ORIGIN OF EXTRAORDINARY SITUATIONS AND THEIR PROGNOSTIGATION

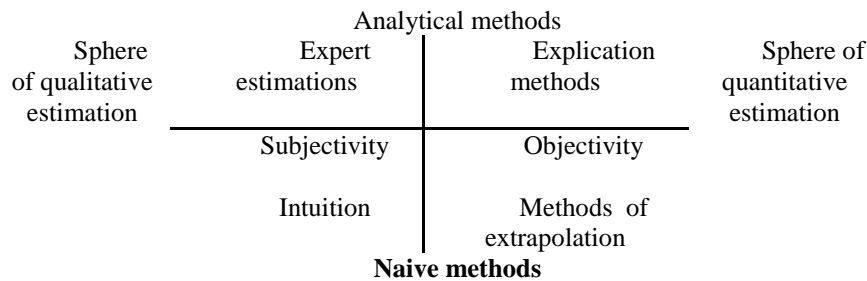
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It is possible to estimate the prospects of the environment by means of prognostication methods. Two criteria are distinguished for classification of these methods: level of objectivity of prognostication (subjective and objective methods) and level of analytics of this process (naive and cause-and-effect methods). Subjective methods are based on the position of a certain expert as for the processes which are not shown obviously, but lie in the basis of the prognosis development. Application of the objective methods provides clearly formulated processes which can be reproduced by other persons, that is, there is a great probability of formulation of the same prognosis by them. It is considered that contrasting of quantitative methods to qualitative in which intuition prevails can be seen here.

The reason to consider the methods to be naive is that a prognosis is based on the supervisions of the past tendencies of variable (for example the level of primary service) without the substantial account of basic motive factors. Cause-and-effect (casual) methods are applied when the factors are identified and their credible future values are predicted that enables to form the credible value of the index on condition of realization of the acceptable scenario. Combination of these

two approaches to classification facilitates the formation of four types of methods of prognostication (scheme 1).



Scheme 1 – Classification of basic methods of prognostication

Basic methods of prognostications include methods of expert estimations, methods of extrapolation and explanatory models.

Methods of expert estimations for making prognosis, as well as during conducting the analysis of the environment are based on the intuitively-logic analysis of the problem, quantitative estimation of judgments and formalized processing of the results. Obviously, application of these methods has certain subjectivism because expert's intuition, experience and knowledge are of great value.

Methods of extrapolation are applied if an analytical basis of the prognosis is weak but it is based on objective information.

Simple methods which foresee the analysis of the process and making prognosis by extrapolation of the past tendencies are used. Statistical supervisions of the dynamics of the certain index, determination of its progress trend and "continuation" of this tendency for the future period are the basis of trends extrapolation methods. Obviously by means of trends extrapolation methods appropriateness of the past development of that or other object of research (phenomenon, situation, process etc.) is carried on the future. Mainly the methods of extrapolation of trends are applied during a short-term (not more than one year) period of prognostication when there are insignificant changes in the environment.

The formalized methods of prognostication can be divided into hardly determined and stochastic.

Methods of middle sliding and exponential smoothing are popular among the determined ones. The method of middle sliding provides that the index which is next on a time interval in size is equal to its mean value calculated for a certain period. The method of the exponential smoothing represents the prognosis of the index for the future as the sum of the actual index and prognosis for a certain period calculated by special coefficients.

Stochastic models are realized within the limits of simple dynamic and multifactor regressive analysis, analysis by autoregressive dependences.

Explanatory (explication) methods are based on creation of mathematical models which enable to imitate situations within the limits of alternative scenarios.

The Delphy's Method was developed for solving knotty strategic problems with the purpose of getting information about the future, maximum diminishment of the subjective factor influence, stimulation of the ways of specialists' thinking by creation of the informative system with the feed-backs, removal of obstacles in exchange of

information between specialists, pressure of the authority and other forms of pressure, providing the increase of authenticity of prognoses by special procedures of quantitative evaluation of experts' opinions and their working.

Development of method of choice of the concrete method of prognostication for estimation of the losses related to the origin of extraordinary situations is the prospect of subsequent researches depending on the changes of external environment.