



The Estimation of Transport Logistic Processes Models on the Base of Intensive Computer Methods of Statistics

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The promotion work 'The Estimation of Transport Logistic Processes Models on the Base of Intensive Computer Methods of Statistics' has been worked out by Helen Afanasyeva to obtain the scientific degree of 'Doctor of Science Engineering in Telematics and Logistics'. Scientific supervisor of the work is Dr.habil.sc.ing., professor Alexander Andronov. The work is devoted to the implementation of the modern statistical methods for the transport and logistic models analysis. The intensive computer method resampling is especially attended. This method is non-parametrical and gives the most efficient estimators of the systems' characteristics in the case of small initial sample sizes. The investigation was held in three main directions: the forecasting and estimation of logistic models, the estimation of the reliability and efficiency of carries, and the analysis of inventory control problems in logistic systems. Resampling method usage algorithms and inferences for formulas of the efficiency comparison of traditional and resampling approaches were suggested for each task implementing corresponding mathematical model. The efficiency criteria were: bias, variance or mean squared error of the estimator. The numerical results proving the efficiency of the suggested approach were obtained. The conclusions and recommendations, concerning the conditions in which the suggested approach is the most effective were made. The obtained results are general, because can be used in other subject areas.

Comments: Summary of the promotion work, Riga: Transport and communication Institute, 2006. -48 p. arXiv admin note: text overlap with [arXiv:1304.6670](#) by other authors

Subjects: **Applications (stat.AP)**

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