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MODELING OF QUANTITATIVE CHARACTERISTICS OF POSTAL AND LOGISTICS COMPANY FLEET OF TRUCKS ON THE CRITERION OF ITS GENERAL LOGISTICS SYSTEMS CARGO FILLING

Postal and logistics company (mail operator) is a company which on a clearly defined schedule transports goods and mails between its warehouses and pick up points, where the recipient can pick his sending up himself, as well as on a clearly defined schedule performs address service, if this service was ordered.

Operating activity is the main postal operator's activity, in addition to investing and financing activities.

The aim of the article is to develop the best ways of operational processes construction of postal and logistics companies in Ukraine. They are currently characterized by a general sales of their services decrease, which caused by a purchasing power of active consumers sharp decline, decrease of international logistics turnover.

The author used techniques of economic analysis, economic and statistical techniques, methods of economic-mathematical modeling and forecasting in research.

The multiple linear correlation and regression model that reflects the dependence of the quantity of interurban transport lines on the shipments quantity is constructed, the multiple linear correlation and regression model describing the dependence of the quantity of address service vehicles on the shipment quantity is constructed, the multiple linear correlation and regression model describing the dependence of the quantity of address service vehicles used in companies unit on the quantity of service routes and the daily average mail and cargo entering on the companies unit is

constructed; rapid diagnostic for models adequacy is conducted, the close connectivity between the variables is proven in the article.

Based on real statistics, provided by one of the postal and logistics companies in Ukraine, the appropriate econometric models of the quantity of the postal and logistics company vehicles – both those, that are used on highways, and those engaged in address service – depending on mail and cargo entering the general logistics system were developed to determine the required number of lines on a certain date and the required number of address service vehicles on a specified date and for a specific companies unit.

The models are useful for operational processes of postal and logistics companies in Ukraine optimizing.

A separate task for further research is the schemes of shipments transportation between company's warehouses and pick up points construction on the criterion of minimum costs based on specific pre-set conditions and limitations.

The next task for further research is the mail company's unit's development and deployment model construction and solution, as well as the conceptual operations management model construction for the postal and logistics company.

References

1. Zdrok, V.V. and Lahotskyi, T.Ya. (2010), *Ekonometriia* [Econometrics], textbook, Znannia, Kyiv, Ukraine, 541 p.
2. Lukianenko, I.H. and Krasnikova, L.I. (1998), *Ekonomyka* [Econometrics], textbook, Znannia, Kyiv, Ukraine, 494 p.
3. Romanych, I.B. (2011), "Analysis of Prime Price Forming of Truck Freight Transportations in National and International Connection", *Derzhava ta rehiony*, no. 4, pp. 137-141.
4. Romanych, I.B. (2014), "The planning forms of amount of postal mails and loads receipt into the general logistic system of postal company", *Monitoryng, modeliuvannia ta menedzhment emerdzhentnoi ekonomiky. Zbirnyk naukovykh prats Mizhnarodnoi naukovo-praktychnoi konferentsii* [Monitoring, modelling and management of emergent economy. Conference proceedings of the International conference], Odessa-Cherkasy, 10-12 September 2014, pp. 159-161.
5. Filippovskiy, I. (2014), "Ukrainian colonialist. «Nova Poshta» will build the networks of branches in Moldova and Georgia", *Kapital*, no. 111 (288), p. 14.
6. Yashchuk, L.O. (2011), *Lohistyka poshtovoho zviazku* [Logistic of postal connection], ONAZ, Odessa, Ukraine, 228 p.
7. Avramenko M. (2014), "Postal logistic in Ukraine. Research results", available at: <http://epravda.com.ua/columns/2014/06/23/468778/> (access date September 12, 2014)
8. "Results of independent research of postal logistic market of Ukraine in 2012 and 2013. Comparison to 2010 and 2011" (2014), available at: <http://eimg.pravda.com/files/f/e/fe27c39-----pdf> (access date September 01, 2014)