

REVIEW
of the monograph by Oleksandr Velychko
“LOGISTICS IN THE SYSTEM OF MANAGEMENT OF ENTERPRISES IN
AGRARIAN SECTOR OF ECONOMY”

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The spread of the logistics in the system of management in agrarian enterprises encouraged the formation and development of theoretical, methodological and practical basics of logistical components in agricultural enterprises. Along with that the study of multiple aspects of logistical provision of agrarian business remains a debatable, discussable and actual issue in the scientific sense even today. Therefore, the study of the development of corporative and cooperative agri-logistics is essential under modern conditions. Based on numerous withholding factors of operating in agricultural supplying cooperation in Ukraine and active spread of private-corporate forms of control over logistical chains in agribusiness this issue requires additional and more profound study.

Attention to agrarian business in Ukraine has been constantly growing for the last few years. According to FAO data Ukraine has been referred to as one of five most prospective agrarian countries. Besides the demand and price for agricultural products at world markets have been steadily increasing. Under these circumstances the task of developing agrarian produce is further intensified, which means the increase in the production of goods calculated per unit of resources. It indicates the growth of effectiveness in all components in agricultural complex, transformation of the producing process into more contemporary, effective and powerful industrial methods of production. A high level of competitiveness at the agricultural market caused the increased significance of the logistics sphere. The need for the creation of the integrated producing-logistical systems, which provide stability in economy and stability in development of agrarian enterprises, has been proved by domestic and foreign practice for many years.

It is worth noticing that the further theoretical-methodological basis of general logistics and logistics of agrarian enterprises in the system of management has been evident in the scientific practice. The author enhanced a set of methodological approaches to preparation of managerial decisions. The contemporary conditions of the development in agrarian logistics in Ukraine have been analyzed. The suggestions towards improving the management over the development of the logistics in private-corporative and cooperative formations in agrarian enterprises have been grounded.

Additionally, the author grounded the dualistic type of modern economical logistics as well as suggested for the first time to view rational and supplying logistics as main directions in the development of the logistical science in the system of entrepreneurial activity and as types in the differentiation of general, agrarian and other types of logistics.

Structurally the monograph consists of five parts. The first part describes theoretical basis of general entrepreneurial (economical) logistics and focuses on the features of interconnection with management and development. Fundamental features of business logistics in interrelation with certain adjacent sciences of different fields have been grounded there. The principle of rationalism has been defined as the classical mutual base for all historical types of logistics. Dualistic type of modern economical logistics has been determined and a recommendation has been made to use it as a basis for logistical classification. Rhochrematics has been defined as a direct evolving basis for modern concept of management over the supply chain. Classification of levels of Party Logistics (PL) by the sign of measure and type of delegating logistical function outside by the company has been improved. Main distinctions between processes of logistical management and control over logistics have been revealed.

Main features of the theory of agrarian logistics as a type of business logistics in economy and management have been reviewed in the second part. Main purposes of functioning and ways of integration of agri-logistical systems and types of logistical formations and forms of control over the logistical chain in agrarian business have been discussed there. The author's interpretation of the term "agri-logistic provider" at basic level of PL has been provided and additional features in classification of such organizations have been suggested. Features of corporative and cooperative agri-logistics have been defined. Subjects and peculiarities of internal and external logistics have been determined and their classification has been suggested in the system of corporative and cooperative agrarian enterprise. Terms "specialized agri-logistical cooperative" and "cooperative with concomitant agri-logistical activity" have been introduced and defined.

General methodological basics of logistical approach towards grounding decisions in agrarian enterprises have been presented in the third part. Additionally, primary and secondary basics of different logistical approaches in the economy have been identified. This part also defined the algorithm of a linear structure, described the methodological approaches to integrated estimation of selection criteria and presented ways of carrying out index analysis of the development in the system of logistics in agricultural enterprises. Logistical model of managing one-factor biological productivity in agro-producing system in plant growing has been

grounded. Methodological features of ABC and XYZ classification of stocking and logistical modeling of solutions in agrarian enterprises have been discussed.

Features of management over the process of developing the supplying logistics in integrated private-corporative agro-formations have been generalized in the fourth part. This section defined features of the logistical mix for providing agricultural producing in corporative business. Patterns in logistical organization of agribusiness in holding formations have been revealed. Dual nature of logistical provision in major agrarian companies has been introduced and defined. Main directions and trends in development of logistical in-sourcing in modern agro-holdings have been studied. Weaknesses of specialized agri-logistical providers in the system of grain gathering have been defined. Trends have been studied and prospective directions in the development of transportation agri-logistics oriented on massive export have been presented.

Fifth part focused on the monograph mechanisms of grounding decisions in the system of agrarian cooperation based on means of rationalistic logistics and presented methodical approach by participants of supplying cooperation toward alternative selection in provision of own grain business. The mechanism of introducing “pushing” logistical system Fortschrittzahlen (FZ) in management over the supply chain in the grain cooperative has been developed. The integrated method of grounding decisions in the system of distributing logistics in fruit and vegetable supplying cooperative has been provided. Methodology of combined application of SCOR-modeling and rationalistic logistics in management over a dairy cooperative have been defined.

The majority of the research has been devoted to studying trends and factors of the development in logistics in the system of activity in agro-holdings as well as in the environment of agrarian supplying cooperation. The author has also developed the general methodology of evaluating development in logistics of agrarian enterprises and mechanism of logistical support of decisions using the method of integral estimation of selection criteria for the service supplier in agricultural sector.

The author’s research has been based on the systematization of the complex of indices and improvement of methods of estimating development in micro-logistical systems of agribusiness. Based on the systematization and critical analysis of the latest research in the monograph a set of author’s developments, which are of great scientific and practical importance, has been suggested. For example the classifications of indices in estimation of logistical development in entrepreneurial organizations, linear algorithm and methodical approach to index analysis of the level of development in logistics of an agrarian enterprise have been presented.

New ideas have been presented in estimation of logistical development concerning differentiation indices by criteria related to quantitative estimation by precise, relative; estimation of changes in relative indices by three categories of the dynamical condition (worsening, stability, improvement), as well as carrying out a dynamic analysis into relatively quantitative estimation at limited range.

The author determined ways of eliminating separate “narrow places” in methodology of estimation in logistical development through appropriate application of means of mathematical tools. Owing to that the author’s methodology provides

changes in the level of deviation between approximated and objective-precise level in development of logistics in agrarian enterprises.

Scientific research identified the features of logistical constituent activity of modern typical agro-holding; author's classification of agri-logistical providers at the basic level of party logistics have been presented based on the signs of the potential benefit and supervision over logistical services by the customer.

Additionally, the author introduced and defined the essence of such terms as "rationalistic and supplying agrarian logistics", "agri-logistic supplier at the basic level of side logistics", "logistical in-sourcing of integrated agrarian formation", "cooperative of side agri-logistic activity" for the first time.

The research is directed towards further enhancing the existing knowledge of agri-logistics in the system of management as well as the study of modern trends and prospective in organizing control over the logistical chain in the agribusiness of Ukraine.

The base of the monograph is the author's idea of dualistic type of entrepreneurial logistics in the agricultural complex: as derived to management (rationalistic type) and as the object of management (supplying type). In the process of the research the author offered and proved the following hypotheses concerning agribusiness: modern entrepreneurial logistics is manifested both in the part of the material flow and beyond it which enables scientists to distinguish such main types as general, specialized and integrated; entrepreneurial logistics is not equal to the SCM concept but it possesses only partial common ground (integrated logistics); multi-aspect manifestation of logistics in economy influences multi-aspect features in logistical approach and its methodology.

In the monograph separate features of regional development in cooperative logistics of agribusiness in Ukraine and in the Dnipropetrovsk region have been studied. The author defined factors, which form a cooperative model of supplying logistics in the system of stocking and distribution of dairy produce by the example of a certain region with classification using the SWOT-model. Prioritized directions in development of logistical provision for agribusiness of a region through the system of servicing cooperation have been generalized. The strategy of fiscal stimulation of development in alternative export-oriented cooperative logistics in the agrarian sector of economy in regions of Ukraine has been suggested.

The studied model of the integrated application of the logistical concept of DRP, tree decision method and linear programming in management over fruit-vegetable cooperative as well as mechanism of integrated application of SCOR-modeling and linear programming method at stages of creation (projecting) and functioning of a dairy cooperative are of great importance.

The author has introduced the term and unveiled the essence of private-corporative, cooperative and mixed supply chain; the link of the cooperative supply chain "producer of milk – supplying cooperative" in the system of SCOR-modeling has been identified. The methodology of formation of the mathematical model towards possible negative effects from applying additional points of milk gathering by a cooperative through the mechanism of planning progressive (digressive) additional

transportation costs has been grounded. In the monograph the reasonability of applying models within limitations as individualized or precise has been determined along with averaging or ranging parameters, which are corresponding to factors of significant and insignificant influence on effectiveness of enterprise's productivity. In the scientific work reasons for applying the developed methods and models for the horizon of planning with average precision have been grounded.

Another important part is the author's presentation of the methodology of rationalization of logistical concept Fortschrittzahlen (FZ) in management of multi-functional grain cooperative based on the method of linear programming through use of differentiated system of quantitative-time variables in the sense of agro-technical periods, agricultural cultures and enterprises.

The author developed formulas for describing limitations considering amounts of costs on services of a cooperative elevator, number of orders for daily serving, storage time of produce without drying, probability of a high demand and prices for the sold produce. Typical model of logistical management in multi-functional grain cooperative has been grounded.

The developed model "tree of alternatives" for an enterprise-member of the grain supplying cooperative concerning logistical storage of grain as well as the method of planning logistical costs for carrying out operations on cleaning, drying and long-term grain storage are of significant scientific-practical interest.

The monograph lists main advantages and disadvantages of operating the holding companies in modern agrarian sector of economy and describes the prospective model of organizing control over logistical chain in agribusiness with participation of serving cooperatives and the country.

The research is based on previous approaches towards solving this issue and it is of the search and systematic-methodological type. The conclusions are well grounded. The processed issues are sufficiently illustrated.

The general result of the research is further widening and enhancing the existing theoretical-methodological knowledge within the area of logistical management of agrarian enterprises. Additionally, the monograph has a complex of new information and regulations in this field of science. The results of the research are also of practical importance for application in managerial activity of private-corporate and cooperative agricultural formations.

Overall the monograph is of high scientific level and can be recommended for a publication.

**Oleksandro Velichkos „Monografijos agrarinio sektoriaus įmonių
logistika vadybos sistemoje“**

recenzija

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