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THE ORGANIZATIONAL-ECONOMIC PROBLEMS OF COLD LOGISTICS DEVELOPMENT

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Volkov V., Goroshkova L. The organizational-economic problems of Cold Logistics development.

The article is considered the researches of directions of development of Cold Logistics in the world and in the Ukraine. The level of economic communications on development Cold Logistics and its dependence on a level of the perfection of legislative framework is analysed. Established, that the basic problems of the development of the cold logistics in Ukraine: imperfection of the legislative framework; absence of compulsion of realization of the control of a temperature mode at a storage, transportation and realization of perishable food; absence of the advanced infrastructure and large operators giving service cold logistics; insufficient volume of refrigerating capacities in the country; high degree of a deterioration of refrigerating machinery; absence of investment and credit resources for development; absence of the information concerning parameters of branch. The directions of perfection Ukrainian organizational-economic regulation in sphere of Cold Logistics are determined. For overcoming problems, it is necessary: creation of legislative framework of the mixed transportations regulation; investments of the attraction; introduction the «logistical modules», automated systems of documentary support of the clients; development of a network of the logistical centers; development of the container transport infrastructure; introduction of the institute for the operators of the mixed multimodal transportations.

Волков В. П., Горошкова Л. А. Організаційно-економічні проблеми розвитку холодної логістики.

У статті проведено дослідження напрямів розвитку холодної логістики у світі та Україні. Проаналізований рівень економічних зв'язків щодо розвитку холодної логістики та її залежність від рівня досконалості законодавчої бази. Встановлено, що основними проблемами розвитку холодної логістики в Україні є: недосконалість нормативно-правового регулювання; відсутність обов'язковості здійснення контролю температурного режиму при збереженні, транспортуванні і реалізації продуктів, що швидко псуються; відсутність розвинутої інфраструктури і великих операторів, які надають послуги холодної логістики; недостатній обсяг холодильних потужностей у країні; високий ступінь зношеності холодильного устаткування; відсутність інвестиційних і кредитних ресурсів для розвитку; відсутність інформації щодо показників галузі. Визначені основні напрями вдосконалення регулювання організаційно-економічної діяльності у сфері холодної логістики. Для подолання проблем, необхідно: створення нормативно-правової бази регулювання змішаних перевезень; залучення інвестицій; упровадження «логістичних модулів», автоматизованих систем документального супроводу клієнтів; розвиток мережі логістичних центрів; розвиток контейнеризації та її транспортної інфраструктури; впровадження інституту операторів змішаних мультимодальних перевезень.

Волков В. П., Горошкова Л. А. Организационно-экономические проблемы развития холодной логистики.

В статье проведено исследование направлений развития холодной логистики в мире и Украине. Проанализирован уровень экономических связей по развитию холодной

логистики и его зависимость от уровня совершенства законодательной базы. Установлено, что основными проблемами развития холодной логистики в Украине являются: несовершенство нормативно-правового регулирования; отсутствие обязательности осуществления контроля температурного режима при хранении, транспортировке и реализации скоропортящихся продуктов; отсутствие развитой инфраструктуры и крупных операторов, предоставляющих услуги холодной логистики; недостаточный объем холодильных мощностей в стране; высокая степень изношенности холодильного оборудования; отсутствие инвестиционных и кредитных ресурсов для развития; отсутствие информации относительно показателей отрасли. Определены основные направления усовершенствования регулирования организационно-экономической деятельности в сфере холодной логистики. Для преодоления проблем, необходимо: создание нормативно-правовой базы регулирования смешанных перевозок; привлечение инвестиций; внедрение «логистических модулей», автоматизированных систем документального сопровождения клиентов; развитие сети логистических центров; развитие контейнеризации и ее транспортной инфраструктуры; внедрение института операторов смешанных мультимодальных перевозок.

The research problem. The actual problem is the increase of management efficiency by sale of the goods in the market of the perishable goods, which volume annually increases as on a global scale, so in Ukraine. The interest to «Cold» or is connected to it «Fresh» Logistics.

The aims of research are the search of ways of increase of a management efficiency of functioning logistic chains on delivery of perishable cargoes in Ukraine. Thus the attention is given both legal, and organizational-economic aspects of the decision of a problem.

The analysis of recent studies and publication. The problem of the Logistics research by the domestic and foreign scientist, among which Cooper J., Browne M., Peters M., Jonsons J.C., Wood D. F., Moller C., Johanser J., Stock J. R., Lombert D. M. [1-4] est.

The research finding. In the economically advanced countries of the world Cold Logistics develops intensively. Today, there is international legislative framework, which regulating activity connected with sale of the perishable food. Such by the documents are the following [5-7]:

1. The international transportations of the perishable cargoes are carried out according to the Geneva Convention «About the international transportations of perishable foodstuff and about special vehicles intended for these transportations».

2. The requirements to the control System of food safety are adjusted by the international standard ISO 22000:2005 «Control systems of safety of foodstuff». This standard includes the requirements HACCP (Hazard Analysis and Critical Control Point) on system of organization and of the foodstuff safety, including storage and transportation.

3. The requirements to transportation of food-stuffs are adjusted by the by the Instructions of EU 93/48 and 89/108.

The coordination of actions in sphere of Cold Logistics in the world is carried out by the World Global Alliance Cold Logistics (GCCA), European Association of refrigerating warehousing and cold logistics.

The dynamic development of the Cold Logistics is caused by necessity of the world scale problem decision, change of the climate and emissions destroying an environment. Harmful emissions of the gas from decomposition of on products, which has been taken out on a dump. The quantity of products sent on dumps in the world makes about 40 % from of the made quantity. Therefore world leaders give the special attention to observance of a temperature mode during transportations of products not to their damage.

In the advanced countries there is an effective system of guarantees of the observance of a temperature mode by deliveries of perishable food as from the manufacturer part, retail network, so from consumer retail network.

The Cold Logistics in the advanced countries is effective due to the fact that in the market the large operators work. It is divided not on small but on large segments. It provides an opportunity to have profit at the expense of use of effect of economy on the scale of manufacture.

The organization of cold delivery circuit demands essential investments of money resources - for installation of monitoring systems of a temperature mode, refrigerating machineries in warehouses, installation refrigerating in the shops, auto park of refrigerator engineering updating etc. Therefore only large operators of the market Cold Logistics have an opportunity of reception of the investment and credit resources. The credit resources in the sphere of Cold Logistics are actively given by the International financial corporation and the European bank of reconstruction and development.

The conclusions concerning a level of food safety in the country and the system effectiveness Cold Logistics can be made on the basis of an estimation of the area of the warehouse area with a temperature control mode on the soul of population. The highest this parameter is in the USA - 71 m³, in EU it makes 65 m³, in Russia 15 m³ (fig. 1). In Ukraine this parameter cannot be determined in the view of the absence of the official statistical data.

On our sight, during the analysis of the Cold Logistics condition in Ukraine, it is necessary to allocate its two sectors:

1. The sale of the perishable goods on a home market.
2. Export-import flows of the perishable goods.

According to the experts [8], the volume of a home market Cold Logistics of Ukraine in 2012 has made 3 million grivni. According to the official statistical data in 2012 the volume perishable food export from Ukraine has made 2,34283 billion \$ USA or 18,742 billion Ukrainian grivni, the appropriate volume of import - 3,70725 billion \$ USA or 29,658 Ukrainian grivni.

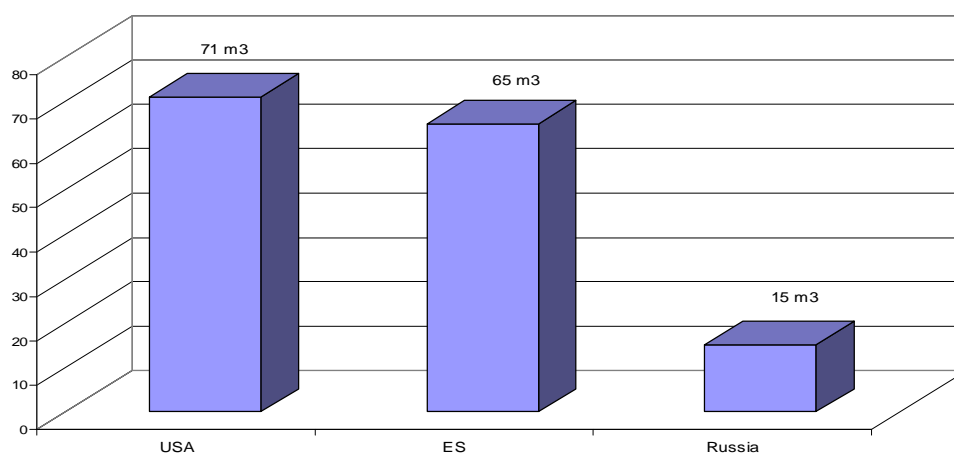


Fig. 1 Comparative estimation of the area of warehouse premises with controls by a temperature mode on soul of the population in USA, EU and Russia

The results of the our analysis of export-import flows of the perishable goods are given in a fig. 2 and 3. As we can see, the import flows have determined the cyclical, in contrast to export. In our opinion, the reason is, that Cold Logistics in the world is the system, the controlled process, and the consequence of the cyclical of import volumes.

The absence of cyclical of the rates growth of export flows grows out of the un generate of the market of services of Cold Logistics in Ukraine. For the benefit of it the increase of import by higher rates in comparison with export testifies. Under the state on 31.12.2012, the result of the foreign trade in the perishable goods in Ukraine made - 1,3644 billion \$ USA or 10,916 billion Ukrainian grivni (the reseat of our analysis). The level of the Cold Logistics development in Ukraine essentially lags behind the advanced countries.

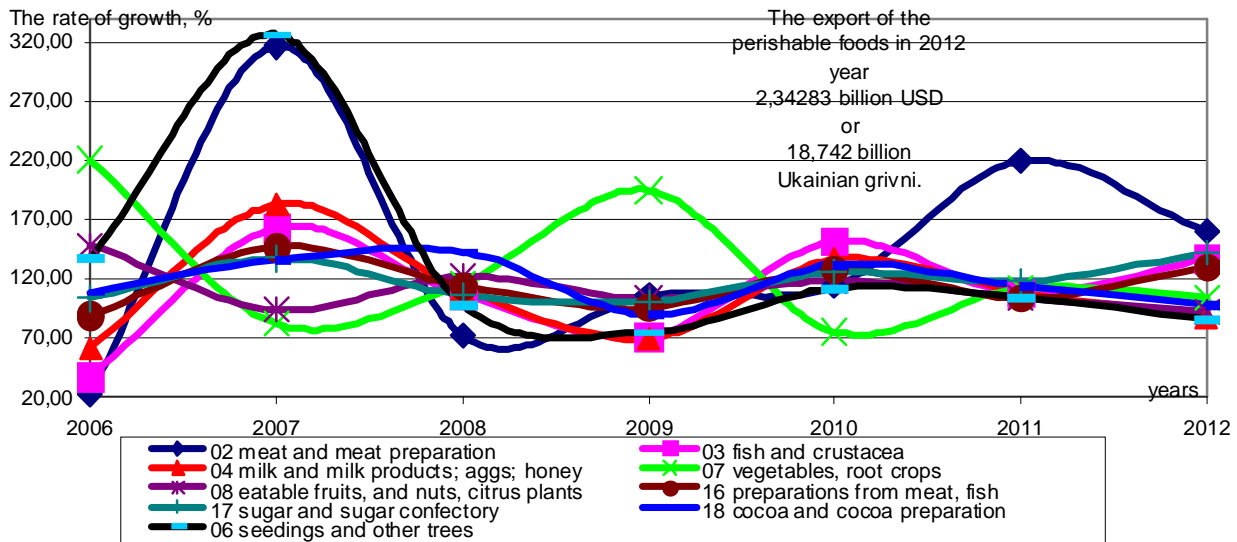


Fig. 2 The rates of the growth of the perishable goods export flows from Ukraine (make by authors)

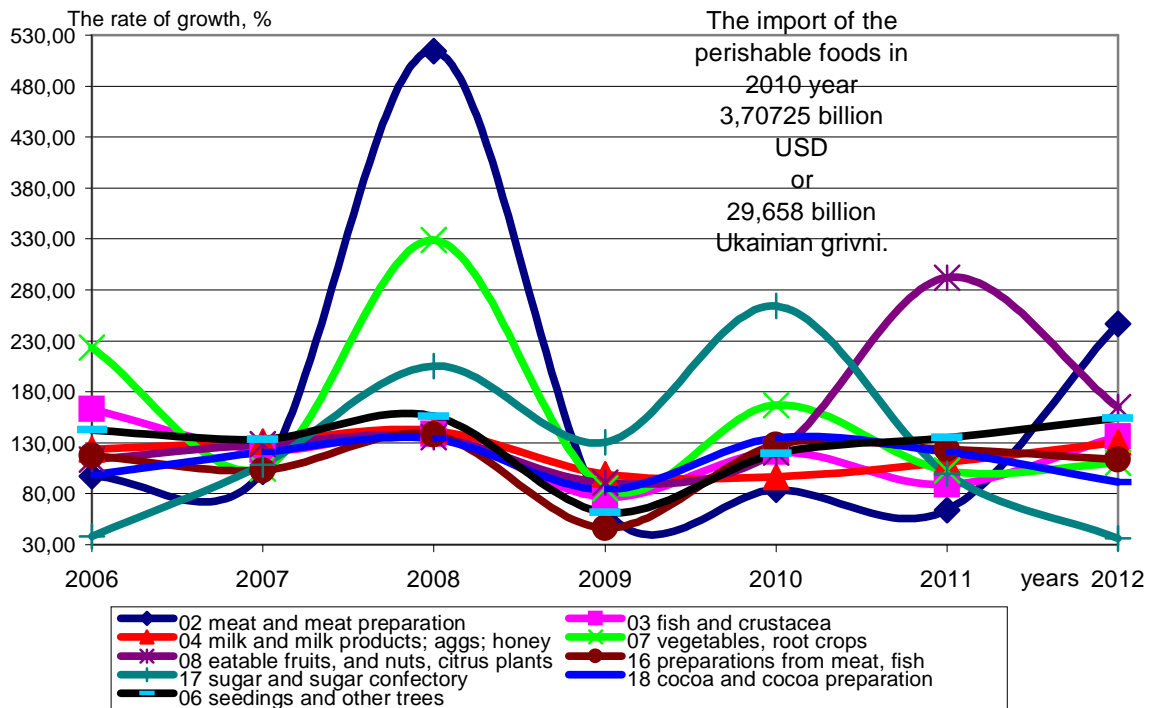


Fig. 3 The rates of the growth of the perishable goods import flows in Ukraine (make by authors)

The basic problems of the development of the cold logistics in Ukraine:

1. Imperfection of the legislative framework.
2. Absence of compulsion of realization of the control of a temperature mode at a storage, transportation and realization of perishable food.
3. Absence of the advanced infrastructure and large operators giving service cold logistics.
4. Insufficient volume of refrigerating capacities in the country.
5. High degree of a deterioration of refrigerating machinery.
6. Absence of investment and credit resources for development.
7. Absence of the information concerning parameters of branch.

Let's characterize each of them in more detail.

The Ukrainian legislative framework [9]:

1. The national standard 4161-2003 «Control systems of foodstuff safety» (works since 01.07.2003).

2. The national standard ISO 22000:2007, harmonization with ISO 22000:2005 (works since 01.08.2007).

3. The order of the Ministry of transport № 363 from 14.10.1997 «Rules of transportation of cargoes by motor transport in Ukraine», in which cold logistics concerns section 29 and appendix №18⁵.

First two documents correspond to the international standards, third the one is obsolete. So, for example, the Rules the transportation of dairy products in awning machines (instead of in special); the list of products is not determined which can be stored and transport and by one transport etc. As a whole, the domestic legislation in sphere of the Cold Logistics cannot be characterized as a system. It includes the separate orders, instruction, the majority from which require updating.

Fact that is positive, in February 2011 under the initiative of more than 25 conducting participants of the Ukrainian market of the Cold Logistics was created the Association «Cold Logistics of Ukraine». Among the tasks put by the Association, we shall allocate basic:

- Development and introduction of the uniform branch standards of the Cold Logistics of Ukraine;
- Interaction with state regulators and lobbying of interests of the participants of the market;
- Maintenance of conditions for effective cooperation and prompt information interchange between the members of the Association;
- Creation of the National center of examination of the quality Logistics of the cooled and frozen products in Ukraine;
- Attraction of the international experience and foreign investments on the national market.

There are bases to hope, that the decision of the listed tasks will ensure (supply) an opportunity of the development of the Cold Logistics in Ukraine.

All those lacks of Cold Logistics sphere, revealed at the analysis of problems on a home market, are the constraining factor and in foreign trade. Besides that such factors are added:

- Duration of transportation (limitation of terms of perishable cargoes delivery);
- Of the external economic cargoes cost transportation (the cost price of production essentially depends on cost of its delivery).

From the position of transportation terms, the most is optimal the air transportation, but it is the most expensive. From the position of transportation price, other types of transport (on the degree of its increase) can be arranged as follows: sea (river), railway, automobile.

In export-import deliveries transport maintenance (the choice of a type of transport) becomes one of the basic. In this connection, the prospects of the Cold Logistics in foreign trade activities, on our sight, are connected to the mixed transportations, namely - contrailers. In Europe first contrailers transportation have begun to be carried is in 60-s in the XX century: the first regular route Cologne (Germany) - Verona (Italy) was entered into operation in 1972. The characteristic of the basic contrailers of routes of Europe and Ukraine is given in the tables 1 and 2.

By the advantages of the contrailers transportations:

- Simplicity of the operation;
- Guarantee of timeliness of delivery of a cargo according to the diagram of the train movement;
- Guaranteed safety of delivery of a cargo under any weather conditions;
- Significant reduction of passage boundary time and customs control;
- Safety of a vehicle and savings it motoresource, economy of fuel;

- Safety of the highways;
- Safety of the environment ecology.

Tables 1 - The contrailers routes of Europe

№	Route	Length, km	The trains per by the day
1	Virgil (Austria) – Trento (Italy)	240	5
2	Virgil (Austria) – Brenner (Austria)	95	14
3	Salzburg (Austria) – Trieste (Italy)	430	3
4	Salzburg (Austria) – Villah (Austria)	190	2
5	Veils (Austria) – Szegen (Hungary)	640	3
6	Veils (Austria) – Maribor (Slovenia)	320	6
7	Lion (France) – Turin (Italy)	175	2
8	Bale (Croatia) – Lugano (Switzerland)	290	1
9	Freeburg (German) – Navarro (Itali)	430	10

Tables 2 - The contrailers routes of Ukraine

№	Route	Length, km	The trains per by the week	Time in way, hours	Time of passage of border, hours
Regulars					
1	«Vikigr»: Illichevsk (Ukraine) – Minsk (Republic Belarus) – Klaipeda (Lithuania)	1700	2	52	1,5
2	Yaroslav»: Kiev (Ukraine) – Slavkov (Poland)	1000	2	39	5
Non-Regulars					
3	«Kreschatik»: Odessa-port, Illichevsk – Kiev (Liski)				
4	«Dneprovets»: Odessa-port, Illichevsk – Dnepropetrovsk (Liski)				
5	«Nika»: Illichevsk – Nikopol				
6	«Odessa»: Odessa-port – Zernovoye (Ukraine) – Suzemki (Russia) – Moscow (Russia)				

Constraining the factors of development combined, including the contrailers transportations:

- Low level of the mixed transportations legal regulation;
 - Absence of legal regulation in responsibility of the parties in the combined transportations;
 - Absence of the law «About ports of Ukraine»;
 - Low investment appeal because of the insufficient legal regulation and the state support of the investment process;
 - Imperfection of legislative base in the sphere customs and other kinds of the control;
- Imperfection of tariff politics;
- Discrepancy to the European technical standards of transportation;
 - Absence of state support in development container and contrailers of transportations;
 - Absence of necessary demand on a number of routes;
 - Disproportion in development of ports and railway stations, contiguous to them;

- Absence of a network of the transport-logistical centers;
- High risks in sector of the warehouse real estate;
- Low level of a hardware of an infrastructure.

Conclusions. The analysis, carried out in the article, has shown, that the Cold Logistics in the world is dynamically developing branch. The reason it is, that the opportunity of the decision of global problems, namely - change of a climate and emissions destroying an environment is connected to it.

The analysis has shown, that in Ukraine the reasons of slow development Cold Logistics are the lacks of the systems in the legal regulation, and also organizational-economic problems.

For overcoming problems, it is necessary:

1. Creation of legislative framework of the mixed transportations regulation.
2. Investments of the attraction.
3. Introduction the «logistical modules», automated systems of documentary support of the clients.
4. Development of a network of the logistical centers.
5. Development of the container transport infrastructure.
6. Introduction of the institute for the operators of the mixed multimodal transportations.

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Key words: cold logistics, delivery, perishable cargoes, container transport, contrailers transportations.

Ключові слова: холодна логістика, постачання, вантажі, що швидко псуються, контейнерні перевезення, контрейлерні перевезення

Ключевые слова: холодная логистика, поставка, скоропортящиеся грузы, контейнерные перевозки, контрейлерные перевозки