

REVERSE LOGISTICS AS AN INSTRUMENT OF GREENING LOGISTICS

I.I. Koblyanska, *post-graduate student*,

Nowadays reverse logistics (RL) is an important component of economy. Being widely presented in Ukraine as warranty services and legal requirement to return packaging to manufacturer it does not work.

Studies of reverse logistics were made by many foreign researchers, such as Carter and Ellram (the pioneers in developing the concept of RL), Hess and Meyhew, Lambert and Stock, Krikke etc.

It is necessary to point out, that the concept of reverse logistics has emerged as a way to decrease economical losses of no-sold or outdated products and negative impacts of forward logistics. These impacts represent wastes of packaging and utilized products, significant resource consumption (energy, labor, money) through the collecting and incineration process, land's using for garbage collecting.

These impacts are environmentally negative, disagree with sustainable development process and must be eliminated.

There is a number of ways toward greening logistics, such as decreasing the quantity of wastes or resource consumption, by redesigning packages, products, production process and returning the materials (products, packaging) to manufacturer.

Reverse logistics is the process of planning, implementing and controlling the efficient, cost-effective flow of raw materials, in-process inventory, finished goods and related information from the point of consumption to the point of origin for the purpose of recapturing value or proper disposal.

It is important, that reverse logistics activity includes only operations with materials or products, which can be sent 'backward'.

Typical reverse logistics activities would be the processes a company uses to collect used, damaged, unwanted (stock balancing returns) or outdated products, as well as packaging and shipping materials from the end-user or the reseller.

A number of reverse logistics activities are used for solving the environmental issues in logistics. They include using reusable totes, remanufacturing, designing a product to make use of reusable packaging. Furthermore, some legislation requirements, related to reverse logistics activities, are provided by necessity to decide environmental problems.

Among the wide range of reverse logistics environmental results it is necessary to highlight the following:

- decreasing of quantity of wastes, in particular, hazardous outputs of chemical, rubbish, pharmaceutical, building, steel and other industries, which can be reused;
- increasing of efficiency of resource consumption, particularly, fuel and energy, rare and valuable materials, due to recycling process;
- improving ecological and ergonomical characteristics of products and packaging materials, due to manufacturer's and seller's goals of reducing costs, related to reverse activities.

Despite a number of positive influences, there are still some problems of reverse logistics development.

First of all, reverse operations are very expensive for manufacturers and sellers. They include costs of reverse transportation, collecting, sorting and processing materials for reuse, inventory management, controlling, staff education and training, storage, adopting for future use, redesigning logistical system.

Secondly, the next important problem, particularly typical for Ukraine, is an absence of definite governmental regulation in this sphere. For example, there is no government control of returning packaging to manufacturers, despite the legislation, as a result, only few number of packages are returned and reused.

To solve these problems some approaches could be used:

- to combine delivery costs with reverse transportation costs, through the collecting and transportation materials for reuse in the 'back way';
- to create generally using storages and systems of collecting and sorting reusable materials (decreasing costs by coordinating interests and facilities of a range of manufacturers);
- to use economical instruments in governmental regulation. For example, using of privilege taxation, credit policy, penalties;
- introduction of hard governmental control regarding legislation performance and standardization.

In general, development of reverse logistics provides considerations for solving environmental issues and problems in logistics. But only coordinated actions of business, government and public community can solve these problems.

A.M. Dyadechko, *ELA*