# Contents of the socioenvironmental responsibility in electronic equipment and machinery trade

Mariana Bets<sup>1</sup>, Nadiia Basiuk<sup>2</sup>

1. Entrepreneurship and Environmental Expertise of Goods Department, Lviv Polytechnic National University, Ukraine, Lviv, Stepan Bandera str., 12, E-mail: becmtpeet@ukr.net

2. Entrepreneurship and Environmental Expertise of Goods Department, Lviv Polytechnic National University, Ukraine, Lviv, Stepan Bandera str., 12, E-mail: mega\_this@ukr.net

Abstract – The purpose of the research is to determine the content of the socio-environmental responsibility of the retailers (distributors) in the process of selling electronic equipment and machinery (EEM) to solve the problem of handling electronic waste. Identification of physical commodity flows of electronic equipment and machinery allows distributors to become elements of the financial flow management system from the collection of electronic waste, which will improve its financial standing.

Keywords: retail network, social and environmental responsibility, electronic equipment and machinery.

#### I. Introduction

The implementation of the "electronic directives" in domestic legislation strengthens the requirements for the implementation on the domestic market of such goods as electronic equipment and machinery (EEM), which facilitates the attraction of trade entrepreneurship in the system of organizational- economic and technological measures to return the outdated technology to the recurrent economic turnover.

This forces business entities to implement managerial measures aimed at increasing the competitiveness of a trading organization through the creation of a positive reputation among consumers as socially and environmentally responsible.

## II. The main material

One of the areas of improving trade management is the development and implementation of the system of social and environmental responsibility at domestic trading enterprises based on the development of legal, economic and organizational foundations in the field of waste management of electric and electronic equipment through the introduction of the increased producers' responsibility.

The social and environmental focus of trade is becoming a key tool for the economic growth of the industry and the region as a source of additional competitive advantages for organizations against the background of the integration of domestic business into international economic relations and the growing importance of social and environmental criteria of goods for consumers and society. It is revealed that the characteristic feature of a socially and ecologically oriented trading structure is the possibility to obtain the increase in a different type of capital, except for financial due to socially and environmentally responsible behaviour, since such type of capital can be "converted" into another, for example, reputation – in funds, funds – into knowledge, knowledge – into trust and image, etc. [1].

As the dynamics of the growth of the quantity and volume of material flows of the EEM is observed, the topical issue is applying modern approaches to their assessment at the final stages of the life cycle of goods, where a decision is made on the appropriateness of direct and reverse logistical costs in the reverse flows of the trading enterprise.

It is found that in the sphere of trade, where the risk of returning goods from warranty repair, replacement, completion or recycling is significant, logistics costs in return flows can account for 4-10% of total costs of the manufacturer [2].

Consequently, a set of commodity-material values is attributed to a certain time interval and is directed from the source of consumption to the source of formation for the purpose of restoring the value or withdrawal from circulation, forms, in accordance with the logistic conception of management, the reverse material flow (RMF), the objects of which may be raw material, finished goods and goods, reusable packaging or waste products.

The restoration of the value of RMF objects can take place through their transformation, and measures of optimization of reverse material flows include the collection, sorting, completion, processing, recycling and utilization of goods, containers, packaging that are consumed and returned to a trading company after the expiration date, damage, or organizational shortcomings in shipping and delivery of goods.

It is proposed to classify the processes of reverse commodity flows in the sphere of EEM consumption by the properties of liquidity and condition.

The reasons for the return of goods are determined by the interests of the one who initiates the return: dissatisfaction of consumers (in direct sales channels, consumers are guaranteed a refund within a specified period for goods that meet their requirements); problems of installation of goods; the need for repair according to the warranty requirements provided by the manufacturer or specialized centers; non-fulfillment of orders by volume and terms; end of the life cycle of a product or its replacement; non-compliance with the requirements of environmental safety of goods; return of goods sold through electronic business channels; the life cycle of electrical household appliances and electronic and electrical equipment leads to residuals in the supply chain [2].

Since in the wholesale trade for the organization of return logistics, there are stages of collection, sorting, processing or disposal of goods returned from the sphere of consumption, it was proposed to create collecting and sorting points of the goods returned from the sphere of consumption at the place of their sale (retail network) or in specialized stores manufacturers as the most economical way for their setting up.

At the initiative of local authorities, retailers should primarily be interested in electronic waste collecting.

The initial element (object) of the system for collecting and temporal storing of electronic waste, that can be restored and reused, is the collection point, that is, the location of the distributor.

Subjects of trading activity can create points of collection of electrical and electronic equipment and machinery waste in the places convenient for users.

The system for collecting electrical and electronic equipment and machinery waste that can be restored and reused by designation includes objects where the assessment (testing) and marking of the equipment and its waste are carried out in order to determine their state for the purpose of restoration (repair) to reuse the whole equipment or its separate components, or further recycle and remove, while the equipment is not restored and its waste is not recycled.

At the points of collection, the waste of the equipment is stored in the way that creates the possibility of their re-use with their initial purpose, with the exception of their damage, unauthorized use and access to them. Points of collection equipment and machinery waste that can be restored and reused for the initial purpose are obliged to properly keep records of the quantities, kinds and types of the received equipment and the equipment waste, indicating to which entity and for what purpose they were handed over.

The equipment and machinery waste, collected for restoration and reuse with their initial purpose, is sent exclusively to specialized enterprises for the restoration and repair or recuperation of materials, recycling or removal [3].

Logistics costs for transportation of the used goods that are collected and sorted in the trading network, can be allocated to the network of selection and the recycling facilities on the basis of justified objects of the cost of electric waste logistics system.

In this aspect, the functions of commercial enterprises in the regional logistics network of waste recycling are proposed to be formulated as follows: carrying out actions for consumers of EEM goods and an information campaign on the management of electrical waste with the support of the departments of urban development; organization of collecting the returned for various reasons and used goods that are subject to and/or not subject to repair; transportation at the stage closest to the creation of returned and/or unrealized goods to producers and/or suppliers and/or to the distribution network where goods are transformed into waste; transportation and storage of waste as components, and goods for sale, and, if necessary, their transportation for processing in order to be sold as goods.

Consequently, the content of the social and environmental responsibility of distributors (retailers), that implement EEM exclusively for the end users, is to develop technology for interaction with municipal and private (including mobile) points of collection, while they will accept the oversized EEM of household origin directly in stores, as well as to remove outdated or dimensional household appliances used when buying and delivering new of similar type or similar features EEM to a consumer.

Thus, in the face of the challenges of the present day, the social and ecological nature of the entrepreneurial behaviour of the entities of the trading network, which implement electronic equipment and machinery, allows, through compliance with the principles of social and environmental responsibility (SER), to solve the problems of using electronic waste, thereby forming its positive image and stimulating demand.

## Conclusion

Since the EEM full life cycle includes the stages of alternative reverse flows processes, the merchants (distributors) must implement a deposit system of payments for goods when the buyer purchasing the EEM pays the money that will be reimbursed to him when the waste is returned to the manufacturer.

The assessment of theoretical approaches to the interpretation of the concept of "social and environmental responsibility" trade in electronic equipment and machinery showed that the subjects of the trading network (distributors) in the long term should form relationships with organizations of individual and collective increased responsibility of the manufacturer in the field of electronic waste, which will increase the efficiency of trading activities by creating a social and environmental image of retail trade

#### References

- Mishenin, J.V. Kobliancka, I.I. Ystik, T.V. Jarova I.J.(2013), *Ekologoorijentovane logisyuchne ypravlinja vurobnuchtvom: Monograph* [Ecologically Logistics manufacture: monograph], TOV "Drykarskij dim "Papirys", Symu, Ukraine.
- [2] Korobchenko, N.M.(2014), "Evaluation of waste management of electrical and electronic equipment in the region". *Efektyvna ekonomika*, [Online], vol.5, available at: http://www.economy.nayka.com.ua (Accessed 13 October 2017).
- [3] Kraijnov, I.P. Kruljuk, V.M. Shago, J. P. and Bachariev, V.S.(2012), "Management of ecological safety in the treatment of waste electrical and electronic equipment", *Ekologichna bezpeka*, vol. 1, pp. 13–17.
- [4] Sadovnichaia, I.O. (2015), "Encouraging the development of entrepreneurial activity in the field of recycling of municipal solid waste", *Sovremenaia nayka*, vol.1 (37), pp.41-42.
- [5] Samojlik, M.S.(2014), "Economic evaluation of the efficiency of recycling solid waste taking into account regional peculiarities", *Akademishnuj ogliad*, vol.1 (40), pp.77-84.