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**OPTIMAL USE OF RESOURCES, AS A CONSTITUENT  
OF ECOLOGICALLY-ECONOMIC ENTERPRISE  
DEVELOPMENT**

**OPTYMALNE UŻYCIE ZASOBÓW JAKO  
SKŁADOWA EKOLOGICZNO-EKONOMICZNEGO  
ROZWOJU PRZEDSIĘBIORSTWA**

**Abstract:** The influence of used resources is investigated on the ecologically-economic state of enterprise in the article. Basic principles of efficiency of the resources use of ecologically-economic development of enterprise are analysed and described the directions of optimization of used resources in conditions of their limitations.

**Keywords:** Resources, optimization, saving, resource efficiency, ecology, economics, enterprise

**Streszczenie:** W artykule zbadano wpływ wykorzystanych zasobów na ekologiczny-ekonomiczny stan przedsiębiorstwa. Przeanalizowano główne zasady efektywności użycia zasobów w ekologiczno-ekonomicznym rozwoju przedsiębiorstwa oraz wskazano kierunki optymalizacji użycia zasobów w warunkach ich ograniczoności.

**Słowa kluczowe:** zasoby, optymalizacja, oszczędzanie, efektywność użycia zasobów, ekologia, gospodarka, przedsiębiorstwo

## Introduction

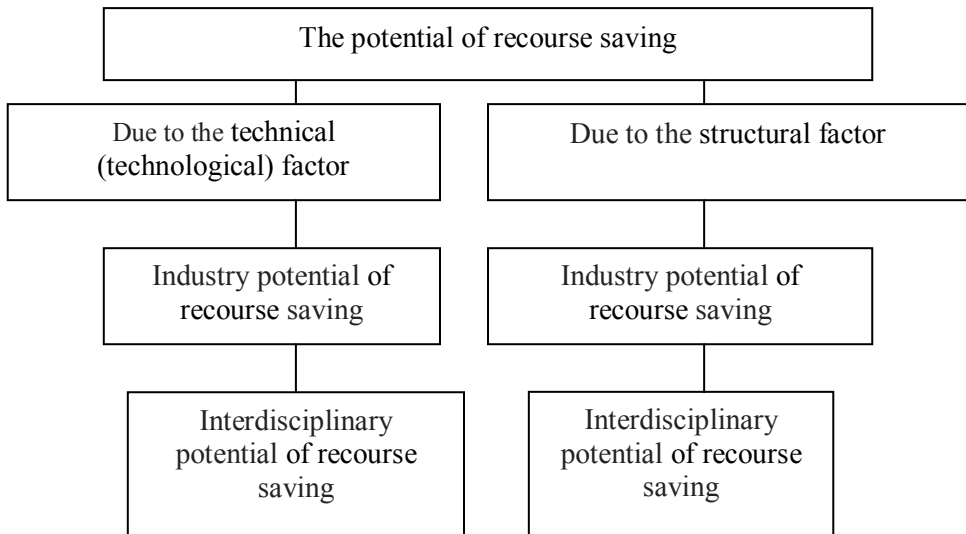
The main trend of the world economy development at the present stage is the spread of globalization processes, with varying intensity affect the economic, political, social and environmental sphere of each state, contributing to increasing interconnections and interdependence between national economic systems. The transition from competing domestically to competing on international markets requires revision of the relationship of the country in general and each enterprise in particular to the efficient formation and use of resources of all kinds, their restoration and saving.

That is, the basis of national competitiveness is the search for ways of rational and efficient expenditure of resources in all industries of the economy, the formation of strategic plans for effective resource use. Particular attention should be paid to the effective use of resources in production, which at the present stage of development of the economy of the state and of certain regions is extremely low. Optimum use of resources should become an integral ecologically-economic development of any enterprise.

### 1. Analysis and perspectives of the potential of recourse saving in Ukraine

The factor of resource saving is one of the determinants for economic and environmental strategy of Ukraine. It determines the effective functioning of the national economy. The structure of the potential of recourse saving is shown on figure 1.

Figure 1. The structure of the potential of recourse saving  
 Rysunek 1. Struktura potencjału oszczędzanie regresowego



Source: own.

Technical (technological) component of the potential of recourse saving provides the introduction of new and improvement of existing resource-efficient technologies and equipment, carrying out resource saving measures to reduce losses of resources and resource intensity of the products of all industries of the economy, substitution and selection of the most efficient energy sources.

In the industry structure of industrial production in Ukraine is dominated by resource intensive industries. Exporting raw materials and importing finished products, the Ukrainian economy loses its natural non-renewable rent, exchanging her on intellectual rent, that is, by financing at the expense of their own natural wealth of the scientific and technological progress and economic growth in other countries<sup>1</sup>.

Structural component of the potential of recourse saving provides for reduced levels of resource consumption due to the change of proportions in the economy, which will lead to a decrease in the proportion of resource intensive industries and the development of knowledge-based industries and productions with low energy intensity and material consumption. Restructuring of the Ukrainian economy – the process of forming such a structure of economy that corresponds to the socially-oriented market system and to the strategic national interests of the country. The main task of restructuring is to concentrate resources in such areas of the economy that

<sup>1</sup> *Enerhoefektyvnist yak resurs innovatsiynoho rozvytku: Natsionalna dopovid pro stan ta perspektyvy realizatsiyi derzhavnoyi polityky enerhoefektyvnosti u 2008 rotsi* / S.F. Yermilov, V.M. Heyets, U.P. Yashchenko, V.V. Hryhorovskyy, V.E. Lir ta in. – K., NAER, 2009. – 93 p.

will ensure progressive economic and ecological development. One of the areas of resource conservation is the conservation of energy resources. Prospects of energy saving in Ukraine for the period 2015-2030 years are shown in table 1.

Conducted studies have shown that Ukraine has a considerable potential of recourse-saving. This increase in the structure of consumption of resources of the own production and reducing imports; increasing opportunities and areas use of alternative energy sources, as well as improving the level of resource-efficiency of social-economic life of the country.

Table 1. Energy-saving potential in Ukraine for the period 2015-2030 years  
Tabela 1. Potencjał energooszczędny na Ukrainie w okresie 2015-2030

Components of energy saving	2015	2020	2030
Energy saving, million tons u.p.			
Due to the technical factor	109,81	137,47	198,06
Due to the structural factor	25,30	54,37	120,30
Summary	135,11	191,84	318,36

Source: <https://www.zakon.rada.gov.ua/laws/show/1071-2013-p>

## **2. Features of formation, distribution and use of resources in a modern economic system**

Resources as factors of economic growth define the future of economic of the country and from their condition and effective use depends possibility to determine that typical processes, which will continue to dominate the processes of economic growth.

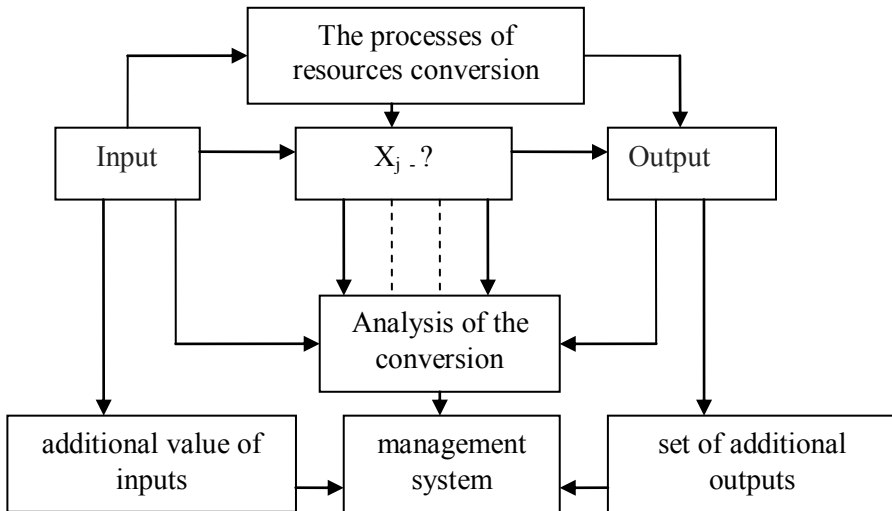
Effective formation, distribution and use of resources are the basis for the development of the national economy. Instrument of the efficiency is a public policy towards structural and technological restructuring of industry and measures aimed at economical use of resources in all industries of the economy and areas of social life, on economic growth.

Economic growth is a continuous change of the final results of the use of limited material resources of the society to increase consumption. Developed theories of reproduction and efficiency of production do not fully reflect new conceptual provisions, which require changes (optimization) entrepreneurial strategies and management techniques.

On figure 2 the developed approach, that combines fundamental value methods and models with modern requirements of the new competitive advantages of the national economy and its structural subsystems.

Figure 2. The relationship of resources conversion processes

Rysunek 2. Związek procesów konwersji zasobów



Source: own.

The information filling of the resource flows and developed relationships indicates that the processes of input and output acquired in today's economy is fundamentally different meaning. If earlier in most economies of the world, the inputs were the advantages of location, efficiency of natural resources, cheap labor, the effects of scale of production and the like, then at the present stage it is the possession of advanced technology, modern management, high competence of employees, intellectual property, etc.

As can see, inputs are resources with unique features of their manifestations of intellectual, information, capital of knowledge and the like. In this case, if the management system is effective, then at the input conversion processes is formed the additional value of inputs, and as a result, there is a set of additional outputs (profit, segment market growth, increased sales, etc.).

In modern economics, which is formed at the present stage, such processes should become a real structural and management components. Strategically-priority approach to them gives the opportunity to develop a more balanced resource policy (primarily through the allocation resource-intensive productions and their classification), and on their basis to define multi-level system of priorities, development objectives and resources (human and financial).

### **3. The organization of optimal use of resources to ensure economic and ecological security of the enterprise**

Integration of Ukrainian economy into the world increases the demands on the entrepreneurial activity and determines the need to find of domestic enterprises searching for new forms and methods to build a competitive advantage, complying with regulations effective economic development policy. Under effective economic development policies of the enterprise should be understood that the direction of development, associated with the rational use of existing economic potential as aggregate production capacity and their capabilities, qualifications of personnel, can be used to provide all the material needs of the enterprise<sup>2</sup>.

Modern high-tech production of goods and services is characterized by complex processes involving various types of resources to create intermediate and final products of appropriate quality and purpose. In the process of attracting them there are problems of their effective use, distribution and storage, ensuring their supply in the required quantity and timing, are subject to the requirements of the business technologies of reproduction and preservation.

The study of the relationship of the allocation and utilization of resources in an environment of market requirements shows their high level of technological and organizational complexity, consistency of appearance and operation, the need for their rational conservation, efficient use and minimization of losses.

In this regard, the activity of the enterprise requires the efficient use of resources, which involves:

- research and study long-term trends of economic development of enterprises with a large share of resource use;
- analysis of the current state of economic activity of the enterprise;
- development of its own long-term plan development processes use of resources in a market environment and its realization in the market environment;
- annual adjustment of the long-term plan in accordance with the results of individual stages of the life cycle to create products.

The world experience convincingly proves that only there happened rapid achievement of international competitiveness of the state where the cornerstone of public policy appeared resource-efficiency<sup>3</sup>.

Under the efficient use of resources at the level of the individual enterprise to be understood the achievement of economically justified use of resources given the existing level of techniques and technologies and observance of requirements to protection of the natural environment<sup>4</sup>.

<sup>2</sup> O.S. Fedonin, *Potentsial pidpryyemstva: formuvannya ta otsinka : navch. posib.* / O.S. Fedonin, I.M. Ryepina, O.I. Oleksyuk – K. : KNEU, 2004. – 316 p.

<sup>3</sup> [http://www.esco.co.ua/journal/2012\\_6/art356.pdf](http://www.esco.co.ua/journal/2012_6/art356.pdf)

<sup>4</sup> *Ekonomika Ukrainy: pidsumky peretvoren ta perspektyvy zrostannya* / za red. akad. NAN Ukrainy

The issue of ensuring economic and ecological security gets for domestic enterprises is extremely sharp sound. The economic security of the enterprise – a state of protection of the economic potential of the enterprise from external and internal threats in various forms, which ensures its stable development in accordance to the statutory objectives, and the ability to confront and creation. Formed therefore, the system of management of economic security of the enterprise implies the provision of financial stabilization of the enterprises; competitiveness of products (high quality and low cost); normative functioning of the operating system, its subsystems, in particular subsystems energy providing; stability of staffing, high its qualifications and motivation; the environmental of production.

## Conclusion

At the present stage of economic development extremely sharp sound has gained question of economic and ecological security, i.e. providing enterprise resources which guaranteeing its full activities and thus preserve the environment.

So, in the Ukrainian economy recourse saving is extremely relevant and important factor of economic growth. It requires continuous research and analysis of the indicators and criteria of effective use of resources at each enterprise, of measures for their improvement. This will provide additional opportunities to the country to achieve European levels of socio-economic and ecological development and will ensure in the future its full membership in the European community.

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