**Belarusian State University   
Faculty of Mechanics and Mathematics  
Department of nonlinear analysis and analysis of the economy**

**Annotation to the diploma work  
"Exchange economy"**

**Anastasiya Haiduk,**

**Diploma advisor Ehor Alehno**

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Diploma work contains:

– 33 pages,

– 18 used sources.

Keywords: RIESZ ECONOMY, PREFERENCE, EXCHANGE ECONOMY, PARETO EFFICIENT ALLOCATIONS, SUPPORTING BY PRICES, WELFARE THEOREMS, EQUILIBRIUM.

The model of an exchange economy and its basic properties was considering in the diploma work.

The aim of the diploma work is to study the basic concepts related to exchange economy, in particular, concepts such as Pareto efficiency, the r-fold replica of an economy, equilibrium. The main emphasis is on outcomes such as the welfare theorems, theorems on the existence of an equilibrium and connection between competitive equilibrium and the core of the r-fold replica of an economy.

To achieve this goal were used:

* methods of the theory of preferences
* methods of the theory of ordered spaces, in particular, the Riesz spaces
* methods of the theory of locally convex spaces, in particular, weak topologies.

The diploma work includes:

1. analysis of the main models of exchange economy, in particular, a detailed examination of the Riesz economy
2. the solution of the problem of the existence of Pareto optimality to some classes of allocations, in particular for allocations in utility spaces.

Diploma work is abstract in nature. Material, which is considered and studied, can be used to read the special courses on economic and mathematical models, as well as courses, dedicated to the theory of ordered spaces.

All results of the thesis are rigorously proved according to the rules of mathematics.

The diploma work was performed by author’s own account.