

---

**РЕФЕРАТИ**

## Рефераты

Abstracts

---

**Portfolio choice problem with the Value-at-Risk utility function under general linear constraints [pp. 4–15]****Zabolotsky T.N., Bodnar T.D., Vitlinsky V.V.****Purpose and subject of research**

The paper is devoted to the problem on constructing an optimal portfolio with the highest expected utility in which to evaluate the risk of the portfolio is accepted VaR. In contrast to the classical method of constructing the portfolio with the expected use of quadratic utility, considered approach was not considered in scientific studies, since the use of VaR as a tool to calculate the risk of the portfolio and its construction is quite new.

**Research methodology**

The study is expected utility function of assigned based on Value-at-Risk and its application to the problem of rational choice structure of the portfolio.

**Value results**

Using the described method of constructing an optimal portfolio, particularly in banking is fully consistent with the recommendations of the Basel Committee. Using this method will allow banks to conduct transactions on the stock market under the Basel and, in addition, provided literacy restrictions, consider all the rules and limitations prescribed by law.

**Conclusions**

The paper considers a generalized and solved the problem of portfolio optimization where classical optimization condition (the sum of the portfolio weights are 1) is replaced by linear restrictions on weights.

---

**Gravity model the spatial distribution of money incomes [pp. 16–25]****Blagun I.S., Dmitrishin O.I.****Purpose and subject of research**

Resolving the placement of the new center, and assess the degree of influence of individual centers based on the new center, provide a basis for determining the spatial structure of sources of income and modifications of this structure prediction based on an analysis of its probabilistic characteristics.

**Research methodology**

The study laid model spatial distribution of cash income.

**Value results**

Detection of latent structures as a tool of analysis can yield fruitful results in the study of the behavior of the population, changes in sources of income for the statistical interpretation of regional differences in the consumption patterns of the population, the intensity of displacement in space, assess the conditions of life within urban areas.

**Conclusions**

The article proposes a gravity model the spatial distribution of money income, theoretical and practical significance of which is to determine the spatial structure of income sources and forecast modifications of such a structure based on the analysis of its probability characteristics.

---

**Dynamic input-output balance with leading argument [pp. 25–32]****Lyashenko I.N., Tadeev Yu.P.****Purpose and subject of research**

The paper treats the problem of building backbone trajectory equation Cauchy problem, where the backbone trajectory is a trajectory of maximum sustainable exponential growth equation.

**Research methodology**

This paper uses the model of Leontief "input-output" and differential equations.

**Value results**

The resulting main path should be used for economic development strategic planning.

---

**Conclusions**

In this paper the dynamic input-output model that takes into account the time lag construction and commissioning of new capacities. The existence of a single backbone path as the trajectory of maximum sustainable exponential growth. Based on the introduction of two hypotheses about the balance of values "consumption-production" held dual dynamic analysis model ahead of the item. Found that the line output growth and increasing prices of products are the same, the same trajectory as expressed through the right and left vectors Frobenius.

**Estimation models of fiscal policy indices balance [pp. 32–45]**

**Guryanova L.S.**

**Purpose and subject of research**

The aim of this study is the development of scenario models of socio-economic development of the regions as a result of the fiscal (fiscal) policies, which make it possible to analyze the structural imbalances in the perspective of territorial development period and determine the direction of fiscal policy adjustments aimed at their elimination or prevention.

**Research methodology**

We use econometric methods, multivariate analysis of panel data, casual and non-causal modeling approaches, mechanisms regulating the development of the territories at different hierarchical levels.

**Value results**

Developed scenario models predict socio-economic development of the regions as a result of the different options of fiscal policy, to evaluate the degree of regional disparities, identify disparities in development areas, to determine the sources of structural imbalances and on this basis to carry out timely adjustment of the parameters of fiscal policy.

**Conclusions**

The paper deals with a concept of generation a scenario model of public financial management and socio-economic development, which allows to estimate the consequences of different variants of distribution options in budget investments, subsidies, grants for the regions and to select an option of financial policy to ensure sustainable growth of the national economy and at the same time reducing inter-regional socio-economic differentiation.

**Portfolio optimization based on the Treynor ratio [pp. 46–50]**

**Hohlov V.Yu.**

**Purpose and subject of research**

The aim of the study is to develop a model of portfolio optimization allowance Traynor (ratio of return and systematic risk) and a corresponding algorithm.

**Research methodology**

The approach optimizing the ratio of return and risk, which was first proposed by Markowitz, but in this article instead of the full risk of the criterion of optimization and utility function for the Beta. The problem is solved by the proposed algorithm quadratic programming.

**Value results**

This study is based on the efficient market hypothesis, and that the stock market is developed and liquid. Most research in this area focused on optimizing the full risk and, in this paper we consider the systematic risk, this risk is rewarded by investors in developed markets. Optimization of the norm Traynor can be used to manage a well-diversified portfolio that is usually relevant for institutional investors.

**Conclusions**

The optimal portfolio in the area of return-beta are on convex polygons, as opposed to parabolic boundary effective in-plane yield risk. But when a large number of assets in the portfolio at a rate Traynor optimal portfolio is close to the optimum allowance Sharpe.

**Modelling of dynamics of enterprise development in conditions of the monopolistically competition [pp. 51–56]**

**Yakovenko A.G., Sherstennikov Yu.V.**

**Purpose and subject of research**

The aim of the article is to construct and study a model of the enterprise in monopolistic competition, study market equilibrium as a result of the interaction of

endogenous and exogenous parameters of the model and study the dynamics of companies in monopolistic competition.

**Research methodology**

Used the model under the system-dynamic modeling approach J. Forrester

**Value results**

The main problem to be solved is to study the dynamics of development and determine the conditions under which the company maximizes its capital accumulation. To build capacity of the enterprise managers make decisions regarding the allocation of half profit increase of fixed assets

**Conclusions**

The paper is constructed and studied a model of the enterprise in monopolistic competition. Market equilibrium obtained as a result of the interaction of endogenous and exogenous parameters of the model. The dynamics of the enterprise in monopolistic competition.

---

**Application of Antagonistic Games to Select the Structure of Optimal Mixture [pp. 57–62]**

**Sigal A. V.**

**Purpose and subject of research**

The subject of the study is to optimize the mix by changing their structure. The purpose of this article - to develop a method of choice of the optimal variant of the mixture, based on the solution of the corresponding zero-sum game.

**Research methodology**

This paper applies the game-theoretic method of choice of the optimal variant of the mixture, which allows you to find the desired structure of the optimal variant of the mixture.

**Value results**

Optimize the use of resources leads to the achievement of the best quality of a mixture that allows to stabilize the demand for these products and, consequently, makes it possible to reduce the level of economic risks faced by the manufacturer of the product. The use of such resource optimization leads to the achievement of the best quality of a mixture that can stabilize the demand for these products and, consequently, makes it possible to reduce the level of economic risks faced by the manufacturer of the product.

**Conclusions**

The article deals with the problem of creating the optimal mix and choice by changing its structure, i.e., selection of such proportions of ingredients of the mixture to the mixture itself has the best quality. In the evaluation of the quality of different options developed mixture attended by several independent experts. We propose a game-theoretic method for choosing the vector characterizing the structure of the optimal variant mixture.

---

**On the optimal repairs and retirement terms planning for complex port equipment when forecast level of employment is uncertain [pp. 63–67]**

**Malaksiano M. O.**

**Purpose and subject of research**

The subject of the study is to optimize the repair and replacement of complex equipment. The purpose of this paper is to study the problem of planning the optimal timing of repairs and replacement of equipment at the port complex is not fully defined the forecast level of his employment.

**Research methodology**

During the study, we used the method of economic and mathematical modeling, the method of simulated annealing, models reproductive management of parks equipment.

**Value results**

The developed model can be of practical interest in the further development of the proposed model for the study of multi-criteria evaluation strategies repairs and replacement of equipment.

**Conclusions**

The paper investigated the optimal timing of the planning of repairs and replacements sophisticated port facilities with fully determine the prognosis of employment. To describe the process of loading equipment, a model based on the use of random diffusion processes.

---

---

**The concept of marketing-oriented modeling of business management in the information business [pp. 68–74]**

**Kravchenko V.N., Kuznecov V.S.**

**Purpose and subject of research**

The aim of the article is to create a conception of modelling of informative business marketing-oriented enterprise management, which allows gross revenue of informative business enterprise maximize during all informative product life cycle.

**Research methodology**

Used the methodology of the informative business marketing-oriented enterprise management.

**Value results**

The main problem to be solved is to analysis of approaches to methodology of the informative business marketing-oriented enterprise management the complex of marketing-oriented models, which engulfs the complete cycle of marketing's measures, and can be presented as modeling informative business marketing-oriented enterprise management conception.

**Conclusions**

The paper is constructed and studied a conception of modelling of informative business marketing-oriented enterprise management.

---

**Develop an approach to the formation of the higher education system in Ukraine [pp. 75–85]**

**Belenko D.V.**

**Purpose and subject of research**

The aim of the article is to offer approach of forming Ukrainian higher education system, which allows to prepare a student, answering the requirements of labour-market, that can be seen as an instrumental in socio-economic development of Ukraine.

**Research methodology**

Used the system analyses methodology.

**Value results**

The main problem to be solved be analysis of models of the world higher education system, their advantages and failings, study of basic progress of Ukrainian higher education trends.

**Conclusions**

In the paper the approach of forming Ukrainian higher education system is detailed; mechanisms of development of higher education are indicated; stages of transformation of university are offered.

---

**Stress testing market factors of the spread of financial contagion [pp. 86–91]**

**Verstyak A.V., Nikoluk V.P.**

**Purpose and subject of research**

The subject of research is the spread of financial market factors infections. The aim of the study is to develop a special algorithm to determine the expected impact on the change in risk factors in the case of different scenarios.

**Research methodology**

Used parametric approach, the method of random scenarios, Boolean Bayesian network.

**Value results**

The model allows the use of the characteristics that affect the distribution of financial infections: changes in interest rates, oil prices, gold, changes in profitability, other indexes (S & P 500) and others.

**Conclusions**

Thus, the model stress testing reveals how financial stability at the front of forecasts and provides an understanding of the possible vulnerability. Although extreme events can not be predicted, study their impact on the effectiveness of the organization strengthens the understanding of the situation.

---