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## The use of statistical functions of selected software in a solution of a probability problem

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### Abstract

The aim of this paper is to demonstrate some statistical functions of selected types of software. Hence, they can be used in the process of solving some probability problems. The demonstration is made on a typical probability problem which can be solved by the Poisson distribution or, approximately, by the normal distribution. As for the software, discussed are three different types: a) widely used commercial software, b) special commercial software and c) software free of charge.

*Keywords:* probability, Poisson distribution, Excel, Mathematica, GeoGebra

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# **Tax optimization of a self-employed person in the context of the method of bookkeeping in the condition of the Slovak Republic**

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## **Abstract**

The aim of the paper is to clarify the legal possibilities of bookkeeping of a self-employed person who is not a payer of value-added tax, in the conditions of the Slovak Republic and thus to optimize his income tax. The self-employed person chooses between flat-rate expenses, simple tax records, single-entry bookkeeping, and double-entry bookkeeping. Each method of bookkeeping results in a different way of calculating the taxpayer's tax base and thus has an impact on the income tax itself. It is through the right choice of the method of bookkeeping that a self-employed person who is not in the position of a payer of value-added tax can significantly optimize his tax base and income tax. In accordance with the aim of the paper, we present a case study of a self-employed person with certain annual income and expenses, while we will analyze each method of bookkeeping, where we will evaluate which method of bookkeeping is most advantageous for taxpayers in terms of tax optimization.

*Keywords:* Tax optimization, personal income tax, self-employed, methods of bookkeeping

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## Financial performance of airlines Literature review

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### Abstract

The results determined by evaluating the financial performance indicators of a company provide a basis for comparison, both with itself in different periods and with competing companies in the same industry. Financial performance indicators are also used to signal the health of companies in any industry. This article is focused on scientific approaches based on the review of the literature with a dimension in the global airline industry and an approach to the literature in the field of financial performance. The purpose of this article was to analyze the literature available in the field of financial performance in the airline industry. Approximately 50 researches from the literature that overlapped with the field of study and industry were taken for this paper. Thus, the review of the literature offers a fairly varied range in the airline industry when it comes to evaluating, improving, comparing financial performance, but also empirical links with other variables. New methods of evaluating financial performance have emerged; methods of improvement that can increase the ability to predict financial performance; comparison tools in force majeure situations and past events; shaping the opinions of researchers following empirical analyzes. In the literature there are a lot of interesting and diverse research in the field of finance when it comes to analyzing or measuring financial performance in the airline industry. We were able to observe the importance that researchers attach to non-financial information and to determine the empirical links between certain variables. In most articles, rankings of airline companies are built based on financial performance.

*Keywords:* Financial performance, non-financial performance, airlines, corporate social responsibility.

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## Input-output analysis of Slovak sectors

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### Abstract

The globalization of the world economy and the increasing division of labour on a global scale in recent decades have made it important to assess the position, importance of economies and individual sectors and their links with other sectors at home and abroad. The increasing interconnectedness of national economies leads to the need to rethink the traditional view of the comparative advantages and competitiveness of the economy at national level. Traditional indicators of competitiveness and the comparative advantages revealed do not consider the complex links between economies and sectors. The aim of this paper is to examine the development trends and the economic links of the Slovak sectors – services and manufacturing. Using input-output analysis based on World input-output tables we examine which sectors are important for Slovakia in terms of job creation. The results show significant multiplier effect of production growth on job creation in sectors such as retail trade, education, public administration, and human health sector. Surprisingly, the automotive sector as an important sector and the driving force of Slovak economy has significant lower multiplier effects on new job creation.

*Keywords:* employment, input-output model, multipliers, sectors, Slovak economy

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## **Data Envelopment Analysis as a tool to evaluate the financial health of micro companies**

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### **Abstract**

The most vulnerable group of companies in terms of bankruptcy and financial health are micro companies, where even a small change in the market can lead to major problems. This means that the need to monitor your financial health applies not only to small, medium and large, but especially to micro companies. In this article, we will focus on Slovak micro companies that belong to the ICT sector. Our goal is to use the method of Data Envelopment Analysis to evaluate the financial health of Slovak micro companies and create for them a particular model. Used data come from the Slovak portal Finstat. Specifically, we used data of Slovak ICT micro companies in the 2013-2017 period. The overall results of this article are compared with the results of other studies that have used micro companies as a sample when evaluating the financial health of the company. We will compare these results based on the calculated index of correct classification and the index of warning reliability. Based on the results of this paper and their comparison with similar studies, we recommend using the traditional Zmijevski X-score model to predict the threat of bankruptcy for micro companies with less than 10 employees.

*Keywords:* financial health, bankruptcy, Data Envelopment Analysis, index of correct classification, index of warning reliability, micro companies

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# Comparison of value-added tax and turnover tax in the context of mitigation of tax evasion at the level of the European Union and the Slovak Republic

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## Abstract

The aim of this paper is to analyze the defects of the value-added tax system, the reasons for tax evasion on value-added tax, compare the differences between the value-added tax system and turnover tax, and determine which system would be more effective in eliminating tax fraud. Value-added tax is currently the most widely used indirect tax in almost every developed economy in the world. Value-added tax, abbreviated "VAT", as one of the most advanced economies in the world - the USA does not use. The USA instead of VAT has introduced the so-called "sales tax", which can be compared to a turnover tax. Value-added tax makes it possible to refund the tax, which tax subjects can abuse and thus unjustifiably enrich themselves at the expense of the state budget of the country, thus committing tax evasion. The turnover tax system does not allow the possibility for taxpayers to claim a tax refund and therefore does not allow tax evasion at all as in the case of value-added tax. This is one of the reasons why we compare value-added tax with turnover tax. In the paper, we will examine tax evasion at the EU level, and at the same time, we will analyze the possible reintroduction of turnover tax and its effects in the conditions of the Slovak Republic.

*Keywords:* Value-added tax, turnover tax, tax systems comparison, mitigation of tax evasion

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## The population ageing and age equality in the V4 countries

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### Abstract

The main aim of the presented paper was to highlight the importance of the equality in every domain of society, especially those related to age. Demographic changes and opportunities for people aged 55 years and more were observed involving the population of the V4 countries. The specific indicators that evaluates the life of elderly and their development in the period 2009–2019 were analyzed. The Age Equality Index that rates every country of the Visegrad Group individually was created and the country's performance on the given indicators was evaluated at the same time. The indicators were divided into five key areas: education, labour market, earnings and social inclusion, health, and digital economy and society. Data were primarily obtained from EU-SILC and ECHP public surveys. To set the indices a data normalization and proximity-to-target methodology were used. The main results of the analysis showed that age equality is improving, mostly in the Czech Republic, where discrimination is very rare. The Czech Republic got the best score for the latest year, while Poland ranked at the second place. Third place was taken by Hungary and the worst score was achieved by Slovakia. On the other hand, the biggest change within the reference period was observed in the Czech Republic, Hungary, Slovakia and Poland, respectively.

*Keywords:* population ageing; age equality; discrimination; V4 countries.

*Keywords:* probability, Poisson distribution, Excel, Mathematica, GeoGebra

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## **Analysis and prediction of the development of private banking in the Slovak republic**

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### **Abstract**

The purpose of the paper was to analyze the progress of private banking sector in commercial banks in the Slovak republic. The position of private banking sector and products and services provided by commercial banks (including product portfolio) were analyzed. Seven most important commercial banks in the Slovak republic were observed for the reference period 2010 – 2019. The following indicators which evaluate the level of private banking sector were analyzed: assets under private banking management, percentage change in assets, number of private clients, volume of assets per client, number of private bankers, number of clients per private banker, volume of assets managed by individual banker, threshold for entry into private banking. The results of the analysis showed that the private banking has been developing positively since 2010. Although offers of the commercial banks seems to be different at the first sight, they offer very similar products and services and their main aim is to satisfy the requirements of clients. We also found that the highest volume of assets per client belongs to the bank that managed the lowest volume of assets in the long-term.

*Keywords:* banking, commercial banking, private banker, private client, asset management, wealth management.

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## Impact of external circumstances on risk management in banks

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### Abstract

The dynamics of modern banking has caused the formation of specialized sectors within banks whose purpose is to monitor, evaluate and control risks that directly affect the stability of the entity itself. Through efficient risk management, the bank preserves unchanged business dynamics, creating a positive effect on the stability of the entire banking system of an economy.

From the recession of 2000, through the oil crisis of 2003, to the mortgage crisis of the American market in 2007, which spread to the rest of the world, and consequently, the insolvency of several European countries that caused the instability of the entire EU and the question of its survival in its original form as an economic-monetary union, it is evident that challenges are frequently posed to the risk management sectors.

However, considering current analysis and already visible consequences, one of the worst crises affecting the global economy is the emerging socio-economic crisis caused by the COVID 19 virus pandemic. In order to systematize and present consequences of the emerging pandemic on the global economic system as a specific situation for which global economy was not ready, the topic *Impact of external circumstances on risk management in banks* has been chosen.

*Keywords:* bank, risk management, crisis, COVID 19

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## Importance of Introduction and Application of Financial Management and Control in the Public Sector in BiH

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### Abstract

The introduction and implementation of FUK in FBiH aims to incorporate a modern public internal financial control system (PIFC) into traditional public resources management models. This area is one of the reform areas in which Bosnia and Herzegovina is obliged to harmonize the legislative framework and practices with the good practices and regulations recommended by the European Commission. The establishment and development of the PIFC is also an obligation of Bosnia and Herzegovina established by the Stabilization and Association Agreement between the European Community and the member states, of the one part, and Bosnia and Herzegovina, of the other part.

The Public Internal Financial Control (PIFC) system focuses on enhancing transparency, financial discipline and dedicated use of public resources, that is, transparent, economical, efficient and effective management of public resources, and control of the use of those resources. The topic of this paper is "Financial Management and Control in the Public Sector", where the aim is to show through the conducted theoretical research the level of achievement of the establishment of this system in public sector institutions in BiH. The European Union wants to direct all potential member countries towards development of internal controls in the use of their own resources, but also to create a control environment that would ensure the dedicated use of EU funds.

In Bosnia and Herzegovina, there is no single legal framework in terms of a single law governing public internal financial controls. The contents of the applicable legal provisions at all three levels (BiH, FBiH, RS) are largely congruent thanks to the Coordination Committee of Central Harmonization Units in Bosnia and Herzegovina, through which the harmonization of regulations and practices in the development of public internal financial controls is ensured.

*Keywords:* public sector, finance, control.

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## **Determining Non-Anthropocentric Value Oriented to Sustainability**

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### **Abstract**

The largest mechanism providing information about the value of our actions and results is the market. The price derives from demand and supply equilibrium and, as such, on the necessity and the scarcity of the object to trade. The main demand driver, that determines what is scarce and necessary, is the subject's preference and utility and, as such, it is anthropocentric. The value of a good in function of its role for the overall system sustainability it is not necessarily so. This dissertation enquires a non-anthropocentric price mechanism oriented to sustainability by introducing structural changes in the models of Sraffa by innovations partially introduced by Ayres and Georgescu-Roegen and partially original.

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*Keywords:* employment, input-output model, multipliers, sectors, Slovak economy

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# **Analysis of Financial Performance of Commercial Banks in Serbia**

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## **Abstract**

The constant dynamics of the Serbian banking sector is largely conditioned by macroeconomic developments and the political situation in the country. With the arrival of foreign banks, the structure of the sector itself has changed greatly. From the former typical socialist political system when banks were precisely concentrated in certain territories and with traditionally defined areas of banking products and services, the banking sector has experienced a complete reorganization of its business with the entry of foreign capital into the domestic market.

Today, more than twenty banks, mostly foreign, operate on the territory of Serbia, and their operations set the conditions for providing banking services. Overall, the role of the National Bank of Serbia as the central regulatory unit of the banking system of Serbia is extremely important, which, with its regulations and recommendations, largely dictates the way credit and deposit institutions operate.

The business performance of commercial banks directly affects the Serbian market as a whole. Considering that market fluctuations are frequent and the prospect of business stability is uncertain, there is a clear need to analyze the performance of the banking sector as one of the key measures of market success of Serbia as a whole. Therefore, this topic was chosen in order to analyze and define the basic parameters of the banking sector of Serbia. Methodologically, the analysis of financial performance indicators was performed with special reference to the key parameters of bank performance, but also the structure of the banking sector in order to facilitate understanding of the complexity of the issue itself.

*Keywords:* bank, financial performance, banking sector, National Bank of Serbia

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## Covid-19: New World are We Ready

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### **Abstract**

After 10 months of pandemic, health situation, international relations and global economic and financial situation are out of control. We are undergoing practical effects of most exotic aspects of chaos theory: "butterfly effect".

Edward Lorenz described butterfly effect in a paper published in 1963; he set the follow question: "Could the flapping of a butterfly's wings in Brazil cause a tornado in Texas?".

Today, more than ever, the question we must ask ourselves is whether mankind (people, political, financial and international organizations) will be able to change.

The actions implemented by the governments of various nations seem to be aimed solely at communicating to the population the fact that the State Institution takes care of them. Even if in reality 'a coherent, shared and coordinated strategy at an international level does not seem to emerge in any nation. . Even the two large federal entities, the US and the EU, have failed to express univocal coordination and governance within themselves.

Politics does not seem to be working on identifying new ways of managing international relations and health needs at a global level.

Focusing on the short term is strongly influencing the economic and financial interventions that do not seem to express any vision for the future, worrying the apparent underestimation of the medium-term effects that will occur as a result of the uncontrolled growth of public debt.

Fundamental challenge on which we will have to work shortly will be to stabilize the economic system and international relations, guaranteeing well-being to the populations and supporting the international exchange.recovery. Coordination processes are needed on a global level; environment and health must be placed at forefront of policies and actions over next 30 years to change the situation definitively. All this is worth the irreversible decline of civilization as we know it today.

*Keywords:* COVIDI-19; Policies; Health; Development; Mankind;

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## **Organizational Learning & Leadership Research: Trends of Today and Tomorrow**

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### **Abstract**

Organization learning and leadership research are essential elements of any business entity. To remain relevant, organizations should research the current trends in both aspects to keep up with the market and obtain insight into the future of the industry. The current trends in organizational learning include experiential learning, learner-centered online training, security awareness in eLearning, and training reinforcement. All these current trends are attributed to the increasing dependence of businesses on technology. From the current trends, some of the projected future trends include microlearning, telecommuting, artificial intelligence, and big data. These trends provide the most efficiency for organizations and are resilient enough to overcome changes in the industry. The future trends in organizational learning will change the leadership, which also changes research carried out on leadership. Current trends in leadership research include a focus on applying and sustaining behaviors, mobile learning, and group coaching, and democratization of leadership development. These trends are guided by prevailing leadership philosophies and preferred leadership styles. Such patterns are expected to change as the future trends will involve normalizing artificial intelligence and an increased focus on core competencies. These future trends all improve the efficiency of an organization and will increase the competitive nature of any industry.

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