

TOPICS FOR DOCTORAL (PHD.) THESIS FOR ACADEMIC YEAR 2021/2022
Field of study: 8. Economics and Management
Study program: Finance

No. 1	Supervisor	doc. RNDr. Jozef Bucko, PhD.
Title		RESEARCH OF CUSTOMERS' BEHAVIOR IN ONLINE SHOPPING BY USING OF BUSINESS INTELLIGENCE TOOLS
Detailed description of the topic (annotation or abstract)		The main goal of our study is to analyze the behavior of the online shopping customers in particular companies and in a particular business. The main goal is a data analysis of the data obtained from the company's online sales process by using machine learning technics in order to provide information to support management decision making.

No. 2	Supervisor	doc. Ing. MVDr. Ján Buleca, PhD.
Title		IMPACT OF CLIMATE CHANGE ON THE SUSTAINABILITY AND PERFORMANCE OF AGRICULTURAL PRODUCTION
Detailed description of the topic (annotation or abstract)		<ul style="list-style-type: none"> Specify the measurement of the performance of agricultural enterprises Quantify the impact of climate change on agricultural production Define and compare important factors of farm sustainability

No. 3	Supervisor	doc. Ing. MVDr. Ján Buleca, PhD.
Title		COMPETITIVENESS OF ORGANIC FOOD PRODUCTION
Detailed description of the topic (annotation or abstract)		<ul style="list-style-type: none"> Characterize the economic performance of conventional and organic food production Define the socio-economic benefits of low-input farming Analyze the efficiency and competitiveness of food production at international level

No. 4	Supervisor	doc. Ing. Radoslav Delina, PhD.
Title		DETERMINANTS AND POTENTIAL OF BEHAVIORAL CHANGES IN THE CONTEXT OF DIGITAL TRANSFORMATION OF SUPPLY CHAINS WITH HIGH SOCIETAL VALUE
Detailed description of the topic (annotation or abstract)		The social economy and the market of high societal value products and services are currently beginning to gain support in the context of the multidimensional problem of societal responsibility and systemic solutions. The aim of the thesis will be to understand the potential of current market systems/ concepts and mechanisms as well as elements of the data economy to bring higher societal value and objectification of this value in multicriteria decision-making when choosing a business partner. It will be necessary to identify critical factors and barriers to the effective development of a data-supported and socially oriented supply chain in B2B and to identify how the company's values and needs are in line with the commercial environment. Examining the impact of increasing transparency and objectifying the societal value of business relationships as well as the local vs. global market of goods

	and services will be the basis for research into behavioral changes in market subjects, determinants influencing these changes as well as impact of these changes on supply chain performance parameters and relevant market subjects and on the possibilities of influencing these changes to achieve greater societal responsibility in the current economic system
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No. 5	Supervisor	doc. Ing. Radoslav Delina, PhD.
Title		POTENTIAL AND IMPACT OF DIGITAL TRANSFORMATION AND DATA DEVELOPMENT IN THE FIELD OF BUSINESS PROCESSES
Detailed description of the topic (annotation or abstract)		One of the sectors most affected by the digital transformation with a significant impact on jobs and decision-making processes in the company is the area of audit and accounting. According to several studies, these jobs are most at risk from digitization, which nevertheless has a huge potential to make these processes more efficient and to bring about breakthrough changes in the supervision and monitoring of companies by regulators and third parties. The aim of the thesis will be to understand the potential of digital transformation of processes, flow and validation of business documents for audit and accounting, potential to automate decision-making processes and analyze the impact of these changes on audit, accounting and business performance in terms of efficiency for the company, audit organization, regulators as well as for society and the labor market.

No. 6	Supervisor	prof. Ing. Vladimír Gazda, PhD.
Title		APPLICATION OF THE TOOLS OF ECONOMICS OF COMPLEXITY IN THE ENVIRONMENT OF A SOCIETY CLOSE TO THE TECHNOLOGICAL SINGULARITY
Detailed description of the topic (annotation or abstract)		The company is developing to technological excellence, which is to be characterized by the predominance of automated and robotic activities, including decision-making. The role of man in this society is changing significantly. The topic of the work is to point out possible scenarios of development, or simulation of existing threats. The Economics of Complexity apparatus will be used in the analyzes. This includes building simulation agent based models, simulations and their evaluation and interpretation.

No. 7	Supervisor	doc. Ing. Kristína Kočíšová, PhD.
Title		BANK COMPETITIVENESS IN THE DIGITAL ERA
Detailed description of the topic (annotation or abstract)		The aim of the dissertation is to analyse the digitisation in the banking sector in selected countries in order to determine which countries we can consider as leaders in the field. At the same time, we will examine which factors can be considered key in the development of digitisation in the banking sector, as well as the effects of digitisation on the competitiveness of banks in the given conditions.

No. 8	Supervisor	doc. Ing. Lenka Maličká, PhD.
Title		DEVELOPMENT AND DETERMINANTS OF THE NON-PROFIT SECTOR EFFICIENCY
Detailed description of the topic		The goal of the thesis is to understand current changes in the position and tasks of the non-profit sector in the society, to understand different forms of

(annotation or abstract)	social value and social welfare, what should the non-profit sector provide and to analyze the determinants of their efficiency, as well as their impact on sustainability of high social value. Partial goals are concerning in understanding revenue models of non-profit organizations, the dependence of non-profit organizations on specific types of revenue models, development of social alliances (Bocquet Cotterlaz-Rannard & Ferray, 2020) and application of “Money Illusion” approach in the field of the money value perception (Weipking & Breeze, 2011; Witkowski, 2020). It should result in the design of the governance model of non-profit sector efficiency what will generate higher social value or social welfare in a current economic system.
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No. 9	Supervisor	doc. Ing. Lenka Maličká, PhD.
Title		EROSION OF THE LOCAL TAX MIX
Detailed description of the topic (annotation or abstract)		The goal of the thesis is to characterize the current design of the local tax mix and its changes in the long-term period, to analyze the adequacy of applied local tax mix models respecting the volume of local public goods and to identify the determinants of its erosion. Partial goals of the thesis rely on the analysis of the shift of competences on local government in the long-term period and their impact on the expenditure side of the local budget, the analysis of shared, own and foreign local revenues in relation with correspondent change on the expenditure side of the local budget, the analysis of dominant type of local revenue and dominant type of local own tax revenue in the structure of local revenues and its determinants, the analysis of the impact of local tax rates changes on the local budget and correspondent society.

No. 10	Supervisor	prof. Ing. Tomáš Sabol, CSc.
Title		IMPACT OF DIGITAL TRANSFORMATION AND ARTIFICIAL INTELLIGENCE METHODS ON COUNTRY ECONOMY
Detailed description of the topic (annotation or abstract)		<ul style="list-style-type: none"> • To analyse individual sectors of economy from the point of view of AI application • To analyse economic impact of digitalization and application of Artificial Intelligence (AI) applications on economy • To innovate a methodology for economic impact evaluation of digital transformation and AI

No. 11	Supervisor	doc. Ing. Marianna Siničáková, PhD.
Title		MONETARY UNIONS IN THE WORLD, THEIR RELEVANCE AND EVOLUTION
Detailed description of the topic (annotation or abstract)		<ul style="list-style-type: none"> • To analyze current state of monetary integration in the World, from the perspective of monetary unions, substitutional currencies, digitalization of money. • To identify main trends, obstacles and incentives in evolution of monetary unions. • To quantify, estimate and evaluate impacts of monetary unions from the point of view of world trade, digitalization of money and their sustainability in future.

	<ul style="list-style-type: none"> To suggest recommendations for (common) monetary policy.
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No. 12	Supervisor	doc. Ing. Marianna Siničáková, PhD.
Title		EFFICACY OF THE ECB MONETARY POLICY VERSUS PANDEMIC CRISIS
Detailed description of the topic (annotation or abstract)		<ul style="list-style-type: none"> Characterize and evaluate the implementation of the single monetary policy before and during the pandemic crisis. Analyze and evaluate the application of non-standard monetary policy. Quantify equilibrium interest rates in the euro area countries. Assess potential of the money digitization process in the euro area.

No. 13	Supervisor	doc. Ing. Michal Šoltés, PhD.
Title		ESG INVESTMENTS AND THEIR IMPACT ON PORTFOLIO PERFORMANCE
Detailed description of the topic (annotation or abstract)		The main objective of the thesis will be to examine the impact of the involvement of ESG investments in the portfolio on its performance. We want to analyze whether ESG investments have a real potential to bring significantly higher sustainable returns, or are only a consequence of global changes and the growing importance of ecology and environmental protection. We are interested in the relationship between the global theme in the society and the real potential of ESG investments to bring returns for investors.

No. 14	Supervisor	doc. Ing. Michal Šoltés, PhD.
Title		THE IMPACT OF REMITTANCES AND DEVELOPMENT AID FLOWS ON RECIPIENT COUNTRIES
Detailed description of the topic (annotation or abstract)		<ul style="list-style-type: none"> To clarify the theoretical basis for examining the effects of remittances and development aid on recipient countries. To analyze their volume in the context of current global trends. To identify their economic impacts on selected countries and compare them with FDI. To evaluate the effectiveness of remittances, development aid and FDI for the development of selected countries

No. 15	Supervisor	doc. Ing. Michal Šoltés, PhD.
Title		PHENOMENON OF CRYPTOCURRENCIES – ECONOMIC, SOCIAL, MORAL IMPACTS
Detailed description of the topic (annotation or abstract)		Research will be focused on explanation of systems of the cryptocurrencies, analysis of their development and their impact on economics, society and people, pros and threats, which cryptocurrencies bring.

No. 16	Supervisor	Prof. Dr. Srdjan Redzepagic
Title		DEVELOPMENT OF EUROPEAN ECONOMICS: FACTS AND FIGURES FROM THE RECENT YEARS
Detailed description of the topic		<ul style="list-style-type: none"> Summarize and critically discuss recent economic changes and development of European Union economies. Analyze of selected economic policies and projects for the future.

(annotation or abstract)	<ul style="list-style-type: none"> Analyze effects of the Euro Area member countries. Identify economic problems in EU member states. Propose alternative measures for reducing inequality within actual member states. Previsions, estimations, analysis.
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No. 17	Supervisor	Prof. Dr. Srdjan Redzepagic
Title		EXTERNAL TRADE AND FINANCIAL STRUCTURE OF EU MEMBER STATES
Detailed description of the topic (annotation or abstract)		<ul style="list-style-type: none"> Summarize and critically discuss External trade of European Union economies. Analyze of selected trade policies and financial structure of EU member states. Analyze effects of the Euro Area member countries. Identify trade problems in EU countries and give forecasts. Identify financial markets in EU and give forecasts. Research why trade openness has noticeably increased since 2004. Previsions, estimations, analysis.

No. 18	Supervisor	Prof. Dr. Martin Užík
Title		ROLLING MOMENTUM STRATEGY IN CRYPTOMARKET
Detailed description of the topic (annotation or abstract)		<p>The focus of the Momentum strategy, as a procyclical investment strategy, lies in the hypothesis that the winning shares of the past will most likely develop in the same direction in the near future. The same is assumed for the performance of the loser shares (Bajgrowicz & Scaillet, 2012; Asness, Moskowitz, & Pedersen, 2013). The technical trading rules of relative strength according to Levy provide the basis for this approach (Levy, 1967). The Momentum strategy can thus offer investors an opportunity to outperform the market (Rachev et al., 2007).</p> <p>The creation of portfolios under the Momentum strategy follows simple rules. On the basis of past prices, equities are selected within a formation period according to return criteria. The stocks with the highest and lowest returns on equities in the formation period are combined into winning and losing portfolios, each with the same number. The final step is the acquisition of the winning portfolio, which is held over the specified investment period, with the loser portfolio being sold short at the same time (Brock, Lakonishok, & LeBaron, 1992; Hong & Stein, 1999; August, Schiereck, & Weber, 2000). Grobys & Sapkota 2019 analysing a set of 143 cryptocurrencies for a sample spanning 2014–2018. They investigate the popular momentum strategy implemented in the cryptocurrency market. Contrary to earlier studies their findings do not indicate any evidence of significant momentum payoffs, supporting the view that the cryptocurrency market is far more efficient than suggested in earlier studies.</p> <p>We assuming, that Grobys & Sapkota 2019 conclusion is not correct. The PhD-Student should analyze more detailed an wider and longer the momentum strategy in cryptomarket.</p>