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Dr. Janis Priede, University of Latvia, Latvia
**Innovations, Pandemic and the Competitiveness of the European Union**

*Janis Priede*
University of Latvia, Latvia  
E-mail: janis.priede@lu.lv  
*Rita Freimane*
University of Latvia, Latvia  
E-mail: rita.freimane@lu.lv

Purpose of the study is to evaluate the importance of the innovations on the competitiveness of the European Union countries and potential risks COVID-19 pandemic brings for the long-term competitiveness. Tasks of the research: 1) Determine importance of the innovations on the competitiveness of the European Union countries; 2) Analyze data related to R&D spending in different sectors; 3) Identify long-term risks that COVID-19 pandemic will cause to innovations and long-term competitiveness of the European Union countries. Research methods: Literature analysis, data analysis. Main results will contain evidence that innovations are one of the main determinants of long-term competitiveness, data analysis of the current situation in European Union countries. Research will highlight potential risks European Union countries might experience as a result of reduced financing during the COVID-19 pandemic. Several examples will be analyzed in context of the EU budget and Recovery and Resilience Facility.  
**Keywords:** Competitiveness, R&D, Innovation, pandemic.

**Regional Aspects and Economic Challenges of Fair Transition in the Context of the Green Deal**

*Kamen Petrov*
University of National and World Economy, Bulgaria  
E-mail: petrovk@abv.bg  
*Nikolay Tsonkov*
University of National and World Economy, Bulgaria  
E-mail: n.tzonkov@unwe.bg

The Green Deal, which was signed from Bulgarian country also, creates a need of national economy transformation. The base of green transition is restructuring of Bulgarian energy system for pure energy production. From the other side the economic transformation of economy pushes Bulgarian state for decision making to productions’ delocalization and structuring of a new sector and territorial economy. The main purpose of the research is to analyze the Green Deal dimensions in Bulgarian country. Methodology includes a complex of different methods as deduction, description, statistical and others. The author’s opinion is that it is important to use the potential of the Bulgarian regions in combination with active state and investment policy. This implies the application of some models for spatial economic planning of the territory, considering labor costs, water and energy and relating to business efficiency, potential market and future sales revenues. Research and science development units and “pure” science take very important place in the planning process. The creation and implementation of innovations is key to the development of high-tech industries and their balanced distribution across the territory based on the close interaction between science and business. Speaking of the economic development of the separate regions, they must use the data effectively. From this point of view, the Black Sea region must be open to the sea for creating a blue economy, and the northern border areas must use the potential of the Danube.  
**Keywords:** Green Deal, energy sector, natural gas, hydrogen, clear energy, national economy, regional development
Main Priorities for a Green Deal towards a Climate-Neutral Europe

Inese Pelsa
University of Latvia, Latvia
E-mail: Inese.Pelsha@gmail.com

Signe Balina
University of Latvia, Latvia
E-mail: Signe.Balina@lu.lv

In 2019, the European Commission issued a communication on the European Green Course, which marked a major transformation of the national economy to ensure a Europe neutral in 2050. Climate change and environmental degradation are an existential threat to Europe and the world. To overcome these challenges, the European Green Deal will transform the EU into a modern, resource-efficient and competitive economy, ensuring: no net emissions of greenhouse gases by 2050, economic growth decoupled from resource use, no person and no place left behind. The European Green Deal aims to boost the efficient use of resources by moving to a clean, circular economy and stop climate change, revert biodiversity loss and cut pollution. It outlines investments needed and financing tools available and explains how to ensure a just and inclusive transition. The European Green Deal covers all sectors of the economy, notably transport, energy, agriculture, buildings, and industries such as steel, cement, ICT, textiles and chemicals. The article analyzes the goals and significance of the Green Course towards a climate-neutral Europe.

Keywords: green deal, climate neutral Europe, priorities

Brain Circulation and Impact of European Programs on the Circular Migration of Researchers from the Western Balkan Countries

Giuseppe Ciccone
International Telematic University Uninettuno, Italy
E-mail: giuseppe.ciccone@uninettunouniversity.net

Gazmend Qorraj
University of Prishtina, Kosovo
E-mail: gazmend.qorraj@uni-pr.edu

National research and development strategies for international cooperation in many European countries strongly promote the idea of international mobility of researchers, based on the assumption that "brain circulation" helps to exploit the quality level of high-quality human capital and contributes to the appreciation of excellence. Therefore, the availability of skilled human capital supports economic sustainability.

For this reason, mobility is considered to be one of the most powerful approaches for integrating Western Balkan researchers into the European Research Area, therefore the objective of this study is to analyze the programs that support the circular migration of researchers from the six Western Balkan countries: Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia, in the framework of structured regional and European mobility programs with a specific focus on Erasmus+ and Marie Skłodowska-Curie Actions.

Regarding the research methodology, there will be applied the review of EU programs, including analysis reports, evaluations published in the EU literature, databases, and official documents. This technique allows the objective, systematic and quantitative description of the content in order to interpret it.

In the paper is used the term "structured mobility programs" when policy measures meet the requirement of the so-called "brain circulation" (opposed to "brain drain") and refer to researchers who go abroad for a limited period to train or improve professionally joining research activities, in the context of temporary
constituted network associations; or the return of which is anticipated or explicitly requested. Governments in the region are aware of the challenges of brain drain and have taken a number of initiatives to address the problem. The recommendations for the development of scientific systems in the WB6 area were those formulated by the “Joint Scientific Conference” of the Austrian Academy of Sciences (ÖAW) and the National Academy of Sciences Leopoldina in the period preceding the “Third Summit of the Western Balkans” (2016) of the Heads of State and Government in Paris. It has been called for greater international mobility at all levels of scientific careers to counter the long-term migration of skilled scientists abroad. In particular, a brain circulation plan was convened for novice scientists from Western Balkan countries to work in cutting-edge institutions and companies abroad.

Finally, as a conclusion the study aims to evidence that structured mobility programs, which allow the exchange of knowledge and the processes of its inclusion through non-permanent stays abroad, can be considered adequate tools to mitigate the challenge of integration and contribute to the “circulation of brains” rather than their own “loss”.

Keywords: Migration, European projects. researchers, circular migration, Marie Skłodowska-Curie, Erasmus+

**Tendencies of Gender Segregation in the Labour Market Across Sectors and Occupations in Estonia, Latvia and Lithuania**

Gabrielė Masiulytė  
Kaunas University of Technology, Lithuania  
E-mail: gabriele.masiulyte@ktu.edu

Rasa Daugėlienė  
Kaunas University of Technology, Lithuania  
E-mail: rasa.daugeliene@ktu.lt

The purpose and tasks of the study. For the past few decades countries in the European Union started to act in terms of diversity in the labor sector. According to the Global Gender Gap Report that was done in 2021, labor markets continue with trends towards focusing on the segregation of occupations along gender lines, which would mean that this phenomenon is visible in every country and is a consistent and continues process. Looking into Lithuanian, Latvian and Estonian perspective, during last two decades all three countries were in the position where they had similar gender segregation numbers and processes but are already taking different paths in terms of gender policies which are involved with public administration workers, laws and policies related to gender gap and labor situation.

The main problem of this paper is focused on what are the main tendencies and reasons of gender segregation across sectors and occupations in Lithuania, Latvia and Estonia? To provide a better perspective and try to answer the problem question, there are two main tasks which include examining and classifying the tendencies of gender segregation in the labor market across sectors and occupations in Lithuania, Latvia and Estonia.

The primary methods used, including a brief description of the study design. The article begins by the theoretical approach and the definition of gender segregation and then it will go by tendencies among occupations and sectors. The methods that were used to prepare this paper consists secondary data analysis and literature review. This type of qualitative data analysis allows to see what the current situation in terms of gender segregation is and what all of the countries are moving towards to. Second part of attention is focused on policy planning process such work in progress laws or programs related to gender policies in public institutions. The concept of gender segregation aspects is analyzed using the method of scientific literature analysis.

The key results that address the specific questions that were asked. The main findings of the research were that women tend to select precise sectors and positions, which are more related to services, education or health. There are several reasons for this phenomenon as social norms or simply that women do not tend
The primary interpretations or conclusions drawn. (1) Each of the countries have similar paths trying to progress in the field by adapting laws, creating initiatives among workplaces and in educational sphere and (2) in Latvia, Lithuania and Estonia gender policy and gender segregation tendencies are moving to a very similar path. Occupational segregation tendencies are mainly about those women dominate in education, health and welfare and men in construction and information and technologies sectors.

**Keywords:** Gender segregation, occupations, sectors, gender policy, gender gap

### The Role of Social Networks in the Career Advancement of Immigrant Women in Finland

**Mukhammadysuf Shaymardanov**  
University of Jyväskylä, School of Business and Economics, Finland  
E-mail: shaymam@jyu.fi

Professional immigrant women often struggle to find a place of employment and a preferred career that meet their education, competence and skills. Behind this struggle is the fact that immigrant women are often excluded from social networks that would benefit their careers. We are hence interested in the role of social networks in immigrant women’s careers. The context under scrutiny here is Finland. Our focus is on the social networks of Russian women who have immigrated to Finland. In this study, we examine the role of social networks when women entered the Finnish labor market and then later when they advanced in their careers in Finland. The data comprises twenty-five professional Russian women working in the fields of IT and healthcare. We conducted a thematic analysis of the semi-structured interviews. As a result, we suggest that when entering the Finnish labor market, the women faced challenges in securing their first jobs and perceived exclusion, however trust building and enhancing visibility as a competent employee within colleagues were said help entering to the social networks. While then advancing in their careers, e-networks as well as informal support from family and colleagues were perceived as significant for career progression as well as for coping with career barriers. Moreover, perceptions of sexuality and language discrimination were seen as limiting social networks for these women. We then discuss the findings of the pilot study and present our research steps going forward.

**Keywords:** immigrant women, social networks, competences, career, exclusion, Finland.

### Corporate Social Responsibility as a Factor Promoting Customer Loyalty in the Latvian Retail Sector

**Velga Vevere,**  
EKA University of Applied Sciences  
E-mail: velga.vevere@eka.edu.lv  
**Inga Shina,**  
EKA University of Applied Sciences  
E-mail: inga.shina@gmail.com  
**Samanta Ganina,**  
EKA University of Applied Sciences  
E-mail: ganina6@gmail.com

Research relevance: The retail sector is an important engine of the national economy and an indicator of the development of the national economy. Over the last ten years, the total retail turnover index has increased by 31%, which highlights the acquisition of competitive advantages. Businesses need to fight strategically for consumers in an environment where information and services are widely available.
Promoting customer loyalty is important for companies, but with the realization of responsible and sustainable operations, corporate social responsibility is one of the ways to promote it. It is important to understand how important corporate responsibility is to consumers and what corporate social responsibility activities are now important to consumers to draw conclusions about their impact on customer loyalty.

The aim of the research is to identify corporate social responsibility activities that promote customer loyalty in the Latvian retail sector. Based on the aim the research question was defined: What corporate social responsibility activities affect customer loyalty? Research methods: The authors evaluate the importance of corporate social responsibility in the food retail sector from the point of view of society and its impact on building customer loyalty. The paper analyzes the essence of corporate social responsibility and customer loyalty, its role in the retail sector. For the analysis of statistical data, the author uses such methods as internal coherence analysis (Cronbach’s alpha), frequency analysis, ranking, factor analysis, graphical analysis. In order to identify the factors influencing corporate social responsibility in the Latvian retail sector, a questionnaire and an interview with industry specialists were used. Novelty element of the study: A model of corporate social responsibility activities was developed for companies in the food retail sector, grouping together the most important directions and activities of corporate social responsibility for consumers in order to promote customer loyalty.

Keywords: customer loyalty, corporate social responsibility, retailing

A Critical Reassessment: The European Cloud University Platform and New Challenges of the Quartet Helix Collaboration in the European University System

Jari Kaivo-oja
Finland Futures Research Centre, Turku School of Economics, Unit of Tampere, University of Turku, Finland & Big Data Excellence Center, Kazimiero Simonavičiaus University, Lithuania
E-mail: Jari.kaivo-oja@utu.fi

Jari Stenvall
School of Management, Tampere University, Finland
E-mail: jari.stenvall@tuni.fi

The purpose and tasks of the study:
The European Commission has presented how it intends to give Europe a lead in the data-driven economy by enabling cloud-based services and world-class infrastructures for industry, scientists and public services. In 2011 we discussed and proposed the cloud university platform for the European Union in the European Integration Studies. The purpose of the study is to deliver a critical reassessment of European Cloud University Platform. Today a new European Open Science Cloud (EOSC) will offer Europe's 1.7 million researchers and 70 million science and technology professionals a virtual environment to store, share and re-use the large volumes of information generated by the big data revolution. The EOSC will be underpinned by the European Data Infrastructure, deploying the high-bandwidth networks and super-computer capacity necessary to effectively access and process large datasets stored in the cloud. There is also a target to build a single market for the Internet of Things: with the right standards for interoperability, and open cross-sector platforms for IoT devices and services to connect seamlessly, and scale-up, anywhere in the EU. Our assessment is focused on the European Open Science Cloud (EOSC) and its operational functioning and implementation process.

The primary methods used, including a brief description of the study design:
The study is based on conventional assessment methods and concept tools. The methodology is mostly mixed methodology (with both qualitative and quantitative data analytics) and it pays attention to argumentation logic and actual policy planning process and operational implementation of the EOSC. Study design has process structure of diagnosis, prognosis and prescriptions.

The key results:
The role of Research Infrastructures (RIs) is emphasized in recent transnational European research and innovation policy. Support for RIs form important pillars in the Horizon 2020-framework, as well as in the upcoming Horizon Europe-framework based on the idea that modern science requires unique global competitive capabilities, which individual institutions, or even individual European countries, often cannot provide by themselves. There are very good reasons to perform a critical assessment, because over the coming 5 years, the European Commission will put forward proposals to meet the €4.7 billion investment need to integrate and consolidate data infrastructure. These vital proposals will bring together EU and other sources, including Member State and private investments. By 2017, all scientific data produced by projects under the €77 billion within the Horizon 2020 research and innovation programme will become open by default to ensure that the scientific community can re-use the enormous amount of data they generate. This change is not marginal and needs more discussion. The primary database of reassessment is the documents of the European Open Science Cloud (EOSC) and (1) associated European Commission work programme (overview of institution-wide deliverables), (2) the strategic plan (department strategy, objectives for 2016-2020) and (3) other management plan (department forecasted outputs, activities, resources) and annual activity reports.

The primary interpretations or conclusions drawn:

The key results of critical reassessment are: (1) There are needs to strengthen links between of the European Open Science Cloud and Industry 4.0 strategy in Europe, (2) the concept of platform needs more discussion in of the European Open Science Cloud, (3) country-level participation to of the European Open Science Cloud needs more discussion and more updated operational implementation plans and programs, and (4) there is need to plan symbiotic digitalized innovation eco-system policy and economic growth policy framework for the European union. (5) Links between Smart Specialisation Strategy and Industry 4.0(Industry5.0 approaches need more specifications.

Keywords: European Open Science Cloud, Industry 4.0, Big Data, Higher education, European integration, Quartet Helix innovation policy, digitalization, digital transformation, platform economy, open science policy, open innovation paradigm, collaboration framework of the European universities

Researching Governance for Making Humanism Meaningful

Linutė Kraujutaitė
Klaipėda University, Lithuania
E-mail : juskevic9@yahoo.com

Europe is the project of intellectuals. In general, their academic mission has been to inquire what diminishes human value and to prepare appropriate cognitive instruments for not only understanding events, but also for anomy postvention as well as prevention. Today, this mission is more relevant than ever, especially due to the deepening threats of structural violence. Contemporary humanistic mindset emphasizes five key principles: 1) human dignity; 2) wholeness of human nature, 3) human existential concerns for everyday life; 4) interactional communication as well as 5) community, which respects Human rights of all people. Stressing this as the set of standards for further thinking the paper analyses a few methodological case study scenarios applied by public administration researchers on how micro level individual-system type interactions may be researched empirically for the purposes of both guaranteeing humanistic research and promoting humanistic values in public organization. The expectation permeates the text presented: knowing experiences and guidelines of our research actions, we can make humanism meaningful much easier in our everyday practices.

Keywords: governance, humanistic mindset, case study, researching processes via interactions
Towards the Transformative Policy making Process Through Design Thinking Approach

**Jurgita Barynienė**  
Kaunas University of Technology  
E-mail: jurgita.baryniene@ktu.lt  

**Asta Daunoriénė**  
Kaunas University of Technology  
E-mail: asta.daunoriene@ktu.lt  

**Živilė Paužaitė**  
Kaunas Science and Technology Park  
E-mail: zivile.pauzaite@kaunomtp.lt

Nowadays fast changing societies face complex, open-ended and multidisciplinary challenges which solving require to rethink existing policy making practices and look for new pathways in policy making processes. For this reason, the new policy making approaches become the object of the European and Lithuanian strategic documents. Much more, scientific and public discussions often mention policies fails, gaps and constant digression from users’ needs and expectations. One of the possibilities to create sufficient public values and increase citizens satisfaction from public policy is to focus on user perspective using design thinking approach.

Although design thinking approach originated in design sphere, architecture, but this approach successful drifted to business sector as well as education and training area. Being characterized as human centered, emphatic, collaborative, experiential and forward looking, design thinking could be seen as the new approach in policy making process allowing to gain in-depth knowledge about users’ needs and expectations (for example, youth, older people, young families and etc.) and constrain empathy-driven policies which ideally meet users’ needs.

The scientific problem of this article can be reflected by the following question: how design thinking can be transferable to policy making process and can improve policy making process and foster public innovations for sustainable development. Aim of the article is to frame the design thinking as the new approach for innovative policy making process identifying the keys of value added. Method used is scientific literature analysis in the fields of policy making and design thinking. The main result of research is constructed recommendations how to apply design thinking in policy making process. The results have practical significance because their application in policy making can be the stepping stone for breakthrough in policy making culture, traditions and to raise the society inclusion.

**Keywords:** Policy making, design thinking, society’s involvement, innovations, sustainable development.

Artificial Intelligence and Competition Law – Challenges for Bosnia and Herzegovina

**Kanita Imamović-Čizmić**  
Faculty of Law, University of Sarajevo, Bosnia and Herzegovina,  
E-mail: k.imamovic-cizmic@pfsa.unsa.ba

The digital economy is characterized by new business models based on the use of electronic communications and digital technology for the production and distribution of goods and services. Big data is becoming an invaluable resource in the functioning of the digital economy. In order to survive in the market and be more competitive, firms are changing the way they make their strategic decisions and are increasingly resorting to the use of big data and technologically advanced tools, such as pricing algorithms. Companies increasingly use computer algorithms to improve their pricing models, adjust services and predict market trends, which is recognized as a model to increase efficiency. The use of algorithms in everyday business brings benefits to businesses, consumers and, ultimately, society, but it also raises a number of legal issues. Many questions also arise in competition law, which aims to
protected the competition process in the market by banning certain business practices. Use of algorithms can be a new sophisticated method, which will make it easier for companies to reach and maintain collusion without any formal agreement or human interaction. The use of algorithms contrary to the provisions of competition law, raises the question of whether competition authorities need to improve existing tools for detecting prohibited agreements as well as several other issues. Bosnia and Herzegovina is a country in transition with a small open economy, which has the status of a potential candidate for EU membership. Modern competition law in Bosnia and Herzegovina is the result of foreign pressure and meeting the conditions for membership in the European Union. Lawmakers in Bosnia and Herzegovina face the challenge of harmonizing competition law with the acquis and improving methods and tools that would enable the Council of Competition, as a body to protect competition in BiH, to respond to the use of algorithms for illicit business practices. The paper aims to research whether and to what extent business processes in Bosnia and Herzegovina have been digitized, i.e. whether business entities use algorithms and to what extent, and whether and to what extent the BiH Council of Competition is ready for challenges of competition law in digital economy.

**Keywords:** Artificial intelligence, competition law, algorithms collusion, Council of Competition in BiH

**The Importance of Strategic Communications in European Risk Management**

*Christos Smilianis*
Aristotle University of Thessaloniki, Greece  
E-mail: Smilianis.christos@gmail.com

*Nikolaos Panagioutou*
Aristotle University of Thessaloniki, Greece  
E-mail: nikospanagiotou@gmail.com

The purpose of this paper is to indicate the importance of communication in European risk safety management. As the crisis of the COVID-19 pandemic appears to be in recession, the observations and lessons learned delivered from each nation’s risk management and crisis response, will start to emerge. As happened in every crisis that occurred during the last 100 years, the communication efforts of countries and organizations were detrimental for the results of their handlings. This applies to all kinds of crises regardless of their nature. From World War 2 to the 21st century refugee crisis and from the Spanish flu to COVID-19 the way and extent that European countries decided to inform their citizens, created positive or negative effects.

This paper is going to analyze the importance and the methods of risk management as a tool to prepare countries, organizations, and individuals to avert a crisis. In case that the crisis is unavoidable, risk management gives the possibility to enter the crisis under the best possible circumstances, with better preparation and with a greater chance of successful crisis management.

In addition, the paper will study the importance of communication and information towards a country’s audience during major crisis in the recent European history. These crises, either handled with a concise communication campaign or with secrecy and avoidance of responsibility, were heavily affected by communication, as it resulted in higher or lower public trust. Consequently, crisis management actions were enhanced or hampered respectively.

Having established the prominence of communication during major crises, the paper will demonstrate the importance and the role that communication can have in all stages of risk management. Measuring the possibility of a crisis and taking measures to act either to prevent it or to handle it more effectively, creates a large area where communication could play a significant role in risk management. Contemporary strategic communication approaches would be beneficial equally in the crisis planning and management for European countries irrespective if they are acting individually, or collectively within the European and Transatlantic mandates.

Finally, as it is not possible to speak of communication without taking into consideration the modern
The paper will examine the applications of modern AI technology in communication and will suggest which tools could be implemented in the European risk management. 

As a conclusion, this paper will outline the unique importance of strategic communications in all stages of a crisis. Not only in the stage of crisis management, in which crisis communication is a well-studied subject but also in the risk management where the planning and management of a risk can indicate on how to avert a crisis, or to create the conditions to successfully deal with one. Communication during risk management can inform all stakeholders and interested parties before a crisis begins, henceforth winning public support through understanding and trust maximizing the effects of crisis management actions from the very early stages of a crisis.

**Keywords:** Risk management, Crisis response, Strategic Communications, disinformation, Artificial Intelligence

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**Health Conditions by Self-Evaluations Changes in Latvia**

**Biruta Sloka**  
University of Latvia, Latvia  
E-mail: Biruta.Sloka@lu.lv

**Ginta Tora**  
University of Latvia, Latvia  
E-mail: Ginta.Tora@lu.lv

**Ilze Buligina**  
University of Latvia, Latvia  
E-mail: Ilze.Buligina@lu.lv

**Juris Dzelme**  
University of Latvia, Latvia  
E-mail: Juris.Dzelme@lu.lv

Recent years a lot of attention is paid to health situation of inhabitants in the country as this is one of important aspects for the society development. The purpose of the study is to investigate development social inclusion by views of self-evaluation of health conditions of inhabitants in Latvia based on EU-SILC survey data analyzed by statistical regions, by territories, by age group and by education level. Tasks of the research 1) analyses theoretical findings reflected in scientific publications, 2) analysis of time-series of statistical data and comparisons with other Baltic countries, 3) investigate developments of self-evaluations by different social groups. For data analysis there are used indicators of descriptive statistics by indicators of central tendency or location and indicators of variability or dispersion, cross-tabulations and correlation analysis as well as non-parametric statistical indicators with chi-square, there are used also tests of statistical hypotheses by using t-test and analysis of variance (ANOVA). The results indicate that the self-evaluation of health conditions differ statistically significant by statistical regions, by territories, but not differ statistically different by gender. EU-SILC survey data are collected by random representative samples and anonymized survey data sets are available for academic researchers for deeper statistical analysis.

The research is supported by National Research Program INTERFRRAME-LV.

**Keywords:** social inequalities, health self – evaluation, attitude measurement
Domestic Savings and International Capital Flows in the EU

Pawel Mlodkowski
School of International Liberal Arts, Miyazaki kokusai Daigaku, Japan
E-mail: pawel.mlodkowski@gmail.com

This paper uses new statistical estimates to test for effects of economic integration in Europe on international capital mobility. In a world of perfect capital mobility, one should experience little or not statistically significant relationship between the amount of domestic savings and domestic investment. Alternatively, under less-than perfect capital international mobility, diverse portfolio preferences and country-specific transactions costs would create impediments for long-term capital flows. This would result in direct connection between any changes (increases) in domestic savings and domestic investment. According to empirical results of a similar empirical study by Feldstein and Horioka (1979) for developed countries (including some of current EU members included in this investigation), there were portfolio preferences and institutional rigidities, which resulted in almost equal corresponding differences in domestic investment rates driven by domestic savings rates among major industrial countries.

The current study tests for capital mobility in the EU Member States (2004-2022) discussing compatibility of findings with previous evidence found in the literature (Feldstein and Horioka 1979). It also addresses the optimal national savings policy, tax incidence and concludes on capital formation in the EU.

Keywords: domestic savings, domestic investment, capital mobility, tax incidence, optimal savings policy

The Role of FOE (Entities) in Post-COVID Economy Eecover in Selected European Countries

Stanisław Umiński
University of Gdańsk, Poland
E-mail: stachu7008@gmail.com

Aleksandra Borowicz
University of Gdańsk, Poland
E-mail: aleksandra.borowicz@ug.edu.pl

Jarosław Nazarczuk
University of Warmia and Mazury in Olsztyn, Poland
E-mail: jnazarczuk@gmail.com

The COVID-19 pandemic is a black swan, changing the way the global economy operates. Its economic consequences are primarily reflected in international relations. The issue of vulnerability to global conditions has already been discussed in various contexts. Excessive dependence on foreign relations (through FDI) and foreign markets is not a new problem neither in academic debate nor in discourse among policymakers. However, the pandemic has explicitly shown the global consequences of breaking international cooperation links resulting among others from the long-lasting FDI relationships. The sharp drop in international trade and supply disruptions were the first signals of the impending pandemic economic crisis. The research aims to:

1. On the grounds of the theoretical and empirical literature, identify of FOEs’ (foreign owned entities) features important for resilience building and in a race for sustainable development goals
2. Revealing the role of FDI and position of FOEs as a resilience factor in the post-pandemic economic recovery and boost.
3. Contribution to the discussion on vulnerability, by adding micro-level factors related to FOEs performance.

The research is based on data from Bureau van Dijk (Orbis) and mainly is focused on utilization of quantitative methods through the development of econometric modelling.

Keywords: foreign direct investment, FDI, foreign owned entities (FOEs), resilience
Decade of Sustainability Reporting: Main Changes and Trends. Case of Companies Listed on NASDAQ OMX Baltic Main List

Natalie Aleksandra Gurvitš-Suits  
Tallinn University of Technology, Estonia  
E-mail: natalja.gurvits@taltech.ee

Inna Sidorova  
Tallinn University of Technology, Estonia  
E-mail: natalja.gurvits@taltech.ee

EU law requires certain large companies to disclose information on the way they operate and manage social and environmental challenges. (European Commission, 2021) thus making corporate sustainability reporting a powerful tool contributing to transparency and accountability of business. The main aim of this article is to investigate whether sustainability reporting has become a common practice among business companies and find out the main features of disclosed items. We examine main trends and changes in sustainability reporting over the period of 2010-2020. We compare information on social and environmental events disclosed by companies listed on NASDAQ OMX Baltic Main List as of June 2010 and June 2020. Main results of the study reveal that non-financial disclosures have become actively implemented by companies in the form of integrating them into the annual financial reports under the separate section. However, the number of standalone sustainability reports remains low. It was also found that among the common features of non-financial disclosures are: personnel related policy, clients orientated strategy, obtained ISO certificates, EMAS registration, SDG and GRI referring.

Keywords: Corporate Social Responsibility, Environmental Report, Non-financial Reporting; Sustainability Reporting.

Financing Energy Transition in Poland: Possible Contribution of EU Funding

Elżbieta Kawecka-Wyrzykowska  
Warsaw School of Economics, Poland  
E-mail: ekawec@sgh.waw.pl

There is widespread agreement that the energy transition is necessary on a global scale to avert the threat of a climate catastrophe and that it is very costly. In the process of transformation of economies to low-emission economies, EU Member States can count on support from the funds of the organization (under the Multilateral Financial Framework and New Generation EU Program). The aim of the paper is to identify EU financial instruments from which Poland can count on supporting the energy transformation and the conditions for obtaining them, to estimate their scale and assess whether Poland will be able to meet these conditions and benefit from EU funds.

The thesis is that EU funds earmarked for Poland for the climate and energy transformation are seriously threatened due to Poland’s delays in implementing EU Green Deal goals and violation of the EU rule of law.

The main conclusions are as follows. Significant EU funds have been planned for Poland to finance energy restructuring and climate changes. However, the possibility of using an important part of them is postponed due to the lack of a credible program for the implementation of the EU climate goals and Poland’s non-compliance with the EU rule of law. As a result, the costs of the Polish energy transformation policy are rising. These include lost EU funds as well as – from day to day growing – penalties for breaking EU law. Energy sector restructuring in Poland is inevitable because of high GHG emissions; strong dependance of the economy on coal, one of the most CO2-emitting fuels; low energy efficiency, ageing power-generation stock etc. Without improvement of Poland’s relations with the EU it will not be possible
to find sufficient funds for necessary modernisation of Polish energy sector. The research method is a comparative analysis of Polish climate protection strategy and EU documents relating to programs supporting climate and energy transformation, their legal bases and criteria for their accessibility.

Keywords: EU climate policy, energy transition, EU funds for Poland, greenhouse gas emissions

Resilient Public Services and Robustness of its Management in the VUCA world

Eglė Gaulė
Kaunas University of Technology
E-mail: egle.gaule@ktu.lt

Donata Jovarauskienė
Kaunas University of Technology
E-mail: donata.jovarauskiene@ktu.lt

Rūta Petrauskienė
Kaunas University of Technology
E-mail: ruta.petauskiene@ktu.lt

Mindaugas Pravalinskas
Kaunas University of Technology
E-mail: mindaugas.pravalinskas@ktu.lt

Rimantas Rauleckas
Kaunas University of Technology
E-mail: rimantas.rauleckas@ktu.lt

The quarantine and post-quarantine period in 2020 and 2022, caused by the COVID-19 pandemic, reinforced previous knowledge on gaps in the public services (health care, education, social protection, housing, etc.) worldwide. These gaps are the result of sophistication public service systems in an increasingly complex environment. The properties of the public services context allow it to be described as a VUCA environment (Zeger, 2017). VUCA stands for volatile, when the change is rapid and unpredictable in its nature and extent; uncertain, when the present is unclear and the future is vague; complex when many different, interconnected factors come into play, with the potential to cause chaos and confusion; ambiguous when there is a lack of clarity or awareness about situations (Murray, 2019; Anzsog, 2017). Such an environment causes disruption of public services delivery which in turn calls for its resilience. The concept of resilience defines the ability of a system to cope with uncertainty while maintaining its performance. Resilience increases the ability to respond, cope and adapt to risks and failures resulting from socio-economic, long-term disruption or poor management (Davoudi, et al., 2012, White & O’Hare, 2014). The resilience of public services stems from the robustness of the management system of these services (Chaskin, 2008; Chenoweth & Stehlik, 2001; Riley, et al., 2005). In organization theory, robustness is defined as the “capacity of an organization to retain its fundamental pattern at core characteristics under changing conditions” (van Oss & van’t Hek, 2011, p. 34). “Organizational robustness is not necessarily designed, but it can emerge and become institutionalized through a specific configuration of internal routines, culture and memory” (Capano, Woo, 2017, p. 403). Robustness is a specific feature of a system that enables not only to retain its basic functional characteristics but also to change in response to shocks or stressors despite the uncertainty faced (Bednar, 2016). Robustness is a feature of public services management system that reflect its internal recovery capacity (ability to learn, adapt, cope and progress under some specific changing conditions) and is realized through internal structure, processes, routines, culture and memory. Despite a fundamental impetus in public service management theory (see Osborne, 2021; Osborne, et al., 2012; Osborne, et al. 2015). This approach is a new perspective in public service management research because there is no general research on resilience of public services and robustness of public services management (concepts from systems theory). In addition, as
long as the definition of the public services context remains unclear (VUCA is proposed here), essential gaps in public services management theory and practice persist.

Research question: how to strengthen robustness of public services management to make public service resilient?

Goal – meeting the VUCA environment conditions to determine the features of resilience of public services and robustness of public services management system to ensure the quality and accessibility of public services.

Keywords: public services, VUCA, resilient public services, robust public services management system.

How Augmented Reality rings an Advanced Way of Success in Manufacturing Industry in the UK

Kamaldeep Singh
Turiba University, Latvia
E-mail: Kampret0001@gmail.com

The importance of augmented reality (AR) has increased with the changing needs in the industries and organizations and improved technological implementations. The potential to provide real-time experience to the users with AR technology and devices is more beneficial for industrial operations than the use of traditional methods. The application of AR makes it feasible to conduct product-related tasks and visualize the final product with a digital transformation. The integration of AR technology in the manufacturing industry has appeared to be an advantage for businesses to enhance performance and achieve goals. It presents a better experience of reality with added features to the production processes in the industry and revolutionized the way the manufacturing sector serves UK customers and overseas.

This research article aimed at explicating the role of augmented reality in providing useful solutions to the manufacturing industry of the United Kingdom that brings success to the businesses. Formostly, the research objectives have been designed based on the aim in order to implement the research strategies and approach accordingly. As AR technology has emerged as a benefit to the manufacturing industry, it becomes an area of research to evaluate how this advanced technology brings success to the industry with its solutions and how the business leaders take complete benefit of AR by mitigating the challenges associated with it. This research included the use of both primary and secondary data for achieving the research objectives so that this research topic can be studied from different perspectives. A proper research strategy has been implemented and a research design has been formed for conducting the process of the research work, with the integration of the qualitative research method. The qualitative method has been suitable for addressing the research questions with in-depth information and detailed concepts. The interview conducted among the managers appeared to be an effective primary data collection tool for this research work. The qualitative data collected through interviews added information to the literature and supported the research findings with opinions and perceptions of the leaders in the manufacturing industry. The secondary data has been collected from previously published articles and journals, and this data has been analyzed by constructing themes for arranging the patterns in the data. The qualitative data has been helpful in getting a better view of the experience of AR technology users to get rich information about the advantage of implementing AR in the UK manufacturing industry. Integration of both the primary and secondary data collection method and analysis has been beneficial for deriving evidence-based research findings and drawing the conclusion. The key results depicted the requirement of AR in the manufacturing industry for making valuable revolutionary change in the
production processes that brings success to the businesses. Implementation of AR can be associated with some challenges in the manufacturing industry, but this research focused on the positive outcome of AR implementation by mitigating the issues with proper strategical approaches and deriving some solutions with respect to the application of AR devices in the manufacturing sector of the UK.

**Keywords:** Augmented Reality, real-time experience, manufacturing industry, Digital Transformation, Qualitative research

**Who will be the Next in Line to Join the Euro Area?**
**– A Business Cycle Synchronization Evidence**

*António Portugal Duarte*
CeBER, Faculty of Economics, Coimbra, Portugal
E-mail: portugal@fe.uc.pt

*Nuno Baetas da Silva*
CeBER, Faculty of Economics, Coimbra, Portugal
E-mail: nuno.silva@fe.uc.pt

*Martin Lábaj*
University of Economics, Bratislava, Slovakia
E-mail: martin.labaj@euba.sk

*Agáta Šuláková*
University of Economics, Bratislava, Slovakia
E-mail: agata.sulakova@euba.sk

Purpose of the study. The topic of the Euro Area enlargement is justifying as Croatia and Bulgaria have joined the ERM II in July 2020. Croatia, the newest member of EU, and Bulgaria have the greatest effort to adopt the euro as soon as possible compared to Sweden, which has been in the EU since 1995. For a country to adopt the euro it must meet the convergence criteria. But is it sufficient? We try to find out whether the candidates meet one of the criteria of the optimum currency area defined by Mundell (1961) – similar business cycles.

Tasks. The aim of this paper is to investigate business cycle synchronization not only between Eurozone and between Croatia and Bulgaria; but also, between other candidate countries to the Euro Area - Czech Republic, Hungary, Poland, Romania and Sweden. Is the business cycle between Croatia and Euro Area sufficient for the smooth functioning of the monetary union? And how strongly the other candidate countries are synchronized with the core economies and eurozone?

Methods. For our analysis of business cycles synchronisation, we use methodology according to (Hodrick and Prescott, 1997). We first analyse the stationary characteristics of the real GDP time-series and proceed to the selection of the most suitable ARIMA model to avoid the so-called end-points problem. Third, we identify and characterize the business cycles using the Hodrick-Prescott filter. Lastly, we obtain the correlation coefficients as a measure of business cycle synchronization between countries.

Results. We found out that Sweden and Czech Republic are the most prepared to join the Euro Area in the terms of business cycles synchronization criteria. We confirm that the weakest correlation between business cycles is between Romania and core economies, and between Bulgaria and the core economies. Four candidate countries are more synchronized with Germany that with France. But overall, candidate countries to the Euro Area are more synchronized with Euro Area than with core economy alone.

Conclusions. The results point to the existence of a strong business cycle correlation between Sweden and Euro Area, Germany, and France. Paradoxically, Sweden is a country which do not show much interest in joining the Euro Area. The second highest correlation was observed for the Czech Republic followed by Hungary, Poland and Croatia. In contrast, Bulgaria as the member of ERM II mechanism has the weakest business cycle synchronization with both the Euro Area and the core economies.

**Keywords:** Euro area, candidate countries, Hodrick-Prescott filter, business cycle synchronization, euro
The European Commission is seeking ways to ensure dignity at the workplace for a while now (e.g., European Commission, Rubenstein, 1990). This study adds to this goal by broadening the understanding of workplace dignity (WPD) and exploring its experiences from the perspective of employees’ position in the organizational hierarchy. The concept of WPD is rooted in the theory of humanistic management (Pirson, 2017). Employees experience WPD through affirmations or, more commonly, through denials of dignity and, after being denied, WPD can be restored through organizational and employee responses (Lucas, 2015). Most of the workplace dignity research has been focused on blue collar workers (e.g., Hamilton, et al., 2017) as it is assumed that WPD is more salient for people in jobs with harsh conditions and/or low wages (Lucas, 2017). However, certain studies show that dignity denials can stem from managerial position related work characteristics such as excessive overwork, increased involvement linked to work intensification, lack of appreciation, and other (Lucas et al., 2012; Tiwari et al., 2021). This is especially relevant considering middle management. Mid-managers experience a unique situation referred to as “the sandwich”, where conflicting pressures come from ensuring the wellbeing of the team and from complying with the decisions from the top-management (Bossmann et al., 2016). The pressures are even higher for female mid-managers, who are often given additional workloads, sometimes out of their job descriptions (Batara et al., 2018). Conflicting duties, lower levels of control and additional tasks possibly result in WPD violations. Therefore, the aim of this paper is to explore how mid-level managers experience injuries WPD and how they restore it. The paper will present the findings from semi-structured interviews with mid-managers from different industries in Lithuania. The qualitative data will be analyzed using thematic analysis.

**Keywords:** humanistic management, workplace dignity, dignity denials, restoration of dignity, middle management.

The purpose of this study was to explain the relationship between supply chain agility and job satisfaction among employees of knowledge-based companies in Shiraz. The present study was of an applied type in terms of purpose and of a descriptive and correlational type in terms of data collection and analysis. The statistical population of the present study was the managers and employees of knowledge-based companies located in Shiraz Science and Technology Park (n: 5780). The sample size was calculated in proportion to the population size using Cochran’s statistical formula; finally, 360 individuals were obtained and selected by stratified random sampling. Data collection instruments were Minnesota Satisfaction Questionnaire (MSQ, 1987) and Karami Supply Chain Agility Questionnaire (2000). Findings showed that all dimensions of supply chain agility had a significant positive relationship with job satisfaction. Also, all dimensions of supply chain agility were significantly able to positively predict job satisfaction.

**Keywords:** supply chain agility, job satisfaction, knowledge-based companies
An Antinarrative Inquiry into Stakeholder Innovation: Storytelling in an Issue-Driven Innovation System

Ida Parkkinen
Business School, University of Eastern Finland, Finland
E-mail: ida.parkkinen@uef.fi

Hanna Lehtimäki
Business School, University of Eastern Finland, Finland
E-mail: hanna.lehtimaki@uef.fi

The purpose of this study is to adopt an issue-driven stakeholder concept to make sense of innovation in a multi-stakeholder setting. We focus on exploring how antinarratives shape an issue-driven multistakeholder system, what kinds of antinarratives serve as constructs for sensemaking around issue-driven innovation, how stakeholders use antinarratives to promote their interests, and how stakeholder innovation unfolds in storytelling. We contribute to the issue-driven stakeholder literature on innovation by examining future value creation in an issue-driven innovation system of personalized medicine that is expected to lead to new products, services, practices, and business operations in medical diagnosis and care. Personalized medicine as a focal issue defines a stakeholder setting where multiple interdependent actors interact and focus on collaboratively innovating a way to address the issue. Drawing from a qualitative empirical study of personalized medicine stakeholders in Finland, we present findings on the role and use of stories about prospective value creation. More specifically, we analyze stakeholders’ storytelling as they make sense of integrating with each other and institutionalizing new practices for the stakeholder system. We identify three types of antinarrative—making sense of the issue, organizing around the issue, and establishing value creation around the issue. As a result, we introduce an issue-driven innovation system as a construct that refers to an emergent storytelling system in which various actors seek to find ways to collaborate and innovate collectively through narrating the stakes and prospects of value creation. Our study shows that stakeholders seek to leverage innovation as a joint stake in prospective value creation. In their unfolding storytelling, the imagination of future seizes tentative potentialities for future achievements. Our results enrich and further conceptualize the issue-driven stakeholder concept and elucidate a strategic perspective on tackling complex challenges in today's societies. We conclude by highlighting system-level storytelling that is a relevant currency for inter-organizational stakeholders who make prospective sense of the focal issue.

Keywords: antinarrative, storytelling, stakeholder innovation, value creation, personalized medicine

Involvement of employees in increasing the efficiency of production processes for SMEs in the Baltic States

Iveta Linina
Turiba University, Latvia
E-mail: iveta.linina@turiba.lv

Rosita Zvirgzdina
Turiba University, Latvia
E-mail: rosita@turiba.lv

Kamila Tišlerová
Prague University of Economics and Management, Czech Republic
E-mail: kamila.tislerova@centrum.cz

In the current global market, companies are focusing on ensuring their competitiveness. In today’s business environment, there are no uniform standards or models that would ensure business development and efficient use of existing resources. There are different management support standards, models, systems,
however, the unifying criterion of these systems is a satisfied customer and reduced costs, which will be the basis for ensuring long-term competitiveness. Thus, the involvement of employees in increasing the efficiency of production processes is essential and can be a decisive factor in ensuring the sustainable development of SMEs (small and medium-sized enterprises). In order to identify the factors contributing to the competitiveness of SMEs, the authors of this article have studied the nature of employee involvement in manufacturing companies. In order to achieve the set goals using the monographic or descriptive method, the authors have studied the theoretical basis of employee involvement, analyzing the development trends of the SME sector in the Baltics and empirically studying the needs of employee involvement and influencing factors in the production of SMEs in the Baltics. This study will provide companies with an understanding of the impact of employee involvement and the need to increase the efficiency of production processes. Analyzing the theoretical aspects, the authors have defined a unified approach to this situation from the point of view of its essence. Finally, the authors conclude that the involvement of employees in increasing the efficiency of production processes is one of the tools for ensuring the competitiveness of companies. 

Keywords: production, employees, process efficiency, competitiveness, SMEs