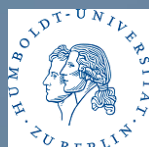


International Scientific Conference
Economics of Digital Transformation (EDT) 2022
DIGITOMICS

International Scientific Conference
“Dealing with Uncertainty”
Economics of Digital Transformation (EDT) 2022

June 23 – 25, 2022
Rijeka, Opatija, Croatia



THURSDAY, JUNE 23TH 2022

17.00 – 19.00 EARLY ONSITE REGISTRATION

FRIDAY, JUNE 24TH 2022

08.00 – 09.00 ONSITE REGISTRATION

09.00 – 09.30 OPENING AND CONFERENCE GREETINGS - Grand Hall of the Hotel Ambassador

Zoom platform link:

<https://us06web.zoom.us/j/89201285720?pwd=dDIyYb1ZEYWZQeUx6R1FGcGZDK21EZz09>

Saša Drezgić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia, President of the EDT Program Committee

Kristina Đukić, City of Opatija, Deputy Mayor

Martina Ciglević, Assistant Advisor to the President for Economics

Award of **BFC SEE certificates** to representatives of City of Crikvenica, and City of Jastrebarsko.

09.30 – 11.30 PLENARY SESSION - Grand Hall of the Hotel Ambassador

Zoom platform link:

<https://us06web.zoom.us/j/89201285720?pwd=dDIyYb1ZEYWZQeUx6R1FGcGZDK21EZz09>

Keynote speakers:

Corrado Macchiarelli Principal Economist at National Institute of Economic and Social Research (NIESR)

Uncertainty and the Costs of the Russia-Ukraine Conflict

Gazi Salah-Uddin, Linköping University, Linköping, Sweden

Bond market spillover Network during the Global Pandemic: What we learn from ASEAN-4 Markets

Kazi Sohag, Graduate School of Economics and Management, Ural Federal University, Russian Federation

ICT diffusion and local institutional quality in ASEAN countries: an application of dynamic common correlation effect – under GMM

Hoda Mansour, University of Business and Technology, College Business Administration, Jeddah, Kingdom of Saudi Arabia

How digital transformation is driving economic change

11.30 - 12.00 COFFEE BREAK

12.00 – 13.30 Gazi Salah Uddin, **How to write a research paper?**
Linköping University, Linköping, Sweden **Grand Hall of the Hotel Ambassador**
Zoom platform link: <https://zoom.us/j/92325833587>

14.00 – 16.00 Kazi Sohag, **Panel quantile regression in R**
Graduate School of Economics and Management, Ural Federal University, Russian Federation
Grand Hall of the Hotel Ambassador
Zoom platform link <https://us02web.zoom.us/j/81327067872>

12.00 – 13.30 SESSIONS – AS DESCRIBED IN THE INDIVIDUAL AGENDA

12.00 – 13.30 PRESENTATION OF THE EFRI EUROPEAN PROJECTS

Social & Creative Capacity Building of BLUE Economy Stakeholders to Effectively use CROWDFUNDING (BLUE CROWDFUNDING)/Inclusion through CrowdFunding”(“InCrowd”) –
Room C

13.30 – 15.00 LUNCH

15.00 – 16.30 SESSIONS – AS DESCRIBED IN THE INDIVIDUAL AGENDA

15.00 – 16.00 **PROMOTION OF THE UNIVERSITY TEXTBOOK ENTITLED**
OPERACIJSKI MENADŽMENT PUBLISHED BY EFRI (University of Rijeka) AND
OTHER PARTNER INSTITUTIONS FROM CROATIA (University of Zagreb, Faculty of
Economics and Business, University of Split, Faculty of Economics, Business and Tourism,
University Josip Juraj Strossmayer in Osijek, Faculty of Economics) - **Room C**
Zoom platform link: - <https://zoom.us/j/94241695830>

**16.30 – 20.30 SCIENTIFIC COLLOQUIUM FOR THE DOCTORAL STUDENTS OF
THE UNIVERSITY OF RIJEKA, FACULTY OF ECONOMICS AND BUSINESS – Room
B**

15.00 – 16.30 PANEL 1. Public interest technologies and smart cities – Room A

Zoom platform link:
<https://us06web.zoom.us/j/86760010765?pwd=Y0JrNXgzM09CanNjTzRhN3I2ZjArZz09>

Nicholas Zingale, Cleveland State University, USA
Introducing Society 5.0 and relationship to the future of cities

Alberto Ferraris, University of Turin, Turin, Italy
How to build a smarter city: evidence from public-private partnership

Moderator:

Saša Drezgić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of
Croatia

Panelists:

Cameron LeMack, Cleveland State University, USA

Julieta Matos Castano, University of Twente, Netherlands

Abigail Poeske, Cleveland State University, USA

Veljko Jeremić, University of Belgrade, Faculty of Organizational Sciences, Belgrade, Republic of Serbia

16.45 – 18:15 PANEL 2. Unger panel – Room A

Zoom platform link:

<https://us06web.zoom.us/j/86924173872?pwd=M2dDWmtrR09tbGNGYmZjbTdCa2sxQT09>

The Unger Family foundation has been working in Croatia since the mid-1990s, helping to support and foster economic and community development through independent research and civic education and engagement. The foundation has worked closely with USAID, the Harvard Kennedy School, Cleveland State University, and the University of Rijeka to engage Croatian political leaders and civil servants and improve the quality and professionalization and governance. More recently, the foundation has also supported the efforts of individual scholars who are conducting research in various related fields. The panel will give a group of these scholars a chance to share their experiences working with the foundation and to present some of their current research related to issues of governance, economic development, and smart cities.

20.15 - GALA DINNER

SATURDAY, JUNE 25TH 2022

10.00 – 16.00 CONFERENCE FOR THE DOCTORAL STUDENTS OF THE UNIVERSITY OF RIJEKA, FACULTY OF ECONOMICS AND BUSINESS – Room A

Zoom platform link: <https://us06web.zoom.us/j/89390910363>

SESSION 1
International Trade and Global Value Chains

Friday, June 24th 2022, 12.00 -13.30 – ROOM A

Zoom platform link:

<https://us06web.zoom.us/j/88421736644?pwd=TWhtdGc1bG1wWUZoU3MzMXcxTzluUT09>

Chair Person and Reporter:

Vinko Zaninović, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Petra Adelajda Zaninović, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Do ICT and technological development facilitate supply chain trade?

Maja Bašić, University of Zagreb, Faculty of Economics and Business, Zagreb, Republic of Croatia

Mile Bošnjak, University of Zagreb, Faculty of Economics and Business, Zagreb, Republic of Croatia

Ivan Novak, University of Zagreb, Faculty of Economics and Business, Zagreb, Republic of Croatia

Productivity shocks and industry specific effects on export and internationalisation: Panel VAR approach

William B. Z. Vukson, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

The Emergence of Joint Ventures and Alliances in the Automotive Global Value Chain
Early Theoretical Foundations of Macro Financialization of Hard Investment Networks from 1970 to 1990

William B. Z. Vukson, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Network Dynamics in the 1990s

The Challenges in Identifying Joint Ventures in the Automotive Global Value Chain (GVC)

Vinko Zaninović, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Facilitating trade in intermediate goods: case of EU

Vinko Zaninović, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia

Alen Host, University of Rijeka, Faculty of Economics and Business, Rijeka, Croatia

Alen Jugović, University of Rijeka, Faculty of Maritime Studies, Rijeka, Croatia

Gravity model on micro data: case of Primorje-Gorski Kotar County

SESSION 2
Contemporary finance, accounting and controlling

Friday, June 24th 2022, 12.00 -13.30 – ROOM B

Zoom platform link: <https://us06web.zoom.us/j/89081485108>

Chair Person and Reporter:

Saša Žiković, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Davor Vašiček, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Bojan Tomić, Effectus University College for Law and Finance, Zagreb, Republic of Croatia

Saša Žiković, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Lorena Jovanović, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Crypto portfolio optimization through lens of variance vs tail risk measures

Mathias Andersson, Linköping University, Department of Management and Engineering, Linköping, Sweden

Andreas Persson, Linköping University, Department of Management and Engineering, Linköping, Sweden

Fixed-Income Alternatives: The Role of SPACs and Emerging Market Bonds in Traditional Asset Allocation

Jasena Torma, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Nikola Motik, Croatian Bureau of Statistics, Zagreb, Republic of Croatia

Companies and Wage Shifting due to changes in Personal Income Taxes: Empirical evidence from a Croatian Tax Reform

Davor Vašiček, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Methodological challenges of consolidating general government financial statements

Marina Čolig, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Saša Drezgić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Reflections on the evolution of the fiscal equalization system of the Republic of Croatia

Antonija Petrić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Neda Vitezić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

The relation between uncertainty, controllers' output quality and enterprise performance

SESSION 3
Regulation Economics and Smart Governments, Regions and Cities

Friday, June 24th 2022, 12.00 -13.30 – ROOM D

Zoom platform link: <https://us06web.zoom.us/j/81630210736>

Chair Person and Reporter:

Dejan Bodul, University of Rijeka, Faculty of Law, Rijeka, Republic of Croatia

Ana Pošćić, University of Rijeka, Faculty of Law, Rijeka, Republic of Croatia

Ana Pošćić, University of Rijeka, Faculty of Law, Rijeka, Republic of Croatia

Adrijana Martinović, University of Rijeka, Faculty of Law, Rijeka, Republic of Croatia

The role of EU competition law in the digital and sustainable economy

Dejan Bodul, University of Rijeka, Faculty of Law, Rijeka, Republic of Croatia

Marko Tomljanović, University of Rijeka, Faculty of Economics, Rijeka, Republic of Croatia

DEFINED DURATION OF COURT PROCEEDINGS: will this certainty be preconditions for attracting investors?

Viviana Vaira, University of Turin, Torino, Italy

Fostering Smart Cities and Innovation of local public administrations - a comparative perspective

Ana Babić, University of Rijeka, Faculty of Economics And Business, Rijeka, Republic of Croatia

Evaluation of the environment in smart Croatian cities through indicators of the smart environment dimension in the function of urban sustainability

Francesco Molinari, University of Rijeka, Faculty of Economics And Business, Rijeka, Croatia

Rethinking public service quality in the era of co-creation

Francesco Molinari, University of Rijeka, Faculty of Economics And Business, Rijeka, Croatia

Hrvoje Katunar, University of Rijeka, Faculty of Economics And Business, Rijeka, Croatia

Dragan Čišić, University of Rijeka, Faculty of Maritime Studies

Good policy takes time. The acyclical nature of mainstreaming processes in conditions of uncertainty

SESSION 4
Innovation Economics and Sustainable Development

Friday, June 24th 2022, 15.00 -16.30 – ROOM B

Zoom platform link: <https://us06web.zoom.us/j/88279798555>

Chair Person and Reporter:

Pavle Jakovac, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Jasmina Dlačić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Nela Vlahinić Lenz, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Barbara Fajdetić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Economic Globalization and the Environment: Data Evidence and Policy Setting

Pavle Jakovac, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Mario Pečarić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Tino Kusanović, University of Split, University Department of Professional Studies, Split, Republic of Croatia

Economy in colours: Blue Economy in the EU and the position of Croatia

Antonija Srok, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Petra Došenovič Bonča, University of Ljubljana, School of Economics and Business, Ljubljana, Slovenia

ICT-enabled healthcare and economic evaluations: a bibliometric analysis

Ivana Knežević, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Jasmina Dlačić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Dina Lončarić, University of Rijeka, Faculty of Tourism and Hospitality Management, Opatija, Republic of Croatia

The role of marketing communication in perception of information availability about renewable energy sources

Hoda Mansour, University of Business and Technology, College Business Administration, Jeddah, Kingdom of Saudi Arabia

The impact of information and communication technologies on economic growth: The case of Egypt

Alemka Šegota, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Marko Tomljanović, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

R&D efficiency analysis of the EU member states

Viktorija Kunštek, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

The Development of the Digital Density Index of the Public Sector in the Republic of Croatia

Michaela Eklund, Linköping University, Linköping, Sweden

Adrijana Omanović, Linköping University, Linköping, Sweden

Risk Spillover Network Connectedness between infrastructure and other asset classes -The aftermath of the COVID19 pandemic

Christoffer Wadström, Linköping University, Linköping, Sweden

The influence of domestic, global and market uncertainty on supplied electric power: A study of the Swedish energy system

Vladimir Valentić, University of Rijeka, Faculty of Engineering, Rijeka, Republic of Croatia

Saša Žiković, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Alfredo Višković, University of Rijeka, Faculty of Engineering, Rijeka, Republic of Croatia

Smart grid concept for electrical power system: a case of Croatian region

Dinko Đurđević, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Saša Žiković, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Incentivizing sustainable sewage sludge management within bioeconomy concept

Živanka Miladinović Bogavac, Faculty of Business and Law, University MB, Belgrade, Serbia;

Sfyrakis Evangelos, Faculty of Business and Law, University MB, Belgrade, Serbia

Adel Bajramović, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Digital signature and possibilities of its application in the business system of Bosnia and Herzegovina

SESSION 5
**Entrepreneurship and Organizational Issues in Contemporary
Business Environment**

Friday, June 24th 2022, 15.00 -16.30 – ROOM D

Zoom platform link: <https://us06web.zoom.us/j/81904500892>

Chair Person and Reporter:

Sanja Gongeta, College of Applied Sciences Lavoslav Ružička, Vukovar, Republic of Croatia

Višnja Smoje, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Dunja Škalamera-Alilović, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Mirjana Grčić Fabić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Digitalization and self-employment: A literature review

Jūlija Mironova, ISMA University of Applied Science, Department of Management, Riga, Latvia

Biruta Sloka, University of Latvia, Faculty of Business, Management and Economics, Riga, Latvia

Valentīna Djakona, ISMA University of Applied Science, Department of Management, Riga, Latvia

Importance of organisational culture in higher education institutions

Biruta Sloka, University of Latvia, Faculty of Business, Management and Economics, Riga, Latvia

Ludmila Lozova, University of Latvia, Faculty of Business, Management and Economics, Riga, Latvia

Construction Sector in Latvia: E-Governance General Lines and CO2 Emissions? Reduction

Sanja Gongeta, College of Applied Sciences Lavoslav Ružička, Vukovar, Republic of Croatia

Olena Marynina, Marketing department at National Aviation University, Ukraine and College of Applied Sciences Lavoslav Ružička, Vukovar, Republic of Croatia

Tihana Sudarić, College of Applied Sciences Lavoslav Ružička, Vukovar, Republic of Croatia

Starting a Business in Ukraine - A Comparative Overview of Pre-War and Wartime Regulation

Jelena J. Stanković, University of Niš, Faculty of Economics, Niš, Republic of Serbia

Ivana Marjanović, University of Niš, Faculty of Economics, Niš, Republic of Serbia

Sandra Milanović, University of Niš, Innovation Center, Niš, Republic of Serbia

Milica Jovanović Vujatović, University of Niš, Innovation Center, Niš, Republic of Serbia

Determinants of Entrepreneurial Dynamics: The Case of the European Union

Timotej Jagrič, University of Maribor, Faculty of Economics and Business, Maribor, Slovenia
Ana Malnar, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Dealing with risk in (post)COVID-19 pandemic era; The case of Croatia

Nenad Vretenar, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Jana Katunar, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Maja Kardum, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Agency in Pharmaceuticals

Monika Arsova, University Goce Delčev - Štip, North Macedonia, Faculty of Economics, Shtip, Republic of North Macedonia

Petra Adelajda Zaninović, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Digital marketing in the trade companies

Maja Matanić Vautmans, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Marijana Oreb, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Alen Matanić, University of Zagreb, Faculty of Political Science, Zagreb, Republic of Croatia

Long term care (LTC) in Croatia; New challenges in the private sector

Ivan Prudky, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Sports events: dealing with uncertainty

SESSION 6
Special Session on Migrations and Labour Market

Friday, June 24th 2022, 16.15 -18.00 – ROOM C

Zoom platform link: <https://zoom.us/j/95809034725>

Chair Person and Reporter:

Danijela Sokolić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Aleksandar Erceg, Josip Juraj Strossmayer University of Osijek, Faculty of Economics, Osijek, Republic of Croatia

HEI graduate students' migration – a review

Marina Stanić, Josip Juraj Strossmayer University of Osijek, Faculty of Economics, Osijek, Republic of Croatia

Push and pull factors of youth migration: The analysis of socio-economic context

Julia Perić, Josip Juraj Strossmayer University of Osijek, Faculty of Economics, Osijek, Republic of Croatia

The role of universities in migration of young people

Ljerka Sedlan Kőnig, Josip Juraj Strossmayer University of Osijek, Faculty of Economics, Osijek, Republic of Croatia

The role of extracurricular activities on subsequent mobility of Croatian university students

Ines Kersan-Škabić, Juraj Dobrila University of Pula, Faculty of Economics and Tourism “Dr. Mijo Mirković”, Pula, Republic of Croatia

Lela Tijanić, Juraj Dobrila University of Pula, Faculty of Economics and Tourism “Dr. Mijo Mirković”, Pula, Republic of Croatia

The Impact of Remittances on Economic Development in the Central and East European Countries

Danijela Sokolić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Davor Mance, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Iva Zdrilić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Youth mobility, labour market and anchoring factors to international migrations

Ana Štambuk, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Andrea Arbula Blecich, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Goran Karanović, University of Rijeka, Faculty of Tourism and Hospitality Management, Opatija, Republic of Croatia

Relationship between competences from the perception of university students and their tendency to migrate

Zoran Ježić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Students' views on migrations - why do they choose to move and what can we learn from this?

Viktorija Knapić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Lara Jelenc, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Matia Torbarina, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Worker well-being in the post-pandemic job design

Boris Zatezalo, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Davor Mance, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Analysis of opportunity costs of students' time

Igor Cvečić, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Alen Host, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Digital Skills in Europe and Student Migration

BOOK OF ABSTRACTS

SESSION 1 International Trade and Global Value Chains

Petra Adelajda Zaninović, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Do ICT and technological development facilitate supply chain trade?

The aim of this paper is to estimate the impact of ICT and technological development of countries on supply chain trade. Domestic value added (DVAFX) included in gross foreign exports from the Eora MRIO database is used as a proxy measure of supply chain trade, while the ICT variable is constructed using confirmatory factor analysis. The economic complexity index developed by Harvard's Growth Lab is used as a proxy variable for the country's technological development. The analysis is based on the structural gravity model estimated with the Poisson Pseudo-Maximum Likelihood Estimator (PPML). Together with the standard gravity regressors, the model includes the bilateral position of countries in the supply chain. Our panel dataset covers the period from 2000 to 2019 and includes 130 countries in the world. To control for the potential source of endogeneity, the model includes reporter and partner country fixed effects, yearly fixed effects, and country-pair fixed effects. The results confirm a statistically significant relationship between the country's technological development and supply-chain trade. Technological development enables country to produce more complex, higher value-added products and thus to be more upstream positioned in the supply chain. The more upstream the country is in the supply chain, the more domestic value added is included in its exports.

Key words: ICT, technology, supply chain trade, trade in value-added, PPML

Maja Bašić, University of Zagreb, Faculty of Economics and Business, Zagreb, Republic of Croatia

Mile Bošnjak, University of Zagreb, Faculty of Economics and Business, Zagreb, Republic of Croatia

Ivan Novak, University of Zagreb, Faculty of Economics and Business, Zagreb, Republic of Croatia

Productivity shocks and industry specific effects on export and internationalisation: Panel VAR approach

This study examines industry specific effects of shocks in total factor productivity, labour productivity and capital productivity on exports and internationalisation of the largest Croatian exporters. 300 largest exporters' microfinancial data for the period 2006-2015 are tested using a panel VAR method. The results show that shocks in total factor productivity Granger cause changes in manufacturing, water supply, wholesale, accommodation, professional services and administrative services sectors; shocks in labour productivity in manufacturing, electricity, wholesale, transportation, accommodation and professional services sectors, while shocks in capital productivity in agriculture, manufacturing, electricity and construction sectors. In terms of the effects of shocks to internationalisation, total factor productivity Granger causes changes in manufacturing, water supply and professional services sectors; labour productivity in agriculture, mining, electricity, wholesale, transportation, information and communication and professional services sectors; and capital productivity in agriculture, electricity and professional services

sectors. The results imply that an increase in labour and capital productivity jointly contribute to changes in agriculture, electricity and professional services sectors, while an increase in labour productivity is more important in mining, wholesale, transportation and information and communication sectors. Managerial and policy implications of productivity shocks are discussed in the paper.

Key words: export, productivity, VAR, industry effects, Croatia

William B. Z. Vukson, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

**The Emergence of Joint Ventures and Alliances in the Automotive Global Value Chain
Early Theoretical Foundations of Macro Financialization of Hard Investment Networks
from 1970 to 1990**

Investment relations can be re-considered in terms of establishing “hard” and “soft” networks in organizations such as large multinational enterprises that characterize the automotive global value chain. The demarcation between the two is complex, but can be viewed in terms of trust and commitment after a soft network as a joint-venture or alliance has been established, *ex post*. Central to this transformation, *ex ante*, are key financial and risk influences both at the macro and micro levels in the operations of a firm. This research paper attempts to integrate two theories: “Financialization” and “Narrative” to show how hard investment networks (FDI, M&A) have been disrupted by monetary policy, trade and investment policies from the perspective of the North American based “Big 3” auto firms from 1970 to 1990. This disruption and attenuation of traditional hard network arrangements in investment relations represents a growing trade-off towards a lesser risk and lesser financial commitment that is offered by soft networks via joint ventures and alliances. Further, I argue that the emergence of mediating behavioural variables such as stock buybacks in organizations and firms, *ex post*, are outcomes that are inherent in this type of transformation.

Key words: Investment; Capital; Hard Networks; Soft Networks; Joint-Ventures; Alliances; Mergers and Acquisitions; FDI; Monetary Policy; Credit Policy; Plaza Accords; Louvre Accords, FTA; Nafta.

William B. Z. Vukson, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Network Dynamics in the 1990s

The Challenges in Identifying Joint Ventures in the Automotive Global Value Chain (GVC)

This paper contributes previously unpublished qualitative insight into hard (M&A, FDI, Internal Investments) and soft (Joint Ventures and Alliances) investment relations within the automotive global value chain (GVC) in the transformative decade of the 1990s. By nominating this decade in our inquiry as ground zero ($t=0$), we are able to gauge the relative developments in the prior *ex ante* period (1970-1990), as well as the *ex post* years (2000-2020) in developing an understanding of a comprehensive longer term investment-network trend within this sector from 1970 to 2020. The qualitative input in this inquiry is unique in that it carried the authoritative attributes of

a *continuous survey* and consisted of an application of academic research insights and research papers from a panel of academic economists participating in a decade long project. Content in the form of article submissions and consultations came to define the geopolitical, technological and policy-driven attitudes to the newly emerging investment network relations in newly emerging market economies that were in previous decades defined by their financial and risk commitments and applications. We construct a Network Financialization Indicator Model (NIFM) from the sentiments expressed by our contributors that gauge the relative trade-offs between hard and soft networks. Additionally, financialization accumulation theory is invoked to assist in identifying and understanding the emerging demarcation between soft and hard networks in this revolutionary decade.

Key words: investment, capital; hard networks, soft networks, joint-ventures, alliances, mergers and acquisitions, FDI, monetary policy, credit policy; Plaza Accords; Louvre Accords, FTA, Nafta.

Vinko Zaninović, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Facilitating trade in intermediate goods: case of EU

A side effect of economic globalisation and new information and communication technologies is increasing fragmentation of the production process across different countries and continents, which contributes to the increase in the trade in intermediate inputs, which rose to almost 2/3 of total world trade. The objective of this paper is to quantify the effect that trade facilitation has on trade in intermediates on the sample of EU28 countries during 2010-2018 period. We estimate augmented gravity model on bilateral trade data using Poisson Pseudo Maximum Likelihood (PPML) estimator. Our results suggest that ICT, as expected, has significant and positive effect on trade in intermediate inputs, when controlling for other gravity model variables such as GDPs of trading partners, distance, contiguity, existence of free trade agreement, exchange rate and common culture proxies. Our results support the global trend of development and investment in new ICT technologies that can not only contribute to the further growth of trade in intermediates but help neutralize negative effect of recent global economic shocks.

Key words: gravity model, micro data, county level

Vinko Zaninović, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Alen Host, University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

Alen Jugović, University of Rijeka, Faculty of Maritime Studies, Rijeka, Republic of Croatia

Gravity model on micro data: case of Primorje-Gorski Kotar County

Since its introduction by Jan Tinbergen in the late 1960s, the gravity model has become one of the most widely used models in empirical international trade analysis. Aim of this paper is to empirically investigate differences in the estimated coefficients of the gravity model estimations using different data aggregation levels. In this paper we estimated augmented gravity model on product-country partner level and county-product-country partner level, with county being

Primorje-Gorski Kotar County. Using Poisson Pseudo-Maximum Likelihood Estimator, on data from 2008 to 2019, we estimated two versions of gravity model, one with absolute values of exports and imports as dependent variables, second with unit prices of exports and imports as dependent variables, which enabled us to expand the research scope. We also estimated gravity model for intermediate, capital and consumption goods separately. Our results show that there are significant differences in the size of the estimated coefficients between two samples, that can mostly be explained by the geographical position of the Primorje-Gorski Kotar County. Most important contribution of the paper is that from the results we can quantify these differences.

Key words: gravity model, micro data, county level

SESSION 2

Contemporary finance, accounting and controlling

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Crypto portfolio optimization through lens of variance vs tail risk measures

Cryptocurrencies are a type of novel digital asset that is very hard to link to a classical approach of tying intrinsic value to market fundamentals which is common in financial markets. When choosing the optimal portfolio for a given investor it is paramount to consider the risk vs expected return trade-off. The choice of an adequate risk measure depends to a large extent on the characteristics and dynamics of the underlying assets. Since the risk – reward optimization target can be adjusted for a broad choice of risk measures in this paper we will test the performance of the classical risk measure i.e. standard deviation versus a tail risk measure such as expected tail loss (ETL). Our goal is to find which of the two offers the best performance for a portfolio of cryptocurrencies and if the differences are statistically significant. The setup for our analysis is testing of two optimization targets (MinVar and MinETL) on 10 portfolios of cryptocurrencies randomly chosen from a sample of 70 cryptocurrencies with the highest market capitalization.

Key words: portfolio optimization, cryptocurrency, risk evaluation, investments

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Hedging capabilities of cryptocurrencies in a period of uncertainty

In recent years, research on cryptocurrencies has increased. Primarily, the cause of the movement of their prices in the market and the possibility of using them in a portfolio with other traditional asset classes is studied. We are currently in a period of uncertainty in the financial markets, and such an environment is ideal to test the hedging capabilities of cryptocurrencies, a theory that is very popular in the crypto community where cryptocurrencies are often (especially Bitcoin) compared to gold. The academic research to date is also divided: While some claim that cryptocurrencies have inflation hedging capabilities, others deny it. The question arises as to why there are so many different conclusions on this topic, and the current economic situation, manifested by inflation and other economic and political developments, is the ideal time to review the previous research. The goal of this paper is to answer the question of whether cryptocurrencies can be compared to safe heaven investments, i.e., investments that have hedging capabilities in times of market uncertainty. Following previous research, appropriate variables in the model are selected for the purposes of empirical analysis. Using the generally accepted methodology for this type of comparison, the question of the relationship between market uncertainty and the modern asset class versus the traditional asset class is answered.

Key words: Cryptocurrencies, Traditional asset class, Hedging capabilities, Uncertainty

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Fixed-Income Alternatives: The Role of SPACs and Emerging Market Bonds in Traditional Asset Allocation

Using multivariate GARCH-type modelling we show how two fixed-income alternatives, SPACs and emerging market bonds, perform in a dynamic multi-asset portfolio setting. With conventional bonds currently providing a negative real yield we argue the importance of investors and portfolio managers to seek higher-yielding alternatives with fixed-income characteristics. Constructing portfolios based on minimizing the time-varying conditional volatility, the emerging market bond portfolio achieve the highest risk-adjusted return. Weighing the fixed-income alternatives equally, the SPAC portfolio rank the highest. Using the Cornish-Fisher expansion to incorporate third and fourth moments into Value-at-Risk and Expected Shortfall risk measures, emerging market bonds are found be a negative contributor to portfolio risk in extreme tail events. The measures based on normality provide higher contributions, indicating that emerging market bond skewness and kurtosis are useful additions to conventional portfolios during market turmoil. SPACs are a good risk diversifier for medium tail events and show increasing equity-like characteristics at low tail probabilities. Our findings can be used as recommendations for investors seeking higher-yield fixed-income alternatives to conventional bonds.

Key words: Fixed-Income Alternatives, DCC-GARCH, SPACs, Emerging Market Bonds, Modified Risk Measures

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Companies and Wage Shifting due to changes in Personal Income Taxes: Empirical evidence from a Croatian Tax Reform

In 2017 Croatian tax system went through large income tax reform in which marginal tax rates were significantly decreased and individual tax-free allowance was increased. In theory, these income tax changes should increase wages or employment-related income if employers do not change employment contracts. But, the reform also increased the incentive to avoid taxation by changing workers income. Empirical evidence on the degree of personal income tax shifting to employees via the wage level is highly controversial and rare. Using a single country event study with a panel of Croatian workers, we use difference-in difference method were we treated private sector as a treatment group and state-owned companies as a valid control group to answer our research question: Do wages rise when income related taxes fall? This paper estimates that on average wages after tax reform have increased but this reform was not effective for each individual particularly depending on type of economic activity. Our paper links on a vast literature regarding the business tax competition to small but growing literature on the effective incidence of the income taxation.

Key words: Government policy, incidence, tax reform, wages.

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Methodological challenges of consolidating general government financial statements

Consolidated financial statements are the financial statements of a group of entities presented as if they were a single economic entity. The basic principles of consolidation of financial statements are economic unity, unique methodological foundation for recognition of the elements of financial statements, a unique reporting period and unique reporting monetary unity. International Public Accounting Standards 6 - Consolidated and Separate Financial Statements, and the European System of Accounts 2010 (ESA 2010) provide an expert methodological framework for carrying out the process of consolidating the financial statements of all entities in the general government sector. Following the application of ESA 2010, the general government sector in the Republic of Croatia has been expanded to include the units that use very different accounting and financial reporting systems depending on their legal status. Therefore, in order to prepare the consolidated financial report of general government, it is necessary to make methodological adjustment and reclassification of elements of the financial statements of entrepreneurs, foundations, banks and non-profit organizations according to the rules of government accounting. The article presents the results of qualitative analysis of the differences in the accounting systems of the entities participating in the general government sector. Also, procedures are proposed for their adjustment for the purpose of establishing a single methodological basis necessary for the preparation of the consolidated financial report of the general government.

Key words: consolidation, financial statements, general government, ESA 2010,

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The relation between uncertainty, controllers' output quality, and enterprise performance

Uncertainty of the environment, rapid technological progress, and general intensity of competition contribute to the growing need to connect controllers and managers in the decision-making process. Controllers as business analysts are more and more advisors, so the relationship between them and managers is becoming a partnership. The results of controllers are various analyzes and reports based on numerous data, so in the era of Big Data, their quality is increasingly important. The aim of this paper is to prove that there is a positive relationship between uncertainty in the environment and the controller's output in both content and quality. Indirectly, this has an impact on the achieved business results measured by various indicators. A survey on a sample of 87 controllers from large Croatian companies will be used to prove this thesis. Thereby the PLS-SEM method will be applied for model testing. The results suggest that environmental uncertainty, including the intensity of competition and accelerated technological progress, have a positive and significant effect on the quality of controllers' outputs and, ultimately, on business performance. The results support a new paradigm about the need for an advisory role of the controller through a partnership with management.

Key words: controlling, uncertainty, enterprise performance

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Effects of inflation on the economic uncertainty and instability: An impact study of the Republic of Croatia

This paper examines the impact of inflation on the economy of the Republic of Croatia. From the beginning of the COVID-19 crisis until today, inflation rates have increased in all countries of the world and it is currently one of the most important economic problem. The current inflation is special in the sense it is caused: on the one hand, by high aggregate demand, which was observed especially after the first unlocking of the economy, and, on the other hand, it is driven mainly by external shocks such as high energy prices and the supply chain cracking. The combined impact of these effects leads to an increase in inflation expectations, which can lead to a decline in economic welfare or even a recession. This article uses various descriptive and econometric estimates to examine how the increase in inflation affects tax revenues, investment, and economic growth in the Republic of Croatia. Although the results cannot fully confirm whether there is a causal relationship, the results suggest that inflation has a negative effect on the analyzed variables.

Key words: economic growth, inflation, investment, Republic of Croatia, tax revenues

SESSION 3
Regulation Economics and Smart Governments, Regions and Cities

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The role of EU competition law in the digital and sustainable economy

In the recent years, the transformation to a sustainable economy has become a key political priority of the EU. It is declared to be ‘essential for the wellbeing of our society and our planet’. The green and digital, or the ‘twin’ transition towards sustainable economy is an ongoing process, which will shape our lives and economy in the years to come. It needs to be facilitated not only by the strong political commitment, but also by a robust legal framework, which is at the same time flexible enough to take into account the innovative dimension of this transition. Undoubtedly, sustainability is embedded in the EU’s constitutional legal framework. But how is it reflected in a specific area of law, namely competition law? Although the competition law and policy are not among the most conspicuous, and definitely not among the most appropriate tools for achieving sustainable development goals, their role in the twin transition should not be overlooked. The twin transition rests primarily on innovative business models, which sometimes challenge the traditional competition enforcement standards. This paper will explore the impact of the green and digital transition in the EU competition law. Digitalisation, innovation, and introduction of environmentally friendly production processes create crucial and complex intersections capable of achieving long-term sustainability gains. However, to produce a large-scale impact, they sometimes require some kind of cooperation across the supply chains, or among competitors, which falls under the scrutiny of competition law. The current approach of the legal profession to such arrangements has often been criticised as ‘too conservative’ (Vestager, 2019). Many authors agree that ‘competition law should not be part of the problem, but part of the solution’ (Holmes, 2020), and that it should not obstruct industry initiatives intended to deliver sustainability objectives. The authors will examine the goals and values of the EU competition law and policy in view of the current sustainability challenges, and focus on the question whether the EU competition law live up to the challenge of the twin transition?

Key words: sustainable development, green and digital transition, EU competition law and policy

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DEFINED DURATION OF COURT PROCEEDINGS: will this certainty be preconditions for attracting investors?

The organization of an efficient judicial apparatus is the primary task of the legislative and the executive branch, which must provide the judiciary with the necessary working conditions. Namely, despite a number of successful measures taken to address the excessive length of court proceedings, it has been identified as a systemic problem by the highest judicial bodies, as well as the doctrine. The aim of this paper is to answer the legal dilemma of whether the duration of court proceedings should be prescribed by law, or is sufficient legal standard determined by autonomous terms such as "reasonable time", "Fair trial" and / or "urgent action". The secondary objective of this analysis is to find an answer to the question of which model meets the requirement of effective legal protection for investors from the perspective of relevant EU law standards.

Key words: judiciary, duration of proceedings, attracting investors.

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Fostering Smart Cities and Innovation of local public administrations - a comparative perspective

Smart City-paradigm and the digital transformation of the public sector introduced new challenges for traditional local governance models, which need to understand, assimilate, and spread innovation. In times of digital revolution and complex societies, local governments require innovative administration processes crossed by three main components: information and communication technologies integration (digitalization); analytical tools that convert data into usable information (informatisation); and organisational structures promoting collaboration and smart governance (open government and innovation). As recently observed, the digital transition of local government administrations requires a deep reengineering of organisational structures and governance models, since the mere adaptation from analogical to digital tools does not guarantee, per se, good administration. This leads to an important transformation in the way cities and territories are governed and introduces new challenges to the traditional local governance models. This contribution aims to analyse how the implementation of the Government-as-a-Platform Approach (GaaP) impacts on local governance and innovation by focusing on a compared analysis of the ongoing "platformisation" and on a critical perspective of the Italian GaaP implementation strategy and the EU Single Digital Gateway.

Key words: Smart Cities, Innovation strategies for local administration, EU Single Digital Gateway

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Evaluation of the environment in smart Croatian cities through indicators of the smart environment dimension in the function of urban sustainability

This article presents the evaluation of the environment for 127 Croatian cities, ie the concept of smart city through indicators of smart environment in the function of urban sustainability and provides information on total electricity consumption per capita, electricity consumption for public street lighting, municipal waste per capita, greenhouse gas emissions, particulate matter (PM10) concentration, the share of budget expenditures for environmental protection and the share of residents connected to the water supply system. The evaluation includes quantitative values of these indicators for 127 cities of the Republic of Croatia, which were collected through systems with integrated information and communication technology (IKT), Internet of Things (IOT), Cloud, Big data, geographic information system (GIS) and which enable measurements in Croatian cities. In addition to the evaluation of these indicators, the paper presents a detailed overview of indicators and models used in previous studies. The results of the analysis are presented by the index, ie the average values of these indicators for each city, and according to the results the greatest environmental impact is present in large Croatian cities (Pula, Rijeka, Osijek, Bjelovar, Zadar, Kutina) and smaller cities that are tourist centers (Cres, Novalja, Hvar, Poreč), while the smallest impact on the environment was recorded by small Croatian towns such as Klanjec, Vrbovsko, Otočac.

Key words: sustainability, smart cities, smart environment, indicators, index

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Rethinking public service quality in the era of co-creation

With the completion of digital transformation of government structures and processes, the need for assessing the value and impacts of fully electronic services on their beneficiaries will become more and more evident. However, in many cases digitalisation enhances the fundamental characteristic of a service, as distinct from a good, namely that of being co-produced by the user jointly with the provider, in a unique and unrepeatable instance. This known fact adds to the plethora of current experimentations and innovations with services – also from the public sector – being designed, monitored, or evaluated in a collaborative fashion with their target audiences. The paper reflects on the implications of digitalisation and co-creation for redefining and measuring public service quality. An application is proposed that makes use of and evolves from the well-known gap analysis of the SERVQUAL evaluation approach.

Key words: public service, quality assessment, co-creation

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Good policy takes time. The acyclical nature of mainstreaming processes in conditions of uncertainty

Time doesn't come back, except in the most popular representations of policy processes. The paper reevaluates time and uncertainty as key influencing factors of public policies and proposes alternative visualizations to the all-too-familiar (and almost orphan) policy making cycle. To highlight the complexity, but also the time dependency, of "real" or "realistic" policy models, the concrete case of mainstreaming of Interreg MED programme results is proposed. To capture the influence of uncertainty and the cause-effect relationships between key input and output variables, the advantages of using Oriented Bayesian Nets as tools for model visualisation are presented and discussed.

Key words: policy processes, policy mainstreaming, policy modeling, oriented bayesian nets

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The purpose of this article is to provide an overview of the implementation of digital transformation in Indonesia. This article uses case studies and a systematic literature review to explore how collaboration can play an important role in the implementation of digital transformation in local governments in Indonesia, more specifically in West Java Province which has a special institution in implementing digital transformation, namely Jabar Digital Services (JDS). The presence of JDS is a strategic step taken in realizing digital-based local government. Preliminary findings show that JDS does not originate from the purity of the bureaucracy, but rather an institution that was formed specifically according to regional needs in dealing with the acceleration of digital transformation. This means that not all local governments in Indonesia have these digital-based institutions, so the digital transformation gap in Indonesia is still wide open. This article will provide an overview of how the Province of West Java, Indonesia implements digital-based policies through joint decision-making (collaborative governance) with stakeholders to develop public policies for effective and lasting solutions to public problems.

Key words: digital government, collaborative governance, local government, public policies

SESSION 4 Innovation Economics and Sustainable Development

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Economic Globalization and the Environment: Data Evidence and Policy Setting

Globalization is a multidimensional process that integrates different markets and nations while trade, investment, mobility, and spillover effects of technology and knowledge become faster and easier. Although globalization has various aspects, this paper focuses on economic globalization, as measured by the KOF Economic Globalization Index and the modal split of passenger transport, and its impact on greenhouse gas emissions. The impact of globalization on the environment has often been evaluated as negative, and most empirical studies show that globalization, liberalization, and international trade lead to an increase in greenhouse gas emissions and thus to a deterioration of environmental and climate conditions. The paper tests the hypothesis of globalization-induced carbon emissions to evaluate the empirical evidence and the environmental policy framework in the European Union as the most ambitious countries in environmental and climate protection. Based on a panel data analysis conducted for 26 EU countries from 2000 to 2018, the paper provides some policy recommendations, especially in the context of high volatility in energy markets.

Key words: globalization, GHG emissions, environment, economic policy, climate policy

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Economy in colours: Blue Economy in the EU and the position of Croatia

Many regions depend on the Blue Economy. It plays a crucial role in trade, tourism, and cultural heritage, as well as being a key area for growth in sectors such as marine renewable energy and biotechnology. In developing countries, fisheries play a crucial role in the economy and provide a key source of protein, as well as livelihoods to hundreds of millions of people. For example, in the Adriatic-Ionian region, the Blue Economy generated €24 billion GVA in 2018 and 1.02 million jobs, mainly in the coastal tourism sector, followed by maritime transport and living resources. In terms of the entire EU, and according to the most recent figures, the established (seven large) sectors of the EU Blue Economy (i.e. marine living resources, marine non-living resources, marine renewable energy, port activities, shipbuilding and repair, maritime transport, coastal tourism) directly employed close to 4.5 million people and generated around €650 billion in turnover and €176 billion in gross value added. The European Green Deal builds on clear ambitions such as carbon neutrality, a circular economy, zero pollution and the restoration of biodiversity. The Blue Economy will play a major role in this transformation. Fostering the true green potential of the

Blue Economy can also play an integral part in mitigating the economic setback caused by the COVID-19 crisis, leading to new growth opportunities and new jobs. The entrepreneurial potential of the Blue Economy for Croatia is enormous. At present, Blue Economy as the newest development concept is becoming an important driving force for achieving sustainable blue development.

Key words: Blue Economy, EU, Adriatic-Ionian region, Croatia

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ICT-enabled healthcare and economic evaluations: a bibliometric analysis

The adoption of information and communication technologies (ICT) in health care received major encouragement during the Covid-19 pandemic. On the one hand, barriers such as high cost of technology or inconsistent cost-effectiveness results were set aside to assure remote healthcare delivery and enable access to care in the wake of social distancing. On the other hand, however, more rigorous analyses of benefits and economic justification of such healthcare delivery was also incentivized. The objective of this paper is therefore to identify the key terms used to describe ICT-enabled healthcare services and to assess the latest research that addresses them. The paper also focuses on the developments in the field of economic evaluations of ICT-enabled health services. The research methods used in this work combine bibliometric methods and appropriate visualization tools to analyze relevant publications from the Web of Science Core Collection database, supplemented with a standard literature review. The bibliometric analysis revealed that the number of publications on ICT-enabled health services has steadily increased over the past 20 years, with a significant increase in 2020. Moreover, the number of publications on ICT-enabled health services in 2021 more than doubled compared to 2019, and the increase was particularly high for telemedicine services. The number of publications on economic evaluations of such services also increased. Furthermore, key research areas, journals, publications and author keywords were identified. Development and implementation of beneficial ICT-enabled healthcare services is proving to be a contemporary and compelling issue. Efforts should be made to replace traditional, in-person, on-site healthcare with effective ICT-enabled healthcare, which could prove to be the new mainstream.

Key words: ICT-enabled healthcare services, terminology, economic evaluations, bibliometric analysis

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The role of marketing communication in perception of information availability about renewable energy sources

Aims of the paper: Clean energy and renewable energy sources are becoming strategic directions for many businesses and economies. Although prioritized by various industries, customers constantly lack sufficient information to make relevant decisions on how to act on renewable energy sources. With the abundance of information available to customers today, it is of utmost importance to have the ability to distinguish between different information and different sources of information with focus on their credibility and information content. On the other hand, companies lack consistency, transparency in their marketing communications and they do not provide enough information to their customers so that they can make informed decisions. Therefore, the purpose of this paper is to analyse the perception of information availability related to renewable energy sources. Consequently, the research objective is to examine the relationship between marketing communication efforts and perceptions of information availability in relation to renewable energy sources. Methodology: The research was conducted on a sample of 130 respondents in Croatia, using predefined scales from previous literature. Research analysis used univariate (descriptive statistics and frequencies) and bivariate statistical methods (correlations and chi-square test). Results: The research results indicate that citizens are sufficiently informed about the positive aspects of renewable energy sources and perceive them as cheap energy that does not pollute or damage the environment. On the other hand, information about negative aspects of using renewable energy sources in the long run is neglected and perceived as non-existent. Both managerial and political implications are offered.

Key words: marketing communication, perceived information availability, renewable energy sources

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The impact of information and communication technologies on economic growth: The case of Egypt

This study offers a new perspective on information and communication technology (ICT) as a driver of economic growth. The study gives information on the role of ICT to national economic growth via the transmission channels. This study scrutinizes the relationship between economic growth and the degree of investment in ICT in Egypt using time series and an errorcorrecting model. The findings demonstrate that there is a long-term positive association between economic growth and capital in the digital economy. Furthermore, Granger's causality analysis demonstrates the existence of unidirectional causality and claims that investments in information and communication technologies promote economic growth, not the reverse. Thus, the development of ICT provides a potential for Egypt to achieve sustained economic growth. To benefit from the

ICT drivers of economic growth, policymakers should enact policies that promote financial sector development, improve regulatory and institutional environments, increase economic openness, prioritize ICT infrastructure development, and control inflation and government consumption.

Key words: digital economy, economic growth, ICT, sustainable development.

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R&D efficiency analysis of the EU member states

Innovations are most often defined as the improvement of the existing or creating brand new products and processes. However, due to different theoretical approaches, there is still neither generally accepted definition nor determined innovation evaluation system. Contemporary authors agree that, at the macroeconomic level, innovations can be reported through the level of investment in research and development (most often through % of GDP). Also, the economic theory points to the importance of innovations in achieving economic growth, increasing the level of education and strengthening international competitiveness, primarily through encouraging the export activities and the development of high technology products. The research problem arises from differences in the efficiency of investment in research and development among the Western Balkan countries, resulting in further increase in developmental differences. The aim of the study is to evaluate the efficiency of investment in research and development in EU countries by applying the Data Envelopment Analysis (DEA) in multiannual period.

Key words: EU, Data Envelopment Analysis (DEA), efficiency, innovation

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The Development of the Digital Density Index of the Public Sector in the Republic of Croatia

The Digital Density Index (DDI) was developed jointly by the Oxford Economics and Accenture developed jointly, with the aim of measuring how digital technologies impact the economic growth. It has been developed with the objective to guide further investments of both the public and business community in order to stimulate economic development. The DDI contains 50 indicators grouped into 4 activity areas and 18 groups of metrics. This paper discusses the modeling of specific DDI for the public sector in the Republic of Croatia (DDIPS^{ROC}), with the purpose of constructing specific key features of precise measurement of DDIPS^{ROC}. The very objective of this research is to use modeling of ideal in reality-a methodology that uses realistic models, represent interpretations of concepts, attitudes, real functions and algorithms in sensory-perceptual and physi objects, systems, relationships. This was done with the aim of development of specific DDIPS^{ROC} model that can precisely measure the DDI of the public sector of the Republic of Croatia. The main finding is the 20 indicator grouped into 4 activity areas of metrics that can precisely determine the DDIPS^{ROC} of every public body in the Republic of Croatia, and that is based on the above-mentioned DDI. In that manner we can scientifically measure, the state

of the DDI of each public body in the Republic of Croatia and develop a new theory on improvement of the DDIPS^{ROC}, which represent both scientific and practical contribution to the digital transformation of the public sector of the Republic of Croatia.

Key words: digital density index, digital density index of the public sector in the Republic of Croatia, digital transformation, public sector, measurement

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Risk Spillover Network Connectedness between infrastructure and other asset classes -The aftermath of the COVID19 pandemic

The COVID-19 pandemic has reduced economic growth and public and private investments. This setback has increased the already existing gap in reaching the infrastructure investment needs and the SDGs. It has also increased the demand for infrastructure investments due to their beneficial characteristics of being a less risky investment and preserving macroeconomic stability. Infrastructure is vital for trade, development, and sustainability, which is a requirement for recovery from this time of uncertainty. For this reason, we examine the connectedness between infrastructure assets and other assets pre- and during COVID-19. With the help of realized volatilities to differentiate between good and bad volatility, we use the Diebold and Yilmaz (2009, 2012) index to study connectedness. Further, to measure asymmetries in realized volatility spillover, we will use the SAM framework developed by Barunik, Kocenda, and Vacha (2016). Our result shows a heterogeneous asymmetry between good and bad volatility and between transmitting and receiving volatility. The bad volatility dominates the good for all infrastructure assets. Furthermore, we found that infrastructure assets do not differ from other assets and were integrated with other assets during COVID-19. The empirical results showed that global infrastructure had lower connectedness during the pandemic, implying positive diversification benefits from an investor's perspective. One major finding was that for emerging markets infrastructure, received good volatility dominates the received bad. This, together with the fact that they transmit less volatility to themselves than global infrastructure, indicates that they received less negative volatility than the global infrastructure during COVID-19. We conclude a need for transparent and predictable institutions to promote investments in infrastructure in the countries that need it the most - developing

Key words: risk, spillover, COVID 19

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The influence of domestic, global and market uncertainty on supplied electric power: A study of the Swedish energy system

The urgency of global challenges, such as accelerating climate change and resource depletion, continue to push for transformative policies and tremendous systemic change to global energy supply systems. The challenges are compounded by the fact that energy demand continue to increase, with no end in sight. Energy efficiency and conservation strategies, in addition to decarbonising our energy sources, are essential to the process of transitioning to a sustainable energy system. Electrification and sector integration are potential pathways towards affordable,

efficient and sustainable energy. Sector integration means managing the energy system as a whole, where the system is organised and optimised across multiple energy carriers, industrial and consumption sectors. Moreover, linking energy carriers and sectors also means linking risk and uncertainty mechanism and system dynamics.

This study uses Granger non-causality in quantiles for analysing the impact structure of how domestic, global and market uncertainty affects electric power supply in Sweden. The results show that uncertainty does not impact the total supply of electricity. But that uncertainty have specific and different impact patterns when it comes to the power generating e.g. nuclear, hydro and cogeneration power. This means that effective sector integration will need to be able to handle different uncertainty responses based on generation type. The reasons for the disparities between power generation sources and their response to uncertainty warrants further studies.

Key words: energy systems, uncertainty effects, sector integration, electricity supply

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Smart grid concept for electrical power system: a case of Croatian region

The current electricity system needs significant financial investments to transition to a low carbon one. The goal of this paper is to assess and quantify three most important pillars of any electrical power system: (i) security and reliability factors, (ii) economic factors and (iii) ecological/environmental factors. We perform our analysis on the date for the largest Croatian region / Istrian peninsula. The analysis is performed on the current data for energy power system (year 2021), and for the forecasted low energy power system in year 2050. In the paper, we present a smart grid concept for the future Istrian electrical power system. Furthermore, we present a comparison of the smart grid concept costs with investment costs of current/classical power solutions (construction of new transmission power lines, construction of new transformer stations, etc..).

Key words: smart grid concept costs, virtual power plant, low carbon energy power system, case study, croatian, istrian

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Incentivizing sustainable sewage sludge management within bioeconomy concept

Sewage sludge represents a major problem on a global scale. This is mainly due to its negative environmental impact, which is caused with its improper treatment. Many sustainable and innovativetechnologies and processes are developed nowadays, which resolve the problem of sewage sludge management. However, development of these technologies, and their further uptake and commercialization has a high cost. In order to examine the feasibility of such a solution, this

paper analysed implementation and feasibility of a wastewater treatment plant upgrade, in form of struvite crystallization plant, through a case study for Rijeka, Croatia. Moreover, through literature overview, it is concluded that most of innovative solutions require incentives, to become feasible. Therefore, this paper also analysed the implementation of two types of incentives – subsidies for the final product and grant scheme for the plant construction. The results showed that plant implementation standalone is not feasible. Moreover, utilization of incentives also proved non-effective, since it required level of incentives of over 270% and 100%, for subsidies and grant schemes, respectively, for plant to become feasible. Therefore, it can be concluded that incentives are a useful tool in uptake of innovative technologies, although a broader overview of the scope is required.

Key words: sewage sludge, bioeconomy, incentives, financial analysis, struvite

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DIGITAL SIGNATURE AND POSSIBILITIES OF ITS APPLICATION IN THE BUSINESS SYSTEM OF BOSNIA AND HERZEGOVINA

Digital signature in the business system of Bosnia and Herzegovina is something that has not yet found its application. According to the Law on Customs Policy of Bosnia and Herzegovina, this method of signing is only applied to freight forwarders, because they certify their documents in the procedure of electronic transport of goods in a new way and send them to the Administration system electronically. In other spheres of the business world, this signature is used exclusively as a transitional solution. This paper, in addition to examining the legal possibility of its application, and the benefits that the business system would have from its implementation, also made an analysis that shows the impact of digital signatures on the business system of a country, and to what extent it facilitates business. The aim is to analyze the degree of application of digital signatures in the BiH market. In addition, the most widely used algorithms in the digital signature cryptosystem with a focus on mode and security will be analyzed. Also through the paper we will look at the principles on which digital signing is based as well as the methods by which we determine the authenticity of the sender. Next, we will define the areas of application of the digital signature. The aim of this paper is to prove that a digital signature in Bosnia and Herzegovina would greatly facilitate the way of doing business, and simplify procedures in the business system, and thus raise the competitiveness of the economy compared to the current situation. According to the above, the hypothesis of this paper is that digital signature, in addition to digital printing and digital communication, has the greatest impact on the efficiency and speed of business between companies operating in Bosnia and Herzegovina. The hypothesis was tested using a multiple regression model, which was investigated and processed by the author. The author investigated

and analyzed the impact of digital signature, digital printing and digital communication on business efficiency in a sample of 235 companies using a multiple regression model. The results showed that all three variables have an impact on business efficiency to a certain extent. According to the results, however, it can be concluded that the digital signature and then the digital stamp have a very high impact on business efficiency. It has been shown that in Bosnia and Herzegovina there is a general perception that the use of digital signatures and its usefulness at the global level, however, by applying adequate methods and techniques, can be improved and improved and thus increase the number of digital signature users.

Keywords: digital signature, legal framework, model, business system, company analysis.

SESSION 5

Entrepreneurships and Organizational Issues in Contemporary Business Environment

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Digitalization and self-employment: A literature review

Self-employment represents an independent and perspective work within the framework of the realization of one's own existence and interests in the individual career. Due to the heterogeneity of its multiple forms of operationalization, the concept of self-employment poses a challenge for conceptual scientific capture, definition and, by extension, measurement of its associated economic and social effects. This is particularly evident when discussing the potential interrelationship between the concept of self-employment and entrepreneurship. The emergence of new forms of self-employment on the market as a result of the process of intense digitalization in recent years highlights the discussion and the need to distinguish these two phenomena in the context of the perception of the benefits and factors of their development. Moreover, the multiplication of research results in the field of self-employment, digitalization and their relationship in the last two decades shows the need for a comparative analysis, a review of the extensive literature and the definition of areas for further research on this topic. The purpose of this study is to provide a systematic review of previous research on the relationship between self-employment and digitalization by applying qualitative research methods - semantic content analysis and comparative representation. A review of the literature revealed that the impact of digitalization on self-employment is evident in the context of reducing constraints and increasing labor flexibility, establishing new models of self-employment, reducing operating and transaction costs of business activities and making them more efficient. The paper also presents theoretical implications and guidelines for future research on the impact of digitalization on self-employment.

Key words: self-employment, digitalization, digital competencies, digital technology

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Importance of organisational culture in higher education institutions

Since the end of the 20th Century the concept of the organisational culture attracted attention of the numerous researchers all over the world, what led it to becoming subject of the important research and studies. Definitely, as in other industries, organisational culture is crucial concept for development in the higher education. Understanding the importance of organisational culture

would help management of higher education institutions to organise working process what would be comfortable for all the employees. Purpose of this study is to investigate theoretical concepts of the organisational culture, as well as to find if there is a link between how values and beliefs of the organisation matches personal values and beliefs of educators with their evaluation how supportive organisation and colleagues are. Research methods: scientific publications analysis and survey of teaching staff on aspect related to organisational cultures in higher education and especially to workload for academic work and for support for scientific research from the higher education institution. For survey data analysis there are used indicators of descriptive statistics, cross-tabulations, testing of statistical hypotheses with t-test, analysis of variance – ANOVA, correlation analysis. Research results show data related to values of the higher education institutions from the perspective of organisational culture.

Key words: Organisational culture, higher education, values

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Construction Sector in Latvia: E-Governance General Lines and CO2 Emissions' Reduction

Construction sectors in Europe have bigger and bigger requirements to fulfil their tasks from one side – being in their business from one side, but from other side – acting in accordance with increasing requirements for environment including CO2 reduction tasks. Many steps are realised in situation of active work of e – governance: there many countries in their academic research have indicated their achievements as well as problems and narrow places. Aim of this research is to investigate possible developments of CO2 reduction by e – governance effective work and taking into account good and bad experience of other countries. Tasks of the current research: analyses scientific publications related to CO2 reduction analysis in respect of e – governance; analysis of situation of e – governance in Latvia; analysis of situation of CO2 development in Latvia. Results of the research indicates that some aspects in e-governance in respect of CO2 reduction in Latvia have to be considered taking into account good experience of other countries.

Key words: Construction, CO2, E-governance, CO2 emissions reduction

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Starting a Business in Ukraine - A Comparative Overview of Pre-War and Wartime Regulation

In the last two decades, we have witnessed various circumstances that have influenced changes in the legal norms of individual countries. As the most significant in that period, we would point out

the last world economic crisis and pandemic. However, one of the reasons for the legislator's intervention are certainly the events of the war.

The paper analyses the importance of timely action of the legislator and the concrete measures adopted by the Ukrainian Government to simplify the process of establishment and operation of companies in wartime.

The comparative overview of the pre-war legal framework of the Ukrainian company law and the reforms due to the war in Ukraine, aims to point out the key changes made by the legislator in order to maintain economic stability.

Key words: company law reform, Ukraine, starting a business, FOP, LTD.

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Determinants of Entrepreneurial Dynamics: The Case of the European Union

As one of the basic drivers of economic growth, economic theory identifies new enterprises, thus bringing to the forefront the need to understand the dynamics of entrepreneurship. Defining the basic determinants of the dynamics of entrepreneurship is a central issue from both a theoretical and a practical point of view. A better understanding of the factors influencing the dynamics of entrepreneurship is a basic precondition for creating effective policies aimed at encouraging the creation of new companies, and consequently, the creation of new jobs. This paper addresses several important issues. From the theoretical standpoint, the role of entrepreneurial dynamics in creating economic growth is examined. From a practical standpoint, the basic factors influencing the creation of new companies are analysed. The analysis was conducted on a sample of European Union countries for the period from 2010 to 2019 using data from the Doing Business database of the World Bank, as well as data on business dynamics from the Eurostat database. A panel regression analysis was conducted, and the results indicate that the dynamics of new enterprises is negatively affected by the total tax burden, as well as the cost of property registration, while the amount of initial capital required to open a business has a positive impact. The results of the research can serve as a basis for creating policies that will facilitate and encourage the creation of new enterprises.

Key words: enterprise birth rates, new enterprises, panel data, tax burden, doing business

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Dealing with risk in (post)COVID-19 pandemic era; The case of Croatia

The aim of this study is to analyse the risk management process in Croatian companies during the pandemic period COVID -19 and to present the forecasts for the following two-year period. The research is based on primary data and presents the results of a risk management survey conducted among 115 Croatian companies in the first quarter of 2022. The focus of the survey is on medium and large companies. The main findings of this study show the extent to which the COVID -19

pandemic has led companies to make operational changes that have impacted resilience and revealed new and unknown types of risks. In addition, the study shows the extent to which the pandemic has helped companies place more importance on and invest more in risk management. The current trends of deregulation and globalization of markets increase the impact of risks on the company's operations, while recognizing and managing various forms of risks by achieving the basic objective increasingly contributes to a company's greater ability to survive and operate successfully in the modern economic environment.

Key words: risk management, COVID – 19 pandemic, business environment, Croatian entrepreneurship

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Agency in Pharmaceuticals

In recent decades, due to the growing problems of information asymmetry and measurement of work performance, the agency problem has become even more evident than before and is also present in many business relationships, not only between owner (principal) and manager (agent). This is particularly evident in companies where business success depends on intellectual labor, teamwork, and other forms of hard-to-measure work, where the agency problem can be recognized between managers (as principals) and key sales representatives (account managers) (as agents). In addition to the familiar cases of insurance salespeople and account managers in B2B telecommunications, this is certainly the case in the pharmaceutical industry, where key customers, such as pharmacies and physicians, are persuaded or pressured by competing pharmaceutical companies. Agents who deal with key customers on behalf of a pharmaceutical company work very autonomously, are relatively difficult to monitor by their superiors (principals), and the best of them are difficult to retain (bond). Therefore, dealing with the agency problem that occurs in this industry is key to their business success and a good showcase for several similar situations. The objective of this article is to determine the relationship between the level of agency costs, both monitoring and bonding, and the motivation and satisfaction of the employees of a pharmaceutical company. Thirty sales representatives of a pharmaceutical company were surveyed. Data were collected on employee motivation and key motivators, various influences on job performance, possible reasons for changing companies, etc. The results provide insight into the impact of the company's investment in monitoring and bonding sales force employees on their motivation and performance.

Key words: agency costs, information asymmetry, pharmaceuticals

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Digital marketing in the trade companies

The aim of this article is to analyse the new trends in digital marketing of companies operating in international trade and logistics. The opportunities offered by digital marketing are beneficial for all parties involved, both service providers and users. Through different forms of digital marketing, trade and logistics companies can develop and achieve savings in various ways. The large number of activities within international trade and logistics activities makes it necessary to take advantage of digitalization, which enables direct connection and seamless communication within the supply chain. The analysis is based on the qualitative study of digital marketing of the selected trade and logistics companies that operate on a global scale. The results of the analysis show positive real-world examples that indicate good use of digital marketing in trade and logistics activities. This work contributes to the existing body of knowledge, because although the need for digital marketing has been known for a long time, its necessity was highlighted in a period of pandemic caused by Covid-19. The promotion of international trade is not possible without the existence of various forms of digital marketing.

Key words: digitalization; digital marketing; trade companies

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Long term care (LTC) in Croatia; New challenges in the private sector

Covid 19 together with the war in Ukraine has brought unexpected challenges in all the University of Rijeka, Faculty of Economics and Business, Rijeka, Republic of Croatia

The prices of materials and equipment went up for more than 30% in Croatia, delivery of goods is aggravated and it is costing big delays in construction. Long term care is facing a problem with higher cost per beneficiary, but public owners are still providing sufficient subvention. Unlikely to them, the private sector is feeling new changes on the market and it is forced to calculate new costs caused by increased energy costs. Some of the private elderly investors are calculating with an increase of costs of accommodation of 1000 HRK per user and more. Construction of new facilities in LTC in Croatia is not a popular option at the moment. Under those circumstances it is a justified question, can a private investor make an elderly institution and offer a market acceptable price and ensure return on investment with the help of financial instruments?

Key words: croatia, elderly home, long term care, covid19, institution

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Sports events: dealing with uncertainty

The crisis caused by the COVID-19 pandemic has influenced many (economic) activities. Sports and sports events were one of the most affected activities – the inability to accurately assess the emergence of future events and frequent changes to the conditions, rules and various regulations lead to situations of uncertainty, significantly aggravating event organisation and execution possibilities. Operational and strategic uncertainty has urged sports- and other establishments involved in the organisation of sports events to carry out prompt analyses and corrections in how sports events can take place, all to reduce negative influences on expected benefits produced from such events. The research is derived from the questions of how strong the impact of the uncertainty of events on sports as economic activity was, specifically in what ways and how fast the organisers of the sports events adapted to new conditions of influence on their activity. The research aims to display the attempted ways of adjusting to new conditions and highlight successful examples. The study found that the sports industry has attained high losses compared to the expected future values projected before the emergence of a crisis caused by a COVID-19 pandemic. Sports organisers attempted to transform sports events and associated products and services digitally, and the success of the annulation of negative impacts had mixed results.

Key words: sports economics, sports events, COVID-19, uncertainty, digital transformation

SESSION 6

Special Session on Migrations and Labour Market

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HEI graduate students' migration – a review

ZOOM LINK - <https://zoom.us/j/95809034725>

One of the Higher education institutions (HEI) main goals is to produce a skilled labor force that should become a significant part of the national economy. Most of the graduates have tendencies to stay and work in the region they have studied. However, a considerable number of graduates are still considering moving abroad to start their careers and this can be a significant problem for the country.

As a research topic, HEI graduate migration has gained a considerable interest in the academic community. That only stresses the importance of the potential migration of students in two directions when enrolling to HEI and when graduating from HEIs.

The main paper's purpose is to present a literature review related to HEIs graduate migrations and empirically research of the Faculty of Economics in Osijek (EFOS) alumnus experience regarding their attitude to migration and starting their careers in Croatia or abroad. Research among EFOS alumnus was conducted in April 2021, and the data were analyzed with SPSS v23. Based on the research data, EFOS graduates tend to stay in Croatia after graduation, but they do not exclude the possibility of migration later. Research results can be a good foundation for HEI to improve and/or change their curricula to help prevent potential future migrations.

Key words: higher education institutions, migration, intentions

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Push and pull factors of youth migration: The analysis of socio-economic context

This paper addresses the burning issue of young people with a college degree leaving Croatia to start a professional career and build their lives in another country. Previous studies have shown an increasing number of young people considering moving out of their home country for a longer period of time or even forever. The purpose of this study is to identify the main social and economic factors that influence young people's intention to leave or stay in Croatia. Building upon previous research, the empirical analysis explores demographic variables and attitudes that may influence the decision to leave or stay in Croatia. The research findings suggest that the most important determinants of the decision to leave the home country are related to the achievement of personal goals and values, a rich cultural and entertainment life, opportunities for professional development, and living in an environment with a high level of human rights protection. Moreover, reaching a relaxed and balanced way of life and the opportunity to contribute to positive changes in Croatia are the main incentives for young people to stay in Croatia.

Key words: migration, attitudes, university students

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The role of universities in migration of young people

In recent pre-corona years, many transition countries such as Croatia have experienced a significant increase in migration of young people. Although migration is not unknown in Croatia, the recent wave of migration has shown that Croatia was not able to prevent this trend and retain young, well-educated people. Major social problems on a global level such as unemployment and poverty are some of the reasons for migration, but research related to the Republic of Croatia claims that one of the most important reasons for young people to leave Croatia is to be found in a poor climate in science and education. The purpose of this paper is to examine the relationship between students' satisfaction with affiliated faculties and the intention to live abroad. Considering the third mission of universities, which is to collaborate with the community and improve the quality of life in the community in which universities operate, the paper also raises the question of whether faculties feel partly responsible for the problem of youth migration and whether they should try to respond to this problem. The empirical part of the study focuses on the perceptions of ten board members of various departments at the J.J. Strossmayer University of Osijek and 252 students at the Faculty of Economics in Osijek, one of the largest faculties in Eastern Croatia, a part of Croatia most affected by youth migration.

Key words: youth migration, brain drain, social responsibility of universities, students

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The role of extracurricular activities on subsequent mobility of Croatian university students

Extensive research has shown that taking part in extracurricular activities has numerous benefits for students, including the development of interpersonal and communication skills, self-confidence and self-esteem, the acquisition of employability skills, and the development of the ability to transfer these skills to work after graduation. This article addresses the less researched question of whether participation in extracurricular activities increases students' propensity to move abroad. The results of primary research among 252 students at a Croatian university suggest that extracurricular activities may induce students to move abroad. This is especially true for students who have studied abroad under the Erasmus+ programme and are more likely to intend to settle abroad. As a participant in the Bologna Process in higher education, the Croatian Ministry of Education promotes and facilitates the mobility of higher education students. The result of this study draws attention to the side effect of educational policies that encourage students to study abroad (such as the Erasmus+ programme), in particular to the fact that such policies can lead to brain drain from developing countries.

Key words: extracurricular activity, education, career, mobility, intentions

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The Impact of Remittances on Economic Development in the Central and East European Countries

Free movement of people within the EU results also with high emigrations, especially from the new EU member states. Advantages of developed economic systems, diversified job opportunities, higher wages, better working conditions, institutional and business trust, etc. represent some of the motives for emigrations to more developed EU member states. Emigration flows and its relations with economic development can be observed through different aspects, from micro and macroeconomic dimension, where one of the important questions is the role and the impact of the remittances, transfer of foreign money in home countries. This is especially interesting for regions and countries with high emigrations. The objective of this study is to investigate the impact of remittances on economic development in the Central and East European countries. Review on previous researches about the role and impact of remittances on economic development will be presented in the first part of the paper. This will be followed by the panel data analysis that will be applied to determine the impact in more detail. The analysis will cover the period after the EU enlargement in 2004 till the nowadays and the group of new EU member states will be included instead of analysing specific EU member state. This study adds to previous researches about the contribution from emigrations to home countries and to discussions about the significance of remittances in the economies of the new EU member states.

Key words: migrations, remittances, economic development, central and east european countries

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Youth mobility, labour market and anchoring factors to international migrations

Economic crises of any kind (recession, Covid19 pandemic, war, etc.) increase unemployment in general, but not equally across the labor market. Youth are regarded as a particularly vulnerable group in the labor market, and they are more susceptible to international migration, particularly if highly educated. With Croatia's accession to the EU in 2013, and the subsequent removal of work-related barriers, migration of highly educated youth to Western European countries became extremely desirable and relatively easy to realize, resulting in a significant brain drain and a significant impact on Croatian demography. To evaluate the determinants of migration behavior and their intensities, we introduce the concept of anchoring factors which are the factors that influence the decision to stay in one's home country rather than migrate abroad. This paper fills a gap in the academic literature by delving deeper into the anchoring factors that discourage potential migrants from leaving their home country via international migration. As a result, rather than studying migration aspirations as a proxy for actual migration, we are investigating factors that influence migration avoidance. Thus, the major contribution of our work is the introduction of

anchoring factors into the migration debate. We use a questionnaire that was distributed to higher education students at a Croatian public university. We are testing factors derived from the literature on a sample of 714 respondents. According to our findings, students perceive more job opportunities abroad that are more interesting and well-paid. Despite the country-specific economic indicators, there is a significant relationship between their decision to stay in Croatia and their perception of a good quality of life in Croatia and the availability of jobs on a domestic labor market, indicating that they are not primarily determining their future based on career-related determinants. These findings may have ramifications for developing regional and national policies aimed at preventing brain drain and improving demographic, and thus economic, indicators in Croatia.

Key words: migration, youth, anchoring factors, labor market, brain drain

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Relationship between competences from the perception of university students and their tendency to migrate

Globalization and European Union integration process, as well as growing trend of student mobility programs, led to higher mobility of students and young adults with university degree. Mobility of university educated people provides them more opportunities in finding a job as well as employers by giving them the opportunity to find an adequate worker for a certain position. This consequently positively affects employment rate and economy of host country. In Croatia the number of those emigrating the country is greater than the number of those migrating in the country. This trend is significantly visible from July 2013 until today with exception of pandemic year March 2020 – March 2021. Main goal of this paper is to analyse how students perceive importance of competencies by employers and student performance of those competencies. For this purpose, survey was conducted on 661 economy and business full time students and Importance-performance matrix (IPA) was used to identify importance-performance of the selected competencies. Sample was divided in two sets, first one includes students that have no intention to migrate in next five years and second set comprises students that have intention to migrate from the country. Results indicate differences between students who intend to (e)migrate and their perception on employers' importance and students' performance of observed competencies. Students who plan to emigrate over perform in language competences but social competencies should be improved. Students who don't have plane to emigrate over perform in literacy competences but should address more to entrepreneurial competencies. Interesting result were provided by both groups and they indicated STEM competencies as lower priority – have low importance and satisfaction.

Key words: competencies, importance-performance analysis - ipa, students' perception, migration

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Students' views on migrations - why do they choose to move and what can we learn from this?

Lack of economic and professional opportunities in the sending country is the primary driver of migration, followed by political factors. Migrants usually look for an economic pull factor in the host country because the economy in their home country is such a strong driver. There are several reasons for the host country to set pull factors, including aging population, labor market gap, and other social, economic, and tax benefits. Surprisingly, migration from developing countries to developed countries is lower than one might expect.

This paper aims to contribute to the economic discussions on the impact of migrations at the macro level and at the personal level. At the macro level the paper will explain the connection between migrations and economic growth and development. Based on the conducted research, author will make proposals on policies important for managing the migration of young people ie. students. The research, at the individual level, on which the conclusions in this paper are based, was conducted within the Project "MI" - Migration Challenges - yesterday, today, tomorrow. Within the Project, a questionnaire was developed which aimed to determine the level of competencies of students of the Faculty of Economics and Business Rijeka, their satisfaction with their studies, but also with life in the Republic of Croatia and decisions on emigration from the Republic of Croatia. The questionnaire with 132 questions was completed by 714 students, of which 545 were female students (76.3%) and 474 were undergraduate students (66.4%).

Key words: migrations, economic growth and development, economic impact of migrations

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Worker well-being in the post-pandemic job design

Workers all over the world experienced great burdens during the COVID-19 pandemic. The physical and mental challenges they had faced generated high levels of exhaustion. This state of uncertainty brought many new work-related recommendations and changes to job characteristics. This has caused additional job stress for workers. In the post-pandemic era, the workplace is adjusted according to new work possibilities: some workers retained the work model of working both remotely and from the office. How did these changes affect the workers' well-being? The present study aims to provide insight into differences in the well-being of workers in the post-pandemic era, but also to explore how job demands and job resources affected workers' exhaustion and work engagement. We aim to expand upon the job demands-resources theory and confirm the model in a new context. In order to answer the proposed questions, 189 workers were surveyed. Participants came from two distinct groups, those who continued to work from the office throughout the pandemic, and others who were asked to work from home during the pandemic. Our multi-group structural equation model shows that social support positively affects engagement

in both groups of workers and that their exhaustion is positively predicted by their workload and work-family conflict. However, the engagement of those workers working from home during the pandemic was positively influenced by their perceived job autonomy while the same effect was not observed for the group commuting to work throughout the pandemic. Another observed difference pertains to the role of role ambiguity and family-work conflict on exhaustion. Exhaustion of the commuters was negatively affected by the perceived family-work conflict, while those that worked from home did not experience such an effect. The opposite is observed for the role ambiguity's relationship with exhaustion, which was positive and significant for workers working from home, but not significantly related to exhaustion of the commuting workers. In conclusion, the post-pandemic changes in the workplace positively reflected the worker's well-being, where the interchange between working from home and working from the office leads to lower levels of exhaustion in workers.

Key words: post-pandemic work design, worker well-being, covid-19, job demands-resources model

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Analysis of opportunity costs of students' time

The paper presents the findings of a student survey on the opportunity costs of their leisure time, with the goal of better understanding their time management decisions. Several hypotheses were tested, including the relationship between leisure time and hourly wages, gender differences in attitudes, and the correlation between daily schedules and time substitution choices. Among other results, it seems that male students were far more optimistic than females about leaving university for a high-paying job, and that the more hours the respondents were willing to sacrifice from a part-time job, the more they were also willing to sacrifice for some other social event together with people important to them.

Key words: time endowment, opportunity cost, students time allocation

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Digital Skills in Europe and Student Migration

Europe needs digitally empowered and capable citizens, a digitally skilled workforce and way more digital experts for the sake of its economic and social development. Basic digital skills for all citizens and the opportunity to acquire specialized skills in the Information and Communication Technology sector for the workforce are a prerequisite to participate actively in the European

'Digital Decade', which was set as a priority in the period 2020-2030. Now, many economies in Central & Eastern Europe (like Croatia) are experiencing a significant 'brain drain', especially the emigration of young people with higher levels of education and better digital skills. These skills are vital for living, working, studying, and entertaining oneself in an information (digital) society. Therefore, it is crucial to comprehend the specifics of such migrations which could have significant effects on outward labour markets, as well as the young Europeans themselves. This research explores Croatia's specifics, compared to other 'peers' and European countries in general, in the context of the digital skills and relates to students' perceptions and preferences regarding migration. As Croatia is experiencing a clear brain drain, especially among digitally skilled young people, it is essential to understand what are their motives for migration and can Croatia, the European Union and other countries better balance the needs of the digital society and economy.

Key words: digital skills, migrations, Croatia, European Union, students