

# Introduction



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Over the past decade, the global economy as a whole has found itself at the conjunction of an unprecedented series of phenomena, creating far-reaching challenges for the very workings of society and the daily lives of individuals—including in the European Union (EU). These challenges can be analysed from a threefold perspective.

Firstly, with innovation proving to be a crucial factor in economic growth (OECD 2016; UNCTAD 2019), we are witnessing an expansion of the knowledge economy, driven by intellectual capabilities rather than physical inputs and natural resources. This is determining the acceleration (and obsolescence) of technical and scientific progress and changing the mechanisms underpinning value creation and competitiveness, signifying a paradigm shift in the long line of industrial revolutions (Powell and Kaisa 2004; Stiglitz and Greenwald 2014). The globalization of digitalization is indicative of a changing multidimensional model shaped by multiple aspects: the dominance of intangible assets in value creation; the increasingly transnational nature of production and consumption, for both goods and services; a move away from human workforces and towards artificial intelligence; the growing power of networks as opposed to individuals; the development of innovative new methods for collaboration, content creation and sharing; and the importance of harmonizing standards and practices within a multilateral framework (Danescu 2020).

Secondly, the implementation of the knowledge economy is taking place in an unstable environment, characterized by an ever more complex mix of overlapping,

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interwoven global crises and risks, each with a different timeframe and intensity but all converging to create high levels of volatility. These include the ongoing COVID pandemic, the military invasion of Ukraine, the migration crisis, climate change, banking and financial scandals, as well as social upheavals related to racial inequality, the need for reskilling, the trend towards remote working, the wealth gap, etc. In these conditions, the whole is more dangerous than the sum of its parts. We are in a situation dominated by multiple rifts, a “global polycrisis”. The latter concept has been defined by American economic and crisis historian Adam Tooze as “any combination of three or more interacting systemic risks with the potential to cause a cascading, runaway failure of Earth’s natural and social systems that irreversibly and catastrophically degrades humanity’s prospects. [...] A global polycrisis, should it occur, will inherit the four core properties of systemic risks—extreme complexity, high nonlinearity, transboundary causality and deep uncertainty—while also exhibiting causal synchronization among risks” (Tooze 2022). A brief incursion into history reveals that the political concept of polycrisis was coined in 2011 by Jean-Claude Juncker, former Prime Minister of Luxembourg (1995–2013), first President of the Eurogroup (2005–2013) and former President of the European Commission (2014–2019), in his description of the internal and external crisis situation that the European Union then faced—and is still facing (Juncker 2011; European Commission 2016). The term was subsequently used in the scientific literature to refer specifically to the Eurozone crisis and global governance matters, and in 2020, it entered the institutional vocabulary of the World Trade Organization. It is interesting to note that the equivalent notion of “permacrisis”—defined as the feeling of living through “an extended period of instability and insecurity, esp[ecially] one resulting from a series of catastrophic events”—was chosen by the Collins English Dictionary as its word of the year for 2022, and given its extensive use in the media, it has now become part of everyday language (Collins 2022).

Tackling the problems generated by these new unavoidable global processes requires a long-term vision that reconciles future goals with present imperatives. Academia has a central role to play in developing this vision, especially higher education institutions with their missions of teaching, research, innovation and knowledge sharing and their integrated research–education–business strategies. “The academic profession has a responsibility to determine how to educate knowledge workers, how to shape the research agenda and promote the public value of knowledge, and how to connect the national and global economy with the responsibility to social demand [...] with the ultimate goal of advancing the human condition” (Bain and Cummings 2021). As a key determinant of the competitiveness of the knowledge economy, academia can generate synergies with various stakeholders and both public and private networks (authorities, local communities, entrepreneurs, the general public, etc.), while promoting collaborative behaviour and contributing to improvements in legislation, in social, economic, cultural and spatial development, and in welfare (De Jong et al. 2014; Compagnucci and Spigarelli 2020; Dieppe 2021). At the same time, an inter-, multi- and transdisciplinary approach is required to find appropriate responses to such heterogeneous, complex, large-scale transformations. This will involve the integration of concepts, ideas, scholarly approaches and methodologies

from various disciplines, with the aim of obtaining new scientific knowledge at the intersection of different fields (Neves 2017; Tobi and Campen 2018; Guimarães et al. 2019). To fully gauge the economic situation in such a way as to facilitate anticipation and reaction, the analytical perspective must be pluralistic, incorporating social sciences (history, sociology, anthropology and psychology), politics and law, mathematics, information and communication technology, natural sciences and linguistics. The knowledge society paradigm and the principles of inter-, multi- and transdisciplinarity are having a major impact on higher education and university research on every continent. Since the early 2000s, the EU has set forth its ambition to build “the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion” (European Council 2000). This aspiration still holds, although competition with the USA, China and Japan (among other competitive nations) and disparities among the 27 Member States are constantly putting it to the test.

The fifth edition of the International Conference on Economics and Social Sciences (ICESS 2022) set out to explore these questions. More than 200 paper presentations by scholars (economists, political scientists, historians and legal experts) from around 30 different countries worldwide discussed the results of their research, compared contrasting and complementary viewpoints emanating from several disciplines and schools of thought, and came up with some valuable ideas on the theme “Fostering recovery through metaverse business modelling: interdisciplinary perspectives on an emerging paradigm shift”. An analysis of the metaverse through the lens of interdisciplinarity provides a key to understanding the new paradigm that is currently taking shape across the world, dominated by the power of technology and its critical impact on geopolitics, on globalized, dematerialized and deterritorialized socioeconomic and monetary processes and flows, on the essence of work and value creation, and on multilateral institutional developments and transnational regulation.

This issue of the proceedings includes a series of selected papers dealing with relevant topics from a multi- and interdisciplinary perspective, offering new insights into the challenges of the knowledge-based society from the viewpoint of international experts and providing tools for a novel critical understanding of the future. In this regard, the following considerations are of relevance:

The Grand Duchy of Luxembourg—a founding member of the EU and permanent capital of the European institutions—is currently one of the most politically stable, consensus-oriented, innovative and prosperous countries in the world, characterized by an advanced social market economy based on services and cutting-edge fields (finance, digitalization, satellites) and a level of material wellbeing above the EU average. The research paper *Regional Heterogeneity and Individual Characteristics in the Development of a European Tax Policy: Historical Insights from Luxembourg* aims to investigate the specific features of the tax system in Luxembourg from a multidisciplinary perspective by analyzing historical sources and exploring the development of these particularities over time, their impact on the socioeconomic context and their repercussions for the European integration process, especially in the design and completion of Economic and Monetary Union and in the governance of

new transnational networks. Luxembourg is home to the European Investment Bank (EIB), the EU's financing institution, owned by the 27 EU Member States, which has been operating since 1958. The paper *The EIB: Fostering Recovery in an Uncertain World* explains the origins, objectives and missions of an institution that is unique, with a lending capacity superior to that of the World Bank, but that paradoxically remains relatively unknown to the public; its progressive consolidation (organizational, institutional and in terms of governance) through the EIB Group (the EIB and the European Investment Fund); and how it is addressing challenges in the face of crises (Brexit, COVID-19, the war in Ukraine, the energy transition) by adapting, upscaling and diversifying its instruments while cooperating with its many partners worldwide.

- The exhibition *Pierre Werner (1913–2002)—A life dedicated to Luxembourg and Europe*, which is also highlighted in this volume, offers further insights into Luxembourg history and the European integration process. As a long-standing senior civil servant, minister and prime minister from the end of the Second World War until the mid-1980s, Pierre Werner was closely involved in integration and policy-making efforts at the national, regional and European levels, and he is unanimously recognized as one of the main architects of Economic and Monetary Union: the 1970 Werner Report provided a detailed blueprint for EMU and sketched out the fundamental features of what would later become the euro. The exhibition presents a wide range of photos and documents, some previously unpublished, based essentially on Pierre Werner's private collections—which have been opened for research purposes by members of the Werner family—and other relevant Luxembourg and European archives. It is significant to note that Pierre Werner was the first Luxembourger to be elected as an honorary member of the Romanian Academy (in 1993), to be awarded an honorary doctorate from the Lucian Blaga University of Sibiu and to be named as an honorary citizen of the city of Sibiu (in 1998).
- Important research results present the implications of the digital transformation process for the Asian economy in the near future. The paper *Factors Affecting Firm Innovation: An Evidence from Vietnam* shows that factors such as the manager's work experience, competition, access to finance, corruption, employee numbers and professional training are affecting business innovation in Vietnam. The research paper *The Moderating Role of Trust in Managers between Strategic Innovation and Firm Performance* emphasizes the importance of trust in managers in moderating the relationship between strategic innovation and company performance in Turkish service firms. Strategic innovation and trust in managers are crucial to improving company performance, and high levels of strategic innovation may improve performance, since service companies' trust in managers is often directly related to corporate success. The study *Transformation for Supporting Business Resilience in the COVID-19 Pandemic Period: Role of Digitalization* aims to clarify the role of digitalization in improving business resilience in Vietnam, an emerging Asian economy. The main results show that digital transformation brought initial positive outcomes for enterprises during the pandemic,

and this process is expected to continue to play an important role in accelerating the recovery of business in the post-COVID-19 pandemic period.

- Higher education institutions have faced several challenges which have strengthened their cooperation to share and learn from other institutions' practices. The results presented in the paper *Open Lab—an Innovative Model to Increase Students' Civic Engagement* show that although students are relatively unaware of the opportunities offered by the Open Lab, their willingness to get involved is high and their engagement level is correlated with communication about opportunities and effective motivation strategies. The findings demonstrate that communication and motivation mechanisms are a way of increasing the effectiveness of the Open Lab. Offering a comprehensive overview of research on the impact of COVID-19 on higher education, the study *Effects of COVID-19 Pandemic on Higher Education. A Bibliometric Perspective* analyzed publications from 2020 to 2022, revealing an initial focus mainly on the negative effects of the pandemic. But the diversity of topics subsequently increased, shifting to technological acceptance, quality of education and its outcomes, satisfaction with teaching and learning, and quality of life of all actors.
- Women experienced higher job losses and declining incomes both during and after the pandemic. The main objective of the paper *Female Labour Precariousness during the Pandemic Lessons for a Future Better Normal* was to study how the precariousness of female employment changed under COVID conditions. The results of the study showed that in 2020, there was a significant increase in the share of women whose jobs were characterized by precariousness, compared to 2019. The paper also identified the behaviour patterns of European countries in terms of the gender gap in employment quality under COVID-19 pandemic conditions.
- The organizational environment is very complex and constantly changing, and resilience is of great importance. The results of the paper *Developing Organizational Resilience through Decreasing Artificial Intelligence Anxiety in VUCA World* concluded that managers see organizational resilience as having an important role in decreasing anxiety about artificial intelligence. Moreover, technological development has a major impact on economic systems, transforming all their components. The study *Skills in Demand for Blockchain Related Jobs* presents a snapshot of the current situation in Romania, revealing two main subsets of characteristics required for blockchain-related jobs. These define two broad categories of vacancies: software engineers, who are expected to have a computer science background and programming skills; and product designers, for whom marketing, communication and design skills are essential.
- Over the years, Benford's Law has been used to spot possible irregularities not only in financial data but also in other data sets. The paper *Applying Benford's Law to detect fraud in the insurance industry—a case-study from the Romanian market* used extracts from financial statements of companies in the Romanian insurance market and showed compliance with Benford's Law. Understanding Benford's Law is essential because it allows forensic investigators to design tests that can effectively detect fraud.

- In the past couple of decades, the level of healthcare expenditure has grown significantly in many countries worldwide. The paper *European Union's Portrayal of Health Expenditure Funding Challenges in Pandemic Crises* examines the economic repercussions of COVID-19 in terms of healthcare funding in European Union Member States over the period 2000–2019. It presents considerable discrepancies among Member States regarding health expenditure, between developed and developing countries, which brings the European Union to a relatively low percentage for health expenditure: 7.14% of GDP. The study *A Dynamic Heterogeneous Panel Model for Predicting Healthcare Expenditure in the Middle East Countries* presents evidence concerning the long-run income elasticity of public and private health expenditure and its key determinants in fifteen countries of the Middle East, for the period 2005–2016. The elasticity estimates suggest that public healthcare is a luxury, while private healthcare is a necessity in this context.
- The issue of sustainability in Africa remains linked to governance factors. The field of African development is subject to inter-African disparities. In this regard, the paper *Impact of Governance Indicators on Inclusive Growth and the Achievement of the Sustainable Development Goals in Africa* examines the impact of good governance in ensuring inclusive and sustainable growth in Africa. The results show that countries with the lowest economic growth have a higher growth rate than the most developed countries because they have improved their governance over time. The most concrete example is Rwanda, which has attempted to improve its state of governance by decreasing the subnational poverty rate for more inclusive growth. The correlation between economic growth and progress in governance sheds light on how to improve inclusive growth in Africa.
- In the field of sustainable development, specifically the reduction of the use of passenger cars as a mechanism for environmental preservation and fulfilment of the Sustainable Development Goals, the paper *Individual Attitudes and Social Norms as Determinants of the Electric Vehicle Purchase* analyzes purchase intentions for electric vehicles according to the postulates of the theory of reasoned action and the advances of other previous research. Its results indicate that personal reasons outweigh social norms and can therefore overcome cultural and value differences in different societies so that individual environmental awareness can prevail even in countries that are less committed to ecological sustainability.
- Bioeconomy is a field that can contribute to Romania's economic development in the context of the European Union's environmental protection policies. The paper *Bioeconomy Sectors in Romania: An Analytical Cluster Approach* analyzes the cluster hierarchy of economic sectors included in the bioeconomy field in Romania. The research results show that the most important sectors of the Romanian bioeconomy are agriculture, bio-based electricity, fishing and aquaculture, and biofuels.

This volume aims to provide readers with new interdisciplinary reflections forged by academia in response to a novel research question that can only be addressed with knowledge, creativity and a collaborative forward-looking approach.

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# Regional Heterogeneity and Individual Characteristics in the Development of a European Tax Policy: Historical Insights from Luxembourg



Elena Rodica Danescu

**Abstract** Luxembourg is currently one of the most politically stable, consensus-oriented, innovative, and prosperous countries in the world, characterised by an advanced social market economy, and a level of material well-being above the EU average. Its strong fiscal position is well illustrated by a long-standing AAA credit rating, a significant accumulation of government financial assets, and a distinct fiscal approach. In this light, this paper aims to investigate the specific features of the tax system in Luxembourg from a multidisciplinary perspective by analysing historical sources and exploring the development of these particularities over time, their impact on the socioeconomic context, and their repercussions for the European integration process, especially in the design and completion of Economic and Monetary Union (EMU). It will look at the development of Luxembourg's domestic fiscal and social policies, driven by national interests and by membership of European and international organisations (which imposes requirements in terms of harmonisation and taxation) and also by constant contact with the multilateral international environment and involvement in the governance of new transnational networks. This research is based on a broad spectrum of multilingual and multimedia archival sources, relevant data, and clarifications of terminology as needed.

**Keywords** Luxembourg · Tax policy · European integration

## 1 Introduction

One of the achievements of the European integration process, of which Luxembourg (alongside Germany, Belgium, France, Italy, and the Netherlands) is a founder member, has been the creation of the Single Market—a borderless area within which people, services, goods, and capital can move freely. The European Union (EU) has a certain degree of harmonising power aimed at approximating national

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