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Report on the Third International Conference "Digital Transformation and Sustainability in Global Financial Economics"*

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On September 18 and 19, the 3rd conference, "Digital Transformation and Sustainability in Global Financial Economics," took place at the Salzburg University of Applied Sciences, Austria. This year's motto was "Opportunities and challenges for a sustainable and digital future." Originally, the conference was initiated by Tim A. Herberger (Chair of Business Administration esp. Entrepreneurship, Finance and Digitalization, Andrássy University in Budapest, Hungary). For the first time, the event was organised in cooperation with Michael Kuttner (Professor of Accounting & Financial Management, Department Business & Tourism, Salzburg University of Applied Sciences, Austria). About 50 experts (mainly from Austria, Hungary and Germany) presented and discussed the latest findings on digitalisation and sustainability. A total of 17 research projects on this topic were presented in both German and English. Each presentation was followed by a co-presentation, which kept the conference lively and open for discussion and constructive feedback. The conference featured a wide variety of topics, which will be presented in detail in the following sections.

1. Initial situation

Digital Transformation has permeated every aspect of our lives, and its importance is now impossible to ignore, particularly with the advent of the Covid-19 pandemic. Similarly, the ongoing endeavours toward sustainability have garnered increased attention in economics and society.

While there is a growing recognition of the importance of "digital transformation" in our current research landscape, its usage is often ambiguous and lacks a clear-cut definition. This absence of standardised terminology complicates interdisciplinary comprehension, obscuring the relationships between these terms. Nevertheless, their significance remains evident. The situation is similar concerning the term

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sustainability, where other terms such as socially responsible investments (SRI) and corporate social responsibility (CSR) are partly synonymous and partly subsets of the overarching concept of sustainability (*Herberger – Dötsch 2021*; *Kuttner et al. 2021*).

Given these problems in defining the buzzwords "digital transformation" and "sustainability," as well as the global challenges against the background of the VUCA[1] framework (*Barber 1992*), we aim to offer a solution strategy. This strategy is based on our conference, "Digital Transformation and Sustainability in Global Financial Economics," where we discuss concrete economic problems and formulate case-related answers based on scientific research. Hence, we adopt *Johansen's* (2012) approach, effectively addressing volatility through a clear vision, gaining understanding in the face of uncertainty, managing complexity with a focus on clarity in our actions and responding to ambiguity with agility.

The conference, which has become a regular annual event and took place at Andrássy University in Budapest in previous years, was held for the first time at the University of Applied Sciences Salzburg. Once again, we presented a multi-layered and informative programme, demonstrating to everyone that risk management has evolved into uncertainty management in financial decision-making.

2. Summary of the presentations of the 1st day of the conference

The 1st conference day was opened by *Yanik Bröhl*, who presented results from a research project with *Arnd Wiedemann* (both University of Siegen, Germany) on the success factors for risk governance of sustainability. Identifying success factors is based on a comprehensive literature review of relevant scientific studies on implementing sustainable management systems in the corporate context. In total, six success factors were identified (e.g. the establishment of sustainability in corporate management and strategy, influence of stakeholders on sustainable corporate management, sustainable partnerships and cooperations). According to the presenter, the success factors, as well as the development of a suitable conceptual framework to manage these factors, are the prerequisite for management and can thus serve as a foundation for transforming a company to improve its sustainable success. Accordingly, by taking sustainability risks and stakeholder interests into account, companies can assume responsibility towards society and contribute to sustainable development.

[1] VUCA stands for volatility, uncertainty, complexity and ambiguity.

The second presentation by *Patrick Hilpert* and *Manuela Ender* (both IU International University of Applied Sciences, Germany) is based on an examination of the influence of the updated auditing standard IDW PS 340 in the context of the audit of the early risk detection system on the external risk reporting of German companies. Based on an empirical content analysis in combination with a scoring model, the 2020 and 2021 risk reports of a sample of DAX 40 (German blue-chip shares' index) companies are evaluated. In doing so, an individually-created mapping specifies the influence of the main changes in IDW PS 340 on the risk reporting requirements of the German accounting standards DRS 20. By using the compliance grades as research results, it becomes clear that the tightening of the internal audit of the risk management system also influences risk reporting. Core elements of the updated auditing standard, such as the specification of risk-bearing capacity or risk aggregation, are more strongly considered in risk reporting in the year of first-time application of the auditing standard than in the previous year. Nevertheless, an optimisation of DRS 20 regarding the updated elements of IDW PS 340 is recommended to increase the reporting quality and informative value for users of financial statements.

Renate Hörzing provided insights into the status of the research project "Impact of Sustainability Reporting on Risk Management", conceptualised with *Michael Kuttner* (both Salzburg University of Applied Sciences, Austria). The research project aims to identify the aspects of sustainability reporting that influence the integration of sustainability risks into risk management. A quantitative research design is used to answer the research question. The sample for the survey includes listed companies in Austria or Germany that prepare sustainability reports according to the Global Reporting Initiative (GRI) guidelines. For example, the variables of organisational integration, reporting experience, reporting quality and stakeholder engagement are investigated. Although the results of the study are not yet available, it is expected that the intensive examination of sustainability in the context of sustainability reporting will support companies in identifying sustainability risks, that the increased involvement of stakeholders will enable companies to address the relevant sustainability risks in risk management in a more targeted manner and that sustainability risks will not be viewed in isolation but rather holistically. Integrating sustainability risks into risk management is crucial to meet stakeholder expectations and regulatory requirements.

Laura Wolfschluckner presented results on the development of a process structure for effective reporting according to the Corporate Sustainability Reporting Directive (CSRD), which originates from a research project with *Christa Hangl* and *Nicole Scheidleder* (all University of Applied Sciences Upper Austria, Austria). The CSRD introduced binding reporting standards at the EU level for the first time. To support companies in fulfilling the requirements, the authors have created a process structure that deals with the concept of reporting and the collection of content-related topics and key figures for the sustainability report. The process structure and associated processes are intended to improve the internal process for preparing the report to meet the new requirements of the directive. The transparency created concerning data availability, tools used and interfaces required within the company should help ensure that the content-related topics and key figures are available on time. During the process, responsibilities are defined, and the controlled processes for collecting qualitative and quantitative content are made available. With the help of the insights gained, optimisation potentials are identified from the process structure, as well as from the detailed process of the environment decision.

Alina Alexenko presented results from a joint study with *Tim A. Herberger* (both Andrássy University Budapest, Hungary). The authors examine whether and how accurately narrative framing is used to describe financial ratios by companies listed in the Financial Times Stock Exchange (FTSE) 100 Index. The analysis results show that companies emphasise desirable developments, especially in the voluntary part of reporting – the shareholder letter. By using a “biased tone,” companies try to hide undesirable business developments. Results show that the modality words communicating lower materiality were used more often to describe undesirable business developments than neutral and positive ones. Moreover, the positive business developments were intensively emphasised with positive and attention-focusing (higher materiality communicating) modality words. The regulatory effort to improve the use of language in reporting is thus justified.

The next presentation by *Marcel Tyrell* comes from a project with *Carina Stanjeck* (both University Witten/Herdecke, Germany) and analyses the capital market performance of listed companies during the Ukraine war. The authors examine which types of corporate structure are present in portfolios with high environmental social governance (ESG) scores and in portfolios with low ESG scores. For this purpose, the Fama and French five-factor model and the Carhart four-factor model are used. These models typically have a high explanatory power for shares due to the structural factors included. The results show strong differences in the individual values of the coefficients of the structural factors for portfolios with high and low ESG scores. This allows conclusions to be drawn about the structure of the companies in the portfolios. Portfolios with high ESG scores have more large, undervalued and low-yielding companies that maintain a conservative investment culture and whose shares have a low preliminary return (momentum factor), compared to portfolios with low ESG scores. All regression models of the portfolios with higher ESG scores had a higher explanatory power for returns than those with low ESG scores. Multifactor models can be better applied to portfolios with high ESG scores during the Ukraine war.

Cornelia Huis presented the results of a study on circular business models of banks, which originated from a cooperation project of the Paris Lodron University Salzburg (*Cornelia Huis*, *Christine Vallaster*, *Claudia B. Wöhle*) and the Salzburg University of Applied Sciences (*Eva Lienbacher*). The authors examine how circular economy business models can be applied within Central European banks and how the strategy and the product portfolio support this change. Initial results show that only a few banks have a circular business model, align their product portfolio with ESG criteria and integrate circular business models. Finally, possibilities to integrate circular business models in the financial sector were discussed.

Laura Schwab and *Martina Sageder* (both Salzburg University of Applied Sciences, Austria) presented results on the acceptance, opportunities and risks regarding the application of FinTech in small and medium-sized enterprises (SMEs). The study results show that FinTechs are already being used in all of the SMEs surveyed, although the potential extent of use is not being fully exploited due to the lack of digitalisation. Reasons for the acceptance of FinTech are a highly perceptible benefit and user-friendliness. Interfaces to existing systems are highly relevant. The automation of standard processes and the associated speed and lower susceptibility to errors are perceived as an opportunity. In addition, the exchange of data with business partners and the good availability of data for evaluations is seen as an advantage. Risks include data privacy and security aspects, such as the risk of cyber-attacks. The high level of investment required for digital innovations is perceived as an obstacle.

Harun Pačić (University of Applied Sciences BFI Vienna, Austria) spoke about the intersection of digitalisation, sustainability and labour law in human resource management. In detail, the results were based on three legal acts from the European Union: the directive on transparent and predictable working conditions in the European Union, the directive on the protection of persons who report breaches of Union law (whistleblowing directive) and the CSRD. From a legal point of view, labour law is the basis and framework for shaping the employment relationship. However, from a human resource perspective, labour law does not drive digital transformation or sustainable development, even though they are in an interdependence with the law. The view of working conditions, however, is shaped by human resources management throughout the value chain.

In the next presentation, *Christian Weiß* and *Katja Wiedemann* (both Salzburg University of Applied Sciences, Austria) addressed the question of how social sustainability is presented in the CSR reports of Austrian companies and how social sustainability can be supported by human resource development. The authors are just at the beginning of the research project and showed a first literature review and explained the planned methodological approach.

The presentations of the first day were concluded by *Alexander Bull* (IU International University of Applied Sciences, Germany), who spoke about the relevance of social sustainability in the context of project management. Findings are based on an explorative survey on social sustainability in project management, which was conducted among professional project managers in the fourth quarter of 2022 in Germany. The results show that project managers in both the private and professional spheres face increasingly extensive requirements and challenges. These requirements and challenges are mostly met based on the existing experience and know-how of the project managers. A healthy work-life balance is essential for successful project management to cope with the requirements and challenges.

3. Summary panel discussion

The 1st day of the conference concluded with a panel discussion on "Opportunities for a sustainable and digital future." During the evening event, experts from business practice and science discussed current and exciting issues relating to sustainability and digitalisation. Participants included *Andreas Schmelzer* (Head of Digital Transformation & Services, Porsche Holding GmbH), *Ulrike Regner* (Head of Sustainability Management, Raiffeisenverband Salzburg), *Lukas Haigermoser* (Managing Director, zobl.bauer. Salzburg), *Erich Stadlberger* (Head of Private Banking & Asset Management, Oberbank AG), *Christine Vallaster* (Professor of Marketing, Paris Lodron University Salzburg) and *Tim A. Herberger*. *Tim A. Herberger* moderated the panel discussion. In addition to the conference participants, about 120 other guests (mostly students) attended the evening event.

After introducing the experts, the session delved into the digitalisation and transformation of entrepreneurial processes and entire economic systems, exploring the associated opportunities and challenges. These encompassed the utilisation of robotic process automation, artificial intelligence, (digital) competency requirements in the future labour market and financing considerations for fundamental transformation processes. Moreover, sustainability within corporate processes and pursuing sustainable business systems were focal points. The discussion encompassed various aspects, including demonstrating sustainability levels through certifications, providing support mechanisms for companies in their transition towards greater sustainability and garnering political support for establishing sustainable business systems. The discussion also touched upon the legal mechanisms to address societal misconduct, including issues such as “greenwashing.” Additionally, there was a focus on integrating digitalisation and sustainability, including concepts like “twin transformation”. Special attention was given to the challenges of pursuing transformation when resources are limited. Finally, the session concluded by addressing questions from the audience.

4. Summary of the presentations of the 2nd day of the conference

On the second day, *Jona Stinner* (University Witten/Herdecke, Germany) started the lecture series with the results of a joint project with *Andreas Park* (University of Toronto, Canada). The authors examine the effectiveness of liquidity mining programmes in decentralised lending protocols within the blockchain ecosystem. Specifically, the research investigates whether these programmes attract meaningful (and permanent) liquidity, whether the liquidity is real or “phantom,” and whether the liquidity creates externalities for other platform users. The results show that liquidity reduction programmes attract deposits and increase platform activity, while the end of a programme leads to outflows of funds and increased lending rates. Increased borrowing raises lending rates, raising concerns that yield aggregators may represent a negative externality. However, the authors conclude that yield aggregators add value to the bottom line because their presence leads to lower total interest payments.

The next presentation by *Maria Skalaban* focused on the impact of digitalisation on households’ financial behaviour and stemmed from a research project with *Tatiana Nikitina* (both St. Petersburg State University of Economics, Russia). The findings are based on a survey among students in Russia and Germany about the use of digital financial products and services. The results make it clear that in Germany and Russia, digitalisation of the financial sector is at a high level and is viewed positively by respondents. Promising areas of digitalisation of the banking sector in Germany include simplifying and accelerating money transfers and developing ecosystems that enable customers to access various non-financial services. This will lead to an expansion of the functionality of the mobile banking application. Among the promising areas of digitalisation of the banking sector in Russia is using digital technologies to encourage investment behaviour among the population. This may include automated investment portfolio management based on data analytics and robo-advising. In addition, banks could provide more detailed information about financial products and financial education articles in their mobile apps. Financial institutions in both countries should pay attention to cybersecurity, as this risk is the respondents’ biggest concern related to digitalisation.

Maria Cenger, *Christine Mitter* and *Julia Riepl* (all Salzburg University of Applied Sciences, Austria) presented findings from their literature review about microcredits in emerging markets. The research aims to identify the impacts of microcredits on firms and borrowers in emerging markets. In total, 44 papers on different impacts of microcredits (e.g. performance, investment, growth, start-ups, health/nutrition, subjective well-being) were identified. The authors presented research gaps and deduced future research opportunities from the findings. For instance, future studies could investigate whether the results can be attributed to microcredits or whether other factors also play a role.

Afterwards, the results of a study of sustainability and resilience in family businesses were presented by *Thomas R. Mörth* and *Michael Kuttner* (both Salzburg University of Applied Sciences, Austria). Based on an exploratory, qualitative study, the authors show that the long-term orientation of family businesses promotes both sustainability and resilience by creating the potential for success through investments in the future. Sustainable, high-quality products target economic success and strengthen the regular customer base. Trusting, personal and long-term relationships with internal and external stakeholders are the basis for successful cooperation and long-term orientation. Emotional attachment to the family business influences the family business's strategic and long-term investments and development. Gut feeling, experience and intuition are essential in decision-making within family businesses. Due to their special characteristics, family businesses are predestined to harmonise economic, ecological and social sustainability and to create differentiating competitive advantages.

Finally, *Jörg Müller* (Technical University of Chemnitz, Germany) offered critical insights on artificial intelligence in university business education. Using text generators based on artificial intelligence (especially ChatGPT) in university teaching is controversial. The discourse to date has focused on admissibility. This study investigates the extent to which artificial intelligence-based text generators provide error-free answers. The results show that the use of text generators based on artificial intelligence often does not lead to an improvement in efficiency for students and/or teachers. In many cases, artificial intelligence supports but cannot fully solve problems due to the lack of "depth" of penetration. A profound reflection cannot be expected from such systems, which should also be made clear to the students.

5. Concluding remarks

To conclude, the two days in Salzburg were characterised by an intensive discourse around digitalisation and sustainability in a global financial economy. The large number of submissions, the heterogeneity of the contributions and the great interest in the conference reflect the relevance of the topics. The valuable feedback of the co-presentations, which experienced scientists held, included the possibility of further developing research projects. Besides the scientific exchange, there was also enough time for networking among the participants, some of whom already knew each other from the previous two conferences at Andrássy University Budapest.

Finally, we would like to thank all participants and especially the speakers. They have contributed significantly to the success of the conference. A conference anthology (*Herberger 2023*) on our conference in 2022 was published in German in the fourth quarter of 2023, containing a large number of the papers presented at Andrássy University in Budapest on 1 December 2022 ("Digital Transformation and Sustainability in the Financial World. Current Issues and Perspectives in the Context of Financial Risk Management"). A corresponding anthology is also planned for this year's conference, which will probably be published in summer 2024 and will also include many of the papers presented. The future of the conference is also secured, with the next event expected to take place in September 2024 in Munich. We will publish a call for papers in early 2024.

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