

# **International Congress on Digital Transformation and Sustainability in Global Financial Economics\***

*Tim A. Herberger – Leon Birawsky*

*In the financial sector, digital transformation and sustainability must be viewed in an integrative manner. But how can this requirement be put into concrete terms and what key challenges will we face in the financially-oriented corporate world in the future as a result of the combination of digital transformation, sustainability and financial markets? The international congress “Digital Transformation and Sustainability in Global Financial Economics” held at Andrassy University Budapest (AUB) on 27 September 2021 addressed these challenges and provided interesting insights into current international research projects on the topics of digitalisation, digital transformation, sustainability, financial markets, blockchain, environment, social, governance (ESG) and green technologies.*

## **1. Initial Situation**

Are digital transformation and sustainability in global financial economics in lockstep? In a nutshell, the idea is to address the two issues and the related efforts by different stakeholders in the global international financial markets and to think together in finding solutions. However, the difficulty that arises at the very beginning of this “thinking together” is that there is usually a lack of universally used definitions.

Sustainability is always about values, organisations and institutions (*Dedeurwaerdere 2014: 1*), but it is also about awareness (*Hildebrandt 2020*). In the well-known “Three Bottom Line” framework, sustainability means a harmony of economic, environmental and social objectives and that harmony leads to a win-win-win development for companies (*Elkington 1994, 1998*). However, harmony between the three areas is a challenge in practical implementation, because it also involves harmonising the different motivations and interests of various stakeholder groups (see e.g. *Wissenschaftliche Dienste des Bundestages 2004; Herberger – Dötsch 2021*). Sustainable efforts mean to identify “*the needs of the present without*

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\* The papers in this issue contain the views of the authors which are not necessarily the same as the official views of the Magyar Nemzeti Bank.

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*compromising the ability of future generations to meet their own needs*".<sup>1</sup> However, for example, a high-tech start-up will not be able to include all future generations in its daily struggle for survival, and a conglomerate constituted as a publicly listed company will not always want to. The question arises: *Can digitalisation and digital transformation be helpful in a symbiosis to promote this harmony?*

If we want to find a meaningful approach, however, we first need to be clear about what digitalisation means (*Herberger – Dötsch 2021*). Even though the common use of “digitalisation” and “digital transformation” documents an awareness of the problem in the public, the terms remain vague and there is a lack of an appropriate definition that would enable understanding across disciplines. The relationships between the terms remain unclear. While digitalisation can be interpreted as the introduction of new solutions based on digital technologies, digital transformation addresses the implementation induced by digitalisation and the associated changes as well as risks resulting from digitalisation compared to the initial situation, which ultimately determines the consequences for all stakeholders, also reaching beyond the implementation issue (*Herberger – Dötsch, 2021; Herberger – Zoll 2020; Hess 2019*). Consequently, digitalisation and digital transformation as terms can be located in a sequence. Against the background of a (business) process, digitalisation can be interpreted as the first step of a change of a current state. Digitalisation is followed by the digital transformation in the form of a transformation process that ultimately leads to fundamental changes in a business model and in extreme cases can even lead to the obsolescence of the business model (e.g. *Helm et al. 2022*). This, of course, inevitably leads to spill-over effects on societal systems and corresponding stakeholders (*Herberger – Dötsch 2021; Herberger – Zoll 2020*).

The Corona pandemic, with a dual transformation booster of innovation and technology, shows us that sustainability and digitalisation are certainly not contradictory, but rather could support each other up to the point of merging. Finally, the AUB was very delighted to discuss those kinds of potential synergies at the finance-focused conference. A special euphoria was noticeable among all participants groups (AUB students, international researchers and the public interested in sustainability as well as digital transformation in the finance sector), because after more than a year it was possible to hold a larger, in-person conference at the university.

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<sup>1</sup> International Institute for Sustainable Development. <https://www.iisd.org/about-iisd/sustainable-development>. Downloaded: 7 March 2022.

The AUB opened its doors to the public on Tuesday, 23 September 2021 to discuss the newest developments in the digital and sustainable future in the business administration sector with a special focus on financial issues. *Tim Alexander Herberger*, host of conference and head of the Chair of Business Administration, specifically Entrepreneurship, Finance and Digitalisation, was highly enthusiastic about the opportunities provided by the face-to-face dialogue at an international level and the combination of experienced as well as young researchers as well as prospective researchers/students and the interested public. He also emphasised the important financial commitment of the Hans Seidel Foundation, without whose efforts such a large conference would not have been possible without charging conference fees. *Zoltán Tibor Pállinger*, the rector of AUB, underlined the importance of the event and gave the starting signal for an exciting combination of scientific presentations with discussions and keynotes by *Anikó Szombati*, Chief Digital Officer at the Central Bank of Hungary (Magyar Nemzeti Bank, MNB), and *Marcel Tyrell*, Chair of Banking and Finance at Witten/Herdecke University.

## 2. Summary of the Speakers' Research Findings

*Jona Stinner* and *Marcel Tyrell* from the University of Witten/Herdecke (Germany) presented their current research work focusing on empirical research in the context of an earlier “mining shock” in crypto currencies. This shock occurred when major mining farms in China were shut down for 6–7 weeks due to strict lockdown regulations to control the pandemic. This special event made it possible to examine the industrial-economic market structure and efficiency characteristics of the mining market as part of Bitcoin technology. It was clear that stability is linearly dependent on the transaction security of the system. The speakers emphasised the immense power of blockchain technology as a central response in the discussion of sustainability and future aspirations. Wherever we see complex supply chains, the use of blockchains combined with smart contracts offers great potential for increasing efficiency and reducing the number of intermediaries causing transaction costs. By reducing the number of intermediaries, the surplus rent can be passed on to both producers and consumers, maximising the overall welfare. Nevertheless, the high energy costs of the mining process will continue to be a challenge, according to the speakers.

While the opening section clearly presented the overwhelming possibilities of digital transformation, *Julia Brunhuber* and *Martina Sageder* from Salzburg University of Applied Sciences illustrated the apparently unchanged reality at German-speaking SMEs according to digital transformation. Based on their analysis, using content analyses of interviewed experts, they investigated how progress in the acceptance of digital financial services among small and mid-sized enterprises (SMEs) looks

like. They showed that for reasons of consumer confidence traditional house banks are still the first choice of contact, especially when dealing with financing issues. When analysing the digitalisation progress of German and Austrian companies, processes are often implemented digitally using “stand-alone solutions”. The reason why companies decide against implementing entirely integrated systems is often not a question of budget; it is more about considering which specific parts of the system is needed to be implemented and whether there are sufficient HR-based resources to educate staff in using those new systems.

*Michael Kuttner*, professor at Salzburg University of Applied Sciences, continued with his presentation of a structured literature review-based paper. He discussed the research issues of which factors support or impede the circular economy of SMEs and how the “R’s” (Reduce, Reuse and Recycle) of sustainability can be linked to the circular economy. In the discussion following the presentation, it was suggested that the R-factors be pulled to a holistic ESG level. In addition, some of the discussion contributions saw a particular challenge in a more efficient measurement or quantification of sustainability.

In the third part of the scientific sessions, the topic “Reporting of ESG efforts” was taken up. *Martina Sageder*, professor at Salzburg University of Applied Sciences, presented results from a research project where the sustainability reporting of manufacturers in the automotive sector was compared from an ecological point of view. The content-analytical comparison between different sustainability reports (2014 and 2018) clearly indicates that specific formulations, such as the definition of objectives, became significantly “flatter” during the last few years. Therefore, a green-washing learning effect can be deduced, whereby corporations assume that negative image effects will occur when formulated goals are not achieved. In this context, she communicated a strong connection in the recent “Diesel Scandal” by Volkswagen as a groundbreaking “shock moment” within the automotive sector.

*Alain Fuchs* and *Manuela Ender* from Salzburg University of Applied Sciences also took another media “shock event” as a starting point to analyse sustainability reports. After the “Ibiza Affair” in Austrian politics, the Corruption Perception Index (CPI) in Austria decreased significantly. An analysis of sustainability reports of companies listed on the prime market of the Vienna Stock exchange indicates that there is certainly potential for improvement in reporting corruption-related content. At the end of the scientific presentations, *Eduard Bossauer* from AUB presented his research project, which includes the implementation of a primary data collection for the European market, in order to determine capital costs and return expectations for several investor groups and types of use with a strong focus on private equity. He showed that private capital markets are still suffering a transparency deficit in terms of data collection that leads to problems in calculating the discount rates.

In a nutshell, the presented research underlines the need for standardised reporting and reliable data exchange in relation to ESG. The speakers noted considerable differences in quality, especially in sustainability reports. Since, according to EU regulations, stand-alone sustainability reports are to be integrated into company reports in the future, uniform standards and auditing obligations are needed. In this way, sustainability efforts could be quantified and made more comparable. From the perspective of the financial markets, stricter rules are to be welcomed due to the unchanged high interest in sustainable investments.

### 3. Summary of the Keynote Speakers' Statements

During the closing keynotes, *Anikó Szombati* took the audience through the digital strategy for Hungarian banks. Underlining the main fields of activities within the digital transformation strategy, Szombati emphasised the importance of “human beings” as a social factor within the ESG-driven digitalisation topic:

*“Actually, we want to establish a digital culture”.*

Progress in digitalisation can only be achieved in cooperation with people, where people are an active part of digital transformation. According to Szombati, providing training for employees is one of the central tasks of the MNB.

Whereas the scientific lectures mainly discussed entrepreneurial action based on ESG principles, *Marcel Tyrell*, professor at Witten/Herdecke University, raised a controversial question to this topic. He questioned whether we might be in a green bubble in the financial market: Is it meaningful just to follow the trend of investing exclusively in green technology? He based his arguments on a counterfactual approach contained in the work of *Oehmke – Opp (2020)*. He argued that it might be useful to invest in “brown” technologies, as some companies will then have a greater opportunity to pursue a greener strategy in the future. This approach was discussed critically in the auditorium. During discussion, there was wide consensus on Tyrell’s demand that in the future a specific ESG factor is needed to quantify and value sustainable investments.

### 4. Concluding Remarks

In his closing statement, host *Tim Alexander Herberger* emphasised that digitalisation and sustainability can no longer be separated from each other. Both always have to be considered together, just like a DNA strand. Technological developments through blockchains and smart contracts can be a decisive factor in achieving the common global objective of climate neutrality.

Finally, the speakers as well as the audience revealed the great potential of using digitalisation to answer questions about how sustainability looks like in numbers. Therefore, finding suitable monitoring parameters and comparable standards is one of the most important challenges in the future. Moreover, it can be assumed that emerging “shocks” in the global economy and on the financial market will continue to cause dynamic changes in the future.<sup>2</sup>

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<sup>2</sup> Some research papers which were presented on the conference is published in an anthology about the conference and the corresponding topics in German: Herberger, T. (ed.) (2022): *Digitale Transformation und Nachhaltigkeit in der globalen Finanzwirtschaft (1st ed.)*. Nomos Publishing. Furthermore, the AUB plans a further conference on sustainability and digital transformation topics in financial economics in the upcoming winter. For further information, please visit the AUB website (<https://www.andrassyuni.eu/nachrichten/call-for-papers-zur-2-tagung-digitale-transformation-und-nachhaltigkeit-in-der-globalen-finanzwirtschaft.html>).

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