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Title of the doctoral thesis:

RESEARCH ON CORPORATE VALUE ASSESSMENT IN THE CONTEXT OF DIGITAL TRANSFORMATION OF BUSINESS MODELS

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b) Keywords: digital transformation, digital business model, digital business model innovation, value enhancement, digital technology, artificial intelligence, data science, innovation

c) Summary:

The competition of companies in the global markets is increasing and the environment to conduct business in is driven by higher volatilities and unexpected events such as material shortages or delivery problems triggered by events like the corona crisis or the war in Ukraine. In order to maintain competitive in this VUCA world, companies undertake different measures to optimize their position in the market by the use of digital technologies and new strategies. Mostly a complete digital transformation plays a key role in that process and the success is dependent on many different factors such as management support and company culture.

Furthermore, the sustainability aspects of business models, the so-called green business models are researched, as the customer requirements are constantly changing and leading towards the demand of sustainable products or services which causes companies to rethink their business models. There is a clear trend that the focus is continuously headed towards sustainable and green aspects in value chain of the companies as well as their offered products and services. The consequences for the companies in the global context are, that there is brand reputation at stake if not dealing with green business model innovation, the loss of customers which are supporting the idea of sustainable products or services and in consequence the loss of customers and market shares.

On the other hand, the shareholders want to see their investment in digital transformation or green business models reflected in an enhancement of the company value to have a return on that investment. Since the implementation of a digital transformation often takes place successively and the effects in many respects only become apparent at a late stage, the success of a digital transformation can only be measured in the long term. The same applies to green business model innovation as there are different regulatory hurdles to overcome when producing sustainable products and services mostly in connection with high implementation costs.

This thesis is highlighting on the approach of digital transformation and its effect on corporate value enhancement in the global context. The assessment of corporate value enhancement by the support of digital transformation is measured with key performance indicators and investigates on the different success factors of value enhancement also driven by digital technologies such as artificial intelligence or data science approaches.

In chapter 1 the theoretical framework of digital transformation in the global context is shed light on, answering the question of the added value of digital transformation and also the benefits of value creation in the application for companies trying to maintain competitiveness. Even though digital transformation suggests to have lots of opportunities such as scaling businesses and gains in efficiency, the risks are also illuminated. Those are mainly cybersecurity and data protection issues that can manoeuvre companies into problems and damage their business, even to the point of insolvency. The combination of digital transformation and sustainable business models shows that green business models can not only be a moral aspect for companies but can also have monetary effects.

Chapter 2 deals with approaches on the assessment of corporate value enhancement with regard to digital transformation of global business. Therefore, digital business models and their contribution to corporate value enhancement are shed light on as well as the fundamental characteristics and value drivers of digital business models are described. There are dedicated digital technologies that are driving the success of digital business models, particularly artificial intelligence, data science, the blockchain technology and the internet of things (IoT). These technologies have a huge impact on the efficiency of processes by automatization or optimization of workflows, the interaction between customers or suppliers and allows conclusions to be drawn from large volumes of data. It concludes that digital transformation contributes in value creation by putting the customer in a central position using data analytics to understand the customer requirements. Additionally, the influence of the mergers and acquisitions strategy on the digital transformation and corporate value enhancement is highlighted, showing that by the acquisition of a company with a digital business model the knowledge and skills of the bought company contributes to value enhancement.

In chapter 3 the current developments and trends for the digital transformation of enterprises and strategic options of digital business transformation in a VUCA environment are researched upon. Thereby, the challenges for companies in digital transformation of industry 4.0 are shown by also putting it into global risk analysis. The hurdles of the manufacturing industry, such as carbon neutrality, new energy sources, raw material shortages and the shortage of skilled labour are compared with the objectives of the EU Green Deal.

Chapter 4 deals with several studies on business models digital transformation in the perspective of industry 4.0 and green business model innovation. The first study is revealing the influence of digital hubs on companies and their contributions to digital transformation by granting access to qualified workforce from universities or research institutions, technological infrastructure and proximity to startups, research institutions or established companies. In a second study the contribution of digital platforms on scaling business models is confirmed by the strong network effects, strong interaction with customers and growth dynamics of digital platforms. In a third study green business model innovation in the context of digital transformation with its targets and influencing factors as well as the challenges and advantages are put in focus. The key requirements of implementing green business models are the role of the management, the interaction with stakeholders, usage of digital technologies to support the

process and efficiency as well as the companies culture. The long-term success of a company is built on ecological and economic goals with digital technologies as enablers.

In chapter 5 the application of data science and artificial intelligence as a driver of scaling business is researched on. The quantitative effects of data science and artificial intelligence like unlocking sales potential, the usage of data analytics, ROI measurements and boosting productivity if aligned with corporate values are essential. On the other hand, the qualitative effects of data science and artificial intelligence should not be underestimated. The corporate culture, the focus on employees, data-driven agile teamwork and the skillset of the employees play a crucial role here. Lastly, the consequences and the economic impact of the AI Act on companies is providing an outlook on the expected opportunities of AI and data science as a driver of scalability of business but also on the risks imposed.

Chapter 6 shows a proposal for the assessment of corporate value enhancement with focus on digital transformation of business models. Therefore, the interlocking integration of business models and the digital transformation is analysed. Here also sustainable criteria such as ESG is a necessary aspect to consider when creating a full picture of value enhancement as the economic and ecological business goals have to be aligned as the focus should not only be on monetary but also sustainable growth.

The study in chapter 7 investigates the impact of digital transformation on corporate value enhancement in the medical technology industry, based on a survey of 27 senior experts. Contrary to expectations, artificial intelligence is not seen as the primary driver of value enhancement, with concerns about upfront costs and the shortage of qualified and skilled employees. There is a divided opinion on whether investment in digital technologies significantly boosts product development. ROI is recognized by 48% of participants as the most suitable KPI for measuring digital transformation success. However, 45% doubt that digital transformation will enhance value within 3-5 years, citing regulatory challenges and investment hurdles, especially in the German context. Collaboration with start-ups is identified as a key strategy for advancing digital transformation, though regulatory frameworks like MDR and GDPR are viewed as significant obstacles. Overall, 48% believe digital transformation is crucial for long-term corporate value growth, with successful implementation depending on adapting to regulations and leveraging partnerships with innovative start-ups.

d) Curriculum Vitae



Curriculum Vitae Europass

Personal information

Last name / First name Weiss / Pablo Valentin

Work experience

Dates	01.02.2023 - today
Occupation and position held	Managing Director
Main activities and responsibilities	consult owners of businesses in the selling process of their company
Name and address of employer	MUB Beratung GmbH
Type of business or sector	Management Consultancy in Mergers and Acquisitions
Dates	30.09.2021- 31.01.2023
Occupation and position held	Senior Consultant
Main activities and responsibilities	Implementation of Information security management systems (ISMS) nach ISO/IEC 27001/27002 und BSI IT-Grundschutz as well as B3S-Standard IT-Projektmanagement, Requirements-Engineering
Name and address of employer	Netec GmbH
Type of business or sector	Management Consultancy in Mergers and Acquisitions
Dates	01.03.2021- 30.09.2022
Occupation and position held	Senior Partner
Main activities and responsibilities	consult owners of businesses in the selling process of their company
Name and address of employer	IT-Firmenmakler GmbH
Type of business or sector	Management Consultancy in Mergers and Acquisitions
Dates	31.12.2019 - 28.02.2021
Occupation and position held	Managing Director
Main activities and responsibilities	consult owners of businesses in the selling process of their company
Name and address of employer	IT-Firmenmakler GmbH

Type of business or sector	Management Consultancy in Mergers and Acquisitions
Dates	01.06.2019 – 28.02.2021
Occupation and position held	Senior Partner
Main activities and responsibilities	Management consultancy with a focus on corporate succession
Name and adress of employer	MWB Beratung GmbH
Type of business or sector	Management consultancy with a focus on corporate succession
Dates	01.10.2018 – 30.05.2019
Occupation and position held	Leading positions in sales
Main activities and responsibilities	Strategic sales
Education and Training	
Dates	01.10.2013 - 31.03.2017
Title of qualification awarded	Master of Science (M.Sc.)
Main subjects covered/skills acquired	Department of Industrial Engineering and Technology Management
Name and type of education institution	Wilhelm Büchner Hochschule Darmstadt / Universtiy of Applied Science
Dates	01.10.2007 - 30.10.2010
Title of qualification awarded	Bachelor of Engineering (B.Eng.)
Main subjects covered/skills acquired	Industrial Engineering with the specialization in Facility Management
Name and type of education institution	Cooperative State University / Duale Hochschule Baden-Württemberg, Stuttgart
Personal skills and Competences	
Mother tongue	german
Other language(s)	english, spanish, french
European level (*)	english (C1), spanish (B2), french (A2)

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Date: 01.07.2024