Global Business Dynamics, Value Chains, and Cultural Linkages

Rainer Wehner and Emin Akçaoğlu
Editors

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1

Global Business Dynamics, Value Chains, and Cultural Linkages

Rainer Wehner and Emin Akçaoğlu

1.1 Introduction

In today's interconnected world, the dynamics of global business are shaped by a complex interplay of economic trends, political forces, cultural nuances, and technological breakthroughs. The global marketplace has undergone significant transformation, characterized by both opportunities for growth and the emergence of complex challenges. This evolving environment requires businesses, governments, and individuals to not only understand these shifts but also adopt strategic approaches to navigate them effectively.

The global economic landscape is in a state of constant transformation, driven by technological innovation, geopolitical tensions, and global health crises. These forces have redefined industries, altered business models, and reshaped global supply chains. Successfully adapting to this evolving environment demands agility, foresight, and a commitment to sustainable and ethical practices.

Technological advancements, including artificial intelligence, blockchain, and the Internet of Things have revolutionized industries, creating unprecedented efficiencies while introducing challenges such as workforce adaptation, cybersecurity risks, and data privacy concerns. To harness the potential of these innovations, businesses must prioritize continuous learning, invest in robust cybersecurity infrastructure, and maintain a proactive approach to technological integration.

Globalization has expanded market access and connected businesses with a worldwide customer base, but it has also exposed companies to trade uncertainties and geopolitical risks. Persistent trade tensions, fluctuating tariffs, and supply chain vulnerabilities highlight the importance of diversification, adaptability, and informed decision-making.

Meanwhile, pressing environmental challenges, such as climate change and resource depletion, underscore the need for sustainability in business operations. Organizations that embrace green initiatives, reduce carbon footprints, and integrate sustainability into their strategies are better positioned to thrive in an economy increasingly driven by environmental stewardship.

Demographic shifts, including an aging workforce and the rise of younger generations, are reshaping labour markets and organizational cultures. Businesses must adapt by fostering inclusive workplaces, promoting lifelong learning, and leveraging diverse talent pools. Talent management, coupled with strong ethical governance, is critical to maintaining competitiveness and driving innovation.

Economic volatility remains a constant, as evidenced by the 2008 financial crisis and the disruptions caused by the COVID-19 pandemic. Businesses must build resilience by implementing comprehensive risk management strategies and contingency plans to withstand uncertainties and ensure long-term stability.

Finally, as regulatory frameworks grow more complex and ethical expectations rise, organizations are increasingly required to operate transparently and responsibly. Cultivating a strong ethical culture, staying ahead of regulatory changes, and proactively addressing stakeholder concerns are essential components of modern business practices.

The book comprises eight insightful chapters and this introduction, each exploring key themes relevant to global business, value chains, and cultural connections. The overarching aim is to provide readers with a comprehensive understanding of the evolving landscape of global trade, the integration of value chains, and the role of cultural linkages in shaping organizational strategies and societal outcomes.

In the second chapter, Vitelli (2024) provides insights into the reshoring of Italian companies under the pressures of deglobalization, political conflicts, and supply chain disruption. The chapter examines

how geopolitical tensions and conflicts, such as the Russian invasion and the Red Sea crisis, influence the global economy. It sheds light on the phenomenon of reshoring, where businesses reallocate operations closer to home to mitigate risks associated with global supply chains. This chapter provides critical insights into how political uncertainties and deglobalization trends are reshaping international trade and corporate strategies. Through a systematic literature review, Vitelli addresses gaps in the literature to identify research trends, conceptualizes current views, and provides new insights into the relationship between political conflicts, reshoring strategies, and global supply chains.

In the third chapter Akçaoğlu and Wehner (2024) offer a comparative analysis of SEZs in two distinct contexts. While Turkey utilizes SEZs as closed zones for production and services, Germany adopts a different approach, leveraging its stable legal system and financial incentives. This comparison underscores the diversity in economic strategies employed by nations to attract foreign investments and foster economic growth. As is known, in a general sense, a free zone, although located within the borders of a country, operates as if it were outside the country's customs, trade, and tax regulations. These zones are physically separated (enclosed) from the countries they are within. Additionally, commercial and industrial activities are incentivized under special conditions in these areas. Free zone practices began in the 1960s with the primary goal of facilitating international trade activities and creating an economic activity area beyond the protectionist approaches that were prevalent in many countries at the time. Over the years, this approach has evolved to encompass not only commercial activities but also industrial—specifically manufacturing—activities. Governments around the globe established Special Economic Zones (SEZs) in their countries to enhance the attractiveness of their economy attract Foreign Direct Investments (FDIs). Companies are offered investment incentives like customs relief for imports and exports, free use of infrastructure or tax holidays. This chapter illuminates the situation about SEZs in Germany and Turkey. It reveals that the intention and the situation in both countries is completely different, and these approaches are related both countries economic structures.

In the fourth chapter, Bauera, Möbsa, Ungerb, Szczensya and Ernstc (2024) focus on the learning curve effects in hospitals as highly specialized expert organizations. The chapter examines the healthcare sector by highlighting how specialization in operating

rooms can enhance efficiency and reduce costs. This chapter not only examines short-term outcomes but also explores long-term implications, demonstrating the broader applicability of specialization as a strategy across industries. Over the past 30 years in most developed countries, the economic pressure on hospitals to improve their efficiency has increased considerably. Specialization is one prominent response strategy to such pressures. This chapter tries to answer the question of whether specialization in the operating room as a cost-reduction strategy deploys spillover effects on non-specialized cases. In order to offer a comprehensive investigation, it evaluates the effects of specialization on specialized cases, too. It has not been investigated yet whether this cost-saving strategy affects later events in the patient's case or the overall costs of a case. Thus, this study tries to examine these effects on a larger scale that considers not only the operating room, since the medium- to long-term effects of the cost-reduction efforts may actually overcompensate initial savings. The authors find that with an increased degree of specialization, the hospital can reduce surgery times and simultaneously improve short-term quality with specialized as well as non-specialized cases, which implies positive spillover effects on non-specialized surgeries. Thus, they contribute by showing that specialization has a cost-saving effect not only in the operating room, but also in the rest of the patient's case in the form of lower follow-up costs due to a lower complication risk.

In the fifth chapter, Soriente (2024) examines Italy's role in global value chains (GVCs). Characterized by robust upstream and downstream linkages, Italy's unique positioning underscores the crucial role of small and medium-sized enterprises (SMEs) in sustaining its competitiveness. The collaborative dynamics between Italian and German industries highlight the importance of interdependence within global production networks. Soriente argues that the internationalization of Italian companies and their integration into GVCs have become increasingly relevant topics. Her study aims to analyze Italy's position within GVCs and identify the key factors influencing this status. Through an empirical analysis of GVCs and a comprehensive review of existing literature, the study delves into the organization of global production and the effects of GVCs on traditional distinctions among producers, exporters, importers, and consumers. It emphasizes that the role of final goods exporters does not necessarily equate to significant added-value contributions, as their output often relies heavily on imported inputs.

The analysis positions Italy as an intermediate player in GVCs, with strong upstream and downstream connections within the production chain. This placement is shaped by the distinctive characteristics of Italy's entrepreneurial landscape, dominated by SMEs. Although Italy has seen a slight shift toward "downstream" participation, it remains a significant "upstream" contributor, producing intermediate goods with high Italian added value that are later integrated into products manufactured abroad. The close interdependence between Italy and Germany in GVCs is particularly noteworthy. Germany frequently serves as a supplier of high-quality machinery and components to Italian firms, enabling them to enhance their production processes. In turn, Italy produces high-quality intermediate goods that are incorporated into Germany's final products. This bilateral collaboration allows Italian companies to leverage German technology and expertise while enabling Germany to benefit from Italy's excellence in intermediate goods production.

In the sixth chapter, Baltzer (2024) examines the concept of value as a central theme in business models. By addressing the processes of value creation, delivery, and dissemination, the chapter deepens the theoretical foundation of business models, providing a nuanced perspective on how value drives organizational success. The concept of value is fundamental to every business model, with the value proposition forming its core. Business models typically encompass the creation, delivery, and capture of value. However, the dissemination of value often receives less attention. This chapter introduces key concepts that collectively illuminate all essential aspects of value within business models.

In the seventh chapter, Hube (2024b) introduces a novel methodology for evaluating the future potential of innovations. By considering both financial and non-financial factors, this methodology provides businesses with a comprehensive framework for assessing innovation projects, addressing the critical need for improved evaluation mechanisms in dynamic market environments. This contribution is based on the publication 'Innovation Formula and Innovation Test Bed', released in March 2024 (Hube, 2024a), and builds on the earlier work 'Innovation Status Formula' (cf. Hube, 2022), which discussed the "aggregate states" of "was" and "is" in the context of innovation. The current focus shifts to the "will be" aggregate state, aiming to calculate the future potential of innovation ideas or projects. The development of innovation ideas and projects into successful market solutions remains a significant challenge, with

success rates still being very low. This underscores the need for a new evaluation methodology that is multidimensional, flexible, and incorporates clear key indicators, while taking both financial and non-financial criteria into account.

In the eighth chapter, Saginova, Zavyalov, Zavyalova, and Runova (2024) emphasize the critical role of public participation in the preservation of cultural heritage. Through comparative case studies of China, India, and Iran, this chapter proposes actionable mechanisms for empowering citizens and illustrates the intersection of cultural linkages with economic strategies. The initiative of citizens to identify, register, and protect cultural heritage is significant both within government programs and as part of public movements. To activate and effectively utilize such initiatives, the concept of customer empowerment can be applied, offering free access to information about cultural heritage sites, their value, and current condition; ensuring the inclusion and organization of all stakeholders in the process; and fostering self-organization and initiative among participants. Based on a comparison of best practices for preserving cultural heritage in China, Iran, and India—drawn from open sources, scientific publications, and expert opinions—a mechanism for managing citizens' participation in cultural heritage protection is developed. This includes objectives, key processes, and implementation tools.

In the final chapter, Meyer, Bolsinger, Wehner, Nair, Nwosu, and Abdullahi explore the integration of spirituality and economics. They examine how spiritual leadership and values influence organizational performance, innovation, and sustainability, offering a culturally nuanced perspective on leadership and workplace dynamics across diverse national contexts. The connection between spirituality in the workplace and the economic sphere is highlighted. Max Weber (1904) identified the positive implications of spirituality for economic outcomes. These findings can be explained by the positive effects spirituality has within an economic context. This value of spirituality is captured in the theoretical concept of spiritual capital. Within this framework, spiritual leadership has emerged in management literature, which is discussed in the article as a foundation for the development of Spiritual-Based Humanism. The first part of the chapter establishes a thematic framework connecting spirituality and spiritual capital in organizations. In addition to key definitions, the context of spirituality is explored, which is closely tied to the worldview of followers of different religious traditions, personal

calling, vision, and corresponding values. Spiritual capital is operationalized through values that influence spiritual or servant leadership. This chapter lays the groundwork for developing a model to assess the potential effects of spiritual leadership on organizational performance. Embedded in the national cultural context, spiritual leadership impacts company performance in financial and other areas (e.g., innovation, sustainability, CSR) through the lived organizational culture, specific values, and employee commitment. In the second part of the chapter, value portfolios of selected globally widespread worldviews are discussed, with concrete examples from sample countries, and the country-specific context is explained. Based on this, a general research design is developed for a follow-up paper to empirically investigate the relationship between spiritual capital and organizational performance.

As outlined in this introductory chapter, this volume brings a number of important topics, and each chapter contributes a unique piece to the puzzle of understanding global business dynamics, value chains, and cultural linkages. Together, they illuminate how businesses must adapt to geopolitical shifts, leverage specialization, foster innovation, and integrate cultural dimensions into their strategies. As globalization faces both advancements and setbacks, this book seeks to inform scholars, policymakers, and practitioners about the dynamic interplay of economic forces, cultural factors, and organizational strategies. By presenting diverse perspectives and rigorous analyses, it aims to foster a deeper appreciation of the challenges and opportunities in the evolving global landscape.

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2

Geopolitical Conflicts and the Shift to Reshoring in Italy

Alfredo Vitelli

2.1 Introduction

The global economic landscape is undergoing a profound transformation, characterized by the gradual shift from a unipolar to a multipolar order. This transition, marked by the emergence of new global powers such as China, has raised concerns about potential global market destabilization (Muzaffar et al., 2017). In response to these changes, governments and entrepreneurs are reevaluating their strategies, moving away from traditional offshoring practices and towards reshoring strategies. Reshoring, the practice of bringing production or business activities back to the country of origin, has garnered increasing attention in recent years. While various drivers of reshoring have been identified in the literature, there remains a need to explore whether new factors are behind its resurgence and to understand the specific influences shaping reshoring practices. Additionally, it is crucial to evaluate the impact of these new drivers on reshoring decisions and their broader implications for global economic dynamics.

To address these questions, this study aims to explore the following research questions: What are the new drivers behind the process of reshoring and thus of deglobalization, and what are their effects? To provide a comprehensive analysis, in addition to reporting on the analyses of the classic drivers influencing Western societies, this study will use a European country, Italy, to examine specific drivers influencing reshoring practices. The Italian market offers a unique context and practical example of how distinct regulatory environments, government incentives, and brand images are already

influencing reshoring decisions. This study posits that the ongoing rise in political conflicts, prompted by the emergence of a multipolar world, significantly contributes to the process of deglobalization. These conflicts not only disrupt global supply chains but also directly influence commercial flows and shape strategic decisions undertaken by entrepreneurs and managers.

2.2 Globalization

Globalization is a phenomenon as current as it is ancient (Palombo, D. 2006). The term "globalization" is usually attributed to Theodore Levitt, a professor at Harvard Business School. It began to be used more commonly in the 1980s, reflecting technological advances that made it easier and quicker to complete international transactions; both trade and financial flows (Levitt, T. 1983). It refers to the increasing integration of economies around the world, particularly through the movement of goods, services, and capital across borders (James and Steger, 2014). However, the concept of globalization and global economic integration has more ancient roots. The first wave of globalization is often associated with the period between 1870 and 1914. This era is referred to as the first "golden age" of globalization, characterized by increased transfers of commodities, people, capital, and labour between and within continents (Zinkina, J. et al. 2019).

Globalization has facilitated easier access to diverse markets, fostering increased trade and economic growth. The benefits of globalization have been made possible through collaborative efforts and cooperation between nations. From a managerial perspective, globalization has provided opportunities to tap into new markets, access a broader talent pool, and optimize operational efficiencies through international collaboration and resource sharing. Furthermore, thanks the globalization managers had the opportunity to turn to foreign suppliers to regain competitiveness has been an existing differential between national labor costs and those in so-called low-cost countries (Baldassare et al., 2014).

Within the context of globalization, the practice of offshoring has emerged as a prominent strategy for companies seeking to optimize their operations and remain competitive in the global marketplace. It refers to an extension beyond national borders of the same market forces that have operated for centuries at all levels of human economic activity, village markets, urban industries, or financial

centres (Palombo, D. 2006). In the age of globalisation of complex cross-border production networks, lower cost is usually associated with economies of scale in input sourcing, whereas higher quality inputs tend to be found in markets with niche expertise—both driving company participation in the global supply chain (GSC) (Baldwin & Freeman, 2022).

Offshoring is the practice of companies moving business activities beyond the borders of their countries to perform functions that otherwise could be done in the home country (Bunyaratavej et al., 2011; Robertson et al., 2010). Typically, companies offshore an operational process, such as manufacturing, or supporting processes (Zuckerman, 2008). Cost optimization and profit maximization often drive companies to source from a single least-cost location with the most productive upstream suppliers. However, in the event of an aggregate shock, such as a significant unexpected event, the entire labour supply in this location could suddenly decrease, leading to a disruption of the entire supply chain. Specifically, through offshoring companies want to address: "efficiency" (cost reduction), "exploration" (access to knowledge and talented people), and "exploitation" (development of foreign markets) (Contractor et al., 2010).

2.2.1 Italian Offshoring

The same drivers were pushing even Italian companies to delocalize abroad, especially in Asian countries. The choice of Italian companies is more complex. Before cost reductions, usually, Italian brands cared about quality and brand image thanks to the Made in Italy. A highly significant factor driving various companies to relocate and depart from Italy, as highlighted by the CEO of SIBEG, is the Italian high taxation, complex regulations, and slow bureaucracy. According to the "Doing Business 2020" report (World Bank Group, 2020), Italy ranks 128th in ease of paying taxes, The "Corporate Tax Rates around the World Report" (PwC, 2023) clearly illustrates the incentive for businesses to move away from Italy. Italy, with a Corporate Income Tax (IRES) rate of 24%, contrasts with other countries such as Liechtenstein, Ireland, or Cyprus, where the IRES is set at 12.5%. According with Masaaki Mike Kotabe and Mol, M. J. (2007) earlier research demonstrates a clear focus on the cost-saving aspects of global sourcing and offshoring strategy, particularly for Western companies. Offshoring from Italy to Asian countries, such as China, India, Pakistan, and Bangladesh, is often influenced by the significant

difference in wages. The lower labour costs in Asian countries make offshoring an attractive option for Italian companies. This cost advantage allows businesses to achieve substantial savings, particularly for labour-intensive tasks, such as manufacturing or customer support, where a significant portion of costs is attributed to wages.

2.3 Deglobalization

In recent years, a growing debate among scholars and policymakers has emerged regarding the nature of the global order. The once-dominant narrative of globalization and a unipolar world is increasingly being challenged by emerging geopolitical shifts and the rise of new economic powers. As we navigate through an era marked by complex interdependencies and competing interests, it becomes imperative to reevaluate our understanding of global dynamics and their implications for international business and economic relations. The Economist (2023) notes that globalization, already slowing, is facing a new assault. This change is the result of a broader shift from a unipolar to a multipolar world order. Unipolarity refers to a condition in which one state, under the condition of international anarchy, enjoys a preponderance of power and faces no competitor states (Monteiro, N. P. 2014). As for decades the unipolar order has fostered global development and globalization while facilitating the fluidity of international trade, the emergence of new world powers is fundamentally altering the global geopolitical landscape. With their rising economic prowess and growing influence, these nations are challenging established norms and reshaping international relations. This shift introduces complexities that demand careful consideration, as the actions and motivations of these emerging powers have far-reaching implications for global stability and cooperation. The significance of de-internationalization has long been recognized. Calof & Beamish (1995) define it as a deliberate adjustment of the firm's exposure to international environmental conditions. Benito & Welch (1997) conceptualize the phenomenon as the set of managerial decisions - voluntary or imposed by external actors (as in the case of nationalizations) - that reduce the company's commitment to international contexts. Hennart et al. (2002) note that foreign disinvestments are perceived as negative events, causing strong manager reluctance to address the topic with researchers. Boddewyn and Torneden (1973) define foreign disinvestments as a voluntary or

involuntary reduction in the ownership stake in a foreign direct investment.

The occurrence of foreign disinvestments is not solely attributable to deglobalization and the uncertainty it fosters. Various events, such as changes in exogenous cost drivers like wage rates, currency fluctuations, and transportation costs, as well as hidden costs such as low productivity, quality issues, cultural disparities, brand image and exchange rate risks, can prompt firms to reevaluate the true total cost of offshoring (Ellram et al. 2013; Gray et al. 2013; Leibl et al. 2011).

In essence, the path from offshoring to reshoring typically unfolds as follows: firms initially offshore activities to leverage measurable advantages like lower labour costs. Subsequently, they may opt for reshoring due to changes in the same factors that initially prompted their decision to offshore, such as increased labour costs. Alternatively, reshoring decisions may arise from perceived benefits associated with bringing operations back to the home country, such as improved quality, flexibility, and the experience of doing business (Tate et al. 2014).

Previous research attributed disinvestment to these factors because, until recently, the world had not faced significant shocks. However, since 2020, starting from the Covid-19 pandemic through to the Russian aggression in Ukraine and the recent Middle East crisis, the entire world has experienced supply chain disruptions and significant shifts in global market dynamics. For policymakers, supply chain resilience and robustness are important for at least two reasons: first, upstream shocks can propagate to the rest of the economy through input-output linkages, resulting in aggregate macroeconomic fluctuations. Second, ensuring resilient supplies in critical sectors, such as food, water and energy, is of strategic importance for the entire society (kancs 2023).

2.3.1 Reshoring

As a result, companies are reevaluating their offshoring decisions and considering bringing production back to their home countries to mitigate risks and ensure greater control over their supply chains. In the last year, several manufacturing companies have announced the return of part of their offshore production to their home countries. Reshoring, the practice of bringing back once-offshored activities, is gaining prominence in modern business practices (Fratocchi et al., 2014; Kinkel, 2012) and is increasingly discussed in both economic

press and political circles (The Economist, 2013). This strategic shift involves a reversion from previous offshoring decisions, with companies opting to relocate their activities back to their home countries (Ellram et al., 2013; Gray et al., 2013). In identifying reshoring phenomena within a company's home country, various terms have emerged in the literature. One proposed term is 'return relocation' (Jungnickel, 1990), encompassing decisions involving the entire foreign subsidiary, specific functions, or even the closure of overseas production units (Hardock, 2000; Holz, 2009; Schulte, 2002). Another term, 'in-shoring,' has been used with varying meanings. Skipper (2006) identifies it as the opposite of offshoring, while Holz (2009) sees it as synonymous with back-reshoring in Germany, and Liao (2012) defines it as domestic sourcing by a company. Dholakia et al. (2012) use 'in-shoring' to cover both the return of production to domestic facilities and the establishment of new production activities in the home country. A third term, 'back-shoring,' primarily used by German scholars, initially referred to relocating value-generating activities back to the home country (Holz, 2009). Later, Kinkel and Maloca (2009) expanded it to include the reintegration of production activities previously carried out abroad into domestic production units. Kinkel and Zanker (2013) differentiate between 'on-shoring,' where a company internalizes outsourced productions from local suppliers, and 'back-shoring,' involving the internalization of production activities previously conducted abroad. Recent scholars from the United States, including Ellram, L.M., Tate, W.L., & Petersen, K.J. (2013) and Gray et al. (2013), define reshoring as decisions to 'bring back home' production activities previously offshored.

2.4 Reshoring Drivers

A significant aspect arising from the literature analysis is the motivations behind reshoring strategies. To address the general drivers of reshoring, it is necessary to consider the overarching factors that motivate companies to bring their production activities back to their home countries or advanced economies. These drivers encompass a range of considerations, including economic, operational, quality, and environmental factors. One of the primary drivers of reshoring is cost, particularly labour costs. Companies may find that the perceived cost savings from offshoring are eroded over time due to rising labour costs in offshore locations, making it more economical to produce goods domestically (Leibl et al., 2009; Platts &

Song, 2010; Holweg et al., 2010). Additionally, other cost factors such as transportation costs and hidden costs associated with offshoring, such as low productivity and quality problems, may influence the decision to restore (Ellram et al., 2013; Gray et al., 2013; Leibl et al., 2011).

Operational flexibility is another critical consideration driving reshoring decisions. Companies may face challenges related to inflexible purchase orders, penalties from late orders, high inventory levels, and reduced responsiveness to customers due to the physical separation between design and production facilities (Kinkel et al., 2007; Ferreira & Prokopets, 2009; Ritter & Sternfels, 2004).

Product quality issues, particularly when offshore activities are delegated to suppliers, also motivate reshoring efforts. Concerns about quality control and consistency may prompt companies to bring production back to domestic facilities to ensure higher standards (Kinkel & Maloca, 2009; Kinkel, 2012).

Additionally, conditions in the home countries of companies, such as incentives for reshoring, increased labour market flexibility, and high unemployment rates leading to protectionist policies, can influence reshoring decisions (Sirkin et al., 2011). Similarly, environmental factors, political and social risks, and exchange rate risks in foreign countries hosting offshoring initiatives may drive companies to reconsider their global sourcing strategies (Leibl et al., 2011). These general drivers of reshoring provide a foundation for understanding why companies may choose to bring their production activities back to their home countries or advanced economies.

2.4.1 Policy Environment

While the tide of deglobalization is gradually gaining momentum, the trade policy landscape has undergone dramatic shifts in the past five years (Goldberg and Reed, 2023). Over the last few decades, global trade barriers have been steadily diminishing, accompanied by a proliferation of bilateral and regional trade agreements that facilitated deeper integration into world markets for many countries. However, a pivotal moment occurred in 2018 when the US announced a series of tariff increases, primarily targeting China but impacting several other nations as well.

The emergence of climate change as a paramount global challenge has cast a critical spotlight on globalization's role as a potential contributor to high emissions. Varying environmental standards

among countries create incentives for the establishment of pollution havens. Moreover, policies aimed at mitigating climate change, such as carbon border adjustment taxes, hold the potential to reshape the global economic landscape. These policies will alter relative prices, potentially affecting countries' competitiveness and comparative advantage (Goldberg & Reed, 2023).

From the perspective of consumers, products originating from countries with lax environmental regulations, such as those outside of Europe, may have adverse effects on brand image. This phenomenon underscores the growing significance of environmental responsibility in consumer behaviour and the potential repercussions for businesses operating in an increasingly interconnected global market.

2.4.2 Made in Italy

The Italian case study provides valuable insights into how Western countries effectively address reshoring drivers. The essence of "Made in Italy" embodies true luxury (PWC, 2015). Over the past two decades, there has been a significant trend of traditional manufacturing relocating to countries with lower labour costs, commonly known as "offshoring" (Baldassare et al., 2014). This phenomenon has led numerous business owners to pursue opportunities in regions increasingly distant both in logistics and culture. The shift in manufacturing has predominantly impacted Western countries, with a particular focus on East Asia. Motivated by the potential to reduce production costs by 30-40%, businesses have established operations and forged partnerships with local producers, often through joint ventures (Baldassare et al., 2014). This strategic approach allows them to leverage special economic zones, modern industrial infrastructures, favourable tariffs, and cost-effective labour, albeit often unskilled.

However, the compromise on quality inherent in offshoring has fundamentally altered the strategic positioning of Italian companies. Traditionally committed to excellence and differentiation, these enterprises now face competition from low-cost countries relying on their cost advantage. This shift has forced Italian companies to divert their focus from quality to price competition, departing from their longstanding manufacturing traditions. Rising wages, tariffs, and other production-related costs in Asian countries have prompted a limited wave of production migration back to the country of origin, aligning with the contemporary trend of reshoring.

The primary driver for this return, cited by 42% of Italian entrepreneurs, is the positive impact of the "Made in Italy" label on consumers, associated with superior craftsmanship and well-crafted products. Another significant factor, identified by 24% of respondents, is dissatisfaction with the low level of quality in offshore production, presenting a branding issue (Baldassare et al., 2014).

For companies emphasizing factors such as high product innovativeness, superior quality, process safety, and rapid flexibility in meeting customer needs, offshoring proves to be an inconsistent strategy. These characteristics are frequently found in sectors such as automatic machinery, agricultural mechanics, and apparel (Baldassare et al., 2014). Thus, the evolving landscape of "Made in Italy" reflects the delicate balance between cost efficiency and preserving brand integrity in an increasingly competitive global market.

2.4.3 Government Incentives

From 2008 to 2014, Italy lost 97,000 jobs due to offshoring (PWC, 2015). However, analyses by PwC indicate that the reshoring effect could generate a GDP growth ranging from 0.4% to 0.8%. Recognizing the critical role of government in creating new job opportunities and mitigating the vulnerability of the supply chain to aggregate shocks while enhancing resilience, the Italian government has implemented a series of legislative measures aimed at promoting the internationalization of domestic economic activities. One significant provision within this framework is Article 6 of the legislative decree on internationalization, which focuses on facilitating the relocation of economic activities previously conducted in non-EU territories to Italy. This article offers a 50% tax incentive on related incomes during a transition period of five years (or ten for large companies), intending to stimulate economic activity within Italian territory (Germani, 2023).

2.5 Supply Chain Pressure: A New Key Driver

A new catalyst has emerged in recent years, fundamentally reshaping the landscape of globalization. This catalyst revolves around the increasing strain placed upon the global supply chain, a consequence magnified by unprecedented events such as the COVID-19 pandemic and ongoing geopolitical conflicts like the tensions between Russia

and Ukraine, as well as the recent confrontations in the Red Sea region. These events have spotlighted the vulnerability and fragility inherent in global supply chains, which serve as the linchpin of globalization. The disruptions and challenges faced by supply chains have underscored their critical importance, propelling them to the forefront of discussions surrounding global interconnectedness and resilience.

2.5.1 Covid-19

Acknowledged as the most severe global economic crisis since the Second World War (OECD, 2020), the Covid-19 pandemic has starkly exposed the vulnerabilities of the overly eastward-shifted global economic system. One of the areas most profoundly affected by the pandemic is undoubtedly the supply chain. This pivotal moment has prompted companies to reassess their strategies of internationalization and outsourcing/offshoring for the first time.

Covid-19 served as a wake-up call, leading entrepreneurs to reconsider the feasibility of shortening the production chain and intensifying the reshoring process. The intricate web of global supply chains, stretching across numerous countries, became glaringly evident as any disruption in a single link reverberated throughout the entire system. In response to this realization, the concept of "reshoring" supply chains gained momentum. As affirmed by Goldberg and Reed (2023), reshoring aims to fortify supply chains by reducing reliance on foreign countries and mitigating the risks posed by disruptions stemming from localized shocks.

2.5.2 Russia’s war in Ukraine

The Russian invasion of Ukraine, in February 2022, underscores the significant impact of localized shocks on globalization, particularly on the supply chain. This case highlights Europe's vulnerability, particularly regarding gas and grain imports respectively from Russia and Ukraine. The attack laid bare European countries' dependence, especially Italy and Germany, on Russian energy imports, revealing the fragility of global supply chains.

In response to the crisis, the German economy notably reduced gas consumption by approximately 20%, with industry reducing by 26% and households by 17% (Moll, Schularick, & Zachmann, 2023). Meanwhile, Italy has focused on developing an energy corridor between North Africa and Italy, with a particular emphasis on collaboration with Algeria (Maliszewska-Nienartowicz, 2023). These

strategic shifts underscore the imperative for countries to diversify energy sources and strengthen regional partnerships to enhance resilience in the face of geopolitical disruptions.

The Russia-Ukraine war caused significant disruptions, particularly in the export of wheat and other cereals from Ukraine (Jagtap et al., 2022). As Ukraine was the largest exporter of grain in Europe and Africa, the blockade of Ukrainian ports in the Black Sea by Russian military vessels for over four months severely impacted the country's cereal exports. The grain, typically destined for Europe and Africa, played a critical role in mitigating the risk of famine and unrest, particularly in regions across Africa to the Middle East (Economia, 2024). However, despite initial progress, subsequent disruptions by Russia saw a change in strategy, leading to the re-blocking of ships from the Red Sea, effectively undermining the efforts of the Black Sea Grain initiative and exacerbating the situation, despite the aid provided to Ukraine by the United Nations. (Il Grano Ucraino Ora è Un Problema per L'Europa, 2023). In response, the European Union implemented a strategic approach that prioritized overland transport, bypassing the Russian blockade of Ukrainian ports. Measures included temporarily removing tariffs on selected Ukrainian products and establishing Solidarity Lanes to facilitate the movement of goods through land routes, effectively circumventing the maritime obstacles imposed by Russia. As a result of these strategies, a larger portion of the grain supply was retained within Europe, leading to increased availability and consequently, reduced prices. World Bank data indicates a "positive" trend, with maize prices dropping to $394.8 per ton in February 2023, down from the peak of $522.29 in May 2022 (Goldberg & Reed, 2023). However, these strategies have proven to be detrimental to certain sectors of the European economy, notably impacting farmers who are facing uncompetitive prices due to the influx of low-cost wheat from Ukraine (Economia, 2024). Beginning in May 2023, complaints and protests emerged from countries such as Romania, Hungary, and Poland. These were followed by protests in Germany, France, Belgium, and Italy, primarily fueled by dissatisfaction with European Union policies. (Il Grano Ucraino Ora è Un Problema per L'Europa, 2023).

2.5.3 Red Sea Crisis

The world has faced significant shocks like the COVID-19 pandemic and the Russia-Ukraine war. However, a new conflict emerged on October 7, 2023, when Hamas attacked Israel (Byman et al., 2023).

This event led to direct and indirect consequences, including a counterattack by Israel and involvement from other groups like the Houthis in Yemen. The Houthi rebels in Yemen have been attacking ships in the Red Sea, targeting those they believe are linked to Israel. They have used a variety of weapons, including ballistic missiles and drones, to carry out these attacks (BBC, 2023). The Houthis have stated that they are specifically targeting ships that are Israeli-owned, flagged, or operated, or that are heading to Israeli ports. However, some of the vessels attacked have had no connection to Israel. The attacks have led to disruptions in international trade and forced several shipping companies to reroute their vessels. The Red Sea crisis has had a significant impact on global trade. Attacks by Houthi rebels along the trade route have led to firms pausing shipments, raising the possibility of a shock to the world economy (Partington & correspondent, 2024). The disruption has effectively closed one of the world's main trade routes to most container ships, leading to a 1.3% fall in global trade from November to December (Ziady, 2024). The world's largest shipping firms are continuing to pause shipments through the Red Sea, driving up the cost of shipments from Asia to Europe and potentially leading to a renewed inflation shock (Ziady, 2024). The disruption is also leading to increased transportation costs, affecting food prices and global supply chains. The longer the disruptions persist, the stronger the stagflationary effects on the global economy (BBC, 2023). Indeed, as highlighted by La Rocco (2024), carriers have redirected a significant portion of trade away from the Red Sea. Furthermore, the transit time for a vessel operating on the MD2 route between Shanghai and Genoa, typically passing through the Suez Canal, has increased from 32 days to 46 days by circumnavigating Africa.

2.6 Methodology

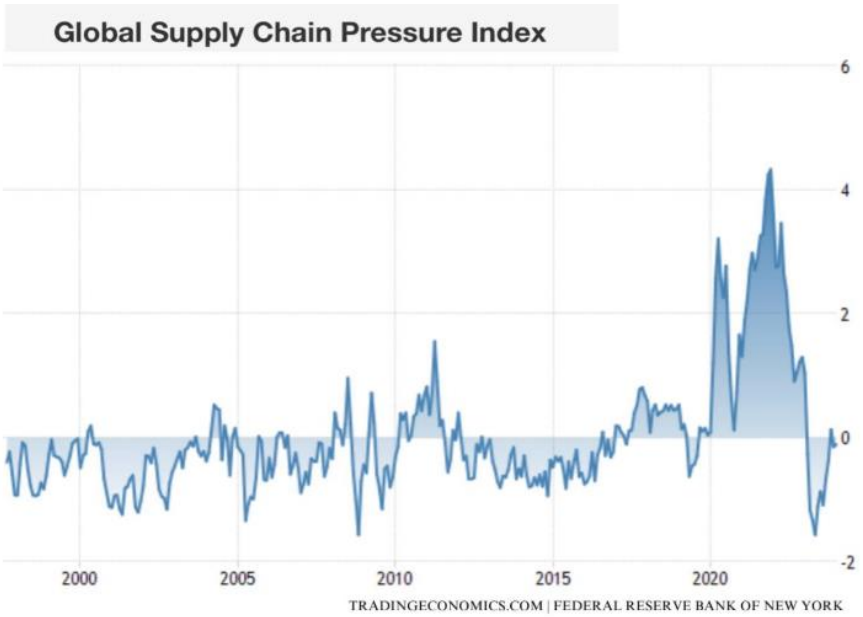
A systematic literature review synthesizes existing evidence, pinpointing gaps and avenues for future research (Petticrew and Roberts, 2006), thus delineating current boundaries in the discourse. It deviates from a narrative review due to its systematic approach, entailing a meticulous description of the steps taken to select, screen, and analyze the literature, to mitigate biases and enhance transparency (Fink, 2013; Tranfield et al., 2003). Tranfield et al.'s (2003) three-stage procedure - planning, execution, and reporting guided this research. Research objectives and key database sources

were identified during the planning stage. To support the research aim, objectives were set to allow for the broad scan of articles: to assess the range of paradigms, definitions and operationalisation in conjunction with theoretical and methodological similarities and disparities. The initial list of articles was generated by computerised database keyword searches on EBSCO Host® followed by Statista and Google Scholar. The keywords chosen were "globalization process" AND "de-globalization" to gain an overview of the topic. Once the overview, to understand the reason for the process of deglobalization the war and global crisis topics have been included in the research.

2.7 Results

This section aims to shed light on the repercussions of recent global shocks, which have had a significant impact on the supply chain, emerging as potent drivers for deglobalization. Drawing upon data from the Federal Reserve Bank of New York, this paper will examine the effects of the past four years' global shocks on the supply chain, which is evolving into a critical factor in the disruption of globalization.

Figure 2.1 Supply Chain Pressure Over the Last 25 Years 1997-2022



2.7.1 Global supply chain pressure

The Global Supply Chain Pressure Index (GSCPI) serves as a crucial measure of the intensity of disruptions affecting global supply chains. This index comprises 27 variables, ranging from cross-border transportation costs to country-specific production data in key economic regions such as China, the Eurozone, the United Kingdom, Japan, South Korea, Taiwan, and the United States. A higher index value indicates more significant strains on global supply chains. Consequently, a higher index signifies increased pressure on global supply chains, with potential implications for various economic factors like inflation, employment, and overall economic health (Beckendorff, 2022).

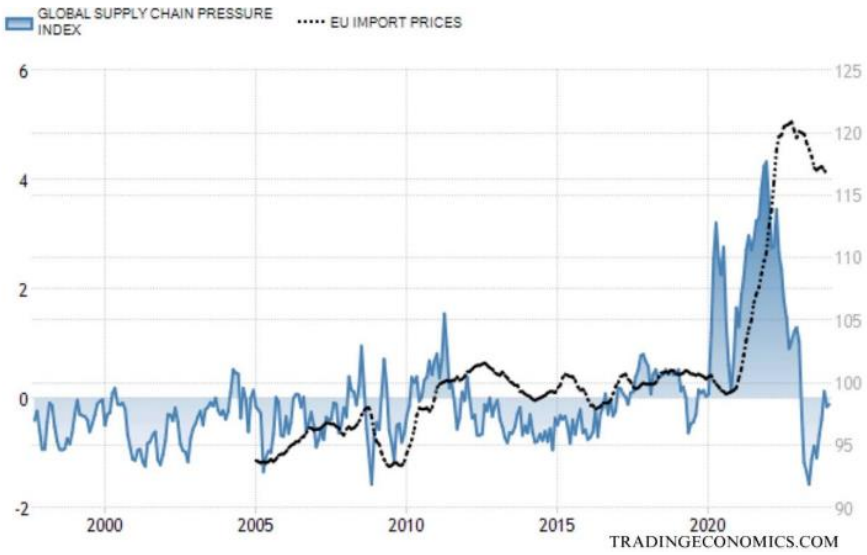
The GSCPI stands as an indispensable tool for monitoring the global economy's health. It offers insights into the challenges and disruptions encountered by supply chains, which can have far-reaching impacts across industries and economies. As evidenced by the graph, there has been a disproportionate growth in recent months, highlighting the escalating pressure on global supply chains.

Figure 2.1 illustrates the fluctuations of the Global Supply Chain Pressure Index (GSCPI) over time, highlighting several notable episodes. Notably, there was a downturn followed by a recovery during the global financial crisis (A New Barometer of Global Supply Chain Pressures, 2022). In 2011, the index experienced a significant increase, primarily attributed to two natural disasters (Japan; and Thailand). Additionally, the index surged during the trade tensions between China and the United States in 2017-2018, as companies adjusted their global sourcing strategies. However, the peaks associated with these events pale in comparison to the challenges posed by the COVID-19 pandemic (A New Barometer of Global Supply Chain Pressures, 2022). Moreover, at the beginning of 2022, it seemed like there was finally light at the end of the tunnel for the global supply chain. Industry insiders were already predicting a significant easing of pressure, until the war against Ukraine erupted on February 24th. Ultimately, this also led to the current peak in pressure reported by the Global Supply Chain Pressure Index (GSCPI) at a value of over 4 points (Beckendorff, 2022).

Figure 2.2 reveals when juxtaposed with Figure 2.1 and the graph depicting increases in import prices. This narrative unveils the intricate interplay between supply chain dynamics and import prices, showcasing a discernible pattern of escalation in import prices as

pressure on the supply chain intensifies. This correlation underscores the deep interconnectedness between global supply chains and economic indicators. Moreover, it highlights the significance of considering diversification of strategy for entrepreneurs in response to the small correlation observed between supply chain pressure and rising import prices.

Figure 2.2 Correlation Between Supply Chain Pressure and Import Prices



2.7.2 The First Effects of the Red Sea Crisis

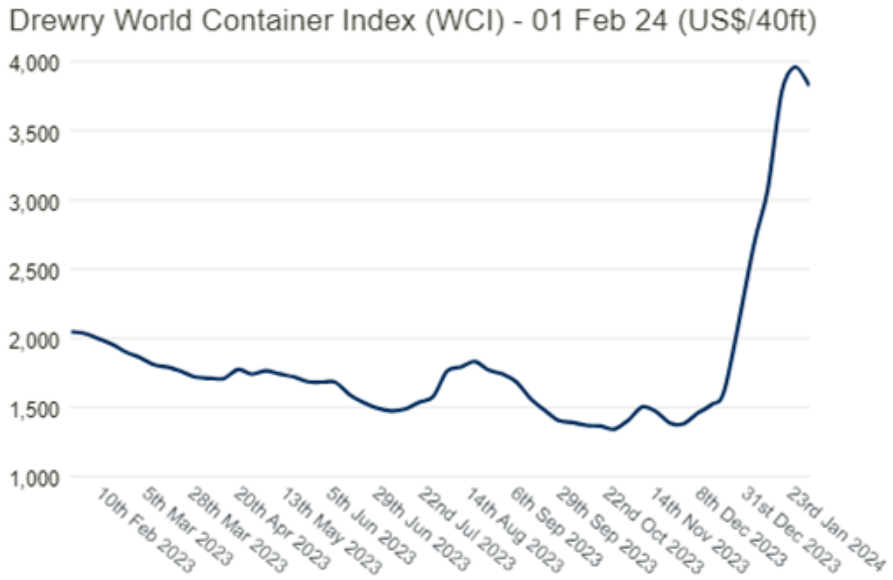
As this chapter aims to analyse the emergence of new drivers of deglobalization, particularly the global supply chain pressure, and given the absence of scientific research on the recent Red Sea crisis's impact on supply chain pressure, it seeks to provide a novel and analytical examination of the effects on the supply chain.

Figure 2.3 illustrates the upward trend in container prices, beginning in December coinciding with the onset of the Red Sea crisis. The composite index surged by 88% compared to November 2023 prices, reaching a cost of $3,824 per 40ft container. Remarkably, the average composite index stands at $778 higher than the 10-year average rate of $2,684, which was inflated by the exceptional Covid-19 period from 2020 to 2022.

2.8 Discussion

The impact of geopolitical conflicts on reshoring trends and global supply chains is undeniable. The recent conflict between Russia and Ukraine, following the latter's invasion, has created significant disruptions in supply chains, in both Russia and Ukraine. These disruptions have had direct and indirect repercussions across various sectors of the economy. For example, Europe's heavy reliance on Russia for energy imports and Ukrainian cereals has exposed vulnerabilities, highlighting the region's lack of preparedness to handle disruptions stemming from major geopolitical shocks (Goldberg & Reed, 2023).

Figure 2.3 Rising price 'World Container Index'



Simultaneously, as showed in chart 3 the ongoing crisis in the Red Sea is putting immense strain on companies reliant on the Asia-Europe supply chain. With shipping times increasing by 30% and costs surging by over 100%, businesses are facing unprecedented challenges in maintaining operational efficiency and cost-effectiveness. These geopolitical frictions directly impact global

supply chain pressure, resulting in increased prices for imported goods, as showed in chart 2. Consequently, managers and entrepreneurs could reassess their strategic trajectories, with reshoring strategies emerging as a potential solution.

Chart 1 illustrates the historical stability of global supply chain pressure, with only three significant disruptions occurring in the past two decades. However, an equivalent number of disruptions have emerged in the last four years alone, primarily due to ongoing global tensions and the pandemic. This underscores the crucial role of supply chain pressure as a fundamental determinant in the dynamic fabric of global trade, emphasizing the importance of adaptable strategies in response to evolving geopolitical landscapes and market demands.

2.9 Limitations and Potential Future Researchs

While this study provides valuable insights into the impact of geopolitical conflicts on reshoring trends and global supply chains, several limitations should be acknowledged. Firstly, the research primarily focuses on recent geopolitical conflicts and their immediate impacts, neglecting potential long-term effects or broader geopolitical trends. Additionally, the study predominantly examines the effects of geopolitical conflicts on reshoring and supply chain disruptions at a macroeconomic level, without delving into the specific strategies or responses adopted by individual businesses.

Future research could delve into the evolving dynamics of global conflicts and their ramifications on reshoring trends and supply chain strategies. Additionally, exploring the strategic considerations behind nearshoring as a consequence of geopolitical conflicts and reshoring trends would provide valuable insights into how businesses navigate geopolitical complexities and reshape global trade dynamics.

2.10 Conclusion

In summary, the findings of this study underscore the unprecedented changes occurring in the world today, marked by the transition from a unipolar to a multipolar global landscape. These shifts have profound implications for globalization, which is now under scrutiny, while deglobalization processes are gaining momentum. As a result, the

once prevalent offshoring strategy is being reevaluated, with reshoring emerging as a necessary strategy for companies to diversify their investments and prioritize local production.

The evolving geopolitical landscape highlights the need for businesses to adapt to changing circumstances and consider reshaping their supply chains. Ultimately, the world is in a state of flux, and deglobalization has emerged as a significant and pressing issue that cannot be ignored. Future research should explore the long-term effects of geopolitical conflicts on reshoring trends, the implications of reshoring on local economies and labour markets, and comparative studies across different regions and industries to provide comprehensive insights into the evolving dynamics of global trade.

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3

Free Zones and SEZs in Different Economies: Divergent Approaches in Turkey and Germany

Emin Akçaoğlu and Rainer Wehner

3.1 Introduction

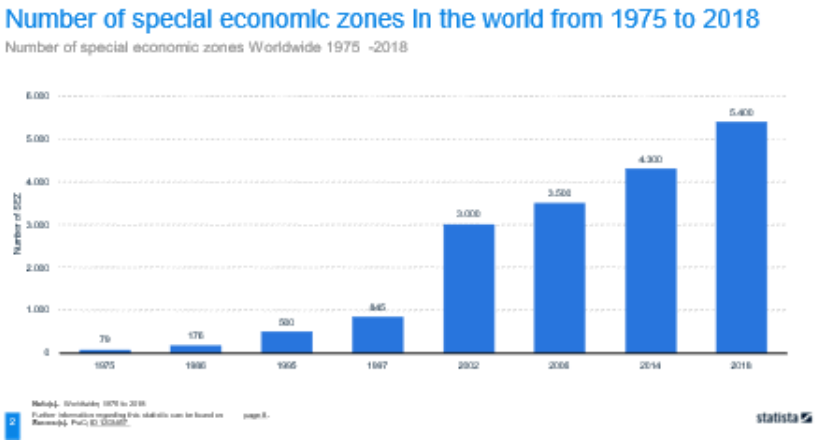
One of the most pressing challenges in regional and structural economic policy is addressing disparities in development and structural distortions across regions. Policymakers are often tasked with crafting targeted solutions to bridge these gaps, ensuring equitable living conditions throughout the country while promoting economic and social cohesion. In this context, interventions and incentives aimed at fostering growth in underdeveloped areas have become central to the debate on regional development.

One potential, yet highly controversial, tool for achieving these goals is the establishment of Special Economic Zones (SEZs). For decades, countries have been establishing Special Economic Zones to stimulate economic growth and development. An SEZ is typically a designated area within a country where economic regulations differ significantly from the national framework, often offering more favorable conditions for businesses. These incentives range from duty reliefs on imports and exports, tax or tariff exemptions, streamlined administrative processes, and reduced bureaucratic hurdles. The objective is to create an environment conducive to business operations and attract Foreign Direct Investments (FDIs).

Since the 1950s, over 7,000 SEZs have been established globally by both developed and developing nations to accelerate economic progress (UNCTAD, 2022). SEZs can take various forms, each catering to specific economic activities. One of the most common

types is the Free-Trade Zone, where goods are imported, processed, and re-exported under special customs arrangements, often with duty-free handling. These zones are primarily aimed at facilitating trade and reducing logistical costs.

Figure 3.1 Worldwide Number of SEZs (Statista, 2024)



Another prominent category is the Export Processing Zone (EPZ), which focuses on promoting industrial and commercial exports. These zones are particularly appealing to foreign investors due to benefits such as tax breaks, import duty exemptions, and minimal trade barriers. Similarly, Industrial Parks are SEZs designed primarily for industrial production. These zones are often equipped with physical infrastructure tailored to manufacturing needs and offer fiscal advantages, including tax reductions.

In addition, Specialized Zones are created for specific industries or purposes, ranging from technology parks to logistics hubs. Their flexibility allows countries to address targeted sectors' needs, further diversifying the economic benefits of SEZs (Investopedia, 2023). Importantly, there are no restrictions on the number or type of SEZs a country can establish. As a result, many nations host multiple SEZ types simultaneously to maximize their economic potential.

For developing nations, SEZs have been a critical strategy to overcome infrastructure deficits, build human capital, and address institutional weaknesses. By establishing state-of-the-art zones with tailored incentives, these countries signal to potential investors that they are "open for business" (Narula & Zhan, 2019). A notable

example is China, which began creating SEZs in the 1980s to attract foreign capital and expertise, positioning itself as a global economic powerhouse. Today, China accounts for nearly half of the world's SEZs (Bost, 2019).

However, while China's success story is remarkable, it should not be universally regarded as a blueprint for SEZ development. Much of the literature on SEZs focuses on their economic impact, often overlooking social and societal consequences. The United Nations' 2019 Human Development Report emphasizes that host countries and investors must align SEZ practices with the Sustainable Development Goals (SDGs) and Environmental, Social, and Governance (ESG) standards to mitigate inequality (Narula & van der Straaten, 2021).

Despite these recommendations, evidence suggests that inequality is rising within many advanced and emerging economies. This within-country inequality is widening the income gap between high-income and middle- or low-income groups, contributing to socio-political challenges such as growing nationalism and extremist ideologies in Western democracies (Qureshi, 2023).

Given these complex dynamics, this study investigates the broader implications of SEZs on political economies, with a specific focus on Turkey and Germany. The central research question is: “To what extent do SEZs influence the political economies of Turkey and Germany?”

To address this question, a systematic literature review was conducted, incorporating official reports from relevant organizations as well as existing academic literature. This comprehensive approach was designed to provide nuanced insights into the socio-economic and political impacts of Special Economic Zones (SEZs) in two distinct contexts—Germany and Turkey. In addition, to gain a deeper understanding of the Turkish case, a series of interviews were conducted with company managers operating in the Aegean Free Zone in Izmir during 2016 and 2017. While the data collected from these interviews are from several years ago, the findings remain relevant. This is because the fundamental reasons driving companies' investment decisions in Turkish free zones have not undergone significant changes. Therefore, this chapter also incorporates the results of this field research as a case study, offering valuable perspectives on the Turkish experience with SEZs and highlighting

key aspects that continue to shape the effectiveness of these zones in attracting foreign investment and driving economic growth.

3.2 Special Economic Zones in Turkey

The concept of free zones in Turkey dates back to the late Ottoman period, with significant developments occurring during the early years of the Republic. The idea gained traction due to economic challenges such as a sharp 45% decline in ship tonnage arriving at Istanbul port between 1910 and 1927 (Keyder, 1980). In response, the Turkish government tasked the Istanbul Chamber of Commerce and Industry with exploring the establishment of a free zone at the port. The resulting report, submitted in 1927, led to the enactment of Turkey's first free zones law that same year (Sönmez, 1982). Over the decades, regulations governing free zones have been updated multiple times, enabling the establishment of zones across various parts of the country.

Table 3.1 SEZ in Turkey

Turkish Free Zones	Establishement Year
Mersin Free Zone	1985
Antalya Free Zone	1985
Ege Free Zone	1987
Istanbul Specialized Free Zone	1990
Trabzon Free Zone	1990
Istanbul Trakya Free Zone	1990
Adana Yumurtalık Free Zone	1992
Istanbul Industry and Trade Free Zone	1992
Samsun Free Zone	1995
Europa Free Zone	1996
Rize Free Zone	1997
Kayseri Free Zone	1997
Izmir Free Zone	1997
Gaziantep Free Zone	1998
Tübitak-Mam Free Zone	2000
Denizli Free Zone	2000
Bursa Free Zone	2000
Kocaeli Free Zone	2000
Batı Anadolu Free Zone	2021

Currently, Turkey hosts 19 free zones, as outlined in the Table 3.1, each established to promote economic development through export-oriented investment and production. These zones operate under the

framework of Law No. 3218 on Free Zones and the Free Zones Implementation Regulation.

The primary objectives of Turkey's SEZs are encouraging export-based investment and production; attracting foreign direct investment (FDI) and technology transfer; fostering export-oriented business activities; and finally, enhancing Turkey's role in international trade.

Legally, free zones in Turkey are considered outside the Turkish Customs Area for customs regulations but within it for origin rules. Goods transported from Turkey to free zones are subject to export regulations, while goods entering Turkey from these zones must comply with free circulation regulations. This distinction enables free zone users to procure goods and services free of customs duties from abroad and VAT-free from Turkey.

3.2.1 Investment Incentives in Turkish SEZs

Turkey provides a range of state-funded incentives to companies operating in SEZs, making these zones highly competitive. Key incentives include (TMT, 2023):

Tax Exemptions:

- Profits derived from activities within SEZs are exempt from income tax or corporate tax for up to 30 years.
- Manufacturers in SEZs are exempt from income tax and corporate tax on profits earned through the sale of goods produced in these zones.
- If a company exports at least 85% of the FOB value of its manufactured goods, it is also exempt from withholding tax on employee wages.

Property and VAT Exemptions:

- Buildings owned by companies in SEZs (not leased) are exempt from property tax.
- Services provided to free zones and cargo transport for export purposes are VAT-free.
- Transactions and documents related to free zone activities are exempt from stamp duty and fees.

Specialized Incentives for Service Providers:

- Service businesses, such as those engaged in maintenance, repair, packaging, and storage benefit from tax exemptions if their services are exclusively for export purposes.

Additional Supports for Specialized SEZs:

- High-Tech and R&D Zones: These specialized zones provide additional incentives for high-value-added, technology-intensive production.
- The government subsidizes up to 50% of the gross monthly salaries of qualified personnel, capped at $1,250 per person (up to $15,000 annually per firm).
- Rent expenses for land and buildings are also subsidized, up to $75,000 annually (TMT, 2023).

3.2.2 FDI in Turkish SEZs

The combination of financial incentives, Turkey's strategic geographical location, and its proximity to key markets in Europe, the Middle East, and North Africa have made its SEZs highly attractive to foreign investors, particularly European multinational corporations.

Not all SEZs in Turkey are equally competitive. Zones close to major ports, such as the Aegean Free Zone in İzmir, offer superior logistical advantages and infrastructure, making them especially appealing to multinational firms.

The Aegean Free Zone has attracted numerous foreign firms, including several prominent German multinationals such as PFW (aviation), Mahle (automotive), Döhler (food), Teka (electronics), Hugo Boss, Roy Robson, Diegel (textile and garment), Janoschka (machinery), Aero (renewable energy) etc.. These companies benefit not only from Turkey's incentives but also from the zone's strategic location and developed infrastructure (ESB, 2024).

In other words, Turkey's SEZs represent a strategic economic tool designed to enhance international trade, attract FDI, and foster export-oriented production. While the country's incentives and geographic advantages make SEZs a competitive option for foreign investors, particularly European firms, the success of individual zones often hinges on location-specific factors. Moving forward, Turkey's ability to sustain and expand the appeal of its SEZs will likely depend on continuous regulatory enhancements, infrastructure development, and alignment with global economic trends.

3.3 Case Study Conducted in Aegean Free Zone

3.3.1 Data Collection

Data was collected over by conducting face-to-face interviews with 30 firms (their names are kept anonymous as it was requested) based in the Agean Free Zone in Izmir by asking their local managers to complete a research survey sent to them in advance. The firms that agreed to contribute to the research were also asked similar questions in both face-to-face interviews. The primary objective of these questions was to investigate why these companies chose to invest in the free zone. When the firms were classified based on the sectors in which they operate, it was found that 7 of them are in the automotive sector, 7 in textiles, 3 in machinery, 3 in food, 2 in aviation, and the remaining companies are involved in various sectors such as optics, leather, construction materials, and shading. Moreover, it was observed that a large majority of the firms participating in the research import a significant portion of the inputs they use in production; and similarly, a large portion of their products are exported. This is a crucial point for explaining the investment motivations in the Free Zone, which will be discussed in subsequent paragraphs. The import of inputs and the export of produced goods allow these companies to benefit from the tax incentives provided by the regulations.

It was found that a significant portion of the participating firms are foreign capital-owned. Some of these firms were initially established with local capital but later acquired by foreign firms. From the information compiled about the firms' fields of activity, it appears that the firms involved in the research are typically manufacturing industrial firms that are fully integrated into global supply chains within their sectors. This integration is independent of whether the firms are locally or foreign-owned. In other words, all of the firms contributing to the research, regardless of whether they are locally or foreign-owned, have become integrated into global supply/value chains at some stage. This is particularly evident in companies operating in the automotive, aviation, and textile industries, although the situation is essentially the same in other sectors.

3.3.2 Rasons for Investing in Turkish SEZs

The reasons why foreign capital firms choose to invest in Turkey are closely linked to the advantages provided by the Turkish Free Zones in general (see: *3.2.1 Investment Incentives in Turkish SEZs*). In other words, without the advantages provided by the Aegean Free Zone, these firms would not even consider investing in Turkey. When Turkey is considered as an investment location, logistical advantages, particularly due to its geographical proximity to European countries, are highlighted. Once this "prerequisite" is addressed, the issues of skilled labor and low wage advantages become relevant. The firms emphasized the relative low wages and the relationship between the quality of the labor force and the wage level. However, the managers of the companies stated that they do not think that the quality of labor in Turkey is high, but the labor obtained at the average wage level is considered to be relatively skilled. This is noteworthy because if Turkey's geographical location were not so close to the European market (export markets), the current wage level and the quality of labor alone would not be sufficient to attract foreign investment. Furthermore, the fact that the Free Zone is an incentive zone, offering substantial tax advantages and the wage levels being made even more attractive through income tax exemptions for investors in the Free Zone, leads to the conclusion that foreign investors are not necessarily attracted to the Aegean Free Zone based on labor quality and wage levels alone.

When considering the Aegean Region and Izmir as an investment location, the reasons are largely the same as those for choosing Turkey. The geographical proximity to European export markets is considered a prerequisite, with emphasis on low labor wages and labor quality. In addition, factors such as good infrastructure (particularly transportation options) in the Aegean Region and Izmir, as well as the connection between Izmir port and European road networks, are also highlighted. However, similar to the reasons mentioned earlier, firms do not place much importance on other potential investment advantages.

The research indicates that the investment decisions of firms operating in the Aegean Free Zone are largely influenced by the tax incentives provided under the 3218 Free Zone Law. Nearly all of the firms participating in the research cited tax incentives as the primary reason for their investment. As mentioned earlier, most of the firms reported that they import a significant portion of the inputs they use

and export a large portion of the products they produce. The customs duty exemption for firms in the Free Zone, the corporate tax exemption for manufacturers who export at least 85% of their total annual production, and the income tax exemption for employees of qualifying firms are the most important factors explaining why firms invest in the Free Zone. For example, in the case of the textile/apparel industry, it is easy to understand how the income tax exemption is as important as the corporate tax exemption, considering the large number of employees working at companies. In normal circumstances, income tax would impose a heavy financial burden, but the tax exemption provided by Free Zone regulations eliminates this burden. A significant majority of the firms reported that, without tax incentives, they would not have chosen to invest in the Aegean Free Zone. In addition to benefiting from tax incentives, the proximity of the Free Zone to the port and airport is considered a significant advantage. Similarly, the good infrastructure in the Free Zone and the fact that the Aegean Free Zone meets expectations in terms of service delivery are also highlighted. However, these factors remain secondary to the tax incentives. In the aviation sector, offset agreements are also considered important.

Some of the firms participating in the research indicated that, in an average year, their financial performance in terms of post-tax profit would deteriorate by about 25% if they were operating outside the Free Zone. As a result, they reported that if expansion investments were planned in the future, they would still prefer to invest in the Free Zone.

The research results indicate that Free Zones primarily attract export-oriented investors, especially foreign investors, due to the tax advantages they offer. With the help of public incentives, foreign firms can significantly increase profitability in sectors that rely on relatively labor-intensive industries or the use of locally available natural resources (such as food products). Considering these conditions, policy recommendations can be discussed on two levels:

If we look at the issue from the perspective of the government or regulatory authorities, it is quite clear that foreign-invested companies using imported inputs contribute to the Turkish economy by creating employment. However, to make a more substantial contribution to the economy, it may be recommended to focus on technology and know-how transfer and the spillover effects of these transfers. Therefore, it may be more beneficial to address these issues

alongside the Free Zone regulations. With this regard, an approach that emphasizes sector-specific Free Zone development and integrates clustering processes with Free Zones could be helpful.

3.4 Special Economic Zones in Germany

As emphasized earlier, SEZs are geographically designated areas where legal and administrative regulations are relaxed or removed to attract domestic and foreign investors (PCG - Project Consult GmbH, 2018). These zones often offer financial incentives, reduced bureaucracy, and enhanced infrastructure to stimulate economic activity. Globally, SEZs have seen exponential growth over the past few decades, increasing from approximately 850 zones in 1997 to over 7,000 in 2022 (UNCTAD, 2022).

While 75% of the world's SEZs are concentrated in Asia, driven by emerging industries, Europe lags significantly, accounting for only 2% of global SEZs (Bost, 2019). Within Europe, Germany stands out for its minimal engagement with this economic model. The country currently hosts just two Free Trade Zones—the free ports of Bremerhaven and Cuxhaven. These zones offer traditional benefits, such as exemptions from customs duties, import sales taxes, and quotas, but lack more expansive incentives like tax holidays or regulatory exemptions.

The idea of establishing SEZs in Germany has surfaced at various points in its history. For instance, in the 1990s, SEZs were proposed to attract investment to the newly reunified eastern states and to mitigate structural decline in regions like the Ruhr, following the collapse of the coal and steel industries. However, these proposals were ultimately rejected by the German government. This raises two critical questions: Why did Germany decide against SEZs, and what factors have shaped its stance on this economic instrument? There were probably two reasons for the German reaction. First, the "German discussion" that is primarily focusing the disadvantages and the negative sides of the introduction of SEZs. The second reason for the rejection probably were the subsidy regulations by the EU. As is known, SEZs often involve financial incentives, such as tax breaks, subsidies, and debt relief, which could conflict with EU rules. While exceptions exist for economically disadvantaged regions, these measures require approval from the European Commission. Germany opted not to pursue this route, citing potential administrative and

political challenges in securing EU approval. Furthermore, the socio-economic conditions in many German regions do not meet the criteria for exceptional state aid, further limiting the scope for SEZs within the EU framework.

3.4.1 Regulations in Germany

As the term SEZ is not defined precisely in the German regulation, it gives room for interpretation about the special regulations that could be introduced by the state to make a region more attractive. Direct objectives of the respective special regulations can be, e.g. the promotion of foreign direct investments, business start-ups, innovation activities or even the redevelopment of urban problem areas. Finally, the ideal goal of the establishment of SEZs is about initiating economic growth and creation of jobs. For this reason, a wide range of instruments can be applied, like tax incentives, investment grants, customs concessions, or the suspension of labor and social legislation. In addition, services, and infrastructure facilities such as good transport connections, health care or even schools can be offered (DGB 2010).

The handpicked combination of those measures in the form of an SEZ goes hand in hand with the idea of stimulating growth in a particular zone that expands later to the entire national economy. Germany could have used the new federal states as SEZs and create a growth pole and attract investments to increase exports, purchasing power and income. This would have had direct and indirect effects on job creation which, through multiplier effects, would have positively affected the entire country as a result of economic growth (Roehl, K.-H. 2004). Instead of selecting a variety of the most suitable measures for the structural economic problems in the new federal states, Germany rejected the establishment of SEZs because parts of social- and labor law had to be changed in the special zones. This would have created a deviation to the national law. The legal unity within Germany would have been broken and fundamental questions of legislative competence would have been affected. In addition, there were massive concerns about the deregulation of the labor market, high implementation costs and the problem that potentially negative competitive consequences for other German regions could hardly be assessed (Roehl, K.-H. 2004).

All in all, it shows that the debate about SEZs in Germany is less about creating financial incentives for investors like export promotion

zones or special tax zones, but primarily about deregulation. Legal regulations such as labor and social law, complex regulations in the field of construction and environment as well as long and complicated approval and application procedures with a high level of bureaucracy are seen as an obstacle by investors who are thinking about setting up a business location in Germany.

3.4.2 Regulations in the European Union (EU)

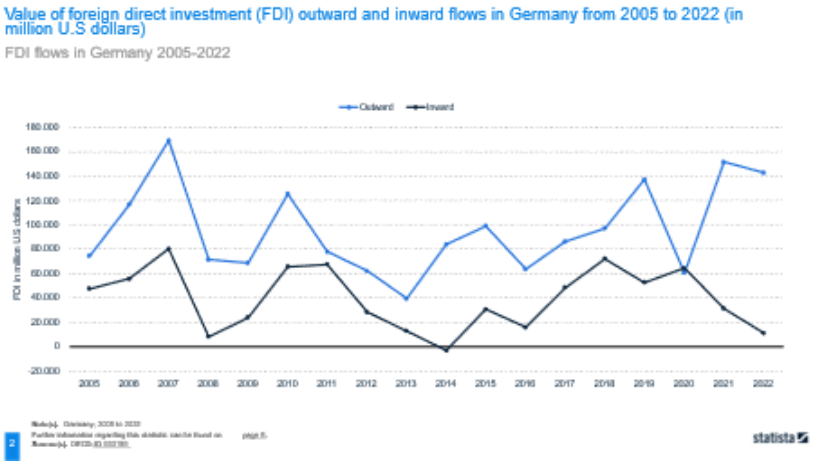
As the EU has a strict competition law the extent of preferential conditions that are offered in SEZs to potentially investing companies is depending on the socio-economic situation in the areas. The regional economic strength and labor market situation must be significantly below the EU average. The subsidies that are offered in SEZs cover a broad spectrum of special regulations selectively granted by state or state-related bodies. The measures can be on the one hand in a direct financial form like grants to companies, debt relief or subsidized loans, on the other hand indirectly in the form of guarantees, tax concessions or other services at special conditions. According to EU-regulations this form of state support is generally prohibited (Art. 107 (1) AEUV) because it disturbs equal and fair competition in the internal market. According to the EU-regulations about subsidies (Art. 107 et seqq. AEUV) member states may grant advantages to companies and investors only in exceptional cases and in compliance with special rules. Exceptions in which compatibility with the common European internal market is assumed are intended but may not be implemented without the approval of the European Commission. Thus, the establishment of SEZs in Germany would have to be audited by the EU Commission. The German Government rejected the audit and renounced the establishment of SEZs.

3.4.3 German Economic Policy and FDI Challenge

In recent years the influx of FDI into the German economy decreased because of the global recession and a subsequent Eurozone crisis. According to the 2023 World Investment Report by UNCTAD, FDI inflows into Germany dropped by 76.2% in 2022, amounting to USD 11 billion compared to USD 46.4 billion in the previous year. The total stock of FDI also decreased slightly to over USD 1 trillion (-4.8%), reflecting broader European trends during a period of global economic uncertainty. Germany's diminished FDI attractiveness can be attributed to several factors:

High Regulatory Complexity: Investors face lengthy approval processes and stringent regulations in areas like construction, labor, and environmental compliance.

Figure 3.2 Inward and outward FDI flows in Germany (Statista, 2024)



Limited Financial Incentives: Unlike countries with SEZs offering substantial tax breaks and subsidies, Germany provides fewer direct investment incentives.

Global Competition: Other nations, particularly in Asia, actively leverage SEZs to create highly attractive environments for investors, leaving Germany at a disadvantage.

The debate over SEZs in Germany reveals a tension between maintaining regulatory standards and fostering economic innovation. Proponents argue that SEZs could serve as growth poles, generating positive spillovers for the national economy through job creation, increased exports, and enhanced purchasing power. Critics, however, highlight the risks of deregulation, high implementation costs, and potential regional inequalities.

Ultimately, Germany's decision to reject SEZs reflects its preference for a balanced, rules-based economic model over targeted interventions that might compromise legal and social cohesion. While this approach aligns with Germany's broader commitment to

equitable development and EU regulations, it may limit its ability to compete in an increasingly SEZ-dominated global economy.

3.5 Criticism on SEZs and Conclusion

Despite the economic opportunities often associated with SEZs, several critical issues merit attention. These concerns highlight the potential downsides of SEZs in terms of labor standards, environmental impacts, economic sustainability, and governance.

Labor Rights and Social Protections: Many SEZs operate with deregulated labor laws to attract foreign investment, which often undermines workers' rights. For example, trade unions may face restrictions, and protections against unfair dismissal can be severely curtailed. In extreme cases, these zones become environments where international labor standards and human rights are routinely violated. In many developing countries, the labor force in SEZs faces exploitative working conditions, including low wages, extended work hours, and unsafe environments. Reports from certain SEZs in the world have revealed instances of child labor and gender discrimination, particularly in industries like textiles and manufacturing.

Environmental Deregulation: In some SEZs, environmental laws are relaxed to reduce operational costs for businesses. This can lead to lowered emission standards and inadequate water protection measures, resulting in significant environmental degradation. Deregulation not only damages local ecosystems but can also lead to public health crises and deplete natural resources critical for sustainable development. The short-term economic gains from such practices are often outweighed by long-term environmental and social costs.

Economic Leakage and Export Orientation: SEZs are often designed to attract multinational companies and boost exports. However, these zones run the risk of economic leakage, where the profits generated by international companies are repatriated to their home countries instead of being reinvested locally. Without strong linkages between SEZ businesses and local economies, the intended benefits, such as job creation and technology transfer, remain minimal. The absence of integration with domestic industries weakens the multiplier effect, reducing the overall economic impact on the host country.

Tax Evasion and Misuse of Incentives: Tax holidays and incentives provided in SEZs, while intended to attract investment, are often exploited. Sophisticated accounting practices, combined with loopholes in international tax laws, enable companies to shift profits out of host countries, bypassing their tax obligations. SEZs can inadvertently become tax havens, where the intended developmental benefits are undermined by companies' strategies to avoid taxes. Mitigation Measures: To counteract this, tax incentives should be tied to specific socio-economic goals, such as job creation, skills development, or technology transfer, both within and beyond SEZs.

Criminal Activities and Money Laundering: Excessive deregulation in SEZs can also create opportunities for criminal activities such as money laundering. By exploiting the relaxed regulatory framework, illicit funds can be funneled into SEZs and integrated into legitimate financial systems. For example, although Germany has not established SEZs, it provides an example of how money laundering can infiltrate an economy through other means. The prevalence of cash-based businesses like restaurants, retail shops, and gambling establishments allows illicit funds to enter the economy. These profits are taxed and subsequently invested in assets like real estate, which may not contribute meaningfully to economic growth (Trautvetter, 2021).

Sustainability and Governance Challenges: For SEZs to achieve sustainable success, they must go beyond offering tax breaks and deregulation. Long-term benefits may require knowledge and technology transfer, or additional environmental safeguards. Establishing partnerships between SEZ businesses and local firms to foster innovation and skill development. For example, enforcing sustainable practices that prevent long-term environmental harm. In addition, strengthening regulatory oversight to prevent misuse of incentives and ensure compliance with labor and environmental standards would be advisable.

While SEZs have the potential to drive economic growth, the associated risks cannot be overlooked. To maximize their benefits, SEZs must balance incentives with robust regulatory frameworks, integrate with local economies, and align with international labor and environmental standards. Countries must also guard against creating conditions that enable tax evasion and criminal activities. By addressing these criticisms, SEZs can contribute to sustainable and inclusive development.

Obviously, there are significant differences in the structure, purpose, and impact of Special Economic Zones (SEZs) in the world including Germany and Turkey as they have significantly different economic structures and hence different needs. In Germany, the two existing free zones—primarily focused on transit trade—offer limited incentives and operate under strict EU regulations. In contrast, Turkey's 19 SEZs accommodate diverse manufacturing and commercial activities, providing extensive tax incentives and operational advantages to attract foreign direct investment (FDI). The tax advantages underpinning SEZs in both countries highlight their role in economic policy, but their overall effectiveness is shaped by broader economic, industrial, and regulatory contexts.

Germany's limited use of SEZs can be attributed to its robust industrial ecosystem, strong technological base, and the global competitive advantage of the "Made in Germany" brand. For Germany, foreign investors are often drawn to these intrinsic strengths rather than cost-saving measures like tax breaks or regulatory leniency. In other words, Germany has rejected to adopt SEZs in the form that is widely practices in many – particularly – developing countries. The main reasons for this is related to a number of reasons: SEZs require adjustments to national laws. In the German context, these changes were viewed as problematic as such adjustments mean deviations from national laws, particularly in labor and social policies. This posed a threat to Germany's principle of legal unity, raising fundamental questions about legislative jurisdiction. In addition, Germany's hesitancy is also rooted in stringent EU competition laws. According to Article 107 (1) of the Treaty on the Functioning of the European Union (TFEU), state aid that distorts competition within the internal market is generally prohibited. Furthermore, while SEZs could have been used to stimulate economic growth in lagging regions like the eastern federal states, the political consensus leaned against compromising national legal standards for localized benefits.

In contrast, Turkey's SEZs rely heavily on tax concessions, geographical proximity to key markets (e.g., Europe, the Middle East, and North Africa), and relatively lower labor costs to attract efficiency-seeking investments. These reflect the differing economic profiles and priorities of the two countries.

Looking ahead, if Germany and the EU aim to enhance their attractiveness for FDI, SEZs could serve as a tool worth reconsidering,

despite the legal and political constraints within the EU framework. Any attempt to establish new SEZs in Germany would require alignment with EU competition laws and a strategic approach that balances national and regional interests. This suggests that the potential development of SEZs in Germany may be more viable as part of a broader European strategy. Initiatives like the Global Alliance of Special Economic Zones (GASEZ), which focuses on the new generation of SEZs for sustainable development, offer a framework for exploring such possibilities. A European-wide model of SEZs, emphasizing innovation, sustainability, and regional cooperation, could redefine the role of SEZs in advanced economies like Germany.

For Turkey, the challenge lies in moving beyond its traditional reliance on tax incentives, proximity advantages, and lower wages. Competing in the global "race to the bottom," where many developing countries offer similar benefits, is increasingly unsustainable. To attract high-quality FDI that generates long-term economic benefits and positive spillovers, Turkey must focus on non-financial incentives. These include building advanced technological capabilities, fostering organizational excellence, enhancing its industrial ecosystem, and strengthening its national brand. Such measures would not only make Turkish SEZs more competitive but also ensure that the investments they attract contribute to sustainable economic development across the country.

In conclusion, the effectiveness of SEZs as a policy instrument depends on their alignment with a country's broader economic goals and its ability to adapt to global economic dynamics. While Turkey must focus on upgrading its SEZs to attract quality FDI, Germany and the EU face the opportunity to rethink the concept of SEZs within a sustainable and innovation-driven framework that aligns with European values and global competitiveness.

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4

Learning Curve Effects in Hospitals as Highly Specialized Expert Organizations

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4.1 Introduction

In most developed countries, the economic pressure on hospitals to improve their efficiency has increased considerably over the past 30 years. The once prevalent system of simple cost reimbursement for hospital care has almost universally been superseded by much more high-powered economic incentive-based systems such as capped budget systems or prospective payment systems. These systems offer powerful incentives to reduce expenses, particularly in high-cost areas such as the operating room (OR). Specialization is one prominent response strategy to such pressure. To set valuable decisions for operative and strategic questions, it is as important for hospitals as it is for every company to obtain detailed information about learning effects and the costs they influence. In the health care industry, Clark and Huckman (2012) examine the impact of the degree of specialization of a hospital on its clinical performance in specialized and related areas of surgery and find that greater operational focus has a positive effect on the quality of medical procedures. Ernst and Szczesny (2006) show that the learning effects in specialized cases lead to an improved resource allocation in the OR and, as a result, to lower costs. Although these studies clearly show lower expenditures in high-cost areas such as the OR, there is little evidence regarding how such isolated cost-reduction strategies affect subsequent cost developments.

In particular, the question of whether cost-reduction efforts by specialization in the OR deploy spillover effects is in the focus of interest. In order to offer a comprehensive investigation, the effects of specialization on specialized cases are evaluated, too. This means the learning effects connected to specialization are also analyzed. It has not been investigated yet whether this cost-saving strategy affects later events in the patient's case or the overall costs of a case. Thus, these spillover effects are examined on a larger scale that considers the entire patient's case, since the cost-reduction efforts may actually be counterproductive because of lower quality of surgeries as well as increased costs in the medium to long term of the patient's case for both specialized and non-specialized cases. Cost-reduction strategies in an isolated area such as the OR might have negative consequences during later treatment, procedures or recovery processes. For example, consider two methods of anesthetizing a patient, where one method is much more expensive than the other one, but leads to considerably fewer problems regarding patient sickness and complications in the post-anesthesia care unit (PACU, formerly known as the recovery room). Clearly, choosing the supposedly less expensive option could lead the hospital to incur much higher costs later on and therefore to overcompensate initial savings. For instance, Beldi et al. (2009) find that hastiness in the OR leads to an increase in postoperative infections, suggesting that such a narrow focus may pose a problem in reality, as the increased follow-up costs due to post-operative infections eliminate any gains from the decreased OR costs attributable to shorter surgery time and increase overall costs per case in the end. It is thus far from obvious whether isolated cost containment measures remain beneficial in a larger perspective that considers the entire patient's case. In summary, the rarely debated issue is whether a more sophisticated specialization-based cost-reduction strategy at one point in the patient's treatment process (here in the OR) with its possible spillover effects can result in higher costs at later points in the patient's case. The entire patient's case in this context denotes a patient's treatment from the surgical intervention to the treatment of possible complications in the PACU.[1]

In this analysis, unique data from the health care industry are used, covering one point in time, 1996, in which economic pressure on hospitals dramatically increased,[2] and the focal hospital reacted by

[1] Due to the data set, a broader definition of the patient's case is not possible. See section 4.3 for a more detailed discussion of this aspect.
[2] In 1996, there was a switch to a rigidly capped budgets system in Germany.

becoming specialized in endoprosthetic surgery (total knee and hip replacement). The data stem from a period prior to the introduction of DiagnosisRelated Groups (DRGs) in Germany and therefore allow studying the unique situation of a hospital specialization unaffected by yearly adjustments common under the DRG system. It is also unique in the sense that micro-level hospital data of similar detail to the one at hand are virtually non-existent in Germany for the period prior to 2003/2004.

The time from incision to suture (in the following "OR time" for short) of specialized and non-specialized interventions is used as an indicator of learning (specialized cases) and spillover effects (non-specialized cases) which influence the short-term costs related to the OR. The proxy for the follow-up costs of a patient's case is the probability of a patient experiencing a complication in the PACU. Because detailed micro-cost data on medium- and long-term quality are generally unavailable, "quality" is used in a short-term design to act as an indicator for costs incurred at later points in the treatment process, i.e. the short-term quality measure serves as a proxy for medium- to long-term followup costs. Decreasing surgery quality typically results in higher follow-up costs because of more (intensive) complications or other adverse events, a higher amount of required medication and/or the need for additional procedures and perhaps a readmission.

The remainder of this paper is organized as follows: In section 2, the impact of the reimbursement reforms on hospitals is discussed, possible reactions are described, and the hypotheses are developed based on the literature. The data set as well as the research models are described in section 3. A discussion of the results and their limitations is presented in section 4, followed by some considerations about the robustness of estimations in section 5. The paper closes with a short summary and outlines some suggestions for further research in section 4.6.

4.2 Background and Hypotheses

4.2.1 OR Times as a Proxy for Costs

The OR times are used as an indicator of short-term costs. Given shorter OR times, more interventions are feasible within a fixed period of time, which leads to a fixed costs degression. Besides

shorter OR times, Ernst and Szczesny (2006) find that there are also labor cost savings related to learning effects as well as an enhanced resource allocation. Cost savings might negatively affect the quality performance. If it were so, cost reductions due to shorter OR times would be attended by lower quality which in turn probably would increase follow-up costs.[3] Due to possible adverse effects of shorter OR times in the medium and long term, the complications as an indicator for medium- to long-term follow-up costs are also investigated. Only taking into consideration both indicators the OR times and the complications, the economic implications of the specialization in the OR on the entire patient's case can be properly evaluated.

4.2.2 Complications as a Proxy for Costs

Whereas the OR times are used as an indicator for costs in the short term only, the complications serve as a medium- to long-term cost indicator. The possible effects of a specialization strategy in the OR on follow-up costs can be measured in a variety of ways. Ideally, actual cost data are analyzed, but these data are rarely made available to researchers, particularly in one-site studies such as the one at hand. An alternative is to use veridical proxies for costs, following Clark and Huckman's (2012) use of patient mortality in their article on hospital specialization. In this case, the probability of a patient suffering from a complication in the PACU is employed to measure the quality consequences of a specialization strategy in the OR. This quality proxy thus accomplishes two objectives. First, it can answer the question how the specialization and its effects influence short-term outcomes with regard to quality. Second, it can link these results to the follow-up costs of the patient's case.

Quality is linked to treatment costs because negative outcomes (such as complications or adverse events) are typically associated with higher resource use. There is distinct evidence in the literature that complications are a proxy for higher costs. Kalish et al. (1995) depict an impressive increase in costs of $16,023 if patients experienced complications. They also show that complications extend the length of stay (LOS), which is consistent with the result of higher costs. In line with this, Collins et al. (1999) as well as Zhan and Miller (2003) find significant cost increases when the LOS increases. Khan et al. (2006)

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[3] For a more detailed discussion of the relation between cost savings and quality, see section 2.2.

find a cost increase of 78% when the patient suffers from a postoperative complication after non-cardiac surgery. Dimick et al. (2004) find a cost increase of $9,607 when a minor complication occurs and $23,869 in case of a major one.[4] All in all, research describes complications as well as longer LOS as strong markers of resource consumption and therefore as cost drivers. It also indicates a clear negative correlation between quality of health care and costs per case, this means quality and costs can be understood as complements. For example, Dimick et al. (2006) offer support for a highly positive correlation between complications (poor quality) and costs. They find that reimbursement for patient care without complications exceeds hospital average costs, resulting in a profit margin of 23% for the hospital, which collapses to a mere 3.4% if complications occur. Jha et al. (2009) use the inverse approach by hypothesizing that hospitals with lower costs may be more efficient and thus may provide higher quality than hospitals with higher costs. Even if it is assumed that the immediate cost effects of these complications are unlikely to be large, it has been shown that even minor complications may have a large impact on mediumto long-term and therefore overall costs. Other effects such as the patient's need for additional interventions and/or possibly a readmission support the argument that short-term quality measured by complications in the PACU can indeed be linked to medium- and long-term quality and therefore affects costs in the patient's case in a meaningful way.

4.2.3 Specialization and the Effect on Specialized Cases

Studies focusing on both manufacturing (e.g. Fisher and Ittner, 1999) and services (e.g. Huckman and Zinner, 2008) offer empirical support for the benefits of greater specialization. Applied to the health care industry, Hyer et al. (2009) analyze the improved performance of what they refer to "as a focused hospital unit [...]" (Hyer et al., 2009, p. 204). Clark and Huckman (2012) examine the impact of the degree of specialization of a hospital on its clinical performance in specialized and related areas of cardiovascular surgery and find that greater operational focus has a positive effect on the quality of medical procedures. The literature supports the notion that hospitals

[4] Major complications are defined as those that are considered significant enough to result in prolonged LOS or the need for additional interventions. This shows that even minor complications that do not result in a prolonged LOS lead to additional costs.

can reduce their costs by limiting the array of services they provide (e.g. Tiwari and Heese, 2009). Consistently, Ernst and Szczesny (2006) report intensified specialization efforts of a German hospital after the tightened capped budget systems had been introduced in 1996. These authors found a learning effect occurring in the OR with respect to specialized cases, resulting in a reduction of OR times and labor costs. These results appear to support the notion that specialization strategies of hospitals have achieved their main objectives. However, it is necessary to analyze whether isolated cost containment measures targeted at the OR impact follow-up costs. For instance, there is some concern that shorter OR times turned the OR into a more fast-paced and therefore potentially more mistake-prone working environment. Savings made in the OR and the outcome quality of the hospital may act as conflicting objectives (i.e. substitutes). If so, this might lead to more mistakes and complications that have adverse cost consequences which may overcompensate the cost savings gained in the OR. However, the literature provides strong evidence that a higher rate of specialized surgeries together with an improved allocation of resources leads to decreased complication rates and fewer mistakes in the OR (e.g. Clark and Huckman, 2012). Here, it must also be considered that more experienced surgical teams generate improved outcomes due to learning effects (Contreras et al., 2011). Thus, the quality proxy for follow-up costs is likely to provide some preliminary answers to cost effects, although no actual cost data are available.

Based on the reasoning, and supported by the literature, the hypothesis regarding OR times reads:

H1: Ceteris paribus, specialization in the OR leads to a decrease in the OR time for specialized interventions.

With regard to complications, as already stated, the following hypothesis results:

H2: Ceteris paribus, specialization in the OR leads to a decrease in the probability of complications in the PACU for specialized interventions.

4.2.4 Specialization and the Effect on Non-Specialized Cases

A specialization strategy with its learning effects in the OR leads to the question whether these effects in the specialized field may not only appear with specialized cases, but might also affect the non-

specialized cases by means of spillover effects. Huesch and Sakakibara (2009) show that knowledge spillovers are a common finding in models of innovation and have been applied in health economics research in the last decade. They emphasize that based on surgeons directly interacting with team members and the daily exchange of experience, spillovers may occur subsequently to a specialization strategy. Other than that, experience gained through learning can improve processes of care, refine the standardization of procedures as well as policies and lead to improved quality control. To put it in other words: By implementing a specialization strategy and undertaking the attendant adjustments to processes and allocation plans, a form of organizational learning might begin. Consider adjustments to the workflow made to increase surgical and process efficiency to allow for the increased numbers of specialized cases.[5] A decreasing probability of complications for all surgeries might be a possible result of these efforts originally geared toward the endoprosthetic procedures. To measure the effects of specialization and co-specialization[6] on quality performance, Clark and Huckman (2012) use patients' mortality rate. However, they fail to provide evidence for positive spillover effects between a focal activity and what they call related activities.[7] Regarding the specialization efforts and the higher volume of specialized cases, Com-Ruelle et al. (2008) show that outcomes can be improved by increasing activity volumes. Dudley et al. (2000) review this effect in more detail and show that mortality as the quality proxy was lower in hospitals with a greater number of elective surgeries. The translation into the specialization/quality language allows concluding that a specialization strategy in the OR and the gained learning experience in the specialized field, lead to efficiency gains appearing in other parts of daily work––called organizational learning or spillovers. Because the OR is a knowledgeintensive setting in which repetition and experience breed competence (Skinner, 1974), it is reasonable to assume that experience gained is likely to lead to economies of scale

[5] See Table 4.4.

[6] Medical fields near to the field of specialization.

[7] The authors define positive spillovers as the extent to which a co-specialization in areas related to the cardiovascular procedures directly influences quality performance on cardiovascular patients. Areas related to cardiovascular procedures are identified by focusing on secondary diagnoses of primary cardiovascular patients being named in a sufficient number of cases (20%).

in shared resources (Clark and Huckman, 2012), and spillover effects on non-specialized cases can result.

Since the presence of such spillover effects is assumed, the hypotheses read:

H3: Ceteris paribus, specialization in the OR leads to a decrease in the OR time for nonspecialized interventions.

H4: Ceteris paribus, specialization in the OR leads to a decrease in the probability of complications in the PACU for non-specialized interventions.

4.3 Data and Estimation Models

4.3.1 Information on the Data

In this analysis, the same anonymous data set is used as it has been by Ernst and Szczesny (2008). The data stem from the anesthesiology department of a small German hospital that provides basic care and keeps its patients in approximately 100 beds. For the entire study period, the hospital was community-owned by the county and operated as a notfor-profit entity.

This type of detailed German micro-level hospital data from a period prior to the introduction of DRGs in Germany (2003/2004) is virtually non-existent and allows studying a specialization strategy unaffected by the yearly adjustments that are common under the DRG system. Previous research has documented that the focal hospital had pursued a specialization strategy in endoprosthetic surgeries in response to the 1996 reimbursement reform, i.e. the introduction of tightened capped budgets (Ernst and Szczesny, 2008). The data set contains information on a short-term measure of outcome quality: the occurrence of complications in the PACU. Complications are documented beginning in 1994, which allows examining the period from 1994 to 1998, which contains the period with the biggest increase in the specialization (1996-1998). 6,491 observations are used to examine the effects of the specialization strategy.[8]

The total number of cases per year fluctuates around 1,300 with the number of specialized interventions greatly increasing from 241

[8] Table 4.4 shows the descriptive statistics for all relevant variables.

(around 18%) in 1994 to 433 (around 36%) in 1998. A major shift from non-endoprosthetic to endoprosthetic surgeries is observed from 1996 to 1997. While the number of endoprosthetic interventions is sharply rising from 277 in 1996 to 364 in 1997, there is a strong decline in the number of nonendoprosthetic ones from 1,116 to 851 over the same period. This shift is regarded as the result of the specialization strategy. In the years following the study period, the number of non-endoprosthetic surgeries stabilizes at around 1,200 (around 70%) per year. It is worth mentioning that the absolute number of surgeries considerably rises, reaching a maximum of 569 endoprosthetic procedures in 2001 and 2002. This second increase is thus not realized at the expense of non-specialized surgeries, but by cashing in on the investment in the specialization strategy, leading to a higher number of specialized interventions, a higher degree of capacity utilization and an enhanced fixed costs degression.

4.3.2 Estimation Models – OR Times

In order to address the first hypothesis of the present study, the following regression model, trying to explain the OR times of the endoprosthetic procedures (ORT_ENDO), was set up:[9]

$$\begin{aligned} \text{ORT_ENDO} = {} & \beta_0 + \beta_1 \cdot \Sigma\,\text{ORT_ENDO} \\ & + \beta_2 \cdot \text{ASA}_2 + \beta_3 \cdot \text{ASA}_3 + \beta_4 \cdot \text{ASA}_{4/5} \\ & + \beta_5 \cdot \text{BLOSS} + \beta_6 \cdot \text{OOR} + \beta_7 \cdot \text{ORW} + \beta_8 \cdot \text{AGE} + \beta_9 \cdot \text{AGE}^2 \\ & + \beta_{10} \cdot \text{SUR}_2 + \cdots + \beta_{19} \cdot \text{SUR}_{11} \\ & + \beta_{20} \cdot 1995 + \cdots + \beta_{23} \cdot 1998 + \varepsilon \end{aligned} \tag{1}$$

In model 1, the experience in the specialized cases is measured via cumulated OR times and used as the regressor ΣORT_ENDO. Because hospitals tend to have more precise information regarding expected severity than insurers, they tend to replace difficult cases with lighter cases while holding total patient numbers (capacity) stable (Ellis, 1998). Since the occurrence of complications is highly correlated with the American Society of Anesthesiologists (ASA) classification of patients (e.g. Hautmann et al., 2010), a different patient portfolio has an impact on overall quality. On average, fewer patients with high severity lead to fewer complications and thus causes quality measures such as complications or mortality rates to

[9] See table 1 for a short description of all the variables. Models are estimated by Ordinary Least Squares (OLS) regression unless otherwise specified.

improve (i.e. to be positively biased). To obtain meaningful results, it is therefore essential to control for the risk classification respectively the medical condition of the patients. To do so, the ASA score is employed. The literature confirms this score as a high-quality and appropriate predictor for complications and postoperative outcomes (e.g. Arvidsson et al., 1996; Hall and Hall, 1996; Wolters et al., 1996). The observation's ordinal ASA score is translated into dummy variables ASAi (i = 1,2,...,5), which respectively represent the classification of the ASA scores (1 for a normal healthy patient and 5 for a moribund one). ASA4/5 is the dummy for the patient classified as ASA 4 or 5.[10] The complication rate is expected to increase with an increasing ASA score. It is reasonable to have a closer look at the mean ASA scores in (non-)endoprosthetic cases.[11] Mean ASA scores are higher for endoprosthetic cases than for non-endoprosthetic ones in each considered year. The mean ASA score for endoprosthetic cases slightly decreases with fluctuations over time. For non-endoprosthetic cases, the mean ASA score even increases slightly with fluctuations, which explains the increase in the overall mean ASA score. To conclude, there cannot be found a tendency neither for endoprosthetic, nor for non-endoprosthetic cases. It does not seem that the hospital implemented a certain selection strategy as a reaction to increased cost pressure.

In addition to the ASA classification, the blood loss (BLOSS) and the patient's age (AGE) are assumed to be signifiers of the complexity of a case, possibly extending OR times. Although AGE does not signify complexity itself, it can be used as a proxy for various unobservable signifiers of complexity. As there might be a disproportionately high increase in complexity with increasing age, the squared age is used as an additional regressor (AGE2) in order to represent a possibly nonlinear relation between the patient's age and the OR time. Furthermore, the waiting time resulting from operating activities (ORW) is used as a further indicator of complexity by identifying the time required for additional unplanned actions during procedures.[12]

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[10] For a description of the ASA scores, see table 3. ASA 1 is the reference category, and therefore, ASA_1 is not included in the regression model. Due to the small number of observations with ASA 5, there is a single dummy for ASA 4 and 5.

[11] For the mean ASA scores, see Table 4.4.

[12] For example, it includes consultations with another physician or the preparation of surgical instruments for an unexpected higher scope of a procedure.

OOR is a count variable of other operations which are conducted simultaneously besides the main operation. SURi is a dummy variable for the i-th surgeon in the data set.[13] Using these dummies, it can be controlled for unobservable differences between surgeons. It may be the case that a certain surgeon is generally faster or slower than others. 1995 to 1998 are dummy variables for the individual years to control for potential unobserved changes over time. The term ε represents the error term.

Since the dummies for the individual years do not have an influence significantly different from zero (in the following "significant" for short),[14] and the variance inflation factors (VIFs) are in parts considerably above 10 for the dummies,[15] these are replaced in model 2 by the dummy POST95, which signals whether an observation is from 1996 onwards (specialization period) to control for potential differences between the period before and the period of specialization.

$$\begin{aligned} \text{ORT_ENDO} = {} & \beta_0 + \beta_1 \cdot \Sigma\,\text{ORT_ENDO} \\ & + \beta_2 \cdot \text{ASA}_2 + \beta_3 \cdot \text{ASA}_3 + \beta_4 \cdot \text{ASA}_{4/5} \\ & + \beta_5 \cdot \text{BLOSS} + \beta_6 \cdot \text{OOR} + \beta_7 \cdot \text{ORW} + \beta_8 \cdot \text{AGE} + \beta_9 \cdot \text{AGE}^2 \\ & + \beta_{10} \cdot \text{SUR}_2 + \cdots + \beta_{19} \cdot \text{SUR}_{11} \\ & + \beta_{20} \cdot \text{POST95} + \varepsilon \end{aligned} \tag{2}$$

For the reason of the present study, the following regression model, trying to explain the OR times of the non-endoprosthetic procedures (ORT_ENDO), was set up:

[13] The first surgeon serves as the reference category and is not included in the regression model.
[14] See table 6. The dummies for individual years have also been tested for joint significance using an F-test. P-value = 0.0974.
[15] VIFs indicate possible problems arising from a problematically high level of multicollinearity. A regression without the dummies yields a significant coefficient of ΣORT_ENDO. [16] The OR area codes used in this paper can be found in table 2.

$$\begin{aligned}\text{ORT_}\overline{\text{ENDO}} = {} & \beta_0 + \beta_1 \cdot \Sigma\,\text{ORT_ENDO} + \underbrace{\beta_2 \cdot \Sigma\,\text{ORT_}\overline{\text{ENDO}}}_{\text{omitted}} \\ & + \beta_3 \cdot \text{ASA}_2 + \cdots + \beta_5 \cdot \text{ASA}_{4/5} \\ & + \beta_6 \cdot \text{BLOSS} + \beta_7 \cdot \text{OOR} + \beta_8 \cdot \text{ORW} + \beta_9 \cdot \text{AGE} + \beta_{10} \cdot \text{AGE}^2 \\ & + \beta_{11} \cdot \text{SUR}_2 + \cdots + \beta_{20} \cdot \text{SUR}_{11} \\ & + \beta_{21} \cdot 1995 + \cdots + \beta_{24} \cdot 1998 + \varepsilon\end{aligned} \tag{3}$$

In model 3, the experience in the specialized as well as non-specialized cases is measured via cumulated OR times and used as the regressors ΣORT_ENDO (specialized/endo-prosthetic experience) and $\Sigma\,\text{ORT_}\overline{\text{ENDO}}$ (non-specialized experience).

In order to obtain more specific results, the regressor $\Sigma\,\text{ORT_}\overline{\text{ENDO}}$ in model 3 is replaced by ΣORT_AREA in model 4, i.e. the experience in the respective OR area (abdomen, extremities, neck, head, proctology, thorax, urology)16 is used. Likewise, the OR times in the OR areas, i.e. ORT_AREA, serves as the regressand instead of $\text{ORT_}\overline{\text{ENDO}}$. This means the estimation has been brought from the hospital to the OR area level.

$$\begin{aligned}\text{ORT_AREA} = {} & \beta_0 + \beta_1 \cdot \Sigma\,\text{ORT_ENDO} + \underbrace{\beta_2 \cdot \Sigma\,\text{ORT_AREA}}_{\text{omitted}} \\ & + \beta_3 \cdot \text{ASA}_2 + \cdots + \beta_5 \cdot \text{ASA}_{4/5} \\ & + \beta_6 \cdot \text{BLOSS} + \beta_7 \cdot \text{OOR} + \beta_8 \cdot \text{ORW} + \beta_9 \cdot \text{AGE} + \beta_{10} \cdot \text{AGE}^2 \\ & + \beta_{11} \cdot \text{SUR}_2 + \cdots + \beta_{20} \cdot \text{SUR}_{11} \\ & + \beta_{21} \cdot 1995 + \cdots + \beta_{24} \cdot 1998 + \varepsilon\end{aligned} \tag{4}$$

Since almost no dummy for an individual year has a significant influence in model 4,[16] these are replaced by the dummy POST95 in model 5.

$$\begin{aligned}\text{ORT_AREA} = {} & \beta_0 + \beta_1 \cdot \Sigma\,\text{ORT_ENDO} + \underbrace{\beta_2 \cdot \Sigma\,\text{ORT_AREA}}_{\text{omitted}} \\ & + \beta_3 \cdot \text{ASA}_2 + \cdots + \beta_5 \cdot \text{ASA}_{4/5} \\ & + \beta_6 \cdot \text{BLOSS} + \beta_7 \cdot \text{OOR} + \beta_8 \cdot \text{ORW} + \beta_9 \cdot \text{AGE} + \beta_{10} \cdot \text{AGE}^2 \\ & + \beta_{11} \cdot \text{SUR}_2 + \cdots + \beta_{20} \cdot \text{SUR}_{11} \\ & + \beta_{21} \cdot \text{POST95} + \varepsilon\end{aligned} \tag{5}$$

[16] See table 8 and 9. The dummies for individual years have also been tested for joint significance using an F-test with heteroskedasticity-robust standard errors if necessary (ABD, EXT, NECK, URO). P-value < 0.05 / rejection of "no joint significance" only for one OR area (PRO).

However, there are problems with the regression models due to strong multicollinearity with regard to ΣORT_ENDO and $\Sigma\,\mathrm{ORT}\ \ \overline{\mathrm{ENDO}}$ (model 3) as well as ΣORT_AREA (model 4/5). VIFs are often above 200, indicating that there are problematically high levels of multicollinearity. Regressions with only one of these regressors mostly yield significant coefficients. When regressing $\Sigma\,\mathrm{ORT}\ \ \overline{\mathrm{ENDO}}$ and ΣORT_AREA on ΣORT_ENDO, it is possible to explain more than 95% of the variance of the auxiliary regressand. Due to multlicollinearity, the non-endoprosthetic experience therefore has to be omitted from the models.

4.3.3 Estimation Models – Complications

To test the hypotheses regarding the probability of a patient experiencing a complication in the PACU, different maximum likelihood models for dichotomous dependent variables (binary logit models) are estimated. The models examine the influence of a set of independent variables on the probability of a complication P(COMPL).

The dummy variable COMPL, which reveals if there is a complication in the PACU, is used. The regression results enable to make statements regarding how the probability of experiencing a complication changes, if the independent variables in the regression model alter. Based on the assumptions and the clinical information about the various independent variables, the following logit model is established:[17]

$$
\begin{aligned}
&\mathrm{E}(\mathrm{COMPL}\,|\,\boldsymbol{x}) = P(\mathrm{COMPL}=1\,|\,\boldsymbol{x}) = \int_{-\infty}^{z} f(t)dt = \int_{-\infty}^{z} \frac{e^{-z}}{(1+e^{-z})^2} = \frac{1}{1+e^{-z}} \\
&z = \boldsymbol{x}'\boldsymbol{\beta} = \beta_0 + \beta_1 \cdot \mathrm{ENDO} + \beta_2 \cdot \mathrm{ENDOSHARE} \\
&\quad + \beta_3 \cdot \mathrm{ASA}_2 + \beta_4 \cdot \mathrm{ASA}_3 + \beta_5 \cdot \mathrm{ASA}_{4/5} \\
&\quad + \beta_6 \cdot \mathrm{BLOSS} + \beta_7 \cdot \mathrm{OOR} + \beta_8 \cdot \mathrm{ORT} + \beta_9 \cdot \mathrm{ORW} \\
&\quad + \beta_{10} \cdot \mathrm{URG} + \beta_{11} \cdot \mathrm{AGE} + \beta_{12} \cdot \mathrm{AGE}^2 \\
&\quad + \beta_{13} \cdot \mathrm{SUR}_2 + \cdots + \beta_{22} \cdot \mathrm{SUR}_{11} \\
&\quad + \beta_{23} \cdot 1995 + \cdots + \beta_{26} \cdot 1998
\end{aligned}
\tag{6}
$$

To depict the influence of the specialization strategy in endoprosthetic surgeries and to test the hypotheses, the dummy variable ENDO and the continuous variable ENDOSHARE are

[17] For a short description of all the variables, see Table 4.1.

deployed. By indicating if the procedure is an endoprosthetic one, ENDO controls for potential quality differences between endoprosthetic and other interventions. ENDOSHARE reflects the three-month moving average of the percentage of endoprosthetic cases.18 To represent complexity, the OR time (ORT) is also used, since more complex interventions supposedly take longer. OOR is employed since it could be that the probability of a complication is higher if there were other operations conducted simultaneously. Another regressor is URG, the urgency of the intervention, since it is assumed that the probability of a complication is larger for an emergency surgery than for an elective surgery planned a certain time in advance.

To be able to distinguish between potentially differing effects of the specialization strategy on specialized and non-specialized interventions, which is not possible with model 6, the interaction term ENDO_ENDOSHARE is additionally included in model 7. It reflects the interaction between ENDO and ENDOSHARE.19 By the help of the interaction term, the overall effects observed in model 6 can be split into separate effects for specialized and non-specialized procedures. It is written:

$$
\begin{aligned}
&\mathrm{E}\left(\mathrm{COMPL} \mid \boldsymbol{x}\right) = P(\mathrm{COMPL} = 1 \mid \boldsymbol{x}) = \frac{1}{1+e^{-z}} \\
&z = \boldsymbol{x}'\boldsymbol{\beta} = \beta_0 + \beta_1 \cdot \mathrm{ENDO} + \beta_2 \cdot \mathrm{ENDOSHARE} + \beta_3 \cdot \mathrm{ENDO_ENDOSHARE} \\
&\quad + \beta_4 \cdot \mathrm{ASA}_2 + \beta_5 \cdot \mathrm{ASA}_3 + \beta_6 \cdot \mathrm{ASA}_{4/5} \\
&\quad + \beta_7 \cdot \mathrm{BLOSS} + \beta_8 \cdot \mathrm{OOR} + \beta_9 \cdot \mathrm{ORT} + \beta_{10} \cdot \mathrm{ORW} \\
&\quad + \beta_{11} \cdot \mathrm{URG} + \beta_{12} \cdot \mathrm{AGE} + \beta_{13} \cdot \mathrm{AGE}^2 \\
&\quad + \beta_{14} \cdot \mathrm{SUR}_2 + \cdots + \beta_{23} \cdot \mathrm{SUR}_{11} \\
&\quad + \beta_{24} \cdot 1995 + \cdots + \beta_{27} \cdot 1998
\end{aligned}
\tag{7}
$$

Since the dummies for 1996, 1997, and 1998 are significant, but the dummy for 1995 (before specialization) is not,20 the dummies for

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18 For example, it takes the value of 16.29 for an observation in March 1994 because 16.29% of all surgeries from January to March 1994 were endoprosthetic interventions.

19 The interaction term therefore equals zero if it is a non-specialized procedure and ENDOSHARE if it is a specialized one.

20 See table 12. The dummies for the individual years 1996-1998 have also been tested for joint significance using an F-test with heteroskedasticity-robust standard errors. P-value = 0.0000.

the individual years are replaced by the dummy POST95. Therefore, the regression models are:

$$\begin{aligned}
&\mathrm{E}(\mathrm{COMPL}\,|\,\boldsymbol{x}) = P(\mathrm{COMPL}=1\,|\,\boldsymbol{x}) = \frac{1}{1+e^{-z}}\\
&z = \boldsymbol{x}'\boldsymbol{\beta} = \beta_0 + \beta_1\cdot\mathrm{ENDO} + \beta_2\cdot\mathrm{ENDOSHARE}\\
&\quad + \beta_3\cdot\mathrm{ASA}_2 + \beta_4\cdot\mathrm{ASA}_3 + \beta_5\cdot\mathrm{ASA}_{4/5}\\
&\quad + \beta_6\cdot\mathrm{BLOSS} + \beta_7\cdot\mathrm{OOR} + \beta_8\cdot\mathrm{ORT} + \beta_9\cdot\mathrm{ORW}\\
&\quad + \beta_{10}\cdot\mathrm{URG} + \beta_{11}\cdot\mathrm{AGE} + \beta_{12}\cdot\mathrm{AGE}^2\\
&\quad + \beta_{13}\cdot\mathrm{SUR}_2 + \cdots + \beta_{22}\cdot\mathrm{SUR}_{11}\\
&\quad + \beta_{23}\cdot\mathrm{POST95}
\end{aligned} \tag{8}$$

$$\begin{aligned}
&\mathrm{E}(\mathrm{COMPL}\,|\,\boldsymbol{x}) = P(\mathrm{COMPL}=1\,|\,\boldsymbol{x}) = \frac{e^{z}}{1+e^{z}}\\
&z = \boldsymbol{x}'\boldsymbol{\beta} = \beta_0 + \beta_1\cdot\mathrm{ENDO} + \beta_2\cdot\mathrm{ENDOSHARE} + \beta_3\cdot\mathrm{ENDO_ENDOSHARE}\\
&\quad + \beta_4\cdot\mathrm{ASA}_2 + \beta_5\cdot\mathrm{ASA}_3 + \beta_6\cdot\mathrm{ASA}_{4/5}\\
&\quad + \beta_7\cdot\mathrm{BLOSS} + \beta_8\cdot\mathrm{OOR} + \beta_9\cdot\mathrm{ORT} + \beta_{10}\cdot\mathrm{ORW}\\
&\quad + \beta_{11}\cdot\mathrm{URG} + \beta_{12}\cdot\mathrm{AGE} + \beta_{13}\cdot\mathrm{AGE}^2\\
&\quad + \beta_{14}\cdot\mathrm{SUR}_2 + \cdots + \beta_{23}\cdot\mathrm{SUR}_{11}\\
&\quad + \beta_{24}\cdot\mathrm{POST95}
\end{aligned} \tag{9}$$

4.4 Results

4.4.1 OR Times

Before dealing with the estimation results, it is reasonable to have a look at Figure 4.1 which illustrates the development of OR times over time. There can be detected declining OR times of endoprosthetic interventions over time. With regard to non-endoprosthetic ones, there is no clear trend. Interestingly, the OR times of endoprosthetic surgeries already decline when the share of endoprosthetics has not risen considerably yet. Obviously, the mere preparation of a specialization on endoprosthetic surgeries reduces endoprosthetic OR times. A possible explanation for this phenomenon might be a thorough inspection, reorganization, and optimization of OR processes in the early stages of the specialization process. Generally, processes and structures are clearly more in the focus of interest in this transition period. The Hawthorne effect might also be an approach: As the surgeons anticipate that the OR as a whole is under

observation in this specialization process and so they are, too, their productivity improves.

Figure 4.1 Average OR Times of Surgeries

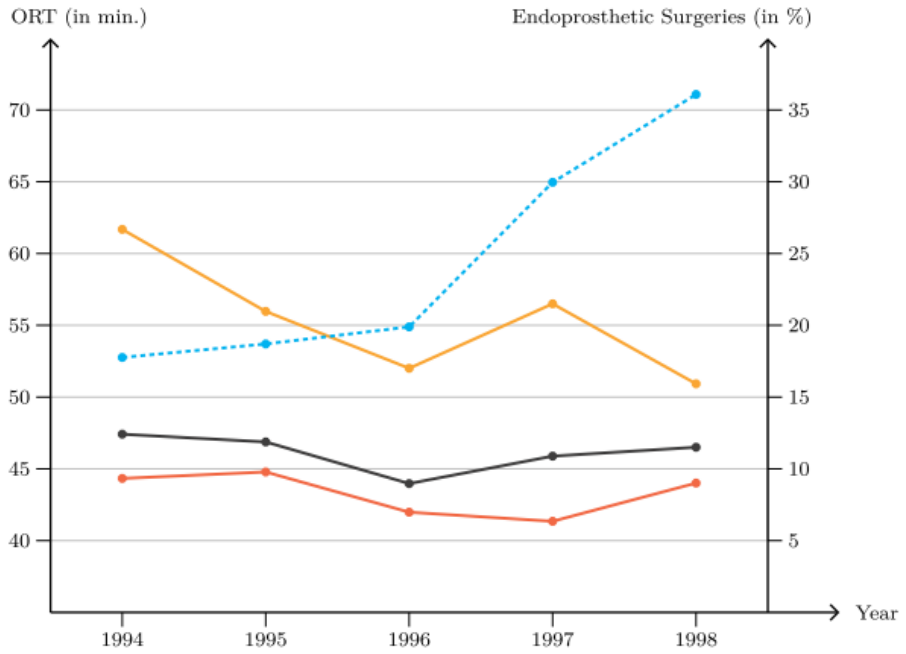

Table 4.6 depicts the estimation results of model 1. The experience in endoprosthetic procedures does not have an influence on the OR times of endoprosthetic surgeries. However, it has to be remembered that there have been problems with the model due to multicollinearity.[21] In order to solve these problems, model 2 has been set up. The estimation results can also be found in table 6. Implied by the negative[22] coefficient of ΣORT_ENDO, the experience in endoprosthetic procedures reduces OR times of endoprosthetic interventions. This supports H1, and therefore H1 cannot be rejected.

Regarding the patient's risk classification, the results do not confirm the expectations. For model 2, ASAi do not have an influence on the OR times of endoprosthetic surgeries. A rising blood loss increases OR time, as it is with other operations executed besides the

[21] See section 4.2.
[22] All coefficients which are interpreted are significantly different from zero.

main intervention. The other control variables ORW and AGE do not have an influence on the endoprosthetic OR times.[23] There cannot be detected differences between surgeons.[24]

Table 4.7 depicts the estimation results of model 3. Implied by the negative coefficient of ΣORT_ENDO, the experience in endoprosthetic procedures reduces OR times of nonendoprosthetic surgeries. This means there is a spillover effect from specialized to nonspecialized interventions, manifesting in shorter OR times. In the following, the estimation results of model 4 and 5 are explained which allow more specific statements about the spillover effect.

Table 4.8 and 4.9 contain the estimated coefficients of model 4. The overall spillover effect on non-endoprosthetic interventions in model 3 is specified here: There is not a spillover effect on interventions in all OR areas, but extremities (EXT), proctology, and urology. The result with regard to EXT is the most obvious one, since endoprosthetics is a field within EXT. But there is also a spillover effect on interventions in OR areas which are "further away" from the endoprosthetic field.

Table 10 and 11 depict the estimation results of model 5. Similar to model 4, the experience in endoprosthetic interventions has a negative, OR time-reducing, influence on procedures in the same OR areas as for model 4 and additionally thorax.[25] In summary, H3 is partly supported, and therefore H3 cannot be rejected.

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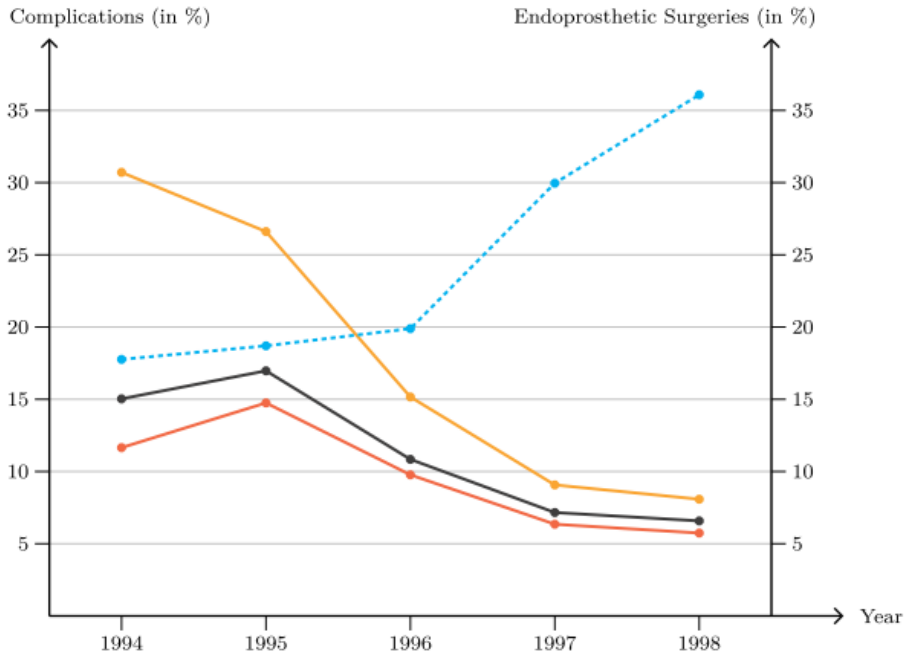
[23] The two regressors representing age have also been tested for joint significance using an F-test. Pvalue = 0.3. The variance in AGE is comparatively low in model 2. The standard deviation (SD) is 9.87; in model 3, the SD of AGE is 24.19. This complicates the detection of a possibly existing effect.

[24] VIFs for model 2 are considerably below 10, indicating that there are no severe problems arising from a problematically high level of multicollinearity. For AGE and AGE^2, VIFs are larger, obviously resulting from a high correlation between these two regressors. Though, AGE^2 has not been dropped from the regression equations due to the theoretical foundation. Further exceptions are some surgeon dummies. The correlation matrix of the variables is also provided in table 5.

[25] VIFs for model 3 to 5 are considerably below 10, indicating that there are no severe problems arising from a problematically high level of multicollinearity. VIFs are larger for AGE and AGE^2 and some surgeon dummies. The correlation matrix of the variables is also provided in Table 4.5.

Regarding the patient's risk classification, the results confirm the expectations. For model 3 to 5, most coefficients of ASAi are positive.[26] The absolute value of the coefficients increases with an increase in the ASA score. Thus, the results confirm that the OR time increases with an increasing patient risk classification. A rising blood loss also increases the OR time, as it is with other operations executed besides the main intervention. The patient's age has a nonlinear relation with the OR time.[27] Not surprisingly, the waiting time from operating activities also extends the OR time. There are differences between surgeons in OR times of non-endoprosthetic interventions.[28]

Figure 4.2 Complication Rates of Surgeries



[26] Exceptions: ASA_3 and $ASA_{4/5}$ in ORT_HEAD (model 4 and 5).
[27] The two regressors representing age have also been tested for joint significance using an F-test with heteroskedasticity-robust standard errors. P-value < 0.05 in all cases except ORT_THO (model 4 and 5, p-value > 0.1).
[28] Although there are time differences, they should not be overrated, but interpreted cautiously. For example, a surgeon with higher OR times than surgeon 1 must not be regarded as "slow". There are most likely differences between individual surgery portfolios with regard to complexity and difficulty which cannot be controlled for with the regressors. Thus, a direct comparison of OR times is virtually impossible.

4.4.2 Complications

Figure 4.2 illustrates the development of complication rates over time. They considerably decline for endoprosthetic and non-endoprosthetic surgeries. Although the drop is larger for endoprosthetic interventions, there is also a drop in non-specialized ones, which are seemingly disregarded by specializing in endoprosthetics. However, this does not seem to happen. As with the OR times, the complication rates already decline when the share of endoprosthetics has not risen considerably yet.[29]

Table 4.12 depicts the estimation results of the logit models regarding the probability of experiencing complications in the PACU. Model 6 and 8 explore whether an increase in the share of specialized procedures has an effect on the complications of all interventions. The negative coefficient of ENDOSHARE (model 8) indicates that an increase in the share of specialized procedures leads to an overall decrease in the probability of experiencing complications, i.e. increased specialization leads to a decrease in complications for specialized as well as non-specialized cases. The negative coefficient of ENDOSHARE (model 9) has the same indications as in model 8. The negative coefficient of ENDO_ENDOSHARE (model 9) indicates that the effects of the specialization strategy are stronger for specialized procedures compared to non-specialized ones, i.e. the complication risk is reduced more for specialized cases.[30] The results regarding non-specialized cases indicate the presence of spillover effects. In summary, H2 and H4 are supported, and therefore H2 and H4 cannot be rejected. This is considered an important result because in contrast to Clark and Huckman (2012), who fail to find spillover effects, there are such effects in these data.

In model 6 and 7, the coefficients of the dummy for 1996, 1997 and 1998 are negative, as it is for the coefficient of POST95 in model 8 and 9. This finding suggests that in spite of public distrust, the

---

[29] Possible explanations have been outlined in section 4.1.

[30] VIFs for model 6 to 9 are considerably below 10, indicating that there are no severe problems arising from a problematically high level of multicollinearity. The only exceptions are ENDO and ENDO_ENDOSHARE in model 7 and 9 with values slightly higher than 10, but they are still significant, so multicollinearity is not a major problem, as well as AGE and AGE^2 and some surgeon dummies in model 6 to 9. The correlation matrix of the variables is also provided in table 5.

increasing cost pressure caused by the introduction of rigidly capped budgets in 1996 did not lead to an increase in complications and thus to compromises on quality, at least if a specialization strategy had been implemented as a reaction.

Consequently, sophisticated specialization-based cost-reduction strategies and the previously linked learning and spillover effects with regard to short-term quality appear to be strategic complements rather than substitutes.

For model 6 to 9, all coefficients of ASAi are positive. The absolute value of the coefficients increases markedly with an increase in the ASA score. Thus, the results confirm the expectations concerning the patient's risk classification. Regarding the other control variables, there is a changing probability of experiencing complications with a change in the patient's age.[31] Positive coefficients of BLOSS, ORW and ORT indicate that an increase in the amount of lost blood, the waiting time from operating activities as well as the OR time itself lead to a higher probability of complications in the PACU. There are no differences in the probability of complications between surgeons.

Summa summarum: It can be stated that the specialization has a positive effect not only for specialized cases, but also for the others due to spillover effects. Besides the OR times, the complication rates in the PACU decrease for all interventions, indicating lower costs in the short, medium, and the long term.

4.3 Limitations

There are some limitations to the results. One must bear in mind that the complexity of the study further increases by the fact that, in reality, hospitals are likely to respond to an increase in economic incentives with a mixture of strategies and have, in fact, been shown to do so in empirical research (e.g. Ernst and Szczesny, 2005). The problem is that effects of the respective strategies may cancel out one another, which obviously makes it even harder to predict the resulting effect on quality and costs over the entire patient's case.

Speaking of effects interfering with one another, one must also bear in mind the omission of the non-endoprosthetic experience in

[31] The two regressors representing age have also been tested for joint significance using an F-test with heteroskedasticity-robust standard errors. P-value < 0.001 in all cases.

model 3 to 5 due to multicollinearity with regard to ΣORT_ENDO and $\Sigma ORT_\overline{ENDO}/\Sigma ORT_AREA$. As the endoprosthetic experience is correlated with the non-endoprosthetic one, the remaining regressor ΣORT_ENDO might also carry parts of the explanatory power of the omitted regressor $\Sigma ORT_\overline{ENDO}/\Sigma ORT_AREA$. However, no alternative measurement of experience has been possible in the present case.

Concerning the definition of the patient's case in this study: It would be reasonable that a patient's case comprises the intervention, the PACU, the intensive care unit, the ward up to the patient's discharge. If there were a readmission (e.g. due to possible complications) associated with the primary intervention, it would need to be part of the patient's case, too. However, it is not possible with the given data set to have a patient's case comprise any treatment after the PACU and it is not possible to connect cases such that a case might be a readmission of a patient from a former case. Therefore, it is not clear whether a reduction of OR times (resulting from learning and spillover effects associated with the specialization strategy) leads to higher complication rates at a later point beyond the patient's case as defined in this context. Complications might, for example, show up in the ward, potentially leading to a longer LOS and therefore higher costs (e.g. Kalish et al., 1995; Collins et al., 1999; Zhan and Miller, 2003). Unfortunately, these data have not been available.

4.5 Robustness of Estimation Models

Several robustness tests have been conducted on the results. Model 3 to 5 have been estimated with a different measurement of experience: via the sum of interventions instead of cumulated OR times. The results do not relevantly differ.

The same results are obtained when using the one-month, six-month, or nine-month moving average of the percentage of endoprosthetic cases for ENDOSHARE instead of the three-month moving average in model 8 and 9.[32] Furthermore, the estimation

[32] In contrast to the other ENDOSHARE variables, ENDOSHARE_1 (one-month moving average) does not use the month of the observation, but the previous month. Further, it is a single value and only titled "average" for consistency reasons.

results of model 6 to 9 virtually do not change even when the observation period is enlarged to 2002, i.e. the year prior to the introduction of the DRG system.

To control for potential differences between statutorily and privately insured patients, a dummy variable if the patient was privately insured has been included in model 6 to 9. Regarding the complications, the short-term quality measure, no significantly divergent results for privately and statutorily insured patients are found.

All regression models have been controlled for heteroskedasticity by using the BreuschPagan test (level of significance $\alpha = 0.05$). Robust standard errors (White) have been used in case of heteroskedasticity in order to receive valid statistical inferences.

VIFs have been computed for all models in order to detect problematically high levels of multicollinearity. Apart from the exceptions explicitly mentioned (dummies for the individual years, AGE and AGE2 as well as some surgeon dummies), VIFs are below 10 and do not indicate problematically high levels of multicollinearity.

4.6 Conclusions

Since there has been the need to draw a more comprehensive view of isolated cost savings on the entire patient's case, this paper contributes to the literature by providing an important link between the cost savings related to learning and spillover effects in the OR triggered by a specialization strategy and the potentially higher follow-up costs which might overcompensate the savings in the OR.

It has been hypothesized that isolated cost-reducing activities in the OR (through a specialization strategy and resulting learning and spillover effects) shorten OR times and simultaneously increase quality by lowering the probability of experiencing complications and therefore reduce the costs over the entire patient's case for both specialized (learning effects) and non-specialized cases (spillover effects). To make statements regarding how follow-up costs are affected by the specialization strategy, a quality proxy has been used.

The available data have enabled the measurement of short-term quality by estimating the effects of different factors on the probability of experiencing complications in the PACU. It has been found that with an increased degree of specialization, the hospital can reduce OR

times and simultaneously improve short-term quality. This result applies for specialized cases (endoprosthetic surgeries) as well as for non-specialized cases. Therefore, it has been concluded that increased specialization efforts and associated considerations regarding the (re-)organization of processes and procedures within the specialized area imply positive spillovers on other surgeries. The effects of the endoprosthetic process optimization have been named a form of learning. These effects also show that efficiency efforts in the OR do not necessarily lead to higher follow-up costs after the surgical intervention. On the contrary, the hypothesis of a reduction in complications and therefore a cost reduction over the entire patient's case can be confirmed.

The findings reveal a hint of association between learning effects in the OR triggered by the specialization strategy, resulting in efficiency gains, and higher patient volumes using economies of scale. Improved patient outcomes (i.e. lower complication rates) link these developments with overall costs of a patient's case. A strong reduction in the complication appearance for endoprosthetic as well as non-endoprosthetic cases increases the specialization effects described above. Thus, this paper contributes to the literature by showing that isolated cost-saving activities have a cost-saving effect not only in the isolated area, but also in the rest of the patient's case in the form of lower follow-up costs due to a lower complication risk.

Future research might obtain deeper insights in individual vs. organizational learning and spillover effects as well as the consequences on costs. With a larger data set, it would be possible to conduct estimations on surgeon level, which have not been done here due to mostly a low number of cases by a single surgeon within a specific OR area and partially also a low number of interventions in general. With an enhanced database, future research might investigate the specialization, learning, and spillover effects in a larger perspective, defining the patient's case the way it has been proposed in the introduction, i.e. a patient's case comprises the intervention, the PACU, the intensive care unit, the ward up to the patient's discharge. If there were a readmission (e.g. due to possible complications) associated with the primary intervention, it would be supposed to be part of the initial patient's case, too. With an even further enhanced database, possibly from the health insurers, future research might investigate the effects even in a larger perspective, not restricting the patient's case to the hospital, but regarding the case from the hospital up to the after-hospital care, i.e. to the point, in

which the case is ultimately over from the patient's perspective, e.g. after the hospital stay and a subsequent physiotherapy. Then, research would be able to evaluate the specialization strategy from the overall perspective. Linked studies should also think about a different, more concise measurement of experience in order to ease the problem with multicollinearity, to be able to better separate between experience in specialization and OR area, and to not have to omit the experience in the respective OR area from the model. However, this would obviously require much medical expertise and very detailed data.

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Appendix A

Table 4.1 Description of Variables

Variable	Description
AGE	Patient's age
ASA_i	Dummy for ASA class $i \quad \forall\, i = \{1, 2, ..., 5\}$. Classification of patients with regard to their physical condition. The smaller, the better the condition is. For a description of the ASA classes, see table 3
BLOSS	Blood loss (measured in ml)
COMPL	Dummy for complication in the PACU
ENDO	Dummy for endoprosthetic procedure
ENDOSHARE	Three-month moving average of the share of endoprosthetic procedures as a proportion of all cases
ENDO_ENDOSHARE	Interaction term of ENDO and ENDOSHARE. 0 if ENDO is 0 and equal to ENDOSHARE if ENDO is 1
OOR	Number of other operations which are done simultaneously with the main intervention
ORT	Operation time (time from incision to suture; in minutes)
ORW	Waiting time resulting from operating activities
POST95	Dummy for observation between 1996 and 1998
SUR_i	Dummy for the i-th surgeon $\quad \forall\, i = \{1, 2, ..., 11\}$
URG	Urgency of an operation (1 = elective surgery, 2 = urgent surgery, 3 = emergency surgery)
Σ ORT_ENDO	Experience in endoprosthetic area (measured as cumulated operation time)
Σ ORT_$\overline{\text{ENDO}}$	Experience apart from endoprostethic area (measured as cumulated operation time)
Σ ORT_AREA	Experience in OR area (measured as cumulated operation time). For the OR areas, see table 2
ε	Error term
1995/1996/1997/1998	Dummy for the year 1995/1996/1997/1998

Table 4.2 OR Areas

Abbr.	OR Area
ABD	Abdomen
EXT	Extremities (endoprosthetic interventions excluded)
NECK	Neck
HEAD	Head
PRO	Proctology
THO	Thorax
URO	Urology

Table 4.3 ASA Classes (American Society of Anesthesiologists, 2019)

Class	Description
ASA 1	A normal healthy patient
ASA 2	A patient with mild systemic disease
ASA 3	A patient with severe systemic disease
ASA 4	A patient with severe systemic disease that is a constant threat to life
ASA 5	A moribund patient who is not expected to survive without the operation
ASA 6[1)]	A declared brain-dead patient whose organs are being removed for donor purposes

[1)] Data set does not contain patients classified as this ASA class.

Table 4.4 Summary Statistics of Relevant Variables

		1994	1995	1996	1997	1998	Σ
AGE	$\bar{x}$	46.75	51.21	50.99	55.08	57.68	52.15
	σ	25.6888	23.3509	23.4360	22.6586	21.4096	23.7038
ASA_1	n	300	195	296	186	152	1,129
	p	22.11 %	14.71 %	21.25 %	15.31 %	12.67 %	17.39 %
ASA_2	n	560	617	681	614	591	3,063
	p	41.27 %	46.53 %	48.89 %	50.53 %	49.25 %	47.19 %
ASA_3	n	397	452	374	383	391	1,997
	p	29.26 %	34.09 %	26.85 %	31.52 %	32.58 %	30.77 %
ASA_4	n	98	61	41	32	65	297
	p	7.22 %	4.60 %	2.94 %	2.63 %	5.42 %	4.58 %
ASA_5	n	2	1	1	0	1	5
	p	0.15 %	0.08 %	0.07 %	0.00 %	0.08 %	0.08 %
$\sum_{i=1}^{5} ASA_i$	n	1,357	1,326	1,393	1,215	1,200	6,491
	$\bar{x}$	2.2203	2.2881	2.1170	2.2148	2.3100	2.2275
$\sum_{i=1}^{5} ASA_i$ (ENDO)[1)]	$\bar{x}$	2.7469	2.6734	2.4657	2.4533	2.5219	2.5547
$\sum_{i=1}^{5} ASA_i$ ($\overline{ENDO}$)[2)]	$\bar{x}$	2.1066	2.1994	2.0305	2.1128	2.1904	2.1238
COMPL	n	204	225	151	87	79	746
	p	15.03 %	16.97 %	10.84 %	7.16 %	6.58 %	11.49 %
COMPL (ENDO)[1)]	n	74	66	42	33	35	250
	p	30.71 %	26.61 %	15.16 %	9.07 %	8.08 %	15.99 %
COMPL ($\overline{ENDO}$)[2)]	n	130	159	109	54	44	496
	p	11.65 %	14.75 %	9.77 %	6.35 %	5.74 %	10.06 %
ENDO	n	241	248	277	364	433	1,563
	p	17.76 %	18.70 %	19.89 %	29.96 %	36.08 %	24.08 %

$\overline{\text{ENDO}}$	n	1,116	1,078	1,116	851	767	4,928
	p	82.24 %	81.30 %	80.11 %	70.04 %	63.92 %	75.92 %
ORT	$\bar{x}$	47.4134	46.8741	43.9734	45.8848	46.5042	46.1108
	σ	42.3310	38.7100	37.6850	48.5631	38.4952	41.2601
ORT (ENDO)[1)]	$\bar{x}$	61.6805	55.9677	52.0036	56.4973	50.9238	54.8720
	σ	28.1110	23.9849	27.0621	51.4731	20.3367	32.9885
ORT ($\overline{\text{ENDO}}$)[2)]	$\bar{x}$	44.3324	44.7820	41.9803	41.3455	44.0091	43.3320
	σ	44.2128	41.0786	39.6346	46.5304	45.4723	43.1870

[1)] Only endoprosthetic surgeries considered.

[2)] Only non-endoprosthetic surgeries considered.

Table 4.5 Correlation Coefficient

	AGE	AGE^2	BLOSS	ENDO	ENDO-SHARE	ENDO_ ENDO-SHARE	OOR	ORT	ORW	POST95	URG	Σ ORT_ ENDO
AGE	1.0000											
AGE^2	0.9686 (0.0000)	1.0000										
BLOSS	0.1417 (0.0000)	0.1457 (0.0000)	1.0000									
ENDO	0.4096 (0.0000)	0.4077 (0.0000)	0.1484 (0.0000)	1.0000								
ENDO-SHARE	0.1423 (0.0000)	0.1346 (0.0000)	0.0790 (0.0000)	0.1818 (0.0000)	1.0000							
ENDO_ ENDOSH.	0.3861 (0.0000)	0.3844 (0.0000)	0.1691 (0.0000)	0.9394 (0.0000)	0.3464 (0.0000)	1.0000						
OOR	0.0368 (0.0030)	0.0165 (0.2000)	0.1381 (0.0000)	−0.1029 (0.0000)	0.0216 (0.0818)	−0.0930 (0.0000)	1.0000					
ORT	0.3060 (0.0000)	0.2802 (0.0000)	0.3742 (0.0000)	0.1196 (0.0000)	−0.0025 (0.8422)	0.1600 (0.0000)	0.2694 (0.0000)	1.0000				
ORW	0.2412 (0.0000)	0.2274 (0.0000)	0.1751 (0.0000)	0.2588 (0.0000)	0.3911 (0.0000)	0.3325 (0.0000)	0.0502 (0.0001)	0.2009 (0.0000)	1.0000			
POST95	0.1132 (0.0000)	0.1031 (0.0000)	0.0683 (0.0000)	0.1149 (0.0000)	0.6488 (0.0000)	0.2127 (0.0000)	0.0115 (0.3528)	−0.0211 (0.0895)	0.3655 (0.0000)	1.0000		
URG	0.0462 (0.0002)	0.0689 (0.0000)	0.0013 (0.9166)	−0.1922 (0.0000)	0.1025 (0.0000)	−0.1829 (0.0000)	0.0322 (0.0096)	0.0043 (0.7282)	0.0396 (0.0014)	0.1310 (0.0000)	1.0000	
Σ ORT_ ENDO	0.1476 (0.0000)	0.1374 (0.0000)	0.0864 (0.0000)	0.1533 (0.0000)	0.8491 (0.0000)	0.2914 (0.0000)	0.0295 (0.0174)	−0.0112 (0.3661)	0.4450 (0.0000)	0.8163 (0.0000)	0.1359 (0.0000)	1.0000

P-values in parentheses.

Appendix B

Table 4.6 Estimation Results Model 1 and 2

$\hat{\beta}_i$	Model 1 (ORT_ENDO, years, OLS regression)		Model 2 (ORT_ENDO, POST95, OLS regression)	
(Intercept)	62.50508 **	(23.82396)	63.07661 **	(23.83174)
Σ ORT_ENDO	−0.00012	(0.00015)	−0.00012 *	(0.00006)
ASA_2	4.31085	(7.15033)	4.39384	(7.15164)
ASA_3	10.49217	(7.19876)	10.54168	(7.19910)
$ASA_{4/5}$	8.69071	(7.96947)	8.71348	(7.95751)
BLOSS	0.02366 ***	(0.00256)	0.02371 ***	(0.00256)
OOR	4.27956 .	(2.38421)	4.25616 .	(2.38160)
ORW	0.07564	(0.09804)	0.10556	(0.09622)
AGE	−0.39718	(0.63563)	−0.42271	(0.63598)
AGE^2	0.00377	(0.00474)	0.00399	(0.00475)
SUR_2	6.47802	(12.46254)	5.52145	(12.41763)
SUR_3	6.28951	(11.43868)	5.73926	(11.36265)
SUR_4	−5.96298	(10.92831)	−7.25021	(10.83764)
SUR_5	—	—	—	—
SUR_6	—	—	—	—
SUR_7	18.31565	(11.20279)	16.82042	(11.12097)
SUR_8	11.46042	(12.38259)	11.18241	(12.30038)
SUR_9	17.74206	(11.44548)	16.57724	(11.34916)
SUR_{10}	7.00818	(14.14672)	6.15889	(14.11276)
SUR_{11}	8.36716	(12.10661)	6.28302	(11.99921)
1995	−2.41056	(3.50819)	—	—
1996	−7.85422	(4.96002)	—	—
1997	−2.70985	(7.23471)	—	—
1998	−5.71742	(10.10500)	—	—
POST95	—	—	−4.62474	(2.84637)

Significance levels: *** 0.001 ** 0.01 * 0.05 . 0.1

Standard errors in parentheses.

n = 1,563

R^2 (model 1) = 0.17054, R^2 (model 2) = 0.16773

Table 4.7 Estimation Results Model 3

$\hat{\beta}_i$	Model 3 (ORT_$\overline{\text{ENDO}}$, OLS regression)	
(Intercept)	26.89226 ***	(4.05161)
Σ ORT_ENDO	−0.00024 *	(0.00010)
ASA_2	3.69651 ***	(1.01032)
ASA_3	5.95151 ***	(1.58051)
ASA_45	8.28044 **	(3.08991)
BLOSS	0.06539 ***	(0.00663)
OOR	20.52799 ***	(1.26370)
ORW	0.62537 ***	(0.09299)
AGE	0.50176 ***	(0.09230)
AGE^2	−0.00383 ***	(0.00102)
SUR_2	−13.05248 **	(5.05485)
SUR_3	14.16087 **	(4.65559)
SUR_4	−10.69805 **	(3.70955)
SUR_5	−22.02584 ***	(3.92281)
SUR_6	−17.19298 ***	(3.88379)
SUR_7	16.60418 ***	(3.82666)
SUR_8	−7.48901	(4.67298)
SUR_9	8.57913 *	(4.32699)
SUR_{10}	−17.49577 ***	(3.83551)
SUR_{11}	7.04908 .	(4.27590)
1995	−2.86974	(1.90323)
1996	−1.27006	(3.24131)
1997	1.82202	(4.55936)
1998	5.06048	(6.96916)

Significance levels: *** 0.001 ** 0.01 * 0.05 . 0.1

Standard errors in parentheses. Robust standard errors (White) due to heteroskedasticity.

n = 4,928

R^2 = 0.43270

Table 4.8 Estimation Results Model 4 for ABD, EXT, HEAD, NECK

Model 4 (ORT_AREA, years, OLS regression)

β_i	ABD		EXT		HEAD		NECK	
(Intercept)	30.17111 ***	(8.15604)	27.74989 ***	(4.75470)	−14.46656 *	(6.08221)	139.91789 **	(45.99854)
ΣORT_ENDO	0.00008	(0.00022)	−0.00035 *	(0.00014)	0.00025	(0.00020)	0.00006	(0.00017)
ASA_2	3.14043	(2.22513)	3.82097 .	(2.08119)	0.73703	(2.18481)	−0.66145	(0.84218)
ASA_3	7.74887 *	(3.55649)	3.91413	(2.40603)	−11.99969 *	(4.03637)	5.84439	(4.85582)
$ASA_{4/5}$	8.68524	(6.44637)	9.56199 **	(3.63557)	−30.88612 **	(7.61392)	−10.63684	(14.25533)
BLOSS	0.05212 ***	(0.00663)	0.06553 ***	(0.00732)	0.30064 **	(0.07993)	0.16319 ***	(0.03394)
OOR	15.38061 ***	(2.12625)	21.25076 ***	(2.59740)	−0.04219	(2.78181)	13.06435 ***	(3.81296)
ORW	0.72411 ***	(0.19076)	0.41000 ***	(0.11160)	0.21195	(0.91750)	0.04874	(0.51134)
AGE	0.73101 **	(0.25257)	0.40731 **	(0.12805)	−0.35834 *	(0.16525)	0.97774 *	(0.39731)
AGE^2	−0.00311	(0.00292)	−0.00383 **	(0.00128)	0.00853 ***	(0.00198)	−0.01414 *	(0.00628)
SUR_2	−28.08120 ***	(7.39471)	−4.32223	(5.86105)	—	—	−145.62029 **	(48.39232)
SUR_3	9.62702	(7.99934)	10.68565 *	(5.21650)	34.22977 **	(8.52746)	−107.05370 *	(49.43001)
SUR_4	−22.60949 **	(6.96846)	−4.60400	(4.26313)	24.76911 *	(8.73984)	−116.96934 *	(48.00314)
SUR_5	—	—	—	—	18.92644 **	(5.98716)	−143.88231 **	(46.06584)
SUR_6	−19.82159 **	(7.06514)	−22.19581 ***	(4.64318)	—	—	—	—
SUR_7	8.16257	(6.05611)	18.45161 ***	(4.47790)	32.46839 ***	(4.84764)	−56.13828	(47.99230)
SUR_8	−28.10958 **	(10.86487)	0.76462	(5.35967)	—	—	—	—
SUR_9	8.65967	(8.16539)	6.98531	(4.65089)	20.55813 **	(5.93634)	−112.32905 *	(50.12487)
SUR_{10}	−14.57138 *	(7.17102)	−3.19145	(4.67315)	—	—	−111.63634 *	(48.31958)
SUR_{11}	−5.89138	(7.41176)	11.67157 *	(5.10455)	37.43395 ***	(6.21090)	—	—
1995	−10.16944 *	(4.33096)	0.97923	(3.02088)	0.56467	(4.74853)	2.98577	(2.11640)
1996	−13.27850 .	(7.24939)	1.17496	(4.83514)	−4.35502	(7.14510)	−0.34396	(4.73735)
1997	−16.05105	(10.33887)	5.83311	(6.91379)	−13.19681	(10.26005)	−3.97335	(7.42205)
1998	−14.98600	(15.34627)	12.47275	(10.26727)	−21.52230	(15.16340)	−4.90314	(11.62089)

Significance levels: *** 0.001 ** 0.01 * 0.05 . 0.1

Standard errors in parentheses. For ABD, EXT and NECK, robust standard errors (White) due to heteroskedasticity.

n (ABD) = 1,367, n (EXT) = 1,939, n (HEAD) = 34, n (NECK) = 474

R^2 (ABD) = 0.42167, R^2 (EXT) = 0.29709, R^2 (HEAD) = 0.97017, R^2 (NECK) = 0.87301

Table 4.9 Estimation Results Model 4 for PRO, THO, URO

Model 4 (ORT_AREA, years, OLS regression) $\hat{\beta}_i$	PRO		THO		URO	
(Intercept)	13.34864	(14.73185)	−0.79744	(32.80808)	36.69582 ***	(4.91395)
Σ ORT_ENDO	−0.00059 **	(0.00019)	−0.00025	(0.00083)	−0.00032 **	(0.00012)
ASA_2	2.40258	(2.50351)	8.50078	(12.17396)	0.71210	(1.42562)
ASA_3	−2.39401	(3.44435)	13.54180	(16.02671)	4.27589	(2.65480)
$ASA_{4/5}$	−3.12263	(5.88275)	−0.96873	(23.07768)	−0.99066	(3.02070)
BLOSS	0.07201	(0.08804)	0.08208	(0.05181)	0.11832 ***	(0.01208)
OOR	6.59168 *	(2.77409)	13.84663	(9.46869)	18.41840 ***	(1.89408)
ORW	0.18652	(0.19001)	−0.49856	(0.56976)	0.93668 **	(0.29706)
AGE	0.15980	(0.28435)	1.38804	(0.59065)	0.19725	(0.16857)
AGE^2	0.00039	(0.00287)	−0.01264	(0.00873)	−0.00062	(0.00185)
SUR_2	—	—	−11.84336	(42.07789)	—	—
SUR_3	4.89708	(13.68407)	35.11700	(29.00227)	−1.59887	(5.80873)
SUR_4	0.02490	(13.10518)	4.34564	(25.86571)	−18.91645 ***	(4.38983)
SUR_5	—	—	—	—	—	—
SUR_6	6.19558	(13.92509)	−5.31233	(31.53623)	−27.42315 ***	(3.81155)
SUR_7	11.20083	(12.96891)	19.18777	(24.18541)	14.25696	(15.42437)
SUR_8	5.33692	(18.17062)	—	—	—	—
SUR_9	19.03945	(13.29472)	44.09732	(28.70539)	−29.83865 ***	(5.02701)
SUR_{10}	2.76276	(13.34488)	−4.81763	(29.05739)	−30.46395 ***	(3.77868)
SUR_{11}	18.16574	(13.22207)	23.24289	(28.68812)	—	—
1995	−1.44672	(3.90051)	−9.82391	(16.00775)	1.04701	(2.69468)
1996	9.83790	(6.22971)	−1.27363	(25.87655)	6.05727	(4.46386)
1997	22.14191 *	(9.41904)	25.04016	(40.07725)	9.53161	(6.56738)
1998	29.34345 *	(13.26388)	−4.38456	(56.58075)	11.43131	(8.85171)

Significance levels: *** 0.001 ** 0.01 * 0.05 . 0.1

Standard errors in parentheses. For URO, robust standard errors (White) due to heteroskedasticity.

n (PRO) = 206, n (THO) = 242, n (URO) = 666

R^2 (PRO) = 0.37609, R^2 (THO) = 0.16235, R^2 (URO) = 0.71002

Table 4.10 Estimation Results Model 5 for ABD, EXT, HEAD, NECK

Model 5 (ORT_AREA, POST95, OLS regression)												
β_i	ABD		EXT			HEAD		NECK		
(Intercept)	30.76233	***	(8.03035)	26.91032	***	(4.74835)	−7.59015	(6.18400)	140.41489	**	(47.08956)
Σ ORT_ENDO	−0.00005		(0.00009)	−0.00013	**	(0.00005)	−0.00002	(0.00009)	0.00002		(0.00005)
ASA_2	3.08499		(2.20182)	3.77650	.	(2.08854)	−0.60720	(2.38572)	0.04174		(0.77331)
ASA_3	7.47185	*	(3.51423)	3.96692	.	(2.40967)	−13.43314	** (4.57836)	6.25889		(4.97485)
$ASA_{4/5}$	9.13818		(6.49350)	10.19279	**	(3.64443)	−26.33284	** (7.82263)	−9.30807		(14.13418)
BLOSS	0.05253	***	(0.00662)	0.06569	***	(0.00728)	0.25554	** (0.07111)	0.16492	***	(0.03507)
OOR	15.21526	***	(2.14897)	21.50182	***	(2.57543)	0.87773	(2.92074)	12.35213	**	(3.86764)
ORW	0.68158	***	(0.18703)	0.41180	***	(0.11183)	−0.16459	(0.99550)	0.06283		(0.52515)
AGE	0.72878	**	(0.25068)	0.40830	**	(0.12833)	−0.17659	(0.15261)	0.95538	*	(0.39228)
AGE^2	−0.00303		(0.00292)	−0.00386	**	(0.00128)	0.00602	** (0.00173)	−0.01385	*	(0.00623)
SUR_2	—		—	—		—	—	—	—		—
SUR_3	−30.36149	***	(7.40440)	−5.41552		(5.81655)	—	—	−146.46618	**	(49.16950)
SUR_4	7.91678		(8.04220)	9.58125	.	(5.16000)	25.50515	** (8.71987)	−108.11105	*	(50.55478)
SUR_5	−25.84814	***	(6.91520)	−6.28493		(4.15539)	20.67776	* (9.49019)	−116.38939	*	(48.79288)
SUR_6	—		—	—		—	13.37536	. (6.38264)	−143.16462	**	(46.82480)
SUR_7	−23.10689	***	(6.94585)	−22.04427	***	(4.58213)	—	—	—		—
SUR_8	4.14946		(6.74944)	16.37403	***	(4.30824)	31.56286	*** (5.34806)	−55.39074		(48.77722)
SUR_9	−32.35612	**	(10.69618)	−0.96600		(5.21700)	—	—	—		—
SUR_{10}	5.90540		(8.00123)	5.29723		(4.54120)	19.18714	* (6.65622)	−111.73285	*	(51.08548)
SUR_{11}	−17.94881	*	(7.03961)	−4.48640		(4.57776)	—	—	−112.39844	*	(49.32117)
POST95	−9.85366		(7.31143)	9.32928	.	(4.96651)	33.38953	*** (6.84005)	—		—
	−4.82010		(3.72685)	−3.20732		(2.34266)	0.70235	(4.08376)	−1.81152		(2.31039)

Significance levels: *** 0.001 ** 0.01 * 0.05 . 0.1

Standard errors in parentheses. For ABD, EXT and NECK, robust standard errors (White) due to heteroskedasticity.

n (ABD) = 1,367, n (EXT) = 1,909, n (HEAD) = 34, n (NECK) = 474

R^2 (ABD) = 0.41822, R^2 (EXT) = 0.29519, R^2 (HEAD) = 0.95298, R^2 (NECK) = 0.87128

Table 4.11 Estimation Results Model 5 for PRO, THO, URO

Model 5 (ORT_AREA, POST95, OLS regression)								
β_i	PRO		THO		URO			
(Intercept)	13.19080	(15.10368)	−3.03177	(32.75971)	35.28071	***	(4.63233)
Σ ORT_ENDO	−0.00025	** (0.00007)	−0.00062	. (0.00032)	−0.00021	***	(0.00005)
ASA_2	3.08428	(2.53191)	8.45641	(12.21893)	0.72884		(1.42440)
ASA_3	−1.11136	(3.47180)	11.87763	(15.58559)	4.22564		(2.58393)
$ASA_{4/5}$	−4.19866	(5.97385)	−1.21254	(22.76273)	−0.84502		(2.97231)
BLOSS	0.09273	(0.08984)	0.07907	(0.05200)	0.11839	***	(0.01186)
OOR	6.13208	* (2.82140)	13.73323	(9.50965)	18.39674	***	(1.88969)
ORW	0.27591	(0.19085)	−0.00999	(0.53122)	0.94437	**	(0.29008)
AGE	0.09953	(0.29111)	1.50598	(0.93589)	0.19241		(0.16988)
AGE^2	0.00095	(0.00294)	−0.01358	(0.00879)	−0.00158		(0.00185)
SUR_2	—	—	−3.14109	(41.64207)	—		—
SUR_3	2.55440	(13.93898)	46.90587	. (28.23832)	−0.28614		(5.87736)
SUR_4	−2.10482	(13.46518)	7.48248	(25.06485)	−18.21405	***	(4.29614)
SUR_5	—	—	—	—	—		—
SUR_6	3.71969	(14.27210)	3.60618	(30.87095)	−27.08267	***	(3.78800)
SUR_7	5.91392	(13.21846)	16.29327	(23.62865)	14.60806		(15.57779)
SUR_8	−3.24941	(18.47852)	—	—	—		—
SUR_9	15.45296	(13.59783)	46.83314	(28.47221)	−29.87318	***	(5.06899)
SUR_{10}	−0.42128	(13.66043)	−3.11047	(28.04536)	−30.01440	***	(3.79067)
SUR_{11}	13.43961	(13.49423)	16.36057	(27.58598)	—		—
POST95	5.34578	(3.43889)	19.20000	(13.39528)	3.63099		(2.38906)

Significance levels: *** 0.001 ** 0.01 * 0.05 . 0.1

Standard errors in parentheses. For URO, robust standard errors (White) due to heteroskedasticity.

n (PRO) = 206, n (THO) = 242, n (URO) = 666

R^2 (PRO) = 0.33104, R^2 (THO) = 0.13743, R^2 (URO) = 0.70807

Table 4.12 Estimation Results Model 6 to 9

β_i	Model 6 (COMPL$_{it}$ no interaction term, years, logit)		Model 7 (COMPL$_{it}$ interaction term, years, logit)		Model 8 (COMPL$_{it}$ no interaction term, POST95, logit)		Model 9 (COMPL$_{it}$ interaction term, POST95, logit)	
(Intercept)	−4.13607 ***	(0.60656)	−4.28158 ***	(0.60634)	−3.67233 ***	(0.58798)	−3.86390 ***	(0.58830)
ENDO	0.11576	(0.11307)	0.67211 *	(0.30173)	0.11111	(0.11259)	0.75173 *	(0.29330)
ENDOSHARE	−0.09991	(0.01195)	−0.00082	(0.01256)	−0.03778 ***	(0.00809)	−0.02544 **	(0.00937)
ENDO_ENDOSHARE	—	—	−0.02476 *	(0.01247)	—	—	−0.02842 *	(0.01201)
ASA_2	0.54859 *	(0.22445)	0.55372 *	(0.22385)	0.51867 *	(0.22624)	0.52527 *	(0.22537)
ASA_3	1.17876 ***	(0.23780)	1.18215 ***	(0.23728)	1.14711 ***	(0.23943)	1.15208 ***	(0.23861)
$ASA_{4/5}$	1.65698 ***	(0.27287)	1.66624 ***	(0.27254)	1.61103 ***	(0.27387)	1.62511 ***	(0.27321)
BLOSS	0.00083 ***	(0.00014)	0.00084 ***	(0.00014)	0.00083 ***	(0.00014)	0.00086 ***	(0.00015)
OOR	0.02897	(0.08505)	0.02757	(0.08482)	0.03337	(0.08535)	0.03167	(0.08502)
ORT	0.00306 **	(0.00098)	0.00292 **	(0.00096)	0.00297 **	(0.00099)	0.00280 **	(0.00097)
ORW	0.01918 ***	(0.00555)	0.01974 ***	(0.00555)	0.01554 **	(0.00514)	0.01631 **	(0.00516)
URG	0.09213	(0.10326)	0.07134	(0.10379)	0.07106	(0.10323)	0.04671	(0.10366)
AGE	0.01957	(0.01416)	0.01938	(0.01416)	0.02039	(0.01422)	0.02007	(0.01420)
AGE^2	0.00000	(0.00012)	0.00000	(0.00012)	−0.00001	(0.00012)	−0.00001	(0.00012)
SUR_2	0.49752	(0.69065)	0.53329	(0.69246)	0.39655	(0.69033)	0.43822	(0.69204)
SUR_3	0.47997	(0.46788)	0.46953	(0.46924)	0.36493	(0.46220)	0.29001	(0.46313)
SUR_4	0.30817	(0.42270)	0.28856	(0.42017)	0.37809	(0.41875)	0.35045	(0.41614)
SUR_5	−0.51188	(0.66681)	−0.52213	(0.66795)	−0.42786	(0.67027)	−0.44632	(0.66815)
SUR_6	−0.00560	(0.45506)	−0.02240	(0.45362)	0.06031	(0.45298)	0.03357	(0.45178)
SUR_7	0.41477	(0.41950)	0.42287	(0.41707)	0.53880	(0.41510)	0.54236	(0.41250)
SUR_8	0.28596	(0.58371)	0.28376	(0.58241)	0.22840	(0.58550)	0.22341	(0.58470)
SUR_9	0.18299	(0.45710)	0.14186	(0.45539)	0.23211	(0.45282)	0.18024	(0.45142)
SUR_{10}	0.13133	(0.44432)	0.11676	(0.44268)	0.18544	(0.44231)	0.16235	(0.44073)
SUR_{11}	0.24355	(0.44804)	0.25471	(0.44556)	0.36856	(0.44360)	0.37778	(0.44069)
1995	0.05075	(0.11923)	0.04873	(0.11950)	—	—	—	—
1996	−0.45367 ***	(0.13676)	−0.45900 ***	(0.13680)	—	—	—	—
1997	−1.16876 ***	(0.22603)	−1.15136 ***	(0.22480)	—	—	—	—
1998	−1.31995 ***	(0.29856)	−1.27507 ***	(0.29850)	—	—	—	—
POST95	—	—	—	—	−0.59378 ***	(0.11787)	−0.59807 ***	(0.11738)

Significance levels: *** 0.001 ** 0.01 * 0.05 . 0.1

Standard errors in parentheses. Robust standard errors (White) due to heteroskedasticity.

$n = 6,491$

BIC (model 6) = 4,146.8, BIC (model 7) = 4,151.6, BIC (model 8) = 4,139.7, BIC (model 9) = 4,143.0

McFadden's R^2 (model 6) = 0.15566, McFadden's R^2 (model 7) = 0.15653, McFadden's R^2 (model 8) = 0.15151, McFadden's R^2 (model 9) = 0.15270

5

Internationalization of Italian Companies: Analysis of Italy's Positioning in Global Value Chains

Sonia Soriente

5.1 Introduction

Italy, as one of Europe's leading economies, is faced with the challenge of improving its position within GVCs in order to take full advantage of the opportunities offered by global production.

Over the last few decades, there has been a growing process of fragmentation in the production of goods and services, which has assumed proportions on a large geographical scale and involved an increasing number of actors within the global system. In this context, Global Value Chains (GCVs) have been a fundamental phenomenon, consolidated for over twenty years, representing a central element of the globalized world. These Chains have allowed an increasingly intricate interweaving between different industrial realities, often belonging to deeply different socio-cultural contexts, through a continuous exchange of tangible and intangible resources between the various countries.

The evolution of GVCs over time has been influenced by multiple factors, including technological transformations, increasing global connection and companies' business strategies. This development has had a significant impact on the structure and organisation of economic activities at global level.

Initially, GVCs were limited to flows of trade in final goods between firms, through import and export transactions. However, in

recent years there has been a paradigm shift: companies have begun to collaborate in an increasingly interconnected way along GVCs, fragmenting production into different specialized phases, carried out by a dense network of companies located in different geographical areas, in order to exploit economic advantages and underline their degree of specialization. This new organisation of production led to a redefinition of the traditional concept that exporters had to ensure the production of added value, while importers were destined to meet final demand. Therefore, the analysis of the effects of trade policies can no longer be limited to traditional measures based on import and export flows, as these measures represent only the gross value of trade. The distinction between gross and net flows becomes crucial because of the trade in intermediate inputs that cross borders more than once: the value of an exported good, produced with the use of intermediate inputs, includes by definition the value of these inputs, causing an over-counting (double-counting) in foreign trade statistics.

Considering this situation and the need to clearly define the value of GVCs, there has been a growing interest in recent years in the use of value-added measurements to assess trade, going beyond traditional import and export measures. This approach allows for a more accurate view of the effects of GVCs on value creation and global economic dynamics, and allow to better understand the position of the italian companies in the GVCs.

5.2 Unravelling Research Question and Pursing Objectives

"What is the positioning of Italian companies in the Global Value Chains and what are the main characteristics that have influenced this positioning in terms of participation, role and value creation?"

Starting from this question, the following research intends to combine several studies, both theoretical and practical, regarding the participation of the Italian businesses in Global Value Chains, in order to understand their positioning, correlation with the process of internationalization of companies and the main trading partners; all this by offering first of all an overview of the existing theories regarding Global Value Chains and then a specific case study that helps in understanding the Italian context.

5.3 GVC: Theoretical Background

Global Value Chains are a phenomenon that has been widely studied in the academic and economic literature. Several scholars have contributed to the definition and analysis of GVCs, providing a solid conceptual basis for understanding their impact on the organization of economic activities at the global level.

By the term Global Value Chain, the scholar Kogut (1985) referred to "the process by which technology is united with material resources and labor, semi-finished products are processed, assembled, brought to market and distributed. A single company can only play one link in this process or it can be vertically integrated." However, the transposition of the concept of GVCs into the nascent globalized context is due to the work of Gereffi & Korzeniewicz (1994), who have contributed significantly to the definition of key concepts and the analysis of this complex phenomenon, identifying three key dimensions: the governance and geography of Chains and the governance of nodes. The first two relate respectively to the distribution of control in relations between undertakings and to geographical division; while node's governance refers to the strategies and policies of individual companies participating in GVCs.

The literature has also focused on the study of the positive effects found by the individual companies that adhere to the GVCs. Gereffi & Fernandez (2016) underline the positive correlation between participation in GVCs and productivity of firms, especially in developing countries; with the consequence that this correlation does not depend only on the wealth of the country, as stated by Del Prete, Giovannetti & Marvasi (2017) who observe, for example, that there is a direct link between the production performance of North African companies and their dynamism at the international level, in spite of the difficult socio-cultural context in which they were born. Therefore, if these positive effects do not depend exclusively on the economic strength of a country, according to a OECD study (2013), they are due to factors such as increased international competitiveness, easier access to know-how and technologies used by companies belonging to the Chains or access to a wider range of intermediate goods.

To affirm these observations, with reference to Italy, Agostino, Giunta, Scalera & Trivieri, (2016), in analyzing the positioning of

Italian companies in GVCs, agree that the participation in the Chains does not guarantee optimal performance, but is relevant both the ability of the companies to capture and exploit the positives related to the involvement of such systems, and the positioning along the Chains; consequently, the position of a company within the GVCs can change over time and progress towards higher value-added activities, achieving what Gereffi & Lee (2014) defines as functional upgrading, which occurs when a company tends to innovate and enrich its know-how. Tian, Yu, & Rui (2017) observe that companies that innovate have a tendency to engage more in international trade; therefore, since innovation appears to be closely related to participation in Global Value Chains, it is observed that participation in international trade and innovation should be promoted in parallel (Ganne & Lundquis, 2019; Lendle & Olarreaga, 2014).

Subsequently, the topic of GVCs has proved to be so broad and articulated as to allow the development of multiple lines of research, aimed at studying their implications at an economic and territorial level, as well as the evolutionary dynamics over the years.

5.4 Italy in the Global Value Chains: Theories and Studies

It is clear that the presence of GVCs in different territories can lead to greater economic development and to multiple positive effects, given precisely by the possibility of operating in the international context. However, there are peculiarities in the territories that can lead to a different diffusion of GVCs, which can lead internationalized companies to be part of more or less innovative Chains or to position themselves in different segments of the Chains, depending on their characteristics.

There are numerous authors who have proceeded to map the participation of companies in the international context and their inclusion in the Global Value Chains, developing different and very complex methodologies to create a snapshot as realistic as possible of a process that, by its very nature, is characterized by a strong dynamism. Consequently, in order to deepen the issue of participation in GVCs, different strategies can be adopted, aimed at providing a representation as faithful as possible to reality regarding the involvement of companies in internationalization processes and

the extent to which they interact and cooperate with each other.

In the case of Italy, both Agostino, Giunta, Nugent, Scalera, & Trivieri (2014) and Cappariello & Felettigh (2015) said that Italian companies participate in GVCs in a widespread and uneven way. Cingolani, Panzarasa & Tajoli (2018) conducted a study trying to understand their positioning along the Chains: the authors hypothesize the existence of Global Value Networks at an international level formed by several cross-chains and use an approach that allows to understand if companies tend to operate more downstream or upstream of production. From the analyses carried out in this way, it emerges that Italian companies tend to participate more downstream of the Chains or in any case in intermediate positions. This non-predominant positioning is also justified by the fact that companies do not always have the opportunity to open up to new horizons, for many reasons. In the Italian case, Lasinio, Manzocchi, & Sopranzetti (2018) note that there are several factors that can discourage their participation in GVCs, such as the high tax burden or the presence of binding trade agreements that do not provide the necessary flexibility to operate in an international context. Another factor that can influence the participation of companies in GVCs is represented by the size of the companies; according to Ganne & Lundquis (2019) in fact, despite the fact that small and medium-sized enterprises represent the largest share of Italian companies, their participation in GVCs remains much more limited than that of large companies due to their small size. With regard to the importance of the size of firms and the correlation of these characteristics with their internationalization, the authors found that, generally, the participation of small and medium-sized enterprises in GVCs is proportionally lower than their weight in terms of economic and employment activities, and that therefore the potential success of their participation is limited precisely by the problems which they find due to their small size.

Finally, the opening to foreign markets also changes according to the territorial location. In Italy, for example, the most internationalized companies are those in the north. This aspect is not very reassuring if we consider that, according to the analysis carried out by Agostino, Giunta, Scalera & Trivieri (2016), it is precisely the companies in Southern Italy that participate in GVCs that derive the greatest benefits from this inclusion, recovering an important share of the productivity gap that historically separates them from Northern

Italy. Consistent with the above data, again considering companies in Southern Italy (not only small and medium-sized), the authors also note that participation in the Chains is low, as well as characterized by unprofitable positions. In fact, 34% of companies in Southern Italy do not have an international opening, compared to 19% of companies in the Centre-North. To aggravate this gap, there is the fact that companies in Northern Italy more easily resort to medium-long term credits, unlike companies in Southern Italy which tend more to use self-financing. This figure is significant if we consider that in order to carry out innovative activities it is necessary that the related investments are long-term, considering that both the economic return and the result are not immediately obtainable. Therefore, companies that more easily access these forms of financing have the opportunity to invest more easily in Research and Development, i.e. in activities that, if incorporated into the international production process, also allow them to position themselves "upstream" of the Global Value Chains. The greater the tendency of companies to innovate, enriching their know-how, the greater the chances of "moving up the chain" towards more "upstream" positions with high added value and, therefore, the greater the tendency to engage more in international trade (Gereffi & Lee 2014; Tian, Yu & Rui, 2017). Conversely, the companies most open to internationalization are also the most likely to innovate (Brancati, E., Brancati, R., & Maresca 2015; WTO 2014).

5.5 Research Methodology

In order to ensure an accurate drafting of the paper in question, first of all a review of the main literature on Global Value Chains was carried out, all by comparing different sources to ascertain the veracity of the information, as reported above; following the same process, it was also given an overview of the correlation between Italian's companies and GVCs. Next, we intend to focus on a specific case study in order to understand the situation of Italian companies in terms of internationalization and to have a real numerical base that allows us to understand the positioning of Italian companies along the Global Value Chains.

In this last point, a study conducted by Giovanetti & Marvasi (2021) was examined, the aim of which is to provide an accurate and in-depth description of the intricate trade involving Italy. This analysis is based on the data offered by the international Input-

Output (I-O) Tables. These tables, first developed by Leontief (1936), represent a macroeconomic approach that analyzes aggregated data with the aim of reproducing and analyzing the relations of production and consumption, and the sectoral interdependencies existing within an economy. Thus, they make it possible to trace trade flows between the different productive sectors of a nation, also integrating the international dimension. From a statistical and methodological point of view, the construction of input-output tables requires a rigorous work of harmonization and standardization of data from national and commercial sources.

Given the importance and necessity of analyzing reliable data in order to ensure a correct measurement of GVCs, it should be noted that in recent years many institutions have invested resources in the production of input-output tables. Currently, there are several databases available to scholars, including OECD-TiVA, WIOD, UNCTAD-Eora and Asian Development Bank (ADB), which differ in the approaches used in the construction of the tables, the coverage in terms of sectors, as well as the frequency of updating the data.

Table 5.1 Italy's total exports and imports (goods and services, values in billions of dollars)

	2013	***2014***	***2015***	***2016***	***2017***	***2018***	***2019***
	Asian Development Bank						
Exports	573	589	512	517	566	615	632
Var. %	3,8%	2,8%	-13,1 %	1%	9,6%	8,6%	2,9%
Imports	520	520	452	451	502	554	571
Var. %	-0,6 %	0,1%	-13%	-0,2%	11,4%	10,3%	3%
	UN Comtrade						
Exports	624	639	551	558	613	664	-
Var. %	3,4%	2,3%	-13,7 %	1,3%	9,9%	8,3%	-
Imports	586	585	508	506	566	623	-
Var. %	-1,3 %	-0,3 %	-13,1 %	-0,3%	11,8%	10,2%	-

Therefore, considering the different sources that can be used, in relation to the study examined in this report, the goal was to use updated data as much as possible; therefore, it was chosen to use as a primary source the international input-output tables recently developed by the ADB, referring to 2019 data. However, the data obtained from the above I-O tables, like almost all the data available internationally, are in dollars (current prices). The same currency is also used by UN-Comtrade, which is the main official source of

traditional statistics on international trade. Therefore, in order to ensure maximum linearity of the data examined, a comparison was made between ADB's and ComTrade's data on dollar values.

As can be seen from Table 5.1, this comparison showed that the data are aligned, and that therefore the description of the GVCs on the basis of the ADB Tables I-O provides a reliable representation of the phenomenon under consideration.

5.6 Results: Italy in the GVCs

Therefore, starting from the above theories and assertions regarding the positioning of companies along the GVCs, it must be said that several authors have studied and measured the centrality of countries within the networks, classifying them as exporters of intermediate goods (upstream, i.e. upstream of the value network), as importers of intermediate goods and exporters of finished products (midstream) or as importers of finished products (downstream, i.e. downstream of the value network). The positioning of companies in the Chains, therefore, is an extremely important element for their development, since the greater the ability to position themselves "upstream" of the Chain, the greater the added value produced.

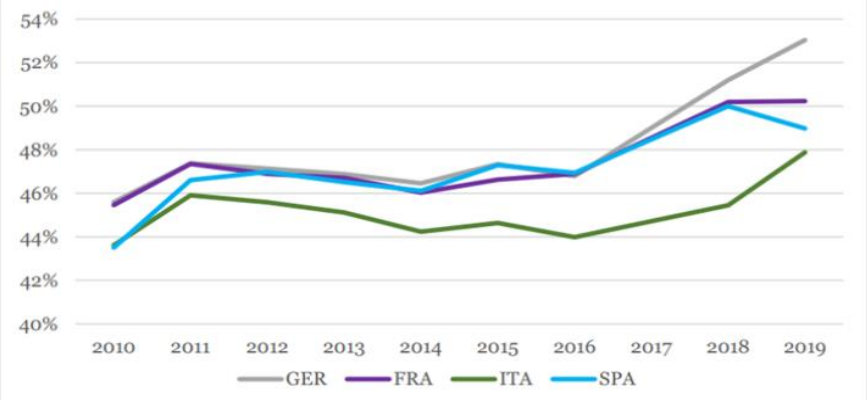
Having realized the linearity of the ADB data with the main existing data on international trade, Giovanetti & Marvasi (2021) compared the intensity of the "upstream" and "downstream" ties of the Chains in which Italy is involved, equipping themselves with an indicator that would allow comparisons to be made between the various countries. With specific reference to Italy, the country holds an intermediate position within the Global Value Chains, having strong links within both types of participation. Although there is a slight shift "downstream" as a user of foreign added value for the production of goods to be exported, Italy is also confirmed as an important forward participant, i.e. more "upstream", producing intermediate goods whose added value will then be incorporated into products made abroad. This type of "upstream" participation increased between 2010 and 2019, while the "downstream" (backward) participation declined between 2011 and 2015, then increased until 2018 and decreased again in 2019.

Following this approach, based on ADB’s data, each country's

participation in GVCs is calculated as the ratio of the volume of GVC-related exports to the individual country's exports. Following this approach and considering the main exporting countries (including non-European ones), Italy ranks ninth in the ranking.

On the other hand, if we want to offer a comparison with the main European countries, Figure 2 shows that France, Germany and Spain have a higher GVCs' participation rate than Italy (in 2019 it was 53% for Germany, 50.2% for France, 49% for Spain and 47.9% for Italy). This difference, although already existing in 2010, has widened over time; in detail, although since 2016 the trend has been increasing for all countries, for Italy this increase has been less pronounced; however, between 2018 and 2019 Italy's participation in value chains increased more significantly than in other countries.

Figure 5.1 Main European Countries in the GVC, 2010-2019



In the light of the above data, it is clear that there is a direct relationship between a country's GDP per capita and the volume of trade linked to GVCs, i.e. the more a country produces, the more its exports contribute to GVCs.

More specifically, it should be noted that there has been a steady growth in international trade in recent years, which came to an abrupt halt in the first quarter of 2020 following the decision by several countries to adopt restrictive measures in order to contain the spread of the COVID-19 virus. In that year, gross world exports at constant prices increased but at current prices, recording a percentage change

of -3% compared to the previous year and a value size from $26515 billion (US$) in 2018 to $25703 billion in 2019 (Table 3). With close reference to Italy, in 2019 it recorded an increase in both the value of gross exports (+2.9%) and imports (+3%); in fact, the total amount of the country's exports rise from a value of $615 billion in 2018 to $632 billion in 2019 and that of imports from $554 billion to $571 billion. In this context, Italy, with a value of $632 billion (€565 billion) in exports, ranks among the top ten exporting countries in the world, accounting for 2.5% of gross world exports in 2019 (Table 5.2).

These dynamics affected the country's trade balance, which in 2019 recorded a trade surplus of $61 billion, with an increase in trade surplus of about $913 million compared to the previous year (Table 4). The above statistics show that the trend of Italian trade in recent years has been positive, with both exports and gross imports increasing.

Table 5.2 Top ten global exporters of goods and services, 2010-2019

	Exports (billions of dollars)	**Exports** (million of euros)	**Shares in World Exports**
China	2589,739	2313,673	10,1%
USA	2497,726	2231,468	9,7%
Germany	1811,300	1618,215	7,0%
Japan	888,224	793,539	3,5%
UK	879,435	785,539	3,4%
France	850,357	759,709	3,3%
Netherland	750,199	670,227	2,9%
South Korea	654,396	584,637	2,5%
Italy	**632,507**	**565,082**	**2,5%**
Canada	537,724	480,402	2,1%
Total in World	25703,385	22963,825	100%

5.7.1 Italy and its Main Trading Partners

In 2019, Italy therefore held an important share of the global export market, accounting for 2.5% of world exports. Over the years, this share has shown an increasing trend, with a positive change of 2.9% compared to previous years. Among the main recipients of imports of Italian products, European countries are in the first place, and in particular Germany. In 2019, Italy recorded an import volume from

Germany worth $80 billion, followed by France, the United States, and England, with respective import volumes of $61 billion, $57 billion, and $40 billion. The manufacturing sector is the main driver of these imports, with the machinery sector being the first in terms of volume of exports, accounting for 16% of total exports.

Table 5.2 Italy's trade and balance (billions of dollars and euros)

	2013	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
EXPORTS (X) (USD)	573	589	512	517	566	615	632
EXPORTS (X) (EUR)	431	444	461	467	502	521	565
VAR. % (EUR)	0,4%	2,9%	4,0%	1,2%	7,5%	3,7%	8,4%
IMPORTS (M) (USD)	520	520	452	451	502	554	571
IMPORTS (M) (EUR)	391	392	408	408	446	470	510
VAR. % (EUR)	-3,9%	0,1%	4,0%	-0,01%	9,3%	5,4%	8,6%
(X+M) (USD)	1092	1109	964	968	1069	1169	1204
(X+M) (EUR)	823	836	869	875	948	991	1075
VAR. % (EUR)	-1,7%	1,6%	4,0%	0,7%	8,3%	4,6%	8,5%
SALDO (X-M) (USD)	53	69	59	66	64	61	**61**

Considering Italy both as a user and as a provider of added value in upstream and downstream links, Germany plays a key role. On the one hand, the German market contributes more than 4% of the value of Italian exports (followed by France, China and the United States with percentages of less than 25%), on the other hand, exports to Germany include over 38 billion euros of Italian added value, equal to 6.4% of the total.

Germany is therefore Italy's main trading partner, being also the third largest exporter in the world and the main European exporter. The Italian and German economies have always been closely interconnected and, thanks to Global Value Chains, have become one of the main pillars of European manufacturing activity. German companies are not only potential competitors for Italian companies, but also important allies in supporting exports and competitiveness. In fact, between 2010 and 2019, Italian exports to Germany grew by 32.5%, a significant figure considering that exports to Germany alone are worth more than those to the whole of North America or Central

Asia.

Focusing on Italian exports to Germany, the main sector is machinery and equipment, which in 2020 accounted for 14% of total Italian exports to Germany, with a volume of 8 billion euros. This is followed by the automotive, metallurgy and food sectors, which make up 11%, 9% and 8% of Italian-German exports respectively, with volumes between 6 and 4 billion euros. Pharmaceuticals and chemicals both account for 7% of Italy's total exports to Germany.

Looking at the opposite flow, i.e. what is imported from Germany to Italy, the sectoral composition is the same for the first two sectors, which, however, occupy reversed positions: the first is in fact represented by motor vehicles which, with 9.5 billion euros imported in 2020, represent 16% of total Italian imports from Germany. This is followed by the machinery and equipment sector, which accounts for 13% of total German exports to Italy. The chemicals, pharmaceuticals, and computers and electronics sectors are also relevant, accounting for 12%, 8% and 7% respectively.

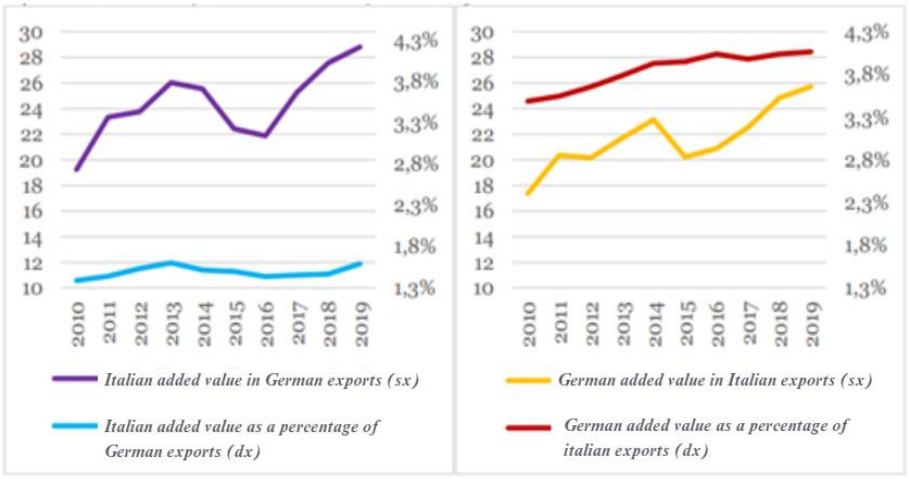
It is also interesting to analyze the flow of added value that is produced in Italy and exported to Germany, which, in 2019, amounted to 55.3 billion dollars, equal to 68.9% of total Italian exports of goods and services to Germany. Of this added value, a part is directly consumed in Germany; another part is exported from Germany and consumed in other countries; finally, a third part is in turn exported and consumed in a third or fourth country. In 2019, of the total Italian added value reaching Germany, 46.1% was consumed in Germany while 53.9% was again incorporated into German exports, a maneuver that can be considered a measure of the intensity of Italy's "indirect exports" through Germany. In particular, the United States, China and France represent the first three countries receiving this "indirect export", both in the case of goods exported from Germany and directly consumed in one of these countries, and in situations in which these goods are exported from Germany to other countries and only at a later time destined for one of the countries mentioned for final consumption.

Analyzing the involvement of Italian and German companies in the Value Chains, it is clear that Germany has a greater integration than Italy. For both countries, however, there has been an increase in the importance of GVC-related trade from 2010 to 2019, particularly from

2016 onwards. In 2019, the participation rate in Germany was 53%, while in Italy it was 48%.

It therefore emerges that Germany is a key country in the context of the good economic performance of many Italian production Chains. The link between the two countries appears particularly strong from the point of view of both the commercial ties on the basis of which Italy imports added value from other countries, and the ties within which it is Italy that provides added value, which will then be transformed and used by the companies of the receiving country for their exports. In both cases, Germany seems to be the first country in terms of importance of these ties, providing 4.1% of the added value of Italian exports and receiving from Italy a quantity of intermediate goods that represent 6.4% of the total Italian added value. The fragmentation of production and the collaboration between Italian and German companies therefore make the economies of the two countries increasingly interconnected with each other, in a context in which, between 2010 and 2019, Italian exports to Germany grew by 32.5% and in 2019 appear to be composed of 68.9% of added value produced in Italy for a value of 55.3 billion dollars, (Figure 5.2).

Figure 5.2 Italian added value in German expoerts and German added value in Italian exports (billions of dollars, 2010-2019)



5.7.2 Interpretation of Results

Through an empirical analysis of the GCVs and a review of the main studies on the subject, it emerged that Italy plays a significant role within the Global Value Chains, ranking ninth worldwide. However, Italy's participation is mainly concentrated in intermediate positions within the Chains rather than in top roles, with a slight shift towards "downstream" participation, as a user of foreign added value for the production of goods for export. This phenomenon can be attributed to the characteristics of Italian companies, which are mainly small and medium-sized and therefore face several limitations related to their small size, such as the limited availability of financial resources for investments in advanced technologies, research and development, as well as the acquisition of new machinery or the expansion of activities. Limited production capacity can result in less flexibility in responding to market demand and difficulty in meeting specific customer requirements. In addition, it must be considered that the lack of harmonization of the national entrepreneurial fabric does not guarantee Italy one of the "first places in the ranking", in fact the gap between companies in Northern and Southern Italy is still deep, considering that the latter struggle more to finance innovative projects, which would allow them to put themselves on a par with international companies and therefore face foreign markets.

Despite these limitations, Italy still maintains a prominent position within the GVCs, thanks also to trade with Germany, which is one of the main partners of Italian companies and contributes significantly to the creation of added value, especially in the manufacturing sector. Importantly, both countries are increasing their participation in GVCs. Germany is not only an outlet market for Italian exports, but is also a major user of the added value produced in Italy. The solid commercial ties with Germany and the presence of numerous Italian companies in the production processes of German products, offer Italian companies not only the opportunity to export finished products, but also to transfer their added value to foreign markets in an alternative way, overcoming any obstacles. It has been found that more than 50% of Italian exports are made up of added value actually generated in Italy, especially in the manufacturing sectors, while the remaining part of the value added comes from intermediate goods imported from abroad. Overall, Italy uses foreign added value for its own exports, but at the same time provides added value for other countries' exports.

Thanks to strong upstream and downstream links, Italy's participation in GVCs has increased over the years, although moderately. Despite this success, Italian companies may still face challenges in the context of GVCs, such as limited production capacity, limited access to foreign markets, and difficulties in adopting advanced technologies. Therefore, it is important that national and international policies support Italian companies, providing them with tools, resources and opportunities to overcome these limitations and participate more actively and competitively in Global Value Chains.

5.8 Conclusion

Global value chains have led to a significant change in the organization of world production, with a breakdown of the traditional overlap between producers and exporters on the one hand and importers and consumers on the other. Today, the role of the exporter does not necessarily reflect a significant contribution to production in terms of added value, as it may largely depend on the use of inputs imported from other countries.

In conclusion, the performance of trade relations is influenced by various factors such as politics, culture, and geopolitical events. However, it is important to try to take advantage of each situation and make the most of the tools at disposal, this requires to be flexible and open to innovation and continuous improvement, while maintaining the own roots.

In the case of Italy, it is important to maintain an active and diversified presence along global value chains. This means taking advantage of opportunities both as a supplier of intermediate goods and as a user of foreign inputs for the production of final goods for export. This strategy requires a change that allows Italian companies to have a solid national cohesion, and then increase their reputation at an international level.

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6

Value in Business Models: A Holistic Analysis of Related Concepts

Björn Baltzer

6.1 The Role of Value in Business Models

Business models are centered around the idea of value proposition, as can be seen from two of the most well-known business model templates: The Business Model Canvas by Osterwalder and Pigneur (2010, see figure 1) and the Business Model Navigator by Gassmann, Frankenberger and Csik (2017, see figure 2).

In the Business Model Navigator, the term 'value' can also be found explicitly, as well as the term 'value chain'. Generally speaking, business models cover the value proposition, how the value is created and then delivered to the customers. In addition, the financial perspective is an integral part of business models in the sense of the monetary value capture. This leads to the typical definition of business models as exemplified by Teece (2010, p. 191): "A business model describes the design or architecture of the value creation, delivery and capture mechanisms employed". By applying this logic to the Business Model Canvas, the nine fields can be grouped as follows (Bocken, Short, Rana & Evans 2014, p. 43):

Value Proposition: Customer Segments, Customer Relationships and Value Proposition itself.

Value Creation and Delivery: Key Activities, Channels, Key Partners and Key Resources.

Value Capture: Cost Structure and Revenue Streams.

A more comprehensive understanding of business models is given by Bieger and Reinhold (2011), who add two more aspects to the business model logic: Value dissemination, and value development.

Figure 6.1 Business Model Canvas

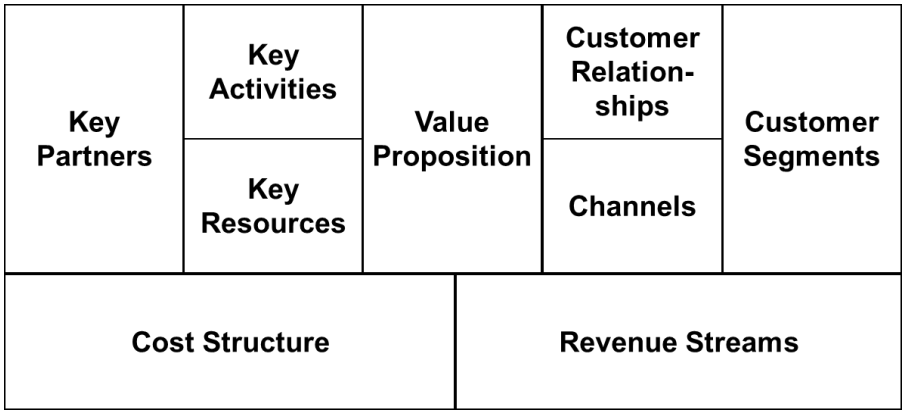
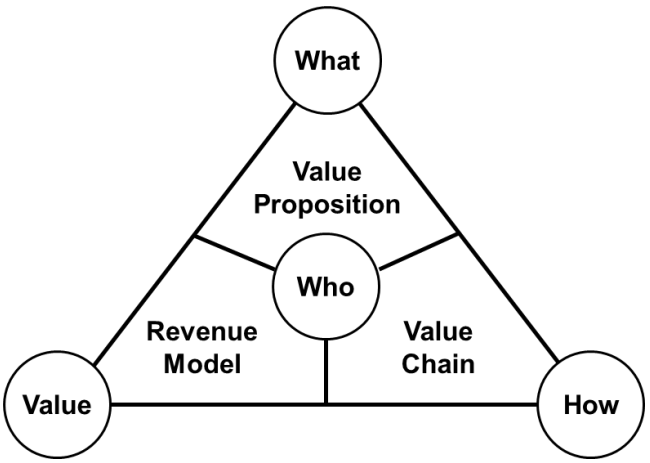


Figure 6.2 Business Model Navigator



Value development deals with the fact that due to constant changes within and outside the company, business models are not static, but need to be evaluated and adapted on a revolving basis, either in an evolutionary or in a revolutionary way. In other words, the idea of value development brings a dynamic perspective into the business model logic. Value dissemination asks the question what to do with

the value, once it has been generated and captured. Value dissemination thus deals with the monetary distribution of value among different parties.

While the aspect of value development deals with the important dimension of time, it does not add additional insights from a content perspective. The evaluation of a business model that had been defined some time before needs to cover again the aspects of proposition, creation, delivery, capture and dissemination of value. Therefore, value development is left out of the following analysis. The dissemination of value, however, is considered to be an important additional topic from a content perspective and is therefore included in the analysis. Thus, the aim of the analysis is to explain crucial concepts that can explain the creation, delivery and capture of value as well as the subsequent dissemination of value. Before the presentation of the concepts, important assumptions that are the basis of the analysis will be explained.

6.2 Foundations of the Analysis

Even though the following remarks can be considered standard body of thought in business administration, it is important to explicitly state them as the concepts that will be presented afterwards are directly linked to them.

6.2.1 Understanding of Company Activities

As opposed to private and public households, companies are defined as makers of products and/or services. In the following analysis, the term company is restricted to privately owned ventures, while public companies also exist. In today's economies with a high division of labor, companies are part of often complex and global value chains with multiple customer-supplier relationships. Depending on their position in the value chain, companies might serve business customers as well as end consumers. In market economies, companies are not on their own, but they face competition from other companies in differing intensities. The state guarantees fair competition by imposing laws and other types of regulation and also provides the necessary infrastructure. In turn, companies need to contribute to the financing of the state by paying taxes and other types of public dues on several administrative levels (federal, municipal etc.). As private ventures, companies are financed by their owners that are also called shareholders. Besides equity, companies

typically also borrow funds from creditors to keep their financing costs low and to have access to more capital. In smaller companies, owners typically also act as managers. In most of the larger companies, however, ownership and management are separated, i.e. managers are employed. Managers not only coordinate the company's activities, but also lead the (regular) employees of the company. Finally, companies are part of the society, i.e. they are embedded both in local communities as well as in the general public. The latter includes players like the media or non-governmental organizations. As opposed to project ventures, companies strive for ongoing existence, which explains the importance of the aspect of value development as explained before.

6.2.2 Understanding of Company Stakeholders

As the previous chapter has shown, companies are in relationships with many different interest groups that are also called stakeholders. Using a categorization by Freeman, Harrison and Wicks (2007), the different stakeholder groups can be separated by importance as follows:

Primary Stakeholders: Customers, suppliers, shareholders, local communities, creditors, managers and employees.

Secondary Stakeholders: Competitors, state and general public.

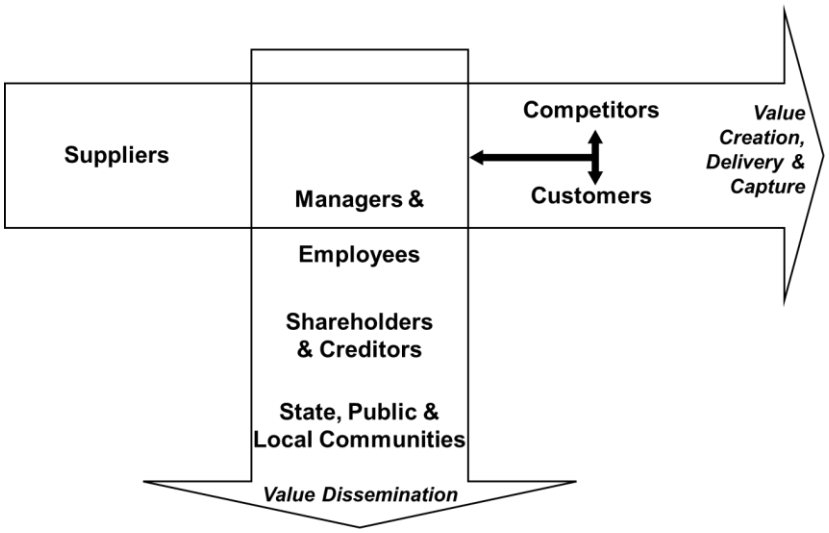
The Coalition Theory developed by March and Simon (1958) based on the ideas of Barnard (1938) explains the importance of stakeholders for companies. The different stakeholders decide on their involvement with the company. In order to get their involvement, the company needs to offer inducements to the stakeholders. If the stakeholders accept the inducements, they contribute to the company, which allows the company to pay out the inducements. In case stakeholders have a positive net balance of payments over contributions and as long as other companies cannot offer a higher net balance, stakeholders will keep up their involvement with the company.

As companies strive for ongoing existence, they need to make sure that all of their stakeholders have positive net balances all of the time. This means that companies need to generate value constantly in order to be able to distribute it to their stakeholders. In other words, companies need to realize Stakeholder Value. The problem with Stakeholder Value is however that the different stakeholder groups all have a different understanding of what value means. So discussing

value on an aggregate level is not helpful, what is needed instead is to look at each stakeholder group separately. This is what the analysis in this article aims to do.

By combining the different stakeholder groups and the two streams of the value logic, it can be seen from Figure 3 that some stakeholder groups are more involved in the creation, delivery and capture of value (horizontal arrow), while other stakeholder groups need to be considered in the dissemination of value (vertical arrow). This is based on the monetary value added concept (Haller & Stolowy 1998), where value added is calculated as the difference between monetary output (mainly generation of revenues) and monetary inputs (mainly consumption of materials and usage of assets). The value added is then distributed among shareholders and creditors, managers and employees and the state. Therefore, in the following analysis, the different stakeholder groups will either be discussed in the Creation-Delivery-Capture Value Stream or the Dissemination Value Stream.

Figure 6.3 Stakeholders and Value Streams

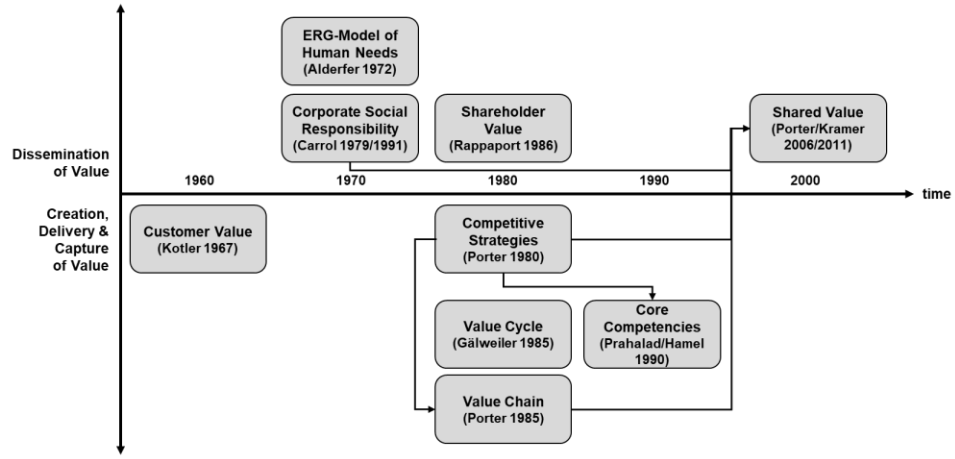


6.3 Value Concepts

For each of the stakeholder groups mentioned above, at least one crucial value concept will be presented. The following Figure 4 provides an overview of those concepts (for a similar idea, cf. Gomez & Meynhardt 2014). The concepts are sorted chronologically and

whether they belong to the Creation-Delivery-Capture Value Stream or to the Dissemination Value Stream. Where important relations between the concepts exist, they have been marked with arrows and will be explained in the analysis.

Figure 6.4 Value Concepts



The concepts will be presented in a concise manner, but referencing to relevant sources will be provided so that the reader will be able to find more details. The focus will lie on explaining the importance of the concept for managing the respective stakeholder group from the company perspective.

Even though the aim of the analysis is to provide a holistic picture of relevant value concepts, a subjective choice had to be made which concepts to present. Therefore, the analysis cannot claim that all possible concepts are included. For example, the Public Value concept by Moore (1994, also cf. Gomez & Meynhardt 2014) was excluded from the analysis, as it is mainly applicable to public households and public companies, which are both outside the focus of this analysis. Moreover, it needs to be noted that in all cases more authors contributed to a concept besides the ones that are referenced to. The goal is to provide one important source as the starting point for further reading.

6.3.1 Concepts for the Creation, Delivery and Capture of Value

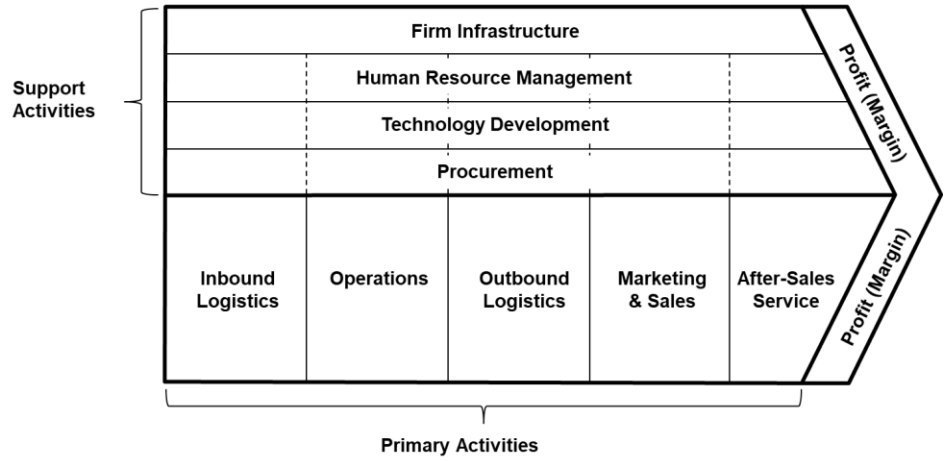
Stakeholder Group Customers - Customer Value: The concept of Customer Value is based on the logic that "the customer is the company's only true 'profit centre'"(Kotler et al. 2009, p. 380). Customer Value is a marketing concept that was developed in consequence of the transition from sellers' markets to buyers' markets. When considering a purchase, prospective customers compare all benefits of the product (or service) with all costs involved in buying and using the product. The positive net balance between total customer benefit and total customer cost is called the Customer Value. It is important to note that it is more precise to speak of a Customer-perceived Value, as the judgement of both benefits and costs is a highly subjective process. Customer Value is crucial for generating revenues with customers and thus for value capture.

Stakeholder Group Competitors - Competitive Strategies: When facing competitors, companies must ensure that they can realize the Customer Value. This is because prospective customers not only judge the Customer Value of the company's product, but also the Customer Values of the products of the relevant competitors. Therefore, the relation between company and customers is actually a triangle (see figure 3). According to Porter (1980), companies can pursue two different Competitive Strategies in order to stand up against their competitors. The first generic strategy is to offer a comparable product at a lower price, which requires that the company has a better cost position than its competitors (cost leadership strategy). The second generic strategy is to offer a product that is superior to those of its competitors, which allows the company to charge a price premium (differentiation strategy). Porter (1980, p. 73) argues that companies that fail to clearly choose one of those two strategies will suffer from lower returns as they are "stuck in the middle". Besides, companies need to decide whether to serve the main market or only market niches. Competitive Strategy is a concept from Strategic Management that is also crucial for generating revenues and thus for value capture.

Stakeholder Group Suppliers - Core Competencies: The concept of Core Competencies also stems from Strategic Management and can be considered a complement to the concept of Competitive Strategies. While Competitive Strategies are about positioning against competitors, Core Competencies are about the resources and

capabilities that the company possesses. While every company has a wide range of competencies, only those competencies that are "the roots of competitiveness" (Prahalad/Hamel 1990, p. 81) and thus are valuable can be called Core Competencies Also, Core Competencies need to be rare and hard to imitate or replace by competitors. The concept of Core Competencies is important for the company's relations with its suppliers. Companies can create, deliver and finally capture a higher value if they concentrate on their Core Competencies. For inputs (materials, goods and services) that lie outside the Core Competencies of the company, it is preferable to procure them from its suppliers by outsoucing or buy-decisions (instead of make-decisions).

Figure 6.5 Value Chain



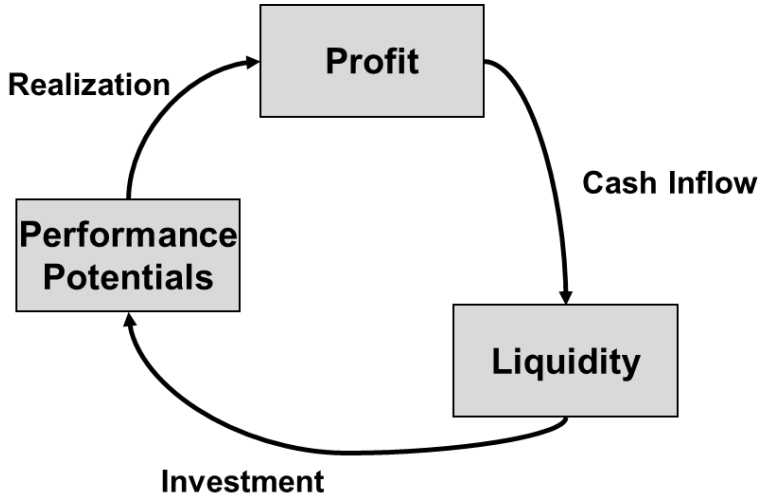
Stakeholder Group Managers (1) - Value Chain: The Value Chain is another concept from Strategic Management and was also developed by Porter (1985). It is a generic template for the main activities that take place in industrial as well as in service companies. As can be seen from Figure 5 (Porter 1985, p. 62), activities are grouped into two categories:

- Primary activities are the activities of the production and sales process: inbound logistics, operations, outbound logistics, marketing & sales and after-sales service.
- Support activities are the activities that enable the primary activities: firm infrastructure, human resource management, technology development and procurement.

The Value Chain concept can be used by managers for identifying the strengths and weaknesses of the company and for comparing the own company with its competitors. Therefore, the Value Chain concept helps managers to create and deliver value.

Stakeholder Group Managers (2) - Value Cycle: The Value Cycle concept is from Strategic Management and can be considered a complement to the Value Chain concept, as it can also be employed by managers and also helps to create and deliver value. While the Value Chain concept looks at how to perform primary and support activities, the Value Cycle concept deals with how to plan and control those activities.

Figure 6.6 Value Cycle



Gälweiler's (1985) idea was that planning and control needs to take place in different time horizons. In the short run, companies need to ensure liquidity at all times in order to avoid insolvency. In order to ensure the company's existence in the long run, however, liquidity needs to be invested into building up competencies. Gälweiler understood competencies as the congruence of internal strengths with external opportunities. He did not use the term competencies, however, but 'performance potentials' ('Erfolgspotenziale' in German), because at the moment of investment, it is uncertain whether the investment will pay off later. Thus performance potentials are a necessary, but not a sufficient condition for later

profit. Active management is needed in order to realize profits in the mid-term. In case profits have been made, this results with a certain delay in cash inflows and thus increases liquidity again. Existing performance potentials deteriorate by usage, by the lapse of time or by changes outside the company, however. Therefore, liquidity needs to be invested again in order to build up new performance potentials or to keep up the quantity and/or quality of existing performance potentials. Thus, the cycle of planning and controlling the three measures performance potentials, profit and liquidity is an ongoing effort to ensure the existence of the company.

6.3.2 Concepts for the Dissemination of Value

Stakeholder Groups Shareholders and Creditors: Shareholder Value: Shareholders are a special group of stakeholders, because they carry the risk of failure of the company. Therefore, the argument of the Shareholder Value concept is that value should primarily be generated for the shareholders. Rappaport (1986) presented a model how monetary Shareholder Value can be calculated. The company's expected future cash flows need to be discounted with a rate that equals the company's cost of capital, which results in the company value from today's perspective. As the funds provided by creditors need to be repayed, they have to be deducted from the company value and the remaining figure is the Shareholder Value. As the calculation methodically includes creditors, the Shareholder Value concept covers that stakeholder group as well. There is a major difference between shareholders and creditors, however: While the interest payments and repayments to creditors are fixed due to contractual arrangements, the shareholders are only entitled to receive the variable remainder as dividends. This explains the initial statement that the shareholders predominantly carry the risk of the company's success.

Stakeholder Group Employees: ERG-Model of Human Needs: The ERG-Model of Human Needs by Alderfer (1972) builds on the work of Maslow (1954) and is a model from Human Resources Management about the motivation of employees. In this context, the term 'employees' includes both regular employees as well as employed managers. 'ERG' is an acronym of the terms 'existence', 'relatedness' and 'growth' that explain the three general categories of human needs:

- Existence needs: lower order physiological needs (food and water, sleep, air etc.) and needs for safety and security (health, financial safety etc.).
- Relatedness needs: higher order personal needs (self-esteem etc.) and social needs (love, friendship, status etc.).
- Growth needs: highest order needs for self-actualization (fulfillment and development of talents).

The ERG-Model shows that companies do not only provide value to employees by paying their labor, but also by offering them the possibility to employ and develop their skills and by offering them a platform for social interaction.

Stakeholder Groups State, General Public and Local Communities: Corporate Social Responsibility and Shared Value: In a narrow understanding, one can argue that companies contribute to society by paying taxes to the state. The collection of taxes enables government and administration to foster social and ecological ends. From this perspective, companies could limit their social responsibility to making profits (Friedman 1970), which would increase their tax payments for the sake of society. As early as in the 1950s (Latapí Agudelo, Jóhannsdóttir & Davídsdóttir 2019), however, companies have been confronted with expectations of Corporate Social Responsibility (CSR) beyond this narrow view. CSR is a concept from Business Ethics that originally focused on social aspects. Over time, ecological aspects have been included in the CSR concept as well and are now considered to be of equal importance. Carroll (1991) developed a hierarchical order of the responsibilities of companies towards society:

- Economic responsibilities: mandatory requirement to make profits.
- Legal responsibilities: mandatory requirement to obey all relevant laws.
- Ethical responsibilities: expectation that companies care about social and ecological aspects, even though it might not be required legally.
- Philanthropic responsibilities: recommendation that companies should act as good corporate citizens e.g. by sponsoring.

Today, it is generally accepted that companies need to act sustainably, i.e. they need to pursue economic, social and ecological goals at the same time.

The concept of Shared Value was introduced by Porter and Kramer (2006) and can be considered an advancement of CSR by combining it with Porter's previous work on gaining competitive advantages. The Shared Value concept claims that companies should incorporate social and ecological goals into their strategies. By doing so, they can reach economic, social and ecological goals at the same time.

6.3 Conclusion

The notion of value is fundamental for business models. Value proposition lies at the core of every business model. Business models typically also cover the creation, the delivery and the capture of value. The dissemination of value, however, is often not dealt with in business models. This chapter presented crucial concepts that together explain all relevant aspects of value in business models.

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7

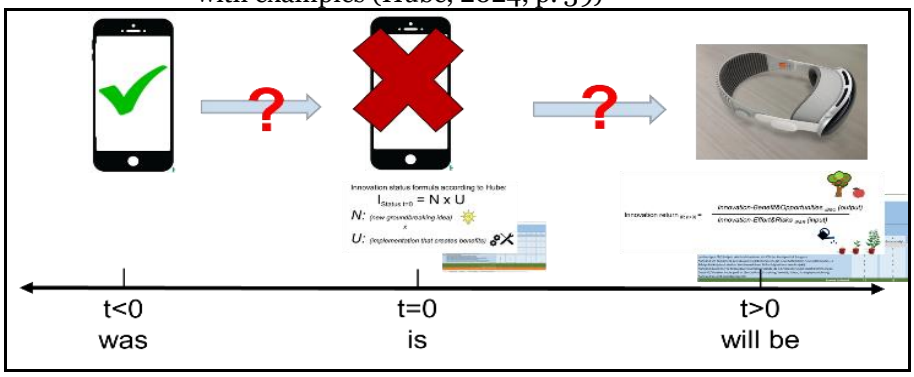
How to Calculate the Potential Return of an Innovation: Innovation Return Formula

Gerhard Hube

7.1 Initial Situation and Motivation

Innovations can basically assume the three "aggregate states" "was", "is" and "will be". If we look at Apple's first smartphone in 2007, for example, it was an innovation consisting of novelty and a beneficial realisation. If you look at the smartphone from today's perspective, the benefits for both users and companies such as Apple have increased enormously, but there is no longer any novelty, so the smartphone is no longer an innovation (Hube, 2022, p. 7). The third aggregate state concerns the future, i.e. the question of whether an innovation idea or project can become an innovation and what potential the idea or project actually has (Figure 7.1).

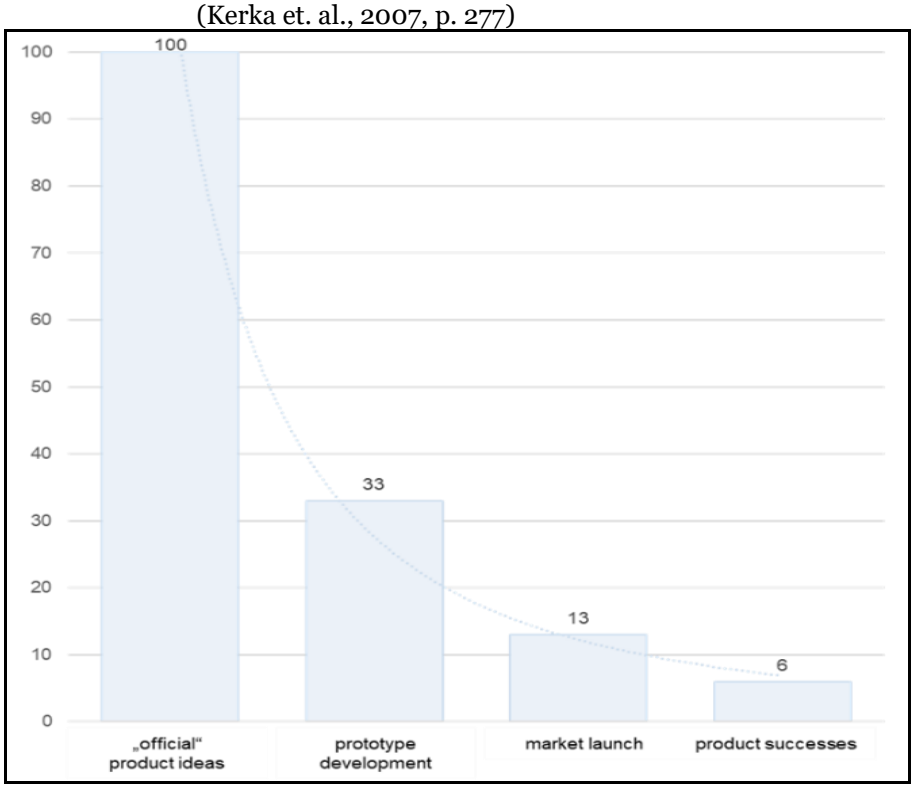
Figure 7.1 The three aggregate states of innovation according to Hube with examples (Hube, 2024, p. 39)



From Apple's perspective, for example, one could ask what potential the idea of "vision pro" has as a new product approach for virtual reality (Fäcknitz, 2023, n.p.).

Companies face a particular challenge when assessing and selecting new ideas, as the selection of new ideas is considered on one of the most difficult and risky management decisions in the course of an innovation process (Brentani, 1986, p. 109). Numerous studies, both from the 1980s and today, have repeatedly shown that, on the one hand, only a few innovation projects actually make it to the market and, on the other hand, only a few of these are successful on the market (Christensen/Raynor, 2003, p. 73; Stevens/Burley, 1997, p. 16; Wahren, 2004, p. 157; Lienert/Commes, 1983, p. 349). A study by Kerka et. al. from 2007 comes to the sobering conclusion that just 6% of all product ideas become a success on the market (Figure 7.2).

Figure 7.2 Success rate of product ideas, figure based on Kerka et. al. (Kerka et. al., 2007, p. 277)



7.2 Poor Quality in the Evaluation of Innovation Ideas and Projects

Success factor research provides very interesting information on analysing the causes of the low success rate of innovation ideas. In this area of research, long attempts have been made to establish correlations between market success and the success factors leading to it (Vahs/Brem, 2013, p. 69. If we look at the factors that can be influenced by the company, the great importance of a careful and comprehensive evaluation of innovation ideas and projects becomes clear. In their study in 1996, Kleinschmitt et. al. identified the "execution quality of preliminary activities" as one of 8 success factors for successful innovation, as shown in table 1 (Kleinschmitt et. al. 1996, p. 10). According to a cross-industry study by Jaruzelski et. al, compa-nies with above-average success control their innovation ideas and projects early and strictly in the innova-tion process (Jaruzelski et. al., 2018, n.p.). Janovskji et. al. also identified in their study, the well-founded evaluation and selection of the right innovation ideas as an important success factor (Janovski, et. al. 2016, p. 48).

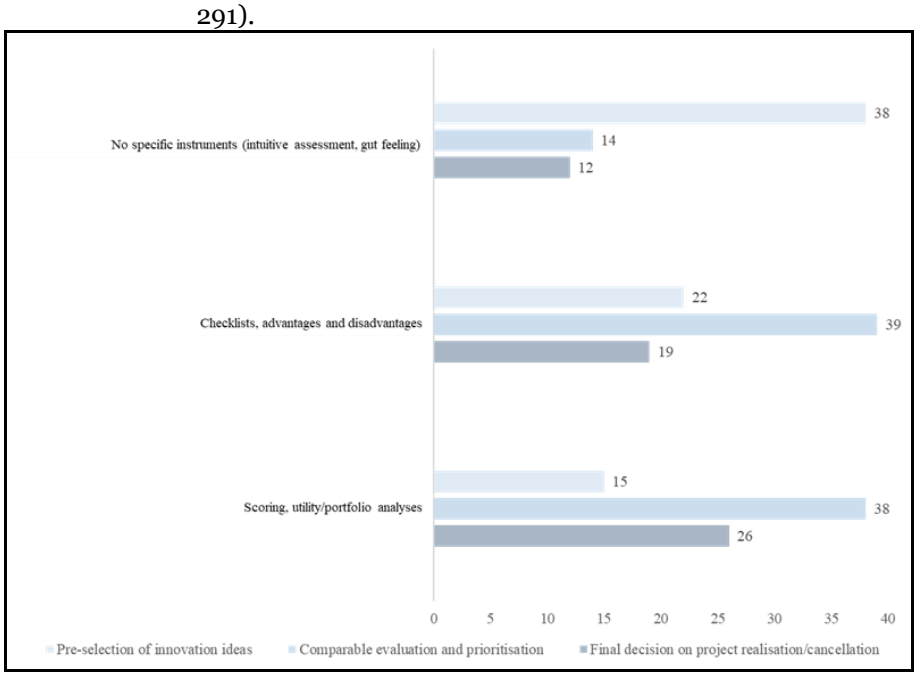
7.3 The Role of Intuition in the Evaluation of Ennovation Ideas and Projects

Even if previous approaches to the evaluation of innovation ideas are argued as objectively as possible and with the help of objective criteria, it is not realistic to assume that an objective and fact-based evaluation of innovation ideas is possible at all (Adam, 2012, p. 247). Assessing the novelty and suitability of an idea hardly seems to be possible objectively and is highly influenced by the intuitive nature of humans (Adarves-Yorno et. al., 2005, p. 4; Pratt/Zeckenhauser, 1987, p. 153

Particularly in situations such as the early inno-vation phase, when speculative considerations and "soft" arguments predominate, it is the entrepreneurial "instinct" that prevails in an assessment (Vahs/Brem 2013, p. 317). In a 2007 study, 38% of respondents stated that they made intuitive decisions based on "gut feeling" when pre-selecting innovation ideas, see Figure 3 (Kerka et. al., 2007, p. 291). In another survey, a majority of over 166 managers stated that they were guided by technical feasibility and their intuition when making judgements (Hart et al., 2003, p. 28). Various other studies show that around 50% to 75% of management decisions are generally

based on intuition (Gigerenzer / Gaissmaier, 2015, p. 33 ff.). The influence of intuition, subjectivity, situational constraints and other factors in the evaluation of innova-tion ideas and projects can therefore definitely not be ignored (Adam, 2012, p. 247). Intuition should be de-liberately included in the methodology as a qualitative evaluation criterion.

Figure 7.3 Use of instruments for evaluating innovation ideas, illustration based on Kerka et. al. (Kerka et. al., 2007, p. 291).



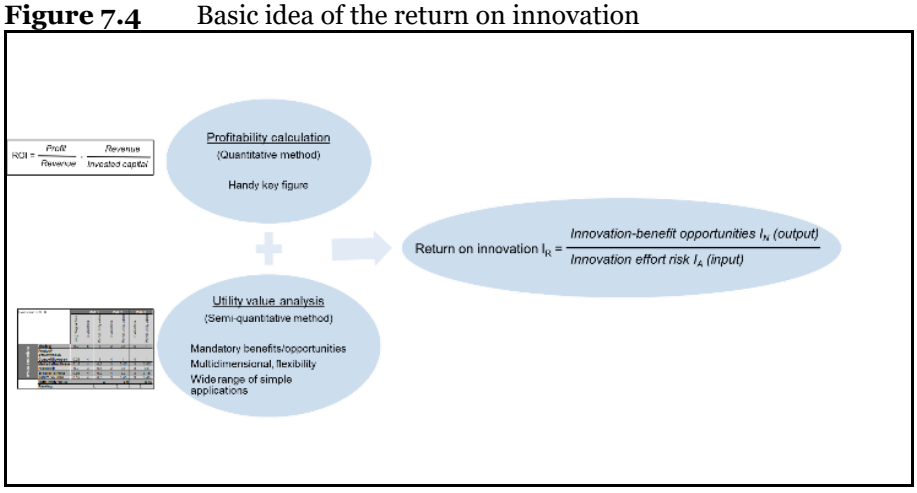
7.4 Basic idea of and criteria for an innovation return formula

A combination of semi-quantitative methods with quantitative methods could fulfil almost all the require-ments which are necessary for the new methodology. To evaluate the future potential of an innovation idea or project, the basic formula for profitability should be used. As profitability always results from the ratio of an output to an input, both benefits and costs must be considered.

This fulfils the requirement for mandatory consideration of costs and benefits. Comparative profitability calculations are also clear and recognised in terms of their comprehensibility and informative value

(Heesen, 2009, p. 130, Vahs/Brem, 2013, p. 321). The utility analysis should be used as a semi-quantitative method for this purpose. Many authors consider utility analysis to be particularly suitable in terms of its flexibility, suitability for evaluating innovation ideas, user-friendliness and acceptance (Adam, 2012, p. 259, Heesen, 2009, p. 127, Vahs/Brem, 2013, p. 333). In practice, utility analysis is also one of the most popular methods in decision support (Cooper, 1985, p. 36). Figure 7.4 illustrates the basic idea of the innovation return formula.

Figure 7.4 Basic idea of the return on innovation



It should already be emphasised at this point that this "profitability" does not have a value-based character, such as a classic return on sales or ROI, but rather works with dimensionless figures like all scoring models. As with other semi-quantitative methods that work with non-metrically scaled criteria and weights, there is also a risk of pseudo-objectivity with this proposal (Plattfaut et. al., 2020, p. 1126, Hüsler et. al., 2017, p. 44). When selecting the criteria and their factor values for the denominator and numerator, a certain balance should be achieved so as not to distort the comparison. In addition, the same time period should be selected for the comparison, i.e. the point in time in the future for which the results on benefits/opportunities and costs/risks are assessed. The evaluation of innovations, ideas and inventions is highly dependent on the context of the company and the organisation, as well as on the type of innovation and the period under consideration. It is therefore extremely difficult to define generally applicable criteria.

7.5 Proposed Criteria for the Benefit/Opportunity Potential as the Numerator of the Return Formula

Hauschildt et.al. define the overall benefit of an innovation in the three dimensions of "technical effects", "economic effects" and "other effects", whereby he believes that there is unanimity in the literature on at least the first two dimensions (Hauschildt et al., 2016, p. 399). Even though Hauschildt emphasises the great importance and necessity of economic criteria for evaluation, he also considers qualitative aspects such as customer satisfaction, image effects and ecological sustainability (Hauschildt et.al., 2016, p. 399-400). Against the background of findings from the literature and the specific requirements placed for this work the following benefit/opportunity criteria are proposed:

1. Economic benefit
2. Perceived benefits and significance for customers
3. Benefits through the development of competences and skills
4. Opportunities through future market with long-term significance
5. Sustainability benefits
6. Total benefits & opportunities based on gut feeling

The best decisions are made when both analytical and intuitive thinking are combined and not seen as oppo-sites (Hildenbrandt/Neumüller, 2021, p. IX).

7.6 Proposed Criteria for the Cost/Risk Assessment as the Denominator of the Return Formula

Schumpeter already stated that the implementation of innovations in the economy requires production re-sources such as labour, raw and auxiliary materials or tools, which can lead to "increased deprivation" or "increased effort" (Schumpeter, 1934, p. 103). The following criteria are proposed for the denominator of the return on innovation, i.e. for effort/risk. Here too, as with the benefit/opportunity criteria, it is not possible to generalise and ensure the accuracy of the criteria due to the different starting conditions and objectives of companies. However, an attempt should be made to formulate criteria that are as

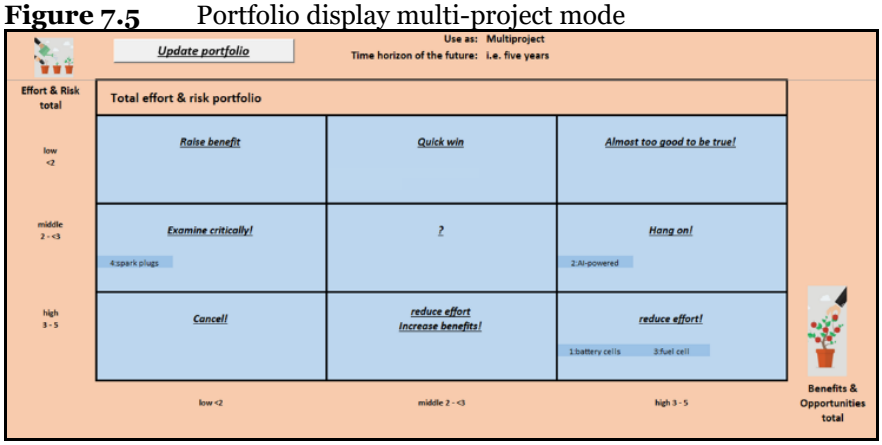
overarching and compre-hensive as possible and provide a holistic picture.

1. Investment expenditure for development and capacity building in R&D
2. Effort to convince customers
3. Success risk (technical) feasibility
4. Market and competition success risk (VUCA world)
5. Effort to convince internally and further conversion effort.
6. Total cost & risk according to gut feeling

7.7 The Innovation Return Coalculator Tool

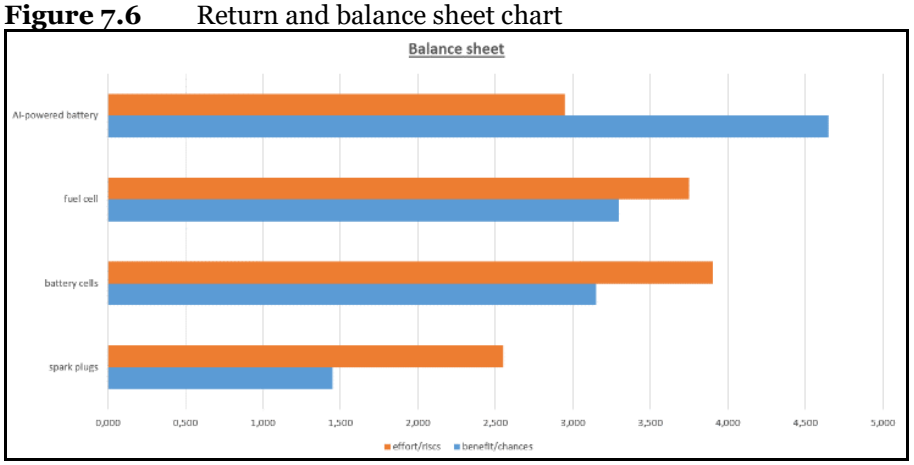
Now that the methodology of the innovation return formula for determining a potential return on innovation ideas and projects has been worked out in chapter 5, a tool is to be derived from it that enables to be used in practice. In contrast to the innovation test bench, which determines the "aggregate state in the actual state" (Hube, 2022, p. 13-17), the innovation return calculator is intended to analyse the "aggregate state in the making", i.e. the future return potential of innovation ideas or projects. To this end, various dialogues and evaluation options are presented. A portfolio visualisation is used for an initial evaluation of the innovation returns. Portfolio representations allow for simple and easy-to-understand visualisation, and initial recommendations for action can already be given for each result field (Figure 7.5).

Figure 7.5 Portfolio display multi-project mode



To analyse individual projects from the different perspectives within a company, e.g. from the point of view of R&D, marketing and service, the multi-assessment mode can be used as an alternative to the multi-project mode. In this case, the cost/benefit portfolio could be analysed from different point of views like e.g. sales, R&D or finance department. This can now serve as a basis for discussing the causes of different judgements and, in the best case, eliminate possible obstacles to implementation. Further analyses are offered in the form of return and balance sheet charts. The positive or negative return (return chart) or the relationship between benefit/opportunity and expense/risk (balance sheet chart, Figure 6) is emphasised.

Figure 7.6 Return and balance sheet chart



7.8 Conclusion and Outlook

As the methodology does not contain any KO criteria, it should be considered whether a KO criteria check should be carried out before using the innovation return calculator to rule out the possibility of ideas being included in the evaluation that do not fit the corporate strategy, violate legislation or contravene the company's guiding principles, for example. However, criteria should not be used that can only be clarified later in the valuation process, such as minimum turnover or return on sales (Kerka et. al., 2007, p. 288).

In order to do justice to the initially uncertain data situation, which will presumably improve as the innovation progresses, the determination of the financial criteria could possibly be calculated rather roughly at first and then more and more finely, e.g. initially

using static methods and later using dynamic methods. However, this would also require the methodology to be applied regularly over the course of the innovation process, which would certainly lead to an increasingly better assessment of the return on investment or enable corrections to be made. An interesting suggestion was made during a expert survey (cf. Hube, 2024, pp 36-38), which envisages a "basic" variant for pre-selection in the early phase, switching to an "advanced" variant as the process progresses and working with a "professional" variant in the final third, which would almost represent a business case.

Further possibilities for the further development of the methodology could be the systematic review of the use of artificial intelligence (AI). It would be interesting to determine which AI tools could be used to process the various proposed criteria. The pilot practical use of the tool in the innovation area of a company could also provide further insights for improvement and further development. In the context of teaching, the tool should be used to convey the importance and some of the fundamental characteristics of innovation.

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8

Customer Empowerment in Managing Cultural Heritage Protection: Comparison of China, India and Iran

Olga Saginova, Dmitry Zavyalov, Nadezhda Zavyalova and Nadezhda Runova

8.1 Introduction

The preservation of historical and cultural heritage is an important task of modern society. Objects of historical and cultural heritage contribute to the understanding of people's history and national identity, support the development of comfortable urban environment, tourist brand of the city and the country, which positively affect the economy of cities and territories, in line with the UN sustainable development goals.

An important element of cultural heritage protection is the involvement of citizens and civil society. Their participation in the decision-making process for the preservation, use and promotion of cultural heritage sites allows them to develop a sense of belonging and co-ownership. This, in turn, enables not only to harmonize efforts to effectively manage heritage sites in accordance with the expectations and needs of the local population, but also stimulate citizens and public organizations to take a more active part in the preservation and use of heritage sites.

The purpose of this article is to identify effective models of interaction between the state and society to preserve historical and cultural heritage and develop citizens' sense of belonging and

responsibility for the protection of cultural heritage, its use in the daily life of the city and the country.

A comparative analysis of modern practices of managing citizens' participation in the processes of preserving cultural heritage was carried out based on the analysis of regulatory and legislative documents, scientific publications and other open sources, and experts opinions in the People's Republic of China, the Islamic Republic of Iran and the Republic of India. The choice of countries for comparative analysis was determined by the presence in these countries of a significant number of cultural heritage sites relating to different eras and being used in economic and social life.

This paper presents results of the second wave of research of cultural heritage management in the world capital cities, the first being related to five European capitals (Naslediye, 2021). The second wave of research was contracted to the research team of the Plekhanov Russian University of Economics and was conducted in 2023. An integrated approach was used by the research team to select and assess the interaction mechanisms between the state and society and their impact on the cultural heritage sites management.

8.2. Cultural heritage as an economic and social asset

At the beginning of the XXI century, more than 100 international legal documents were related to the regulation of identification, conservation, protection, classification, and promotion of cultural heritage sites. National laws are largely based on international conventions, with the basic document being the Convention on the Protection of the World Cultural and Natural Heritage, adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization UNESCO in 1972 (Convention, 1972). In the Convention, the term "cultural heritage" is used to mean: (1) monuments: works of architecture, monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, caves and groups of elements that have outstanding universal value from the point of view of history, art or science; (2) places of interest: human works or joint creations of man and nature, as well as zones, including archaeological sites of outstanding universal value from the point of view of history, aesthetics, ethnology or anthropology.

All country-parties to the convention comply with the rules established by the UNESCO and use the cultural heritage management system contained in UNESCO documents and recommendations. For sites included in the World Heritage List, the participating country regularly submits reports to the World Heritage Committee and receives UNESCO representatives to monitor and verify the condition of the sites in a particular country and actions taken to protect them.

The system of managing the interaction of the state, business and civil society does not have a single universal pattern. The basis of interaction is legislation and regulations explaining the role of participants in the process of preserving historical and cultural heritage when identifying cultural heritage sites, adding them to lists of protected values, planning restoration and archaeological excavations.

The guiding document on the preservation of cultural heritage sites in all the countries under consideration is the Constitution, which obliges the state to provide conditions for the preservation of cultural heritage monuments, and every citizen to appreciate and cherish the historical and cultural heritage of the country. In China, the law "On the Protection of Cultural Relics" (Cultural Relics Protection Law) contains a definition of the concept of "cultural relic"; it presents the principles of management and distribution of powers of authorities when working with cultural relics; formulates the main approaches to financing the protection and management of cultural property, defines the ownership rights and responsibilities of the owners. In India, the "Ancient Monuments, Archaeological Sites and Remains Act of 1958" (The Ancient Monuments, 2010) defines the principles of classification of cultural heritage sites and distribution of powers of authorities, the rights and obligations of owners. In Iran, the "Law on the Preservation of National Cultural Heritage" (Iran, 1930) defines the national heritage, the registration process, the responsibility of the state and owners, the rules for the import and export of cultural heritage objects, the responsibility of organizations and citizens for damage to such objects.

Basing on the legislation, a management system is formed from the federal to the regional and municipal levels. The State, acting jointly with public organizations, plays the leading role in the process of preserving and managing cultural heritage and acts as a guarantor of its protection. The state level, in the form of a specialized department,

Ministry of Culture, Tourism or Education, defines the basic rules and regulations, transferring practical responsibilities for the preservation of cultural heritage to local authorities. Local authorities are responsible for the protection of cultural heritage sites in all the countries under consideration, involving businesses, public and non-profit organizations, and individual citizens to perform some tasks or stages of cultural heritage sites protection. There are examples of initiatives taken by individual cultural centers and research organizations to collect information and certify cultural monuments (for example, the project of the Indira Gandhi National Center for the Arts in India or the participation of volunteers in the Chinese national census of Cultural Heritage sites). There are both short-term programs for the participation of businesses in the restoration of heritage sites (for example, projects for the repair and restoration of sections of the Great Wall of China) and long-term programs (a program for the historical and cultural monuments adoption in India). The management processes of cultural heritage sites include several stages (Table 8.1).

Table 8.1 Key processes for cultural heritage management

Stages	Participants	Explanation
Initiation	owner of the object (physical person or legal entity), or cultural heritage management bodies	Information about the site is initially collected by local cultural heritage management authorities
Examination	commission of experts in accordance with the criteria defined by the law	criteria include the age of the object, its historical or architectural value, originality and degree of preservation
Registration	supervising authority/ministry at the state or local level	Cultural heritage object is registered depending on its value as local/national/world heritage
Protection	authorized bodies	conservation plan restoration if necessary, protection and use.

In India and Iran, after an expert opinion on the value of an object is presented, a public notification is issued, and within a specified period, the owner of the object (and in India, anyone) can express their disagreement if they consider their property rights infringed by the object registration as cultural heritage. During registration, not only the level of protection of the object (world, national or local) can

be determined, but also its class. Registration of the object is executed by a document (certificate, passport), which specifies the basic data on the object (name, location, characteristics of value).

The main coordinating role at all stages is played by authorized state bodies, but gradually the role of public initiative in the field of protection and promotion of national heritage is increasing in all the countries studied. That is why, it is so important to identify effective mechanisms to involve and manage non-government bodies and individual citizens in the processes of preserving cultural heritage.

The preservation of the historical function of a cultural heritage object also includes its profitable usage. As a rule, this model includes elements of adaptation (redevelopment) of individual parts of the object to achieve profitable usage. For example, the Trans-Iranian Railway, included in the World Heritage List, has preserved the authenticity of its main elements in terms of location, shape, design, materials, use and functions. Since its creation in 1927-1938, the railway has been used and continues to play a key role in the life of the region, connecting the Persian Gulf with the Caspian Sea.

Museumification model includes the transformation of historical, cultural, or natural objects into museum displays to maximize the preservation and identification of their historical, cultural, scientific, and artistic value. Modern museumification process includes not only the cultural object itself, but also its environment and landscape, which undergo certain changes during the restoration process. One example of redevelopment and adaptation of cultural heritage sites to the needs of a modern city is creation of the Shougan Industrial Park on the territory of the former metallurgical plant in Beijing, creation of a museum of wildlife and nature on the territory of the former Beryanak sock factory in Tehran.

One of the most painful factors reducing the effectiveness of cultural heritage management is the lack of coordination and integration of actions between various stakeholders – government agencies, businesses, public and local civic organizations.

8.3 The concept of customer empowerment as the basis for the activation of citizens' initiative

The concept of "customer empowerment", which has become popular during the past 20 years, can be interpreted as increasing customers'

individual freedom of choice, expanding control over resources and decisions that affect the quality of citizens' lives (Stegareva, Saginova 2022). The traditional view of customer empowerment involves a transfer of power from producers to consumers (Lincoln, Travers, Ackers, & Wilkinson, 2002). In the marketing publications, the concept of customer empowerment is used to justify new opportunities and tools for consumers to collect and use information and to provide legal and practical remedies for the market failures (Nardo, Loi, Rosati & Manca, 2011). Some authors expand the concept of customer power to the active participation of consumers in production processes to show what consumers really want from products and services (Fuller, Muhlbacher, Matzler, & Jawecki, 2009).

The concept of customer empowerment is used in the economic literature to denote both a subjective aspect or experience associated with an increase in consumer capabilities (Hunter, Garnefeld, 2014) and an objective aspect associated with the expansion of consumer knowledge or understanding (Stegareva, Saginova, 2022). Within this concept, a wider range of choices, easier access to information and a higher level of consumer education is a prerequisite for their empowerment, which leads to greater engagement and a better quality of life (Leary, Vann & Mittelstaedt, 2017). Based on previous studies (Hwang, Wang & Kim, 2014), customer empowerment can be characterized as consumer's ability for the personally conscious and socially sustainable consumption behaviour.

The concept of customer empowerment has found practical application not only in the marketing activities of businesses, but also in social life of modern society, in the field of healthcare and digital medicine, for example. Patients armed with their rights and new technologies access their medical records and can share their health data with other participants within the healthcare system and have control of the process. To empower patients, health policies are being developed aimed at providing citizens with the necessary information and decision-making instruments.

The concept of customer empowerment provides for the interaction of four main elements: (1) free access to information, (2) inclusion and participation, (3) transparency and accountability, (4) self-organization and initiative (Stegareva, Saginova, 2022).

Information exchange between government bodies and citizens is equally important for the implementation of an active responsible

civic position of the people and responsible, accountable to citizens, managerial efforts of the authorities. Well-informed citizens have access to services, exercise their rights, defend their interests, and can monitor the proper performance of their functions by government and non-government organizations.

Inclusion is the answer to the question "who should participate?", and participation is the answer to the question "how should their participation be organized?". Transparency and accountability means being able to hold public officials, employers, or service providers accountable for their policies, actions, and use of funds. Various groups and communities are organized to work together, mobilize resources to solve problems of common interest. Various types of public organization are possible: voluntary groups, professional communities, associations and joint projects.

In the research papers on management of cultural heritage, we have not found examples of the use of the concept of customer empowerment, although international agreements, regional and national programs for the preservation of cultural heritage indicate the need to actively involve citizens into this work. A comparative analysis of the involvement of citizens in projects to preserve cultural heritage in China, India and Iran confirmed the relevance of the above conditions for the customer empowerment.

Free access to information about cultural heritage sites in the form of public information portal (as in Delhi), updated information on the website of the governing body in Beijing, public notifications on registration of objects in India – all these provide citizens with information about existing heritage objects, their current condition, ongoing or necessary restoration work, organizations, and individuals responsible for their protection. Based on this information, public awareness of the cultural heritage of a city, region or country is being formed.

However, just access to information does not activate citizens to actively exercise their customer power, they must understand how they can influence the state of cultural heritage, where they should forward their proposals or complaints, whom to contact for direct participation in projects. In some countries, there are special websites and portals for registering the position of citizens, public discussions are held, statements and proposals are posted, citizens can receive feedback (for example, “Active citizen” portal in Moscow). In China, the website of the Beijing Cultural Heritage Administration provides

an opportunity for feedback, through which citizens can inform about the improper condition of an object, complain about the actions of the authorities or specific persons, but there is no opportunity to participate in the decision-making process on this issue. In India and Iran, the issue of public announcements on the registration of cultural heritage sites is more likely to concern owners who may declare their rights or disagree with the planned actions regarding a particular object. There is also no public channel for citizens' initiative in Iran or India.

The practices of self-organization of citizens' initiatives usually depend on the activity and role of non-government organizations (NGOs) in the country, and their independence. However, even in conditions of limited independence of NGOs in China, free access to information about their activities at cultural heritage sites attracts large numbers of volunteers to work to preserve cultural heritage (for example, the “Friends of the Great Wall of China” movement).

Insufficient and limited access to information, passive position of government bodies responsible for the preservation of cultural heritage, do not allow the development of residents’ initiative, prevent the formation of awareness and participation. This is the way it is in Iran, where the perception of some cultural heritage sites as alien if these objects or artifacts have been identified, registered, and preserved by experts from foreign countries or under their supervision. This attitude is characteristic for other developing countries, and as a result, the people’s sense of "ownership" of such cultural items is not developed, and they consider them valuable only to outsiders and foreigners. To revive this sense of belonging among the population, preference should be given to those objects that will attract or stimulate the greatest interest among the local community.

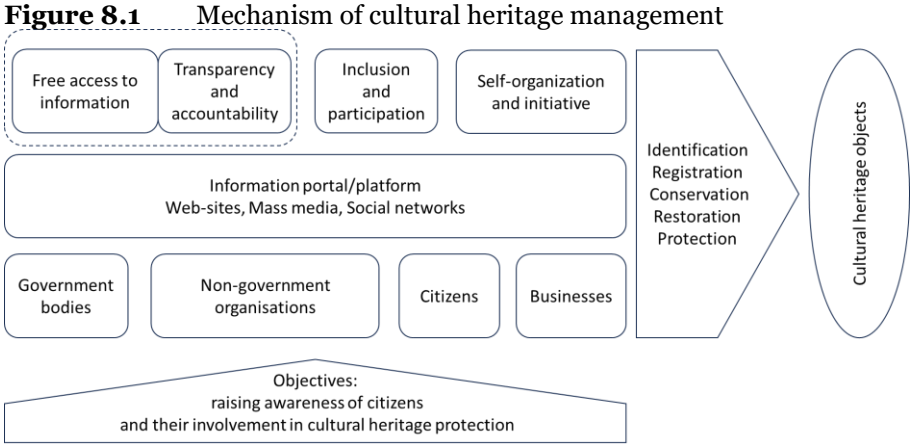
Government agencies responsible for the preservation of cultural heritage at the ministerial level often combine tourism development in their functions (Ministry of Cultural Heritage and Tourism in Iran, for example). However, information about cultural attractions to develop domestic or international tourism is not enough to activate citizens' enthusiasm to preserve cultural heritage. It is also important to have clear and accessible communication channels, involve citizens in various projects and works, and have clear organizational schemes. Analysis of the best practices for attracting citizens to projects in the field of cultural heritage preservation using the concept of customer

empowerment allowed us to formulate the main components of a mechanism to manage citizens' participation.

8.4 Mechanism to manage citizens' participation in protecting cultural heritage

The concept of customer empowerment has become the basis for reviewing best practices and identifying mechanisms for activating citizens to preserve cultural heritage. According to the concept, four elements are needed to empower consumers (in our case, citizens) with customer power: free access to information; inclusion and participation; transparency and accountability; self-organization and initiative. In the case of cultural heritage, since most of work is organized and implemented by the state or municipality, the element of transparency and accountability should be combined with the availability of information, access is provided to information about heritage objects, their condition, work carried out and expected results. Free access to this information means meeting the transparency/accountability requirement (Fig.1).

Figure 8.1 Mechanism of cultural heritage management



The comparative analysis of cultural heritage management systems in China, India and Iran has shown that access to information is available in all countries. However, the channels used, and their capacity are different. In China, information is available on the Cultural Heritage Management Department website and is distributed through the organization of the annual Cultural Heritage Day on the second Saturday of June. In India, there is limited

information on the site of the Archaeological Survey of India (ASI), but with the help of public organizations, certification of heritage objects has been carried out by the Indira Gandhi National center for Arts, and public notifications are issued to inform about the intentions of registering heritage objects. In Iran, as well as in India, public notifications on registration of heritage objects are being issued. However, lack of digital tools for the dissemination of information significantly limits its accessibility.

Inclusion is stated as the guiding principle in all countries studied, but organizationally, the possibility of participation needs specific tools. In India, since 2017, there has been a government program for the "adoption" of cultural heritage objects, under which an organization or citizen can undertake a certain amount of work to preserve an "adopted" cultural heritage object. As part of this program, businesses and citizens were invited to take care of more than 3,000 protected monuments throughout the country to improve their tourist accessibility and attractiveness by organizing various additional services and developing their territory. Since 2020, an updated version of the program has been implemented through a special web portal (Adopt a heritage, 2020) containing detailed information about the monuments that are supposed to be adopted, as well as the analysis of gaps in their maintenance and a financial assessment of the necessary tourist amenities around the site.

In Iran, in the post-revolutionary period of 1979-1988, Iranian cultural heritage activists promoted the rejection of anything pre-Islamic, and therefore the protection of pre-Islamic cultural relics became a problem of that time. A more active manifestation of activism in the field of cultural heritage began in 1997. While maintaining a focus on Islamic principles, interest in pre-Islamic culture related to Iran's historical monuments and the formation of Iranian identity has been revived. Citizens' and NGOs' activities in the field of cultural heritage generally include organizing cultural tourism to historical sites, working as guides, organizing thematic events and discussions about the role of cultural heritage sites in the development of the Iranian society.

The self-organization and initiative of citizens are unevenly represented in the open sources of the studied countries, which makes it difficult to make comparisons. In China and India, associations and public movements are mainly implemented within the framework of government programs. In India, individual citizens can participate in

the government program of adopting cultural heritage objects. In China, proactive citizens hold thematic events in schools, youth hostels and other institutions to promote cultural relics and protect cultural heritage. Examples are projects to protect the old city of Beijing - "Friends of Old Beijing" movement, "Walking around Old Beijing for Children", training programs for repairing the traditional Beijing courtyards, etc.

The mechanism for activating citizens to preserve cultural heritage, based on the concept of customer empowerment, thus includes objectives (raising awareness of citizens and their involvement in cultural heritage protection), participants (authorized state bodies, NGOs, associations and individual citizens), objects (cultural heritage sites and various additional services on their territory), communication tools (information portals, websites, social networks, mass media).

8.5 Digitalization as a tool of customer empowerment

The development of digital services significantly helps to preserve cultural heritage. The creation of digital duplicates of territories helps to assess how well a new building fits into the historical urban landscape, plan transport accessibility, and is a monitoring tool that allows to assess the dynamics of the changing historical sites.

Digital tools are used to protect cultural heritage in the countries studied. The Indian Heritage mobile application (Indian Heritage) demonstrates historical and cultural heritage of India. The application provides detailed information about the monuments, their photos, and lists the available tourist services.

A digital platform for monitoring China's World Cultural Heritage sites has been created in Beijing. The information collected is used to plan the restoration, preservation, and promotion of the cultural heritage. Together with the charitable foundation of the Tencent investment holding, the project "Cloud Tour of the Great Wall of China" has been developed (Virtual tour), within which users can take a virtual tour of the Great Wall of China using their mobile phones and see the restoration in progress.

Digital technologies are used to conduct research, restoration work, collect and store data on cultural heritage sites, and organize

interaction between participants in the process of its preservation. The analysis of the practices of citizens' participation in the preservation of cultural heritage in the countries studied showed that the more widely digital technologies are used to inform and self-organize citizens, the more widespread are public programs, volunteer projects, the more tangible is the perception of citizens' "ownership" of cultural monuments, concern for their preservation and profitable use.

The creation of the Great Wall digital platform and the implementation of the state program for the creation of the Great Wall National Park in China not only made it possible to attract thousands of volunteers in a short time to clean up the territory, do the restoration work, but also significantly increased the awareness of the entire population about this symbol of the Chinese culture.

The lack of digital support for projects of the Ministry of Cultural Heritage and Tourism of Iran limits the availability of information about the country's unique cultural heritage sites – such as the Trans-Iranian Railway or the Persian Caravanserai system - to popularize this work and attract potential corporate investors and active citizens.

8.6 Conclusion

Approaches to the historical and cultural heritage management are diverse and reflect countries' national characteristics, historical, economic and political structure, specifics features of the cultural heritage sites, public and government interest in preserving and usage of the national heritage for the living and future generations.

The world experience has clearly shown that addressing the historical roots of one's nation makes it possible to solve the complex tasks of modern development. The society's understanding of the importance of protecting cultural heritage contributes to the improvement of legislation in this area, the creation of effective management and financing models, processes for identifying, preserving, protecting, studying, and popularizing cultural values and cultural heritage sites.

The analysis of cultural heritage management systems and practices for activating the initiative of the population in China, Iran and India based on the concept of customer empowerment resulted in identifying the main elements of the mechanism for managing

citizens' participation in the preservation of cultural heritage. The most important factors in raising awareness and forming a sense of "ownership" of cultural heritage objects is to widely inform citizens about the existing cultural heritage objects, their condition, ongoing and necessary work, and the potential of their use in economic life of the capital city and the country; the availability of accessible and understandable channels for citizens' participation in this work; organizational and information support for citizens' initiatives and their direct participation in projects.

The widespread use of modern digital technologies significantly contributes to popularize cultural heritage, allows not only to effectively manage heritage sites in accordance with the expectations and needs of the local population, but also involve citizens and public organizations in the preservation and effective use of heritage sites.

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9

Spiritual Capital, Leadership, and Performance Across Cultural Contexts

Jörg Meyer, Harald Bolsinger, Rainer Wehner, Sindhu Shantha Nair, Emmanuel Nwosu and Bello Muhammad Abdullahi

9.1 From Spiritual Intelligence to Spiritual Capital

In times of increasing digitalization, terms such as artificial intelligence are in the focus of general interest. One reason for this is the economic potential that is attributed to these new technologies. As a result, other aspects that are also attributed to a positive economic potential disappear from the focus. One such aspect is spirituality. In a systematic literature review, Obregon et al. show the positive aspects for the economic context that are associated with spirituality and religion (Obregon et al., 2022, p. 573-574).

Obregon et al. emphasize the increasing number of publications demonstrating the economic benefits of spirituality and ethical action in a corporate context. For this, they refer to the publications of Benefiel, Bouckaert und Sanders (Obregon et al., 2022, p. 574 / Benefiel, 2003, p. 383-391 / Bouckaert, 2015, p. 15-26 / Sanders, 2003, p. 21-31).

The basic idea behind this is that the behavior of the individual is positively influenced by spirituality and that this leads to positive effects in the corporate context. This results from corresponding ethical behavior (Obregon et al., 2022, p. 574 / Wong, 2008, p. 169-191).

According to Obregon et al., the positive economic effects can be explained by general ethical principles. With reference to Sardeli and Savvas these are integrity, transparency, accountability, responsibility and fairness. These are related to quality-specific aspects as well as customer and employee satisfaction (Obregon et al., 2022, p. 574 / Sardeli, 2020, p. 149-156).

In this context, it is understandable that business ethics was given a key role in the 1990s with regard to building a trustworthy corporate reputation and motivating employees. Bouckaert and Zsolnai further explain how the European Union described Corporate Social Responsibility (CSR) as a new instrument in its Green Paper in 2001. At the latest during the banking crisis of 2008, it became clear that the ethical standards associated with CSR were apparently not firmly enough anchored at the individual level to avoid such a crisis. It is interesting to note the assessment of Bouckaert and Zsolnai, according to which business ethics can be anchored more deeply and authentically at the individual level with the help of a spiritual basis. (Bouckaert et al., 2012, p. 489).

Thus, against the historical background, spiritual intelligence is said to have the potential to strengthen CSR in the entrepreneurial context and thus reduce the risk of new business scandals.

In the European context, Bouckaert and Zsolnai organized a workshop entitled 'Spirituality in Management' as early as 2001. This event can be seen as an initial starting point, which resulted in the foundation of the European SPES Forum (Spirituality in Economics and Society) in 2004. (Bouckaert et al., 2012, p. 490).

Therefore, it is understandable that the research field of spirituality in the entrepreneurial context became the focus of research. Obregon et al. prove this by naming renowned journals that deal with such issues. The Journal of Business Ethics, the Journal of Religion and Spirituality in Social Work and the Journal of Management, Spirituality and Religion can be listed as examples. (Obregon et al., 2022, p. 574).

9.2 Theoretical Underpinnings of Spiritual Intelligence

Spirituality has been a philosophical domain for ages but became prominent during the last century and received alignment alongside

the psychological discipline of study and research, in terms of well-being (Emmons, 1999), Coping (Pargament, 1997), meaning of life (Park, 2005), health (Koenig, 1997; 2011), personality (Emmons, 1999; MacDonald, 2000), and special abilities (Sisk, 2019).

Transformation and finding meaning and purpose in life are important factors in spiritual development through spiritual intelligence (Frankl, 1966, Park, 2005; King. 2010; Skrzpinska, 2014, Sisk, 2019).

The development of spirituality in an entrepreneurial context is associated with spiritual intelligence on an individual level.To understand this terminology, we have to create a definitional basis in the next step.

9.3 Defining Spiritual Intelligence

Although spirituality in the entrepreneurial context has reached the focus of scientific interest, its definitorial delimitation is challenging. This results from the findings of Bouckaert and Zsolnai. According to them, spirituality is an "intercultural and multilayered concept" (Bouckaert et al., 2012, p. 490). This becomes obvious by looking at the definition of the European Institute SPES regarding spirituality: „[...] spirituality as people's multiform search for meaning interconnecting them with all living beings and to God or Ultimate Reality“ (European SPES Institute).

Of interest are the common features identified by Bouckaert and Zsolnai, which, according to them, the different definitions of spirituality have in common: „reconnection to the inner self; a search for universal values that lifts the individual above egocentric strivings; deep empathy with all living beings; and finally, a desire to keep in touch with the source of life (whatever name we give it). In other words, spirituality is a search for inner identity, connectedness and transcendence“ (Bouckaert et al., 2012, p. 490).

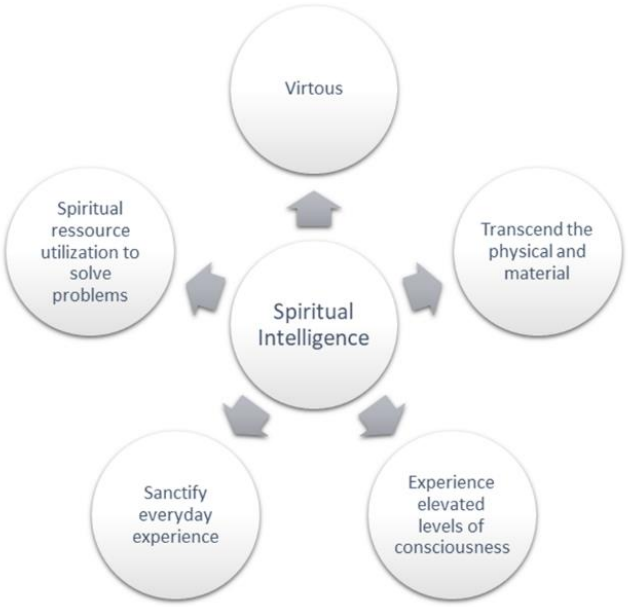
This definition leads to the question of how spirituality is related to religion. Here the explanations of Büssing are useful. He distinguishes with reference to Allport between intrinsic and extrinsic religiosity. (Büssing, 2019, p. 84 / Allport, 1950). According to Büssing, the first is the inner spiritual core that influences a person's everyday life and is oriented toward a relationship with a transcendent entity. (Büssing,

2019, p. 84) Based on Büssing's definition of intrinsic religiosity, it appears that this addresses spirituality.

The term spiritual intelligence has its source by Zohar (Zohar et al., 2000, p. 3-4). Specifically, Zohar and Marshall understand spiritual intelligence:

"I mean the intelligence with which we address and solve problems of meaning and value, the intelligence with which we can place our actions and our lives in a wider, richer, meaning-giving context, the intelligence with which we can assess that one course of action or one life-path ist more meaningful than another." (Zohar et al., 2000, p. 3-4). From this definition, it can be concluded that spiritual intelligence positively influences an individual on a holistic level. If a person has a leadership role, spiritual intelligence consequently has an influence on the individual leadership style. Against this background, we can speak of a spiritual-based leadership style. Fairholm describes the idea underlying this leadership style as follows: "They believe that leadership comes out of the leader's inner core spirit." (Fairholm, 1998, p. xxii). Once spiritual intelligence has been defined, it must be placed in the context of the various types of intelligence This is done in the next section.

Figure 9.1 Five Components of Spiritual Intelligence [Source: Emmons (2000a)]



9.4 Models of Spiritual Intelligence

Intelligence is the ability to understand and adapt to the environment and is largely inborn and difficult to alter (Gardner, 2000). The term spiritual intelligence was introduced by Zohar (1997). Further Emmons described spiritual intelligence (1999) as a matured personality attribute to enable fulfillment of spiritual goals and also involves capacities and abilities for problem-solving.

Thus, Spirituality conceptualizes adaptive, cognitive and motivational dimensions consisting of abilities and competencies for expert knowledge relevant to situations.

Emmons (2000a) explored five components for spiritual intelligence as the capacity to transcend the physical and material, the ability to experience heightened states of consciousness, the ability to sanctify everyday experience, the ability to utilize spiritual resources to solve problems and the capacity to be virtuous. The capacity to be virtuous was dropped, following criticism (Mayer, 2000) on the virtuous attribute of being more oriented towards ethics and personality.

An empirical approach by King (2008) postulated spiritual intelligence as the mental capacities contributing to the awareness, integration and adaptive application of the nonmaterial and transcendent aspects of one's existence that leads to outcomes such as in-depth existential reflections, meaning enhancement, transcendental self-recognition, and spiritual states mastery. Through this empirical research a self-report inventory, SISRI-24 was developed with critical existential thinking (contemplate meaning, purpose, metaphysical issues, to existential conclusions and non-existential issues in relation to one's existence), personal meaning production (personal meaning, purpose, transcendental awareness, and conscious state expansion.

Spiritual intelligence can be related to religion. However, spiritual intelligence can also be associated with fundamental world views. For this reason, a distinction is made below between spirituality and religion. Spirituality and religiosity are not one and same but can occur with overlapping proportions of its' components (Skrzypinska, 2014, 2016).

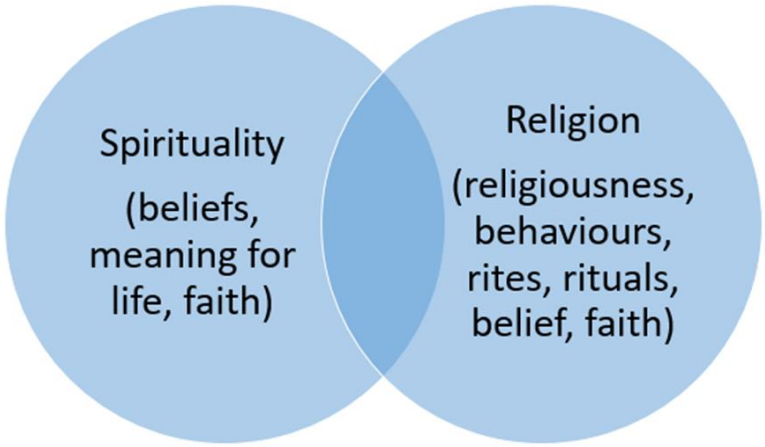


Figure 9.2 Spirituality and Religion [Source: Skrzypinska (2014, 2016)]

Theories of faith development (Fowler, 1981) explains a characteristic pattern of the spiritual and religious development (Fowler 1981; Ozorak, 2005) and the spiritual sphere is instrumental for cognitive development (Paloutzian & Park, 2013; Skrzypinska 2014, 2016). If one is not able to find meaning or purpose in life, due to absence of spiritual intelligence, there will be a low degree of wellbeing (Emmons, 2000a). A few people are able to recognize the meaning of life always and show a higher degree of well-being while a few are only able to partly recognize the meaning of life.

Notably, Gardner claimed that to consider spirituality as an intelligence depends upon definitions and criteria (2007), while spirituality was considered as a dimension of personality (Emmons, 1999; Piedmont,1999; MacDonald, 2000; Skrzypinska, 2014). Instances of people with high IQ, losing a sense of direction indicates that rational or emotional intelligence may not be able to replace spiritual intelligence. There were no significant correlations found between intelligence quotient and spirituality quotient (King, 2008) and thus rational intelligence and spiritual intelligence could be independent which can be explored. Needless to say, this clearly explains the lack of adeptness and the inability to find meaning of life and to cope with life's challenges. That being so it is also an interesting fact that while intelligence quotient develops during early years, King (2008) found that age had a mild relation to spiritual intelligence and potentially it may develop throughout the lifespan.

The Big Five Model, postulates spirituality as a sixth dimension of personality (Emmons, 1999; Piedmont, 1999; MacDonald, 2000; Skrzypinska, 2014). It is also positively connected to conscientiousness, agreeableness and extraversion (Amrai et al., 2011). The causal sequence for these factors may be further explored.

Once the terms have been defined, they must be applied to the entrepreneurial context.Specifically, how religion, spirituality or worldview can lead to spiritual capital.

9.5 Selected Forms of Spiritual Capital

Vasconcelos describes how academics differentiate between the various forms of capital. In this regard, Vasconcelos lists intellectual capital, social capital and human capital, among others. Using the example of human capital, Vasconcelos explains, with reference to Pennings, how this influences operational results with the help of innovation and creativity. (Vasconcelos, 2020, p. 117)

Spiritual capital is a special case because, according to Zohar and Marshall, it can be seen as a new paradigm and therefore as a mindset change (Zohar and Marshall, 2004, p. 21). Spiritual capital lays the foundation for generating "meaning and value" (Zohar and Marshall, 2004, p. 21). According to Zohar and Marshall, spiritual capital can „[...] generate profit that both draws on and adds to the wealth of the human spirit and to general human well-being" (Zohar and Marshall, 2004, p. 21)

This can be attributed to Vasconcelos' observation that spirituality enables people to deal with challenging situations in a productive way. (Vasconcelos, 2017, p. 601)

According to Vasconcelos, this is due to the spiritism doctrine. Vasconcelos understands this to mean „SD is the outcome of a blend of science, philosophy and religion" (Vasconcelos, 2020, p. 119). This is seen as an indication of the usefulness of being able to identify a cross-religious commonality in spiritual capital.

With regard to the various definitions of spiritual capital, Vasconcelos notes that they overlap in terms of the following aspects: „wealth, faith and belief, values, virtues, vision and benefits thereof" (Vasconcelos, 2020, p. 121)

Based on these findings by Vasconcelos, spiritual capital is understood in the sense of Zohar: "I define spiritual capital as the wealth, the power, and the influence that we gain by acting from a deep sense of meaning, our deepest values, and a sense of higher purpose, and all of these are best expressed through a life devoted to service. Based on this definition, spiritual intelligence is the intelligence by which we build spiritual capital" (Zohar, 2010, p. 3)

The Zohar definition should be considered in conjunction with the Baker et al. definition, as the latter places spiritual capital in relation to other types of capital:

"Spiritual capital is the set of values, ethical standpoints and visions for change held by both individuals, groups and institutions. It is shaped not only by systems and practices of belief, but also by engagement with wider sets of relationships (broadly defined) and the sense of meaning and purpose derived from work-based and other activities (sometimes referred to as the 'spirit' or 'soul' of a business). Spiritual capital is often the source of motivation for other forms of capital (e.g. social capital and its emphasis on the importance of trust and norms as the basis for conducting any form of progressive or enhancing human activity)" (Baker et al., 2011, p. 6)

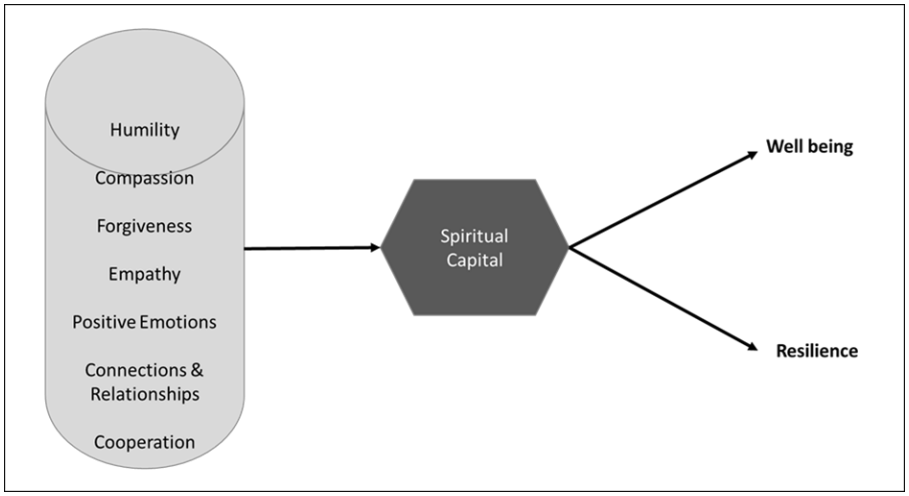


Figure 9.3 Conceptual model of spiritual capital [Source: Vasconcelos (2020, p. 128)]

Against the background of the various definitions, different conceptual approaches have been generated in order to locate spiritual capital in a model context. Vasconcelos cites Middlebrooks and Noghiu and Kolade and Egbetokun as examples of this. Vasconcelos sees the lack of practical relevance and thus the insufficient applicability by the individual as critical of the previous models. (Vasconcelos, 2020, p. 127)

Through his conceptual approach, Vasconcelos contributes to the development of spiritual capital by increasing its usability for the individual.

From this model, Vasconcelos concludes that the fulfillment of the following conditions is likely to lead to the individual generating spiritual capital. That is: „The commitment to embracing the virtue of humility, compassion, forgiveness, empathy will likely lead the individual to build a spiritual capital." (Vasconcelos, 2020, p. 129-130)

In addition "the commitment to showing only positive emotions, cultivating high quality connections and relationships in the workplace and cooperating in the workplace will likely lead the individual to build a spiritual capital." (Vasconcelos, 2020, p. 131)

By fulfilling these requirements, Vasconcelos comes to the conclusion that behaviors based on a lived spirituality lead to personal satisfaction in a professional context. He links this insight to positive leadership behavior, for example. (Vasconcelos, 2020, p. 132)

These explanations lead Vasconcelos to the assessment that the individual has an increased well-being and resilience through a built-up spiritual capital. (Vasconcelos 2020, p. 132-133)

9.6 Selected Aspects of Spiritual Capital for Leadership

The practicality of the spiritual capital model developed by Vasconcelos proves that this contributes to inner satisfaction for the individual and thus generates ideal gains (Vasconcelos, 2020, p. 133).

This happens when the individual generates spiritual capital by living the requirements of Vasconcelos' model: „humility, compassion, forgiveness, empathy, positive emotions, connections/relationships and sense of cooperation" (Vasconcelos, 2020, p. 133)

Vasconcelos concludes that this has positive effects for the individual: “In essence, the model comprises some constructs that encourage people to use their inner strengths, capabilities, positive feelings, states and aspirations in order to engage even more in praiseworthy behavior and reach self-fulfilling.” (Vasconcelos, 2020, p. 133)

If a person generates spiritual capital, the logical conclusion is that this has an impact on their leadership behavior. In this way, a connection can be made to servant leadership, for example, which is demonstrated by the following definition by Eva et al: „Servant leadership is an (1) other-oriented approach to leadership (2) manifested through one-on-one prioritizing of follower individual needs and interests, (3) and outward reorienting of their concern for self towards concern for others within the organization and the larger community.” (Eva et al., 2019, p. 114)

Eva et al. use the three criteria to explain the uniqueness of servant leadership. The second criterion in particular illustrates the relationship to the spiritual chapter. Eva et al. emphasize the uniqueness of the needs and interests of the individual. (Eva et al., 2019, p. 114)

In building spiritual capital, the leader has answered these questions for themselves. In this way, the manager can act as a sparring partner for the employee to answer these questions for themselves and in this way increase their own self-satisfaction.

The distinction between servant leadership and the ethical leadership style is of interest. Eva et al. make this distinction with reference to Brown and Trevino. On the one hand, servant leadership incorporates the stewardship approach more explicitly. On the other hand, servant leadership enables more individual leadership behavior, as ethical leadership is based on universal ethical principles.(Eva et al., 2019, p. 113)

9.7 Models of Spiritual Leadership

Spirituality and its integration into the workplace, started in 1992, given the fact that people spend more time at the workplace and pursuing meaningfulness at work makes sense (Dent, Higgins & Wharff, 2005; Fry, 2003; Neal & Biberman, 2003). Spiritual leadership is also the values, attitudes and behaviors that are essential

to intrinsically motivate self and others to have a sense of spiritual survival through membership and calling (Fry, 2003) and thus is a holistic leadership approach that includes fundamental factors of the human body, mind, heart, and spirit. That is the physical, logical or rational thoughts, emotions & feelings and spirit. Thus it differentiates from other leadership types of transformational, servant and authentic leadership (Crossman, 2010; Fry, Vitucci & Cedillo, 2005; Frye, Kisselburgh & Butts, 2007; Hackett & Wang, 2012; Nicolae, Ion & Nicilae, 2013); Parris & Peachey, 2013; Reave, 2005; Sanders, Hopkins & Geroy, 2003)

Fry (2003) proposed the first spiritual leadership model considering the four dimensions of intrinsic motivation of individual spiritual needs, religious attributes of altruistic love and care for others, ethical responsibility for reciprocal outcomes and values to support organizational atmosphere for meaningfulness at workplace. This model also integrates the spiritual aspects of vision, hope or faith and altruistic love of leaders', spiritual wellbeing of calling and membership of followers' and the outcomes and causal relationships of organizations'. In 2005 he extended his model and included four more dimensions such as inner life or spiritual practice to influence developing spiritual leaders' qualities, life satisfaction, spiritual wellbeing and corporate social responsibility. Spiritual leadership was used to increase the bottom line of the organization (Fry, Matherly & Ouimet, 2010), and how it can emerge as a new paradigm in leadership (Benefiel, Fry & Geigle, 2014). Bases upon Fry's model, and other models like organizational transformation framework (Benefice, 2005), integrative conceptual based on ego-transcendence (Prarameshwar, 2005) spiritual leadership business model incorporating strategic management (Fry & Nisiewicz, 2013), spiritual model as an universal application (Fry, Vitucci & Cedillo, 2005; Fry et al., 2017; Jeon et al., 2013; Tafreshi, Jahadar, Rassouli, Atashzadeh-Shoorideh & Kavousi, 2017). New paradigms on spiritual leadership could be explored further.

9.8 Putting Values to Action

Human action is always embedded in a normative framework, a normative rationality. The normative framework within which people operate are, for example, laws that apply in a certain country, codes that have been drawn up for a certain industry or professional group or even the constitutions of countries. The Universal Declaration of

Human Rights, for example, is such a normative framework. The inner degree of approval, the inner yes to the validity of the contents of this normative framework is reflected in the normative rationality of the person. This is where the individual defines whether the contents of the normative framework and which ones exactly are reinforced and actively affirmed or simply accepted or even rejected. On the one hand, there are sources that can be analyzed by reason, which are often discussed in everyday language as philosophical theories or theological doctrines and on the other hand, transcendent spiritual sources must be also taken into account, which additionally help to open up the reflection and understanding of the individual meaning of the sources that can be analyzed by reason beyond logic. The normative rationality is determined by the individual's own world view, outcoming beliefs and applied spirituality. (Bolsinger 2019)

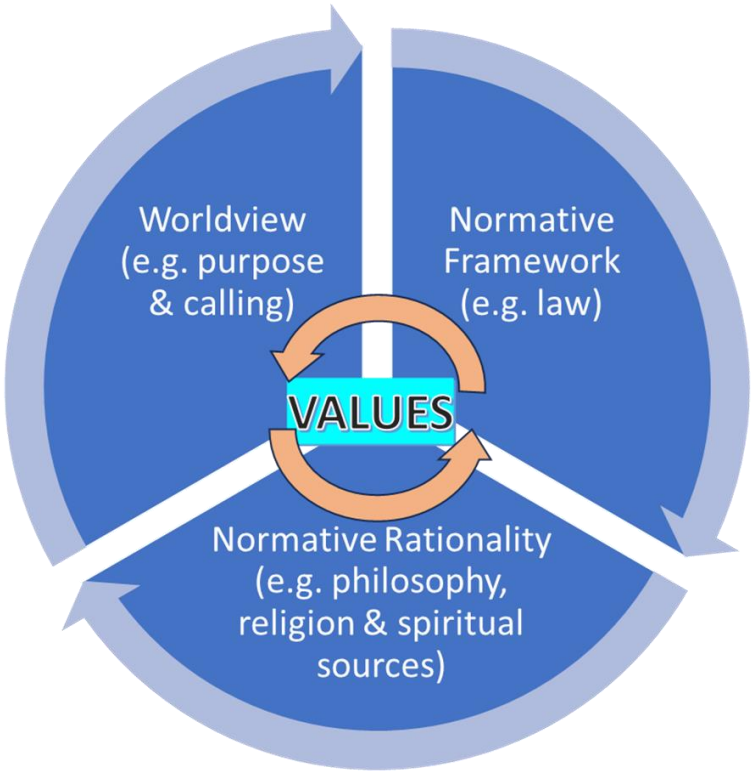


Figure 9.4 Values in Context

Of course, it is important to note that this is not a one-way street. Although worldview shapes the type of spirituality and normative rationality, which in turn can result in acceptance of a normative framework. The normative framework within which an individual operates also has an effect on normative rationality and worldview. Above all, it is important to note that norms - including a normative framework within a company or organization - are created and further developed in this interaction. It is undisputed that the valid normative framework has an influence on the normative rationality of the individual and that this also has an effect on the acceptance of the normative framework. Theological and philosophical justifications of the validity of existing norms reinforce their acceptance. The link between these three areas is the practiced values. The behavior of people is an outflow of this interaction and can be described by values and harmonized across different world views and spiritual practices. Spirituality ensures the living spirit of values that can be rationally derived from the normative framework and are compatible with the normative rationality and worldview of individuals. See figure 4 for an overview.

While it is important to the individual how certain values are justified, agreement with certain values within a pluralistic and diverse group of people becomes possible through different contexts of justification. For example, different legal frameworks, worldviews and religious beliefs, despite their respective uniqueness, can be combined in a shared portfolio of values and thus motivate behavior in a common direction. For this reason, organizational development requires active values management to define this bridge between different worlds in the brains of people. It is also important to have respect for the individual reasons and beliefs from which the values are derived and make sure that people can live out their individual worldview in the organizational context. Values foundations are decisive for which values can grow in a company and which corporate ethos can be shaped at all. Values are fed by the ideological imprints, by the worldviews lived out by people in the company. (Bolsinger 2023)

Worldview is a hearts´ attitude, a “fundamental orientation of the heart” (Sire 2015). This is not only to be understood cognitively and rationally, but also emotionally, intuitively – psychologically influenced and spiritually shaped. Worldviews can be distinguished by explaining basic assumptions about the fundamental questions of life. On the one hand, they become visible in the behavior lived out,

for example through spiritual actions such as prayer or meditation and can thus be empirically investigated through approaches of behavioral economics. On the other hand, they are recognizable in a classification and assessment of the behavior of other people according to the individual's understanding of reality. What is unusual about working with worldviews is that they can be real or unreal, conscious, or unconscious, consistent, and logical in themselves, or contradictory and completely illogical. Nevertheless, they are often a non-reflected basis for the individual sense of meaning and the individual values of people. (Sire 2015)

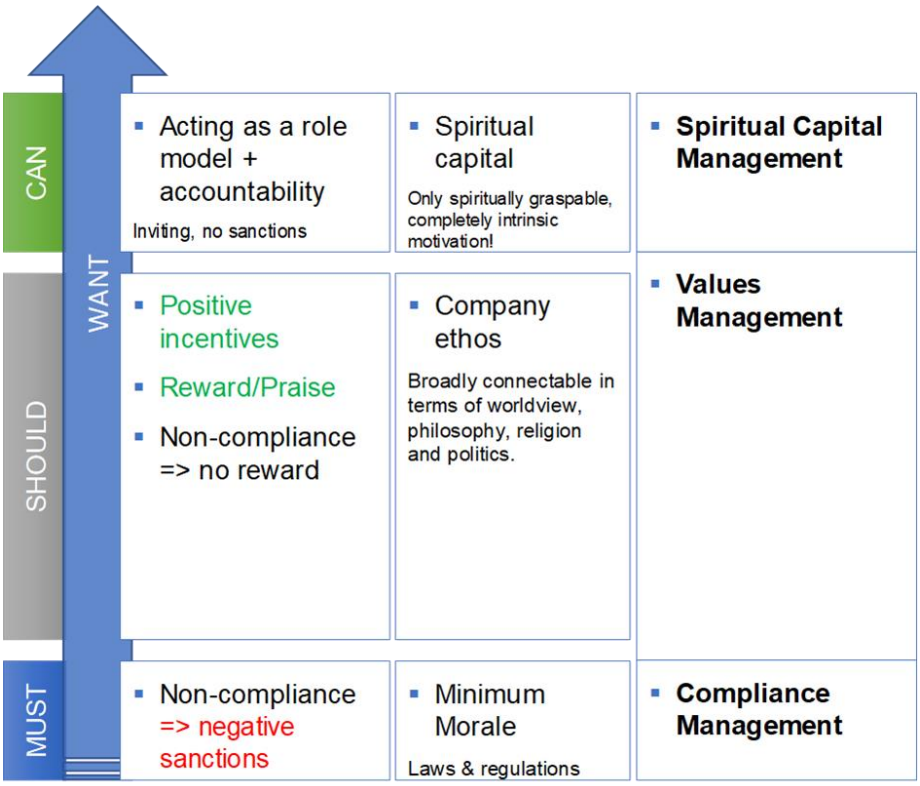


Figure 9.5 Fig.5. Context of Managing Spiritual Capital, (based on Bolsinger 2023, p.146)

This is where spiritual capital comes into play.The values set of employees resulting from a particular system of meaning is a valuable resource for a company – it is the often-ignored spiritual capital of the organization. Holistic management considers that values perceived as

important by the individual are consciously or unconsciously based on a specific worldview. Thus, the values are accompanied by a specific type of spirituality based on this worldview. This specific form of spirituality must be given space as a resource of value-oriented self-control that organizationally desired values are strengthened and can unfold. An atheist who mainly believes in science will reflect differently than a Hinduist with his spirituality or a Christian who believes in Jesus or a Muslim believing in Allah. The knowledge of this is an advance in understanding and at the same time an admission of the limitations of one's own categories of thinking that are conducive to innovation. It makes it possible to stand on solid ground while reflecting on one's own worldview and at the same time let others choose their own reasoning system. In the understanding of a holistic values management, the aim is to identify the values being already part of the individuals' worldview – shaping the spiritual capital of a company – and above all to actively develop and promote the values that are particularly important for the company, as well as to ensure a mandatory minimum moral in the sense of compliance. Three levels merge smoothly into one another in corporate practice. (Bolsinger 2023) See Figure 9.5 for an overview.

Minimum Moral Standards: The compliance organization is a first starting point for addressing the minimum moral standards required in the company. This results from the normative framework of the company and can be expressed in the form of values in addition to detailed codes of conduct. This is also referred to as the integrity approach in compliance management. The violation of this set of values requires consistent sanctions based on legal necessities, so that this minimum moral standard is anchored as an imperative in the company or the respective area of the company.

Corporate Ethos & Culture Management: Based on this, increasing values-oriented self-control results from a smooth transition to the desired "SHOULD". This area of the SHOULD requires active and human-centered professional values management in order to create a differentiated corporate ethos from the use of individual value imprints. The ethos has to be ideologically broadly connectable and at the same time strategically target-oriented. In this area, the different justifications for specific values must be considered and respected, which makes the individual actively living out the values. Not all employees can and must fully demonstrate every value of the SHOULD in their behavior. This reduces the pressure to perfect compliance and at the same time ensures the ability to discuss in the

company about value rankings for specific questions, which protects against operational blindness. Incentives in the form of positive sanctions of various kinds must be created for particularly values-compliant actions, so that every employee is motivated to activate his or her personal value strengths for the company.

Spiritual Capital: In order to be able to tie in with the intimate meaning of life as a ground of values of the employees, space for spiritual community as a "CAN" are necessary. In these spaces employees reinforce each other's values and make them available in the company as spiritual capital. Normally employees find this opportunity extremely appreciative and pleasant, so that their sense of purpose is linked to the company and becomes a breeding ground for the intrinsic motivation to actively live out goal-oriented values. This can be achieved through spiritual communities and community building, be it through religiously shaped spaces such as prayer communities or meditation groups, or low-threshold spaces for employee sports groups or other offerings that require and promote appropriate acceptance of specific values (e.g. team spirit). These offers aim at the personal development of employees and in particular of leaders. They must be kept free of sanctions of any kind and require a healthy understanding of diversity, plurality, tolerance, and mutual acceptance.

A company's spiritual capital becomes a resource above all when it is actively used for the benefit of the company's goals and manifests itself in leadership and employee behavior by lived out values.

9.9 Spiritual Capital in The Marketplace: Ressources of Selected Worldviews

9.9.1 Hindu Aspects - The Example of India

A country responsible for breakthroughs in agriculture and industry with an accelerated development and expansion in agriculture and industry, with states playing active roles, became a distressed economy due to colonization. Being a colony did not bring significant changes benefitting the social sector which largely hampered the enormous produce and the capacity of the economy. Post-independence, the economy and the systematic organization of it posed a real challenge to the government then, with a huge demand for the need for delivering growth and development with a flavor for

Nationalism. The important strategic decisions taken in 1956 are still helping India shape her economic journey. India is currently ranked as the seventh largest economy and third in terms of PPP (Purchasing Power Parity), with the GDP pegged at 2.9 trillion dollars. India's market size is pegged to be growing and thriving at 6 trillion dollars in the years to come (WEF report on 'Future of consumption in fast-growth consumer market). Further to the adoption of the New Economic Policy in 1991, there was a landmark shift in the Indian economy from mixed economy model to open economy to the world with the performing sectors like Agricultural sector, Industry Sector, Services Sector, food processing, Manufacturing sector.

The recent developments in the economy of India, are the initiatives such as Goods and Service Tax, Insolvency and Bankruptcy Code, Startup India and Digital India. These reforms made a major leap in the reputation of India in the global economy. India is considered as a fastest growing major economy in the backdrop of a stable macro-economy, declining inflation, improving fiscal and external balances, and also as one among the few economies that enact major structural reforms positioning India as a competitive player in the global market. To achieve consistent growth, a document (Strategy for New India @ 75) was released by NITI Aayog, with the objectives like doubling farmer incomes, creating a talent pool for the states as the All India Services, 'Make in India' campaign, achieve increase in tax to GDP ratio and investment rate. India is an emerging superpower and a vibrant economy, with a growth rate at 7.7% with various opportunities in business.

Hinduism in India and worldwide fosters human wellbeing in general, and the capacity to view cognitive flexibility more than the fixity of dogmatism. Indian society is legitimized and intertwined with Hindu doctrine practices along with other religious legitimations. In India, the history can be traced to 1500 BCE, tracing antecedents from comparative philology, religion and archaeology. The seminal source is the Rigveda from the final centuries of the 2nd millennium BCE. Mahatma Gandhi is considered to be the quintessence of the Hindu tradition. His beliefs were also braced by Christian literature, and his technique of passive resistance and satyagraha has precedence from Indian traditions. He believed in the dignity of manual labour and equality of women. The emergence of Hinduism, Buddhism and Jainism from the same milieu with a common sharing of practices such as renunciation, meditational techniques and doctrines of the Vedic culture that the truth is one and

can be spoken by scholars in many different ways. The oldest text of Hinduism, the Vedas, and one of the six schools of Indian philosophy, stress the universal and humanistic side of service rather than dogma (Britannica, 2023), self-perfection and service being the order and ideals. The Upanishads are the elaborations of the Vedas being the longer and older ones, the Brahma sutras the brief and one word interpretations of the doctrines of Upanishads, and the Bhagavad Gita or the Song of the Lord are elaborations of the Vedas and are drawn in support of the doctrines in Upanishads. Indian school of thought was profoundly influenced by Vedanta. Hinduism originated in India and comprises several systems of philosophy, belief and rituals. In 1816, Raja Rammohun Roy, gave the word 'Hinduism' and in 1994, Chandranath Basu gave the name 'Hindutva'. Before 1816, it was referred to as 'Hindu Dharma' in the works of Chaitanya Mahaprabhu and Kabir to differentiate or distinguish Indian local culture. The idea or categorization of religion emerged in the 19th century in the world due to European Colonizers. Needless to say, the seeds of communal divide and bigotry started sowing from this divide and vested interests. The narrative began to revolve around the construct of unite and divide. India is often referred to as the country of tolerance, diversity, survival instincts and Indian philosophy teaches impermanence. Over a period of time Hinduism became a designator and distinctive to India of the religious ideas and practices, primarily religious rather than cultural or geographic, thus adding a new layer to a tradition that was elaborated with practice and doctrines. Hindus accept the multileveled, organic and pluralistic nature of traditions, and their views are expansive from the belief that reality or truth cannot or is not encapsulated in a creedal framework. They believe that truth needs to be sought from multiple sources and good thoughts can come from all sides. Thus anyone's view of reality or truth is conditioned by the specificity of gender, age, time, consciousness, geography and attainment stage. That being so, the broader view and multiple perspectives create tolerance for religions as the highest virtue. The fabric of Hinduism is practice, regardless of the vast diversity and the common thread is the behavioral connections through rituals, tradition and societal values. Another narrative is of the single community discourse, storytelling of divinity, human experience, forms of love, struggle, law and order, chaos, duty and play and many different genealogies. This narrative stimulates righteous behavior and the feelings of members of a single imagined family. Though Hinduism depicts realities in multitude, the Hindus

hold this complex structure together affirming them, continuing and accelerating the definition.

In society collective ideas are not just a process that is intellectual merely but also is connected to social movements. Needless to say, that no sole determinant can bring in social change and any social process is often intertwined between economic, political and technological processes without fixed boundaries. Human beings are innovative and keep improving ideas and practices and thus this paper focuses on the spiritual capital and the culture sensitive leadership practices that can enhance the multitude of change and institutionalizing change through collective ideas with differentiation amidst innovations, conflict, competition, cooperation, tension and adaptation. This change can be diverse, short term or long term, cyclic or unidirectional, varied or interconnected, regular and structured.

Hinduism is pluralistic in nature and traditions, expansive in the belief that truth cannot be proclaimed and it has to be sought from multiple sources. A spiritual master or Guru is considered having a superior authority and is conditioned from specificities of gender, age, state of consciousness, social location, geographic location and the attainment stage or level. These multiple perspectives of Hinduism help a broader view of religion and affirms the value of tolerance as a religious virtue. The religious identity emphasizes continuity and existence that is eternal (Sanatana) encompassing obligations, traditions, ideals (dharma), and obligations that are beyond the concept of thinking religion as primarily a system of beliefs. A common thinking is that Hinduism is a way of life than mere religion. The tradition is that of doctrines, practices, society, storytelling and devotion related to one another and like beads in a garland, with each bead with a history and tradition. The doctrines are anchored to Knowledge (Veda), the core, the practices are unique and diverse, with ritualistic behavior with commonalities of worship like honouring the deities, echoeing hospitality and honoring guests, generosity to life and possibilities. Society is another bead in the garland to organize life as a social being, a social structure as classes of society, Story is a dimension to draw Hinduism to the community through discourses connecting the divine and the humans through various experiences, forms of love, struggle, duty and play, righteous behavior, social inequities to map experiences into believing the imagination as members of a single family. Devotion the next bead

unites Hindus through sharing or devotion (bhakti) sans genders and social classes.

Exemplary Corporate Manifestations: India has been resilient in the volatile global situations and has consistently grown steadily and has secured a place among the fastest-growing economies in the world. The growth rate was at a rate of 6.8% during 2018, and is progressing. The corporate sector has played a huge role in India's development and to the phenomenal growth since the shift to open economy. A country with demographic dividend and the expansion of working-age population and rapidly changing employment landscape, skill initiatives are in place the private sector is playing a crucial role to meet this challenge. The corporate sector has also strong links to higher investment in education and also to bridge the skill gaps through vocational training, skill facilitation, private public partnership, educational institute partnership and also to create a future ready workforce that is talented and skilled. The more the investment, a multiplier effect is created in the economy, direct and indirect employment, and also future development. Public-private partnerships are crucial to channel funds to development. India went through a technology revolution, transformed industrial production and manufacturing, through new initiatives, new business models and sustainable growth. Innovation and entrepreneurship ensures the future progress in Indian economy and corporates are integral part of it, and private sector provides investment for infrastructure, modern technology, and research and development in India. India has emerged as a significant player through entrepreneurship and converging technology.

9.9.2 Muslim Aspects - The Example of Nigeria

With around 53% of the total population, Islam is the largest religion in Nigeria (Statista, 2023). Islam is believed to have arrived in Nigeria during the 7th century when Muslim traders from North Africa and the Arabian Peninsula began travelling to the region for their trade activities (Quinn, Charlotte A., and Frederick Quinn, 2003). These traders who were very instrumental to the commercial activities in the region paved the way for the spread of the Islamic teachings and practices across the region over time through their activities. Fast forward to the 14th and 15th centuries, Islam saw a fast spread especially in the Northern Region owing to the rise of the Hausa city-states like Kano, Gobir, and Katsina and with the establishment of the

Sokoto Caliphate in the 18th century by Usman Dan Fodio which leads to its widespread acceptance among Hausa people.

The Muslims in Nigeria like many other people with different religions have their distinct values which are very central to Islam in which they believe, and therefore integrate it in their various works and workplaces. Some of the few amongst others include; the Tawheed (Oneness of Allah), Adl (Justice), Amana (Sincerity and Trustworthiness), Ihsaan (Benevolence), usury (Riba), positive attitude to work and importance of work. These values extend beyond the realm of personal spirituality and religious practices, having a significant impact on the Nigerian economy and can be observed in various aspects of Nigerian companies as well. For instance, Tawheed emphasizes God's oneness, which has instilled in the Muslims a great sense of unity through spiritual connection and a commitment to living based on divine principles. Hence, providing them with strength and resilience in the face of adversities, fostering a sense of community, belonging and solidarity among them across diverse ethnic and cultural backgrounds and in whatsoever different settings (Nasr, 1993). Justice (Adl) a core value also highlighted in the previous paragraph emphasises fairness and justice for all and manifests in several companies in Nigeria and the Nigerian economy as a whole through policies, practices and initiatives promoting inclusion for all (Ibrahim and Abubakar, 2016). For instance, the Microfinance Policy and Regulatory Framework implemented by the Central Bank of Nigeria (CBN, 2005) ensures that everyone indifferent of their socioeconomic background has access to financial services. This policy and commitment to equitable access promotes economic activities, and empowerment and reduces disparities in the economy.

However, the concept of “Ihsaan” which signifies the disposition to be kind and do good to others is evident in many Nigerian companies. Many businesses have incorporated and upheld this value into their works and ethics, a clear-cut example is the Tony Elumelu Foundation operating under the aegis of the UBA Group. The foundation provides grants and training to entrepreneurs across Africa regardless of their socio-economic background, still here reflecting the “Adl” values. This commitment to social responsibility has created millions of jobs and has impacted the lives of millions demonstrating the ethical application of Muslim values in businesses. With time these values have spanned over to almost every sector of the economy guiding ethical business conduct, charitable activities,

financial transactions, and investment decisions. The concept of "Riba" emphasizes the prohibition of charging or paying interest which leads to the development of Islamic finance products by the financial services providers. For instance, takaful insurance, a cooperative insurance system based on the Islamic principles of Adl Ihsaan and shared responsibility, is being offered by Nigerian insurance companies (Fadun, 2015). Some banks in Nigeria also operate based on the Sharia (Islamic law) principles, offering services that do not involve interest and also adhere to the ethical investment guidelines of Mudarabah and Musharakah which promote shared risk and profit. To accommodate all these values, the Nigerian Stock Exchange also introduced the NGX Lotus Islamic index in 2009 to cater for Muslim investors who want Sharia-compliant investments. These reflect the Muslim principles of shared responsibility and cooperation in economic activities (Fadun, 2015). Lastly, "Amanah" emphasizes honesty, trustworthiness, and fairness in business dealings (Septiarini, 2017). These principles are deeply rooted in the Nigerian business culture, where companies strive to uphold transparency and trustworthiness to build long-lasting relationships with employees, customers and partners. This value/ethic is obvious inside the first Islamic Bank in Nigeria, Jaiz Bank, regarded for its transparency, sharia-compliant offerings and moral banking practices has continually acquired the "Most Ethical Bank in Nigeria" award from Euromoney magazine. This has further strengthened the reputation of Islamic banking in Nigeria building trust and loyalty among diverse customers. Conclusively, Muslims are encouraged to work by Islam, which makes it obvious that those who produce, and work are superior to those who idle away their time or limit it to mosque worship. To some extent, individuals who are able to work harder are held in higher regard than those who are not (Koenig and Shohaib, 2014). This very mindset and the act of togetherness exhibited by the Muslim workers in Nigeria has led to a strong work ethic and dedication to excel in their various workplaces and companies. Companies now more than ever recognize ethical conduct, fairness and compassion towards employees and partners as a result of the emphasis placed on justice and benevolence. Moreover, the financial sector in Nigeria which saw a continuous development of interest-free lending, and investment practices has to a large extent been influenced by the prohibition of usury, attracting a lot of investors and leading to the rise of Islamic banking and finance in the country. Islam in addition to these values, provides a standard framework for business ethics and social responsibility as a Business,

this is contained in the wide range of topics covered in the Holy Quran covering social welfare, business transactions, and contracts. This guidance has helped to shape the way that many Nigerian businesses operate, and the integration of Muslim values into the Nigerian business landscape showcases a unique interplay between faith and commerce in the country promoting fairness, benevolence, and trustworthiness, thereby contributing to a more ethical, just, and prosperous business environment and economy.

Exemplary Corporate Manifestations: Building on the Islamic historical overview and its actual economic influence in Nigeria, spirituality has also permeated the corporate landscape, shaping organizational practices and fostering a unique business culture. Incorporating these Islamic values into the workplace goes beyond a religious practice—it's a heartfelt conviction that work is more than just a job; it's a form of worship, an avenue to serve and wholeheartedly submit to Allah. Khalfoui, 2021 opined that to some extent work is a compulsory obligation for every Muslim and something that must be done with much diligence because Allah SWT in the holy Quran in Suratul Tawbah (9:105) said "Tell ˹them, O Prophet˺, "Do as you will. Your deeds will be observed by Allah, His Messenger, and the believers. And you will be returned to the Knower of the seen and unseen, then He will inform you of what you used to do." With the ultimate goal being heaven, every task is recorded, and the sincere pursuit of honesty and sincerity in all work and endeavors becomes essential. Furthermore, at the heart of Islamic spirituality lies the concept of taqarrub, a continuous striving to draw closer to Allah (Dasti & Sitwat, 2014). This pursuit of spiritual excellence extends beyond personal piety to encompass the workplace, transforming it into a sacred space where every action and interaction is imbued with divine purpose (Al Ghazali, M.,2015). Companies that embrace Islamic values often prioritize social responsibility, aligning their operations with the principles of Zakah, which emphasizes charitable giving and poverty alleviation (Ismaeel & Blaim 2012). This commitment to societal well-being manifests in various forms, from supporting community development projects to implementing zakat-based initiatives that empower underprivileged communities (Alamer, Salamon, Qureshi, & Rasli 2015). The corporate manifestation of spirituality is not merely a set of rules or corporate policies; it reflects the deep-rooted Islamic values that permeate Nigerian society. A testament to the belief that spirituality and

business are not mutually exclusive but rather complementary aspects of a fulfilling and meaningful life.

Ethical Business, Halal Practices and Leadership: Honesty and fair dealings are paramount in Islam. Any form of deception or manipulation for personal gain is strictly prohibited. The religion emphasizes justice and ethical conduct in all transactions, as reflected in the Prophet's (peace be upon him) hadith while reprimanding the dishonest businesses or dealers he said; "Laisa minna man gashshdna" meaning “whoever deceives is not one of us”. This therefore lays the groundwork for businesses grounded in ethical principles. It emphasizes integrity and transparency, actively discouraging practices like bribery, corruption, and exploitation. Additionally, it prioritizes ensuring that all products and services offered are aligned with ethical and legal considerations, fostering a culture of responsible conduct and ensuring that products and services are compliant with Islamic law. Nigerian companies, especially in the financial sector, operate based on Sharia principles, offering services aligned with ethical guidelines of Mudarabah (trustee financing) and Musharakah (partnership in profit). Here, Mudarabah involves a partnership contract where the first party, known as the holder of funds or shahibul maal, provides the capital, while the second party, the fund administrator or mudharib, manages the funds. Profits are then divided based on an agreed-upon ratio. In the event of capital failure not caused by the fault of the fund administrator, the losses are borne solely by the capital holder. However, if the loss results from the fund administrator's fault, the fund manager assumes responsibility (Fatmawati, 2016). On the other hand, musharakah, as defined by Rahayu, Husaini, & Azizah (2016), entails financing conducted by a bank that serves as the funds holder or enters a business partnership with another party. The profits generated align with the initially agreed-upon investment capital. In case of business failure, losses are shared based on the established shareholding ratio. Therefore, the incorporation of Islamic spirituality in Nigerian businesses, particularly in the financial sector, is evident through adherence to ethical principles and Sharia-compliant financial practices, among the notable leading institutions in this are Jaiz Bank, Sterling Bank, and Lotus Bank. By upholding honesty, fairness, and ethical conduct, these businesses have not only align with these Islamic values but has also contributed to a culture of transparency, integrity, and responsible business practices in the Nigerian corporate landscape.

Employee Well-being and Social responsibility: Employee well-being and social responsibility are intertwined aspects of Islamic business ethics. Islamic values, emphasizing fairness and benevolence, extend to the treatment of employees, as reflected in the Hadith of Prophet Muhammad S.A.W. Ibn Majah (2433) reported, "Give the worker his wages before his sweat dries" highlighting the prohibition of delaying payment to an employee. Al-manawi (1994) reported in his book Fayd al Qadeer that the command to give it to him before his sweat dries is a metaphor for the obligation to pay him as soon as the job is done, even if he does not sweat, or if he sweated and it has dried. Muslim (1564) and Bukhari (2400) also reported that Prophet Muhammad SAW said; "Withholding payment by the rich is wrongdoing". This obligation to promptly compensate employees is reinforced by the Quran in Suratul Talaq (65:6) "...reward those who nurture children..." These principles collectively underscore the commitment to employee welfare. Simultaneously, as highlighted in the previous pages some of these ethics initiative like the Tony Elumelu foundation owned by the UBA Group, Jaiz Charity and Development Foundation owned by Jaiz Bank, Sterling One Foundation by Sterling Bank, Dangote Foundation owned by the Dangote Industries Limited etc which exemplifies social responsibility supporting educational programs, healthcare facilities, and environmental sustainability, showcasing the profound impact of "Ihsaan" values in creating jobs and empowering communities.

Sadaqah and Zakat: Businesses incorporate the Islamic principles of zakat (mandatory alms-giving) and sadaqah (voluntary alms-giving) into their corporate culture. This culture for the Muslim corporate business majorly stems from the holy Quran, as mentioned by Allah SWT in many instances. For example; Suratul Baqarah 2:267 "O you who believe! Give of the good things you have earned, and from what We have produced for you from the earth. And do not pick the inferior things to give away, when you yourselves would not accept it except with eyes closed. And know that Allah is Sufficient and Praiseworthy." Also, in Quran 3: 92, Allah SWT says "You will never attain righteousness until you spend in charity from that what you love". This involves either donating either a portion of their profits to charitable causes, supporting community development initiatives, or providing assistance to those in need. For instance, some organizations here in Nigeria have what they called quarterly bonuses, end of the year bonuses or profit sharing where they share

the proceeds of the business with their employees. Therefore, to a large extend spending one's riches is considered a good action because it is extremely helpful for both the recipient and even the donor spiritually.

Conclusively, the corporate manifestation of spirituality in Nigeria reveals a profound influence of Islam on the country's corporate landscape. Beyond the pursuit of financial success, businesses and organizations are deliberately integrating Islamic values into their practices. This integration extends beyond profit margins and shareholder value, aiming to contribute meaningfully to the overall well-being of society. In doing so, these companies are not merely driven by economic objectives; instead, they are active contributors to a higher purpose, aligning their endeavors with the ethical and moral principles derived from Islamic teachings. This dual commitment reflects a holistic approach where financial success coexists with a genuine dedication to societal welfare, showcasing the broader impact of businesses grounded in spiritual values.

9.9.3 Christian Aspect

The Example of Germany: The historic roots of the influence of spiritual capital on capitalism in Germany can be traced back to the Protestant Reformation in the 16th century. The Protestant Reformation was initiated 1517 by the Augustinian monk Martin Luther, who came up with a completely new philosophy of life. Luther´s new ideology lead on the one hand to a split of the traditional Catholic Church into a Roman-Catholic and Protestant-Evangelical part, on the other hand to a different view on the economic behaviour of the people. While the Roman-Catholics still followed the traditional direction that the accumulation of wealth is a sin, the Protestants, based on Luther´s definition of labour as a “calling”, were able to develop their businesses or work and fulfil God´s will. Luther´s ideology was further developed around 1535 by John Calvin, a Swiss reformer who combined labour with an ascetic lifestyle. The more successful the people were and the less money they spent on themselves the more was this constancy of lifestyle seen as a pure life before God. This ascetic Protestantism was, according to the German sociologist Max Weber, the basis for the Spirit of Capitalism (Weber, 2005, p.104). To understand the meaning of that phrase, Spirit as well as Capitalism cannot be applied literally but needed to be interpreted. Spirit in this context means cultural accepted habits

by the society in general, that create a basis for a capitalistic behaviour. Likewise, the term Capitalism describes an ethical based aggregation of money and a constant re-investment of the profits into the business. The simple collection of money by a single person to meet just selfish needs has nothing to do with the ideal type of a capitalistic entrepreneur (Weber, 2005, p. 33). The ascetic Protestantism, for example of the Calvinists, laid therefore the basis for the Protestant Ethic that provided a guideline for the people to live a self-controlled and rational life (Guttandin, 1998, p.140). The ascetic compulsion to save - capital was not allowed to be spent on pleasure and consumption - led to the accumulation of capital, which was thus willed by God. As a result, the Puritan conception of profession and asceticism had a direct impact on financial performance and the development of capitalism. However, the full economic effects could only be seen later, when the direct religious influence turned more and more into a cultural habit. Over the years those cultural habits and values solidified especially in protestant regions all over Europe. Supported was this process by the upcoming secularisation with its rational worldview and its critical position against religion. With the Prussian Kings and their mercantilist approach economic success was something positive and good for the state. Based on their pietistic belief, they created a work Ethic that ended up in the so-called Prussian Virtues. Making profit stood in the middle of Prussian policy and led to economic stability and prosperity. (rbb, 2023). Even during the time of the industrialisation, which brought a lot of critical voices and opponents against capitalism, the attitude of most of the Germans against work and capitalism did not change. After two lost World Wars and the breakdown of the Prussian empire as well as the National socialist regime, Germany was completely destroyed in 1945. With the permission of the victorious powers Germany was able to create a constitution based on liberal democratic values and could reconstitute as a Democracy in 1949. Through the intrinsic work ethic, and the idea of some bright minds, Germany invented furthermore a new Economic system, the “Social Market Economy” that helped the country to recover very soon.

Based on the experiences of the Great Depression, a rise of communism and fascism, in the 1920s a group of thinkers around Walter Eucken and Franz Böhm, an economist and a lawyer at the University of Freiburg, developed a new school of thought called “ordoliberalism” in the 1930s. They focused on reforming the existing

capitalist order because they feared that some market actors could accumulate too much power without institutional regulations. Eucken and Böhm argued that without regulations the accumulation of power has a severe negative impact on consumers or competitors but it can also threaten democracy itself. Therefore, the ordoliberals emphasized the need for regulatory authorities to protect the free markets and preserve free competition (Lenz, 2021, p. 4). The ordoliberal thinkers united in the so-called "Freiburg-Circle " developed a model which, in contrast to the laissez-faire capitalism and the planned economy, put state, market and society as an interdependent triad into the centre of their thoughts. This model was the basis for the reorientation of the German economy after World War II. Together with members of the Freiburg Circle the German economist Alfred Müller-Armack developed the model of the "Social Market Economy" that seeks to bring the ideals of justice, freedom, and economic growth into a reasonable balance. However, the Social Market Economy was perceived and interpreted in different ways; it facilitated successful, efficient economic action and at the same time stabilized and expanded the fundamental system of social security (Evangelical Church of Westphalia, 2010, p 12). The social concern of the Social Market Economy can be understood as a genuinely ethical i.e. normative concern. Market and competition are a means and not the goal of societal shaping. The societal aim is a humane order conducive to a successful life of every individual. Hereby the specifically ethical meaning of the Social Market Economy is to be understood in terms of the Christian tradition. Without turning to the religious roots of Western civilization building a "civitas humana" was not thinkable. Wilhelm Röpke, one of the fathers of the Social Market Economy stated in this context: "Social Market Economy is not everything. It must be embedded into a higher context" (Röpke, 1979, p 146). The higher context can be found in the Christian Religion. Based on the principles of the Catholic Social Theory and the Protestant Social Ethics the conception of the Social Market Economy is closely linked to a Christian way of life. Müller-Armack pointed out the "irenic" character of the model, when he stated that the model of the Social Market Economy is not 'Christian as such' as no social or economic system can ever be, but it is 'filled with Christian spirit' and can be interpreted by Christians as an object of their responsibility (Müller-Armack, 1955, p. 99). In this sense the Social Market Economy is an economic order that is able to balance individual- against public interests. Besides political freedom it is one of the fundamentals of the Social Market Economy that the market economy

system requires clearly defined areas and clear regulatory conditions to preserve the freedom of all market participants, facilitate successful economic action and create a social balance. These prerequisites are based on state action, which has to create and guarantee a framework of the market economy system. In this sense, a 'strong and neutral state' is a necessary prerequisite of the Social Market Economy (Rüstow, 1932, p. 148). The attributes 'strong' and 'neutral' designate the requirements for state action to set a framework for economic action in a sovereign manner, without advocating certain interests, and to intervene in the economy under certain conditions. This understanding of the state is unmistakably also driven by the conviction, embedded in Christian traditions, that the state represents the common good and ranks therefore prior to individual stakeholder groups (Evangelical Church of Westphalia, 2010, p 13). It is therefore a clear refusal to Laissez-faire capitalism which leads to individualistic tendencies and social imbalance. In this context the concept of the Social Market Economy demands also an active social policy that harmonises the targets of freedom with the target of social justice, as it is laid down in the protestant social ethics (Müller-Armack, 1959, p. 16). The Social Market Economy laid the basis for the quick economic recovery of Germany after World War II and made the country one of the worldwide leading economies over the last years. Having a look at today's world with globalisation, financial and economic crisis, war, pandemic and climate change, the Social Market Economy is facing major challenges. Especially the financial and economic crises showed the weakness of the system. The global liberalization and deregulation of the financial markets in the 1980s entailed a completely new market with huge monetary volumes but without political and ethical restrictions. As a result, these new financial markets operated in isolation from the real economy and lost the connection to ethical, social, ecological, or political dimensions of economic activity (Evangelical Church of Westphalia, 2010, p 21). Therefore, national regulatory measures showed no effects and the financial markets detached from the basics of the Social Market Economy and turned into a pure capitalist market economy without a moral ground. Thus, the lack of control and an economic thinking that is based on self-interest and profit maximisation is causing ecological threats, social polarisation as well as new emerging risks concerning the supply of common goods. As the pure market economy has caused this economic and social crisis, it is not able to solve this problem out of itself. Without the promotion of an ethical behaviour that respects human dignity and common

goods, as well as a set of rules that sanction unfair behaviour and noncompliance, there will be no solution to the crisis. In this context, the concept of the Social Market Economy promotes a 'strong' and 'neutral' state that is able to establish a regulatory framework oriented towards the common good even when faced with powerful social groups. The nation state however, as a previous guarantor of this concept, will no longer be able to fully perform this task in a globalized world. That is why new political regulatory patterns will have to be devised at a transnational level. In this regard, the Social Market Economy is currently facing a big challenge. The examples of the financial and environmental crisis have shown in a particularly impressive manner that the nation state no longer constitutes a sufficient framework, because the fundamental ideas and stimuli of the Social Market Economy must be implemented at the international level. Regional economic blocks, in particular the European Union, form a key link between the regional and international levels. In this respect the policies of the European Union must be further developed from a Social Market Economy viewpoint (Evangelical Church of Westphalia, 2010, p 23).

The Example of Nigeria: The quest for the worship of the true God has given rise to the formation of numerous religions. According to Qayyum, Anjum, & Sabir, (2020), the global count exceeds 1000 religions, among which Christianity is distinguished by its distinctive system of beliefs and practices. Christianity is practised in over 120 countries in the world. Christianity is the second largest religion in Nigeria after Islam in terms of the population of the followers. While northern Nigeria is predominantly Muslim, the south is dominated by Christians. The Christian religion has evolved for nearly one and half centuries since the arrival of the Roman Catholic followed by the protestants (especially Anglican, Methodist, Baptist, and Presbyterian). The introduction of Christianity to Nigeria is often attributed to European missionaries who arrived in the 19th century (Mepaiyeda, & Popoola, 2019). British and Portuguese missionaries played a significant role in spreading Christianity in Nigeria. For instance, some of the channels through the spread of Christianity in Nigeria include; teacher training, pastoral training, evangelism, and women's fellowship among others channels. Similarly, Samuel Ajayi Crowther, a former slave, who later became Nigeria's first African bishop played a pivotal role in spreading Christianity through his translation of the Bible into Yoruba (Hargreaves, 1965; Iyer, 2010).

The missionaries came with the colonial masters and it was easier for them to introduce it in southern Nigeria because the North already was dominated by Islam so it would have been difficult to introduce a new religion there without facing backlash.

Before Christianity, southern Nigeria, which is made up of different ethnic groups including the Youbas and Igbos which are the major ones, were highly spiritual as they were engaged in traditional religious practices through which they communicated to God through their ancestors. However, the introduction of Christianity became widely accepted in Southern Nigeria thereby displacing traditional religious practices within 100 years. Although, there are still communities that have remained steadfast in their traditional religion till this 21st century. The acceptance of Christianity was based on the new form of spirituality and social capital that came with it. Individuals would commune with God and grow spiritually with the hope that an eternal life that is better than life on earth awaits one. However, the relationship that an individual would have with people around him including those at the workplace is one of the prerequisites for accessing a greater reward. Christians are highly motivated by their religious leaders whom they constantly consult before they embark on any serious venture like starting marriages or starting a work or business, among other things. They are encouraged by the prayers and counselling they receive from them and thus try to be of good behaviour in workplaces, business relationships, and interactions with the larger society in non-discriminatory ways for Christians and non-Christians alike.

Interestingly, the mid-20th century saw a surge in Christian influence, especially with the rise of charismatic and Pentecostal movements (Asadu, 2021). These movements appealed to a wide audience, emphasizing spiritual experiences and personal transformation. Mega-churches, such as the Redeemed Christian Church of God, grew rapidly, becoming influential both nationally and internationally. Today, Christianity is a major religious force in Nigeria, with a diverse range of denominations, including the Catholic Church, Anglican Communion, Baptists, Presbyterians, Methodists and numerous Pentecostal and charismatic groups. The Christian community has played a role in social and political spheres, advocating for social justice and contributing to education and healthcare (Adeyanju, Babalola, & Emmanuel, 2017). The history of Christianity in Nigeria reflects a dynamic interplay between religious

faith, cultural adaptation, and socio-political dynamics, shaping the nation's religious landscape.

More interestingly, the advent of Christianity in Nigeria has helped in various aspects to promote economic growth through a reduction in the unemployment rate and poverty rate, infrastructural development and good work ethics (Emecheta & Hart, 2019). For this reason, studies have often ascribed an important role to religions and their significant impact towards the sustenance of inclusive growth. Furthermore, Christian churches actively engage in industrial development, playing a noteworthy role. Beyond government involvement, churches today contribute to rapid industrial growth by establishing or investing in industries, thereby raising essential funds. In the realm of banking, churches make significant contributions to overall economic development (Qayyum, Anjum, & Sabir, 2020). Whether there is an interplay between Christian religious capital and financial performance or not requires empirical evidence. There are many church-run schools from early childhood care education to university education. Paradoxically, the schools run by the churches in present-day Nigeria are the most expensive and almost unaffordable to most of their members compared to the ones brought by the early missionaries with free education which most of the church owners benefitted immensely. Though the church-run businesses have been performing very well financially, this may be partly a result of spiritual capital since the employees are mostly church members and partly due to the desire to make a profit.

Corporate Manifestations - Encounter with a Living God: In Christian spirituality, the spirit we are talking about represents a personal counterpart and spiritual experiences therefore stem from a "You God with me man". The Christian spirituality has its core in the "encounter" with the living, personally tangible God as a counterpart and dialogue partner. The encounter with the living God supports the emotional certainty of spiritual knowledge, which is embedded in the normative rationalities that differ from denomination to denomination. The historical address to man through God's Word in the Holy Scriptures as the essential basis of Christian ethics gets alive today through the spiritual experience that God continues to reveal himself and allows man to participate in his counsel. The drivers of Christian spirituality are not self-discovery or self-realization, but finding God and finding meaning from God's word in the real world

towards the highest meaning of man: the confident hope of eternal fellowship with God himself. Christian spirituality points towards a consciously chosen willingness to hear from God, to receive knowledge and to experience communion with Him.

Commandment of Love: All of this takes place within the framework of a concrete normative rationality that is derived from the Holy Bible and creates rational certainty about the goodness of these norms. The confessional normative rationality includes God's mandate to love him with all our strength, to love our neighbor as ourselves and even to extend our love to our personal enemies. God's Spirit enables this devotional love, concretizes it for the individual context of experience and fills the human heart with the emotional certainty of being surrounded by God's love. (Bolsinger 2019)

Prayer Community and Cross-cultural Values

In the corporate environment, Christian spirituality manifests itself above all in the three aspects of community, intercession and prayer. Of course, it manifests itself in actions and decisions based on Christian values, but these actions are spiritually nourished by communion with God the Father, Jesus the Son and the Holy Spirit together with other believers in the company and beyond. This fellowship is the source and place of intercession for each other, for the company, for competitors (due to the commandment of love) and equally for listening to prayer. This is where God, who is spiritually experienced as a living and speaking God, can speak and give impulses for action, bringing values into a good order of priority. Christian values include the triple commandment of love: to love God, to love one's neighbor as oneself and to extend this love also to enemies. Above all, these unique Christian values cannot be fully grasped or implemented without spiritual experience and without the assurance of empowerment by God's Spirit. Biblical texts allow value portfolios to be derived and have the advantage that they can be clearly assigned across all languages through their unambiguous positional information and are already available in various languages around the world. (Bolsinger 2019)

An exemplary value portfolio was worked out in the normative rationality of Holy Scripture, which was derived from biblical basic texts across denominations and expanded with further important items from spirituality research in the context of the publication of

Bolsinger (2019): “The Decalogue and the Sermon on the Mount or Field Speech are core texts that are recognized and known throughout the world and across confessions. The Sermon on the Mount in particular is addressed to all people who hear and accept Jesus' word and actively combines this word with the exemplary prayer in the Lord's Prayer as an expression of Christian spirituality. Thus it is an example of biblical-Christian normative rationality that comes to life in the present day above all through Christian spirituality. The basic concerns of the Decalogue describe the relationship between God and man and require to secure freedom in human community with concretely described behavior. Honesty and integrity, as well as massively moving values in an economic context, can easily be derived from the Decalogue. Love of God as a special form and source of love is the basic requirement of God in Deut. 6,5. In Luke 6:27 and following, Jesus further concretizes love for one's neighbor, including enemies, and leads to the golden rule: "What you expect others to do, so do they." Thus the double commandment of love for God and neighbor is the basis for all further normative ideas, as Jesus himself explains in Mt 22,36-40. In addition there are other passages in the Holy Scriptures which are important for the creation of a values portfolio. Since communication with God's Spirit as applied spirituality can create emotional certainty for value judgments and meaningfulness according to the model presented above, values from the naming of the gifts of the Holy Spirit, the Spirit of God, in Isaiah 11:2 ff. are essential parts of a Christian-based value portfolio: wisdom, insight, counsel, strength, knowledge and fear of God, justice, faithfulness. The list from Galatians 5, 22 ff. is supplemented by the fruits of the Holy Spirit that we could call “applied Christian spirituality” with the values love, joy, peace, long-suffering, kindness, goodness, faithfulness, gentleness and self-control, abstinence, modesty. Mercy is derived from the words of Jesus in Mt 25:40 and the responsibility for one's own human body in the form of health as a value is based on the body as the temple of the Holy Spirit, as Paul points out in 1. Co 6:19. In the tradition of Thomas Aquinas, the four cardinal virtues could also be part of a worldwide known portfolio in christian communities: Prudence, justice, bravery, temperance. (Pasnau 2023). These were supplemented by the first letter of Paul to the Thessalonians with the three divine virtues in 1 Thess. 1:3: Faith, hope and love.

9.10 Outlook

This chapter paper spans a thematic framework between spirituality and spiritual capital in organizations. Specifically, the economic relevance of hinduism, buddhism, islamic and christian aspects were examined. On the one hand, this is done by means of a religious-theoretical localization of the respective religion. On the other hand, behavior-influencing aspects were identified in the respective religious characteristics that are corresponding to spiritual capital. The special feature here was that the explanations of the respective religion were elaborated by a person who feels that they belong to this religion. The central finding from this publication was a cross-religious relationship to spiritual capital. On this basis, the identified cross-religious relationship to spiritual capital is to be transferred into a theoretical model in a subsequent publication. Therefore, the conceptual understanding in this paper should be implemented in a theoretical model to demonstrate the relationship between personality, vision, calling and membership, spiritual well being, personal and company values, corporate social responsibility, increasing the bottomline of the organization for leaders' and followers'. It has to be checked whether this theoretical model predicts organizational transformation, strategic management and can be modeled for universal application.

Based on this agreement on a theoretical model, which integrated the herby showed findings, we recommend an empirical research to investigate the resilience of the model in an economic environment. Therefore, in a further project a general research design shall be derived in a follow-up paper that can empirically investigate the relationship between spiritual capital and organizational performance. With empirical results there will be the possibility to get a closer look at the different forms of spirituality in companies, their influence on leadership and employee behavior and practiced values. From there on we believe to find new results for a better understanding regarding the link between spiritual capital in companies and their performance in the marketplace.

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