

# Journal of International Doctoral Research

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# **Journal of International Doctoral Research**

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## **INTRODUCTION AND WELCOME**

### **Our vision:**

The International Doctoral Research Centre was created over two decades ago, by like-minded researchers from across the globe who wish to promote excellence in research. The IDRC journal consequently represents our multi-national effort to integrate various organizational disciplines into a coherent body of knowledge and facilitate the emergence of management and economics as an interdisciplinary domain of study. The journal seeks to provide a forum for interdisciplinary approaches and research traditions. We aim to showcase an international perspective that gives voice to doctoral and post-doctoral research and scholars in all regions of the world.

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## **Introduction**

Welcome to our 10<sup>th</sup> year of JIDR publications, an honor to be the guest editor again this year, sincere thanks to the JIDR board and our team of peer reviewers whose work we rely on to ensure the most scholarly levels of publications.

As was written last year, Our lives as researchers are constantly changing, now more than ever as we navigate global developments such changing geopolitical shifts of power, global unrest and conflict, twin transitions with both digitalization and sustainability in focus, and not least harnessing, the value of Artificial Intelligence, and big data. As we predicted last year, we evolve as researchers and learning facilitators helping the next generation prepare for work life with hybrid work, remote offices and community building in new ways. We see the importance yet also the challenges with digital advances in teaching technology, remote meeting tools and state-of-art digital classrooms, whilst maintaining the focus on physical presence for community building in our work-life when it is the best solution for new knowledge building.

During the last decade, the **Journal of International Doctoral Research (JIDR)** has been honored with an important accreditation for all the hard work done by the Journal's authors, editorial review board members and editors, as the journal was given official accreditation status in listings such as Washington Academic Library Index and the Norwegian academic publishing system, amongst others during the last 10 years. Our goal now is to maintain such rankings and continue to seek growth in external recognitions for the JIDR as an open access journal, continuing to develop the impact of our publication in the international research community.

**The JIDR is devoted to a wide range of research themes**, which are all linked to the concepts of organizations and management both implicitly and explicitly. Management research is no longer defined or confined to work and organizational studies. Today, management is at the interface of ways of thinking and acting in all aspects of our lives. The very history of management scholarship is rooted in the world of work and with concern for employee's well-being, as workers are not simply units of capital production, but also human beings.

In this issue we present a number of new studies, which use a management lens to look at some **fundamental questions societies face today**: questions relating to **corruption challenges; convenient billionaire refugees as economic emigrants, governmentality, Industry 4.0 and Lean management in industry, corporate governance and value creating boards and new thinking on project life cycles**. Hence, with mission-based research in focus for this year edition of our journal, we are proud to include outstanding scholars from many countries in this special edition. We very much appreciate your support as we strive to develop the JIDR as an authoritative journal, which publishes innovative research in an international context. The success and sustainability of our journal depends on the number of quality manuscripts submitted for peer review. Our acceptance rate is on average between 40 % and 50 % each year. Consequently, we encourage you to invite colleagues to consider the JIDR as an excellent publication channel.

All submissions by prospective authors will be handled efficiently by our blind peer review process and will also be provided a similarity screening check. One of the great benefits to all authors who submit manuscripts to the JIDR is that no matter whether their work is accepted for publication or not, is detailed one-to-one feedback on both content and language is always given. These are high quality, helpful reviews that are designed to help authors improve their research methodology and manuscripts further. As in prior years, we would like to take this opportunity to thank the JIDR advisory board members, reviewers, and authors, who support the journal and help make it so successful. We greatly appreciate your support and readership. With warm regards, Dr Eric Balan Head of Academic and Talent Development, AsiaTech Business School, our guest editor previously, sincere thanks for helping JIDR expand its scholarly network.

Kind regards, Guest Editor,  
Gillian Warner-Söderholm  
Department of Business, Strategy and Political Science , University of South-Eastern  
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## **Governmentality of mega projects in Iceland: "...it's all about people"**

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### **Abstract**

This study aims to explore the role of governmentality in executing large, transformative endeavours, known as mega projects, in Iceland. Governmentality, in this context, refers to the behaviour and attitudes of managers toward those under their supervision. While governance in bigger societies has been extensively studied, this research is pioneering in Iceland, offering insights into mega projects within a small nation.

The study delves into distinct aspects of governmentality by analysing four projects, all considered significant by Icelandic standards, spanning up to 22 years in preparation and implementation. Data was collected through twelve semi-structured interviews with key (project) managers.

The results reveal that governmentality in executing large and complex projects in Iceland comes to light through three main themes: project organization, project culture, and project image. Governance in these cases fosters trust between governance and staff, and heavily relies on the attitudes and behaviour of owners and managers. Effective communication promoting transparency and conflict resolution without repercussions is vital. These findings align with the discourse within project management, indicating that soft factors, such as management skills, play a significant role in project success, often surpassing the influence of hard factors like management practices.

**Keywords:** *governmentality, project management, mega projects, Iceland*

## **1. Introduction**

An endeavour will need a specific type of administration when it affects almost everything and costs a lot of (also) public money. Think of a project like the Panama Canal, which reshaped global trade; think of the Three Gorges Dam in China, which is one of the world's largest power stations; think of Hartsfield-Jackson Airport with over one hundred million passengers a year. All these one-time endeavours were mega projects. Mega projects have received attention due to their vast impact on societies and have been called to be managed better (Flyvbjerg, 2017).

What once used to be a rare exception, today mega projects are more and more common (Müller et al., 2017), and are forecasted to grow in numbers (Barthel and Vignal, 2014). Megaprojects can bring profound changes to the communities where they are implemented (Nourelfath et al., 2022; Montrimas et al., 2021). However, the complexity and size of these projects can also lead to major mistakes during their implementation (Müller-Mahn et al., 2021). Mega projects are under scrutiny due to their excessive cost and wide-ranging effects on society. As a result, it is important to focus not only on the so called “hard” components of attaining the goal but also on other factors, such as leadership, which are key success factors. Recently, governmentality – one of those “soft” aspects of management – has been identified as one impacting success factor in mega projects (Müller, 2016) in addition to the typical view on project management as a set of tools and techniques, enabling to plan and deliver the result (Bourne, Bosch-Rekveltdt, & Pesämaa, 2023).

Governmentality is the human side of governance and is concerned with what those in governing positions think about their role as governors (Müller et al., 2019). In this regard governmentality implicitly relates to the (cultural) values and its manifestation is context dependant, as values are beliefs originating from a specific environment. Governmentality of projects brings about yet another level of complexity due to its temporary nature.

Based on the information provided above, the research presented in this paper investigates the governmentality of four mega projects in a specific cultural context – namely, Iceland. Megaproject governmentality is a topic that needs additional research in order to provide a better understanding of the particulars of cultural influence.

Societal culture is “the collective programming of the mind” (Hofstede, 1991, p.5) with profound impact on our beliefs regarding what should be done and how it should be done. Societal culture in Iceland is commonly characterized by the “þetta reddast” (“it will sort itself out”) phenomenon (Sigurdardóttir, 2013; Snaebjornsson, Edvardsson, & Littrell, 2017), prominent levels of trust (Vilhjeldsdóttir, 2020, p.iii; Arnardóttir & Minelgaite, 2022), and inclusion and consensus orientation (Snaebjornsson, 2016).

Therefore, the research question is: *How is governmentality manifested in mega projects in Iceland?*



To address this question, this study will examine the decision-making processes, governance structures, and cultural factors that influence the execution and outcomes of mega projects in Iceland.

## **2. Literature review**

### **2.1. Mega projects**

Mega projects have been described as a large-scale infrastructure and/or development initiatives characterized by high costs, immense size, complexity, and significant economic, societal, and environmental impact on a region or an entire country (Flyvbjerg, Holm, & Buhl, 2002). These projects require substantial investments – exceeding \$1 billion or even reaching one trillion and more USD (Miller, Lessard, & Sakhrani, 2017, Brookes and Locatelli, 2015). In addition, mega projects demand a long timeframe, pose substantial risk and uncertainty, and an extensive engagement of diverse stakeholders with different objectives for the project, its output, and the business objectives (Flyvbjerg, Holm, & Buhl, 2002, Turner & Zolin, 2012). All these characteristics call for different project management approach, hence categorizing mega projects as different kind of species in the world of projects (Flyvbjerg, 2017).

The flow of global organizations and financial capital (Zhao, 2006), the development of engineering technology, and the globalization of culture and intellectual elites (Olds, 2001) have been main contributors to increasing number of mega projects and its construction density, which has hit the highest point in history. Mega projects enjoy unprecedented in the contemporary era attention of societies (Jia, Yang, Wang, Hong, & You, 2011). Since 1990s increasing global competition led mega projects to serve yet another purpose – as an important tool to lift the political and economic status of certain countries in the global arena (Jia, Yang, Wang, Hong, & You, 2011). For this reason, research on mega projects withing specific cultural context of certain society is particularly interesting, as it unveils the meaning and impact of change brought by mega projects to society.

Certain tension surrounds mega projects. On the one hand, these projects come with societal and political expectations as to the value they will deliver and their implications for society as a whole. Hence, demand for clarity in communicating project goals throughout planning and execution phases to the public. On the other hand, megaprojects often start without precisely defined goals and without a detailed knowledge of how the project will progress or the outcomes will be delivered due to the size and complexity of mega projects (Bourne, Bosch-Rekveldt, & Pesämaa, 2023). In this context, the need for guiding management structures emerges, and brings the attention of the top managers to governance and, more recently, to governmentality.

### **2.2. Governmentality of mega projects**

Desirable impact of corporate governance on organizational outcomes is well-documented in management literature as means to improve performance, reduce the risk for stakeholders, attract investment capital, and increase profitability and long-term

value (Mishra et. al., 2001; Kwak, 2003; Black et al., 2003; Spanos, 2005; Khumani et al., 1998).

Since 2005, governance has been also seen as an important factor in project success, which is defined as an achievement of combination of objective and subjective measures, manifested in the success criteria and measured at the end of a project (Biesenthal and Wilden, 2014; Müller & Judgev, 2012). Therefore, project governance, coexisting within the corporate governance framework and evolving around “the use of systems, structures of authority, and processes to allocate resources and coordinate or control activity in a project” (Müller, 2009; Pinto, 2014) is an increasingly researched topic in project management field today. Empirical and conceptual studies suggest that governance is an antecedent variable of project success, therefore present before individual project is launched and during the whole project life cycle (Bekker & Steyn, 2008; Joslin, & Müller, 2016).

However, recently the interest of researchers began to focus on the relationship between governance and governmentality in relation to project success (Müller et al., 2017). Müller’s (2016) research unveiled that governmentality plays an important part in project success, as it influences how governance is implemented. In other words, governmentality is the human side of governance, just as leadership is the human side of management (Müller et al., 2019). Müller's research indicates that governmentality is a crucial factor in managing large projects such as mega projects.

Governmentality is a term coined by the French philosopher Roland Barthes in 1957, where he combined the words governance and mentality. Twenty years later, the French philosopher Michel Foucault reformulated the term from the merging words government and rationality (Foucault, 1991). For Foucault, governmentality was about strategic vision of organization, in a broad sense of this word, as well as the self-management of those involved in management of organizations (Clegg et al., 2002). Foucault’s theorising is considered to have triggered a critical discussion about the management of organizations, their activities and identity (McKinlay, et. al., 2013). It called for answers to the questions such as: How does individual controls himself? How does he manage others? How is manager perceived by people and is it possible to be a better manager?

Mega projects, as the most complex types of projects to manage (Flyvbjerg, 2017), require a strong emphasis on the “soft” side of management – communication, leadership, and more. Governmentality is one of these factors, since it influences the success of megaprojects (Müller, 2016). It is related to a more intangible aspect of management, and thus is more shaped by a specific setting.

### **2.3. Project management in context of societal and organizational culture in Iceland**

Project management is characterized as the most effective way to create a change, by producing a unique deliverable and/or outcome, with means of applying certain tools and techniques, enabling to plan and deliver the result (Bourne, Bosch-Rekveltdt, & Pesämaa, 2023). The effectiveness of approaches and methods employed in project management are mostly derived from the early 1970s, delineated with stable political,

economic, and technological context and the defence/aerospace, pharmaceutical, and construction industries as progress-driving spotlight of the time (Levitt, 2011). However, in today's environment projects are prevalent in various industries and even personal lives of people, causing evolvement of more diverse approaches in managing (Minelgaite & Hinriksdóttir, 2022).

Increasing intensification of projects made notion of temporality and temporary organisations more evident (Vuorinen & Martinsuo, 2019). Furthermore, it started to bring to light realisation that detailed, standard, centralized planning and control in project management process, one-fit-all template of managing projects, need to take into consideration important contextual factors, in order to deliver promises made by projects. Arguably, the most powerful impacting factor in this context is culture, which can be seen as multi-level construct (Snaebjornsson, 2016).

Projects are not managed in isolation and are impacted by team culture (Patrucco, Canterino, & Minelgaite, 2022), organizational culture (Suda, 2007), and most of all - societal culture, as it is "the collective programming of the mind" (Hofstede, 1991, p.5) with great impact on our beliefs regarding what should be done (e.g. project goal) and how it should be done (e.g. project planning and execution).

Therefore, the question is how fitting is the disciplined, process-centric, and front-planning mindset of project management into Icelandic context? An overview of literature on organizational and societal culture in Iceland provide some valuable insights.

Societal culture in Iceland is commonly characterized with "þetta reddast" ("it will sort itself out") phenomenon – a reactive and positive attitude towards problems, optimistic view on life – even in times of crisis (Sigurdardottir, 2013; Snaebjornsson, Edvardsson, & Littrell, 2017). "Þetta reddast," combined with other aspects of Icelandic societal culture, leads to limited reliance on formal rules and structures among Icelanders (Eyjolfisdottir & Smith, 1996), which is a challenge for project management.

Trust is considered to be a key factor in developing economic prosperity of societies, successful companies, and especially in highly performing project teams (Hamilton, Helliwell, & Woolcock, 2016; Zak, 2017; Hakanen & Soudunsaari, 2012). Research suggests that "Icelanders are and have been among the most trusting citizens in Europe" (Vilhelmsdóttir, 2020, p.iii), providing cultural background for favourable dynamics for project teams. Furthermore, research on managing construction projects in Iceland have confirmed the importance of trust in formation, governance, and longevity of project networks (Arnardóttir & Minelgaite, 2022).

Inclusion, personal relationships, quality of life, caring for others, and showing concern for environment are yet other characteristics of the Icelandic culture (Snaebjornsson, 2016). Combined with respect for tradition, and fulfilling social obligations (Minelgaite, Guðmundsdóttir, Guðmundsdóttir, & Stangej, 2018) this cultural context makes stakeholder involvement particularly important. Yazici (2009) found that organizational cultures that are more stakeholder-participative and have shared values are more likely to achieve project success.

Organizational culture and business values in Iceland reflects the societal believes and are defined by optimistic, initiative, risk-taking, and inclined to improvise managers. Informal and democratic leadership style is observed in Icelandic companies observing the need for both – task and relationship orientation (Snaebjornsson, Edvardsson, & Littrell, 2017).

Based on above outlined, “cultural enablers” contributing to more effective project management in Iceland are tolerance of uncertainty with solving-problem-once-it-emerges mentality, ability, and inclination to involve diverse stakeholders, substantial communication in collaborative efforts all led by high levels of trust. “Cultural disablers” on the other hand would be reactive (as opposed to pro-active) planning, unwillingness to follow formal guidelines (especially if it is not in line with the way “we always did it”), potentially negatively impacting budget and timeline of the projects implemented.

### **3. Methodology**

In line with defining characteristic of mega projects outlined in literature review these types of projects tend to be characterised first and foremost by their impact and high cost of often over \$1 billion USD (Flyvbjerg, Holm, & Buhl, 2002; Miller, Lessard, & Sakhrani, 2017). However, literature also suggests that the term mega project is somewhat subjective and can vary depending on the context (Miller, Lessard, & Sakhrani, 2017). Research presented in this paper investigates four big projects in the setting of Iceland. As Iceland in total has a population of less than 400.000 people, the projects investigated technically do not satisfy the defining characteristic of a mega project regarding impact on million(s) of people. However, projects presented here were very large and complex, its’ preparation and implementation time was long, up to 22 years, the total cost of each was between 73-733 million USD, and their implementation has a long-term and far-reaching effect on the economy, geographical environment, and their society of Iceland. In this regard, we categorize four selected projects as mega projects for Icelandic standards.

To ensure confidentiality, the four projects were given the pseudonyms Griðungur, Gammur, Dreki and Bergrisi. Table 1 below provides general description of the chosen projects:

Table 1: Mega projects researched

	Initiation, years	Design and implementation, years	Delivered in
Griðungur	4	3	2007
Gammur	15	4	2018
Dreki	11	10	2011
Bergrisi	12	7	2018

The owners of Bergrisi and Griðungur are companies with decades of experience in implementation of big projects. In Dreki, it is a collaboration between private and public entities that have formed an alliance and established a company with a board and a director for the project. Gammur is owned by a company and is the first of its kind in its operation.

Purposive sampling and snowball samplings were employed to select twelve individuals who had been immersed in these projects. The interviewers' anonymity is protected assigning them with pseudonyms and by providing limited information about their background, as small country size of Iceland makes it easy to trace identities of participants. However, the most relevant for the research information about interviewees is provided in the table below. The main objective of the research is to investigate governmentality (the ideas of those in governing positions about their way of governing). Therefore, the chosen interviewees represent senior or top management positions.

Table 2. Interviewees

Mega project	Interviewee	Role within the mega project	Age
Griðungur	Kjartan	Project manager	36-45
	Oliver	Project manager	56-65
	Guðrún	Project manager	46-55
Gammur	Júlíus	Director	56-65
	Sigbór	Project manager	46-55
	Björgvin	Lead of preparation	46-55
Dreki	Huginn	Director	56-65
	Sveinn	Chief project manager	46-55
	Þórkatla	Member of implementation board	66-75
Bergrisi	Víkingur	Chief project manager	56-65
	Stormur	Project manager	25-35
	Jóhanna	Project manager	36-45

The research employed semi-structured interviews containing predetermined questions as part of its methodological approach. Conducted in May 2019, the interviews varied in duration, ranging from 55 to 87 minutes. To ensure comprehensive data representation, thorough transcription of all interviews was undertaken, supplemented by the documentation of pre- and post-interview notes. This methodological choice was driven by the intention to detect, analyse, and explain evolving themes and patterns within the dataset.

Thematic analysis according to Braun and Clarke (2006) was used to process research data. The process of identifying themes, a crucial aspect of thematic analysis, is a multistep procedure that involves systematically coding and categorizing data. To enhance the transparency and accuracy of the thematic analysis, the researchers followed the five-step method of Castleberry and Nolen (2018). This systematic approach ensured a comprehensive and organized analysis of the data, contributing to the reliability of the findings. The first step of this method involves data collection, including transcription of interviews by the researchers for in-depth understanding. In the second step, data are systematically coded to identify patterns whereby researcher carefully worked through the dataset, coding sentences or paragraphs based on key

questions, aiming to reveal underlying themes. Important findings were noted during coding, contributing to the comprehensive classification of data. Following coding, the third step involved grouping data into themes based on identified patterns. The researchers reviewed all coded interviews, aiming to refine and summarize data. Here, a mind map was created to visualize the relationships between themes. Step four emphasizes the interpretation of coded and organized data into themes. Themes were evaluated for their relevance to the research question, and a thematic map was prepared. Hereby, the identification of missing themes, overlap, and hierarchy was approached through iterative rounds of analysis and discussion among the research team, contributing to the robustness of the thematic analysis process. Further, given the importance of inter-rater reliability, special attention was given to address potential issues during the classification and categorization of themes. Training and calibration sessions were conducted among different coders to establish a collective understanding of coding criteria, and regular communication was maintained to resolve any incongruities that occurred during the analysis. The final step, step five, concludes the research process by writing up research results. Following these five steps ensures the credibility and reliability of the thematic analysis results (Castleberry and Nolen, 2018).

#### 4. Results

The main goal of this study is to shed light on the manifestation of management insight in very large and complex Icelandic projects. The results indicate that the characteristics of management in large and complex projects in Iceland appear through three main themes: *project organization*, *project culture* and *image of the project*. As can be seen in picture one, project organization is described through the categories: project owner framework, project scope, and clear roles and responsibilities. Project culture is described through three categories: effective communication, shared vision, and the importance of management support. The third and last theme, project image, is described through two categories: impact on the environment and community perspective.

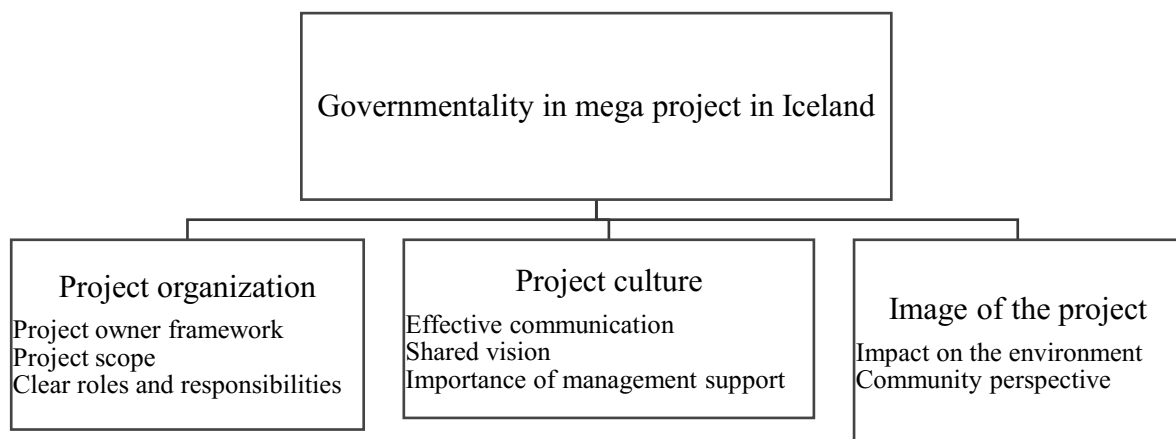


Figure 1: Visual representation of research results

#### 4.1. Project organization

The first theme is project organization, which is described through three categories: project owner framework, project scope, and clear roles and responsibilities. It quickly became clear during the processing of the data that it is important for the progress and success of projects how they are structured and prepared. It is in line with what Flyvbjerg (2018), and Miller and Hobbs (2005) assert regarding the preparation time of mega projects that in order to be successful, it is important how planning and organization are conducted in order to be successful. Those projects that are well prepared and have a solid framework do better, especially in great uncertainty.

##### *Project owner framework*

The principles of an organization create the tool through which its values spread through its entirety (Franck and Jungwirth, 2003). The interviews showed different principles when discussing policies and values. It seems to depend on whether projects were managed by a company with extensive experience in similar projects or none. It was important here that everyone was aware of their roles and that the strategy, values and owner's focus were reflected in the project. Interviewees from Bergrisi and Griðungur describe well their experience, highlighting how the solid direction and values set by the owners served as guiding beacons that remained consistent throughout their work and played a pivotal role in advancing the projects. The owner of Gammur had no experience with such a project but wanted to diversify the company's investments. Based on the statements of an interviewer at Gammur, it can be assumed that there is a disparity between Gammur and the policies and values of its owner. Dreki, as an alliance of different stakeholders, a company with a board and a director, did not have a formal structure, and therefore there was no strategy or values that created a framework for the project. In the beginning, however, it had been part of the project to define its direction and values.

##### *Project scope*

The scope of a project refers to the outcome of a project and its overall purpose (Larson and Gray, 2018). This includes the planning of the project, procurement of resources and human resources as well as crisis management. As mentioned before, good preparation is key to project success. Those at Bergrisi agreed that, apart from traditional planning, it was important to have time to do a detailed analysis of the stakeholders and map their influence on the progress of the project. They were all convinced that an important part of Bergrisi's preparation was generating a communication plan with all stakeholders both inside and outside the project. Sveinn at Dreka is an experienced project manager who emphasized the importance of project preparation. The plans he says that need to be made are project plan, cost plan, resource plan, cash flow plan and meeting plan. He further mentioned the three main pillars of project management or the so-called "iron triangle," which are quality, time, and

money. Huginn however revealed, that if one intends to achieve the goals of a project but at one point the budget for the project is depleted then it is important “...to try to discover the deviations as soon as possible....” He emphasized that in mega projects, effective risk management holds significant importance.

According to Stormur, there is always “something unforeseen that happens” as external circumstances can have a major impact on the progress of projects. There are situations that managers have no control over, and therefore crisis management must be excellent within the company. There is consensus between Bergrisi and Griðungur in terms of careful preparation of projects, and both put a lot of effort into it. Oliver at Griðungur uses the word “...outstanding...” about the procedure within the project and says the owner has invested enormously in its preparation. In contrast, Gammur faced setbacks attributed to external factors, as per Júlíus, who believes that these could have been prevented had local expertise been consulted. He asserts that the project was created “somewhere in some office,” and the plan was rigorously adhered to, regardless of changes in the environment. Sigthór agrees with this perspective and adds that Gammur’s owners did not adequately invest in staff training and preparation.

One of the critical aspects concerning project preparation and execution is human resources, and a majority of the interviewees highlighted the significance of selecting the appropriate individuals. Huginn concisely captures this by stating, “Of course, it is all about people; both positive and negative outcomes are linked to people. The key is to select the right people.” He points out that diversity is vital when assembling a team, advocating for interdisciplinary teams with individuals possessing varied knowledge and experiences.

### *Clear roles and responsibilities*

This sub-theme highlights personal accountability on the one hand and collective responsibility on the other.

Overall, organizational charts seem to differ between projects and the level of emphasis on defining the roles and responsibilities of managers and teams varies. Notably, within the context of Griðungur, there is a significant emphasis on fostering a flatter organizational hierarchy. Oliver underscored the value of carefully communicating job descriptions and bureaucratic protocols, noting that this approach has proven to be substantially beneficial.

Víkingur at Bergrisi has a lot of experience in project management. Over the past decades, he has noted major shifts in managerial priorities emphasizing a period marked by excessive deference to CEOs, which he compares as “subjugation” towards CEOs. He juxtaposes this perspective with the image of his office as an “ivory tower” and reveals the phenomenon he terms “BOGSAT” or a “bunch of old guys sitting around the table.” Nonetheless, he optimistically notes that the prevailing route is one of positive development and transformation.

Despite the presence of a flat organizational structure within Bergrisi, Stormur points out that the degree of emphasis on hierarchy within projects can vary based on their



size. This observation finds resonance with Jóhanna, who underscores the necessity of clear authority delineation, noting that it is crucial to always identify the ultimate decision-maker. Víkingur affirms that the organizational chart serves to establish distinct roles for each team member and further specifies their individual responsibilities. Conversely, in the case of Gammur, Júlíus recounts one of his initial tasks involving the formulation of an organizational chart, which was imperative due to time constraints in the construction phase. In contrast, Dreki adopts a basic approach, maintaining a clear organizational structure and defining each team member's scope of responsibilities within a well-defined mission statement.

When asked if someone was made to take personal responsibility, the discussion mainly revolved around two factors. On the one hand, people were let go from a project if the person did not fit into the group, and on the other hand, if the person did not manage the complexity and stress of the project. Several interviewees also mention examples of the responsibility of subcontractors who were made to take responsibility for their actions. Sveinn mentioned an example of a person who was not a real "...team player..." and stated that he lacked "...this human element." He pointed out that if any of the project managers do not live up to the responsibilities assigned to them and if "...we [are] either significantly overrun in time or money and it can be attributed to the fact that we have not done our job, then we are responsible."

#### **4.2. Project culture**

The way culture is cultivated within project settings holds significant relevance in the realm of management. Lehtonen and Martinsuo (2008) underscore the critical role of fostering a culture characterized by open and effective communication as the cornerstone for cultivating the desired cultural environment within a project, one that aligns with policies and values.

Workplace culture represents the unspoken yet emotionally rich dimension of an organization, serving as a binding force that unifies the entire company. Such a culture is a powerful tool for controlling the behaviour of individuals within organizations (Kotter, 1996). Under this theme are three categories: effective communication, having a shared vision, and the importance of management support.

##### *Effective communication*

This research underscores that the recognition of the significance of communication in the role of a project manager is relatively recent, or as articulated by Víkingur, that historically, "soft matters" were hardly acknowledged, with limited consideration at best. Stormur corresponds with Víkingur, describing the prevalent emphasis on "engineering and hard-core technical matters" that have traditionally received more attention and importance. Stormur stresses that there is a noticeable shift towards acknowledging the growing importance of aspects like communication and consultation within project management. Sveinn at Dreki highlights that a sizeable portion of his work, approximately one-third, is now dedicated to addressing the

“human aspect.” He notes that this aspect has seen a steady growth in its significance in recent years.

Stormur underlines the fundamentally extensive communication dynamics that come into play within large-scale projects. Such projects inherently involve multiple stakeholders, leading to an overflow of issues, diverse opinions, and the potential for disagreements. Stormur stresses the importance of having a well-defined communication plan in place. He emphasizes the necessity for stakeholders to comprehend the effort required and the significance of handling communication carefully and patiently.

Building on this theme, Víkingur places particular importance on the attitudes that individuals bring to their communication endeavours. He highlights the value of approaching people on an equal footing, thereby fostering a climate of trust among all parties involved. This approach shifts the focus away from an individual’s hierarchical position and instead directs it towards their contribution to the project’s success.

At Gammur, it seems that something else is at stake than in the other three projects. There seems to have been a lack of communication between the parties during the development of the project. Gammur’s prospective operators felt that they had nothing to say about the project, and if they tried, they were not listened to. According to Júlíus, this caused the project to fall behind schedule. In light of this, it is interesting to highlight the difference in emphasis between the projects where Jóhanna talks about the “...element...” of listening and how important it is when you are in consultation with others.

The team at Bergrisi highlights their proactive approach in terms of actively listening, understanding, and then taking responsive actions. However, Jóhanna underscores the dominant importance of preventing conflicts between different stakeholders. In this context, Stormur emphasizes the necessity for individuals to possess a complex understanding, stating that communication issues are sophisticated, requiring an ability to interpret more than just spoken or written words.

#### *Shared vision*

At the end of the interviews, the interviewees were asked to summarize what made the projects successful. A recurring theme among the interviewees was the principal significance of cultivating a shared vision regarding the project’s objectives. This notion aligns with the insights offered by Kotter (1996), who underscores the importance of a shared vision when organizations go through transformative changes. A shared vision serves as a navigational compass, directing collective efforts toward a common goal and averting divergent paths among team members. Moreover, it fills employees with a sense of independence in their decision-making processes.

As stated in the section on clear roles and responsibilities, the interviewees agreed on the importance of forming a team in the right way because the staff is the most important when it comes to creating a shared vision. As an example, Sveinn at Dreki talks about the importance of creating a “...team spirit...” that everyone feels part of the team and that everyone is rowing towards a common goal. Members at Griðungur articulate the manner in which their management exhibited a well-defined vision,

maintaining a comprehensive perspective right from the project's start. This vision served as a guiding force, offering the necessary discipline to ensure alignment and unity among all project participants.

The project at Bergrisi stands out primarily due to the distinct emphasis placed on the creation of shared ownership of the projects. Víkingur reveals that the owner of Bergrisi has established a specific framework within the projects to uphold the owners' vested interests throughout the project's lifecycle. He explains that those responsible for managing contracts within the projects are granted the authority to make crucial decisions, a practice that ensures continuous alignment with the owners' intentions.

Stormur highlights the importance of fostering a clear vision and implanting projects with ambition, asserting that when one gives their word, the commitment to uphold it and deliver excellence becomes a driving force. This distinctive approach underscores Bergrisi's unique perspective on project management and ownership.

#### *Importance of management support*

The third category regarding Project culture is the importance of management support, where interviewees believe it is important that a manager can make decisions and support staff. The consensus among the interviewees is that the support from their superiors has been notably satisfactory. Jóhanna, for instance, commends the manager's support as being extraordinarily vigorous, noting the manager's availability to all, even as the ultimate decision-maker. Collectively, the interviewees agree on the characteristics that effective managers should represent, emphasizing the importance of trusting individuals, granting them autonomy within a well-defined framework, allowing them to confront challenges, as this not only reinforces them but also enhances job satisfaction. Nevertheless, the need for various management styles is appreciated, as highlighted by Kjartan in Griðungur. He underscores the necessity of investing in staff and selecting the most suitable approach for each situation, a practice that has accumulated trust and proved invaluable during critical stages. Kjartan also notes that the management style employed today differs from that during the project's initial phase.

Sveinn relates his managerial role to that of a coach on the sidelines, with his primary duty being to motivate his team. He describes this approach as "positive, demanding but fair." While there is a shared belief in the importance of being present for one's team, Stormur underscores the significance of setting boundaries early, advocating for maintaining a professional distance and not letting work permeate into one's personal life. Oliver stresses the potential benefits of increased independence, emphasizing that it leads to greater job satisfaction. He notes that staff are encouraged to engage in continuous learning, with Griðungur facilitating access to educational opportunities, fostering enthusiasm among employees.

#### **4.3. Image of the project**

The third and last theme is the image of a project, which is described through two categories: impact on the environment and community perspectives. Exceptionally large and complex projects can rarely be considered private projects for the reason that

they have a significant impact on the economy, the environment and the society that hosts them (Miller and Hobbs, 2005).

### *Impact on the environment*

Environmental awareness has seen a noticeable rise in recent years. However, our primary focus here is on how the interviewees perceive their work in compliance with the established requirements concerning interactions with their environment. The emphasis placed on specific project aspects has evolved over time, as Huginn notes. Initially, there was a focus on methodological aspects within the industry, which later shifted towards quality concerns. Huginn further notes that in the current landscape, environmental issues have taken a central stage.

The owners of Griðungur and Bergrisi show great respect for the environment. Interviewees at Griðungur say that from the first moment a lot of emphasis was placed on environmental issues, and they set a clear strategy. Openness and transparency were integral to the project, ensuring that all relevant matters were openly discussed. The team at Bergrisi was deeply committed to minimizing their impact on the natural environment, taking great care not to disturb it any more than necessary. Stormur summarizes this mindset well, explaining that their aim was to leave as minimal a footprint as possible. Víkingur asserts that Bergrisi's commitment to listening to suggestions from individuals who had insights into nature interaction has been exemplary. He holds the belief that this project will serve as a valuable reference for future projects within the company, setting a standard for responsible and environmentally conscious practices.

### *Community perspective*

It is difficult to analyse the perspectives of society without directly asking its members about the impact of individual projects, and therefore it is only possible to rely on the standpoint of the interviewees of the projects. Within this context, the dissemination of accurate and timely information plays a fundamental role in building trust and gaining community support. This can be done by e.g., holding open residents' meetings, holding open houses, and regularly sending out newsletters in order to build trust and support in the community.

Júlíus underscores the principal importance of communication, emphasizing that consistent and transparent information sharing is the foundation. Whether the information concerns to positive or negative developments, making it publicly available is vital. He declares that it is essential in communication to prevent any unwanted surprises, unrelatedly of the magnitude of the project. People should be well-informed about project developments and what to expect. Víkingur underscores that trust-building is a deliberate and continuous process. It involves fostering and promoting relationships, an aspect that Bergrisi executed effectively. Building trust is not an

immediate occurrence but rather the result of consistent endeavour and transparency in communication.

Víkingur emphasizes the importance of treating people as equals, especially those who are directly affected by the project. He believes that it should be the people who are most closely connected to the project who manage these relationships, rather than higher-ranking individuals. This approach has fostered a sense of joint ownership among the project participants, encouraging a shared sense of responsibility.

In a similar vein, Guðrún speaks of “resident democracy,” underlining the company’s enduring presence in the community and the need to collaborate closely with its residents while considering their perspectives. Jóhanna’s creation of a communication register with community members illustrates this active engagement with the local community. By maintaining detailed records of interactions, it becomes easier to establish consensus and understanding about the projects.

### **Discussion, limitations, and conclusions**

The primary objective of this study was to examine the role of governmentality in the execution of large, complex projects, often referred to as mega-projects. The study sought to uncover how governmentality manifests itself in the implementation of such projects in the context of Iceland, using four specific projects as case studies.

The results of the study reveal that the manifestation of governmentality is captured within three overarching themes. The first theme relates to the organization of a project, encompassing the expression of governmentality through the framework established by the project owner. This framework extends to the explanation of the project’s scope and the explicit definition of roles and responsibilities within it. These three categories underscore the critical importance of a well-structured project, wherein the owner’s vision and values are clearly defined and consistently pass throughout the project’s lifecycle. This aligns with the observations made by Franck and Jungwirth (2003) emphasizing the need for correspondence between the principles of organizational units and projects. Furthermore, the study underlines the significance of thorough project preparation, resonating the visions of Flyvbjerg (2018) and Miller and Hobbs (2005), who stress the fundamental importance of creating a realistic plan before establishing large and complex projects. Additionally, the selection of the right people and the explicit clarification of their roles occur as crucial elements, as personal and collective accountability must be clearly defined to foster trust among individuals and within the governance structure, aligning with the results of Müller et al. (2013).

The second theme investigates the culture of a project, emphasizing the critical role of fostering transparent and open communication among project stakeholders. This theme highlights the necessity of cultivating a shared vision among all members and underscores the significance of vigorous management support. This collective approach fosters trust and, in turn, facilitates issue solution through discussion and dialogue, whether it be among staff, within teams, with contractors, or with other stakeholders. These practices align with the research of Müller (2016) and Lehtonen and Martinsuo (2008). Furthermore, the theme underscores the importance of establishing a shared vision concerning project objectives, which serves to mitigate disagreements and

conflicts, thus reducing the incidence of protests and claims. This collaborative approach fosters a sense of mutual benefit and cooperation, aligning with the findings of Clegg et al. (2002). Additionally, the theme highlights the significance of empowering staff by offering them opportunities and autonomy within a well-defined framework, while ensuring that management support is readily available when needed. This approach represents the principles of effective management, reflecting on the perspective of governmentality by empowering staff, as illustrated by Müller (2016).

The third theme revolves around the project's image and how governance is expressed through its environmental impact and its influence on society. This theme underscores the project managers' approach, which exhibits respect for the environment and the communities in which they operate. It also highlights the strategies employed in providing information and fostering communication with community members.

One aspect that does not emerge within the themes addressed in this study relates to temporary processes, measures, and outcomes, as discussed by Müller (2016) and Bresnen et al. (2004). The absence of this factor in the study's themes may be attributed to the primary emphasis placed on the human element during the interviews. Consequently, certain considerations related to the availability of capital, which typically forms a part of the requirements for initiating governance, did not receive substantial attention in the discussions.

In conclusion, this study provides compelling evidence of the presence of governmentality in three out of the four projects investigated in Iceland. This finding aligns with the ongoing discourse within project management, highlighting that soft factors exercise a more reflective influence on project success than their hard counterparts, as discussed by Müller et al. (2017). However, the degree to which governance is manifested varies among these projects.

In the cases of Bergrisi, Griðungur, and Dreki, the presence of governmentality is apparent. This conclusion is based on the attitudes and behaviours exhibited by project managers towards their staff, the effectiveness of communication channels between them, and the trust established between staff and project governance. It is worth noting that in these projects, governmentality was implemented using a liberal and neoliberal approach. Furthermore, it is worth emphasizing that such large and complex projects were successfully executed without significant conflicts with subcontractors, which aligns with the notion presented by Clegg et al. (2002) that governance can serve as an alternative to daily fines and complaints, particularly in circumstances with numerous stakeholders.

On the other hand, in the case of Gammur, the manifestation of governmentality is less clear. The implementation of governance in this project was primarily conducted through authority, with limited or no communication between project units during the initial phase. This primarily reflects the owner's and their representatives' approach to the project.

When evaluating the manifestation of governmentality across these projects, it raises the question of whether the decades of experience held by the owners of Bergrisi and Griðungur in similar operations significantly influenced the outcomes. This leads to the

suggestion that the factors triggering governmentality remain consistent, regardless of whether the projects are large or small in scale.

In addressing the limitations of this study, it is essential to acknowledge the relatively small research sample and the unique context of Iceland as a small country. This inherent characteristic introduces a potential risk of project and interviewee identification. To mitigate this concern and maintain the protection of participant interests, it was especially important during the research process to enhance confidentiality. This means that the list of interviewees intentionally contains limited information. Further, it is crucial to recognize that the small-scale nature of the study and the distinctive features of Iceland as a research context impose certain limitations on the generalizability of findings. Future research with a more extensive and diverse sample size could address these limitations and contribute to a broader understanding of the subject matter.

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## Appendix: Interview template in Icelandic

### Í upphafi viðtals:

Kynning á rannsakanda og stutt lýsing á verkefni, leita eftir samþykki á upptöku, 100% trúnaðar heitið, nafnleynd heitið á verkefni og viðmælanda. Upplýsa viðmælanda að honum sé ekki skylt að svara og geti alltaf hætt. Rannsakandi tekur niður nótur á meðan viðtal fer fram.

Viðmælandi beðinn að fylla út eyðublað með bakgrunnsupplýsingum.

### Inngangsspurningar:

Örstutt um fyrirtækið, saga og þróun fyrirtækis/eiganda verkefnis?

Skipulag fyrirtækis/eiganda?

Af hverju þetta verkefni?

### Stjórnarhættir:

Hvernig var skipulagi verkefnisins háttað?

Hvernig voru verkefnahópar, stýrihópar og verkefnastjórar skipaðir?

Eru stefna og gildi fyrirtækisins í heiðri höfð í verkefninu?

Regluverk, skýrt?

Voru sett niður markmið og þá hvernig?

Voru markmið sýnileg öllum og allir er vinna að verkefninu meðvitaðir um þau?

Í upphafi verkefna voru hlutverk og ábyrgð hvers og eins skilgreind?

Hvernig var árangur metinn?

Voru starfsmenn, stjórnendur ábyrgir fyrir árangri? (sameiginleg v.s. persónuleg ábyrgð)

Hvernig var fylgst með framgangi verkefnisins? (upplýsingagjöf, skýrslur, fundir, minnisblöð)

### Stjórnvíska

Hvernig hefur samskiptin verið sett upp. Boðleiðir hvernig, lóðrétt/lárrétt?

Hvernig voru fundir settir upp, reglulegir, óreglulegir?

Hvatti fyrirtækið verkefnastjóra í að vera sjálfstæða og fjárfesti í þeim?

Gat verkefnastjóri samið fyrir hönd verkefnisins þvert á stjórnendalög?

Hvernig stjórnandi myndir þú segja að þú værir?

Hvernig var samskiptum við yfir- og undirmenn háttað?

Hvert leitaðir þú ef eitthvað kom upp sem þú þurftir að ræða, fá álit á (spegla þig)?

Sjálfstæði í starfi var horft yfir öxlina?

Var hrós til staðar?

Var valdefling til staðar?

Voru allir virkjaðir í gegnum verkefnið var valdi dreift?

Eitthvað sem kom upp á með starfsfólk/aðra?

Ef upp kom vandamál hvernig var brugðist við?

### Samfélag

Verkefnið hafði það áhrif á samfélagið?

Var það háð því til að verða að veruleika?

Samskipti við utan að komandi hagsmunaaðila? (hið opinbera, samfélagið, fjárfestar, fleiri?)

Helstu áskoranir sem verkefnið stóð frammi fyrir?

Óeðlilegur þrýstingur?

### Að lokum

Eitthvað fleira sem viðmælandi er að hugsa eða vill koma á framfæri?

Þakka viðmælanda fyrir þátttöku.

## **Interview template translated into English**

**At the beginning of the interview:** Introduction of the researcher and a brief description of the project, seeking approval for recording, 100% confidentiality, anonymity of the project and the interviewer. Inform the interviewer that he/she is not required to answer and can always stop. The researcher takes notes during the interview. The interviewee is asked to fill out a form with background information.

### **Entrance questions:**

Very brief about the company, history, and development of the company/project owner?

Company/Owner Structure?

Why this project?

### **Governance:**

How was the project organized?

How were project groups, steering groups and project managers appointed?

Were the company's strategy and values respected in the project?

Regulations? Were goals set and if yes, how?

Were the goals visible to everyone and was everyone working on the project aware of them?

At the beginning of the projects, were the roles and responsibilities of each person defined?

How was success measured?

Were employees and managers responsible for success? (joint vs. personal responsibility)

How was the progress of the project monitored? (information, reports, meetings, memos)

### **Governmentality**

Has was the communication structure? Channels, vertically/horizontally?

How were meetings set up, regular/irregular?

Did the company encourage project managers to be independent and invest in them?

Was the project manager able to negotiate on behalf of the project in violation of management laws?

What kind of manager would you say you are?

How was communication with superiors and subordinates conducted?

Where did you go if something came up that you needed to discuss, get an opinion on (reflect on)?

Independence at work or were you monitored?

Were there any compliments?

Was empowerment present?

Was everyone involved throughout the project, was power distributed?

Did something come up with staff/others?

If there was a problem, how was it dealt with?

### **Community**

Did the project affect the community?

Did it depend on it to come true?

Communication with external stakeholders? (the public sector, society, investors, others?)

Major challenges the project?

Abnormal pressure? **At the end of the interview**

Anything else the interviewer is thinking about or wants to add? Thank the interviewee for participating.

## **Rich but not mighty: A study of non-traditional migration by convenient billionaire refugees as economic emigrants**

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### **Abstract**

In previous decades, one or two rich Norwegians moved to Switzerland. Suddenly, in 2022 there were 36 wealthy Norwegians moving to Switzerland. They were all labeled tax refugees and economic emigrants in the media. This article applies the theory of convenience to study the phenomenon of immigration. Based on extensive media coverage as the source of information for this study, some convenience themes seem to dominate. In the motive dimension of convenience theory, goal achievement for business activity is visible in the sample. In the opportunity dimension, Switzerland as a tax haven with financial secrecy is attractive. In the willingness dimension, learning from others is visible in the sample. This article presents important insights into a phenomenon that has not been investigated in traditional migration research.

*Keywords: convenience theory; immigration; goal achievement; business owner.*

### **Introduction**

In previous years, one or two rich Norwegians moved to Switzerland. Suddenly, in 2022 there were 36 rich Norwegians moving to Switzerland. They were all labeled tax refugees and economic emigrants in the media (Feratovic, 2022; Hagesæther, 2022; Hegnar, 2023a; Juel, 2023; Mikalsen and Bakken, 2023; Milne, 2022; Selmar, 2023). While Switzerland is ranked #5 on the corporate tax haven index, Norway is not on the list at all (European Commission, 2020; Tax Justice, 2021). Switzerland is ranked #2 on the financial secrecy index, while Norway is ranked #48 (Tax Justice, 2022). Based on these rankings, it might seem obvious why they all moved. However, it is interesting to study the sample of thirty-six emigrants by the emerging theory of convenience. The theory suggests that there are motives based on opportunities and threats, there are opportunities to conduct and conceal activities, and there is willingness for deviant behavior based on choice and innocence. By deviance is in this study not meant wrongdoing but rather deviation from most other rich people in Norway. This article thus addresses the following research question: What propositions in convenience theory might apply to rich refugees as economic emigrants from Norway to Switzerland? This research is important as it applies the theory to deviance as behavior simply different from most other people's behavior rather than misconduct, wrongdoing, or crime. This article presents important insights into a phenomenon that has not been investigated in traditional migration research. It reflects on important aspects of sociodemographic, economic, political, legislative, spatial aspects of human mobility among privileged individuals, thereby adding to traditional migration research (e.g., Hunter and Simon, 2023; Khuu and Bean, 2022).

## Theory of convenience

Convenience theory is an emerging explanation for deviance. While mainly applied to negative deviance such as white-collar crime (e.g., Braaten and Vaughn, 2021), this research attempts to apply the theory to deviance as behavior simply different from most other people in the same group. The initial introduction of convenience is thus modified in the following to align with the perspective and research question in this article. The modified version of convenience theory is illustrated in Figure 1.

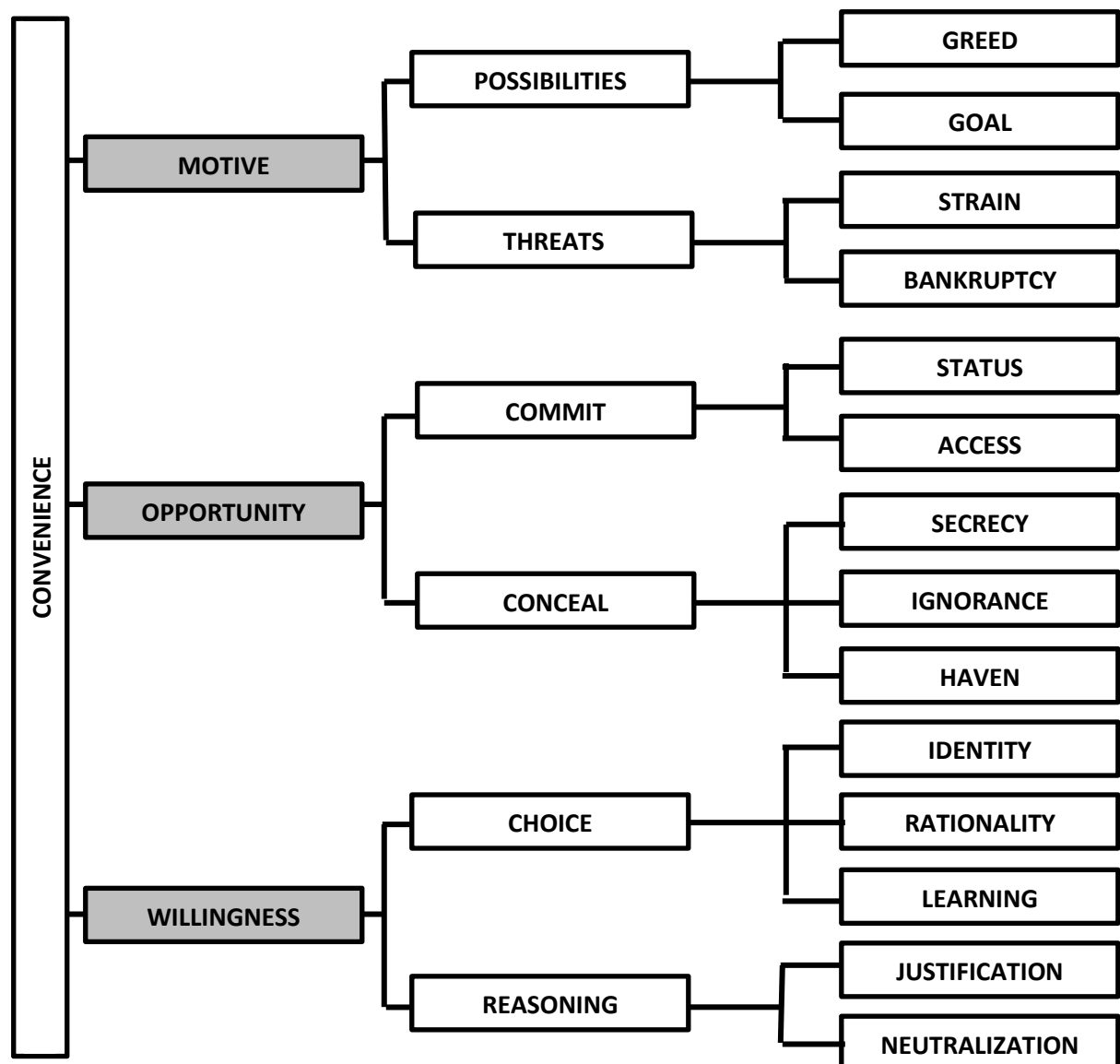


Figure 1 *Structural model of convenience theory*

To speculate in the motives of economic emigrants is to suggest potential possibilities and threats where possibilities can be exploited, and threats can be avoided by moving from Norway to Switzerland. Both possibilities and threats have two options in convenience theory for the individual personally and for the individual's business enterprise. Motives for possibilities can be greed for the individual and goal for the enterprise. Motives for threats can be avoidance of strain for the individual and avoidance of financial trouble and possibly bankruptcy for the enterprise. Greed is

defined as socially constructed needs and desires that can never be completely covered or contended (Goldstraw-White, 2012). Rather, a greedy rich person does always want more. Sajko et al. (2021) studied CEO greed where they defined greed as self-interest by excessive materialistic desire and lack of concern for the well-being of others. Goal setting is often perceived in a positive light, meaning that ambitious goals increase performance (Locke and Latham, 2013). However, there is also evidence suggesting that high performance goals can lead to deviant behavior (Locatelli et al., 2022; Welsh et al., 2020).

Strains as a threat are events and conditions that individuals dislike (Thaxton and Agnew, 2018). Strains lead to negative emotions and thereby create pressure for corrective action (Vilalta et al., 2021). Similarly, stress is a psychological state that arises from a mismatch between perceived demands and one's ability to meet those demands given available resources (Linder et al., 2021). Painful corporate economics threats include bankruptcy (Downing et al., 2019). The threat of corporate collapse and bankruptcy might cause exploration and exploitation of deviant avenues to survive, where moral panic can occur (Kang and Thosuwanchot, 2017). Loss of self-esteem is a typical consequential threat of organizational failure (Crosina and Pratt, 2019).

To speculate in the opportunity structure is to suggest the potential for conducting and concealing actions. Conducting actions conveniently is based on the status of the person or the persons' access to resources. Concealing actions conveniently is based on secrecy, ignorance, or haven. By moving from Norway to Switzerland, there is an issue of whether the individual's status changes. Status is an individual's social rank within a formal or informal hierarchy, or a person's relative standing along a valued social dimension (Kakkar et al., 2020). Status is the extent to which an individual is respected and admired by others, and status is the outcome of a subjective assessment process (McClellan et al., 2018). By moving from Norway to Switzerland, there is another issue of whether the individual's access to resources changes. A resource is an enabler applied and used to satisfy human and organizational needs (Williams et al., 2019). A resource has utility and availability (Wheelock et al., 2011). The resource-based approach to management postulates that differences find explanation in the extent of resource access and the ability to combine and exploit those resources. According to Petrocelli et al. (2003), access to resources equates power. Valuable resources are typically scarce, unique, not imitable, not transferrable, combinable, exploitable, and not substitutable.

Secrecy in Figure 1 refers to "intentionally prevent information or evidence of it from reaching a particular person(s) and therefore could be comprehended as the methods used to conceal and the practices of concealment" (Fan and Liu, 2022: 1034). A secret, on the other hand, refers to the content of information that is kept unknown to others. Secrets do not conceal themselves. It is secrecy that conceals secrets. Ignorance refers to lack of control and guardianship where little or no supervision to react to activities exists (Chan and Gibbs, 2022). Ignorance is "against the wisdom and is referred to as knowledge that is ignored" (Karimi-Ghartemani et al., 2022: 550). Concerted ignorance refers to "a general way of covering up" (Shichor and Heeren, 2021: 99). A haven for tax is a country or place with very low or no rates of taxation for foreign investors where foreigners enjoy complete secrecy about their investments. On the legitimate side, the use of tax havens enables transfer-pricing



strategies to lower overall tax burdens for multinational corporations. Subsidiaries located in tax havens serve multinationals to avoid taxes by shifting income from high-tax countries to low-tax countries. Firms also use tax havens in strategies that involve inter-company debt or leasing arrangements to shift income across jurisdictions. Tax authorities in various countries attempt to challenge this kind of tax evasion with varying success (Dyrenge et al., 2019; Guenther et al., 2019). To speculate in the willingness to be deviant by moving from Norway to Switzerland might be based on choice or reasoning. The choice in turn can be based on a deviant identity, rationality, or learning from others, while reasoning can be based on justification or neutralization. The identity perspective suggests that individuals develop professional identities where they commit to a chosen identity (Obodaru, 2017). It is a process of generating possible selves, selecting one, and discarding others. Professional identity is how an individual sees himself or herself in relation to work. The self-concept is a complex cognitive structure containing all of a person's self-representations potentially influenced by the identity label glued to the person by others (Bernburg et al., 2006). Rationality of moving from Norway to Switzerland can be based on benefits exceeding costs (Rokkan, 2023), and advantages exceeding disadvantages (Paternoster, 2018). Rationality is a subjective matter (Kamerdze et al., 2014). The assumption of rational choice is that every action is chosen for specific reasons (Thomas et al., 2022). Learning from others by differential association suggests that people associate with those who agree with them, and distance themselves from those who disagree (Sutherland, 1983). This perspective might be expanded by the metaphor of a tidal wave where someone made it a business of helping rich Norwegians move to Switzerland. Learning from others is an active process (McGloin and Thomas, 2019).

Reasoning by justification in Figure 1 is a situation where the actor takes full responsibility for the act (Schoen et al., 2021: 730): "People use justification mechanisms to protect their sense of self". In neutralization, the actor can apply various techniques to remove any potential guilt feelings (Schoultz and Flyghed, 2016). This concludes the adaptation of convenience theory to legitimate deviance that will be explored empirically later in this article by the sample of 36 rich Norwegians who have moved their management of business activities to Switzerland.

## **Research method**

In the fall of 2022, Norwegian newspapers reported continuously about millionaires and some billionaires moving from Norway to Switzerland: "Billionaire moves to Switzerland", "Hands over luxury mansion to ex-wife", "Fishery heir joins Norwegian colony in Switzerland", and "Norwegian billionaires in Switzerland: Have experienced that some people think it is a shame that they are leaving". In previous years, one or two rich Norwegians moved to Switzerland. Suddenly, in 2022, 36 rich Norwegians moved to Switzerland. They were all labeled tax refugees in the media (Feratovic, 2022). "It is the children who flee", wrote Hegnar (2023b). Norwegian media had in the fall 2022 extensive coverage of rich Norwegians moving to Switzerland. The main business newspaper reported and summarized those moving (e.g., Feratovic, 2022), and the main general newspaper interviewed individuals who had moved (e.g., Hagesæter, 2022). The newspaper Financial Times also got interested in the sudden cross-border movement of many rich Norwegians (e.g., Milne, 2022). These archival sources serve as empirical basis for the current study.

Table 1 lists characteristics of the thirty-six wealthy refugees who conveniently moved from Norway to Switzerland (Feratovic, 2022). The first column lists their name. There were 5 women (14%) and 31 men (86%). The average age was 52 years old, ranging from 22 years to 77 years. The tax authority in Norway has registered the wealth of each person by taxable fortune as listed in the third column. The fortune in Norwegian kroner is on average 994 million that is the equivalent of 99 million United States dollars. However, their real fortune as estimated by the magazine Kapital is far larger as listed in the sixth column. The ratio between the estimated fortune in column six and the taxable fortune in column three is listed in the final column seven. At its most extreme, the real wealth of an individual is 185 times higher than the taxable wealth.

NAME	AGE	FORTUNE	PLACE	REASON	KAPITAL	RATIO
Apeland	68	50	Zug	Business	800	16
Astrup	58	287	Verbier			
Bakkejord	46	233	Luzern			
Borgenhaug	50	225	Luzern	Family	3200	14
Dahl	53	2300	Lugano			
Erla	63	27	Thurgau		5000	185
Gjøvaag	57	480				
Haga	31	26	Zug	Business		
Halvorsen	48	560	Lugano			
Hay	52	708	Luzern		2400	4
Karlsen	54	349	Luzern			
Karlsen	48	180	Luzern			
Klaveness	58	430	Zürich			
Kolstad	51	450	Luzern	Tax		
Myhre	64	64	Luzern		100	2
Måsøval	46	380			1300	3
Nergård	30	129				
Neslein	33	502	Lugano			
Ness	62	62		Family		
Nilsen	47	92	Zug			
Nilsen	46	102	Zug			
Ramski	65	349	Luzern		1400	4
Reitan	22	2400	Geneve			
Reitan	24	2400	Geneve			
Rugseth	60	598	Luzern	Tax		
Røkke	63	17800	Lugano	Business	45300	3
Sandvold	30	131	Zürich			
Slettemoen	64	516	Zug		1100	2
Solberg	70	114				
Stiansen	77	1600	Luzern			
Straume	52	16	Luzern			
Sundby	53	698	Luzern			
Sundby	57	707	Luzern	Business		

Syversen	54	344	Luzern	Tax		
Wessel	58	119	Andermatt	Business		
Winge	46	388	Lugano		1400	3

Table 1 *Characteristics of rich refugees (derived from Feratovic, 2022)*

The fourth column in Table 1 lists the place in Switzerland where the refugees have moved. The most frequent place is Luzern in the middle of the country. A few economic migrants told Feratovic (2022) why they moved as listed in the fifth column regarding reason. Five claim business reasons where their investments are just as much outside Norway as inside Norway. Three emigrants claim tax burden in Norway, and two claim family members already living in Switzerland. The media reported that thirty-six of the richest Norwegians fled to Switzerland as many of them voiced concerns over wealth levy (Milne, 2022):

Public filings to Norway's population registry show that at least 30 billionaires and millionaires swapped the prosperous Scandinavian nation for the lower-tax Alpine jurisdiction in 2022, including fishing-to-oil magnate Kjell Inge Røkke, its one-time richest person. More are likely to follow suit as the rich fret about tax changes they say hurt the country's competitiveness, according to wealthy Norwegians and tax consultants. Norway's wealth tax, one of the few still levied in Europe since France abolished it in favor of a property tax in 2018, has long been a bone of contention for the country's rich.

For some entrepreneurs, the problem might be that all their wealth is tied up in their enterprises. While the enterprises are lossmaking during the rapid growth phase, entrepreneurs nevertheless have to pay wealth tax on the value of their investment assets. The only way to do that might be to take out big dividends or even sell part of the business. Taking out money from a lossmaking enterprise is, however, not a feasible owner approach during the rapid growth phase of an innovative start-up (Milne, 2022).

On the list is Kolstad at the age of 51 years old a typical example of a male refugee with a taxable fortune of NOK 430 million. He told the press that he moved to Luzern for tax reasons (Hagesæther, 2022: 18):

-There will be times in life when you have to choose how honest you want to be. Should you wrap in the message or tell the truth and take the blame? At home in the city of Bodø, property billionaire Tord Ueland Kolstad had written the press release. He was going to do a master's degree in Switzerland. Make time to ride his bike. More free time. Then he pulled himself together. I'm sitting here lying, he thought. The 51-year-old finally decided to speak openly about why he moved to the Alp country.

-There is only one reason: wealth tax. Anyone who says otherwise is lying or not telling the whole truth. It's just a bit stigmatizing to say so, he admits.

-But as a serious businessman, I have to choose what secures the company and the employees. Although there are both pluses and minuses to this. They flew from Bodø in early October. Mother, father, and the nine-year-old daughter. The other three children are older and work or go to school in Norway or

abroad. At Zurich airport, the family picked up a rental car before driving to the apartment they have rented in Luzern.

On the list is Syversen at the age of 54 years old another typical example of a male economic migrant with a taxable fortune of NOK 344 million. He also told the press that he moved to Luzern for tax reasons (Bach and Valderhaug, 2022):

-As a consequence of the fact that it is no longer possible to service tax obligations without incurring a large personal debt or putting our own interests before those of the companies, we have chosen to move, says Rune Syvertsen.

The Tax Justice Network (taxjustice.net) has a corporate tax haven index where Switzerland is ranked #5. Norway is not on the list at all (Tax Justice, 2021; Ulvin, 2022). The index is a ranking of jurisdictions most complicit in helping multinational corporations underpay corporate income tax. The index evaluates each jurisdiction's tax and financial systems to create a clear picture of the world's greatest enablers of global corporate tax abuse, and to highlight the laws and policies that policymakers can amend to reduce their jurisdiction's enabling of corporate tax abuse. Ranked #1 on this list are the British Virgin Islands followed by the Cayman Islands.

The Tax Justice Network (fsi.taxjustice.net) also has a financial secrecy index. Switzerland is ranked #2, while Norway is ranked #48 (Tax Justice, 2022). The index is a ranking of jurisdictions most complicit in helping individuals to hide their finances from the rule of law. The index identifies the world's biggest suppliers of financial secrecy and spotlights the laws that governments can change to reduce their contribution to financial secrecy. Ranked #1 is the United States followed by Switzerland. It is important to note that this ranking is a combination of secrecy score, and global scale weight were the United States with the largest economy in the world have a very high scale weight. When only secrecy scores are reviewed, then a number of countries have a secrecy score far above the U.S. score of 67. For example, both Angola and Algeria have secrecy score of 79. The secrecy score for Norway is 53. The combination of being a tax haven and the lack of transparency by secrecy seems to be attracting many rich Norwegians such as Kolstad quoted above. Lack of transparency can make concealment of wrongdoing in accounting more convenient (Goncharov and Peter, 2019; Mehrpouya and Salles-Djelic, 2019). Elite members can withhold bad news by accounting misrepresentation (Bao et al., 2019). Balakrishnan et al. (2019) found that reduced corporate transparency is associated with increased corporate tax aggressiveness. Four refugees on the list in Table 1 claimed business reasons for their move. Apeland had sold all his enterprises in Norway and invested elsewhere, for example in a fish farm in Canada. Haga had founded a company that expanded abroad and where most of the business is now outside Norway. Haga told the Financial Times (Milne, 2022):

-I had to choose: am I based in Norway, or do I want this company to succeed? It's not about wanting to pay taxes. It's about paying taxes on money I don't have", he told the Financial Times.

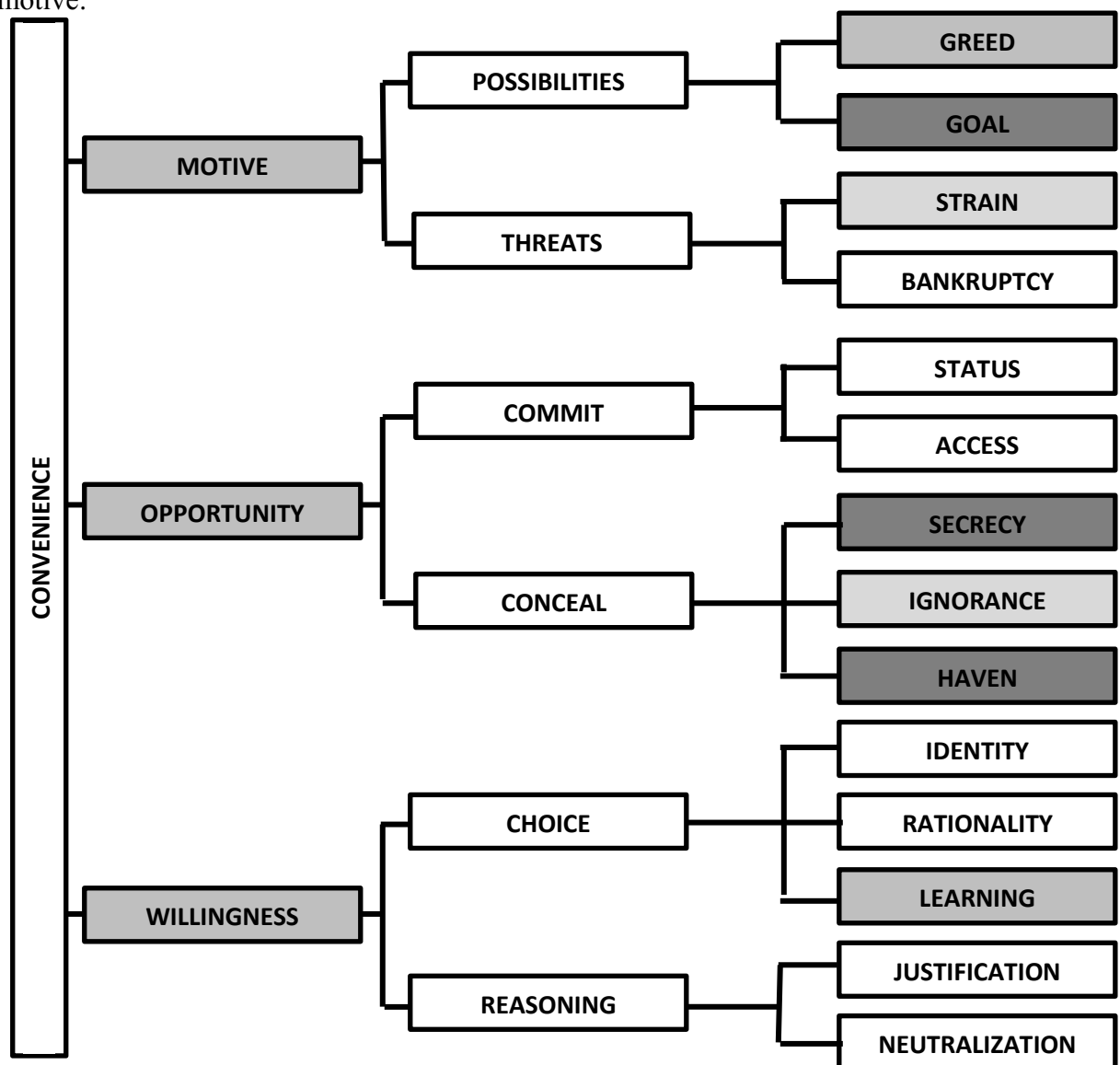
Sundby also said that he moved abroad to expand the business together with his wife abroad. Similarly, Wessel said (Feratovic, 2022: 34):

-The vast majority of my business activities in the last 20 years have been outside Norway and I have had a Swiss partner for the last 5-6 years, Wessel writes in an email.

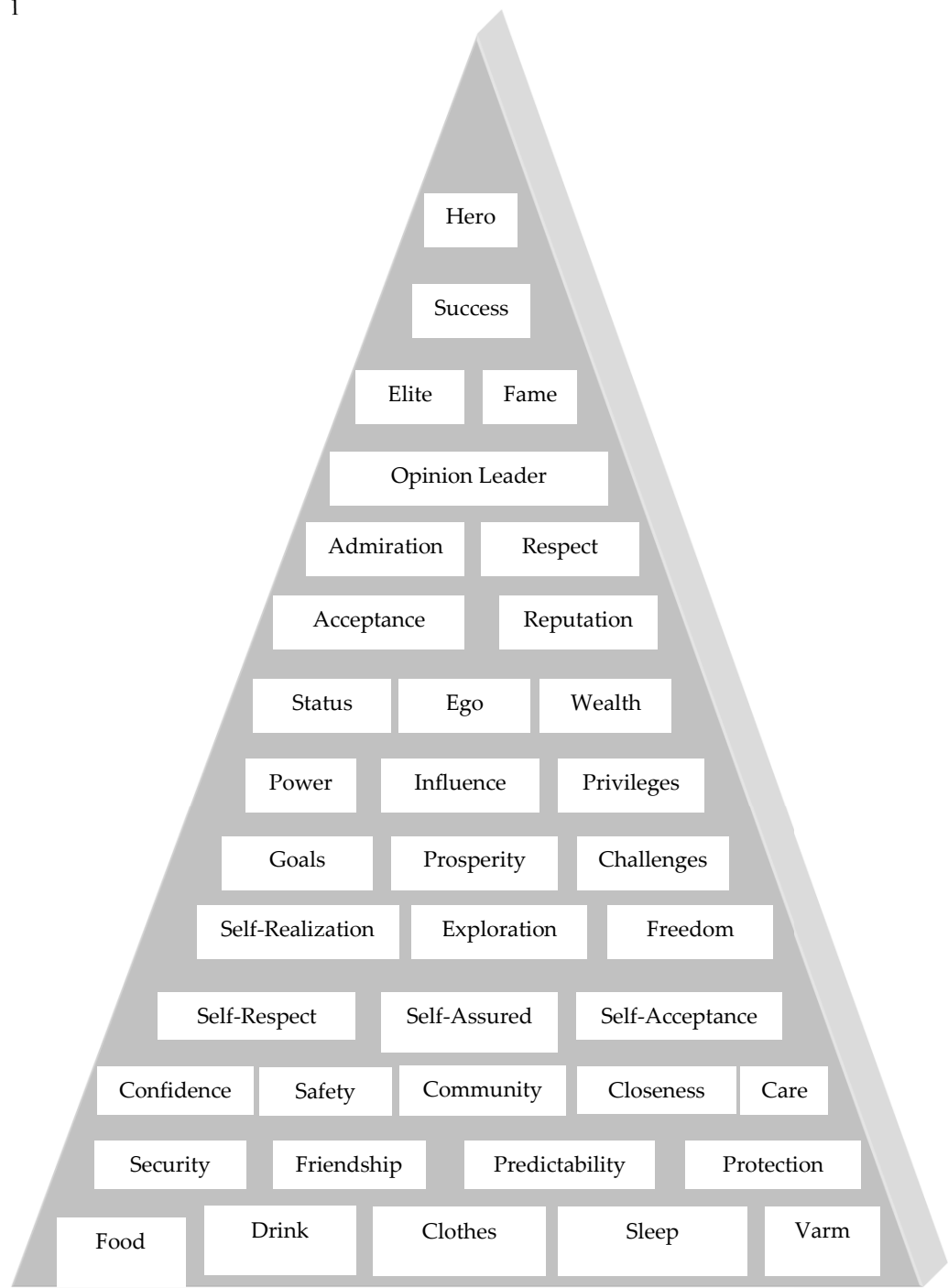
The empirical basis for this study is thus both quantitative and qualitative data. The quantitative data are information about the complete sample of thirty-six economic emigrants in 2022 as listed in Table 1. The qualitative data are information from interviews and descriptions regarding some of the rich refugees found in the media.

### Research results

In the motive dimension of convenience theory, possibilities rather than threats seem to dominate the decision-making of moving from Norway to Switzerland. Within possibilities, the dominant aspect seems to be business expansion by ambitious goals rather than greed for personal wealth. Within threats, there seems to be some strain among some of the emigrants, but no risk of bankruptcy. This is illustrated in different shades of grey in Figure 2, where darker shade of grey illustrates a stronger motive:



**Figure 2** Convenience propositions relevant for economic emigrants



**Figure 3** Pyramid of needs for white-collar offenders adapted from Maslow (1943)

Regarding business goal as the main motive, Wessel expressed support for this convenience proposition in the interview with Feratovic (2022). Greed was somewhat implicit as it was indicated that the tax burden might reduce personal wealth, for example for Syversen (Bach and Valderhaug, 2022). Strain was expressed by Haga (Milne, 2022).

In quantitative terms, it might be argued that those reported as heirs mainly have the motive of greed. They did not create the business, but rather their parents or those before the parents created the inherited wealth (Feratovic et al., 2023a; Hermann, 2023; Solberg et al., 2023a, 2023b; Valderhaug, 2023a; Valderhaug et al., 2023). They have gained access to the wealth without much effort or contribution. Seven (Astrup, Bakkejord, Neslein, Nergård, Reitan, Reitan, and Sandvold) of the thirty-six refugees are portrayed in the media as rich heirs (Feratovic, 2022; Hagesæther, 2022; Mikalsen et al., 2023; Solgård et al., 2023). Therefore, we might conclude that at least 22% of the emigrants had the main motive of greed with non-heir Syversen included in the fraction. Three (Haga, Myhre, Måsøval) of the thirty-six seemed to indicate strain, so that at least 8% have the motive of strain. Adding 22% and 8% to 30% leaves a maximum of 70% who have the motive of goal. These percentages are reflected in the shades of grey in Figure 2.

In the opportunity dimension of convenience theory, status of the person and the person's access to resources are enablers of desired actions. Do rich people have a higher rank in Switzerland compared to Norway? Do rich people have more convenient access to relevant resources in Switzerland compared to Norway? We find no definite answers to these questions. There are global statistics that might give some indication, for example to which the nation is more or less egalitarian and has more or less gender equality. On the global basis, however, Norway and Switzerland are very similar. For example, among more than one hundred nations, Norway is ranked 3<sup>rd</sup> while Switzerland is ranked 10<sup>th</sup> on the gender equality index. Therefore, we conclude that there are probably no significant differences regarding rich person's status and rich person's access to resources between Norway and Switzerland. However, as an anecdotal evidence of a possible status discrepancy is the claim that rich people and their friends suggested that wealthy people were bullied in the media when journalists covered the emigration from Norway in December 2022. Criticized headings included "It has never gone well with someone who suddenly changes their lifestyle because they get access to money" (Sæther, 2023), and "How have Norwegian wealthy people actually become rich?" (Kristensen, 2023) indicating not very admirable avenues. Significant differences emerge when it comes to concealment. Secrecy is almost a trademark for Switzerland, while transparency is almost a trademark for Norway. Secrecy refers to intentional prevention of information disclosure, while transparency refers to easiness for others to see what actions are performed. As mentioned earlier, Switzerland is ranked #2 on the financial secrecy index, while Norway is ranked #48 (Tax Justice, 2022). For example, Switzerland is famous for its strict banking privacy laws combined with favorable regulation for businesses (Trumpy, 2023c). Secrecy as a convenience proposition is thus marked with dark grey in Figure 2.

Ignorance refers to lack of control and guardianship where little or no supervision to react to activities exists. Examples of guardians are external and internal auditors who seem to have similar roles in Norway and Switzerland. The only difference might be public authorities such as financial inspection, cartel agency, and revenue service that might be slightly more ignorant towards businesspeople in Switzerland than in Norway. Therefore, ignorance is marked with light shade of grey in Figure 2. Since Switzerland is ranked #5 on the corporate tax haven index, while Norway is not at all on the list (European Commission, 2020; Tax Justice, 2021), it is obvious that there is a significant difference between the two countries as illustrated by dark shade

of grey in Figure 2. The convenience of Switzerland as a tax haven is not only lower rates of taxation but the flexibility of moving profits to avoid taxes.

In the willingness dimension of convenience theory, it is important here to be careful in speculating regarding why the rich Norwegians had willingness to immigrate to Switzerland.

Little information is known about their identity, rationality, justification, and neutralization. The only convenience proposition that seems to find some support in the empirical presentation is learning, where several have indicated in newspaper interviews that they joined others in moving to Switzerland. This explanation might be expanded by the metaphor of a tidal wave where several people indeed made it a business of helping rich Norwegians move to Switzerland (Risbakken and Trumpy, 2023a; Sæther, 2023). Among professionals who made it a business of helping were tax lawyers in law firms (Risbakken and Trumpy, 2023b), who advised their clients on a number of the relevant issues (Feratovic, 2023: 6):

-We can also assist in practical matters such as tax reports, forms, calculating tax and the like. There was a particular increase in inquiries after this summer. Hveding (the interviewed lawyer) does not want to say how much it costs to consult with a tax lawyer but admits that it is usually a case of partner work. Thus, a price of several thousand kroner per hour can be expected for such tax advice (...)

-But it may be that someone disposes of housing in both countries, and then the tax agreement states that one must be considered resident in the country with the strongest personal and financial interests, or so-called “center of life interests”. Then we are on to a discretionary criterion. Particularly central to this criterion is where the spouse and minor children stay. It can also be important where you operate your business or have your social ties.

We return now to the research question: What propositions in convenience theory might apply to rich refugees as economic emigrants from Norway to Switzerland? Suggested answer is mainly propositions regarding goal, secrecy, and haven, and to some extent propositions regarding greed, strain, ignorance, and learning.

## **Discussion**

Why do people do what they do? An interesting perspective is Maslow’s hierarchy of needs. The Russian American psychologist Abraham Maslow developed a hierarchy of human needs (Maslow, 1943). Needs start at the bottom with physiological need, need for security, social need, and need for respect and self-realization. When basic needs such as food and shelter are satisfied, then the person moves up the pyramid to satisfy needs for safety and control over own life situation, as illustrated in Figure 3. Further up in the pyramid, the person strives for status, recognition, and self-respect. Most individuals will want to move higher up in the pyramid when needs below are satisfied.

Traditional refugees from regions with war and conflicts tend to be happy with the basics at the bottom of the pyramid in terms of food, clothes, sleep, security, and safety. Rich refugees as discussed in this research are already far above traditional



refugees. They enjoy prosperity and privileges. They want to secure their wealth and reputation, and they do possibly want to achieve admiration and respect.

Without any scientific evidence, it seems that just being rich is not sufficient to achieve admiration or respect in neither Norway nor Switzerland. However, being rich might be stronger associated to elite in Switzerland compared to Norway. The convenience of being rich in Switzerland rather than Norway given goal achievement, financial secrecy, and tax haven status as enablers can thus represent an explanation for climbing the hierarchy of needs by being a rich refugee as an economic emigrant (Spurkland, 2023).

A review of Swiss media rather than Norwegian media might help determine the relevance of this explanation. In the German-speaking part of Switzerland, Blick (2022) interviewed a refugee:

“I really have only one comment: I’ve moved, and everything is working”, he said of the polemic. And: “Switzerland is a beautiful country. It reminds me a lot of Norway. I’m fine”. Bet that more rich Norwegians will soon follow him?

Kinzelmann (2022a) reported that Norwegians “flock to Switzerland” because of “monster tax” as a “moving caravan”. Kinzelmann (2022b) and others in Switzerland emphasized the reasons for leaving Norway and not the reasons for immigrating to the country. The refugees were portrayed as victims of punitive tax in Norway (Gjems-Onstad, 2023; Gjerstad, 2023a; Kværnes, 2023; Rydje and Bakken, 2023; Tallaksen, 2023b). Some refugees were portrayed as temporal emigrants, since it was possible to return to Norway after a period of five years to gain a tax advantage (Næss, 2023). Maybe Norway is a slightly more egalitarian society that dislikes inequality in terms of wealth. Few if any seemed so concerned that they wanted to change Norwegian society to make it more attractive to the rich people, and certainly not the social-democratic government. For example, the finance minister in the government made the following statement about the rich emigrants (Tallaksen, 2023a: 2):

These are good and clever people, so of course I hope they choose to move home eventually. Actually, I think it is a bit boring to live in Switzerland. I think it’s boring to be a small clan down in Lucerne, or wherever the various people live. From a human point of view, of course I hope they are fine, but over time moving is not a feasible solution. If you have made a fortune in Norway, you should live here and share with others. The mountain code states that there is no shame in turning around.

Even the mainly conservative Norwegian business newspaper ‘Finansavisen’ (2023) did not take it very seriously that some rich people left the country as the newspaper introduced ironic reasons for moving to Switzerland: Assisted dying is legal, enough shelters in all buildings, LSD was invented here, the Anti PowerPoint Party achieved 4356 votes, your status depends on your wristwatch, the country has not been involved in war since 1815, and there are more banks than dentists. While the Swiss drink far more alcohol, they are always on time. Furthermore, since German, French, Italian, and Rhaetian are official languages, and English and Portuguese are spoken as well, it is likely that Norwegian will become an official language soon in Switzerland, the newspaper suggested ironically.

Irony went on by the statement that “the stronger the colonial environment in the country of immigration, the more it will resemble living at home” (Rokkan, 2023: 2). Also, Bjerkholt (2023: 2) at the other Norwegian business newspaper ‘Dagens Næringsliv’ joked about rich men who stay in Norway while sending their children to Switzerland by writing that “so highly did they love their fatherland that they sent their firstborn to Switzerland with all the b shares”. A key Norwegian politician stated that there is “no reason to coddle those who travel to Switzerland” (Gjerstad, 2023b). Another key Norwegian politician stated the following (Gausen and Sørenes, 2023: 14): “These people are turning their backs on Norway. The tax evaders are failing their social responsibility, they are failing the community that has made them rich, and they deserve to hear it.” The journalist reported that she “went down the throats of billionaires” (Rydje, 2023b: 11).

On the other side, the largest Norwegian bank DNB opened a branch office in Switzerland in 2022 to serve the Norwegian community of economic emigrants. And editor Jacobsen, Frithjof (2023: 2) claimed that “the war against the rich has cost the government expensively”.

One of the emigrants, Rugseth (2023), did not like the finance minister’s suggestion that it might be a bit boring to live in Switzerland. He joked that it was obviously boring that everything works in Switzerland, while a lot of things are problematic in Norway. He wrote that he did not miss labels like tax dodger, tax evader, welfare profiteer, salmon baron, or capitalist. A former top politician expressed concern about such rhetoric (Schultz, 2023), and the debate went on in Norwegian media (e.g., Bondevik, 2023; Clemet and Fasting, 2023; Følsvik, 2023; Kvadsheim, 2023; Munch-Thore, 2023; Nygaard, 2023; Setsaas, 2023; Valderhaug, 2023c; Vestre, 2023), including disagreements regarding facts (e.g., Fasting and Clemet, 2023; Feratovic and Solberg, 2023; Grini, 2023; Hoddevik, 2023; Isaksen, 2023; Jacobsen, Frode, 2023; Kaski, 2023a, 2023b; Pedersen and Vamraak, 2023) and whether the refugees had created jobs in Norway (Feratovic et al., 2023b; Solberg and Feratovic, 2023b; Trumpy, 2023a), as well as attacks on individual refugees such as the Olympic champion Bjørn Dæhlie (Bergan, 2023) and updates on the situation in Switzerland (Wiedswang, 2023: 34):

Norwegian tax refugees’ preferred country of asylum is not what it used to be. There is a crack in Switzerland’s political and economic model. The financial industry has been shaken by the collapse of Credit Suisse, the country’s second largest bank. The EU wants to push the country into something similar to the Norwegian EEA model. And in the rest of the West, anger is rising that the Swiss are blocking the re-export of weapons and ammunition to Ukraine – partly because Switzerland has had no problems selling weapons to the parties in the bloody civil war in Yemen. A proposal was voted down by the Swiss parliament in March. The country’s largest party, the national conservative Schweizerische Volkspartei (SVP), stands with the left in defense of a narrow understanding of neutrality – and the SVP is working for a referendum that guarantees against change in policy.

Yet another perspective on emigration to Switzerland was introduced by Bangum (2023: 30) who argued that it would become less attractive for Norwegians if the tax agreement between Norway and Switzerland from 2010 was terminated regarding profits on shares in Norwegian companies:

In practice, Switzerland has no tax on capital gains, and the tax on share dividends is in practice ten percent. In comparison, Norwegian shareholders pay more than 35 percent tax when they receive dividends from Norwegian companies. To ensure that foreign shareholders are taxed in the same way as domestic shareholders, most countries in the world have introduced so-called source tax on dividends. In Norway, foreign shareholders must pay 25 percent tax on dividends from Norwegian companies. If a dividend of NOK 100 is paid, the foreign shareholder must pay NOK 25 to the Norwegian tax authorities. This source tax is usually reduced if Norway knows that the foreign shareholder pays tax in the home country. Norway does not need to impose a source tax if the dividend is anyway taxed abroad. Through tax agreements that Norway enters into with other countries, source tax is therefore reduced. Norway does not enter into tax treaties with traditional tax havens. Such countries do not tax their citizens. Norway therefore imposes source tax on such countries to ensure that foreign shareholders living in tax havens are taxed. Based on this rationale, Norway should only reduce source tax in Switzerland if Switzerland taxes its shareholders. In reality, shareholders in Switzerland pay zero tax if they realize a gain by selling shares in their company, while they pay ten percent tax if dividends are paid from the company to the shareholder. This essentially makes Switzerland a tax haven for shareholders. Therefore, one would think that Norway still has a source tax on Switzerland. But we do not have that. In 2010, Norway and Switzerland agreed to remove source tax on dividends paid from a Norwegian company to a Swiss company. Dividends can therefore be sent tax-free from a Norwegian company to a Swiss company. The Swiss shareholder can then withdraw dividends from the Swiss company either by selling the shares tax-free or by paying ten percent in dividend tax. The agreement between Norway and Switzerland from 2010 is perhaps one of the reasons why over 50 Norwegian rich people have moved to Switzerland. Why should you pay more than 35 percent dividend tax in Norway when you can move to Switzerland and receive stock dividends tax-free? Norway should now renegotiate the tax agreement with Switzerland to reintroduce a source tax. This will remove some of the incentive to move to Switzerland.

Not only this information presented by Bangum (2023), might cause uncertainty among refugees. Also, the information that symbolic transfer of wealth to children who moved to Switzerland without real disposition rights over the money that was kept by the father might cause uncertainty among refugees (Rydje, 2023a). When one child moved to Switzerland, while sisters and brothers remain in Norway, it would not be obvious to tax authorities what might happen to real ownership when the father dies (Solberg and Feratovic, 2023a).

In the spring 2023, a survey among 292 rich Norwegians was conducted. 149 people responded, providing a response rate of 51%. Six out of ten respondents said they have considered moving out of Norway. Respondents listed reasons why moving is complicated: they have to sell their home, the spouse has to be willing to move, and there are limitations how often they can stay in Norway after having moved (Valderhaug, 2023d).

In many countries, money can help secure a visible memorial. An example is university buildings that are paid for by wealthy people and thus carry their names. This is not possible in Norway, while it is certainly possible in the United Kingdom (e.g., Saïd Business School after a donation from Wafic Saïd) and in the United States (e.g., Carl H Lindner College of Business after a donation from the family Lindner), and also in Switzerland. An example is the Swiss city of Lugano where several Norwegian refugees listed in Table 1 have settled. At the Università della Svizzera Italiana, the rich couple Cele and Aldo Daccò contributed to the construction of the Lugano campus where a major university building is now carrying their names. Names on buildings are symbols by presented artifacts to portrait the persons in positive light by communicating a message for influencing in favor of the persons. When climbing in Maslow's (1943) hierarchy, rich people can secure their own legacy by having their names on university buildings.

In Norway, university buildings are named after famous scientists. For example, the two computer science buildings at the University of Oslo are named after the inventors of object-oriented programming and the Simula programming language (Dahl and Nygaard). Rich people continue donating money to universities in Norway, but they do not get buildings named after them. Unfortunately for rich people in Norway, personal legacy does often not include a financial aspect as emphasized generally by Musgrave (2010: 17):

Values, beliefs, and philosophies are at the core of what people want to leave as their legacy from their time in this world. When you ask about money, those who have received a legacy will often answer that the money was incidental. When you think of some of the greatest legacies of all time, they often do not include a financial aspect. Think of Mahatma Gandhi, Mother Theresa, and no money was involved, but what personal legacies. Pope John Paul II started writing his legacy document from his first day in the role as pontiff.

Legacy refers to an enduring meaning that lasts beyond an individual's living existence on this planet. Legacy is connected to the identity of an actor, the legator, that is intended to have an impact after he or she is gone. Legacy is attached to some individual and lasts beyond some particular end (Colquitt et al., 2023).

One personal legacy approach in Norway is to set up a foundation. Thon hotels are owned by a foundation created and named by the wealthy Norwegian Olav Thon ([www.olavthonstiftelsen.no/english/](http://www.olavthonstiftelsen.no/english/)). Another personal legacy approach in Norway is to set up a prize that is handed out annually also after the founder has deceased. The prize typically carries the founder's name. The most famous one is the Nobel peace prize. Other examples include Anders Jahre's medical prize and Odd Reitan's society prize where the winner of the latter receives a statue of Odd Reitan (Ladejarl, 2023):

The prize of two million kroner is given to an individual who has excelled in working towards a warmer society. The winner of this year's charging earl receives a certificate of honor for following his dreams and values. Do you know someone who goes above and beyond and deserves the award? Everyone can nominate and everyone can be nominated here [reitan.no/arets-ladejarl](http://reitan.no/arets-ladejarl).

The richest person in Switzerland, Bertarelli, has a family foundation in memory of Fabio Bertarelli, father of Ernesto and Dona Bertarelli and husband of Maria Iris Bertarelli ([www.foundation-bertarelli.org](http://www.foundation-bertarelli.org)). The foundation went to the United States to get their name on an academic building (e.g., Babson College's Bertarelli Institute for Family Entrepreneurship).

The private legacy approach is interesting, especially when compared to the public notion of historical persons. Historical figure is a person who lived in the past and whose deeds exerted a significant impact on other people's lives and consciousness. Historical person is attributed with certain features that are a compilation of the actual values he or she proclaimed and the manner the person was perceived by others. Simply having been rich does not qualify. Adding the fact that money beyond a certain level does not make people happier when they are living (Grinde, 2023), creates a fascinating avenue for future research.

Some of the Norwegian billionaire refugees in Switzerland attempted to influence politics in Norway in their favor. One approach was to contribute large amounts of money to the election campaign fund of the conservative party, which is allowed in Norway. The media speculated that the contributors suffered from homesickness (Madsen and Rydje, 2023; Trumpy, 2023b). Also, if refugees were categorized as foreigners, then they are not allowed to contribute since political influence by foreigners is forbidden by Norwegian law (Rydje et al., 2023).

## **Conclusion**

Convenience theory is a novel, integrated theory aimed at explaining deviance at the individual level. This integrated and deductive theory applies the actor-based rather than the action-based perspective on acts of individuals. Applied to a sample of rich immigrants from Norway to Switzerland, this article has demonstrated that some of the convenience propositions are relevant while others are not. In previous years, one or two rich Norwegians moved to Switzerland. Suddenly, in 2022 there were 36 rich Norwegians moving to Switzerland. They were all labeled tax refugees and economic emigrants in the media. The number grew to 44 emigrants early 2023 (Hegnar, 2023a; Mikalsen and Bakken, 2023) and continued to grow into groups of not-so-rich Norwegians (Valderhaug, 2023b).

This article applied the theory of convenience to study the phenomenon of immigration. Based on extensive media coverage as the source of information for this study, some convenience themes seem to dominate. In the motive dimension of convenience theory, goal achievement for business activity is visible in the sample. In the opportunity dimension, Switzerland as a tax haven with financial secrecy was attractive. In the willingness dimension, learning from others is visible in the sample.

## **DATA ACCESSABILITY STATEMENT**

All data used in this study are publicly available in the media.

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## **Less is more. Use of 4 and 7 step project life cycles in benefit co-creation analysis in the geothermal sector**

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### **Abstract**

This study discusses the importance of organizations understanding how to execute projects using the project life cycle as an analysis tool and offers insight into how projects in the Icelandic geothermal sector might benefit from co-production. The four-step life cycle is the most mentioned in literature out of all project life cycles. The seven-step life cycle is compared to the four-step life cycle in this study, seeking to add to and enhance the project management literature. Eleven semi-structured interviews with project managers with managerial experience working in the Icelandic geothermal sector were conducted as part of a qualitative research to gather data. The findings demonstrate a project that can take up to 25 years in perspective of the four step and seven step project life cycle. The findings indicate that employing the seven-step project life cycle can help project managers in such long projects monitor job completion before moving on to the next phase in the project as well as to maximize the efficiency and effectiveness of the project.

**Key words:** *Project Management; Project Lifecycle; Projects; Geothermal Sector; Benefit Co-Creation; Sustainable Development*

### **Introduction**

Project managers control projects to produce results based on quality, time, and budget, while achieving goals based on a variety of pre-defined parameters (Project Management Institute, 2017). Today, projects are described as little or major steps toward change because they can impact the environment in which they are formed while simultaneously being affected by it (Armenia et al., 2019). Successful project management is necessary for organizations to realize long-term economic growth in their operations (Larson and Gray, 2018). The success of a project is determined by improving effectiveness, which is dependent on the specified aim and what the project achieves (Armenia et al., 2019). When adjusting their operations and policies to pursue sustainable development, organizations that regularly employ project management approaches are more prone to gaining a competitive advantage (Kohl, 2016). Projects provide a broad view of change, innovation, and benefit co-creation (Keeys and

Huemann, 2017). The transdisciplinary subject of interest in this study is projects in Iceland's geothermal sector. The production of electricity, hot water, space heating and indirect uses provided by geothermal energy in Iceland has grown substantially in recent years, with 29% of the nation's total electricity produced by geothermal energy facilities and a sizable portion of the nation's geothermal district heating (Iceland Renewable Energy Cluster, 2021).

Project management is used to start, conduct, and finish successful projects in a variety of industries worldwide. Despite its importance in corporate operations, project management research is still in development, and in some cases lacks theoretical foundations and ideas (Patanakul et al., 2010). Recognizing the notion of the project life cycle is beneficial for project management research (Patanakul et al., 2010). In a recent systematic literature review conducted by Masso et al. (2020, pp. 15) which focused on risk management in the software life cycle, it is stated that it is "necessary to carry out research that would enable the identification and analysis of tools and techniques capable of supporting the risk management process". Lessons learned can be used as a tool during the post-project review stage of the project life cycle to assess the risks of future projects (Gachie, 2017). In research conducted by Cook et al. (2022) the analysis was mainly focused on identifying the main stakeholders of projects in the Icelandic Geothermal Energy sector, acknowledging the sustainability benefits that projects offer, and considering when these normally arise throughout the project life cycle. According to Ding and Runeson (2020), the many ways that life cycles are divided into distinct stages have complicated research analyses and made it difficult to compare study findings.

The research question is based on Cook et al. (2022) as it offers an opportunity to examine the project life cycle as an analysis tool from a benefit co-creation perspective in the process, which needs further exploration. The following research question is proposed to address the problem based on the gap in the literature: *What is the implication of the four step and the seven-step project life cycle when investigating projects in the Icelandic geothermal energy sector from a benefit co-creation perspective?*

This study provides insight into how to apply the four step and seven step project life cycles to maximize the efficiency and effectiveness of the project life cycle as organizations have limited resources. Furthermore, this research demonstrates two different approaches to the project life cycle, illustrates the importance of acknowledging and adapting the project life cycle as a tool in project management, addresses the significance of organizations knowing how to implement the project life cycle, provides insight into benefit co-production in projects in the Icelandic Geothermal sector, and contributes to the academic literature on project management research.

The structure of the study is as follows. The introduction is followed by a literature review which focuses on the four step and seven step project life cycle, benefit co-



creation in projects and geothermal projects in Iceland. Followed by a description of the research methodology, an introduction to the research participants, a succinct description of the analysis and coding of the data from eleven semi-structured interviews, and ethical considerations. The key findings of the interviews are examined and put into context with theoretical discussions and conclusions.

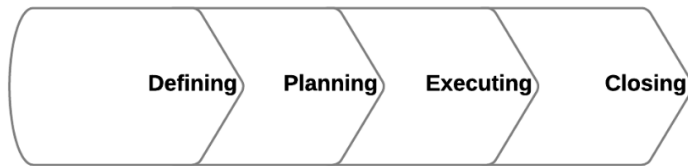
## **Literature review**

### **Application of Project life-cycle framework**

When executing a project, there are numerous project management tools, frameworks, and methodologies that can be utilized by project managers (Patanakul et al., 2010). Assessment of the project life cycle is part of the current evolution of project management, which is now much more concerned with the demands of stakeholders and project success (Davis, 2014). The project life cycle acknowledges that projects have a fixed lifespan and that levels of interaction change regularly throughout the course of a project (Larson and Gray, 2018). The initial stages of a project lay the groundwork for the project's success (Buttrick, 2003). The project life cycle identifies the distinct components of a project. Producing, developing, and implementing a novel concept is part of the project life cycle (Marcelino-Sábaba et al., 2015). The project life cycle helps utilize and shows the scheduling of significant activities across the course of the project (Larson and Gray, 2018). Project success and results are frequently reviewed and measured towards the completion of the project life cycle (Jugdev and Müller, 2005). The project life cycle initially aids in the planning and implementation of projects, but at the same time, you can use the project life cycle like Cook et al. (2022) has done to analyse projects. Cook et al. (2022) analysed Iceland's geothermal power projects using the project life cycle to identify several sustainability benefits that span all six areas of developing sustainable energy.

Project managers often employ a variety of tools and approaches to assist them in leading a successful project and orchestrating activities throughout the project life cycle (Patanakul et al., 2010). Projects are complex and it is hard to find a framework that works for all, companies working within the same sector may not even agree on which framework of the project life cycle is the most fitting to ensure the project's success (Labuschagne and Brent, 2005). Several projects life-cycle methodologies are discussed in the literature (Labuschagne and Brent, 2005; Larson and Gray, 2018), with varying phases ranging from four to seven, both of which this study focuses on. Figure 1 shows the presentation of the four-step project life cycle.

*Figure 1. The four-step project life cycle (Larson and Gray, 2018; Author 's representation).*



The first stage of the four-stage project life cycle involves defining needs and opportunities; the second involves organizing the components that emerged in the previous stage; the third involves carrying out the project to achieve its objectives; and the fourth and final stage is the completion of the project and project's delivery (Pinto and Slevin, 1988; Larson and Gray, 2018). The project life cycle is most often divided into four stages, but many are tailored to a certain sector or kind of project (Larson and Gray, 2018). Figure 2 shows the presentation of the seven-step project life cycle.

*Figure 2. The seven-step project life cycle (adapted from Buttrick, 2000; Labuschagne and Brent, 2005, Author's representation).*



Using the definitions of the seven-step project life cycle by Buttrick (2000) and Labuschagne and Brent (2005), the first stage of the seven-step life cycles the proposal outlines the idea and basis of the project. The second stage consists of evaluating the current proposal, which is conducted following the project's scope, duration, and cost, suitability for the company, and compliance with its policies. The third stage of the project is defined by evaluating the project's risk, which looks at potential dangers that may be associated with the project and ways to minimize or lessen these risk factors. The project is designed in the fourth stage, involving the development of the project, structure, and creativity. In the fifth stage of the project life cycle, the project is put to the test and evaluated to see if it achieves the goals specified at the start of its creation. In the sixth stage of the project, it is distributed to people who will make use of the project, such as certain departments within the corporation, individuals, and consumers. At the final stage, the lessons learned through the project's life cycle are assessed through comprehensive reflection, and it is determined whether the project's benefits have been realized. (Buttrick, 2000; Labuschagne and Brent, 2005). The lessons learned throughout the project are essential for the organization to achieve maximum results and progress forwards (Todorović et al., 2015). The main additional element in the seven-step project life cycle, compared to the four-step project life cycle, are the evaluation, validation, and post-project review.

As Kloppenborg and Petrick (1999) pointed out, using the project life cycle as a tool may assist project managers in overcoming the late recognition or absence of essential

project elements, and enable them to intervene early to prevent lengthy financial support for a failed project or a project which is not delivering the expected final product. The project life cycle can be used to analyse projects in various industries. Minelgaite et al. (2021) point out that the business or sector must have organizational knowledge on how to use the project life cycle and other tools during the lifetime of a project.

### **Benefit co-creation in projects**

Project benefit realization is an increasing challenge for businesses that rely on projects for innovation, transformation, and value development (Keeys and Huemann, 2017). During a project, an emphasis on project benefits allows for more significant project resources (Sopko and Demaria, 2013). According to Keeys and Huemann's (2017) findings, in addition to their immediate usefulness, projects also facilitate a longer-term perspective on change, innovation, and benefit creation, which establishes the composition of project teams and the organizational framework of projects. Incorporating an organization's agenda and business goals at the initiation of a project attains benefits through linear planning as it links the two together (Keeys and Huemann, 2017). The greatest benefit of project management maturity that a company may achieve is continuous learning and progress (Todorović et al., 2015).

Benefits from a stakeholder viewpoint are the measurable rewards of a profitable project (Sopko and Demaria, 2013). Benefit co-creation develops through the participation of organizations and their stakeholders during a project (Cook et al., 2022; Schultz and Hatch, 2016). It is clear that these are the means through which projects create benefits, and the extent to which benefit is generated depends heavily on the subjective opinions of the stakeholders (Cook et al., 2022).

### **Geothermal projects in Iceland**

The Icelandic geothermal sector includes more than 60 stakeholders (Richter, 2016), and an established cluster network is working to create new business prospects and ways to transfer knowledge, given the complicated diversity of direct and indirect applications of geothermal power in Iceland (Gekon, 2011; Iceland Renewable Energy Cluster, n.d.). Iceland has evolved into one of the top worldwide leaders in the geothermal sector despite having a relatively small population of approximately 376,000 (Statistics Iceland, 2022), with the country's knowledge and influence being shared internationally (Mikhaylov, 2020; Zhang et al., 2020). Geothermal energy initially played a role in lowering reliance on fossil fuels. In Iceland, this was primarily driven by a desire to decrease expensive imports of oil and boost domestic energy security (Ioannidis and Chalvatzis, 2017; Splitter et al., 2020). About 66% of Iceland's primary energy consumption is derived from geothermal sources (National Energy Authority, n.d.). This study tends to use projects within the Icelandic geothermal to

identify the advantages of using different project life cycles as analysis tools while examining the co-production of benefits in geothermal industry projects.

## **Research methodology**

### **Research participants**

Qualitative research investigates how people express their experiences, as well as how they give those experiences significance (Korstjens and Moser, 2017; Leavy, 2020; Merriam, 2009). Eleven semi-structured interviews were conducted with six men and five women, ages ranging from thirty to sixty, who had all worked on Icelandic geothermal energy development projects with experience as managers. In Table 1, the interviewees are listed and anonymized using numerical denotations.

*Table 1. Interview participants.*

<b>Interviewee number</b>	<b>Gender</b>	<b>Job position</b>	<b>Company size</b>
1	F	Environmental Organization Manager	Medium-sized
2	F	Quality and Environmental Manager	Medium-sized
3	M	Manager of Mechanical Division	Medium-sized
4	F	Professional Leader in Sustainability	Large operation
5	M	Mechanical Engineer	Large operation
6	M	Business Manager in Sustainable Financing	Large operation
7	M	Division Manager	Medium-sized
8	M	Director of Geothermal Development	Large operation
9	F	Director of District Heating	Medium-sized
10	M	Managing Director	Micro-sized
11	F	Innovation Project Management	Small-sized

According to the European Union's classification, businesses were divided into four groups: micro (0–10 employees), small (50–250 employees), medium (250–plus employees), and large (250+ employees) (European Commission, 2021).

### **Data analysis and coding**

Eleven semi-structured interviews with specified stakeholders were conducted. To create linkages between causative conditions, phenomena, context, intervening conditions, action/interaction strategies, consequences, etc., the data analysis employed the procedures described by Corbin and Strauss (2008). Coding was used as a tool to identify certain components of the data to readily access particular portions of the data

(Merriam, 2009). The open, axial, and selective coding steps proposed by Corbin and Strauss (2008) were followed. These convey a number of advantages, including the formation of linkages, identifying one's own biases as the study is determined by how the researcher analyses information from the selected sample, and returning to the data several times throughout the research process (Merriam, 2009).

### **Ethical considerations**

In this study, ethical issues were taken into account per Bryman and Bell's guidelines (2007). An emailed invitation to participate in the study included details on the study's goals, the researcher, and the organization they represent, as well as contact information in case any issues arose. Interview participants were made aware that the study's findings would be reported in a condensed format.

### **Findings**

When examining benefit co-creation in geothermal industry projects, research data was studied from the perspectives of the four and seven step project life cycles to identify the suitable value of each project life-cycle model. One of the themes that emerged during the data collection was "Procedural life-cycle orientation," which examines the synergistic effects that arise during the project life cycle and the benefits that are created by projects for stakeholders.

#### **Procedural life-cycle orientation**

Interviewee 7 gave a clear description of her project from start to finish as he works at a utility company. He explained the process of a geothermal drilling site, which is a project that can take up to 25 years until it's finished, as follows. The project is defined by the team that starts on the research where temperature drilling is done to investigate the condition of the geothermal area. To get permission to drill and view the situation in the area the company needs to negotiate with the landowners to be allowed to drill, he explains *"then an agreement is made about exploitation, so to speak, if some activity is found."* When it becomes clear that there is an activity in the area there are high hopes for the construction, and further research and drilling are carried out, which is a process that can take many years explained Interviewee 7. He adds that with geothermal drilling there is always a high degree of uncertainty. If everything goes according to plan and water comes out of the borehole, the next step is to follow the legislation and apply for permits, he explains: *"then we start the activation phase of the power plant and in this process, you have to apply for exploitation permits, natural development permits and all these traditional permits"*.

He mentions that pipes need to be laid and they can go through quite a lot of land properties and municipalities, which can take a lot of time according to interviewee 7. After the construction is finished and the plant has been connected to

the system, the next step is to put the plant into operation. Following the operation, the organization and the project team need to set up all kinds of maintenance plans, and record equipment registration to ensure that all the equipment is in maintenance and monitoring. In this way, the utilization of the investment is maximized and subsequently with system management consisting of engineers who oversee running the systems he concludes, *"then it just ticks like that into the future."*

### **The four step and seven step project life cycle**

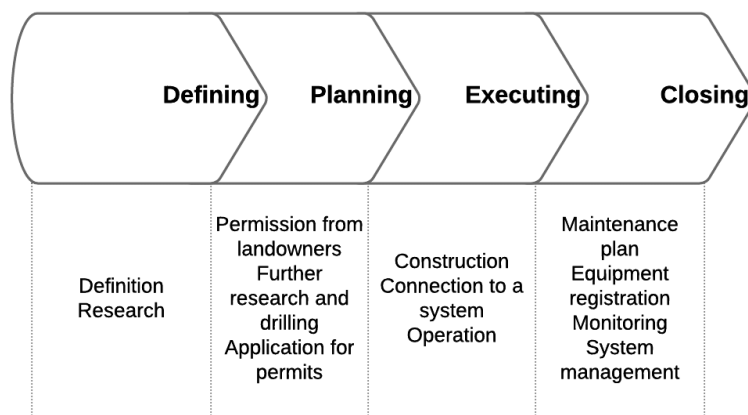
To analyse this project description from the perspective of the project life cycle as a project management tool, the description will be inserted into the four-step life cycle (Larson and Gray, 2018) and seven step life cycle (Buttrick, 2000; Labuschagne and Brent, 2005). Figure 3 shows the project described by interviewee 7 in the four-step life cycle and figure 4 shows the same project in the seven-step life cycle. To examine the four step and seven step project life cycle the co-benefit generation that will be created as a result of the project will be examined and the main stakeholders.

The main benefit for all stakeholders regarding project management is that the project is within the scheduled timeframe according to interviewee 7. Co-benefits generation for the community as a whole from a project described above is mainly district heating and running water which interviewee 7 considers sustainable. He mentioned that the basis for the development of communities is that this infrastructure is in order and is not more expensive than it needs to be.

The main stakeholders of the projects that interviewee 7 manages are municipalities, employers, landowners, the state, the energy agency, planning agencies, the environmental agency, and the general public. Then he mentions that the general public can be inconvenienced when electricity, heat and water are taken from the residents when the systems have to be maintained.

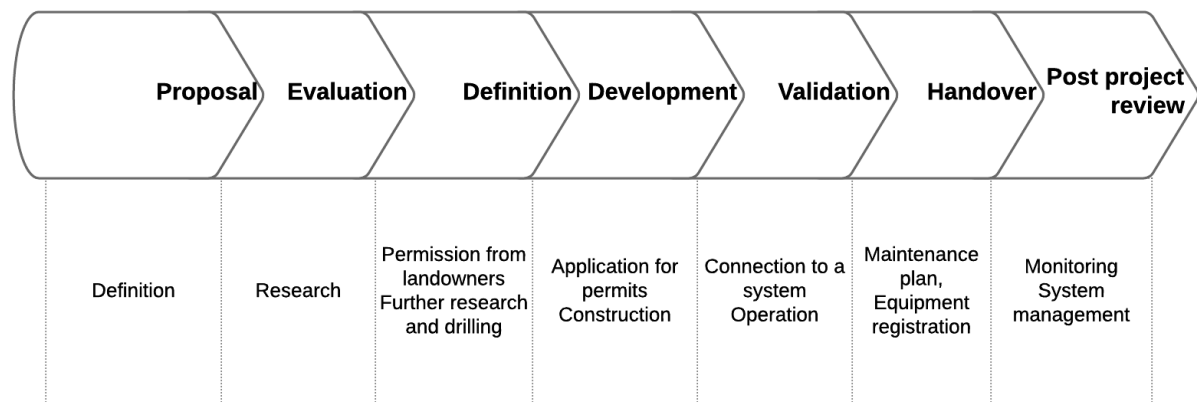
As the project can span over 25 years as previously mentioned by interviewee 7, it needs to fulfil the project goals, which are doing research in the area, getting permission from landowners, drilling, applying for permits, construction, connection to a system, operation and maintenance plan, registration of equipment, monitoring, and system management.

Figure 3. Four step project life cycle based on data from an interview.



Analysing the project from the four-step project life-cycle perspective (Figure 3) shows that a lot of individual tasks are within each stage of the project. While analysing the project from the seven-step project life cycle (Figure 4), each step of the life cycle does not contain as many tasks as the four-step project life cycle. Figure 4 shows that the project is divided into several additional steps, which makes it easier to monitor that each task is completed before proceeding to the next step in the project.

Figure 4. Seven step project life cycle based on data from an interview.



The next section covers benefits for stakeholders mentioned in interviews not, particularly for the project described in this section. This is done to get a better understanding of the benefits for stakeholders in the Icelandic geothermal sector as a whole.

### Benefits for stakeholders

The most frequently mentioned stakeholders in the interviews were employees, customers, municipalities, and national governance and public institutions. Interviewee 4 said that there is a great deal of knowledge among employees and that it is an awareness among employees and that the company's way of life is based on the fact that the natural resources are professionally managed but says more factors than that

come into play. First of all, some financial incentives and opportunities can encourage over-utilization in some periods. Interviewee 4 explains that although it is a pretty mature process inside the organization, it is true that such efficiency is frequently the one that comes to the fore. Long-term and short-term views need to be weighed against one another and that the potential for money and income is what influences decisions the most. While interviewee 8 claims that generating jobs in the communities where projects are taking place is largely done so that there would be a positive social impact rather than simply generating a profit for the energy firm. Interviewee 5 mentioned that the project he manages is related to the efficient use of geothermal resources and that it is utilized as much as possible which can be seen as benefits for stakeholders and added *“we come up with proposals when we see something that is a waste.”*

Interviewee 6 said that for stakeholders to benefit from project work and for projects to be successful, conversations need to take place about the projects. He explains:

One thing that must not be forgotten in this too is that for this kind of project to be successful, it is a lot about the conversations, conversations with the client, conversations with stakeholders and we have been vocal in what we think needs to be done.

Interviewee 3 said that implementing the United Nations Sustainable Development goals into projects helps with project success. He mentions that there are sustainability experts who work on related projects, but there is an emphasis on education for all employees regarding the sustainability within the company. He adds that the company has over the years worked on many projects that are sustainable and a large part of the company's income is related to sustainable projects.

## **Discussion**

As mentioned before, there are distinct types of projects life cycle. This study focuses on comparing the four-step project life cycle and the seven-step project life cycle. It is important to explore the main difference between using four step life cycle and seven step life cycle as an analysis tool and put it into perspective. The four-step life cycle is the most mentioned in literature. As this study intends to extend and contribute to the project management literature, the seven-step life cycle is used as a comparison to the four-step life cycle.

Not all projects have the same timeline, just as projects differ among industries or sectors. The project life cycle recognizes that projects have a limited lifespan and that levels of effort and attention change regularly during a project (Larson and Gray, 2018). If the project has a long timeline and a large team, it might assist project managers to use the seven-step project life cycle as an analysis tool to avoid forgetting or failing to complete certain elements at each stage of the project's life cycle. According to Kloppenborg and Petrick (1999), using the project life cycle as a tool can help project managers overcome late recognition or absence of critical project elements and intervene early to prevent continuing financial support for a failed project or a project



that is not delivering the expected final product. The seven step project life-cycle can offer project managers to take a moment between steps where much depends on the project as the project success and results are most often assessed at the completion of a project; for example where capital and income possibilities weigh heavily in decision-making, where there is a possibility to identify waste in the process when employees with little or no expertise in the project management field want to ask questions or to realize the benefits of the project between stages of the life-cycle. The seven-step life cycle gives more space to ask the problematic questions or to celebrate the small victories throughout the project before going to the next stage of the life cycle, particularly if the project's time limit is extensive. The four step and seven step life cycle both serve the same purpose, they are analysis tools that lays out the groundwork of the project 's success and best practices. The project life cycle is necessary while working on a project that must be completed on schedule, within budget, and within scope. It is critical for the business to have organizational expertise on how to use the project life cycle and other tools during the project's lifetime (Minelgaite et al., 2021).

Project managers frequently use many tools and methodologies to help them conduct a successful project and organize tasks throughout the project life cycle. The project lifetime analysed in the findings is as before mentioned, up to or over 25 years. The four-step project life cycle might be greatly beneficial if the project has a shorter time limit and can help project managers to assign different tasks to project groups or individuals within each step before proceeding to the next step in the project life cycle. The seven-step project life cycle can have advantages in a longer project as it gives better oversight over the individual tasks within each step of the project life cycle, and it can be used as a time management framework as each step covers months to years to finish. Instead of project results and benefits only being reviewed at the end of the project life cycle, it would be reviewed after completion of each step before starting the next stage of the project life cycle.

To answer the research question of the study it was important to understand the implications of the four step and seven step project life cycle, to examine the differences between the two and put them into perspective. Benefit co-creation from projects are manifold as mentioned by interviewees and given a brief introduction in the findings chapter. It is also necessary to examine the potential impact of selecting the right analysis tool in terms of time, scope, and budget.

### **Conclusions and future research**

The focus was on providing insight into how to apply the four step and seven step project life cycles to maximize the efficiency and effectiveness of the project life cycle, using it as an analysis tool on projects in the Icelandic geothermal sector. This study addresses the significance of organizations knowing how to implement the project life cycle and provides insight into the benefits that are created with the project management framework.

Managers and organizations must understand the tools that project management offers and select the most suitable tool for the initiation of the project. There are additional benefits to the project that are created by using the right tool and techniques. If a project is undertaken and no consideration is given to which project life-cycle framework as an analysis tool is the most suitable for the project, it could result in dis-benefits being generated caused by poor project management and planning. The results of this study can lead to project managers and teams to better understand and analyze which tools and techniques are the best suited for the project at the initiation phase to maximize efficiency and to prevent projects from going beyond scope, time, and budget. What's more, as the four-step project life cycle is the most mentioned in literature, this study provides project managers with an insight into the seven-step project life cycle for longer projects and shows a real-life example that compares the four step and seven step project life cycle.

The study provides insight into different projects in the Icelandic geothermal sector. A total of 11 interviews were conducted with interviewees with management experience in the field. The research doesn't represent the geothermal field as a whole or the stakeholders of the sector which can be considered a limitation of the study. It is worth mentioning and can be seen as a limitation of the study is that many companies might be applying a merged version of the project life cycle with blurred lines, which complicates analysis.

In future research, studies can be conducted to examine the existing literature on the different project life cycles and how they are used as an analysis tool in different industries. The findings of future studies should therefore show different projects within different industries that help managers understand how to choose the most suitable project life cycle to manage projects efficiently and effectively to success.

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## **Towards an assessment model for Lean and Green 4.0**

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### **Abstract**

Lean thinking focuses on continuous improvement through the continuous development of employees. A lean assessment can be carried out to determine a company's level of lean maturity. An assessment model that is widely used is the Rapid Plant Assessment (RPA) developed by Goodson (2002). In 2015, the UN launched Agenda 2030 where 17 sustainable development goals were launched. In addition, most companies have a great need to digitalize their processes. However, despite the increased need for digitalization and focus on sustainability in lean manufacturing firms, there is still a lack of clear understanding of how to incorporate sustainability and digitalization into lean assessment models. This paper discusses how RPA can be developed to include green and digitalization aspects. The article launches an extended model where sustainability and digitalization are included.

### **1. Introduction**

Manufacturing remains the catalyst for economic expansion; nevertheless, merely enhancing financial outcomes has become inadequate in today's complex landscape. Manufacturers across the globe are refining their operations and reconsidering conventional business practices to address a multitude of challenges and secure a competitive edge (Touriki *et al.*, 2021). Amid rising demands for corporate performance and increased transparency, companies acknowledge the imperative to embrace sustainability, harness the transformative potential of Industry 4.0, and explore innovative ways for competitive manufacturing.

Sustainability has emerged as an undeniable imperative across society, research, and industry, driven by mounting pressures from customers, regulators, and stakeholders (Cherrafi, Elfezazi, Govindan, *et al.*, 2017). Companies have been increasingly compelled to adopt greener practices to align with stakeholder expectations (Zhan *et al.*, 2016). In this concept, Green signifies a commitment to enhance the sustainability of an organization's operations by reducing waste and minimizing environmental impact across products and services (Duarte and Cruz-Machado, 2017; Shokri *et al.*, 2021). Simultaneously, Lean Manufacturing has established itself as a potent paradigm, fiercely targeting the elimination of waste in diverse organizational functions and helping companies use their resources more efficiently (Kurdve and Bellgran, 2021). This approach is widely accepted in the industrial sector, revered for its ability to streamline supply chains and maintain

productivity in production processes (Akkari and Valamede, 2020). Thus, it has become an integral part of both established and emerging industries.

The confluence of heightened customer demands, and global climate shifts has expanded the scope of Lean Manufacturing and Green approaches by taking deep Lean thinking and further environmental impact reduction, transcending traditional boundaries. Consequently, green manufacturing has emerged as a strong ally for lean manufacturing in enhancing environmental efficiency. The synergy between these two approaches, both focused on waste reduction, has prompted companies to adopt lean and green practices jointly, reflecting the growing emphasis on sustainable production and operations and has attracted researchers' attention (Leong *et al.*, 2019). Sustainability, in essence, entails optimizing resource use, maximizing efficiency, and charting an economical path forward. Lean and Green, in harmony, offer a robust framework for sustainable development, aligning with these imperatives (John, Sampayo and Peças, 2021). Furthermore, waste reduction in the industrial landscape has become an indispensable element for remaining competitive.

In recent years, the rise of Industry 4.0, characterized by the integration of digital technologies, has ushered in a transformative era in manufacturing. This evolution has reshaped customer value creation and revolutionized how organizations manufacture products and deliver services (Duarte and Cruz-Machado, 2018). Manufacturing companies have been at the forefront of embracing these technological advancements to enhance and optimize their processes, leading to a paradigm shift driven by technology. Through this integration of digital technologies, business and engineering processes are deeply integrated, creating a more intelligent and efficient manufacturing environment.

Recognizing the linkage between sustainable manufacturing and Industry 4.0, governments in various countries have provided guidelines to implement Industry 4.0 (Machado, Winroth and Ribeiro da Silva, 2020). Scholars have mentioned that Industry 4.0 exerts a constructive influence on the various dimensions of sustainability, encompassing economic, environmental, and social well-being, through an integrated approach. The forthcoming demands of Industry 4.0 can be adapted with the characteristics of Lean and Green manufacturing, suggesting a shared objective between these two approaches. Lean management, which has been a prominent business strategy for nearly three decades, holds immense appeal for industrial firms, and its adoption is seen as instrumental in implementing Industry 4.0. Lean management excels in distinguishing between value-added and waste within an organization, providing an opportunity to segregate non-added-value activities. In this context, Industry 4.0, with its integration of smart technologies and data-driven insights, plays a pivotal role in enabling leaner, more efficient operations to meet the demands of the modern era.

These three paradigms - Lean, Green, and Industry 4.0 - have assumed undeniable importance in contemporary production environments (Clark and Harley, 2020). However, selecting the optimal mix of approaches and methods remains a complex task, given the multitude of parameters, potential interactions, and their collective

impact on operational performance (Fiorello *et al.*, 2023). Scholars have extensively explored various facets of lean assessment, sustainability, and the adoption of Industry 4.0 technologies.

Researchers have found that the successful implementation of Lean manufacturing is not always straightforward, as obstacles have been identified that hinder the adoption of Lean manufacturing practices (Alkhoraif *et al.*, 2019, Abu *et al.*, 2019). Improper implementation or misconceptions about Lean can inadvertently lead to increased waste, higher production costs, and longer processing times (Nordin, Osman and Adom, 2016). Therefore, it becomes imperative to measure the degree of leanness within a production system, ensuring that the advantages of lean practices are realized and whether a manufacturing company has been correctly applying lean techniques to enhance its performance. Vinodh and Chinta offer a straightforward definition of leanness, characterizing it as the evaluation of the effectiveness of lean practices (Vinodh and Chintha, 2011). Similarly, the adoption of Green Lean practices is a challenging and long-term process for many organizations (Garza-Reyes, 2015). Barriers, including political, managerial, behavioral, resource limitations, and technical factors can exert a significant influence (Cherrafi *et al.*, 2017). Scholars have explored the interplay between leanness and environmental sustainability, leading to the development of assessment models tailored to these dimensions within organizations (Cherrafi *et al.*, 2021; Duarte & Cruz-Machado, 2017).

Amid these developments, as manufacturing journeys toward smart factories and the fourth industrial revolution, companies grapple with identifying appropriate implementation strategies (Huebner *et al.*, 2017). The challenge lies in identifying applications of Industry 4.0 in their processes and initiating measures to adopt digital solutions. Each company has to analyze its unique situation and needs, selecting Industry 4.0 concepts that align with its goals (Matt, Rauch and Riedl, 2018). Maturity models have emerged as valuable tools for guiding organizations through the Industry 4.0 transformation. These models provide comprehensive guidance, assessing and tracking progress in improvement initiatives (Akdil, Ustundag and Cevikcan, 2018; Asdecker and Felch, 2018) and the need for instruments for the assessment of the company regarding the current status or maturity of applied technologies and the level of Industry 4.0 implementation motivated researchers to develop further models. As most companies operate with Lean Production Systems, any digital adaptation inevitably impacts existing production systems. Therefore, a hybrid maturity model that combines Lean and Industry 4.0 assessment becomes more appealing than models that consider either Lean or Industry 4.0 in isolation (Kolla, Minufekr and Plapper, 2019).

Despite considerable research efforts, a significant gap persists in the academic landscape: a comprehensive, unified assessment model capable of simultaneously evaluating leanness, Industry 4.0, and sustainability remains underexplored. This synthesis of dimensions that collectively defines modern manufacturing remains a frontier ripe for scholarly inquiry. Developing tools to evaluate these parameters represents an essential first step. Rather than creating entirely new tools, leveraging



well-established ones may offer an efficient solution. Considering this need, the following research questions emerge:

**RQ: How can organizations assess their efforts towards lean, industry 4.0 and sustainable development maturity?**

To fulfil the purpose of this research, a literature review was performed on different assessment models for evaluating lean, sustainability and Industry 4.0 in organization. Eventually, an innovative assessment model is introduced, designed to offer a holistic assessment encompassing leanness, sustainability, and digitalization. This conceptual model aims to serve as a crucial tool for comprehensively measuring the manufacturing landscape, providing practitioners and scholars with deeper insights into the intricate interplay of these critical paradigms. Through the deployment of the model, this study endeavors to foster a comprehensive understanding of manufacturing processes, identify areas for potential enhancement, and contribute to ongoing discussions on advancing manufacturing practices in the era of Industry 4.0.

## **2. Literature Review**

In the contemporary landscape, manufacturing sectors face heightened competition on a global scale compared to previous times. Therefore, when undertaking an enterprise transformation, it becomes vital to employ assessments that encompass various performance aspects throughout the execution process. These assessments help in comprehending the current status and formulating a transformation strategy that will guide the company toward a new future state (Silvério, Trabasso and Pereira Pessôa, 2020). Such evaluations play a significant role in pinpointing performance gaps, setting priorities, and contributing to the development of a future vision for the enterprise. The existing systems, processes, and practices require comprehensive dimensions, indicators, and indexes for determining their Leanness, sustainability and Industry 4.0 maturity and readiness. Researchers are currently releasing assessment or maturity models tailored to specific industries, including lean manufacturing, sustainability, and Industry 4.0. In the following, the established assessment and maturity models in these domains will be discussed.

Over the last three decades, there has been a growing focus on development and implementation of improvement techniques such as lean manufacturing. Divers maturity models and assessment tool have also been developed for lean evaluation and most of these measurement frameworks follow the same logical pattern in terms of structuring the parameters and asking questions (Alnajem *et al.*, 2013). The MIT-developed Lean Enterprise Self-Assessment (LESAT) helps enterprise leaders evaluate their organization's current and desired states for lean manufacturing across three key areas: lean transformation/leadership, life cycle processes, and enabling infrastructure processes, using 54 lean enterprise practices. LESAT provides a comprehensive roadmap to identify gaps and achieve desired maturity levels (Lean Advancement Initiative, 2001). However, it was first published in 2002 and does not incorporate newer concepts like Industry 4.0 and sustainability. The Shingo model, a widely used lean assessment framework, emphasizes systematic lean evaluation with a focus on organizational culture as a key driver of lean

implementation (Miller, 2014). While it underscores principles as fundamental elements of culture and business excellence, a complementary model based on tangible evidence and formulated criteria is necessary alongside it. Sangwa & Sangwan (2018) introduced a conceptual framework centered on key performance indicators (KPIs) to gauge lean performance. The framework assessed seven critical areas: manufacturing processes, new product development, human resource management, finance, administration, customer management, and supplier management. Within these categories, 26 dimensions and 119 key performance indicators were evaluated. The Rapid Plant Assessment (RPA) was presented by Goodson (2002), is a practical tool initially designed to assess plant leanness through a succinct questionnaire-based walkthrough process. Over the past two decades, RPA has gained extensive usage in the corporate domain, building a substantial database for benchmarking operational efficiency. However, it primarily focuses on the economic aspects of sustainability. This limitation underscores the potential for further adaptation to encompass a broader spectrum of sustainability and Industry 4.0 dimensions. Drawing inspiration from Goodson's (2002) rapid plant assessment tool (RPA), Makui et al. (2014) developed the Total Rapid Assessment (TRA) tool, which consists of 15 assessment categories to appraise the extent of lean implementation.

The concept of Industry 4.0 maturity and readiness (I4.0 MR) emerged with the introduction of the Industry 4.0 term in 2011 for assessing organizational competencies, identifying areas for improvement, and taking corrective action (Dikhanbayeva *et al.*, 2023). I4.0 MR assessment consists of a sequence of stages that assess the current state of a manufacturing organization in its transformation towards a more agile status with a focus on technology, processes, and systems. It evaluates and determines the status of preparedness, attitudes, and resources at all levels of the organization's system (Mittal *et al.*, 2018).

Lichtblau et al. (2015) proposed the Industry 4.0 readiness model (IMPULS) as a comprehensive and meticulous framework for assessing Industry 4.0 readiness, with a focus on analyzing real-world cases. This model considered 18 items that made six critical dimensions of an Industry 4.0 environment: strategy and organizational readiness, which addresses the strategic planning and control of the Industry 4.0 corporate strategy, smart factory, which aims for a distributed, highly automated production environment, smart operation, which aims for an enterprise-wide and cross-enterprise integration of the physical and virtual worlds, smart products, which aim to facilitate an automated, flexible, efficient production management, as well as the creation of new data-driven services, data-driven services, which support new operational efficiencies and revenue streams through services and employees, which help to realize digital transformation. It ultimately classifies readiness into six distinct levels, ranging from newcomers and beginners to learners, experienced individuals, experts, and top performers. Similarly, Schumacher et al. (2016) proposed I4.0 MR models to assess the organization's status. To validate their approach, a combination of quantitative and qualitative methods was used, including industry surveys. The results emphasized the

importance of prioritizing the strategy and product dimensions to achieve readiness for Industry 4.0 adoption.

The researchers aimed to determine the importance of readiness factors for the successful implementation of Industry 4.0 in industrial settings. Samaranayake et al. (2017) specifically investigated the relative significance of essential readiness factors for implementing Industry 4.0, with a particular focus on technological readiness. Their study prioritized process-related goals over economic and environmental considerations. Hizam-Hanafiah et al. (2020)'s systematic literature review of industry 4.0 assessment models, encompassing an analysis of 30 maturity models, underscores the significance of key dimensions, including technology, people, strategy, leadership, process, and innovation. Their finding substantiate the argument that these dimensions serve as pivotal indicators for enhancing digital transformation performance within organizations, irrespective of their size or industry. A summary of existing literature on I4.0 MR is presented in Table 1.

Name of the Model	Author & Year	Dimensions
IMPULS – Industry 4.0 Readiness	Lichtblau et al. (2015)	Strategy and organization, smart factory, smart operations, smart products, Data-driven services, and employees
SIMMI 4.0	Leyh et al. (2016)	Vertical integration, horizontal integration, Digital product, and Cross-sectional technology
Industry 4.0/Digital Operations Self-Assessment	PWC (2016)	Digital business and customer access, digitization of products/services, data analytics, IT infrastructure, IT architecture, Security, and digital culture
Industry 4.0 readiness and maturity of manufacturing enterprises (I4.0 MR)	Schumacher et al. (2016)	Products, customers, operations and technology, strategy, leadership, governance, culture, and people
Industry 4.0 readiness model (WMG)	Warwick	Products and services, Manufacturing and operations, Strategy and organisation, Supply chain, Business model, Legal considerations
Industry 4.0 – MM	Gokalp et al. (2017)	IT, data governance, information flow, process transformation, and organizational structure/strategy
Digital readiness Assessment Maturity Model (DREAMY)	(De Carolis <i>et al.</i> , 2017)	Process, monitoring and control, technology, and organization.
Maturity and Readiness Model for Industry 4.0 Strategy	Akdil et al. (2018)	Smart products and services, smart business processes, strategy, and organization
I4.0 Maturity model	Sony et al. (2019)	Employee, level of digitalization, extent of digitalization, organizational strategy, top management involvement
360 Digital Maturity Assessment (360DMA)	(Colli <i>et al.</i> , 2019)	Governance, technology, value creation, connectivity, competence

The Smart Industry Readiness Index (SIRI)		Technology (Automation, connectivity, intelligence), process (operation, supply chain, product lifecycle), and organisation (Talent readiness, structure, and management).
I4.0 Readiness Model	(Hizam-Hanafiah, Soomro and Abdullah, 2020)	Technology, people, strategy, leadership, process, and innovation
I4.0 MR	(Kumar and Akhilesh, 2021)	Strategy, organization, business model, employee, manufacturing and operations, supply chain, production system, products, and services

Table 1: summary of the literature

Kolla et al. (2019) conducted an extensive review of existing assessment models and mapped lean and Industry 4.0 components to the specific characteristics of manufacturing SMEs that help researchers to develop a hybrid assessment model that includes both existing manufacturing systems such as lean and emerging advanced technologies in ICT known as industry 4.0. Sajjad et al. (2023) presented a lean modified manufacturing maturity model for Industry 4.0 (LM4I4.0) that integrates the two main manufacturing paradigms of lean and Industry 4.0 by adding an embedded lean module to the existing maturity model (IMPLUS). This modification provides a comprehensive and compatible solution for assessing both lean and Industry 4.0 in a systematic way. This model has been validated in fifty Pakistan's manufacturing industries, providing a comprehensive and compatible framework for assessing the current state of maturity and readiness level in developing countries.

Zoubek et al. (2021) developed an Industry 4.0 Maturity Model that evaluates the environmental impact of manufacturing processes and how they can be improved through the implementation of Industry 4.0 technologies. As this model operates with three indicators, the authors suggest implementing more indicators for each factor to obtain a more detailed maturity model of the environmental aspects in all levels of company production processes. Benešová et al. (2021) proposed a business readiness model that incorporates green aspects for realizing a green Industry 4.0 company. The proposed model includes a new dimension that evaluates the requirements of the new green strategies alongside the other dimensions. The literature review reveals that there is only one article that combines the concepts of sustainability (triple-bottom-line) and smart systems within a readiness and maturity model. Demir et al. (2023) introduced a model called the "smart and sustainable supply chain Readiness and Maturity model (S3RM)" to assess the readiness and maturity of smart and sustainable supply chains. The model integrates indicators of smartness and sustainability and measures the smart and sustainable Readiness and Maturity Index by simultaneously taking smart and sustainable dimensions into account.

Sustainable manufacturing is a vital element of contemporary business strategies, focusing on reducing environmental impacts, upholding social responsibility, and securing enduring economic viability. Achieving sustainability requires a holistic approach. Scholars and researchers offer diverse tools and techniques for assessing the sustainability of businesses, products, or specific process systems. To assess sustainability in manufacturing organizations, it is crucial to utilize measurable indicators and a meticulously structured framework. Rapid Sustainable Plant Assessment (RSPA), inspired by the Rapid Plant Assessment approach, was created to evaluate manufacturing plant sustainability. RSPA categorizes sustainability dimensions, assigns eleven indicators to each, and associates questions with these indicators. It analyses economic, environmental, and social sustainability indicators to identify areas for improvement and best practices in manufacturing. The tool was evaluated in four manufacturing enterprises, revealing room for improvement in all sustainability dimensions (Steingrímsson, Heyer and Seliger, 2012). Golinska & Kuebler (2014) presented a method for assessing the sustainability maturity in remanufacturing companies. The self-assessment allows companies to determine their maturity level in each category and identify the potential for optimization of resources utilization in the remanufacturing companies. A sustainability readiness and maturity assessment model was proposed by Sangwan et al. (2018) to provide a holistic view of the organization's sustainability performance, allow for a comprehensive evaluation of its sustainability practices and guide decision making..

Numerous organizations have indicated that their sustainability improvement endeavours had limited longevity within their structures due to the absence of integration with productivity and quality improvement techniques such as TPM, TQM, JIT, lean, Six-Sigma, and others (Dijk *et al.*, 2017). Based on the literature review conducted, there is a dearth of articles focusing on the development of a tool for measuring both lean and sustainability within organizations. Pampanelli et al. (2014) have identified a set of prerequisites essential for the successful implementation of Green Lean practices. However, their work does not encompass a comprehensive methodology or functional technique for quantitatively assessing an organization's readiness for Green Lean adoption. Duarte & Cruz-Machado (2017) have concentrated their efforts on developing a structured framework aimed at evaluating businesses in the context of Green Lean implementation without incorporating specific criteria for evaluating the social dimension. Cherrafi et al. (2021) proposed a self-assessment model to evaluate the level of readiness of organizations to implement Green Lean initiatives. The results of the application of the model in four manufacturing companies showed that the model can help organizations to identify their strengths and weaknesses in terms of Green Lean implementation, and to develop action plans to improve their performance. Suresh et al. (2023) introduced a framework for assessing the synergy between Lean operations and sustainability in construction firms. The study employs Importance Performance Analysis and Graphic Theoretic approaches to pinpoint areas for improvement within the organization's lean sustainability.

Based on the literature search, there is no assessment model evaluating leanness, Industry 4.0, and sustainability simultaneously. Duarte (2023) introduced an

anecdotal framework as a starting point for the design of an assessment model that integrates Lean and green management practices with the digital advancements of Industry 4.0. however, it only identifies eight broad dimensions, including leadership, strategy, people, processes, customers, suppliers, governance, products, and technology, which provide little concrete linkage between Lean and green management and the Industry 4.0 approach. Therefore, in this work we suggest the further development of rapid plant assessment (Goodson, 2002) to consider also sustainability and industry 4.0 elements.

### **3. Towards on assessment model for lean, sustainability and industry 4.0**

The Rapid Plant Assessment (RPA) - utilized by corporate representatives - is a practical tool initially designed to assess plant leanness through a succinct questionnaire-based walkthrough process. The backbone of the RPA is the rating sheet (score matrix) that presents 11 categories for assessing the leanness of a plant, and 20 associated yes-or-no questions to determine if the plant uses best practices in these categories. It is assumed that after identifying points in the questionnaire situations, there is a higher probability of adequate assessment in the Leanness rating sheet. Over the past two decades, RPA has gained extensive usage in the corporate domain, building a substantial database for benchmarking operational efficiency and it has considered the economic aspects of sustainability (Goodson, 2002). This limitation underscores the potential for further adaptation to encompass a broader spectrum of sustainability dimensions. Since the introduction of RPA, although various adaptations have developed with a focus on sustainability, circularity and waste reduction (Almström and Kinnander, 2011; Steingrímsson, Heyer and Seliger, 2012; Kosacka and Golińska, 2014), there is no revision for measuring the level of company's digitalization.

In today's manufacturing landscape, sustainability and digital transformation have become fundamental pillars, akin to the transformative influence of Lean in the 1990s. Enhancing the RPA to include sustainability and digitalization could yield substantial value, similar to the transformative impact RPA had in its time. Thus, this paper introduced Rapid Sustainable Plant Assessment 4.0 (RSPA 4.0), designed to offer a holistic assessment encompassing leanness, sustainability, and digitalization. This innovative concept model aims to serve as a crucial tool for comprehensively measuring the manufacturing landscape, providing practitioners and scholars with deeper insights into the intricate interplay of these critical paradigms. Through the deployment of RSPA 4.0, this study endeavors to foster a comprehensive understanding of manufacturing processes, identify areas for potential enhancement, and contribute to ongoing discussions on advancing manufacturing practices in the era of Industry 4.0.

The conceptual model for assessing leanness, sustainability, and digitalization within manufacturing processes is based on integrating sustainability and digitalization indicators into the Rapid Plant Assessment (RPA) model. These sustainability and digitalization indicators were meticulously developed through a combination of extensive literature review and expert opinions.

#### **3.1.Develop Indicators**

Indicators arise from values, and, reciprocally, create values; therefore, the primary advantage of employing an assessment model based on indicators lies in the quantifiability of the relative levels. Another instrumental purpose of using indicators is their ability to simplify, quantify, analyse, and communicate complex information by visualizing phenomena (Warhurst, 2002). Due to these attributes, indicators have attracted widespread interest, leading to the development of numerous effective assessment practices in the realms of lean management, sustainability, and Industry 4.0.

In order to measure the level of digitalization and sustainability, these indicators ought to be carefully selected. The theoretical aspect demands that these indicators align with the principles of Industry 4.0 and sustainability and encompass all relevant domains. From a practical standpoint, they should possess parameters that facilitate assessment. Additionally, these indicators need also meet criteria of scientific validity, responsiveness to system changes, comprehensibility, and flexibility to incorporate new knowledge and perspectives (Dong and Hauschild, 2017). The indicators have been developed through the literature review and a panel of experts' opinion, who collaborated to reach a consensus on the key indicators of sustainability and digitalization. The panel was a mix of experts from academia, industry, and consultancy. This research endeavours to establish a robust and comprehensive model for assessing digitalization and sustainability within the existing RPA model. This conceptual model will provide actionable insights for plant managers to enhance leanness, digitalization, sustainability, and overall plant performance.

The development of sustainability indicators follows the Triple Bottom Line (TBL) concept, encompassing economic, social, and environmental indicators. The intent is to contribute to the current sustainability assessment methods with a group of indicators measuring parameters that influence productivity and thereby promote sustainability improvement. On the other hand, the development of indicators within the dimensions of digitalization is inspired by IMPULS maturity model, ensuring a holistic evaluation of digitalization within manufacturing plants. For a comprehensive evaluation of digitalization, a set of indicators has been defined, which collectively contribute to the assessment of the digitalization level within manufacturing companies. These factors help break down the overarching concept of digitalization into measurable components, simplifying its analysis, quantification, and communication, much like sustainability factors serve a similar purpose for sustainability assessment. Table 2 has listed digitalization and sustainability indicators respectively as obtained from experts' opinions and literature review.

Table 2. Dimensions and indicator items for digitalization and sustainability

Category	Dimensions	Indicators
<b>Digitalization</b>	Smart factory	<ul style="list-style-type: none"> <li>• Adoption of digital twins/shadow plan/AR</li> <li>• Integration of digital technologies to existing machines</li> <li>• Use of collaborative robots and cobots</li> </ul>
	Smart operations	<ul style="list-style-type: none"> <li>• Use of real-time information sharing and visibility</li> <li>• Predictive maintenance technologies</li> <li>• Integration of humans and machines in the production process</li> </ul>
	smart products	<ul style="list-style-type: none"> <li>• Availability and usage of digital technologies (e.g., sensors, IoT, AI, cloud computing)</li> <li>• Integration of AR/VR for product design</li> </ul>
	Data-driven services	<ul style="list-style-type: none"> <li>• Integration of information systems (e.g., ERP, MES, PLC)</li> <li>• Level of data analytics and decision-making support</li> </ul>
	Strategy and organization	<ul style="list-style-type: none"> <li>• Degree of collaboration and co-innovation with partners</li> <li>• Degree of employee training and engagement in the use of digital tools</li> <li>• Existence of a digital culture and mindset</li> <li>• Use of digital tools for internal communication</li> </ul>
	Employees	<ul style="list-style-type: none"> <li>• Remote work opportunities</li> <li>• Digital skills training</li> <li>• proficiency with digital tools and technologies</li> </ul>
<b>Sustainability</b>	Environmental	<ul style="list-style-type: none"> <li>• Degree of greenhouse gas emissions reduction</li> <li>• Measurement of carbon footprint</li> <li>• Adoption of sustainable transportation and logistics practices</li> <li>• Waste management and recycling and remanufacturing</li> <li>• Byproduct management</li> <li>• Adoption of circular economy principles</li> </ul>
	Social	<ul style="list-style-type: none"> <li>• Degree of compliance with labour and human rights standards</li> <li>• Adoption of fair and ethical labour practices</li> <li>• Level of employee engagement and empowerment</li> <li>• Diversity of employees</li> <li>• Opportunities for further development of employees</li> <li>• Investment in community development and social impact initiatives</li> </ul>
	Economic	<ul style="list-style-type: none"> <li>• Source of power (renewable vs Non-renewable)</li> <li>• Level of carbon offsetting initiatives</li> <li>• Investment in sustainable production technologies</li> <li>• Supplier/customer requirements on sustainability</li> <li>• Degree of energy, water, material consumption reduction</li> </ul>

To effectively incorporate these sustainability and digitalization indicators into the assessment process, they have been integrated into the assessment questionnaire and score matrix used during the plant walkthrough (Figure 1). Each member of the expert team utilizes these indicators to evaluate the plant's performance in these areas. When conducting a comprehensive plant assessment, a team of experts meticulously observes and engages in insightful inquiries during a plant walkthrough, evaluating operations across all levels of the organization. The inclusion of sustainability and digitalization indicators in rapid plant assessment ensures that these essential aspects are thoroughly examined alongside leanness.



The team of experts carefully evaluates the plant's performance in these areas by considering both the qualitative responses and quantitative scores related to the indicators.

Figure 1. The RSPA 4.0 score matrix (adapted from Goodson, 2002)

Rated by: _____		Rapid Plant Assessment						
Tour Date: _____		Table 1--Rating Sheet				Operation _____		
	Ratings	Poor	Below Average	Average	Above Average	Excellent	Best in Class	
No	Measure / Score	1	3	5	7	9	11	Scores
1	Customer satisfaction							
2	Safety, environment, cleanliness, & order							
3	Visual Management System							
4	Scheduling system							
5	Space use, material movement, & product flow							
6	Inventory & WIP levels							
7	Teamwork & motivation							
8	Condition & maintenance of tools & equipment							
9	Management of complexity & variability							
10	Supply Chain Integration							
11	Commitment to quality							
12	Digitalization							
13	Sustainability							
	Totals							

This scoring system comprises six distinct levels, as outlined by Goodson in 2002:

- Poor: 1 point
- Below average: 3 points
- Average: 5 points
- Above average: 7 points
- Excellent: 9 points
- Best in class: 11 points

The collective score, encompassing all evaluated categories, ranges from a minimum of 13 (reflecting subpar performance across all categories) to a maximum of 143 (representing world-class excellence). The average score across assessments typically stands at 65.

Notably, a cumulative score between 1 and 3 signifies substantial potential for improvement in lean, sustainability, and digitalization practices within the organization. A score of 5 denotes a middling performance, reflecting an overall company effort that falls within the realm of the average. Scores in the range of 7 to 9 constitute above-average ratings and are considered highly desirable, reflecting performance levels that exceed industry norms and stand at the pinnacle of achievement. The highest attainable score of 11 represents an exceptional achievement, signifying an organization that has transcended existing standards and is synonymous with innovation.

Consequently, the assessment exercise serves to highlight the company's strengths and weaknesses in each specific category, with particular attention to areas scoring 3 or lower, indicating significant improvement opportunities that require immediate attention. This holistic approach allows for a comprehensive assessment, offering a clear picture of the company's performance across leanness, sustainability, and digitalization. By combining these assessments, the RSPA 4.0 fosters the company's journey towards operational excellence in these critical areas, enhancing overall operational performance.

#### **4. Conclusion**

The presented method, RSPA 4.0, offers a swift and straightforward means for manufacturing companies to evaluate their processes. Unlike other methods that might require complex software or extensive training, RSPA 4.0 stands out in terms of ease of application. Its development was driven by the goal of creating a tool to efficiently provide insights and assess a company's leanness, sustainability, and digitalization level. This approach has proved valuable, especially given the limited efforts required for its implementation. This study is the development of RSPA 4.0 as a conceptual model, and its effectiveness in real-world scenarios will require validation through practical implementation in companies. While RSPA 4.0 doesn't create a highly detailed action plan for immediate execution, it does provide valuable guidance for charting a course forward. The information it yields highlights deficiencies in current lean and sustainability practices and the integration of digital technology. RSPA 4.0 further excels in its ability to identify potential improvements, prioritize them, and assist decision-makers in implementing changes based on the outcomes of RSPA 4.0 assessments. No research is without its limitations, and this is the case with our study: the next step requires the mapping of success factors in multiple institutional settings. Future studies should apply the RSPA 4.0 model in both large manufacturing organizations and SMEs to investigate applications in specific settings.

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## **Value-creating boards in SMEs: Team production efforts**

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### **Abstract**

This study theoretically and practically contributes to show how boards in SMEs can contribute to value-creation. Furthermore, a value-creating conceptual framework is developed integrating an extended team production theory. Team production theory has its roots in law and economics, and it is an alternative to agency theory (Blair & Stout, 2001). The extended team production theory has a focus on leadership and managerial behavior, and it integrates core strategy perspectives from both industrial organization and resource approaches. We were honored that an extended version of this article recently accepted for publication in the Handbook of Research in Corporate Governance and Business Ethics (Gabrielsson & Huse, 2023). In this present article, we specifically showcase to what degree boards in practice may create or destroy values within the organization and we apply a novel lens of extended team production theory to do this.

### **1. Introduction: Are boards creating values?**

Why is it more likely that boards are destroying rather than creating values? This is the first observation made in this article. Our second observation is that boards are not teams – at least not in most cases. The third observation is that team efforts at the board level can contribute to value-creating boards. In this paper, we reflect on these observations, and we show how team production in practice may contribute to value-creating boards. We offer a value-chain framework that as a tool for board evaluations and the creation of value-creating boards. The framework follows core theories in management and leadership research. These theories have empirically been applied to studies of boards in SMEs in various research programs during the two past decades<sup>1</sup>.

Our focus is on value-creating boards in SMEs. We define SMEs as companies that are different from large corporations. Many SMEs are single-business unit companies, and their overall company objectives are embedded in the interests and motivation of their shareholders. The overall company strategies are aimed at contributing to

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<sup>1</sup> The Value Creating Board research program has been particularly important. The program is documented in various books, articles, and reports (e.g., Huse, 2008). Data from the Value Creating Board research instruments and surveys are available through BIRD at BI Norwegian Business School. A book chapter leaning on a version of this paper is published Gabrielsson and Huse (2023).



competitive and sustainable value-creation (Barney, 1991; Porter, 1985) for their stakeholders, including customers, shareholders, and employees as well as broader society.

Our reflections on value-creating boards in this paper have developed through three of our recent contributions. These are Huse (2018) about challenges for future research and practice, Gabrielsson, Huse and Åberg (2019) about corporate governance in SMEs, and Gabrielsson, Calabro and Huse (2016) in the previous edition of the Wiley Handbook of Board Governance. We start by positioning value-creating boards in a section called dynamic understandings of value-creating boards. It contains challenges for future research and practice. In the following section, we present an overview of the status of research about boards in SMEs. Then we have a section showing contributions from the extended team production theory. Finally, we use the value chain approach to summarize our framework that have practical implications for board evaluations and the creation of value-creating boards. We will show how boards in practice may be value-creators rather than only value-distributors or value-destroyers.

## **2. Dynamic understanding of Value-creating boards**

What do we mean when writing about value-creating boards? We started this article by asking why it is more likely that boards are creating value than destroying value. Many arguments exist that show how board are destroying values. We see a firm as a system to create values - however, value can be understood in many different ways, for example from economic, ethical, and societal/ecological perspectives. Even in economic terms, the value concept is debated (e.g., Yar Hamidi, 2019). In SMEs, the personal values of the main shareholders and their families, as well as the values embedded in the local region where the firm operates are also important to consider.

A starting point for these arguments is to emphasize value creation as a context-bound phenomenon, which requires careful attention to the unique conditions and situations of the focal firm. Following this logic, there is a risk that the interests of individuals, various sets of shareholders or stakeholders, and the company may not be aligned. Their interests may sometimes even be in conflict. It is important to identify whose values that are the most important, and for whom the boards should work to contribute to value-creation.

Porter and Kramer (2011) argue that companies and boards today are trapped in an outdated approach to value-creation. Instead, they argue that boards should have a focus on long term and shared value-creation. They argue that value-creation during recent decades has been viewed narrowly with a focus on value-distribution and optimizing short-term financial performance. This narrow view has been implemented in many of the codes and best practice recommendations of corporate governance that are used today.

In Table 1, we compare the present generally recommended characteristics of boards' behavior with value-creating behavior from the strategy and entrepreneurship literature.

	<i>Generally recommended board behavior</i>	<i>Recommended value-creating behavior</i>
<i>Guidelines</i>	Agency theory based corporate governance literature	Entrepreneurship and strategy literature
<i>Value creation for whom</i>	External actors/stakeholders	The entrepreneur/ the company
<i>Value creation definition</i>	Short term value-distribution	Sustainable value-creation
<i>Approach</i>	Avoiding problems	Exploring and exploiting possibilities
<i>Risk attitudes</i>	Risk aversion	Risk willingness
<i>Main attention to</i>	Finance metrics	Knowledge and capabilities
<i>Focus activities or tasks</i>	Control	Innovation and strategy development
<i>Decision-making</i>	Top-down approach	Bottom-up approach
	Decision-oriented	Process-oriented
	Hierarchy driven	Open source
<i>Board member relations</i>	Independent and detached: Boards as a collegium	Competence, impartial and involved: Boards as a team

Table 1. The managerial paradox

The generally recommended board behavior is described in the agency theory (Fama & Jensen, 1983) based corporate governance literature, while the value-creating behavior has a background in the entrepreneurship and strategy literature (Huse, 2007; 2018). The generally recommended behavior has typically a focus that is leading to short term value-distribution, an avoiding problems approach, risk aversion, and it advocates a main involvement in distribution and control tasks with a main attention to finance and financial metrics. This generally recommended approach suggests independent individuals as board members and decision-making using a top-down approach, being decision-oriented and hierarchy driven.

The entrepreneurship and strategy literature defines value-creation in terms of long term or sustainable value creation in the company (Barney, 1991; Porter, 1985). The entrepreneur or the company is the principal for whom values are to be created, and it is a focus on sustainable and long-term value-creation or competitive advantage. The value-creating literature has a focus on exploring and exploiting opportunities, including risk willingness and the use of knowledge and capabilities. Innovation and strategy developments are considered important board tasks, and decision-making will follow a bottom up, process-oriented, and open-source approach. We see boards as teams, and there will be a focus on team development.

The generally recommended board behavior in Table 1 is directly contrasting recommended value-creating behavior. Table 1 is also reflecting the arguments in Charan, Carey and Useem (2014:1) where they argue that the time has come for boards to rebalance their responsibilities. In a period with strong emphasis on corporate governance and control, value-creation and entrepreneurial behavior are often forgotten. Values are easily destroyed when focusing only on one side of the table. We need a reintroduction of the value-creating part in board and governance development. Both sides can and should be included at the same time. This is in recent strategy literature called ambidexterity and means simultaneous use of both hands, which reflects the managerial paradox of balancing both value-creating and governance activities (Huse, 1993).

We will in this paper focus on entrepreneurship to emphasize the value-creating behavior element, yet without forgetting the governance part. This is consistent with Huse (2007; 2018). Having a value-creation approach helps us address challenges boards in SMEs are facing. A value-creating board approach goes beyond finance and accounting. It integrates several disciplines, and it challenges existing knowledge with reflections about the future (Huse, 2018). Developments of value-creating boards challenge borders in topics, methods, and theories. We need to approach issues we do not know, and not only make sophisticated replications of what we already know much about.

The value-creating boards approach as describe in Huse (2007; 2018) includes the use of phenomenological and holistic approaches where behavior, context and time are important elements. It builds on understanding of actors, their motivations and how they are interacting. This approach starts by arguing that boards should be involved where they add the most value and not only focus on certain sets of tasks. A value chain approach may be helpful in visualizing this logic (Gabrielsson et al, 2016; see also Huse, 2018).

An important step for contributing to value-creating boards in SMEs is the understanding of the context and the definition of values. Our awareness of context and values needs to be integrated with scenarios for the future. One important element is the digital transformation of society (Rigolini et al, 2019). This goes beyond the use of software tools for rethinking board processes and procedures, beyond the competences and mindsets of digitally competent board members, and beyond rethinking of board tasks through disruptive innovation and new business models (Bankewitz, 2016; Åberg, Kazemargi & Bankewitz, 2017). There will be in the very near future a need for rethinking corporations and value creation in the digital era. How will artificial intelligence influence boards and corporate governance? We are already now surrounded by challenges from social media, fake news, cyber security, and the shared economy. The digital transformation of society is only one of the many challenges that during the coming few years completely may change our understanding of corporations and boards. Changes in the natural environment, gender equality, political and economic instability, globalization, and migrations are other examples. This reality and pressure for change are not only about the future. They should get to our attention now.

With the understanding of the megatrends presented above on the one hand, it is also important to go beyond the surface. It is important to understand actors and dynamics inside and outside the boardroom (Huse, 2007). Actors are both decision-makers and resources. When understanding boards, we need to know about interactions, motivations, and the variations in the use of power. Value-creating boards build on understanding people and their value-creating potential (Huse, 2018). The strategy as well as the team and leadership literature show the importance of tangible vs. intangible resources, the importance of human, social and relational types of capital, core competencies and capabilities, and how these can be used to reach objectives and create sustainable value. These challenges are integrated in the value-creating board framework presented in this paper.

### **3. Boards and corporate governance in SMEs**

In this paper, we focus on understanding value-creating boards in SMEs. SMEs are a heterogonous group of firms that can be defined differently depending on industry and country. However, they share some generalities when compared to large firms (Gabrielsson et al., 2019). First, the relationship between the SME and the shareholders is much closer than between the shareholder and the large firm. Shareholding is typically located in the hands of a few people, or even a single individual, who are closely involved in the firm with tight control over business operations. The centralized decision-making opens up for organizational structures that are simpler and more flexible than those of larger firms are. Second, SMEs have fewer assets and fewer people employed. This size disadvantage generates difficulties in securing financial capital, capturing economies of scale, and building up in-house competencies (e.g., Winborg & Landström, 2000), and makes them dependent on social networks and collaborative strategies as tools for contributing to their development and success (e.g., Johannisson, 2000). Third, SMEs are often single-business units who serve a relatively small share of their market. They do not dominate their respective industry, and they can often be found in market niches less vulnerable to international competition, or in new expanding markets driven by entrepreneurship and innovation.

These generalities have implications for understanding boards and corporate governance in SMEs. There is a strong link between shareholders and the firm, and shareholding and management roles are often coinciding. The direction and control of business operations rely largely on the social capital embedded in relationships with different stakeholders. The board of directors may be more or less active, and sometimes it may not be used at all. Table 2 provides a stylized overview of different types of boards in SMEs depicted in the literature (Gabrielsson et al., 2019).

	<i><b>Rubber stamping board</b></i>	<i><b>Investor board</b></i>	<i><b>Family board</b></i>
<i>Key stakeholders</i>	Founder(s) or owner manager	External investors	Family members
<i>Role of board</i>	Possible means for acquiring resources	Decision making arena	Inner sanctum
<i>Board involvement in strategy</i>	Reactive, if at all	Proactive with emphasis on financial control	Reactive with emphasis on existing problems
<i>Board tasks</i>	Networking	Monitoring	Advice and counsel
<i>Chairperson profile</i>	Figure head	Liaison	Mentor
<i>Board meetings</i>	Rare, if at all	Frequent	Occasional
<i>Critical board qualifications</i>	Social capital and relational competence	Questioning skills and analytical competence	Functional and firm-specific competence

Table 2: Core features of boards and corporate governance in SMEs: Note: Table adapted from Gabrielsson et al (2019)

Many SMEs have rubber-stamping boards that serve the interests of their founders or owner-managers (e.g., Gabrielsson & Huse, 2005). Their primary motivation to engage in venturing activities is independence and autonomy, and formal governance structures are kept to its minimum. The direction and control of business operations is largely based on trust, direct supervision, and informal communication channels, with a focus on making and selling. The board is in many ways an extended executive team used for creative resourcing to support the identification and exploitation of business opportunities. Strategy is formulated based on the vision of the founder or owner-manager, and there is limited interference from the board in this process. Important board tasks are networking and lobbying, and the board chairperson acts as the figurehead that can represent the firm in relation to external stakeholders. Value-creation in this setting refers to the generation of cash flow to maintain the venturing process and to finance possible expansion.

In contrast, some SMEs have boards that are appointed to serve the interests of external investors (e.g., Garg, 2014). The primary motivation for venturing is monetary rewards and formal governance structures, such as the board of directors, are seen as important building blocks in this process. The direction and control of business operations is based on professional management structures, where objectives are related to measurable units such as profit and growth. The board acts as an independent decision-making arena to separate decision management from decision control. The board is actively engaged in strategy making by systematically gathering appropriate information for situational analysis, with a heavy emphasis on financial control. Important board tasks are to engage in external oversight by monitoring managerial and firm performance, and the board chairperson acts as a liaison representing investors. Board meetings are held regularly as to follow up actual performance to plans. Value-creation in this setting refers to quantitative growth where shareholders expect a return on their financial investments.

Other SMEs have boards that serve the interests of the family of the main shareholders (Gnan, Montemerlo & Huse, 2015). The primary motivation for venturing is creating family legacy in the community as well as continuing the entrepreneurial tradition within the family. The direction and control of business operations is related to the creation of a safe domicile for the family, maintaining family values and traditions, and building for the future generation. The board is used as an inner sanctum to discuss business operations in relation to the family. The

involvement of the board in strategy is characterized by reactive solutions to existing problems. Important board tasks are to provide advice and counsel, where the chairperson acts as a mentor or supporter for the CEO and other board members. Board meetings are held occasionally depending on the situation at hand. Value creation in this setting refers to the creation of socioemotional wealth (Gabrielsson et al., 2016), which include building family identity, maintaining family influence, and keeping the business within the family over generations.

The different types of SME-boards addressed above illustrate how elements or dimensions of corporate governance in SMEs often configure in response to powerful or influential stakeholders (Gabrielsson, 2007). However, this may limit the value-creating capacity of the firm, and some configurations may even destroy rather than create long-term values. This goes beyond seeking narrowly defined corporate governance configurations that serve and deliver value to particular stakeholders. Instead, it requires a systemic understanding of business operations, where boards take a balanced, long-term perspective on value creation. Moreover, it requires the board working together as a team to fulfil, balance and orchestrate several and possibly competing priorities, stakeholder expectations, and board tasks.

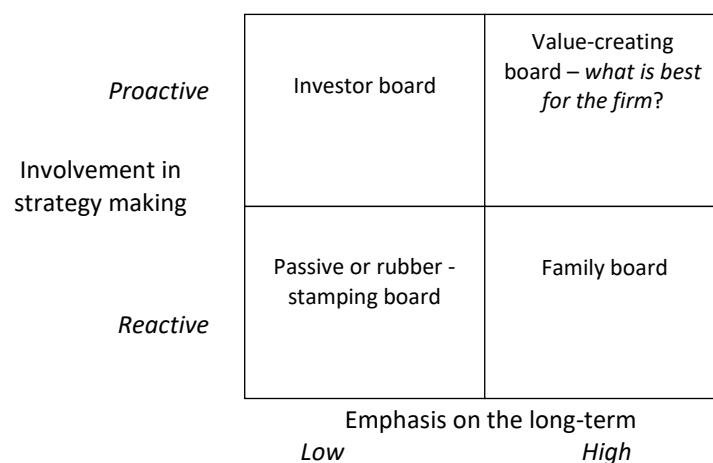


Figure 1: From passive to value-creating boards in SMEs

As illustrated in Figure 1, value-creating boards in the upper right corner meet this challenge by asking: “*what is best for the firm*” (Huse & Gabrielsson, 2012). They are proactively involved in strategy making but also recognize that the long-term survival and success of the firm dependent on the contribution and productive efforts of multiple groups or coalition of stakeholders. When developing the firm, they engage in interactive strategy processes for probing the future.

#### **4. When and how boards should act as teams: Team production efforts**

Boards as a phenomenon have existed for a long time, and they have a long history – probably for thousands of years. However, a redirected attention to boards developed through recent corporate governance attention. Agency theory became then the bible in corporate governance. This bible is built on two core assumptions. The first is about managerial opportunism (man is a sinner) and the second is about awareness of asymmetric information. Agency theory has its roots stemming from problems caused by the separation of ownership and control in large corporations. Shareholders are typically seen as principals and managers are supposed to be the agents of the shareholders. The separation of ownership and control can be due to managerial opportunism and asymmetric information, easily lead to a managerial hegemony situation, and the managers (agents) may make decisions to the best for themselves rather than for what is best for the shareholders (principals). This is a problem presented already by Adam Smith (1776), and later by Berle and Means (1932) before it was introduced as agency theory around 1980 by several scholars and particularly Jensen and Meckling (1976) and Fama and Jensen (1983). Agency theory typically prescribes three main ways to solve the separation of ownership and management problem, namely involving monitoring costs, bonding costs, and residual costs. Fama and Jensen (1983) suggested that boards should be used by shareholders (principals) to monitor managers (agents). Boards are with agency theory lenses usually seen as groups of independent individuals.

There are several reasons why agency theory has gained so much impact in the corporate governance reality, but agency theory has also its weaknesses. Alternatives to agency theory as a grand theory of corporate governance have thus been sought. Stewardship theory and stakeholder theory have been presented as alternatives, but we will argue that they only contribute to minor adjustments of agency theory (e.g., Gabrielsson & Huse, 2010). Team production theory (Blair & Stout, 2001) has, as above mentioned, been presented as another alternative, and it is particularly important for understanding how boards may contribute to value creation in SMEs (Gabrielsson et al., 2019; Machold et al., 2011).

Boards should act as teams that steward the firm's value-creating stakeholders. That is the main lesson from team production theory. Team production theory has its background in the nature of the firm (Coase, 1937) and property rights theory (Demsetz, 1974<sup>2</sup>) and has been formulated in several contributions, mostly by Blair and Stout (e.g., 2001). Team production theory is embedded in the view of an organization as a nexus of team specific assets, where stakeholders are investing firm-specific resources with the hope of getting value from team production (Gabrielsson & Huse, 2009). It is argued that those contributing the most to value creation should be in control, and the boards will be accountable to lead the firm forward in value-creating activities, within a balanced and long-term perspective. Team production theory has a strong focus on stakeholders' commitment by seeking to promote and

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<sup>2</sup> Original version: "Toward a Theory of Property Rights" by Harold Demsetz in *The American Economic Review*, Vol. 57, No. 2, Papers, and Proceedings of the Seventy-ninth Annual Meeting of the American Economic Association. (May 1967), pp. 347-359.

sustain firm-specific investments across all stakeholders that embody the firm's core capabilities (Kaufmann & Englander, 2005). In this respect, the team production model rejects shortsighted distribution rules in the favor of a particular stakeholder. Instead, the model advocates mediation across all the constituents with a personal stake in the firm (Blair & Stout, 1999) as a way to create favorable conditions for developing firm-specific bundles of unique expertise and know-how.

We argue that a team production model of corporate governance makes a better fit with contemporary thinking than agency theory. Adding to this, we have through several publications, argued for an extended team production theory (see e.g., Huse, 2018). Team production theory as presented above, has its roots in law and economics. In the extended team production theory, we integrate the law and economics approach with foundations developed in the entrepreneurship, strategy, and leadership literature. The focus in the extended version is on when and how boards should act as teams to promote and support long-term value-creation.

Contributions from entrepreneurship, strategy and leadership are indicated in the table. In entrepreneurship, there is a focus on the upside of value creation through innovation. The industrial economics approach to strategy has also a focus on identifying and exploiting opportunities. The resource-based approach in the strategy literature has a focus on how to create value by applying core competencies, dynamic capabilities, etc. The use of intangible and inimitable resources is suggested to create sustainable value creation. Porter's value chain approach also comes in here as a way to link strategic opportunities with value-adding activities and capabilities. The strategy as practice literature has a focus on understanding and regulating dynamics inside and outside the boardroom. The strategy as practice literature is a link to the team and leadership literature. The team literature will pay attention to the decision-making culture, often with a focus on processes. The leadership literature will have a focus on goal setting, coaching, motivating, mentoring, evaluating, developing, etc. The outcome of the use of the extended team production theory follows in the coming section.

<i>Team production theory: Why boards should act as teams</i>	Theoretical background?	Law and economics
	What is a firm?	Nexus of team-specific assets
	Main purpose of a firm?	Contribute to sustainable value-creating
	Main role of boards?	Value-creation through team production
	Core actors?	Focus on stakeholder commitments
<i>Extensions in the extended team production theory: When and how boards should act as teams</i>	Entrepreneurship and value-creating activities?	Focus on the upside – supporting the creation of value, e.g., through innovation
	Strategy - Industrial economics inputs?	Boards should identify and be used where they add the most value, e.g., based on a value chain approach
	Strategy – Inputs from resource-based approach.	Applying core competencies, dynamic capabilities, absorptive capacity, and ambidexterity – tangible and intangible resources, e.g., social, human, and relational capital
	Strategy as practice?	Understanding and regulating dynamics inside and outside the boardroom
	Team literature inputs?	Process-oriented decision-making culture, including involvement, openness, generosity, creativity, critical and impartial
	Leadership literature inputs?	Leadership, e.g., goal setting, coaching, motivating, mentoring, evaluating, and developing

Table 3. Why, when, and how boards should act as teams



## 5. The value chain framework as a tool for evaluations and developments

In Gabrielsson et al (2016 ) we discussed boards and value-creation in family firms, and we illustrated the value-creation through a value chain approach. Following the extended team production theory presented above, we will here show how an integrated value chain approach may have practical implications for SMEs in the creation of value-creating boards. We show what boards can do to create value, competencies of board members and how boards can work as teams. An integrated approach will imply that we use:

- a) the value chain approach from the industrial organization literature to illustrate value-creation and board tasks (Gabrielsson et al, 2016; Huse, 2005),
- b) the resource-based strategy literature to show the competence possibilities (Khanna, Jones & Boivie, 2014; Schønning et al, 2018; Åberg, 2017),
- c) the dynamics around board meetings may be studied from a strategizing or a strategy as practice perspective (Ees, Gabrielsson & Huse, 2009; Hendry, Kiel & Nicholson, 2010),
- d) the group effectiveness and leadership literature to show actual value-creating board behavior (Kanadli, Bankewitz & Zhang, 2018; Kanadli, Torchia & Gabaldon, 2018),
- e) board structures and development may be explored from a materiality perspective (Melgin, 2016; Minichilli, Gabrielsson & Huse, 2007).

Based on the below, the value chain approach is integrated in an extended team production framework that we apply within an entrepreneurial SME setting. The framework has in practice proved an excellent tool in board evaluations and board development efforts. It has been used by several board evaluation agencies, as well as in training board members. The framework is presented in Table 4.

<i>Value chain (industrial organization )</i>	<i>Inbound logistics</i>	<i>Operation</i>	<i>Strategy development, innovation, and renewal</i>	<i>Decision-making</i>	<i>Risk management and control</i>	<i>Value distribution</i>
<i>Board tasks (team production)</i>	Legitimacy, lobbying, networking	Advising, supporting, mentoring	Strategic participation	Monitoring, making major decisions	Internal controls, crisis management	Output control and embedding
<i>Board competencies (resource based)</i>	Social and cultural capital	Human capital: knowledge and skills	Relational capital and diversity	Analytical capital	Human capital: board and business experience	Integrity and negotiating capital
<i>Board structures and board meetings (strategy as practice)</i>	Outside the boardroom Coordination	Outside the boardroom Board instructions	Physically in the boardroom	In formal board meetings Protocols	Between board meetings Internal control systems, incentive schemes, committees	All board members Stakeholder / ethics document
<i>Board culture</i>	Loyalty, identity, and involvement	Openness and generosity	Process-orientation: Cohesiveness	Decision-orientation	Critical attitudes, commitment	Independence . Board as a collegium

(group effectiveness)			, creativity, and cognitive conflicts. Team		, time, and availability	
Board leader (leadership)	Figurehead	Mentor and supporter	Motivator: Coach and leader	Chair and strategist	Coordinator, devil's advocate, and listener	Liaison and representative
Board development	Recruitment evaluation	Introductions	Development evaluation	Formalizing and digitalizing	Training and education	External evaluation

Table 4. Board evaluations: A value chain and board characteristics vocabulary\*

\*The empirical relationship in the table is influenced by Huse and Søland (2009) and chapter 9 in Huse 2007.

The general argument in the framework is first to identify the chain or sequence of interlinked activities where (sustainable) values are created. In SMEs, this may be divided in inbound logistics, operation, innovation and renewal, decision-making, risk management and control, and finally value distribution logics. The table shows the value-creating potential more than how it is done in practice.

#### *Inbound logistics*

Boards should place their efforts on the tasks where they create the most value. This may mean that if the company highly depends on external resources, the inbound logistics may be particularly important, e.g., in start-ups or in firms facing legitimacy challenges (see e.g., Huse & Zattoni, 2008; Johannisson & Huse, 2000). Boards should then according to resource dependency theory (Pfeffer & Salancik, 1978) be involved in tasks as legitimacy, lobbying and networking. These efforts will normally put major requirements on the board members' social capital (Haynes & Hillman, 2010). Social capital refers here to the board members' reputation, image and how they are being perceived externally. Social capital can be seen as the sum of the actual and potential resources that can be mobilized through membership in social networks of actors and organizations (Bourdieu, 1986).

#### *Operations*

Boards may also have particular contribution to operations. They may contribute through legal questions, finance, marketing, production, digitalization, ITC, technical or engineering questions, or just to leadership in general. For such issues boards may be involved with providing functional or firm specific advice (Bankewitz, 2016; 2018). Involvement and contributions in advisory tasks depend on the human capital of the board member, i.e., the type of knowledge and skills they have, as well as the diversity among the board members (Åberg et al., 2017; Bankewitz, 2018). It also depends on a board culture reflecting openness and generosity, as well as the chairperson's leadership style (Bankewitz, 2016). Most of the advisory tasks will take place outside the boardroom, often in direct interactions between individual board members and the CEO of the company.

Board members and particularly the board chair may also have significant contribution through mentoring and supporting the CEO in other ways. Immediate

and formal introductions to firm and board activities will be important. Formal board instructions should also be developed.

#### *Strategy development, innovation, and renewal initiatives*

Value creation in the phases of strategic development, innovation and renewal takes place through shaping strategic decisions as well as shaping the content, context and conduct of strategy (McNulty & Pettigrew, 1999). This takes in general place inside the boardroom and often in meetings dedicated to it – sometimes “away-days”. An effective board culture will be characterized by cohesiveness, creativity, and cognitive conflicts. Diversity in knowledge and skills of the board members will be required (Haynes & Hillman, 2010), and their contribution is facilitated by a coaching and motivating leadership style of the chairperson (Gabaldon, Kanadli & Bankewitz, 2018) as well as from the relational capital of individual board members. Dalziel, Gentry, and Bowerman (2011) distinguish between board members’ human and relation capital. Human capital is about expertise, experience, knowledge, and skills. Relational capital is often described as the relational dimension of social capital or the relational social capital (Bolino, Turnley & Bloodgood, 2002). We are here making a distinction between social and relational capital. We consider social capital in a macro ‘influencing’ perspective and relational capital in a micro and reciprocal perspective. This reciprocal perspective is in the board literature studied in terms of relational contracts (Huse, 1993; 1994) or the ability to create relational norms among the board members (Calabro & Mussolino 2013; Huse & Søland, 2009).

#### *Decision-making*

Boards will be in charge of and ratify the major decisions taken in a firm (Fama & Jensen, 1983). This will include monitoring and strategic controls. This is also something most boards are doing (McNulty & Pettigrew, 1999). Boards and board members cannot leave such responsibilities to others, not even to board committees, the CEO, or the management. Boards are on the top of the organizational hierarchy, and they will be in charge of making such final decisions. Therefore, the boards also need to be decision-oriented and use tools that facilitate decision-making. Decisions that may have far-reaching consequences require analytic skills or capital among the board members.

Board leadership for decision-making should be a combination of strategist and chair roles. Strategist, because it is important to see possibilities and how to reach them. Chair, because the board in decision-making must act as a collegium and the voices from all board members should be listened to. Ratifications of decisions or strategies should thus be taken in formal board meetings, but not necessarily in the boardroom. Ratifications may also take place in properly organized and conducted virtual board meetings. Properly made protocols are important tools for value-creating decision-making.

#### *Risk management and control*

Risk management and control goes beyond cash flow. It is about risk awareness. It contains boards’ involvement in operational and behavioral control. The boards’ contributions in risk management can take place ex ante, in the process and ex post.

Ex ante, it can be done by appointing management and by developing incentive systems and work descriptions for the CEO and management. In the process, it can be done through observations from what actually happens in the company or in the case of crisis by being directly involved in crisis management. Internal control systems should be developed, including guidelines for how to deal with information from employees, etc., e.g., how to deal with whistleblowing. Ex post, it can be done through analyses and discussions of reports – typically operational reports. Boards should go beyond reports with traditional financial metrics (Kuoppamäki, 2018). Boards will normally benefit from having members with board and business experience to perform to meet these tasks. The board culture should be characterized by critical attitudes and commitment, including time and availability, from the board members. This time of internal control may be very time consuming, and unfortunately, board members often do not plan for these activities. The board leaders should typically be a coordinator, a devil's advocate, and a listener.

#### *Value-distribution*

Value-distribution is about value-creation for whom. Decisions need to be made about how results and value should be distributed among stakeholders, including shareholders, managers, and other employees. The triple bottom line, including financial, social, or societal and environmental metrics, is one of the terms being used to define value-distribution (Elkington, 1999). The board is particularly accountable for the time perspective of value-distribution and to assure sustainable value-creation in the company.

Board members need to have integrity and negotiating capital, and the board culture should be characterized by independence. The boards must act as a collegium. All board members must be involved, and they must pay particular attention to that many decisions influencing them may be taken outside the boardroom or board meetings by actors that are not board members. The responsibility is still resting on the board members as a collegium. The board leader should act as a liaison and represent the company and its sustainability.

#### *Using both hands – everything at the same time?*

Ambidexterity is a word used for showing that it is possible to do more than one thing at a time. It means using both hands. Boards are supposed to put their efforts in where they add the most value. This is typically done by paying attention to all value-creating possibilities. The various sets of tasks are not exclusive. It is not a question of either control or service. In this paper, we have had a focus on boards in SMEs. It is important to understand contingencies and the board context, when designing and developing boards (Huse, 2005b). Boards may for example face different value-creating possibilities depending on the company's life cycle (Huse & Zattoni, 2008), and this may influence actual board behavior. However, a value-chain analysis contributes to find possibilities for value-creation. The vocabulary presented in this chapter, supplies us with a toolkit that may help us use both hands, i.e., combining many ways of creating values.

#### *Board development and evaluation*

We have in this paper followed the value chain. However, it is also possible to structure an analysis according to topics like tasks, competencies, culture, leader, structure, development, and meetings. The various chapters in this handbook are also organized in this way – in most cases one topic for each chapter. We did also so in our contribution to the previous edition of this handbook (Gabrielsson et al, 2016). However, in the previous edition only limited attention was given to board evaluation and development.

We have indicated in Table 4 that various types of board development and board evaluation support this value chain perspective. We are suggesting three types of board evaluation and three other board development activities. The different types of board evaluations are developed and analyzed in Rasmussen and Huse (2009) for more details. Report evaluation is what typically is found in annual reports. It is written for accountability purposes, is usually addressing whether boards are meeting good corporate governance practices, and the audience will be external stakeholders. Contributions to value creation and board tasks should be the focus in such evaluation. The audience for recruitment evaluation is recruiters, recruiter, and others that select or elect board members. Recruitment evaluation has the objective to evaluate board members and to specify the value-creating competencies needed in the actual board. Gap-matrixes are often used. Development evaluation will usually have a focus on what is (or not) happening in the boardroom. It will have a focus on board culture, board leadership and board structures. This type of evaluation has usually the objective to improve board performance with the existing board members. In Minichilli, Gabrielsson and Huse (2007) we presented in detail various ways board evaluations may be conducted. There we ask for “who does what for whom and how.”

Board evaluations often conclude in board development activities as introductions, training, and seminars. The use of digital means is also emphasized in recent development initiatives.

## **6. Conclusions**

No research is without its limitations, as is the case with this study. We have in this paper theoretically and practically contributed to show how boards in SMEs can contribute to value-creation. As a conceptual contribution to the literature, built upon the state-of-art in the literature, is it now important to collect empirical data from boards to offer new findings. Nevertheless, a value-creating framework has now been developed by means of using a novel extended team production theory lens. We have showed that SMEs have unique features, and that there are differences among SMEs. Furthermore, firms are experiencing considerable contextual differences. However, all firms are unique, but there are also similarities among firms. We will thus conclude with that the vocabulary, tools and conceptual framework presented in this paper can have significant value importance for boards in all types of firms – in small as well as large. A vocabulary may be seen as a toolkit. The words and concepts being introduced and developed in this paper do not only move forward our general knowledge about boards in SMEs. The words and concepts may act as tools for improving and developing both research and practice. They go far beyond the usual

concepts in the board and corporate governance discussions, and the framing in a team production setting also contributes to how they can be used in practice. We see this framework as a powerful tool in evaluating and developing value-creating boards.

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