



# **Resolving the tensions between economic and shared value creation in the global value chain**

## **Case of Tana Oy**

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### **Abstract**

Despite the industry, various value conflicts arise to meet the challenges of a changing world. Every company must assess the values of sustainable development and social responsibility in the face of social pressure and laws. It can be a competitive advantage in some sectors, while others focus on price competition.

The object of the study was to analyze the tension points between economic and social value creation and what are the solutions that benefit the entire value chain. Case company Tana Oy produces and develops environmental technology solutions for waste treatment. It operates as a network company and has outsourced most of its functions, which is why the parties in Tana's value chain were also interviewed. As a theoretical framework, the research adopted the shared value (CSV) dimension of redefining productivity in the value chain. It allowed focusing on six themes in the global value chain: energy use and logistics, resource use, procurement, location, distribution, and employee productivity. The study was qualitative, and its primary data was collected by interviewing five different individuals from Tana and its value chain.

The results showed that the pandemic was the most significant social challenge addressed in the value chain, affecting all themes analyzed. To meet this challenge, bringing the value chain from Asia to Europe was the best solution. The solution also generates social value by shortening transport distances and reducing emissions. However, this was hampered by the industry's cost structure, price competition, and the cost-efficiency of Asia. The use of resources was not reflected in the data collected and was not analyzed. The staff's productivity, i.e., well-being, was promoted in many ways and was considered necessary. Taking care of the well-being of employees also generates social value.

### **Keywords/tags (subjects)**

Sustainability, CSR, CSV, social value, economic value, global value chain, tensions, pandemic.

### **Miscellaneous (Confidential information)**

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**Vanhanen, Minna**

**Taloudellisen ja yhteisen arvonluonnin välisten jännitteiden ratkaiseminen globaalissa arvoketjussa**  
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**Tiivistelmä**

Liiketoiminnassa pyritään vastaamaan muuttuvan maailman haasteisiin ja erilaisia arvostirriitä syntyy alaan katsomatta. Sosiaalisen paineen ja lakien myötä jokaisen yrityksen on arvioitava kestävä kehityksen arvoja ja yhteiskuntavastuuta. Joillain aloilla siitä voi muodostaa kilpailuedun, toisilla aloilla keskitytään kilpailemaan hinnoilla.

Tutkimuksen tavoitteena oli analysoida taloudellisen ja sosiaalisen arvonluonnin välisiä jännitteitä, ja niiden koko arvoketjua hyödyttäviä ratkaisuja. Tapaustutkimus yritys Tana Oy tuottaa ja kehittää ympäristöteknologisia ratkaisuja jätteen käsittelyyn. Yritys toimii verkostoperiaatteella, ja se on ulkoistanut useimmat toimintonsa, minkä vuoksi haastateltavana oli myös osapuolia Tanan arvoketjusta. Teoreettisena viitekehiksenä tutkimus sovelsi arvoketjun tuottavuuden uudelleenmäärittelyä yhteisen arvonluonnin (CSV) teoriasta. Sen avulla tutkimuksessa keskityttiin kuuteen eri teemaan globaalissa arvoketjussa: energian käyttö ja logistiikka, resurssien käyttö, hankinta, sijainti, jakelu sekä työntekijöiden tuottavuus. Tutkimus oli kvalitatiivinen, ja sen primääridata kerättiin haastatteleamalla yhteensä viittä eri henkilöä Tanalta ja sen arvoketjusta.

Tulokset osoittivat pandemian olleen arvoketjun merkittävin yhteiskunnallinen haaste, ja se vaikutti kaikkiin analysoituihin teemoihin. Resurssien käyttö ei näkynyt kerätyssä aineistossa, eikä sitä analysoitu. Paras ratkaisu haasteeseen oli arvoketjun tuominen Aasiasta Eurooppaan. Ratkaisu tuotti myös yhteiskunnallista arvoa lyhentämällä kuljetusmatkoja ja vähentämällä päästöjä. Tämän toteutusta hidastivat kuitenkin alan kustannusrakenne ja hintakilpailu, sekä Aasian kustannustehokkuus. Henkilöstön tuottavuutta, eli hyvinvointia, edistettiin monin keinoin ja se koettiin tärkeäksi. Työntekijöiden hyvinvoinnista huolehtiminen tuottaa myös yhteiskunnallista arvoa.

**Avainsanat (asiasanat)**

Kestävä kehitys, yhteiskuntavastuu, CSV, yhteiskunnallinen arvo, taloudellinen arvo, globaali arvoketju, jännitteet, pandemia.

**Muut tiedot (salassa pidettävät liitteet)**

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# 1 Introduction

Corporate social responsibility (CSR) is a significant object, as business and society interact with and support each other. Society makes the operating environment possible for companies. Citizens start businesses that offer work, companies pay taxes, and administrations oversee regulations and laws. Change in the other can have a far-reaching impact on the other. However, making a profit is a company's primary function to stay vital, and voluntary acts on social responsibility may be minor. A responsible business can also operate by taking full advantage of society and giving back only the necessary. However, the number of regulations and everyday actions are growing and increasingly affect companies of all sizes.

Corporate values are principles expected to guide the company's operations and personnel. The operations of commercial companies are primarily driven by economic value, but in addition to the pursuit of profit, there must also be values that reflect the operating environment. Many social problems affect companies, regardless of their home country, because of global value chains. The pursuit of taking social issues into account affects the entire value chain and the motivation and productivity of staff.

## 1.1 Background

Creating Shared Value (CSV) has been heavily criticized for, among other things, its lack of consideration for conflicting value creation (Crane et al., 2014). Companies face challenges in generating opposing perceived values. These challenges have been further explored as firms integrate CSR practices into their strategies and operations (Acquier et al., 2015; Siltaloppi et al., 2020) and in stakeholder collaboration in general (Matten & Crane, 2010). As the priority for commercial companies, regardless of strategy, is to remain profitable, they will inevitably have to weigh the pros and cons and the costs of introducing new practices.

Sustainability communications for companies have grown significantly in the 21st century. Alongside financial indicators, there are various calculations of the impact of the company's operations on the environment and people. At the same time, governments have also had to consider new indicators to express economic and social development. The European Commission, the European Parliament, the Club of Rome, the OECD, and the WWF met at a "Beyond GBD"

conference in 2007 to discuss new indicators of state well-being (European Commission, n.d.). The Beyond GDP initiative was set up to develop alternative indicators. In Finland, a discussion took place in the early 2010s on the development of well-being indicators (Prime minister's office, 2011). None of these initiatives have yet led to new metrics due to various barriers (Mikola, 2018). However, those have since been noted in The United Nations 2030 Agenda. Political communication has a significant impact on realizing sustainable development more broadly.

This study aims to benefit the IB literature and the case company. In their article, Akpinar and Saleem (2019) highlight the lack of studies on creating shared value among IB researchers. The study examines the means and possibilities of an SME (Small and Medium sized Enterprise) operating in the B2B sector to address social problems in the global value chain. As companies strive to grow, considering sustainable values is increasingly important. Adherence to sustainability and social values requires resources and is therefore seen more as the multinational corporation's (MNC) agenda. However, SMEs likewise need global value chains to operate. Those most often lead to cost-effective Asia, thus, significantly increasing a company's emissions load over long freight distances. Decisions to improve competitiveness are often economical.

## **1.2 Motivation for research**

As a concept, Corporate Social Responsibility (CSR) has become a megatrend that encourages the business world to change its mode of operation. Social pressure on the sustainable development of companies has accelerated significantly in the 2010s. Accidents and catastrophes that have attracted global attention and unethical practices of MNCs (multinational corporations) have affected consumer behavior and the demands of stakeholders (Harmaala & Jallinoja, 2012; Porter & Kramer, 2006). Shared value is an interesting viewpoint for companies to contribute to sustainability issues. CSV can create a motivating perspective on developing responsibility by emphasizing profit from a business viewpoint. Creating Shared Value was introduced in 2011 by Porter and Kramer (2011) as a new way to address sustainability and social issues. Its essence emphasizes strategic positioning rather than thriving to do things better than other companies. (Harvard Business School, n.d.)

People want companies to act sustainably and be socially responsible. However, being responsible and making a good profit requires a commitment to long-term goals from the entire company.

Cone Communications LLC (2017) study revealed that more than 60% of Americans want companies to lead environmental and social change because the government appears to be passive in the matter. Almost 80% also wanted businesses to manage crucial social justice issues. Criticism does not always lead to changes in corporations, but eventually, it can become a heavy burden and lead to negative financial consequences. A company may drift into internal conflict in its operations or external conflict with stakeholders and shareholders. The risk of a conflict holds back the will to make changes since they need time and resources, and in most cases, there is no ready instruction manual.

Social responsibility plays dissimilar roles in different industries. In retail consumer products, CSR can affect brand image and sales. In B2B trade, consumer choices do not directly have such a considerable influence. However, stakeholders raise societal issues related to business operations. Shareholders can also pressure companies to change their viewpoints when ignoring social challenges can put their investments at risk. For example, in 2021, one of the biggest petroleum and chemical manufacturers, ExxonMobil, elected two board members to run their climate targets (STT, 2021). The election was preceded by decades of refusing to act on their climate strategy. The latest year's pressure from shareholders (Cardwell, 2017) concluded in forcing the company to initiate change.

This research aims to study and identify tensions between economic value and shared value (CSV) and ways to solve those tensions profitably. Presenting existing tensions and solutions can help companies avoid or solve their challenges from a business perspective. For this subject, the original research motivation was introduced in the article *Creating shared value in international business: A research agenda* (Akpinar & Saleem, 2019). As a personal motivation, the author is interested in studying CSV and its implementation since social responsibility and sustainability are matters of competitiveness now and in the future and vital processes for every company.

### **1.3 Research approach and structure of the thesis**

Creating economic and social value simultaneously can create internal tensions in the company and external tensions with stakeholders. Tensions can arise from contradicting values or from a social problem that threatens a company's productivity. Identifying challenges and solving them requires resources, so companies need to consider their implications.



This study carries out empirical research, consisting of a qualitative case study of Tana Oy, an environmental technology company from Jyväskylä, Finland. The research objective is to analyze the tension points between economic and social value creation and what are the solutions that benefit the entire value chain. The research question is *how to resolve tensions between creating economic and social value?* Interviews conducted for the study included questions: *What are the key social challenges influencing the value chain? What is the emerging economic tension? What are the solutions to overcome these challenges?* The study addresses the following issues from a global value chain point of view within the case company.

After the introductory chapter, the second chapter is a literature review that provides an overview of the theme of sustainable development. The chapter introduces the implementation and management of CSR and the theory of CSV. Theoretical framework, CSV perspective redefining productivity in the value chain is presented at the end of the literature review. The third chapter introduces the study's methodology, the research context, and the data collection and analysis. The study is qualitative, and data is collected through in-depth interviews. Finally, the last chapters deliver the results and discussion of the research, also presenting suggestions for future research.

## **2 Literature Review**

This study focuses on sustainable development issues and related theories and research. The literature review is based on the research question, and it systematically explores the concepts and development of the idea of sustainability and CSR, also introducing the concept of shared value. The aim is to present the essential background factors for the research and reduce the risk of bias when interpreting the data. A comprehensive literature review helps in the reliability of the study.

Sustainable development and social problems are critical issues globally. They guide the importance and rationale for CSR, so it is essential to become acquainted with the social factors that affect it. The Shared Value approach chosen as a frame of reference is relatively new, emphasizing improved profitability and competitive position. Because the originators of creating shared value, Porter and Kramer (2011), state that it is a unique viewpoint, it is relevant to review

the previous theories. The same researchers also introduced ways to implement strategic CSR. (Porter & Kramer, 2006)

The first part of the theoretical framework reviews the concept of sustainable development and its origins. It is followed by a discussion of corporate responsibility and the implementation of strategic corporate responsibility. Last, the theory of shared value is introduced.

## 2.1 Sustainable development

The concept of sustainable development was defined in 1987 by the Brundtland Commission as “development that meet the needs of the present without compromising the ability of future generation to meet their needs” (World Commission for Environment, *Our Common Future*, 1987, as cited in Harmaala & Jallinoja, 2012, p.16). The Brundtland Commission also defined three dimensions of sustainable development, which are economic, social, and environmental. These definitions still form the basis for sustainable development models, both in communities and in business.

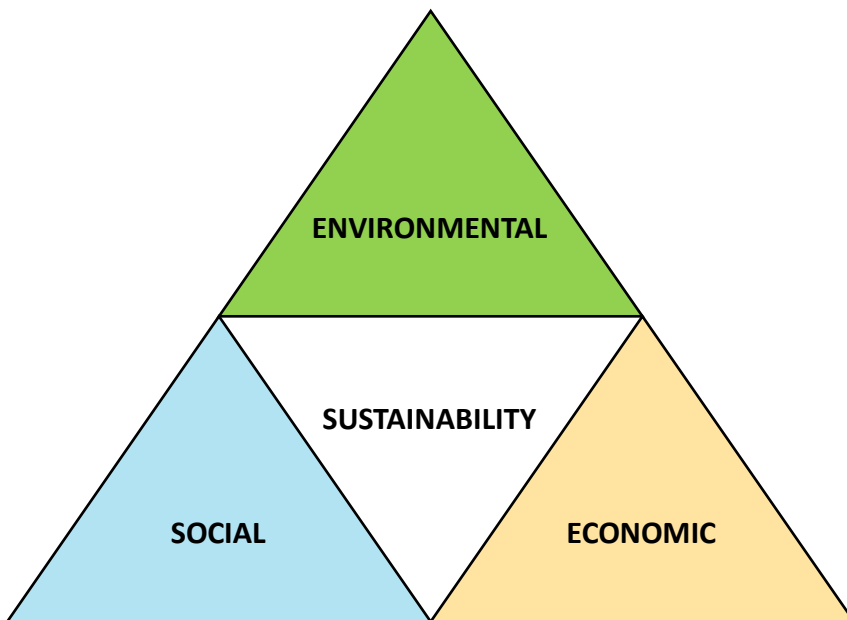


Figure 1. Dimensions of sustainability (adapted from Harmaala & Jallinoja, 2012)

The governments of many countries and international organizations have been setting goals toward a climate-neutral economy and sustainable development. In 2018, the European

Commission set its climate-neutral target for 2050 (European Commission, 2018), and China is planning carbon-neutrality before 2060 (Harvey, 2020). The United Nations' 2030 agenda for sustainable development was adopted by 193 countries in 2015, setting several goals targeting people, the planet, prosperity, peace, and partnership (United Nations, 2015). The plan emphasizes the interdependence of economic, social, and environmental dimensions and particularly notes the need to strengthen the social dimension.

Political decisions also guide businesses worldwide. Harmaala and Jallinoja (2012) concludes that sustainability and corporate responsibility issues have been actively incorporated into companies' development plans since the 1990s. Stakeholders and society expect companies to act morally right and be socially responsible. It includes using natural resources, the environmental load, and how companies behave towards their communities.

## **2.2 Strategic Corporate Social Responsibility**

According to The European Commission (2001), corporate social responsibility is an activity in which companies voluntarily interact with their stakeholders, taking social and environmental considerations into account. Consequently, CSR is about the relationship between business and government and their apportionment of social responsibility. The concept has emerged from the use of business ethics researchers and is today in everyday use (Harmaala & Jallinoja, 2012). It is an ethical duty in promoting welfare. CSR can be viewed from political and geographical perspective, as particularly multinational corporations (MNC) have significant role in, for example, building societies and curbing climate change. CSR efforts are also dependent on cultural, historical, legislative, and socio-economic differences, and companies act differently in different regions.

In responsive CSR, corporate citizenship refers to corporate moral behavior towards society. Companies are considered to be members of society with their duties and responsibilities. They are also expected to comply with laws and regulations to receive their *license to operate*, which is a minimum level of being socially responsible (Harmaala & Jallinoja, 2012). However, socially responsible and primary operations measures are not actively linked to responsive CSR. Therefore, *philanthropy* is also considered part of responsive CSR since companies can benefit society with charitable acts. Principles and modes of action underlying these terms are culture-

and region-related. Laws and regulations and moral expectations differ, which is why a company should know its operating environment to avoid conflicts.

Social responsibility and sustainability reflect corporate moral values and is therefore a key factor for the reputation of the company. Reputation and company image can affect economic prosperity and motivate companies to consider their actions. (Harmaala & Jallinoja, 2012; Porter & Kramer, 2006). It should be noted that companies' market only the positive actions of corporate responsibility, and opposite actions, for example, tax planning, grey economy and corruption can remain hidden (Harmaala & Jallinoja, 2012). Stakeholders play a significant role in encouraging companies to act responsibly and morally towards society.

Strategic CSR is a more active and holistic part of operations than responsive CSR. The company's strategy is designed to respond to its value proposition and differentiate it from other companies. When CSR is implemented strategically, it is wholly merged into business strategy and operations, and acting on chosen social issues is part of the value proposition (Harmaala & Jallinoja, 2012; Louche et al., 2010; Porter & Kramer, 2006). Including stakeholder views in decision-making is at the core of the strategy. Another critical thing is measuring and monitoring the company's CSR-related value creation in economic, environmental, and social dimensions. Strategic CSR enables companies to reach competitive advantages and new market shares, for example, by anticipating megatrends or changing regulations and laws. Innovating new products or creating value strengthens companies' probability of differentiating from competitors.

Porter and Kramer (2006) demonstrated ways to practice strategic CSR. First, a company must identify the intersections between the company and society. The company should evaluate how it affects the society (e.g., environment, work conditions) it operates in and how society (e.g., government) affects its competitiveness. After identifying the areas, the company must select the social issues they could contribute to creating benefit for society and the company's performance. Another way is to "mount a small number of initiatives that generate large and distinctive benefits for society and your company." In developing countries, a company can, for example, invest in support activities that contribute to increasing its market share in the region. Porter and Cramer (2006) state that these initiatives will contribute to the region's economic growth while creating growth for the undertaking of the initiatives.

## Other concepts linked to CSR

*The triple bottom line* (TBL), introduced by Elkington (1997), is an accounting framework for reaching and maintaining sustainable development. It is frequently being referred to when talked about sustainability actions in a company. The idea is to measure – according to the dimensions of sustainable development – the social, economic, and environmental aspects of operations. Elkington (1997) was motivated by the idea that businesses should strive to help society achieve not only economic prosperity but environmental protection and social equity. TBL is a holistic method of achieving sustainable way of operating. Savitz and Weber (2014) emphasized the interdependence of the three dimensions, and how it is considered in TBL.

*Bottom or base of the pyramid* (BoP) concept considers the poor as tomorrow's middle class and potential market, which can be reached with a change of business model or designing products targeting the BoP. Prahalad and Hart (1999) demonstrated that when the world population is described in the shape of a triangle based on income, the poor as a majority form its base. The social responsibility perspective is achieved when companies design products or services that are available to poor consumers. A low-cost car, being able to use a phone or access the internet can also create opportunities to boost livelihoods. According to United Nations (2020) statistics, poverty and people living in extreme poverty have been declining since 1998 and in the 21st century declined from 15,7 percent to 10 percent. People in extreme poverty are living below \$1,9 a day. Statistics on the fact that poverty is decreasing support the BoP concept.

*Social enterprises* can be different in corporate form, being small or medium-sized companies, and the business model is always value-based. The term is used for companies whose main purpose is to benefit society and the community in which they operate and reinvest in them rather than maximize profit. However, social business is not charity, and it is expected to make a surplus. (Department for Business, Energy & Industrial Strategy, 2011; Harmaala & Jallinoja, 2012)

## Management

International corporate governance is the mechanism of good business practice and large corporations are globally expected to adhere it (Harmaala & Jallinoja, 2012). It sets out the regulations and practices of how the business is being controlled and monitored, and what is the

role of the management and their relations to shareholders. The uniform procedure will help international cooperation among companies, as well as to manage their relationship with their stakeholders.

Some available tools used in business ethics management in corporations are the Mission and value statements of the company; Codes of conduct to guide the ethical behavior and decision-making throughout the organization; Reporting or advice channels for employees; Risk analysis and management; Ethics managers, officers, and committees; Ethics consultants; Ethics education and training; Stakeholder consultation and partnership; Auditing, accounting, and reporting (David 1989; Starkey 1998, as cited in Matten & Crane, 2010). Matten and Crane (2010) offer the core areas in ethical management to set standards, manage stakeholder relations, and assess ethical performance. It is common for big companies to have a sustainability officer or a coordinator organizing and managing social responsibility, as Harmaala and Jallinoja (2012) point out. However, in some cases, corporate responsibility issues are only outsourced actions in communications and reporting. In some industries (e.g., chemical), there is a greater need to identify and manage environmental risks, in which case companies usually have a specialist or unit focused on responsibility. The critical feature of strategic CSR is risk management. Good stakeholder relationships help with risk identification and assessment, both ethically and in monetary terms (Harmaala & Jallinoja, 2012). A comprehensive risk management plan reduces reputational and financial risks.

Responsible human resource management is one of the key factors in successful outcome of all corporate responsibility actions (Harmaala & Jallinoja, 2012). It can also be a competitive advantage in recruitment and therefore become a success factor for the company. The CSR actions and objectives of the company do not materialize if the company values do not guide the activities of the entire staff. Thus, the company must commit itself to providing for the needs of its employees as well. Harmaala and Jallinoja (2012) demonstrate that responsible human resource management is planned and holistic, and therefore supports companies' positive image and competitiveness.

In sustainability management, businesses can comply with various standards and certifications of sustainable development and social responsibility. One of the most known authors of standards is

the nongovernmental organization ISO. ISO 26000 is extensive guidance on social responsibility, but it cannot be certified as many other standards (ISO26000.info, n.d.). Its meaning is to be accessible for every company and thus promote social responsibility. SA8000 program of Social Accountability International (SAI) offers certification on social standards and it is one of the most known certifications (Social Accountability International, 2021). Also, another certification of social standards is the Business Social Compliance Initiative (BSCI) which was formulated by the Foreign Trade Association (FTA) (European Union, 2013). Certifications require measuring, reporting and official certification auditing from the businesses.

### **Measurement and Reporting of Social Value**

A company generates social value by contributing to society and its individuals' long-term well-being and resilience (Social Value Portal, n.d.). A company creates value with CSR initiatives if the activity is strategic and its results are confirmed by measuring. The value will be created in all three dimensions of sustainable development – economy, environment, and society. (Louche et al., 2010) Hart and Milstein (2003) introduce four ways to create sustainable value; considering the consumption of natural resources and the load on the environment, being transparent and responsible, developing green technology available to all, and enabling wealth creation and distribution utilizing the BoP concept.

Social accounting measures issues important to stakeholders and are classified in economic, environmental, and social dimensions. There are no exact ways or objectives to measure sustainability or ethical performance (Louche et al., 2010; Matten & Crane, 2010). Each business must determine its value creation method and how it is measured. Commitment to a management system standard helps implement the metrics, and the company can arrange an external audit or have internal auditing. Standard metrics in social accounting include emissions and consumption due to the company's activities, the satisfaction of the staff, and the economic impact on the company's operational environment (Harmaala & Jallinoja, 2012). The balanced scorecard (BSC) is strategic tool managers use to link strategy and performance indicators and evaluate them. BSC has four different perspectives: economic, internal process, customer and stakeholders, and organizational capacity or innovation and learning (Kaplan & Norton, 1992; Harmaala & Jallinoja, 2012). Perspectives help managers evaluate the company's performance in the eyes of external and internal stakeholders and customers.

## 2.3 Creating Shared Value

Michael Porter and Mark Kramer first demonstrated the efforts for strategic CSR in 2006, from which it evolved as a shared value. The idea of Creating Shared Value (CSV) was introduced in 2011. They stated that business and society should once again work together, and companies should take the initiative. From their point of view, Corporate Social Responsibility did not work as a leading force to change corporations' behavior towards society. Similarly, Hart and Milstein (2003) discovered the same problem earlier when studying creating sustainable value and how companies struggle to see the economic opportunities in becoming more sustainable. Companies are forced and recommended to be more sustainable or socially responsible by governments and shareholders, and some look at it only as a cost of doing business. (Hart & Milstein, 2003; Porter & Kramer, 2011)

A company delivers shared value when its operations strategically develop the activities of society, and when simultaneously benefiting its own business and pursuing competitive advantage. This strategy requires the identification of limiting factors in the operating environment that hinder business, and long-term development work in conjunction with stakeholders. Porter and Kramer (2011) emphasize identifying the limiting factors as societal needs that arise in the operational environment of the business. All needs create a business opportunity, and by benefiting societal needs, companies can do profitable and far-reaching business that improves the value of the business as well as the society.

Societal needs are linked to the shortcomings and problems of society. They can be significant and extensive problems, for example in infrastructure, or environmental issues, or a problem to be solved on a case-by-case basis such as procurement of some essential production related device. Porter and Kramer (2011) give examples from building roads and ports, on the reduction of environmental impacts and all the efforts to help producers increase productivity and income.

The key aspects of implementing shared value can be listed as follows: reconceiving new innovations and markets, redefining productivity in the value chain, and enabling the local business ecosystem that the company is part of. These are the three methods that Porter and Kramer (2011) defined as ways to create shared value.



### **Reconceiving products and markets**

Porter and Kramer (2011) encouraged companies to evaluate how value-generating factors and all customer needs are being met in different markets. Developing a product that, for example, helps the poor save money or producing affordable food that is more nutrient-rich and healthier, benefits society by contributing to the well-being of the citizens and thus creating common value. Reconceiving products and markets require a profound knowledge of the society where the company is planning to operate, and the stakeholders to operate with. Although underserved markets can be found anywhere, disadvantaged communities and developing countries have more societal needs, compared with developed countries. This method reflects the BoP model presented above, which encourages companies to look at the opportunities in emerging societies.

### **Redefining productivity in the value chain**

Value chains can be long and involve multiple stakeholders and operators. Many societal issues are linked with environmental issues and work conditions. Environmentally stressing activities and poor employee care often result in unnecessary costs for companies. Porter and Kramer (2011) list the main aspects to be reviewed in the value chain: *energy use and logistics, resource use, procurement, distribution, employee productivity, and location*. Companies can make significant improvements by studying how these aspects could use fewer natural resources, produce less waste, serve the local community and be more efficient. Value chains on shared value can also create new business opportunities.

### **Enabling local cluster development**

A *cluster* is defined as a particular geographical concentration of related industries and other related parties significant for competition (Delgado et al., 2014). Enabling cluster development is the most demanding and holistic means of implementing CSV but can also create the most complete and permanent results. All the ways presented above can serve and be part of the local cluster development. As an example, Porter and Kramer (2011) give corporations who ensure and strengthen their production by enabling rural farmers in developing communities to improve their productivity must look at the whole cluster and strengthen cooperation. The starting point might

have been redefining productivity, but significant initiatives have broad implications between industries.

### **Criticism**

CSR is a topic that has divided researchers into defenders and opponents. The most critical opponents believe CSR is detrimental to a company's performance when advocates see it as creating more opportunities for businesses to succeed (Louche et al., 2010). The criticism is still given of the naivety of goals and means. However, the 21st century, with its many crises, has begun to make sustainable development the responsibility of all.

Crane et al. (2014) criticized CSV for varied reasons and ignoring the tensions between social and economic goals was one of the highlighted. They argue that Porter and Kramer fade potential problems by presenting that there should be a pursuit only to win-win situations without trade-offs. Crane et al. (2014) point out that the theory makes complex social and environmental problems too simple, which has also been a common critique of CSR. They add that addressing and resolving some issues nevertheless ignore different industries' general and more extensive problems. For example, the clothing industry uses a significant amount of fresh water in cotton production, a great number of chemicals that pollute water and land, and the use of child labor is not unusual; Tobacco industry causes serious health harm and strains health care; Palm oil industry causes significant de-forestation and destruction of biodiversity in rain forests. As one of the means of CSV, Cluster development is not a new concept, and it is recognized to create a risky dependency between location and business. A city or region built on the wealth generated by a single industry can quickly fall into crisis if the largest company in the cluster closes or reduces its operations. (Crane et al., 2014)

## **2.4 Tensions between social and economic objectives**

Acquier et al. (2015) studied the tensions in implementing CSR policies in GVCs (Global Value Chains), and they categorized their findings as economic issues and behavioral threats. They used the Transaction Theory (TCT) costs to explain the tensions. The three types of transaction costs that are categorized as economic issues are organizational costs, transaction costs with business partners, and cooperation costs with secondary stakeholders. The need to comply with CSR

standards and policies generates these costs. *Organizational costs* for GVC members are incurred when production processes need to be transformed when implementing CSR policies. It includes making products and production methods more responsible, adopting new functions, or abandoning old ones, and changing the operating model. *Transaction costs* are incurred when contractual arrangements with business partners need to be redesigned. Existing contracts may need to be renewed or terminated altogether, and new contracts will need to be made with suppliers and distributors, for example. New actors in GVC must prove reliable, negotiate contracts, and ensure that compliance with the standards is working. The third economic issue Acquire et al. (2015) found was *cooperation cost* that occurs between GVC members and secondary stakeholders, such as national governments, NGOs, international organizations, and trade unions. These, secondary and non-business stakeholder relationships also need coordination which incurs costs. Companies should keep communication open and show interest in the social issues raised. However, some societal problems that secondary stakeholders bring up can be turned into a possibility to create shared value.

Corporate investment in CSR policies and the distribution of the profits it generates among chain members pose a threat of conflict, leading to behavioral threats. (Acquier et al., 2015). Fair contracts and practices contribute to the even distribution of costs and economic value achieved, contributing to the excellent maintenance of relations. Suppose one of the GVC members captures a disproportionate amount of the value. In that case, it creates inequalities in relationships and cooperation, leading to breaches of contract or giving up the CSR initiatives.

In their study, Acquier et al. (2015) also discovered that economic issues are influenced by asset specificity that results from the implementation CSR practices. Asset specificity can be, for example, a machine designed for unique use, people hired to manage sustainable development, or organizational and intangible such as certificates or processes. The study suggests that CSR related asset specificity increases transaction and cooperation costs presented earlier. Behavioral threats, in turn, were influenced by GVC structures. If there is a dominant company in the GVC that has high bargaining power and can govern the value chain by setting rules unilaterally, it can increase behavioral threats among weaker companies. Acquier et al. (2015) set clothing brands for example, who are leaders in their value chain. Forcing suppliers to adopt the CSR policy is likely to lead to fraudulent practices.

Siltaloppi et al. (2020) studied a construction company SmartCo's CSR integration with business strategy and ways of managing them for eight years. They were able to identify three tensions: the tension between past understandings and future visions, the tension of inconsistent behaviors, and the tension between competing decision-making rationales. These tensions are consistent with the economic issues and behavioral threats presented by Acquier et al. (2015).

The first tension between past understandings and future visions arises when accepted habits and attitudes must change to follow new practices. Putting CSR policies into practice demands a change of mindset for each person in the company. This needs profound justification, reasoning, and giving examples, not only for the employees of the company but also for, for example, stakeholders and clients. In the case study of Siltaloppi et al. (2020) the management's response to solve this tension was to direct the CSR behavior by integrating a new vision into the company's communications and making it visible, as well as recognizing and responding to the tensions and keeping dialogue open.

The tension of inconsistent behaviors arises from diverse ways of committing and complying the ethical values, for example, conflicting practices in different projects. Management's solution in the case of SmartCo was to formalize CSR practices and create clearer rules. The tension between competing decision-making rationales results from the necessity of making decisions between conflicting values, for example, sustainability and work efficiency. Competing decisions can also create a gap between projects and headquarters as the size of the company grows and the strategic management goes further in the operational work. Management's action to this tension was to improve the strategic sensemaking and organize annual events to communicate the strategy more clearly. Training in the workforce was also of foremost importance. (Siltaloppi et al., 2020)

## **2.5 Theoretical Framework**

This research will adopt the CSV dimension of *redefining productivity in the value chain* as a theoretical framework. This dimension has six different viewpoints to create shared value and, therefore, also addresses the tension points. Porter and Kramer (2011) point out that societal problems threaten value chains with rising costs. Societal problems in the value chain are related to, for example, natural resources, working conditions, pollution, and pandemic. Therefore,

companies have the opportunity to create social value by addressing these issues that are economical to them. Implementing shared value in the value chain generates economic benefits, yet costs cannot be avoided. The following paragraphs explain the six aspects of the value chain, the type of tensions a company may encounter, and ways to find solutions.

### **Energy use and logistics**

Energy use and logistics can be an excessive cost to a company. Porter and Kramer (2011) listed logistics, processes, energy used in buildings, and support functions in the value chain to be examined. The use of electricity, for example, can be reduced by utilizing modern technology. As energy prices increase, investing in energy-efficient solutions is looking for the long term. When logistics are planned more efficiently throughout the value chain, all parties' costs and environmental emissions will be reduced. In the process, productivity can be improved. Technological and digital solutions can also reduce the transaction costs in logistics, as it can require much management.

### **Use of resources**

Improving resource efficiency reduces the environmental impact and costs. As the price of raw materials rises and availability declines, companies motivate themselves to use them efficiently. In more efficient resource use Porter and Cramer (2011) use the example of MNCs that have significantly reduced their water consumption. Efficient resource use also includes recycling and reuse of materials.

### **Procurement**

In supply chain management, the unilateral search for benefits in cheaper countries is not considered far-sighted in terms of productivity and profitability. Considering suppliers more as partners and enabling them to improve productivity and sustainability or develop quality, is mutually benefiting. Using local and domestic suppliers generates shared value domestically and reduces logistical distances. MNCs have ethical codes and criteria for suppliers that they must meet to be part of the value chain. As Koipijärvi and Kuvaja (2017) suggest MNCs can create shared value by engaging SMEs in common operating models and encouraging them to invest in

sustainability. Managing sustainability risks and tensions in a GVC is challenging. As a solution, some companies have reduced the number of subcontractors.

### **Location**

The location of the business and its suppliers significantly impacts production and costs, as hidden transaction costs are reduced, deliveries are domestic, and the operating culture is the same. Embracing locality in products and production is a megatrend related to sustainability. Koipijärvi and Kuvaja (2017) point out that the creation of value in the local community should not be underestimated, as community approval is, however, a precondition for the existence of a business. By investing in local suppliers and partners, the company can improve its position in the local community.

### **Distribution**

Looking at distribution channels from a shared value perspective can generate new revenue streams. Porter and Kramer (2011) give an example of Hindustan Unilever's Project Shakti which employs underprivileged female entrepreneurs in rural areas. Unilever trains and provides micro-credits for entrepreneurs to run the home delivery business of Unilever products. Project Shakti benefits communities by employing but also making hygiene products available, for example. Another example of shared value distribution practice is Google Scholar, which makes scientific literature available to all who have access to the internet. Providing support to suppliers and distributors and helping them to develop is also an important way of creating shared value.

### **Employee productivity**

Taking care of employees improves employee productivity. Investing in the well-being of employees commits staff and, for example, reduces sick leave. A business can also influence workers' working conditions and the well-being of the entire value chain, for example, through fair pricing and contract terms (FIBS, 2016). Workplace health promotion (WHP) is a part of sustainable HRM. According to the European Network for Workplace Health Promotion (ENWHP), WHP is the company's strategy to promote employee health and prevent various occupational health problems (ENWHP, 2018). The study of Gorgenyi-Hegyessy et al. (2021) shows that over a 1

to 5-year period, WHP will, among other things, increase productivity and performance and reduce accidents at work.

## **Tensions**

Inés Alegre (2015) studied social and economic tensions in social enterprises and found that the number of tensions was significantly influenced by the model of creating social value. The social value creation was divided into three distinct phases in the company's value chain, which were procurement (*input*), production (*transformation process*), or the final product or service (*output*). Managing social and economic tension was more challenging when the creation of social value was embedded in the company's processes. Alegre's (2015) study indicated that companies that create social value through their products are forced to compromise less or not at all in economically challenging situations. Companies that create social value through their supply chain or in their production are more likely to end up doing trade-offs if they must, for example, downsize or change their business as demand changes.

Matten and Crane (2010) introduce general problems that could arise with stakeholder collaboration. The causes leading to tensions are usually associated with lack of resources, management and communication failure, trust in the other party, and too major differences in point of view. Collaboration with stakeholders requires time and other resources, which may contradict shareholders' expectations. These groups can also have quite different values and goals that may create a culture clash. As companies have many stakeholders, some projects may have successful collaboration, while other projects fail. Matten and Crane (2010) stated that this can cause a lack of control in cooperation and therefore a shortage of confidence. As a result, the company may lose its strategic direction. The accountability of stakeholders can also be challenged if the operation is not transparent, or they have problems in their history.

## **3 Methodology**

This chapter presents and justifies the methods used in this empirical study. The research approach reviews the chosen approach and methodology to answer the research question, the research context introduces the case company, and data collection and analysis present how the

collected research material has been collected and analyzed. The last paragraph, verification of the results present how validity, reliability, and objectivity are ensured in this study. The research objective is to understand the tension points that arise between economic and social value creation and how to find solutions that benefit the entire value chain. The question to be answered is *How to resolve tensions between economic value and social value creation?*

### **3.1 Research approach**

The approach and method of this research is qualitative, using the case study strategy, and as a data-collection method the semi-structured interview. A qualitative approach is necessary because it investigates the meaning of social problems to a business (Creswell, 2014) and aims to answer the research question with participants' viewpoints (Bell et al., 2019). The goal of this study is to recognize the tensions that have occurred between social and economic value creation, and the actions, the solutions that have emerged as a result. To be able to do that, it is necessary to understand which social problems have a meaningful impact on business and have affected the case company causing economic tensions. The characteristics of qualitative research are, e.g., the interaction with participants', multiple sources of data, and the pursuit to create a holistic picture of the studied phenomena (Creswell, 2014). The researcher as a persona and his or her knowledge and skills are a key factor in data collection and its analysis. The researcher's focus is to understand the participants' meanings and to be constantly ready to adapt to the collected data to obtain the needed information.

Maxwell (1996) states that qualitative study consists of four parts: the relationship between the researcher and the objects, how the sample, i.e., the objects to be studied have been selected, how the data is collected, and how it is analyzed. To conduct a reliable study in ethical manners, the researcher must have permission to explore their objective. The permission needs to be negotiated, regardless of the way data is collected. The relationship between the researcher and research objectives affects the success of the study and the quality of the data obtained. In this case, the researcher was employed in the case company when the agreement of the study was made. The employee relationship also helped to get the agreement with the companies in their value chain.



The sample consists of the objects you study that give you the data to analyze. Sampling is deciding where, when, who and what to observe in some method (Maxwell, 1996). In this study the sampling is purposive, thus the interviewees were not selected on a random basis (Bell et al., 2019). In purposive sampling, only the most relevant sources of data are sought to find to answer the posed research question. In this case study, suitable people to be interviewed were suggested by the company's contact person. The sample enables the generalizing of the results and is, therefore, a weighty decision when preparing for the study. However, this research has a case study strategy, and therefore the results cannot be generalized, which is why the sample is the company. (Thomas, 2016)

When designing the data collection, the researcher should leave space for flexibility to adapt methods and interview questions if necessary (Bell et al, 2019; Creswell, 2014; Maxwell, 1996). When designing the interview questions, pilot-testing is an effective way to avoid unsuccessful data collection. As methods are means to answer the research question, it is useful to also consider the details of the data collection situation, thus timing and surrounding effect on the interview or observation situation (Maxwell, 1996). In data analysis, it is recommended to begin the analysis right away after the first interview or observation and continue throughout the data collection process. Data analysis is the reduction of data to be able to understand it. A more detailed review of the data collection and analysis in this study is under the title 3.3 Data collection and analysis.

As mentioned earlier, a case study cannot be generalized, but the results only describe that case. A case study consists of the subject, and the object or analytical framework that explains how the analysis will be done (Thomas, 2016). A case study can be subject driven when the research is set in motion by a desire to study a certain subject, or object driven, when the research data is planned to be limited by choosing, for example, a case company. This study follows the latter example. In both cases, it is important to relate the subject to the object or analytical framework, as it is necessary to justify the chosen subject and the research context. This case study is a particular case design, conducting an in-depth analysis of the research problem, as is typical for a business case study. (Bell et al., 2019; Wilson, 2010)

## 3.2 Research context

The environmental technology equipment and services market is extensive and includes various sectors. International Trade Administration (ITA) (2020) estimates that the global market's value was \$1.12 trillion in 2017. The case company Tana Oy operates in the waste management equipment sector and its market was estimated to be \$48,420 million in 2019 and growing. (Research and Markets, 2020)

Municipal waste is highly regulated in many countries. From 2020 onwards, EU countries must increase their recycling rates in five-year cycles from 55% to 65% by 2035 (European Environmental Bureau, 2018). These regulations drive the case company's sales development, as municipalities and the private sector need more advanced machines. Tana compactors are sold to countries where recycling is not yet in a significant role, while shredders are sold to countries with more regulated waste treatment.

The study examines the value chain challenges posed by societal problems and their solutions. The case company Tana Oy operates as a network company and the value chain is vital to it. The value chain manufactures its products from start to finish, and only design is the actual operation of the company. As research focuses on the sustainable productivity and shared value of the value chain, it is essential to consider the different actors in the chain. To study a research issue from different perspectives in the value chain, it is essential to involve Tana's partners in the research. For this reason, the study has also interviewed Tana's delivery partner Combi Works and Tana's machines final assembler Toijala Works.

### Tana Oy

The case company Tana Oy is an environmental technology company from Jyväskylä, Finland. It was founded in 1971 and has gone through various development phases in its history (Tana Oy, n.d.-a). In 2022 it had 33 authorized distributors. Its products are sold in more than 50 countries (Tana Oy, n.d.-b), with the U.S. and Australia being its largest market areas. Tana's waste shredders are used in waste processing and compactors in landfills. The company operates as a network company and has kept only the essential functions within the company, having about 40 employees. These functions are product development and support, procurement, spare part sales,

business support functions, HR, sales, and marketing. In addition to employees in Finland, Tana has one employee in Germany and one in Austria. Management in the company is network-leading because the company's existence is based on practical and profitable cooperation with partners. Tana's sales were €26,385 million in 2020-2021, and its profit was €726,0 thousand (Kauppalehti, n.d.-b), placing it in small and medium-sized enterprises (SME).

### **Combi Works Oy Ab**

Combi Works, founded in 2005, was the second biggest sourcing partner of components and assemblies in Tana's supply network in 2020-2021 (S. Sell, personal communication, November 16, 2021). Its head office is in Finland, and other locations are Lithuania, Estonia, Sweden, India, and China (Combi Works, 2021-a). Combi Works offers its customers procurement software Factory as a Service (FaaS). It aims to make manufacturing digital and data-driven, enabling savings and better manageability (AirFaas, n.d.). It also promotes improving sustainability in manufacturing (Combi Works, 2021-a). Combi Works' sales in 2020 were €10,616 million making a loss of €329,0 thousand. (Kauppalehti, n.d.-a)

### **Toijala Works Oy**

Toijala Works specializes in machine building and has manufactured Tana compactors and shredders since 2006 (Toijala Works, n.d.). In addition to manufacturing, it also takes Tana's supply stock to its balance sheet (J. Tapanen, personal communication, January 21, 2021). The company was founded in 1960, and after several stages of development, it became part of TWB Group Oy in 2004. Toijala Works' sales in 2020 were €43,261 million and profit €556,0 thousand. (Kauppalehti, n.d.-c)

## **3.3 Data collection**

Primary data in a qualitative study is data that the researcher has collected and is unique (Wilson, 2010). In this study, the primary data is collected using semi-structured interviews, four online using Teams, and one face-to-face. It was also possible to utilize observation to support the meanings of the material collected because the case company also employed the researcher. The secondary data used in this research are other studies that review the same issues. In addition to

this, secondary information has been collected, for example, from the websites of the companies interviewed.

The three main tools to collect data are interviews, questionnaires, and observation. The main three types of interviews are structured, which is often used in quantitative study, semi-structured and unstructured. Semi-structured interview consists of structured questions presented by the interviewer but gives the respondent and interviewer space to interact and, for example, ask more questions if necessary. That is also the advantage of using interview in data collection, as questions are easy to adapt, people are more likely to respond positively towards it, and it can be easier to collect comprehensive data (Bell et al., 2019). Disadvantages of the interview are, for example, that respondents and answers may be affected by the interviewer or surroundings and analyzing of data is time consuming and subjective. (Bell et al. 2019; Wilson, 2010)

For this study, the semi-structured interview is the most suitable method, as the topic is wide and concepts challenging, and it is likely that clarifying questions are needed. It is recommended to do a test or pilot interview, as mentioned in chapter 3.1, to test if the questions provide expected data. This interview was tested with the first respondent, after which the author decided to give more background information and examples for the interviewees. The interview questions can be found in Appendix 1 and interviewees in Table 1.

Table 1. Interviewees and interview details

Interviewee	Company	Position in the value chain	Language	Date
CEO	Combi Works Oy AB	sourcing	Finnish	3.1.2022
Director of Sourcing & Production	Tana Oy	manufacturer	Finnish	5.1.2022
VP, Finance & Supply	Tana Oy	manufacturer	Finnish	12.1.2022
Purchasing Manager	Toijala Works Oy	production	English	18.1.2022
Production Planning Manager	Tana Oy	manufacturer	Finnish	21.1.2022

All interviews were arranged by email. The initial request presented the topic and the interviewer's goals for the study. Interviewees outside Tana were also aware of the interviewer's employment with Tana. At the beginning of the interview, the interviewees were asked for their consent to record it.

### 3.4 Data analysis

This study is analyzed using thematic analysis. The first steps in analyzing interviews are transcribing them, reading the transcripts, listening to the taped interviews, and making notes. The goal is to form a holistic view of the collected data. After this, the data is coded according to the themes that address the research questions or interview questions. Once the transcripts are coded, the sections can be organized for comparison, and unnecessary data can be reduced. At this point, the data is ready to be interpreted for findings and the researcher can draft the report. (Bell et al., 2019; Creswell, 2014; Maxwell, 1996; Wilson, 2010)

Bell et al. (2019) recommends that the interview be transcribed soon after it is done. In this case, there are only five interviews, and the author made the decision to do the transcribing after all the interviews. The theoretical framework and interview questions are set in clear themes, which eases the analysis. Themes and codes for analysis are presented in Table 2. After coding the data,

it is compared and interpreted thematically using excel, and findings are reported in the result section of this study. A picture of the data analysis excel can be found in Appendix 2.

Table 2. Themes and codes for analysis

Themes of the study	Challenges	Solutions	
T1 Energy consumption and logistics	C1a, C1b...	S1a-a, S1a-b...	S1b-a, S1b-b...
T2 Use of resources	C2	S2a	S2b
T3 Procurement	C3	S3a	S3b
T4 Location	C4	S4a	S4b
T5 Distribution	C5	S5a	S5b
T6 Employee productivity	C6	S6a	S6b

The six themes (code T1-T6) of the study are derived from a theoretical framework, and they deal with the operation and aspects of the value chain. Interviewees were asked to consider what societal issues affect the company's operations concerning these themes and what challenges they have caused in its operations. The challenges are coded C1-C6 for thematic analysis and the number indicates the theme. If there are multiple challenges in a theme, the challenges are divided by a letter, for example, C1a and C1b. The solutions are the different solutions how the companies in the value chain have pursued to address the challenges. They are also divided by a letter indicating first the challenge's theme and then the solution. For example, S1a-a, "S1" indicates the number of the theme and the challenge, the first letter "a" further specifies the challenge, and the second "a" specifies the solution.

Wilson (2010) advises looking into the relationships between themes and evaluating their importance. It is also essential to review whether the results are consistent with previous findings. When analyzing the data of this study, it will be reflected with the theoretical framework and the examples found from previous studies. Different themes are first analyzed separately, and finally, the results look at the whole and the interconnectedness of the challenges.

### **3.5 Verification of the results**

A researcher must prove the reliability and validity of the study (Creswell, 2014). Validity is checking and presenting the accuracy of the results, and reliability means consistency and comparability to earlier studies. Creswell (2014) urges to use of several sources of data or sufficiently large samples to have compared interview answers. To improve validity in this study, the author has comprehensively viewed literature and other reliable sources covering the topic, based on which the interview questions are created and analyzed. To be able to compare the respondents' perspectives accurately, it is necessary to do the transcriptions precisely, to avoid incomplete data that affect the interpretation. This is also referred to as rich data, and it means the level of detail of the data (Maxwell, 1996). To improve valid interpreting of other people's words and meanings, it is important to strive to understand how the participants "make sense what's going on." (Maxwell, 1996, p. 169)

Interpretations are exposed to researcher bias, and for the validity of the research, it is important to self-reflect biases (Creswell, 2014; Maxwell, 1996). The author considers the bias in the results and strives to openly discuss them. Things that affect the interpretation and should be reflected are, for example, the background of the researcher and the previous knowledge author has on the issue. As the researcher has been employed as a trainee in the case company before the study, it gives the opportunity to understand the field and surroundings better, yet it also may affect how the interviews are interpreted. Creswell (2014) underlines that it is essential to show that the data has not been compromised and will not harm the participants. The analysis presents quotes from interviews to confirm the observation and address these issues.

## **4 Results**

This chapter presents the research findings according to how to resolve tensions between creating economic and social value. The analysis is done thematically, and first, all themes are analyzed separately to ensure the clearness of the analysis. Last, the challenges and solutions and their causes are considered whole. In the discussion chapter, the results are reflected in the theoretical framework and previous studies.

All primary data is gathered through semi-structured interviews with different value chain persons. The interviewees included a manager, a director, and a vice president from the case company Tana, the CEO of its sourcing partner, and a manager from the final assembler of its machines. The first questions aimed to determine the company's CSR practices and what kind of social value it creates. All interviewees said their companies do not have an actual CSR policy or meters. However, the companies comply with laws and ethical practices in their operations. All three companies are SMEs, and interviewees estimate that the development of CSR policy is more a matter for large companies that have the resources to do so.

Tana's sourcing partner Combi Works requires ISO14001 or environmental certification and OHSAS 18001 social responsibility certification from its manufacturing partners. The CEO of Combi Works commented that these requirements are not particularly hard, but they are formal and audited measures. Combi Works has defined in its strategy that they want to be a pioneer in sustainable manufacturing. The AirFaas software they develop is at the core of their strategy. The CEO commented that "we have an important part and place in the value and supply chain of companies and by doing our own work we can improve the social and environmental responsibility of our customers and thereby make and create value for society as a whole."

Almost all interviewees mentioned the employment impact of their entire value chain and the payment of taxes as their contribution to social value. Other elements raised were co-operation with schools and research institutes and charity. One of the interviewees underlined that Tana generates social value through its products:

*...we contribute to the sustainability of the world and greenhouse gas emissions and material recycling and sustainability around the world through our product development, and the products that result from it... we employ people who make a living from this, and the company pays tax because it is a law-abiding company.*

#### **4.1 Energy Use and Logistics, and Use of Resources**

The first theme was the most prominent in the data, and the financial challenges were also the most significant in logistics. The challenges were reflected in other themes as well. However, there were no findings concerning the use of resources, so it has not been addressed in the results.



Table 3. Challenges and Solutions of Theme 1

<b>T1 Energy Use and Logistics</b>			
<b>Challenges</b>		<b>Solutions</b>	
C1a	Shortage of transport capacity	S1a-a	Finding suppliers closer
		S1a-b	Train transportation from China to Finland
C1b	Logistics costs	S1b	Finding suppliers closer
C1c	Location of stocks in relation to production	S1c	Transport optimization
C1d	Shortage of goods	S1d	Stock increased
C1e	The cost efficiency of Asia		
C1f	Energy costs	S1f	Replacing the light source in production halls with LEDs

Related to the theme of energy consumption and logistics, the most significant challenges that emerged in the interviews were the lack of transport capacity and the substantial increase in transport costs in the last years. Rising freight costs and uncertainty in deliveries make it challenging to plan operations and increase pressure to raise prices. The pandemic that began in the beginning of 2020 significantly exacerbated the logistic problem. Containers used in sea freight transport got stuck in China at the pandemic's start. It also caused a shortage of goods. Addressing the shortfall has forced an increase in inventories, which has led to additional costs and transportation.

As a solution to global transport challenges and costs, there have been efforts to find suppliers closer in the past ten years. Bringing the value chain closer has somewhat reduced transport costs and benefited domestic operators. Another solution to the shortage of containers has been to transport the large parts needed for the machines by train from China via Mongolia and Russia to Finland. The study cannot compare the differences in the environmental impact of ship and train traffic. Today Tana has suppliers in Eastern Europe and Finland, but much production is still in China and India, and one important production partner in Turkey. Assemblers interviewed commented that “neighbor” suppliers would be the best option, but suppliers must be sought from cheaper countries because of the price orientation of B2B customers. However, it was

pointed out that as the rise in freight costs has affected everyone, it has also pushed the relocation of production from Asia. Although there have been initiatives, there is now an economic rationale for them. Production in Europe is more expensive compared to Asia, and as one of the interviewees put it, “no one agrees to be the one to raise the price of a product by 20% just to get it (production) closer.”

Tana made an organizational change in the mid-2000s, fully outsourcing production operations. Due to the cost structure, the company was forced to export production to Asia. Now, however, efforts are being made to get production closer to Finland. According to Tana's sourcing partner, cost efficiency in Asia is challenging efforts to relocate production to Europe. Another reported issue increasing the emission effects of logistics is the network model of Tana. Because inventory is outsourced it is not located at the same place as assembly, and therefore significantly increases the need for truck transport inside Finland. It was justified by the lower risks and capital costs of one of the interviewees. However, the network model of manufacturing also positively affects energy use, as one of the interviewees indicated:

*...when they (manufacturing partners) are companies with other customers, then the resources they have are used equally for the needs of different customers, and therefore there can be no idle in production to the extent that it would be our own production.*

Thus, it can be said that Tana's production is more efficient and generates savings when outsourced.

The interviewee from the assembly commented that they have invested in replacing the lighting in the production halls with LEDs. It has generated savings as less energy is used. Consideration of energy use is more critical at the production site because the energy consumption of the offices is low. Because factories use energy considerably, cutting costs is the driving motivation. As a result, the source of energy might not be of importance, and energy production, in general, is influenced by political decisions. As one of the interviewees commented, the coal-fired power plants in Eastern Europe are not supporting the sustainable energy efficiency, and overall, the energy use is hard to compare between Asia and Eastern Europe.

The interviewees discussed all themes together. Theme 2, the use of resources, was not prominently featured in the interview material and could not be separated from other themes. As a result, theme 2 is excluded from the analysis, and the next section is about theme 3.

## 4.2 Procurement

Procurement was affected by the logistics problems already presented in the previous paragraph. Factors influencing the relations between the actors were also sought in the interviews.

Table 4. Challenges and Solutions of Theme 3

<b>T3 Procurement</b>			
<b>Challenges</b>		<b>Solutions</b>	
C3a	Supply chain relationship management	S3a	Detailed contract terms and conditions
C3b	Relocation of production from Asia to Europe	S3b	Move production to Europe as much as possible
C3c	Labor shortage in Europe		
C3d	Uncertainty caused by trade unions	S3d	By negotiating locally

Toijala Works, where Tana's machines are assembled, had a big fire between the second and third interview in January. One factory hall was destroyed in the fire, and it also affected Tana's production to some extent. As a result of the fire, one interviewee brought up that there is an opportunity to increase capacity by extending the production network in Finland. However, contract negotiations and their equitable drafting are always challenging because the need for production varies. As one interviewee put it: "...new suppliers, in particular, want to make a contract that what will happen when that work is reduced ... and these will be difficult discussions". New suppliers will have to make investments as they expand. Another interviewee pointed out that if, for example, pandemic affected the supply chains, it would be easier to tackle with Tana's flexible operating model. It is also an enabler of Tana's growth because the operation is scalable. However, Tana's sourcing partner pointed out that building new supply chains is a challenge in general. The details of these challenges did not appear in the data. The production interviewee expressed the challenge of procurement distances. From their perspective, suppliers

as close and centralized as possible would be best for manageability. However, as discussed in the previous topic, moving manufacturing from Asia to Europe is challenging due to pricing.

Labor availability was also mentioned as a challenge throughout the value chain. The pandemic affected labor mobility between countries, causing temporary problems. As a broader problem, it has also increased the already alarming worker shortage in the labor sector. Solutions to labor shortages are complicated for individual companies to find, as the problem is Europe-wide. In Finland, trade unions also have a great deal of influence on companies' operations. Of these, Transport Workers' Union AKT, for example, may pause all international trade from Finnish companies by going on strike. As one of the interviewees described:

*...exports can sometimes come to a sudden halt, and that one-week break may make it difficult, incur insane costs because it also means that not only do exports stop but that imports can also stop, so that union is a really big uncertainty in this whole.*

Other interviews also highlighted the uncertainty brought by the trade unions. The only solution to the effects of union action was local negotiation in problem situations.

### 4.3 Location

The theme of location considered the location of companies in the value chain with each other. The distance between suppliers and manufacturers can cause challenges and additional costs. However, there are no simple solutions in global value chains.

Table 5. Challenges and Solutions of Theme 4

T4 Location			
Challenges		Solutions	
C4a	The cost efficiency of Asia		
C4b	Labor shortage	S4b	Recruiting from abroad
C4c	Global problems in logistics	S4c	Finding suppliers closer

The results have highlighted the challenges of the location of suppliers in previous themes. The location of suppliers is determined by cost, so most suppliers are in Eastern Europe or Asia. However, Tana also has some suppliers in Finland. The manufacture of machines is also done in Finland, which is considered essential in the value chain. The machines are mainly sold to the end customer by a dealer, and they operate locally around the world, providing technical support and machine maintenance. Overall, these results show that Tana creates significant local social value in its home country and distributors create local value in their locations.

Lack of cargo capacity is a big problem. Container shortages delay delivery throughout the chain, at worst to the customer. As one interviewee put it:

*...subcontractors in China are currently causing gray hair when there is no freight capacity, and no goods can be imported into Europe. At the same time, of course, when we sell globally to almost all continents, logistical challenges can cause problems if cargo capacity is not available, which will affect shipping schedules.*

However, another interviewee referred to the location theme that there is no perfect place to make Tana machines because they are sold worldwide. From this perspective, Finland is in the middle of the world.

Toijala Works is in an area where many companies require similar skills, which increases competition in the labor market. In addition, it is hard to find special expertise, such as welders, in Finland at all. The challenges have been solved by recruiting from abroad. Toijala Works is a company valued by its community. The locality is small, and the livelihood of many and the municipality's well-being depend on the company's success.

#### **4.4 Distribution**

The distribution theme was less discussed in the interviews. However, its problems were considered the same as in transportation in general. Tana transports the machines to its distributors worldwide, who in turn deliver the machines to customers locally.

Table 6. Challenges and Solutions of Theme 5

<b>T5 Distribution</b>			
<b>Challenges</b>		<b>Solutions</b>	
C5a	Global problems in logistics		
C5b	Information flow in the value chain	S5b	Change of logistics partner
C5c	Obtaining financing and security for transactions	S5c	Helping dealers applying for financing

Distribution was affected by the same problems as in logistics in general, i.e., container shortages, prices, and transport distances. It applies to the shipment of machines to distributors. One of the interviewees also highlighted the challenge of the flow of information in the distribution network. Tana's former logistics partner did not seek to develop systems, making it challenging to provide and manage the information about the shipments. The matter has been resolved through the exchange of a logistics partner. The new partner is developing and investing in their systems which have helped Tana better track shipments and provide dealers with more up-to-date information about the machine's arrival in the country. Another challenge related to distribution was acquiring financing or security for the transaction, which dealer or customer applies. Tana strives to help apply for financing as it can. As a conclusion on the distribution theme, the study did not find significant ways to create social value.

#### **4.5 Employee Productivity**

Personnel productivity was examined through coping and well-being at work. Case's value chain includes both white-collar and blue-collar workers. There were some differences in the way the well-being of the staff was taken care of, but everyone felt it was essential. Taking care of employees is a cost to the company, and productivity can be challenging to measure. Social value is created not only by employment but also by promoting the well-being of workers.

Table 5. Challenges and Solutions of Theme 6

<b>T6 Employee Productivity</b>			
<b>Challenges</b>		<b>Solutions</b>	
C6a	Well-being at work	S6a-a	Workplace health promotion
		S6a-b	Information sharing
		S6a-c	Development of work processes
		S6a-d	Strengthening social ties in the work community
		S6a-e	Normalization and utilization of working from home
C6b	Coordination of work	C6b-a	Developing of Data Exchange Layer
C6c	Labor unions	C6c-a	Local negotiations

The fundamental challenge in employee productivity is employee well-being and measures what the company is willing to do. Communication between the various parties in the value chain is continuous, and the aim is to keep it open and functional. Respondents expressed that companies have measures for Workplace Health Promotion (WHP), such as comprehensive occupational health and mobility incentives, such as exercise vouchers. Team days and company-wide celebrations were also considered important in strengthening social ties in the work community. Interviewees, overall, expressed the importance of information sharing and discussion within a company and throughout the value chain.

Tana measures the satisfaction of its employees four times a year with the help of an independent operator and strives to respond based on the results. The researcher was able to observe the implementation of the surveys during the employment in the case company. Efforts are made to influence job satisfaction and productivity by developing processes. Survey results may indicate, for example, excessive workload or dissatisfaction with supervisors or management. It is also possible to suggest improvements anonymously through the survey. In Toijala Works production, processes have been developed by investing in welding robots, which reduces heavy manual labor and improves occupational safety.

The interviews also clearly showed the increase in working from home caused by the pandemic. It was seen as a positive opportunity and a potential burden. One interviewee said, "...it is so much

employee dependent when one then prefers to work in the office. Overall, I think the good thing is that you have flexible, more flexibility in where you work because the systems allow it today....”

On the other hand, distance working is only possible for white-collar workers. In production, work is in the workplace, and the effects of a pandemic have been different. However, the interviews did not show whether the pandemic had burdened the production workload. One comment on the procurement theme mentioned that the pandemic hampered workers’ movement between countries.

There was a negative comment about the organizational structure of Tana, which was said to promote a lack of leadership and taking responsibility. The interviewee experienced that Tana’s network management model lacked in coordination system. The problem leads to duplication of effort, and no one is necessarily tackling the problems experienced by employees, for example. As one solution, Tana is developing a “Data Exchange Layer” to address the issue of coordination. Its purpose was described by one interviewee as follows: “... all departments have the same view of what is being done and those products and those documentation ... that it synchronizes what is being done on schedule and through awareness.”

Another emerging challenge was the impact of unions on labor productivity. Strikes and intimidation affect labor productivity and can lead to dissatisfaction and a breakdown in cooperation in the value chain. Workplace-specific walkouts and threats can be addressed through negotiation. One interviewee commented that unions could negatively affect the image of their fields. The informant demonstrated that, “...for welders and so it's been because the labor union has been yelling for years that they don't get paid much and it's tuff work...” The comment referred to the challenge of finding welders in Finland presented in the section on procurement and distribution.



## 4.6 Summary of the results

The study identified several challenges resulting from a social problem, i.e., a pandemic that began in 2020. To meet this challenge, bringing the value chain closer was the best solution. Tana had had initiatives to do this before the pandemic that shook the world, but it has added the necessary financial incentives.

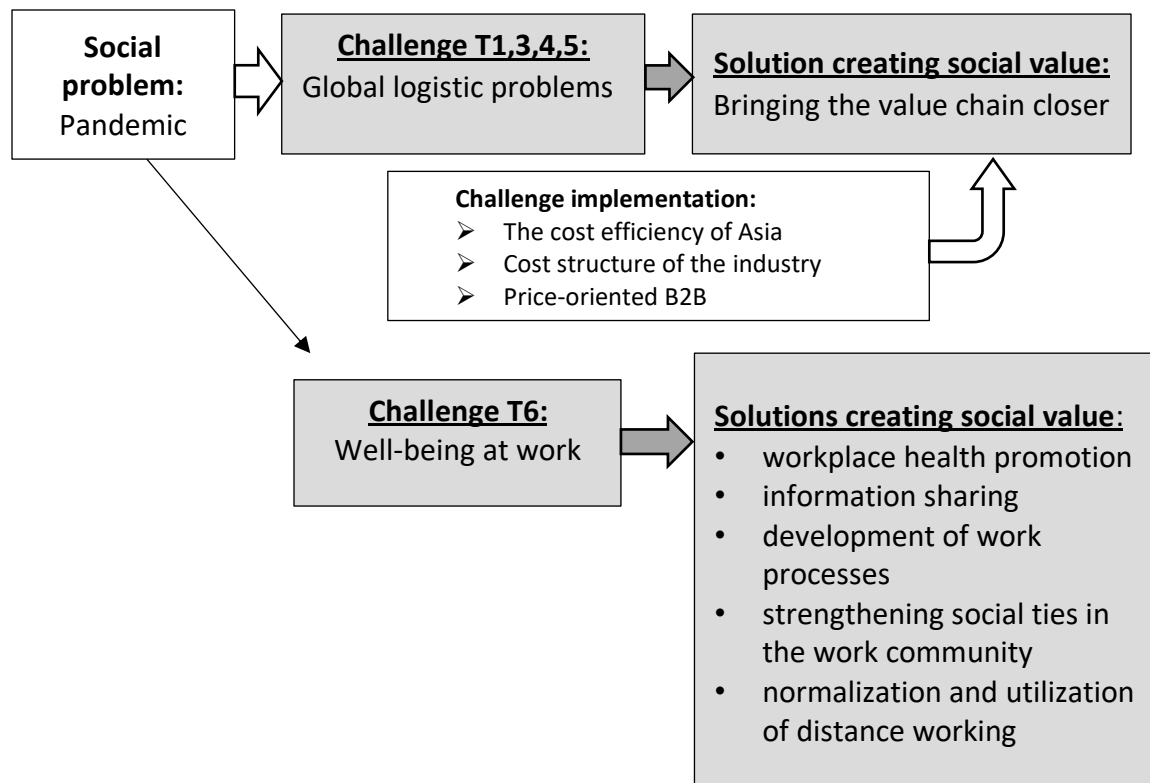


Figure 2. Summary of the main results

The results showed that the pandemic was the most significant social challenge addressed in the value chain, affecting all themes analyzed. The logistics challenges, i.e., the lack of freight capacity and high freight costs, affect the value chain in themes 1, 3, 4, and 5. No data were collected from theme 2, so it was excluded from the analysis. Logistical challenges, in turn, also caused a shortage of goods, which has led to an increase in stocks. The solution to the logistical challenges was to move production to Europe as much as possible, which would generate social value as transport distances would shorten. However, this is challenging because of Asia's cost-effectiveness and price competition in the B2B market. No solution affecting distribution was found as there are no alternatives to shipping. The pandemic has also had a negative impact on the European labor

market, which is difficult for individual companies to address. Foreign workers have compensated for the shortage of welders in Finland. Trade unions create uncertainty in trade and, in addition, were perceived as harming the image of some professions. The well-being of employees was improved by workplace health promotion, sharing information, developing work processes, strengthening social ties in the work community, and normalizing and utilizing distance working. The coordination of the work was also perceived as a challenge in the sixth theme, and it was developed with Data Exchange Layer.

## **5 Discussion**

The study aimed to find out how to resolve tensions between creating economic and social value in the global value chain of case company Tana. As a theoretical framework, this research used the CSV dimension of redefining productivity in the value chain developed by Porter and Kramer (2011). The theory proposes the creation of shared value in the value chain through six different perspectives. Shared value follows the principles of social value and CSR but places it at the strategic competitive advantage of the company, and thus shared value is produced in terms of economic value. Examples of tensions and solutions were also sought as a frame of reference.

The study was conducted as empirical qualitative research and the primary data was collected by interviewing individuals from Tana's value chain. Since the case company also employed the researcher, it was possible to utilize observation to support the meanings of the material collected from the interviews. The results were analyzed thematically and compared with the relevant literature and previous studies. However, few previous studies were found or could not be identified, especially in the machine and engineering industry.

The results showed that social problems had caused economic tensions in Tana's value chain. The most significant social challenge in the study was the pandemic that had affected the entire world. It has hampered global trade and the transport of goods, as curbing the spread of the disease nearly halted international traffic. It has boosted the company's efforts to bring the value chain closer from Asia to Europe. Reducing transportation distances in the supply chain generates economic value while reducing emissions. However, efforts are being challenged by cost-

effectiveness in Asia and the price driven B2B trade, as the values of sustainable development in were not yet perceived as a competitive advantage.

Tana operates as a network company, and most of its operations are outsourced. Therefore, the value chain and its equal value creation are vital for the company. Challenges are also being addressed together with partners who impact each other's value creation. Tana has kept outsourced manufacturing of its machines in Finland and has also entered into agreements with domestic suppliers, thus increasing local social value.

### **5.1 Practical and managerial implications**

The results showed that all challenges that could be addressed had been met or opportunities had been considered. Bringing value chains closer was hampered by the cost structure of the industry, fierce price competition, and the cost-efficiency of Asia. The researcher does not have solutions to present to this challenge. However, based on the observations, it would be possible for the company to improve the efficiency of logistics and the flow of its information locally. Because the inventory and production are outsourced, information on the destination of shipments is sometimes unclear. Therefore, the shipments travel unnecessarily, causing additional work, costs, and emissions.

By studying the value chain logistics and processes, a company can strive for more efficient operations. In a small company, staff could be committed to reducing emissions by asking for suggestions on how the processes could be optimized in terms of emissions and costs. Solutions can already come from more detailed instructions or better communication. In procurement, it is a good idea to look at the possibilities of increasing domestic production, as its benefits can be significant. Despite the higher production cost, transportation distances are shortened, and the operating culture is the same, so savings accrue in the long run. At the same time, emissions will be reduced, and cooperation will benefit domestic companies and localities. By investing in locality and domesticity, companies invest in the competitiveness of their operating environment.

Job satisfaction can only be affected by investing enough in it, which means costs for the company. However, taking care of the well-being of the staff increases both motivation and

productivity and reduces sick leave. Because well-being is affected by many things, there are several ways to improve it. The company must have a consistent, transparent action to promote a healthy lifestyle and take care of, for example, the work atmosphere and the appropriate workload. According to the interviews, personnel management was sometimes deficient in the network management model. In the network management model, work and coordination are independent activities. Without making the organization more hierarchical, work and processes can be managed and monitored regularly. It also facilitates communication and streamlining processes.

## **5.2 Assessment of the results in the light of literature**

According to CSV theory (Porter & Kramer, 2011), social challenges pose opportunities that, when addressed by companies, generate economic benefits for their operations but also social value. Economic challenges caused by social problems can degrade earnings, hamper growth, or lower employee well-being and productivity. By reducing emissions and consumption and streamlining processes, companies can save money and the environment. Encouraging staff to lead healthier lifestyles can reduce sick leave and increase productivity. Healthy and productive people are also valuable to society. The study sought to identify the economic challenges in the value chain posed by social problems and how Tana has addressed them.

The manufacturing industry is a B2B trade, where it competes on price, not on the values of sustainable development. More sustainable solutions for the manufacturing industry require a change in the culture of the industries and pilot pioneers, as was highlighted in SmartCo's case (Siltaloppi et al., 2020). Tana's sourcing partner Combi Works has developed procurement software to make manufacturing digital and data-driven, enabling savings and better manageability. The company strives to be a pioneer in sustainable manufacturing with the software it offers and aims to help more sustainable companies gain market share in the future. Combi Works' goals also follow the principles of shared value.

Tana's value chain solutions to energy use and logistics challenges largely follow the examples of social and shared value presented by Porter and Kramer (2011). Finding suppliers closer than in Asia shortens transportation and emissions. Optimizing transportation from stock to production also reduces emissions creating social value. However, the increase in stocks due to shortages of

goods had the opposite effect, as it has temporarily increased transport but has been necessary to safeguard production.

Social and shared value is created through a long-term perspective in procurement, creating sustainable partnerships (Porter & Kramer, 2011). Although Tana's operations are based on long-term partnerships, the challenge is the price orientation of the B2B market and the cost-effectiveness of cheaper countries, which is difficult for European suppliers to meet. Seeking unilateral benefits from cheaper countries can increase social disadvantages. However, Combi Works, Tana's sourcing partner, requires its contract suppliers to certify the environment and social responsibility, thus creating social value in the value chain.

Tana's business is in Finland, and its machines are manufactured in Finland, which is significant in local value creation. Regarding the location theme, one of the fundamentals of CSR is that the company is part of society and its community; they have corporate citizenship (Harmaala & Jallinoja, 2012). Thus, Tana generates local social and shared value by choosing domestic partners.

The study found that employees are valued in the value chain, and companies have many ways to contribute to well-being. In employee productivity, social value is created by taking care of employee well-being (Porter & Kramer, 2011). There is no meter of the correlation between productivity and well-being in a case company, but satisfaction is measured regularly, and the results are openly reviewed throughout the company. The human resource management at Tana appeared to be holistic and planned as responsible HRM is expected to be. (Harmaala & Jallinoja, 2012)

Overall, the study was in line with previous studies, although comparable studies were difficult to find. The use of resources was not analyzed because no data were collected from the interviews. Also, the study did not find significant ways to create social value regarding the distribution theme.

### 5.3 Limitations of the research and recommendations for future research

There is a vast amount of literature and research on sustainable development. The subject is broad, and the delineation of literature was challenging. On the other hand, although CSV is already a twenty-year-old concept, it was hard to find supporting research for the design of this study. Studies on the challenges between economic and social values were found only in social enterprises. It must be considered when comparing results with commercial companies. Studies on the challenges were also found in the implications of CSR methods. In addition, some comparable results and help in identifying potential challenges were possible to identify.

The context and field of the research were new to the researcher, but the short employment in the company helped to understand the value chain of the machine industry and Tana's operating model. However, the researcher had to keep in mind the bias made possible by the employment relationship when collecting and analyzing the data. The implementation of the interviews remained somewhat straightforward, as the researcher was unable to address issues that may require further questions. Overall, the interview questions were challenging to design with few sample studies. The research topic was briefly presented to the participants in the interview request, but it may have been somewhat forgotten at the time of the interview. In addition, as mentioned in the results, Toijala Works had a big fire between the second and third interviews. It changed the schedules and mood of the rest of the interviews. The impact of the fire on the content of the material is difficult to assess. However, the responses were well aligned, so it can be assumed that the impact was not significant.

Recommendations for future research would be to repeat this study in another context. The challenges between economic and social value could also be studied as a longitudinal study, in which case challenges and value creation could also be measured. Another interesting topic would be to compare the impact of responsible human resource management on staff productivity between companies. The opportunities for different research topics seem broad. Not much published material was found on the implementation and challenges of shared value, for example, in SMEs and the heavy industry.

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## Appendices

### Appendix 1. Interview questions

1. Does your company comply with Corporate Social Responsibility (CSR) policy / program, or how your company operates responsibly for society? Do you use any metrics?
  2. How does your company consider CSR in its value chain? Do you use any metrics?
  3. How does your company create social value?
  4. Consider the six aspects of the value chain listed below,
    - 1) *Energy consumption and logistics*
    - 2) *Use of resources*
    - 3) *Procurement*
    - 4) *Location*
    - 5) *Distribution*
    - 6) *Employee productivity*
- a) What are the societal challenges that affect your operations?
  - b) Do they cause economic tensions?
  - c) How have you solved them?

## Appendix 2. Data analysis in Excel

Code	Text from data sheet	Location of text	Analysis/comment
C1	voisi kuvitella, että länsimaissa nyt ainakin olisi ympäristö ja energiatehokkaam	Interview1 page 3	
C1	Mä sanoisin että energian kulutuksessa siinä on toisaalta se valmistuksellinen o	Interview1 page 3	
C1	paineita on siirtää valmistusta Aasiasta Eurooppaan mutta se ei aina oo niin yks	Interview1 page 4	Pandemia
C1	Ja se esimerkiksi että kuljetuskapasiteettia ei ole ja tavallaan tavara jää seisoma	Interview1 page 4	pandemia
C1	se on dominoefekti, tavaroiden hinnat nousee, inflaatio nousee, palkkapaineet n	Interview1 page 4	pandemia
C1	kustannusrakenteen vuoksi Tana on ollut pakotettu siirtämään sitä tuotantoa ec	Interview2 page 7	kustannukset
C1	energian kulutus ja logistiikka puolella olevat yhteiskunnalliset haasteet tulee va	Interview3 page12	polttoaineen hinnan ka
C1	nytte varsinkin tässä tilanteessa ja tänä vuonna se on ollu haaste kun materiaalle	Interview3 page13	pandemia
C1	there is a bit shortage of transportation equipment. Talking about ships, trucks w	Interview4 page17	puuten kuljetusvälineis
C1	Tällä hetkellä kun Tanalla on se politiikka että meillä on varastot muilla kuin mei	Interview5 page23	varastojen sijainti
C2	kierrätysmateriaalin perempi hyödyntäminen myöskin Tanan koneissa, ...ei olla	Interview3 page16	materiaalin käyttö kone
C2	energy consumption, as we are in b2b the kind of marketing value of the green e	Interview4 page17	energian hinta
C3	valmistuksen siirtämistä lähemmän eurooppaa tai eurooppaan pois aasiasta niir	Interview1 page 4	aasiasta eurooppaan
C3	työvoiman saatavuuteen niin tietysti se osaavan henkilöstön saanti se on haaste	Interview3 page14	pandemia osittain
C3	Ja sitten taas työvoiman saatavuuteen pandemia vaikutti esim siten että kun To	Interview3 page14	pandemia
C3	For us the procurement distance is kind of a challenge. So to have suppliers far a	Interview4 page18	sijainti
C3	meillä on AKT vasarana tai kirveenä muille järjestöille niin meillä saattaa vienti k	Interview5 page22	liitot, myös C1, C5
C3	kuka tahansa kenellä on tilillä rahaa, niin haluaa ostaa sitä tavaraa josta nyt on p	Interview5 page22	pandemia, tavarapula
C4	kiinassa sijaitsevat alihankkijat ne aiheuttaa tällä hetkellä tuskaa kun ei oo rahti	Interview3 page13	pandemia osittain
C4	Labor shortage is a tricky question for instance on the location. Welders you can	Interview4 page18	työvoiman puute
C4	our location. Yes we are a big company here and we have a good reputation but	Interview4 page18	työvoiman puute
C5	Se varmaan tulee niitten koneiden kuljettamiseen liittyvien vaikutusten kautta j	Interview3 page14	pandemia
C5	konekaupat monissa maissa perustuu siihen että asiakkaat tai dileri saa rahat ul	Interview3 page14	rahoitus
C5	meillä on nyt sellanen logistiikkakumppani joka pystyy tuottamaan ja on kehittä	Interview3 page15	järjestelmät
C6	haasteena sen että ihmisen on kokoajan online ja kontaktissa jollonka on vaikee	Interview1 page 5	online
C6	yhteiskunnallisena haasteena, että ihmisten työhyvinvointi ja yleensäkin henkil	Interview1 page 5	yleinen hyvinvointi
C6	liittojen väliset työmarkkinapolitiikka ja tämmönen ja sillä on meihin ja tuottavu	Interview3 page15	liitot
C6	pystyy joustavammin hyödyntään etätyömahdollisuutta kuin aikasemmin kun r	Interview3 page15	etätyö, ennen ei suositu
C6	We need to focus on having satisfied employees because in our business we see	Interview4 page18	uuden työntekijän sisää
C6	the labor unions are they loosing their power...but they also someway destroy th	Interview4 page19	liitot
C6	Suoraan kun meillä on tässä talossa semmonen typerä politiikka että kaikki on j	Interview5 page25	johtaminen

S1a	meidän rooli ja meidän tyylisten yritysten rooli skaalaavan ja tuotantotehokaan	Interview1 page 3	tuotanto lähemmäs
S1a	tuodaan valmistusta lähemmäksi Eurooppaa elikkä pyritään pääsemään näistä	Interview3 page 13	aasiasta eurooppaan
S1a	me ollaan ratkaistu se niin että ollaan pyritty tuomaan siirtämään valmistusta a	Interview1 page 4	aasiasta eurooppaan
S1a	kuluneen viimisen kymmenen viiden vuoden aikana erityisesti logistisista syistä	Interview2 page 7	aasiasta eurooppaan
S1b	2000 luvun puolenvälin paikkeilla päätöksen siitä että lopetetaan se oma tuotan	Interview2 page 7	oma tuotanto pois
S1c	näitä ratkasuja kauempaa aina intiaasta, kiinasta alkaen jotta saatiin se koneen k	Interview2 page 7	tuotanto kauemmas
S1d	Tietysti niinku kuljetuksia optimoimalla ja että saadaan tavarat oikeaan aikaan t	Interview3 page12	logistiikan optimointi
S1e	we changed from our normal light inside the factory into led lights because that v	Interview4 page	energiaratkaisut
S1f	Et ei siinä mitään järkee oo, mutta tää on sitten sitä talouspolitiikkaa tanan sisällä	Interview5 page23	taloudellinen turva
S1g	tällä hetkellä se että meillä on niin järjettömät kuljetuskustannukset kiinasta, on	Interview5 page23	pandemia
S2a	nyt kun me käytetään valmistusverkostoja...jolloin se hyötysuhde siinä tekemis	Interview2 page 8	verkostomallin hyöty
S3a	ratkasu niihin on ollut siirtää tuotantoa tänne siltä osin kun se on mahdollista	Interview1 page 4	aasiasta eurooppaan
S3a	meidän toimintamallissa me tiedetään että me pystytään se tavalla tai toisella t	Interview2 page 9	pandemia
S4a	diilerithän on sitten lokaaleja...että me ei suomesta käsin hoideta niitä, niinku ni	Interview2 page 9	koneiden huolto
S4b	we sit along the road 3 which is kind of the development area in Finland ... in tha	Interview4 page19	kehittyvä alue
S5a	edellinen logistiikkakumppani joka meillä oli erityisesti viennissä niin he ei halun	Interview3 page15	järjestelmät
S6a	järjestämällä yhteistoimintaa ja operatiivisen työn ulkopuoleista toimintaa ja tav	Interview1 page 5	yhdessäolo
S6a	sitten on tietysti nämä virkistymisasiat erikseen lähetään sulkapalloa pelaamaa	Interview2 page 11	yhdessäolo
S6a	extra activities what we do. Some pikkujouluet and some other things	Interview4 page18	yhdessäolo
S6a	varsinki kaikki illanvietot, niin uskon että ainakin itselleni niistä on iloa. Mutta on	Interview5 page24	yhdessäolo
S6b	yritytään varmistaa, että kaikilla on hyvät työolosuhteet ja työkalut mitä tarvits	Interview1 page 5	työvälineet
S6b	Tanalla tiettyjen perusprosessien tekeminen tietysti näitä tietojenkäsittelyväline	Interview2 page 10	ohjelmistot
S6c	, pandemian vauhdittamana mutta muutenkin tapahtumassa työnteon ja toimis	Interview1 page 6	etätyö
S6c	meidän avokonttorimaailmassa, niin henkilökohtaisesti ite ajattelen että työteh	Interview3 page15	etätyö
S6d	monissakin eri tehtävissä voidaan käyttää sitte ulkopuolista ulkoistettua palvelu	Interview2 page 10	ulkoistaminen
S6e	prosessia viilataan ja korjataan ja nopeutetaan ja siellähän sitten voi olla että me	Interview2 page 10	prosessin mittaus
S6e	tuotantomenetelmien kehittäminen ja sitä kautta työn tehostaminen on varmas	Interview3 page15	prosessin kehitys
S6f	henkilöstön hyvinvointiin liittyenhän on sitten nämä mittaukset tyytyväisyyteen	Interview2 page 10	hyvinvoinnin mittaus
S6g	palveluväylä jolla sitten poikki tämän koko tekemisen pyritään jakamaan sitä ti	Interview2 page 11	tiedon jakaminen
S6g	istutaan aika paljon yhdessä erilaisissa pikkupalaverissa jotka ei oo pelkästään	Interview2 page 11	tiedon jakaminen
S6g	giving out information as much as we can to keep the kind of tell our employees	Interview4 page18	tiedon jakaminen