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Corporate Sustainability and Postgrowth in the Light of
Predominant Economic Discourse

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Abstract (German)

Diese Arbeit untersucht kritisch die Nachhaltigkeit von Unternehmen im Rahmen der vorherrschenden wirtschaftlichen Diskurse, analysiert, wie wachstumsorientierte Paradigmen die Unternehmenspraxis prägen, und untersucht Postwachstum als praktikable Alternative. Das Konzept des ewigen Wachstums ist tief in den theoretischen Grundlagen der zeitgenössischen makroökonomischen Politik und der Wirtschaftstätigkeit verankert. Durch die kritische Untersuchung methodischer Annahmen, Ziele und Implikationen wird deutlich, dass die vorherrschenden Wachstumsmodelle zunehmend unvereinbar mit den planetarischen Grenzen und dem gesellschaftlichen Wohlergehen sind. Umweltprobleme wie Klimawandel, Ressourcenverknappung und Verlust der biologischen Vielfalt stehen in direktem Zusammenhang mit der wirtschaftlichen Expansion. Während das politisch-ökonomische Paradigma traditionell die schädlichen Dynamiken des Kapitalismus kritisiert, ist in den letzten Jahrzehnten die Kritik an traditionellen, wachstumsorientierten Modellen lauter geworden, da die Wirtschaftspolitik keine glaubwürdigen Lösungen für moderne Probleme bietet. Kapitel 1 schafft eine kritische Grundlage für die Analyse aktueller Wirtschaftssysteme und unterstreicht die Bedeutung der Erforschung nachhaltiger, gerechter und ökologisch tragfähiger Alternativen. Kapitel 2 untersucht Formen des Wohlstands und des gesellschaftlichen Wohlergehens und zeigt, wie eine übermäßige Fokussierung auf das BIP als einzigen wirtschaftlichen Parameter nicht quantifizierbare Aspekte des Wohlstands untergräbt und gleichzeitig die Ungleichheit verstärkt. Um einen bedeutenden Wandel zu erreichen, ist ein Paradigmenwechsel hin zu ökologischer Nachhaltigkeit und eine Umstrukturierung der Wirtschaft erforderlich. In den letzten zwei Jahrzehnten haben Wissenschaftler aus verschiedenen Bereichen Veröffentlichungen herausgebracht und sich dafür eingesetzt, über die Unveränderlichkeit des Wachstums als Hauptmaßstab für wirtschaftlichen Wohlstand hinauszuschauen. Das Ergebnis war die Entstehung des Postwachstumsparadigmas, das eine eigene, transdisziplinäre Perspektive auf nachhaltige, gerechte und ganzheitliche Ansätze in der Wirtschaft bietet. Spezifikationen wie die Degrowth-Theorie fördern die Neutralität gegenüber dem Wirtschaftswachstum und betonen die Notwendigkeit, wirtschaftliche Ziele neu auszurichten und alternative Indikatoren für Wohlstand zu entwickeln. Kapitel 3 analysiert dieses neue Paradigma und zeigt auf, wie eine Verlagerung hin zu einer starken Nachhaltigkeit eine widerstandsfähigere Gesellschaft schaffen könnte, die innerhalb der planetarischen Grenzen agiert. Die Ergebnisse legen nahe, dass die Gesellschaft traditionelle Wirtschaftsmodelle überdenken und einen transformativen Weg mit methodischer Offenheit einschlagen muss, anstatt sich auf einen eindimensionalen Maßstab für Wohlstand zu

konzentrieren. Das Ergebnis muss eine Steigerung der ökologischen Integrität, der sozialen Gerechtigkeit und eine Neuausrichtung der wirtschaftspolitischen Ziele sein. Der Übergang zu einem radikal anderen Wirtschaftssystem ist jedoch mit Schwierigkeiten und Einschränkungen verbunden. Er würde erhebliche kulturelle, institutionelle und politische Veränderungen, den Abbau von Machtstrukturen und große demokratische Mehrheiten erfordern. Kapitel 4 empfiehlt praktische Schritte zur Neudefinition gesellschaftlicher Erfolgskennzahlen und zur Umsetzung verbindlicher Umweltbudgets. Es betont auch die Bedeutung der Förderung gemeindebasierter wirtschaftlicher Aktivitäten und lokaler Initiativen. Insgesamt erscheint eine Umstellung auf eine auf Postwachstum ausgerichtete Politik als nicht praktikabel. Dennoch bietet das Postwachstumsparadigma eine vielversprechende Richtung für die zukünftige Forschung zur Angleichung wirtschaftlicher Aktivitäten an ökologische Grenzen und gesellschaftliche Bedürfnisse.

Abstract (English)

This thesis critically examines corporate sustainability within the framework of prevailing economic discourses, analyzing how growth-oriented paradigms shape corporate practices and exploring Postgrowth as a viable alternative. The concept of perpetual growth is engrained into the very theoretical foundation of contemporary macroeconomic policies and business activity. By critically examining methodological assumptions, goals, and implications, it becomes evident that prevailing growth-models are increasingly incompatible with planetary boundaries and societal well-being. Environmental issues such as climate change, resource depletion, and loss of biodiversity are directly linked to economic expansion. While the Political economic paradigm has a tradition of criticizing detrimental dynamics under capitalism, in recent decades criticism of traditional, growth-oriented models has grown louder as economic policies fall short of providing credible solutions to modern problems. Chapter 1 establishes a critical foundation for analysing current economic systems and underscores the importance of exploring sustainable, just, and ecologically viable alternatives. Chapter 2 explores forms of welfare and societal well-being and shows how hyper focusing on GDP as a singular economic parameter erodes non-quantifiable aspects of prosperity while augmenting inequality. Achieving meaningful change requires a paradigm shift toward ecological sustainability and a restructuring of the economy. For the past two decades, scientists from diverse backgrounds have published and advocated for looking beyond the immutability of growth as the main metric for economic prosperity. The result

was the emergence of the Postgrowth paradigm which offers its own, transdisciplinary perspective on sustainable, equitable, and holistic approaches to economics. Specifications like Degrowth-theory promote neutrality towards economic growth and emphasize the need to realign economic goals and develop alternative indicators of prosperity. Chapter 3 analyses this new paradigm and presents how a shift towards strong sustainability could create a more resilient society operating within planetary boundaries. The results imply that society needs to rethink traditional economic models and to pursue a transformative pathway with methodological openness instead of focussing on a one-dimensional metric for prosperity. The result must be an increase in ecological integrity, social equity, and a reorientation of economic policy goals. However, transitioning towards a radically different economic system comes with difficulties and limitations. It would require substantial cultural, institutional, and policy changes, the deconstruction of power structures, and large democratic majorities. Chapter 4 recommends practical steps for redefining societal success metrics and implementing binding environmental budgets. It also stresses the importance of fostering community-based economic activity and local initiatives. All in all, a shift towards Postgrowth-aligned policies seems impractical. Nevertheless, the Postgrowth paradigm offers a promising direction for future research on aligning economic activities with ecological limits and societal needs.

Introduction

In the past few decades, environmental damage and climate change have developed from a niche matter for activists to one of the main concerns for the business world and the very basis of human existence. However, global attention only shifted slowly: After early warning signs in the 1970s, the first turning point was the year 1988, the hottest year on record at that time, coming with widespread media attention. In the same year, the Intergovernmental Panel on Climate Change was established to provide scientific assessments, thereby establishing a scientific foundation. The 1990s were characterized by the signing of the UNFCCC, a UN framework on Climate Change; and Angela Merkel chairing the first UN Climate Change Conference (COP1) in Berlin in her role as German Federal Environment Minister in 1995. This shows that the topic has been on the global agenda for more than 30 years. At least since then, corporate sustainability has emerged as a concept to align business activity and economic value creation with the conservation of nature and natural resources. For over a decade, governments have pledged climate goals, and whole economies have started transitioning. Scientists all but unanimously

agree on the prospect of erosion of our very basis of existence, should we not get climate change under control. However, it remains unclear why every single country on earth fails to meet its climate goals, despite the size of the debate and the clarity of the problem. Business Administration predominantly teaches that a market needs regulate itself, and that consumers control it through their demand, maximizing societal welfare. corporate and product sustainability has indeed become a selling point as well as *the* mainstream corporate concern (ESG, CSR, net-zero pledges, SDGs); and consumer demand clearly favours more sustainability. Nevertheless, humanity is nowhere close to meeting the necessary climate and preservation goals. This raises the question of whether contemporary capitalist economic structures are capable of preventing or adequately addressing the escalating climate crisis. Indeed, many scholars identify perpetual economic growth, one of its basic principles, as a main driver for ecological damage. The Financial Crisis and post-covid times are recent, non-ecological examples of the shortcomings of the market to regulate itself through market mechanisms alone. In December 2025, German economist Maurice Höfgen postulated that the purchasing power of Germans still lags behind that of 2019. At the same time, inequality is rising. At present, the market appears to struggle to uphold its promise of increasing welfare directly, but also indirectly through limiting future harm to our livelihood. But what exactly is wrong with the way we do business, and might it be a conceptual problem? Against this background, the persistent gap between sustainability goals and actual outcomes raises the question whether the limitations of contemporary approaches may not lie in a lack of awareness, scientific insights, or capabilities, but rather in the economic framework within which sustainability is pursued. Corporate sustainability, as currently conceptualized and practiced, is embedded in an economic system of perpetual growth which treats expansion of production and consumption as a necessary instrument for change. There is increasing uncertainty among economists and cross-disciplinary scientists on whether this system based on growth is suited to tackle modern problems. Nevertheless, predominant economic discourse seems to follow through without critically questioning its axioms. While sustainability measures are intended to mitigate environmental harm, they are not designed to question the underlying objective of economic growth itself. However, there is an emerging field of heterodox economics challenging this foundational assumption by critically examining the compatibility of perpetual growth with ecological limits and long-term societal well-being. This field is most often summarized under the term „*Postgrowth*“. From a Postgrowth perspective, the failure of corporate sustainability to deliver absolute reductions in environmental impact appears not as an implementation problem, but as a structural tension between growth imperatives and ecological constraints.

This thesis aims to critically examine corporate sustainability in the light of predominant economic discourse, and to introduce and analyze the Postgrowth perspective. Rather than assessing individual sustainability measures and corporate performance at the micro level, the focus lies on the underlying axioms that shape how sustainability and welfare are conceptualized within contemporary business activity and economic thought. By returning to the theoretical foundations of economic systems, the thesis examines whether prevailing economic discourse is able to address ecological limits and long-term societal well-being, and to what extent perpetual growth can be reconciled with planetary boundaries. The thesis proceeds by developing an understanding of the origins of the established orthodox and heterodox economic paradigms. It then examines how sustainability and welfare are framed within dominant economic and corporate narratives, before describing and analyzing Postgrowth economics within the same framework. Finally, it discusses which changes in economic thinking may be necessary.

Research Objectives and Research Questions

This thesis functions as a summary and an aggregation of economic perspectives and ideas, sorting them into their scientific, philosophical and historical origins. They relate to the explanation of common contemporary side effects of business activity. This should allow for an easier categorization and help readers gain an educated overview over economic discussions and perspectives. There have been many scholarly pieces about the individual predominant economic paradigms, especially throughout the 20th century. Famous names include authors like Joseph Schumpeter (1883 – 1950), Mark Blaug (1927 – 2011), Joan Robinson (1903 – 1983) and Ernest Mandel (1923 – 1995). There are also overviews of theories within the paradigms, such as the Dependency theory within the Political economic paradigm or Butterwegge, Lösch & Ptak's (2017) comprehensive description of Neoliberalism within the Neoclassical paradigm. However, systematic overviews or summaries are more challenging to find. The only comprehensive treatises I found during my research were the works of Wolff & Resnick (2012) as well as Jäger & Springler (2015). Societal welfare specifically has been the topic of numerous pieces of literature and economic research, as will become clear in the first chapter of this work. It was often closely linked to the question of the goal of economic activity. Especially in recent years, there have been numerous publications in the field of so-called "happiness economy", with its strong focus on economic and non-economic well-being and ecological sustainability. (Agrawal et al., 2024)

However, as far as my research provided, there has been no systematic overview of the extensive concept of (economic and non-economic) welfare and its indicators in the theoretical and empirical framework of the economic paradigms except for Jäger & Springler (2015). Furthermore, since the emergence of literature examining the ideas of *Décroissance* (i. e. an economic system abolishing growth or even promoting negative growth), there has been a vast and growing amount of literature surrounding the emerging so-called “Postgrowth paradigm”. However, Postgrowth literature – while touching a vast range of interdisciplinary aspects of life, has remained somewhat abstract in conceptualization. There are few authors like Kallis (2018), who have tried to give this emerging field of study some conceptual structure. Postgrowth research has also remained largely theoretical. There are a small number of existing studies that have reviewed macroeconomic or microeconomic modelling in relation to sustainability topics. Notably, among others, Tim Jackson (*1957) has published several papers with such attempts, and Hardt & O’Neill (2017) have reviewed more, with most of them published in the last 15 years. Many of these authors recognize the difficulties with Postgrowth modelling, and there are few actual attempts at describing a holistic description of the business world under a Postgrowth economic system. Most descriptions entail certain aspects but do not paint a holistic picture. This thesis is an attempt at going back to the origins of economic thought and asking fundamental questions about the benefit of economic activity for society. It is a trivial though potentially critical question that is rarely asked, as many aspects of the economy are perceived as the natural state. After describing the origins and the current state of economic theory and empiricism, I would like to discuss one of such aspects: Namely, in what ways economic activity benefits us as humans, if it follows natural laws, or if we can manipulate it to suit our needs. And if we can, what would we want it to achieve? Which benefits are we hoping for, and which would be the best way to measure it? Finally, I would like to describe the Postgrowth paradigm using the same schematics as for the three traditional paradigms. That includes giving the Postgrowth paradigm a sound theoretical analysis that takes historical and economic context into consideration. Then, I will apply the understanding I have gained over the course of my studies to analyse for their methodology, central ideas and implications. In my opinion, the current economic system is not fit to battle contemporary challenges. And I think there are few (if any) credible alternatives posted by economic academia and politics alike. It seems like universities do not provide the tools to students of Economics and Business Administration to think about innovative reforms to transform the status quo away from its current form – the form that causes precisely the externalities which form the basis of our main challenges. Contemporary economic discourse seems one-dimensional and – for now – to not dare provide practical implications and considerations deducted from Postgrowth theory. Part of my research interest lies in the question

if Postgrowth is a better theoretical foundation for strengthening environmental regulations and corporate sustainability. Would a stagnating or even shrinking of the economy be feasible in an ecologically, socially and ethically just manner, and without causing crises? I hope to contribute to current, scientific economic discourse by deducting concrete formulations for the business world under a different accumulation regime than capitalism.

To summarize, the research objectives will be roughly the following:

- To systematically describe and compare the foundational assumptions, goals, and implications of Neoclassical, Keynesian, and Postgrowth economic paradigms.
- To explore, define, and critically analyse concepts of societal welfare, proposing alternative metrics and values that go beyond GDP.
- To critically examine the principles of the emerging Postgrowth paradigm and Degrowth more specifically, evaluating their theoretical coherence and potential alignment with sustainability goals.
- To identify and discuss the primary obstacles — cultural, institutional, political, and practical — that hinder the implementation of sustainable policies.
- To develop an inductive understanding of how societal, legal, and economic structures may transition toward Postgrowth principles, highlighting potential pathways and resistances.

Research Questions.

Q1:	How do different economic paradigms conceptualize societal welfare and environmental sustainability, and what limitations arise from growth-oriented frameworks?
q1.1:	What role do environmental problems play in contemporary economic discourse, and how are they framed within dominant economic paradigms?
q1.2:	How do Neoclassic, Keynesian, and Political economic traditions differ in their conceptualizations of societal welfare and their treatment of environmental sustainability?

q1.3:	What are the core definitions and dimensions of societal welfare, and how can they be integrated into economic frameworks beyond GDP?
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Q2:	To what extent does the Postgrowth paradigm offer viable alternatives for reorienting economic systems toward well-being within ecological limits?
q2.1:	In what ways does the Postgrowth paradigm provide an integrative framework for reconciling economic activity, societal well-being, and ecological boundaries?
q2.2:	How do the Postgrowth paradigm and its Degrowth theory challenge traditional growth-oriented economic models, and what theoretical justifications underpin its critique?
q2.3:	What challenges constrain the implementation of Degrowth policies at micro and macro levels?

With this in mind, the remainder of this article is organised as follows:

Theoretical Background

This first part of this work follows a semi-systematic literature review approach as per Snyder (2019). According to the author, the semi-systematic approach is suited for mapping theoretical frameworks, which fits the purpose of this work. A semi-systematic literature review is a research method containing a narrative approach for analysing topics that have been studied by researchers from various disciplines using different concepts, rendering the field too vast for a full systematic review process. All topics analysed in this work, including established economic theory, the Postgrowth economic paradigm, climate change and corporate environmental regulations have been identified as such transdisciplinary research fields which extend beyond positivistic economics (s. a. Schmid, 2019). Apart from the size of the academic field, the topic initially also involves theoretical considerations and abstractions at a high level, which are concretised over the further course of this work. Reviewing every single article on either topic is therefore neither feasible nor sensible. This review aims to identify and capture all potentially relevant research traditions that have an impact on the topic under investigation and synthesise the results using meta-narratives. A content review was conducted to identify, analyse and report patterns in the form of themes within texts and ideas. That method was deemed appropriate to

synthesize the state of knowledge and create an adequate theoretical framework. As it is common practice, the sources used in the reviewed literature were also investigated to better understand and report on the discussed concepts. This led to those sources ending up directly impacting this work themselves. Naturally, only peer reviewed academic journals and books were used in the process of theory creation and reference. In a few circumstances, newspaper articles were used to quote researchers renowned in their field, or to underline constructed concepts with tangible real world-examples.

Building upon this analytical foundation, the subsequent section will employ a qualitative interpretative approach to synthesize the insights from the literature review. This involves systematically categorizing the identified themes, patterns, and debates within the various research traditions and discourses uncovered during the review process. The aim is to develop a coherent narrative that highlights consistencies, divergences, and potential gaps within the current knowledge landscape concerning environmental sustainability, economic paradigms, and societal welfare measurement. Furthermore, this synthesis will incorporate a comparative analysis, contrasting normative claims within the paradigms with empirical findings and policy proposals. This step is crucial to evaluate the practical implications and feasibility of transitioning toward a Postgrowth-oriented economy — particularly in relation to macroeconomic stability, social equity, and environmental integrity. To enhance the robustness of the qualitative analysis, triangulation will be applied through cross-referencing diverse sources, including peer-reviewed literature, policy documents, and, where relevant, authoritative reports from international organizations. This multi-source approach aims to mitigate bias and ensure a comprehensive understanding of the multidimensional research field. Finally, the interpretative synthesis will serve as the basis for deriving policy implications and strategic recommendations. These insights will then be contextualized within the broader socio-economic landscape, acknowledging both the theoretical underpinnings and practical constraints of implementing degrowth or Postgrowth principles at different levels of governance and within corporate strategies.

Overview of Postgrowth Terminology

Agrowth. Agrowth is an economic and political concept that suggests an attitude of indifference toward economic growth. Supporting authors claim it could be a third option between degrowth and pro-growth neither aiming for it nor against it. (Tomassini & Cavagnaro, 2022)

Latouche (2004) compares “a-growthism” (ibid.) to atheism in the way that it rejects the current economic orthodoxy as it resembled a faith system.

Buen Vivir. According to Chassagne (2021), Buen Vivir is an idea with conceptually loose boundaries. It is characterized by incompatible and contested ideas of how to put it into practice, most of which are legitimate, nevertheless. Although, the concept can be broken down to a few core principles. Three different streams can be identified: an indigenous, a socialist-political, and a post-developmental stream. Equally, three reoccurring core elements can be identified as identity, equity, and sustainability. While scholarly interpretations of the different interpretations exist, the author highlights a lack of synthesis. An overarching theme in Buen Vivir is living in harmony with nature, a reciprocity with society to ensure a “good life”¹ in all forms. Just as in ESG-conceptualization there are three pillars, the various principles of Buen Vivir can roughly be categorized into the three pillars “social”, “spiritual” and “material”.

Circular Economy. The idea of circularity is an ancient imagery that has been largely used to conceptualize life on Earth, biological processes, and the processing of material. Circular economy is understood as applying the circularity mould to an oikonomia, the ancient Greek word for “household” and the root of the word “economy”. In this context, our household is the planet with all its inhabitants. (Tomassini & Cavagnaro, 2022) In a narrow sense, a circular economy turns goods at the end of their life cycle into resources for others. No waste would be produced, as industrial loops are closed and everything is either utilized or reused. The idea is that it is more efficient to recycle and refurbish than to create from scratch. (Stahel, 2016) Nevertheless, the idea of a circular economy is more than an economy with a circular design and the regeneration of materials and products. Circular economy means rethinking economy and drive business in an ethical sense beyond merely economic goals. An example could be the remodelling of tourism: Novel spaces created by various stakeholders with multiple functions could pursue the well-being of the local community as well as the global “household”. (Tomassini & Cavagnaro, 2022)

Coopetition. Coopetition is a strategic approach where competing organizations collaborate to achieve mutual benefits while still maintaining some level of rivalry. It involves open and ongoing knowledge sharing, joint problem-solving, and resource pooling between competitors to enhance efficiency, innovation, and sustainability. This relationship balances cooperation and competition, allowing firms to create shared value through joint efforts, such

¹ “Live well” or “Good life” would be the closest English translation for the Spanish “Buen Vivir”.

as developing new technologies or addressing common environmental challenges, while still competing in the marketplace for private benefits.

Decoupling. Decoupling is defined as reducing the rate of use of an input per unit of economic activity, as measured in GDP. The most common archetypes are resource, energy and emission decoupling. A general distinction exists between relative and absolute decoupling. Relative decoupling describes resource use growing more slowly than GDP. Absolute decoupling is achieved when the economy grows but resource use remains stable or decreases. (Lorek, 2015) Advocates of Green growth claim that significant increases in factor productivity can compensate for increases in resource consumption due to economic growth. And indeed, several countries have reported a reduction in production-based emissions (PBE) in the past years. However, the PBE was often the result of outsourcing emissions to other countries. Globally, emissions may even have increased. (Hubacek, Chen & Feng, 2021) The consumption of materials and carbon takes place in countries from which they increasingly import material goods. Most countries, however, show relative decoupling. Global material productivity increased by 37 percent between 1980 and 2008. GDP grew 147 percent in the same time horizon. Material consumption “only” grew by 79 percent. Strategies to achieve absolute decoupling include the development of new technologies, material innovation, productivity increases in construction, increasing durability and recycling of goods, and the propagation of resource-poorer lifestyles. Nevertheless, slight adjustments within the system are not promising to be enough to foster the necessary reductions to stay within planetary boundaries. (Lorek, 2015)

Degrowth. The idea of Degrowth was first developed in the early 2000s in France, where activists coined the term “décroissance” (French for degrowth). Degrowth in this context is a downscaling of throughput, with the accompanying effect of securing prosperous living standards for the majority of the population. It is too abstract and transdisciplinary to call it a system itself; it can be better understood as a schematic and critique of the ecological consequences of economic growth. (Kallis et al., 2018; Kallis, 2018) Unlike Tomassini & Cavnaro (2022) and Van den Bergh (2017), Kallis (2018) does not define Degrowth as an imperative for negative growth. The author sees the goal of Degrowth not in forcibly decreasing GDP, as this would have similar effects as a recession, or even a depression. In the author’s view, Degrowth refers to a trajectory where the throughput of an economy shrinks while societal welfare increases. For Latouche (2010, as cited in Kallis, 2011), Degrowth means abandoning a goal of abundant growth and reforming society. In his works, Latouche emphasizes that Degrowth is not a fixed theory equivalent to the growth theories of

economics. Degrowth is a term coined by radical critics of growth theory to free economic actors from the economic obstinacy that prevents from proposing alternative solutions for modern problems and developments. (Latouche 2004) As it presents an umbrella term without a universally accepted definition, its exact meaning is constantly evolving. (Hardt & O'Neill, 2017) Degrowth is frequently used interchangeably with Postgrowth. However, in the context of this work, it is treated as a theory within the Postgrowth paradigm. Degrowth has been most often interpreted as a voluntary societal transition toward higher welfare, lower environmental destruction and more emancipatory democracy. (Lauer, Capellán-Pérez & Wergles, 2025)

Ecological economics. This discipline brings together economists, ecologists and social scientists; essentially researchers from various fields dissatisfied with economic policy makers treat environmental issues. Great focus lies on the conflict between growth and environmental protection. (Kallis, 2018) There is widespread consensus among ecological economists that human activity will in the long run have to decrease to a sustainable level, coverable by the rate of flow of renewable energies. The main reasoning for this perspective is founded on the exhaustible character of mineral stocks, accumulation of CO₂ in the atmosphere, rising sea levels, pollution, and diminishing biodiversity. (Georgescu-Roegen, 1975; Kallis, 2018)

Environmental justice. Environmental justice (EJ) is an intersectional, analytical approach. (Bellina, 2022) Intersectionality is a concept that describes how different aspects of a person's social and political identity (e. g. race, gender, class, sexuality, ability) overlap and interact to shape their experiences, especially regarding discrimination and privilege. (Bora & Kretschmann, 2024) EJ is about the protection especially of marginalized groups and their living space from uncontrolled growth, shareholder investments, disinvestment and speculation, pollution, land grabbing, decay and abandonment. (D'Alisa, 2015) An important characteristic is the connection of human rights and environmental questions. The elimination of the divide between environmental and social issues creates a new interpretative framework for socio-ecological justice: EJ shows that human-nature relations are not monolithic, but rather that they are "human-human-nature relations", combining social and ecological aspects. (Bellina, 2022) EJ especially recognizes a racial and gender dimension to environmental marginalization. BPOC (Black people / People Of Colour) are disproportionally exposed to harm from environmental inequalities. One example is green extractivism, which describes environmental destruction in the global south in the process of

extracting resources for the green transformation in the global north. (D'Alisa, 2015; Bellina, 2022)

ESG / Corporate Sustainability. The definition of the BRUNDTLAND Commission from 1987 still characterises the sustainability discourse today. It was the first to formulate the concept of sustainability as „development that meets the needs of the present without compromising the ability of future generations to meet their own needs and choose their own lifestyles” (WCED, 1987). Intra- and intergenerational justice, i.e. justice among and between generations is thus accorded central importance. (Freiberg & Bruckner, 2022) *ESG* stands for Environmental, Social, and Governance. It is a framework used for evaluating how a company or organization manages risks and opportunities related to the three key pillars mentioned in its very title. Environmental encompasses mutual impact of firms and the environment. It considers aspects like carbon emissions, climate change initiatives, pollution, waste management, and resource use. The Social pillar regards how a company manages relationships with employees, suppliers, customers, and the communities, as well as their interests where it operates. Governance includes issues like board diversity, executive pay, audits, internal controls, and shareholder rights, namely governance aspects of a firm. (Edmans, 2022)

Exploitation. One person or group exploits another if it benefits at its expense. There are two forms of exploitation in this context: “Expropriation” is the acquisition of another’s work, land or resources by another, as it happened during slavery or colonial theft. “Appropriation” is the extraction of resources or unpaid work. This type of exploitation famously happens in the case of extraction of fossil fuels, ecosystem services, or unpaid care work. (Khallis, 2018)

Green growth. Even though there is no one universal definition of Green growth, most publications follow the general idea an economy growing in an environmentally sustainable way. It is about increasing wealth and employment while making sure that natural resources like clean air, water, soil, and oceans are protected for future generations. The idea is to decouple economic growth from environmental externalities, in order to have more industries, products, and services, while reducing pollution and the overuse of resources.

Postgrowth. In the context of this work, Postgrowth is defined as a transdisciplinary economic paradigm which moves beyond the absolute necessity of GDP growth as the main indicator of economic success. Research in this paradigm focusses on well-being, sustainability, and equity over economic expansion; Accepts that in some areas, growth may continue, but it

must be regenerative and just; Encourage new ways of measuring success (like happiness, health, or environmental quality); and be open to alternative economic models.

Steady state-economy. David Ricardo famously predicted stagnation tendencies under capitalism in the early 19th century. He based the idea on his rent theory of diminishing profits due to rising rent costs and population growth. As profits facilitate reinvestments and therefore growth, the rising rent costs indirectly impede economic progress. (Jäger & Springler, 2015) Centuries later, economists have picked up on a stagnating economy in the context of planetary boundaries. However, while Ricardo warned of such tendencies, Daly (1992) argued that over the long run, a stationary state is the only sustainable form of economy. The author claims that an ever-growing economy will have rising throughput of energy and materials, which will destroy the environment and our life basis. Additionally, an ever-growing population requires increasing amounts of sustenance and production. Growth must stop before the point of marginal costs exceeding marginal benefits, beyond which economic activity becomes uneconomical.² This is true without the necessity of precisely quantifying costs and benefits. A steady state economy implies a constant stock of human-made products produced with constant inputs. This requires a steady flow of maintenance throughput to counteract the forces of entropy and decay. Prerequisites include a) renewable resource extraction and waste emissions which do not exceed planetary capacities, b) consumption of fossil fuels at a lower rate than the development of renewable substitutes, and c) stable human populations. The last point is especially controversial, as it is not clear how exactly population control would be designed. Although GDP is a good indicator for the throughput of an economy, achieving a steady state throughput is seen as less controversial and more important than ending GDP growth. (ibid.; Farley, 2015; Kallis, 2018)

Throughput. Throughput is the extraction of raw materials and their return to nature in the form of waste (Farley, 2015). It is an essential indicator in steady state-economics and Degrowth theory. The exact relationship between material throughput and GDP growth remains disputed. (Mason & Büchs, 2023)

² Nowadays, many ecological and Degrowth economists are of the opinion that we are past that point, and the marginal costs of growth have already exceeded marginal benefits. (Kallis, 2018) And even the IMF published a paper arguing that our economic growth has become unsustainable (Van den Bergh, 2017)

1. The status Quo of Predominant Economic Discourse

In order to critically examine corporate sustainability, it is first necessary to examine contemporary economic discourse. Economic thought is not uniform, but organized around different conceptualizations, or world views, each characterized by specific assumptions, methodologies, and normative implications. Chapter 1 establishes the theoretical foundation for the subsequent analysis by looking at the history and theoretical foundations of economic thinking. Building on this foundation, the chapter then explores how these paradigms interpret and address key environmental challenges, thereby illustrating how economic discourse conditions the understanding of ecological problems and their potential solutions.

1.1 Economic paradigms – Theoretical discussion

Differing world views are also based on different scientific-philosophical foundations. Such differences can result in differing methodological implications (i. e. effects on the procedure for gaining scientific knowledge), specifications and conclusions. Such an approach with all their continuations and implications is called a *paradigm*. Paradigms can be considered different perspectives on reality, or “lenses”, which can be understood as different forms of abstraction for specific problems, processes and relations. (Jäger & Springler, 2015) An understanding *of* or working *with* any piece of information or concept without experiencing through such a lens is not possible. (McKinzie, 1994) The specifications of such a paradigm are expressed in *theories*³ which formulate and try to answer tangible questions within their paradigm. (Lauth & Sareiter, 2005) An interpretative and organisational framework for the perception and understanding of economic reality is indispensable. It is therefore even more important to be aware of the perspective nature of one's own view of economics. This is the only way to systematically and critically analyse economic phenomena and economic policy issues. This section analyses three major theoretical paradigms that are considered particularly relevant and still debated in economic discourse: Neoclassical, Keynesian, and Political Economy. The selection of the Neoclassical, Keynesian, and Political economic paradigms is based on their historical significance, contemporary

³ The term “theory” will be used twofold in this work and must be understood within the specific context. As mentioned in this context, a theory can be understood as a specification within a given paradigm. The other meaning of the term in this work is a systematic and rational form of abstract thinking about a phenomenon, or the conclusions derived from such thinking.

Kommentiert [A1]: Consider adding a brief real-world example (e.g., a policy debate) to illustrate how these paradigms shape economic discourse today, beyond theoretical abstraction.

I have another concern about choosing these three approaches. I am not an expert in theoretical Economics, but I am aware that there are other approaches, such as Behavioral Economics, that might be relevant to your topic. Can you argue why these three? I know that you mentioned later in the text about BE, but any further argument will be good.

Kommentiert [A2R1]: Do you want me to address this additionally the improvement of the descriptions at the end of page 3 (next comment) ? Or will it be fine there?

relevance, and fundamental differences in their approach to economic policy. These three paradigms represent the dominant frameworks shaping economic discourse and policymaking today while also capturing the broader ideological debates about the role of markets, the state, and societal structures in shaping economic outcomes. The Neoclassical paradigm is the mainstream economic framework that underpins much of modern economic theory and policy. It is built on the assumptions of rational agents, market efficiency, and equilibrium-driven resource allocation. In more concrete terms, Neoclassical theory is what most free market-oriented arguments are based on. The Keynesian paradigm emerged as a response to the limitations of Neoclassical theory, particularly its inability to explain and resolve economic crises (e.g., the Great Depression and several financial crashes). It shifts the focus to aggregate demand, market failures, and the necessity of government intervention. The Keynesian paradigm is what shaped economic policies in the decades after World War II until the emergence of Neoliberal economics in the 1980s, which marked a turn back towards Neoclassical theory. Keynesian economic theory is the basis for many demand-oriented policies and systems in the Western world, like the Social Market Economy which held in high regards to this day in countries like Germany. The Political Economy paradigm challenges the assumptions of both Neoclassical and Keynesian economics by emphasizing that economics is not a neutral or natural science, but a social science deeply embedded in political, historical, and social structures. Although other economic approaches exist (e.g., Behavioural Economics), they do not constitute independent paradigms but rather fit within existing ones. Other examples for such theories within the given paradigms are General Equilibrium Theory, Theory of the Firm, (Neoclassics), Modern Monetary theory (Keynesianism), Labour theory of Value, and Dependency theory. (Jäger & Springler, 2015)

The paradigms will first be put into the historical context of their development. In continuation, it will become clear how the three are linked to each other with regards to their socio-historic context with the help of a systematic comparison. Different forms of systematic assessment of economic phenomena are to be understood historically and analysed against the contemporary economic problems and social interests of their emergence. The clear presentation of different perspectives and the associated implications is the basis for an independent examination of economic issues and therefore represents the central approach in this work. (Jäger & Springler, 2015) According to Lauth & Sareiter (2005), once a paradigm has become established in a certain field of research, it becomes the normal standard of science for many people. The authors describe this as an attempt to draw a clear but rigid picture of the world. Phenomena that do not correspond to this rigid world view are systematically ignored. The

authors describe the phenomenon of a “narrowing of vision”, accompanied by an intolerance towards other world views. Lauth & Sareiter explain this narrowing with “science being inherently conservative”, meaning scientific focus is only placed on problems that fit into one's own world view. Scientists usually try and find solutions within the framework of their own paradigm. However, this rigid focus also enables a maximum degree of precision and depth. That profoundness allows solving highly specialised problems. (ibid.)

Paradigms are abandoned when observable problems and phenomena can no longer be adequately explained with the help of established theories. (ibid.) Abandonment is usually not a linear process. Normally, more than one paradigm is predominant in science at a time, and several approaches are used for different problems. (Jäger & Springler, 2015) On a smaller scale, the scientific discipline of Business Administration provides a good example for this: The Ceteris Paribus principle allows to observe a certain event or phenomenon, analyse it using a specification (in this case: a theory) suited to explain it, and generalize the findings. That way a “puzzle piece” is created that helps understand the world – in that case the economy – as a whole. The existence of Ceteris Paribus demonstrates that differing perspectives are needed to explain different phenomena. In economics, **the Neoclassical paradigm** is a fitting theoretical framework to explain why the German tax reduction on petrol and diesel in the context of the newly emerged war in Ukraine was never going to yield the promised surplus value for consumers. (Brühl, 2022) The Neoclassical paradigm assumes that markets operate efficiently, with rational consumers and producers responding predictably to price signals. According to this theory, a tax reduction on petrol and diesel should lead to lower prices at the pump, allowing consumers to retain more disposable income and thereby increasing overall welfare. This assumption is based on the idea that competition among fuel suppliers would drive them to pass the tax savings directly to consumers. However, the real-world outcome of Germany's tax reduction on petrol and diesel in response to the war in Ukraine did not align with these theoretical expectations. While the government intended for the tax relief to ease the financial burden on consumers, much of the benefit was absorbed by fuel suppliers and distributors rather than being fully transferred to end-users. It has been established that refineries rationally retain part of the reduction as a profit margin. Duso points out that the market structure in Germany, which comprises a limited number of refineries, gives these companies the market power to determine prices. (Duso, 2022) **The Keynesian paradigm** is suitable for demonstrating why natural unemployment exists, what causes it and why market liberalisation does not automatically lead to a reduction. (Jäger & Springler, 2015; Agénor & Aizenman, 1995) The strong focus of Keynesian economics on

Kommentiert [A3]: The German tax reduction example is promising but underdeveloped—perhaps you can expand this example to show how Neoclassical theory predicted outcomes versus reality.

unemployment will be elaborated on at a later point in this work. **The Political economic paradigm** is suitable for analysing why income and wealth are unequally distributed under capitalism (Jäger & Springler, 2015), or why the mere allocation of property rights is not a suitable method for the purpose of nature conservation. (McAfee, 1999) A more profound analysis of scientific methodology will be conducted in the context of subsection b). Most people perceive, work and research within a single spectrum that has the greatest synergies with their view on the world. It is foolish but expected for people to regard their own perspective as the only correct one and to use specific lines of argumentation to secure it. Many representatives of Neoclassics, for instance, present their own conclusions as the logical consequence of a linear theoretical development to devalue other approaches that are outside their favoured economic discipline. In turn, Political Economists claim that Neoclassics systematically ignoring social distribution and power issues and thus tending to legitimise the status quo of economic and social structures. (Jäger & Springler, 2015)

Economic theoretical discussions are by nature extracted and abstracted from reality. Observable phenomena seldomly fit economic textbook theory. Two reasons can be identified: Firstly, economics – regardless of the paradigm – is an empirical field as it observes events and tries to draw conclusions in retrospect. Second, there are too many externalities influencing a current or future event to allow accurate predictions. These influences range from barely noticeable to strong, causing shocks. Therefore, abstract discussions about economic theory happen somewhat separated from societal reality. The development of economic theory production, however, still happens in the context of broader societal processes. (Jäger & Springler, 2015) In order to build a stringent and comprehensive theoretical framework to analyse the Postgrowth paradigm, it is important to consider social and historic context and developments attached to the development of economic theory. The following section will therefore display a summary of the recent history of economic thought as ground for further considerations. Subsequently, the two main methodological schools of thought will be presented, before analysing the three major economic paradigms Neoclassics, Keynesianism and Political economy in more depth. That will form the theoretical basis for the discussion about environmental issues.

a) The History of Economic Thought

According to Blaug (2001) economists' interest in the history of economic thought has declined to a point where it has disappeared from university curricula. During his analysis, Blaug contemplates several possible reasons. He describes the belief among economists that there are more important and more efficient ways to teach economics to students than studying its history. The author opines that many economists believe their community to represent a virtually perfect market of ideas, where knowledge is transmitted so efficiently through books, journals, and presentations, that basically no idea or significant concept is lost. As no thought is ever "lost" but influences following theory production, there is no need to stir in the past, let alone an advantage that could be drawn. (ibid) So, what is the point in looking back? Schumpeter (1954) agrees that rediscovering ideas in old and cast aside texts is uncommon, though not unheard of. Examples for such rediscoveries include Pareto efficiency and transaction costs by Coase. Both concepts were exhumated a long time after their original discovery. However, for Schumpeter, creating vast and accessible databases is only one of the advantages of knowing history. The history of economic thought can also be viewed as the history of economic doctrines and policies. (Blaug, 2001) It is surely no coincidence that the theory of free trade was formulated in the economic powerhouse England at the beginning of the 19th century by David Ricardo. Other, comparatively less industrialized and therefore less competitive economies like Germany or the USA brought forth different economic schools within different economic theories. This illustrates that the development of economic thought is a non-linear process, always to be understood in the context of external influences. This context highlights the relationship of economic theory and economic policy. Knowing it allows to learn of social, philosophical and political contexts and thus can help economists identify solutions to modern social and environmental problems. (Blaug, 2001) Sometimes, contemporary economic discourse can feel like it is stuck in patterns that served well in the past, when the global situation was different. At other times, discussions feel like a repetition of century-old discourses which have been forgotten but could offer valuable insights. One example is the discussion of the housing crisis by authors like Friedrich Engels (Brie, 2021) or Ruf (1930), which read like they could have been written in the 21st century. Societal scientific knowledge (re-)production is as path-dependant as its mode of commodity production. But there lies a certain conceptual depth in analysing concepts and comparing them with others which seem similar. Taking a look at the summary of discoveries, insights and errors in the past can facilitate valuable insights into the present and future. It is important to briefly highlight the history of economic thought in modern history, to prepare the examination of present and future developments like the Postgrowth paradigm (ibid).

The history of modern economics starts in the 16th and 17th centuries with the strengthening role of trade capital for national economies. External trade and its importance for state finances started playing an increasing role in economic theory production. These developments laid the foundation for *Mercantilism*. One of the most famous representatives of mercantilism was the French finance minister Jean Baptist Colbert (1619-1683). He introduced the state budget and kept records of France's income and expenditure. (Jäger & Springler, 2015)

In the early 18th century, Physiocracy arose in France as a riposte to Mercantilism. Its most important representative was the Frenchman François Quesnay (1694-1774). It was an economic school of thought that emphasised the role of productive agriculture and thus the importance of natural resources as the source of prosperity. (Zorn, 1960) Politically, this can be seen as an attempt to support the traditional class of landowners, the nobility. The end of the 18th / beginning of the 19th century marked the time when Classical Political economy gained a foothold and turned against the old feudal order, arguing that capitalist accumulation and markets could be suitable for driving social development. (Jäger & Springler, 2015) It is also the time when Pierre Le Pesant de Boisguilbert broke down the exchange value of commodities into the amount of labour needed to produce them. He determined the “true value” (fr.: “*la juste valeur*”) of production by the share of labour-time distributed among the industrial branches. In his view, free competition was the answer. (Lehmann, 1977) Generally, a central interest of economic research at the time was the search for the root of long-term economic development dynamics. Accumulation of capital was identified as a central driver for social progress. While Adam Smith (1723-1790) expressed optimism about capitalist growth dynamics when writing “*Wealth of Nations*”, David Ricardo (1772-1823) described long-term stagnation tendencies in his “*Principles of Political Economy and Taxation*”, due to the limited supply of usable land and based on his rent theory. For Ricardo, free international trade not impeded by tariffs was at least a temporary remedy for these tendencies. Ricardo also developed the concept of comparative advantage and spoke up against the English “Corn laws”. Classical Political economy played a precursor role in undermining feudal societal structures and represent the call of the aspiring English bourgeoisie for more economic freedom. (Jäger & Springler, 2015)

Kommentiert [A4]: As both are prominent, the discussion of Classical Political Economy (Smith vs. Ricardo) could perhaps benefit from a table summarizing their views to improve clarity and comparison.

Kommentiert [A5R4]: I can if you think that would benefit the text. However, the focus of my thesis is not really historical. I deemed it more important to focus on a detailed analysis of the state of the two theories today. Please let me know if you want the comparison nonetheless

Table 1: Comparison Smith - Ricardo

Theme	Adam Smith (1723–1790)	David Ricardo (1772–1823)
View on Economic Growth	Optimistic: Believed in strong, long-term growth driven by division of labour, expanding	Pessimistic/Stagnationist: Expected long-term stagnation due to diminishing returns in agriculture and rising rents.

	markets, and capital accumulation.	
Source of Value	Early <i>labour theory of value</i> but allows for deviations in market prices from “natural prices.” Value shaped by labour, capital, and land inputs.	Strong <i>labour theory of value</i> : commodity values determined primarily by labour embodied during production.
Capital Accumulation	Central driver of productivity and wealth; reinvestment expands markets and specialization.	Also central but ultimately limited by rising rents and diminishing returns on land, which reduce profits over time.
View on Class Relations	Recognizes three classes (labourers, landlords, capitalists) and generally harmonious interests in long-term growth.	Also three classes, but sees conflict , especially between landlords and capitalists; rents rise and squeeze profits.
Role of Land and Rent	Land is a factor of production; rents arise from differential fertility but play a less central role.	Critical importance : Rent increases as land quality decreases due to scarcity; a core explanation for stagnation.
Free Trade	Favors free trade but frames it mainly as an extension of the division of labour.	Strong pro-free trade advocate ; develops the theory of comparative advantage ; opposed the Corn Laws.
Long-Run Economic Outlook	Sustained progress possible; markets and competition drive innovation and wealth.	Long-term decline in the rate of profit likely, leading to a stationary state .
Role of the State	Limited but: defence, justice, public works, education in some cases.	Strongly limited state; opposed tariffs and agricultural protectionism.
Analytical Method	Historical, empirical, broad sociological approach; “system of natural liberty.”	Abstract, deductive, formal; more mathematical/analytical style for his time.

While Classical Political economy was the main economic school of thought in England and advanced free trade, Germany and Austria as less powerful economies found a different approach: Within the Historical School of economics, economic phenomena and economic activity were not simply the result of rule-bound deduction but analysed in their institutional societal context. (Jäger & Springler, 2015) Friedrich List (1789-1846) is a famous representative and believed that the national economy should be strengthened by imposing protective tariffs. The idea behind this is that stronger economies benefit from free trade, while more agrarian societies need to provide an initial spark to their industrialization and protect their young industries against foreign competitors. The ultimate goal was to catch up to more developed economies. (Kirsten, 2014) Except for representatives of Historical school, Karl Marx (1818-1883) was the first to offer a systemic critique of Political economy. (Jäger & Springler, 2015) He adopted the analytical core of classical political economy, including the focus on social classes. Marx

opined that such classes face each other in an antagonistic relationship of tension that has always existed in one form or the other over the course of history. He found that property relations represent the dominant relations of production, and that these relations are determined by the state of the productive forces as well as the division of labour at the time. (Cook, 2013) While Smith and Ricardo took for granted that workers should earn a subsistence wage to survive, Marx problematised this. Keeping the labour force at the survival minimum is an expression of the fact that workers were excluded from economic prosperity, leading to impoverishment. For Marx, this was exploitation. Marx criticised the unequal distribution structure behind rising productivity because of developing productive forces. He identified systemic power relations and the allocation of property rights as an underlying source of injustice. (Comyn, 2025) In this way, Marx utilised the prevailing economic argumentation of the time and formulated a fundamental critique within the paradigm. This was taken up by the emerging labour movement, which used it to scientifically legitimise its demands. (Jäger & Springler, 2015) The hitherto prevailing economic paradigm lost its function for capitalist development. It failed to uphold the vested interests of the Bourgeoisie, which opened the need for an alternative approach that was more appropriate to justify existing dominant economic interests. In the 1870s, the Neoclassical paradigm arose as a response to the labour movement and slowly ousted the Classical political economy over the course of the 1890s. The *“Principles of Economics”* by Alfred Marshall (1842-1924) was an important catalyst for the theoretical developments at the time. (Cook, 2013) This was also the time when economics started to become more institutionalized and an integral part of university curricula. The newly founded chairs were often staffed with Neoclassical economists, further crowding out Classical political economy and the Historic school from academia. (Jäger & Springler, 2015) The terminology and focus on social classes completely disappeared in Neoclassical theory production. It was replaced by the economic actors: “households” and “firms” (Rogall, 2013) and by methodological individualism. Another characteristic is the separation of the economy from politics and treating the former unique sphere by itself⁴ (Screpanti & Zamagni, 2005)

Kommentiert [A6]: Your argument about Marx's critique is detailed but lacks a counterpoint—how did Neoclassicals respond to his ideas at the time?

The different positions in the dispute between the historical school and the Neoclassical school were once again demonstrated clearly at the end of the 19th century in the so-called „*Methodenstreit*“, the “battle of methods”. It was a more than ten year-long methodological controversy between Carl Menger (1840-1921), an economist of the Austrian school, and Gustav von Schmoller (1838-1917), leader of the younger German historical school of economics. First

⁴ Neoclassical concepts and ideas will more thoroughly discussed in chapter 1.1 c)

and foremost, the Methodenstreit was a dispute between abstract deduction, represented by Menger, and empirical induction as defended by v. Schmoller. Menger claimed that all economic phenomena could be broken down to individuals' choices and preferences, which themselves spare any need for explanations. These (given) preferences and the concept of rational utility maximization built the basis for the understanding of economic activity and interactions on markets. As a result, general laws of economic phenomena should be postulated based on deduction. Von Schmoller claimed that there were no immutable laws of behaviour. The economy and individual behaviour can change over time and must be understood and treated as social phenomena. The disputes surrounding these differences were acrimonious, because economic policy implications vary vastly, depending on the approach. (Louzek, 2011) Followers of the Historic school demand proactive state intervention in the economy and the introduction of labour rights. On the other hand, representatives of the Neoclassical approach plead for a politics of "*laissez-faire*". I. e. unregulated markets and renunciation of state control. Neoclassical theory prevailed and became widespread and differentiated out. Its position was only first questioned as the mainstream by an emerging Keynesian paradigm. In the late 1920s and the 1930s, macroeconomic theory experienced a shock caused by the Great Depression. (van Treeck, 2017) Neoclassical Laissez-faire was expressed through restrictive state budgeted and monetary policies, which led to deflation and a strong increase of the real interest rate in the 1930s. This resulted in failing economic political programs and the crisis further intensified. The inability to properly deal with an economic crisis of that magnitude led to a preliminary discreditation of liberal capitalism in the USA and Europe. (Jäger & Springler, 2015) In the middle of the crisis, British economist J. M. Keynes (1883-1946) published his "*General Theory of Employment, Interest and Money*". (Van Treeck, 2017) At the time, populism, fascism, and radical left political movements threatened stability and societal peace. Keynes assumed that the solution to the crisis, and therefore the recovery of the Capitalist system was only feasible through massive state intervention. Keynes' teaching opened fundamentally new perspectives on economics. (Jäger & Springler, 2015) At its core, the new paradigm is based on the image that markets do not automatically reach an equilibrium, but states of disequilibrium. In Keynes' theory, this is due to economic tendencies towards stagnation, similar to what Ricardo had proclaimed some 100 years earlier. The newly emerging Keynesian paradigm broke with strict methodological individualism and analysed economic aggregates like growth, consumption, unemployment, and interest rates. On their own as well as with regards to their relationships with each other. (Jäger & Springler, 2015) In the decades after the Second World war, Keynesianism became the dominant school of economic thought and the foundation of many economic policies. (Somek 2023)

Over the decades, all three major economic paradigms experienced theoretical diversification. Neoclassical theory partly gave up on a few central assumptions: *Information economics*, for instance, breaks with the assumption of complete information as a precondition of perfect markets. *Game theory* occupies itself with the choices of market participants on imperfect markets. One of the most recent developments changed assumptions regarding rationality in the context of *Behavioural economics*. (Comin, 2024) Partly, the economic political implications were quite contrary to General Equilibrium Theory. However, methodological individualism as the basic principle remained largely unchanged. Keynesian theory also developed and can be split into *Neokeynesianism*, which represents the Neoclassical approach of integrating Keynesian theory into its own models, and *Post-Keynesianism* which is the development that follows the original of Keynes' teachings more tightly. Two of the most important streams out of Political economy that arose during the 1960s and 1970s are *Regulation school* and *Dependency Theory*. Critical Political economic approaches have played a marginal role in economics and have therefore been further developed by scientists from other disciplines, such as geography, sociology or political science, which has strengthened their transdisciplinary character. (Jäger & Springler, 2015)

The 1970s were characterised by rising rates of inflation and unemployment, a so-called "stagflation". Stagflation is caused by excess aggregate demand and a subsequent oil price supply shock. This resulted in conflicts about distribution between unions and employers, who kept up an alternating escalation of prices and demands for higher wages. In some countries, frequent strikes paralyzed economic activity. The traditional Keynesian instruments seemed inept to overcome contemporary problems. In this context, economics experienced a change of direction with regards to science and politics, the so-called "Neoclassical counterrevolution". (Seidman, 2005) The work of Milton Friedman (1912-2006) played an important part, whose ideas inspired governments including the one under Margaret Thatcher (UK) and under Ronald Reagan (US). Over the course of these developments, most countries switched to supply-side-oriented economic policies, as opposed to demand-oriented Keynesian politics. (Jäger & Springler, 2015) Milton spoke out against a Keynesian monetary policy and a controlled recession to lower the increase rate of wages and prices. (Seidman, 2005) He supported rule-bound policies primarily centred around inflation. (Föterer, 1979) Although some Keynesian argumentation was integrated into the theory, the resulting economic policy suggestions were directly opposed to Keynesian teachings. Friedman's monetaristic theory was first put in practice in the 1970s in Chile under dictator Augusto Pinochet, from 1979 onwards by the Federal Reserve in the USA, and during the

1980s in the UK under Margaret Thatcher. (Jäger & Springler, 2015) The goal was to reduce state-bound inefficiencies and provide incentives for employees and private companies, with the purpose of improving the supply-side of the national economy. For that purpose, high income tax and wealth tax were reduced, and the labour market was deregulated. Simultaneously, state expense budgets were restricted, and economic austerity policies became more prominent. (van Treeck, 2017)

Over the course of globalisation, catalysed by the dissolution of the communist Eastern bloc at the beginning of the 1990s, international trade restrictions were also increasingly dismantled. The international financial markets were deregulated. This was intended to strengthen international competition and eliminate inefficiencies that were attributed to the isolation of national economies from international competition. (ibid.) After the fall of the Soviet Union, the Neoclassical paradigm - or its concretisation in the form of the accumulation regime modern capitalism - was largely regarded as the only approach with scientific justification and history as having reached its end point. (Somek, 2023) Since the latest major economic crises and specifically since the 2007/08 financial crisis, the conflict between Neoclassical and Keynesian theory has pushed back into economic political debates. Initially, many governments reacted to the crisis with comprehensive Keynesian government expenditure programs. Many economists argued that these emergency measures were necessary to avoid an economic and political downfall the magnitude of the Great Depression. Furthermore, alternative schools of thought have experienced increasing popularity. Increasingly, economists are also recognising international income inequality as a major cause of the financial crisis. In countries like the US and the UK, lower- and middle-income groups have had to take on debt in order to keep demand high because their incomes were no longer or hardly increasing. Thought schools that can be categorized as derived from Neoclassics are predominant to this day. (Jäger & Springler, 2015; van Treeck, 2017) Nowadays, many governments follow the idea of austerity politics because the economic problems are interpreted as essentially structural in nature. In the European Union and especially in the eurozone, this policy is being pushed by the German government. At the same time, some international observers criticize what they see as anti-Keynesian positions in Germany and even diagnose the eurozone with a “Germany problem”. One of them is Oxford university economics professor Simon Wren-Lewis (2014) in connection with what he sees as the negative consequences of austerity policies. Many supporters of neoclassical concepts, on the other hand, still consider Keynesianism to have failed after the experiences of the 1970s. (ibid.

2013) It is therefore currently still unclear in which direction economic thinking will develop in the coming years.

b) Methodology of Economic Paradigms

There are two opposing approaches in economics at the level of scientific theory: **Critical Rationalism** stands in the positivist-analytical tradition. *Positivism* is a philosophical school of science. It recognizes only those statements as true which can be deduced through empirical methods and hold up to a certain generalizability. (Chandler, 2020) **Critical Realism** draws on hermeneutic-dialectical approaches. Hermeneutic-dialectical refers to the combination of interpretation (hermeneutics) and dialogue/debate (dialectics) to understand complex issues. It emphasizes the dynamic interplay of different perspectives, seeking meaning through interpretation while resolving contradictions through discourse. This method is often used in philosophy and social sciences to analyse texts, ideas, or social phenomena by engaging in an evolving, reflective conversation. (Esser, Klenovits & Zehnpfennig, 1977) While the Neoclassical paradigm stands in the positivist tradition and can therefore be grouped with Critical Rationalism, Keynesianism and Political Economy utilise the instruments of Critical Realism, though here the practice must be distinguished from the concrete formulation and is significantly older. Both Critical Rationalism and Critical Realism were developed in the 20th century, in the 1930s and 1970s respectively. It is therefore obvious that these have not always represented the meta-theoretical foundations for economic theorising in general or the paradigms discussed. (Jäger & Springler, 2015) In the case of Critical Rationalism, the connection to, and continuation of the school of positivism is obvious and clearly traceable. Positivism has prevailed in science since the 19th century. (Jäger & Springler, 2015) Critical Realism does not provide such a clear genealogy. There are strong hints at the schools of philosophy of science in the 19th century as well as Dialectical Materialism and Hermeneutics. (Bhaskar, 1998)

Kommentiert [A7]: It is better to define 'positivism' and 'hermeneutic-dialectical' briefly for clarity.

Critical Rationalism is an approach founded by Karl Popper (1902 - 1994), which includes the scientific-theoretical idea of being able to recognise the world objectively. The constant progress of science is seen as a given, as is the automatism that unsuitable theories and paradigms disappear over the course of history, while innovations and improvements prevail. In logical consequence, all such findings are considered temporarily valid, until falsified. That way, everlasting process can contribute to an increase in common welfare. Critical Rationalism

assumes a strict distinction between factual (positive) knowledge and value judgements described as normative. All science should work completely free of value judgements and be “neutral”. The social, institutional and political production conditions of knowledge and the influence of specific interests on theory production play no role in the analysis of theorems and principles, as those were devised through neutral deduction. The question of social implications of certain perspectives is negated. (Jäger & Springler, 2015) The genesis of new theories always takes place within a similar deductive thought pattern, as the analysis of the emergence of previous theories is also limited to the context of the history of theory or the ideas and their mutual influence. Critical Rationalism implicitly relies on the notion that concepts can only be understood when examined in comparison to other, closely related concepts. This leads to depth in knowledge, as it becomes important to differentiate finesses of thought as well as method and to draw conclusions accordingly. (Blaug, 2001)

Critical Realism, founded by Roy Bhaskar (1944–2014), conceptualizes societal reality as a complex, open system composed of dualisms. A key distinction is between positive naturalism, which applies scientific methods to human affairs, and anti-naturalist hermeneutics, which argues for a fundamentally different approach in the social sciences. Critical Realism challenges the Humean notion that causal laws are merely constant conjunctions of events, rejecting the idea that scientific inquiry should only describe observable patterns while ignoring deeper ontological structures. Instead, Critical Realism posits that reality is structured, differentiated, and dynamic rather than uniform, flat, and repetitive. (Bhaskar & Nielsen, 2016) Rather than attributing social phenomena to singular causal mechanisms, Critical Realism recognizes that an infinite number of interacting causes and determinants shape outcomes. Knowledge is always context-dependent, and transferring findings across domains requires independent analysis. (Jäger & Springler, 2015) Unlike Critical Rationalism, which emphasizes continuous theoretical development, Critical Realism insists that scientific inquiry is inherently social, shaped by researchers' backgrounds, values, and theoretical perspectives. (Buch-Hansen & Nielsen, 2023) While open to synthesis with other schools of thought, it rejects a deterministic worldview that would render human agency and scientific progress meaningless. (Jäger & Springler, 2015) Although Critical Realism acknowledges the social embeddedness of science, it does not lapse into relativism. Scientific claims remain testable and reproducible: if multiple researchers adopt the same perspective on a real phenomenon, they should arrive at the same conclusions. This is evident in climate science, where the reality of climate change is not merely a social construct but an objective phenomenon requiring structural and causal analysis. However, the selection of

Kommentiert [A8]: Please elaborate on how Critical Realism applies here versus Critical Rationalism (I mean in the climate science context).

research methods remains contested, as scholars differ in training, ideology, and methodological preferences. (Jäger & Springler, 2015) While both perspectives affirm the objective reality of climate change, Critical Realism stresses the necessity of uncovering underlying causal structures, whereas Critical Rationalism prioritizes empirical scrutiny and the elimination of errors through critical debate.

Methodologically, Critical Realism employs a causal-explanatory approach. Unlike positivist deduction, which seeks universal laws, Political economic analysis uses critical dialectics to develop normative, context-specific solutions (Seufert, 2007). It also seeks to address how non-dominant interests can be recognized in scientific inquiry, contributing to an emancipatory function of knowledge (Jäger & Springler, 2015). Science is thus both descriptive and creative, moving between empirical observation and theoretical explanation to uncover underlying structures and mechanisms. (Buch-Hansen & Nielsen, 2023) Ultimately, Critical Realism underscores that all scientific paradigms rely on implicit ontological assumptions, shaping their understanding of knowledge and reality. (Pühretmayer, 2005)

c) Deep Dive Into The Major Paradigms

The methodological orientation of the three major paradigms is reflected in their different theoretical foundations and basic principles. In the following subsection, the three most important paradigms - Neoclassics, Keynesianism and Political Economy - will be analysed with regards to their foundational theories. The focus will lie on their methodology, research interest, central statements and economic policy implications. The Neoclassical paradigm is going to be the starting point of the discussion. This is due to multiple circumstances: For once, it is the most widely known of the three and the one that readers will probably be most acquainted with, as it is considered the mainstream in economic theory and teaching. (See 1.1) Furthermore, there are virtually no links to the other two paradigms in Neoclassical theory. Keynesianism, however, naturally provides a range of explicit and critical references to the Neoclassical theory. That is unsurprising, since it was formulated by J. M. Keynes as a response to the Laissez-Faire capitalism of the late 19th and early 20th century. (See 1.1 a) Therefore, Keynesianism will be the second paradigm presented. The end point will be the description of Political Economy, which covers the vastest field within social sciences. Direct links to Neoclassical theory are rare.

However, references to elements within Keynesianism are more common, and some political economists use Keynesian tools on occasion.

Neoclassics.

The Neoclassical paradigm is arguably the most widespread and is therefore also considered the mainstream in economics (also Jäger & Springler, 2015), although other authors claim that this school of thought peaked in the late 19th and early 20th century (van Treeck, 2017) and was superseded by the Neoclassical Synthesis. One traditional view of neoclassical economists is the tendency of self-regulation of labour, financial and goods markets. Such markets are bound to reach long-term equilibria if they are not distorted by state interventions. In such an equilibrium, there is supposed to be no excessive unemployment. Additionally, economic interests of households and firms coordinate themselves through a market mechanism, i. e. supply and demand. (van Treeck, 2017) Neoclassical theory does not incorporate the concept of “class” as a societal group with shared economic interests and realities anymore at all. (Milonakis & Fine, 2009) This used to be different in Classical economics à la Adam Smith. Neoclassics treat the economy as the sum of individual economic actors, by principle *Homines Oeconomici* who make decisions based on rational choice, maximizing their individual utility (*Methodological Individualism*). Since the economy works by individual actors making rational choices and follows natural instincts, automatisms and laws, Politics and Economics should be separated sharply. Keynesians and so-called Neo-Ricardians criticize Neoclassical economics for not including a credible and consistent theory of (re-)distribution of income and economic wealth. This dissent has also become famous by the title “*Cambridge Controversy on Capital*” (Jäger & Springler, 2015)

Methodology

Neoclassical Economics stands in the tradition of positivist deduction based on Critical Rationalism. In alignment with its theoretical foundations, Neoclassics strives for value freedom. An important distinction is the one between *positive* and *normative* statements. Positivist statements contain no value judgements but are neutral statements about economic facts. Normative statements contain judgements such as “the unemployment rate should be lowered”. (Jäger & Springler, 2015) Methodologically, it is assumed that neoclassical theory can always be used to analyse economic relationships, regardless of the historical and geographical context. Neoclassical approaches assume that economic dynamic systems are *ergodic* systems. This

Kommentiert [A9]: Any example?

Kommentiert [A10R9]: See the part behind “(Cf. Dow 2001: 15 ff.)”

means that the development of systems when viewed as an averaged function of the status over a long period of time leads to the same result as their average evaluation of all possible characteristics. If external circumstances are kept constant, the same chain of processes should lead to the same result. (Dow, 2001) This can be illustrated by picturing a gas inside a closed container. A large number of gas molecules collide elastically with each other as well as the walls of the container. In infinity, every single molecule will eventually visit every possible position and velocity allowed by the system's energy constraints. If you take the average over time for a single particle, it will be the same as the statistical average over all particles at a given moment.

Neoclassical Economics follows the Critical Rationalist method of deduction, which is defined as the idea that scientific knowledge can be gained by drawing conclusions from assumptions and laws; (Jäger & Springler, 2015) and methodological individualism is at the heart of this paradigm. Within methodological individualism, every economic phenomenon is ascribed to and deducted exclusively from individual rationale and self-interest, which is defined as the individual's very own set of preferences. Following this logic, humans are generally assumed to make rational choices maximizing their personal utility and following given behavioural patterns (*Homo Oeconomicus*). (ibid; Milonakis & Fine, 2009) Until recently, all areas of neoclassicism assumed that perfectly informed individual making rational decisions according to utility maximisation criteria. Nowadays, certain fields within mainstream economics, like Behavioural Economics, have unclenched their assumptions about the perfectly informed, utility maximizing individual. (Jäger & Springler, 2015) Concepts like time-variant preferences or Prospect theory are good examples: The former illustrates how preferences can change over time and that long-term rationality does not hold up. Loss aversion in prospect theory contradicts quantifiable utility, because the net utility surplus of gaining 50 euros does not equal the net utility loss of losing 50 euros. Nevertheless, Neoclassical theory still explains any economical phenomenon through individual behaviour (ibid.) and "*no collective body, such as the national economy, can be analysed in its own right without reference to its constituent individual members*" (Milonakis & Fine, 2009). *Why* individuals act in this way (and only in this way) is not part of the Neoclassical analysis. The economic sphere is strictly separated from the political and societal spheres. Societal and institutional influence or more generally any kind of social (other than market) or historic influences do not find their way in Neoclassical analysis. Neither do developments on preference or economic thought. (Jäger & Springler, 2015; Milonakis & Fine, 2009) Moreover, methodological individualism is also applied to other areas of society, e.g. marriage decisions, family division of labour, behaviour of political parties. (Caporaso & Levine, 1992) Neoclassical

Kommentiert [A11]: Can you explain how it challenges the Homo Oeconomicus model with a specific example?

theory has a diverse and international ideological background. How diverse can be illustrated by the fact that the Austrian School of Economics used to follow non-mathematical argumentative teachings, whereas today Neoclassical consensus generally assumes that economic phenomena should be adequately captured by means of mathematical models. (Jäger & Springler, 2015) Milonakis & Fine (2009) highlight that Neoclassics reduce Economics to logico-mathematical problem-solving, which abstracts the theoretical considerations from the real world. Generally, Neoclassical economics falls back to a form of mathematics developed in the 19th century, consisting of linear sets of equations, parameters and assumptions about singular variables. Variables can be changed or varied to construct a comparative-statistical analysis. Marginal costs, marginal revenues and marginal benefits are important categories, highlighting the importance of differential equations. The use of mathematics is widely accepted, as it is an exact science and satisfies the Critical Rationalist claim of value freedom. Since all systems of equations explain economic phenomena based on decision-making of rational economic actors, historic context is externalized. This shows that not only market outcomes (price and quantity) are the direct result of individuals' decisions, but also institutions in their existence and configuration. (Jäger & Springler, 2015) Coase (2014) describes that firms only exist because they lower market transaction costs, such as hierarchies replacing the constant search for services on the market. An important exception to mathematized Neoclassical Economics is neoliberal theory as refined by Friedrich Hayek (1919 – 1992), which does without the extensive need for mathematical calculations. (Jäger & Springler, 2015) Generally, in the course of progressing Neoclassical theoretical differentiation, General Equilibrium theory on a macroeconomic level seems to fade to some extent. There is a stronger focus on microeconomic questions, including strategic decision-making, Game theory or agents' behaviour on (semi-)monopolistic markets. Some disciplines recently developed a stronger focus on market imperfections, and some "new", rejuvenated old fields such as new growth theory, new institutional economics, new economic geography, new labour economics, and new development economics have reemerged, which do not focus solely on rationality-based behaviour. (Milonakis & Fine, 2009) Nonetheless, Neoclassical theory keeps adding to economic-political discussions on a macroeconomic level, mainly in the framework of Neo-Keynesian theory, which is going to be covered at a later point in this work.

Central ideas

Contrary to Classical Political Economy, Neoclassics does not foreground the questions of growth, development, crisis or distribution. Instead, it focusses on describing how

microeconomic features like price and quantity-optimization and singular markets work. However, the core of Neoclassical theory, as described by Alfred Marshall (1842 – 1924) in his book *Principles of Economics* is widely unchanged. Neoclassical economics and its idea of a perfectly competitive market is based on several assumptions, one of which is complete information for all market participants. In the same spirit, Neoclassical economists demand a system of trust and transparency, in the place of state governance and regulations. The idea behind it is that if the stakeholders' or shareholders' trust is abused, the individual agents themselves should punish the misconduct, namely through abdication of the wrongdoer's goods or services or shares sales. However, modern Neoclassical economics has revoked the assumption of perfect information, as in the real world, a decision-maker rarely has access to perfect, comprehensive information regarding all market participants, prices, probabilities, and utilities. (Aliev & Huseynov, 2014) Instead, they must build the decision framework based on their perception and judgment. Another basic assumption in Neoclassical theory is the scarcity of resources, while bigger quantities of a given good always increase personal utility. Although this effect decreases with every added unit (*marginal utility*). Generally, the urge for more goods is potentially limitless. (Jäger & Springler, 2015) Economic agents' Individual decisions lead to equilibria on any given market. Such market equilibria determine equilibrium quantity and price of any good or service produced (and demanded), depending on accumulated individual preferences as well as resources. (ibid.) The maximum combined quantity of two or more produced goods with a given input is determined by the "production-possibility frontier" (PPF). This counts for individuals, firms and the state. The PPF-curve shows the various combinations of two or more goods that the economy can produce with its limited (scarce) resources. If all resources are utilised efficiently, there is an upper limit to the number of cars and computers that can be produced. This limit is the PPF-curve. (Mankiw & Taylor, 2011) The textbook example is that of a state producing butter and canons as x_1 and x_2 . That example serves impeccably to demonstrate the inherent conflict: Production of both goods cannot be infinite. To produce one more unit of one good, x units of the other good must be foregone. This concept is called opportunity costs. Besides the national economy, opportunity costs are most often understood in the context of productive labour. We can express opportunity cost by the formula $OC = RMPIC - RICP$ where $RMPIC = \text{Return on most profitable investment choice}$ and $RICP = \text{Return on investment chosen to pursue}$. If a movie star tends to their own garden, the opportunity cost for gardening is $[\text{their potential wage for working on a movie}] - [\text{the wage they would need pay to a gardener}]$. Another example is a janitor having the possibility to work as a teacher, with a teacher's salary representing the opportunity cost for their work as a janitor. If the opportunity cost is > 0 , the people from the two examples should hire

Kommentiert [A12]: Maybe to strengthen the narrative, it is better to explain the tension between the assumption of perfect information and Behavioral Economics here

Kommentiert [A13R12]: I assume that you are referring to Information economics, not behavioral economics?

Kommentiert [A14]: The opportunity cost example is clear, but can it be linked to a contemporary issue?

Kommentiert [A15R14]: I'll consider how to put it into a fitting context. I will leave this thread open for now

someone else to tend to their garden, and aspire a career change, respectively. (Jäger & Springler, 2015)

According to the Theory of Consumer Choice, every Homo Oeconomicus has a set of preferences and a given budget. Within that budget constraint, actors try and maximize their utility by deciding which combination of products to buy. In the Theory of the firm, a similar process is explained for companies. Along the lines of utility maximization of consumers, firms always try to maximize profit. Firms maximize profits by deciding the optimal quantity q^* to supply in a market. The market is the place where supply and demand (or producers and consumers) meet. Which quantity q can be supplied or demanded depends on the equilibrium price p , which is the price at which suppliers are willing to supply exactly as much as demanders are willing to buy, which clears the market. In a simple quantity-price diagram, supply and demand curve can be analysed simultaneously. Equilibrium quantity, dependent on equilibrium price are deducted finding where the two curves intersect. The market price forms through horizontal aggregation of the supply and demand information of all market participants. Market participants determine their price preferences individually. Although they should not buy/sell while diverting from the market price, or else they won't be able to maximize utility/profits. Would suppliers go higher, they won't be able to sell their goods. Supply would exceed demand for the given price. Would suppliers go lower than p , they could have sold for more at market price. Either way, the supplier does not maximize their profits. A consumer who buys above market price reduces his gained welfare surplus. That's why in a competitive market, every single participant is merely price taker and can only maximize profits if they match the equilibrium price. The setting of the equilibrium price is enabled through free individual price setting. Competitive markets naturally reach such equilibria in the long run. In an equilibrium, market price and quantity are efficient and clear the market. I. e. there is neither an excess supply, nor excess demand. That outcome is considered socially optimal. If supply or demand curve shift based on various factors, equilibrium price and quantity change as well. All individuals are better off after trading for the market price, compared to their situation before the trade. Otherwise, they wouldn't trade. (Jäger & Springler, 2015)

This form of neoclassical analysis of singular economic actors, markets and production and consumption is referred to as Microeconomics. The field of analysing entire economies is called Macroeconomics. The micro foundation is essential in that context. Everything that happens on a macro level is considered the sum of markets and choices on a micro level and

must subsequently be ascribed to and explicable through rational choices of individuals. On a simplified level, the process is the following: Households offer their resources (mostly labour) on factor markets.⁵ Firms demand the household's resources, reimburse the household and utilize those resources for the supply of products and services. Those products and services can then be demanded on goods markets by households. Through their purchased quantity, consumers effectively control how many units of a given good are produced on the market. The consumer is therefore the sovereign of the model which illustrates that economies produce what is demanded. With the help of the supply and demand curves and equilibrium price and quantity, changes on the markets like a demand shock, changes in price elasticity, or a change of the market price of complements or substitutes can be partially investigated for their results on equilibrium price and quantity, when adjusting factors like cost of inputs or consumer preference. This happens in the form of a comparative-statistical analysis since two snapshots of economic situations are compared adjusting one or several factors, while all others are held constant. This method is called *ceteris paribus*. (ibid.) A last though important factor in neoclassical theory is money. Money is an abstract object which is used to reduce transaction costs. Money is usually "ignored" in the context of real-economic models. It is usually analysed in separate, monetary models.

The analysis of supply and demand is also used to investigate the effects of state interference on markets. One of the most tangible phenomena is what would happen if a government set a price ceiling (price floor), which would result in excess demand (excess supply). The price ceiling (price floor) will have no effect if it lies above (below) the market price. A good example for a price floor is a minimum wage, which will always result in unemployment (excess supply of labour in combination with decreasing demand). An example for a price ceiling is rent control. (ibid.) Another state instrument which can be analysed is tax. If labour is taxed, the supply curve shifts upwards, which typically leads to a reduction in traded quantity, a rise of the market price and a loss of societal welfare surplus⁶. State interference in general causes market inefficiencies and is therefore strongly advised against for every sector where a service or good can be provided more efficiently by the market. This includes the areas real estate and rent, education, pension, and health. Only exceptionally, government interference can be called for, for example in the case of market failures or an intense rise of external costs. Market failures occur when the market does not reach an efficient market equilibrium. Examples are public

⁵ Factor markets are markets for production factors such as capital or labour

⁶ The concept of societal welfare, its forms and derivatives will be discussed in chapter 2.

goods, the military, or administration. But even in those cases, markets should be established where feasible, for instance in the case of arms production or in the form of New Public Management. In all other cases, the only task of the state is to ensure competition and the market framework, which includes the assurance of civil rights like property protection or the freedom to contract. (ibid.)

A perfect market is characterised by an abstract, large number of suppliers and demanders for a standardised product, free market entry and exit as well as perfect information and transparency of all competitors. In such a case, no market participant can influence prices, as they are mere price takers. A *monopolistic market* is one where a single supplier has the power to control traded quantities and set prices for the whole market. The extreme version of a monopolistic market is called a *monopoly*. An *oligopoly* exists when there are two, up to a few suppliers on a monopolistic market. Oligopolists act similarly to monopolists, however their respective profit shrinks accordingly. If they cooperate (through price and quantity coordination), oligopolists can act like a monopolist and increase their profit. In the case of *monopolistic competition*, various suppliers offer not identical, but diverse products, which all provide the same functions (cars, phones, appliances). However, those products are perceived as unique. Such a situation can be provoked using marketing and branding instruments, and results in a de facto control of price and quantity. Due to possible market entries and exits it is assumed that monopolistic profits dwindle in the long run. (ibid.)

Scientific motivation, objectives and political implications

The intrinsic scientific motivation behind Neoclassical research is to understand economic phenomena in a narrow sense. A too vast field of externalities and socio-historic context tends to render concepts too complex to fully comprehend. The *ceteris paribus*-principle is one of the most utilized instruments on the curriculum of economic studies, because it enables an analysis in the first place. That is why it is central to Neoclassical theory to ascribe all economic phenomena to individual behaviour. Based on such an analysis, the Neoclassical paradigm offers clear recommendations for economic policies and a framework for market economies. The economic policy postulate conveys a clear and simple message: Under perfect competition, free markets are efficient, and suppliers and demanders are automatically coordinated via the market equilibrium and personal interest. The state should always act as a neutral actor wherever possible. State intervention such as taxes or controlled prices lead to a

reduction of the traded quantity and therefore a loss of societal welfare. Despite the perceived higher efficiency of private operations, Neoclassics has identified numerous cases which justify state interventions, namely when the conditions for perfect competition are not given. Market imperfections as well as market failure do present a big topic in Neoclassical knowledge finding these days. Such imperfections prevent markets from reaching the efficient equilibrium. The most famous case where state action is supported is administration. (Jäger & Springler, 2015) The advantages of neutral and state-bound clerks who must follow different guidelines than their own economic interests are intuitively fathomable, as the opposite would probably directly lead to increased corruption and a de facto end to impartiality in administrative processes. However, markets should be established in the public sector wherever feasible. This was executed, for instance, in the “New Public Management” framework via outsourcing of services to private companies and the introduction of business management tools. Employees in bureaucracies are assumed to behave rationally and maximise their own benefit. Parties are also seen as organisations of utility-maximising individuals who try to maximise votes and thus access to resources and positions. (Schedler & Proeller, 2011) Another sector which necessitates the state to function is arms production. Since no one in their right mind would want to create a private consumption market for FIM-92 Stinger air defence systems or Tiger tanks. And as even the possession of handheld guns remains an exception in most of the Western, demilitarized countries, nation states represent nearly the entire demand for weaponry. Many economists and authors, however, see the accumulation regime behind capitalism as a big driver for the mass production of weapons. If societal economic production capacities surmount demand, the efficiency precept demands the exhaustion of excess investment capacities of free capital. Since societal consumption and investment demand is covered, a market that does not rely on individual private demand provides better investment opportunities. In that view, subsequently, there would be an economic interest behind the initiation of armed conflicts, since states would not purchase weapons without the prospect of necessity. (Allio, 2020; Mandel, 2015 [1979])

Kommentiert [A16]: The arms production example is provocative. It is good to support it with some evidence.

The second important area of responsibility for the state is the guarantee of safeguarding of market competitiveness through competition regulations. This includes executing law & order, securing property and adopting disclosure requirements which are needed for professional independence and allow faith in good business conduct. Furthermore, in the case of so-called externalities – such as environmental pollution – government intervention can reduce microeconomic market distortions and inefficiencies. This can happen e. g. through environmental taxes or regulations. (Jäger & Springler, 2015) However, opinions differ here, as

many Neoclassical economists are of the opinion that private actors can ensure environmental protection more efficiently than the state could, via the distribution of property rights and a price mechanism. The topic of environmental protection is discussed elsewhere in this work in the context of all three paradigms analysed and in the context of the postgrowth paradigm. (Coase, 2013 and also subsection 1.2 as well as section 3 of this work) Since microeconomic markets are efficient by principle, macroeconomic markets are as well (as they merely represent accumulated microeconomics). Resource as well as labour and capital markets, but also goods markets can sometimes benefit from increased efficiency because of public so-called supply-side policies. However, those policies must follow predetermined rules and mechanisms, never situational discretion; And only if the state intervention is microeconomically plausible. Ordoliberal theory in particular has developed systematic considerations in this regard. It is generally necessary to „protect“ the market from the state. Defensive or rule-based policies are therefore considered desirable in both growth and stabilisation policy and in monetary policy. Moreover, the state should refrain from redistribution measures as far as possible. (Jäger & Springler, 2015) In contrast to classical liberalism, the ordoliberals did not believe in Adam Smith's optimistic idea that the self-interested endeavours of individuals would automatically lead to the highest good of society. Instead, they saw it as the task of a strong state to create and monitor a social and economic order that protects the freedom of the individual and guards against the arbitrariness of private and state economic power. (Piekenbrock & Henning, 2013)

Keynesianism & Neoclassical Synthesis.

Keynesianism is a paradigm based on the teachings of Economist John Maynard Keynes (1883-1946). Traditionally, Keynesianism has taken an oppositional stance to Neoclassics. The theoretical foundations came from Mr. Keynes' work itself and is an elaboration of his teachings. Some of his immediate students were a driving force behind the development of his theory, among others economist **Joan Robinson** (1903-1983). Other notable economists, who have carried out a discussion of Keynesian theory in the sense of Keynes, i.e. away from the neoclassical synthesis already mentioned, are **Roy Harrod** (1900-1978), **Nicholas Kaldor** (1908-1986), and **Sidney Weintraub** (1914-1983). These economists are oftentimes referred to as "Cambridge-economists" or as belonging to the "Cambridge School" of economics. Keynes believed that the drastic decrease in production and the subsequent rise in unemployment during the early 1930s could be explained through a lack of societal demand on the goods markets. He argued that – contrary to popular belief – market forces were not prone to self-regulate and that markets needed state intervention to function properly. (Hogan, 2021) That approach was

unheard of in Neoclassical theory to that day. Keynes recommended actively working towards an increase in consumption demand through central bank-driven interest rate policy, a strong state with high expenses and investments and a reduction in income inequality to boost purchasing power. (van Treeck, 2017) With regard to the various further developments of Keynesianism, three trends can be distinguished: The *Neoclassical Synthesis*, *Neokeynesianism* and *Post-Keynesianism*. While both the Neoclassical synthesis and Neokeynesianism have since been endeavouring to integrate Keynes' theoretical foundations into the IS/LM model, Post-Keynesianism represents a direct continuation in the Keynesian paradigm. (Cúrdia & Woodford, 2010; Hogan, 2021) Different elaborations of Mr. Keynes' teachings connect more with the basic ideas, for example the persistence of a natural state of disequilibrium. This direction of thought is usually referred to as "*Post-Keynesianism*". When the term "Keynesianism/Keynesian" is used from here on, reference is made to the Post-Keynesian development. (Jäger & Springler, 2015)

Methodology

The central methodological foundations of Keynesian theory are the importance of uncertainty, historical time and institutions as well as demands for an interdisciplinary, open system. Since the 1930s, when Keynes formulated his theses, several extensions with partly vastly different scientific instruments have been developed. Post-Keynesianism and Neokeynesianism are the most prominent ones with the biggest number of supporters over the course of the 20th century. (Jäger & Springler, 2015) While Neoclassical models try and postulate generalizable laws *ceteris paribus*, Post-Keynesianism aims to explain tangible phenomena in the observable world. Critical Realism as underlying scientific philosophy provides a valuable basis. The emphasis on the economy as an "open system", the recognition of the importance of institutions and the consideration of fundamental uncertainty for economic analyses clearly indicate Critical Realism as the central basis for Post-Keynesianism (Lawson, 1999; Jäger & Springler, 2015) Another feature of Critical Realism is the rejection of the positivist perspective in Neoclassical economics: If an economic model aims to observe general principles and regularities, it sacrifices the detailed analysis of observable social dynamics. In turn, that leads to limited applicability of such economic models, when trying to explain real social phenomena. (Brown, 2003; Jäger & Springler, 2015) Despite rejecting positivist scientific tradition, Critical Realist theory within Post-Keynesianism does not make suggestions for explicit economic policies. Scientists following methodological Critical Realism can reach concrete and situational recommendations, depending on the specific context. However, specific solutions usually lack generalizability. Due to different externalities such as historic context – which in turn results in

different institutional framework – even similar problem statements can be answered fundamentally different. Consequently, Critical Realism does not offer a specific method for a general problem statement, but a set of instruments and the aim to find an adequate solution tailored to a specific situation. Amongst other things, this means taking into consideration the role of institutions in the historic course of things. (Jäger & Springler, 2015) Critical Realism as the epistemological background for economic matters, however, is subject to critique. One criticism is it being a philosophical approach and that there is a risk that scientific positions and recommendations could be overshadowed by its application. (Rotheim, 1999)

Many core elements of Keynesian theory are a result of critique of Neoclassics and its limited usefulness for explaining real-life phenomena. Regarding (re-)occurring events over the course of time, for instance, Keynesianism criticizes the Neoclassical image of “*logical time*”. (Jäger & Springler, 2015) It is a conceptual ordering where the focus is on the logical sequence of decisions, actions, or phases in an economic model rather than on their exact timing or duration. Logical time helps economists model processes step-by-step, analysing cause-and-effect relationships in a structured, sequential way without assuming these events occur at specific moments or within fixed time periods. Business cycles and product life cycles are prominent examples. As previously mentioned, Post-Keynesians observe economic phenomena in the context of *historic time*. In this context that means that the dynamic system of capitalist development is characterised by concrete historical events, their respective institutional frameworks and other specific circumstances. Neoclassical economics perceive economic, dynamic systems as *ergodic systems*. (Dow, 2001) Keynesianism, however, postulates non-ergodicity. In this view, logical time cannot replace historic time, and the observed averaged characteristics cannot necessarily be explained by the mean of a long-term function and may deviate. Society experiences constant change of social and economic circumstances. Descriptive models hereby must take into consideration the institutional framework of the phenomenon at hand. When looking at dynamic processes through the lens of a historically grown institutional context, no calculation or predictions can be made from the current state about future events or even their occurrence. Consequently, there is *fundamental uncertainty* in economic processes.⁷ The future is further influenced and changed by the expectations and the individual needs of individual actors (households, companies) involved. (Jäger & Springler, 2015)

⁷ This concept has its origins in Keynes' analyses of uncertainty that there are situations which do not offer enough insight or information to accurately predict their outcome by means of probabilistic evaluation. (Keynes, 2018 [1920])

Kommentiert [A17]: The critique of logical time is sharp. Can you contrast it with a Neoclassical counterargument to balance it?

Kommentiert [A18R17]: I have to think about how to phrase this. But generally, Neoclassical theory prioritizes generalizability over usefulness to explain observable phenomena. In mainstream empirical economic analysis, the goal is not to perfectly predict and counteract economic developments. But to be able to explain them with generally valid economic laws. That is what is meant by “limited usefulness for explaining real-life phenomena”. Keynesian economics is more discretionary.

Let me know if I should make that clearer in the text

Kommentiert [A19]: A brief example (e.g., 2008 financial crisis) can illustrate its real-world impact

Neoclassical economists justify logical time as a necessary abstraction for coherent modelling. Hicks (1939) and Samuelson (1947) argue that it isolates causal mechanisms and enables clear equilibrium analysis. New Classical authors such as Muth (1961) and Lucas (1976) defend it by assuming stable, ergodic structures in which agents form expectations. General Equilibrium Theory also depends on an atemporal framework to prove equilibrium existence. (Arrow & Debreu, 1954) Likewise, modern macroeconomics requires stationarity for estimation, as shown in Sargent (1987). A clear illustration is the 2008 financial crisis. From a Keynesian / Post-Keynesian perspective, the collapse cannot be explained through logical time because it was shaped by historically specific institutions: securitization practices, deregulation, and evolving financial innovations; Combined with non-ergodic uncertainty and shifting expectations. In contrast, a Neoclassical model using logical time would abstract from these historical contingencies and instead analyse the crisis as the logical outcome of shocks hitting an otherwise stable stochastic system. This contrast shows how the two paradigms attribute fundamentally different roles to history, uncertainty, and institutional change.

In Keynesianism, a mere quantitative analysis is not adequate to explain real-world phenomena, given the preconditions. The assumptions of non-ergodicity and fundamental uncertainty necessitate an open system, i. e. an adequate set of quantitative and qualitative methods, as well as several different theories to highlight different phenomena. Keynes did not see his approach as detached from other economic approaches. On the contrary, he found additional explanatory value in cooperation and in the considering economic problems against the background of different economic models. ("*methodological pluralism*"). That pluralism includes recognizing other disciplines as equipollent and in turn leads to inter- or transdisciplinary research when explaining observable phenomena. In its historical genesis, Post-Keynesianism is marked by an inner conflict between theoretical focussing on its own theoretical foundation and collaboration with other emerging economic movements. There is an ongoing discussion about the importance of quantitative-analytical instruments and – ipso facto – the importance of mathematics itself (ibid.) Historically, Post-Keynesianism has a difficult relationship with mathematical methods. (Dow, 2001) However, following its own intrinsic need for pluralism and situationally adequate methods, it has not been fundamentally opposed. However, the analysis of observable phenomena – and not the method as an end in itself – should always be the centre of a given problem statement. (Springler, 2011) Another substantial critique Post-Keynesianism formulates about Neoclassical theory is that its abstract models being only constructable with the help of narrow axioms which do not reflect economic reality. One of such

mentioned axioms is voluntary unemployment. In Neoclassics, one reason for unemployment is the company's demand price for labour and an individual's supply price for labour not matching on the labour market. This results in a situation of a non-cleared market. Other than market prices, Neoclassical theory does not conceptualize unemployment at all. Keynesianism is not devoid of axioms. However, their use does not serve theoretical modelling for its own sake, but as a base for the explanation of real phenomena. (Jäger & Springler, 2015)

Keynesianism is characterized by the constant effort to question the adequacy of theoretical models for the purpose of explaining and understanding real-life phenomena. Real economic and sociopolitical effects of theoretical concepts present an integral part of theoretical discussions. In contrast to Neoclassics, it is assumed that economic and market behaviour can lead to under- or unemployment and other inadvertent effects. The collision of free market forces does not necessarily lead to an equilibrium in the sense of an optimum price meeting an optimum quantity on all markets. Keynesian models centre around effective demand. A shortage of effective aggregate demand leads to a production level below optimal quantity q^* and thus a so-called "*deflationary gap*"⁸. Since production capacities operate below optimum, labour markets do not clear. (Jäger-Springler, 2015) This form of underemployment creates involuntary unemployment. Keynesianism rejects the Neoclassical idea of voluntary unemployment. Economic pressure is a strong driver for accepting jobs at or below a subsistence level, and higher-qualified personnel will not end up unemployed if a job offer does not match their expectations. (Thirlwall, 1997; Eichner & Kregel, 1975) Post-Keynesians have elaborated on the idea that economic development does not always reach an equilibrium. For instance, the materiality and reality of underemployment caused by economic activity opens questions about wealth and income distribution in society. In addition to *personal* distribution and redistribution, the *functional distribution* of income is important. I. e. how the produced income from economic activity should be distributed between the factors labour and capital. (Jäger & Springler, 2015)

In Keynesian perspective, raising aggregate demand seems to represent a solution to most economic problems. One way to raise it is to increase one or more of its components. It can also increase indirectly through a change in money supply or the interest rate. Post-Keynesianism

⁸ The mentioned gap is the discrepancy between the production level q^n (which is equal to aggregate demand) and the desirable/optimal production level q^* . In turn, it is also the difference between the effective demand and the demand which would be necessary to reach a macroeconomic equilibrium

focuses predominantly on the macroeconomic perspective, and the structure of an economic analysis is often centred on the monetary system. It criticizes Neoclassical theory for ignoring the effect of money on the real economy. Neoclassical theory assumes a barter economy in its modelling framework and regards money as neutral. Keynesian perspective recognises that goods and labour are remunerated with money, which has further effects on the monetary analysis. Since money is used to compensate the production factor labour, the wage rate⁹ is crucial for the value of money and therefore for inflation. (Jäger & Springler, 2015) If supply exceeds demand, increasing scarcity leads to rising prices. In turn, if production capacities are fully utilized and demand exceeds supply – i. e. if the wage increase exceeds the productivity increase – prices rise as well, because producers face higher production costs per unit. In addition to effective demand, consumers' price expectations for the future also play a role in inflation. (Keynes, 1940; Jäger & Springler, 2015) The only instrument the central bank can use to battle unemployment and inflation, is the interest rate i . The interest rate has an influence on production costs through increasing or decreasing prices on loan-taking. Moreover, money demand and supply are considered endogenous, as Keynesians believe that the central bank has no noteworthy control over the quantity of money in the economy. (Jäger & Springler, 2015)

Aggregate demand is a falling function of the variables consumption (C), investment (I), government spending (G) and net exports (X). In Neoclassical economics, the aggregate supply (S) is represented by a vertical curve, in accordance with Say's law. In Keynesian theory, aggregate supply is initially a horizontal and subsequently monotonically increasing function. While consumption and investments can only be influenced through nudging and government incentives, government spending can function as a direct intervention on aggregate demand. Since aggregate supply (AS) is depicted as a rising curve, prices would increase slightly. However, the effect on unemployment and purchasing power would surpass the price increase. (ibid.) In this way, fiscal policy intervention by the state has noticeable effects on the real economy. When it comes to investments, Keynes warns of macroeconomic fallacies within Neoclassical economics, where savings (s) are considered investments, as they raise future consumption possibilities c_1 at the cost of current consumption possibilities c_0 . While this is true for individual households¹⁰, an economy suffers from a lack of effective demand due to excessive savings. While it is accepted that savings can be used to finance future consumption c_1 , they widen the effective demand-gap during the prior saving periods t_0 by lowering consumption c_0 . This

⁹ The wage rate is the amount of remuneration for labour in proportion to the value generated.

¹⁰ That is if the discounted future consumption possibilities c_1 are equal to or higher than c_0

ultimately leads to a decrease in investment and output down the line. Alternatively, the chain of events can be inverted by allowing debt to finance current investments and consumption (i_0 and c_0), which can be paid back in later periods. This shows that adding up microeconomic processes and phenomena does not – as postulated in Neoclassical theory – allow sufficient conclusions to be drawn about macroeconomic constellations. (Keynes, 1958 [1936]; Jäger & Springler, 2015)

Political implications

Since Keynesianism assumes the environment of economic activity to be fundamentally uncertain, it is impossible to make accurate predictions. From a Keynesian perspective, market failure results from capitalism's inherent tendency towards cyclical crises. For this reason, markets are dependent on political stabilisation. Uncertainty can be cushioned by strong institutions to create a stable environment. (Jäger & Springler, 2015; Wissen, 2015) Keynesians call for a strong state to overcome imbalances and crises and see necessities for state intervention. Economic development can lead to imbalances and lacking effective demand can result in underemployment, which in turn leads to inefficient utilisation of output capacity. Therefore, economic policy measures are called for which, contrary to the neoclassical orientation, manifest not in a rule-bound but in an actively interventionist direction. Based on the concept of effective demand, the deflationary gap can be significantly reduced with the help of fiscal policy measures. Such an intervention must be countercyclical and tailored to the respective economic situation. In concrete terms, countercyclical measures imply that government spending should be increased during economic downturns and cut during upturns. Interventions should be discretionary, i.e. ad hoc when necessary. Keynesians assume fundamental uncertainty in economic development. Therefore, measures that are rule-bound and therefore predictable, such as those advocated by monetarist economists or in the teachings of the Neoclassical school, should be dismissed. In addition to the instruments at the fiscal policy level, there are further possibilities for intervention in the context of monetary policy, even if the monetary policy level only has an indirect effect on the real economy. Wage policy as the third level is primarily expressed within the framework of institutional conditions on the labour market. From a Keynesian perspective, it is important that this level is actively served and not just regarded as an economic policy residue. This includes, for instance, active efforts to ensure fair pay. Unlike supporters of Neoclassical economics, Post-Keynesians do not believe that wage policy can have a meaningful influence on employment. It is more important to find a wage level that is appropriate to economic development. Neoclassical postulates such as minimum wages

causing unemployment are of course strictly rejected by Post-Keynesians. (Jäger & Springler, 2015)

The non-predictability of future events has implications for economic policy recommendations. Instead of market-based solutions and assurance through transparency and increased information density, Keynesians call for a strong state. This is intended to enable direct regulation and create trust through a strong institutional framework. Macroeconomic effective demand must be stabilised through government economic policy and a strong welfare state. (Wissen, 2015) In general, Keynesians assume growing labour productivity, technological progress and general efficiency, but also market instability. Economic growth and increased productivity are the basis for high employment in the wage labour sector, for primary and secondary distribution¹¹, for government revenue (through taxes) and spending policy and for strong domestic demand. Overall GDP growth is desirable and important, as it creates prosperity and reduces distributional conflicts. (Brand, 2015) This was indeed economic reality in most Western countries in the decades after the Second World war. The welfare state expanded in the rich countries based on high taxes and social security contributions; the financial markets were heavily regulated and international capital flows were limited; unemployment was low, the trade unions were in a strong negotiating position, and far-reaching distribution policy measures were taken to minimize inequality of income and wealth. State-owned companies and state regulation characterized national economies. Those conditions lasted until the late 1970s, when theory production turned back towards Neoclassical ideas in the form of *Neoliberalism*. Neoliberal theory, thought out by economists like August Hayek (1899-1992), had an obvious liberal direction. (Butterwegge et al., 2017) Shortly after the end of the Second World War, Hayek warned against an escalating welfare system and called for the state to be reined in. (Jäger & Springler, 2015)

Political Economy.

The term “Political Economy” indicates that economic and political or social processes are integrated into the analysis. In contrast to Neoclassical economics, questions of economic development are understood as broad social phenomena. (Litschka, 2020) The term has many meanings, depending on the context in which it is used. Nowadays it is often preceded by the

¹¹ *Primary distribution* refers to income generated directly on the market, including income from employment, self-employment, wealth and entrepreneurship. In contrast, *secondary distribution* includes government measures to redistribute income, such as transfers received by a household.

prefix “Neu” (*New*) in German or “Kritische/Critical” in German and English respectively. The title dates to Adam Smith and David Ricardo and in particular their criticism and extensions by Karl Marx. In contrast to Neoclassical economics, Political economy focuses on the integrative analysis of economics, politics and society, as it essentially understands the economy as a system of social interactions. (ibid.; Jäger & Springler, 2015) According to Seufert (2007), Political Economy further differs in its different *understanding of science* (critical-dialectical and normative, instead of empirical-analytical), its *object of knowledge* (macro instead of micro phenomena, changes instead of static states), its *definition of an “optimum”* (welfare instead of individual enforcement of preferences) and its *methodology* (verbal historical analysis instead of mathematical equilibrium analysis). Like the Keynesian paradigm, Political economy (PE) stands in the Critical Realist tradition and can be described as a transdisciplinary approach, as it systematically transcends the boundaries of historically established disciplines. (Jäger & Springler, 2015) From a PE perspective, politics in capitalism - despite some minor changes in individual cases - upholds the existing and largely unsustainable socio-economic conditions at local, national and international level (see also Opratko, 2012). This is the cause of many implementation problems of socio-ecological policies, also and especially around effective climate protection. This has less to do with individual character flaws of a lack of insight on the part of politicians. Rather, with the social distribution of power between interest groups and social classes, as well as social discourses and generally accepted principles. (Blühdorn, 2014; Brand, 2015) Alternatives emerge particularly in the field of progressive civil society. State policies change as an expression of changing social power relations and discourses. Although the ‘Buen Vivir’ or ‘Vivir Bien’ approaches originating in Latin America have constitutional status in Bolivia and Ecuador, they are a product and subject of historical and current social disputes (Brand, 2015)

Central terms and concepts

The fundamental principle of the Political Economic paradigm is that humanity has always been forced to work and produce. This is the only way to meet needs that are essential for survival (food, housing, etc.). Production generally takes place within a social framework and in the framework of given productive forces. Work as the central concept is at the core of the paradigm. The terms “*mode of production*”, “*relations of production*” and “*productive forces*” play a central role in this paradigm. (Jäger & Springler, 2015) The analysis of the ***mode of production*** understands social and economic processes as a unit and is based on the interaction between human society and nature. Nature must be transformed through labour to make it usable for humans and thus

give it a use-value. (Marx, 1979 [1890]) Crops do not feed humans until they are harvested and processed into food. Similarly, iron ore is of no use to humans if it is buried deep in the ground. In societies with a division of labour, production is always characterised by its technical and human organisation and the associated power relations and consequences for distribution. (Jäger & Springler, 2015) This is reflected in the state in the form of institutions as a consolidation of class interests. (Candeias, 2021) People's subjective identity, their consciousness, is also based on a certain mode of production. The mode of production is therefore central to human behaviour. The way in which humans interact with nature, and thus production and distribution, is also determined by social conditions (Jäger & Springler, 2015) The historical change in the mode of production is essentially determined by the development of the **productive forces**. The productive forces are the ensemble of available natural resources and means of production in combination with the state of technology and knowledge. The example of the crop shows that this is a historical and social phenomenon. The crops we use today are the result of thousands of years of refinement by humans. The specific plant that is harvested today is based on earlier social transformation processes of nature and had to be planted by humans. Productive forces evolve historically, human societies have further evolved their techniques for mastering nature, resulting in different means of production being available today than in the past. Changes in *productive forces* also lead to changes in social forms of production organisation, i.e. **relations of production**. When the hunter-gatherer society that had existed for many thousands of years began to cultivate crops and raise livestock, people began to gather in large settlements. This enabled a previously unthinkable form of division of labour and brought about a dramatic change in the mode of production. In the world empires that followed, the forms of division of labour supported by the changed social structure were obvious: Slaves carried out various specific tasks. Citizens in turn directed, supervised and determined the fruits of labour. The current production relation involves workers who produce value and sell their labour to survive and consume, and those who own the means of production, who receive the biggest portion of the produced labour and have control over how it is distributed in society. (Jäger & Springler, 2015) Groups of individuals that share interests and a common function in the societal production process or other groups are referred to as **classes**. Examples could be “slaves”, “the working class”, “factory owners”, or “the clergy”. In Political Economy, Neoclassical methodological individualism is replaced by the concept of class as the main economic actors. (Hanappi, 2019)

Kommentiert [A20]: The crop example is vivid. Extend it to a modern context (e.g., GMO debates) to show ongoing relevance.

Every mode of production is stabilised by its specific material and discursive social superstructure. This is the state with its institutions, but civic institutions and social discourse.

Discursive forms of common sense and consciousness, which also include norms of living, working and consuming, are also part of this superstructure. All these factors mutually influence each other. (Butterwegge, Lösch & Ptak, 2017; Jäger & Springler, 2015) The actions of the actors are limited by material structures such as production relations or financial situation. Ideological views and ideas are at the same time the foundation and the result of societal circumstances. (Opratko, 2012; Budd, 2013) However, societal discourses are not directly deducible from the economic basis (the mode of production), nor vice versa. Every society has its own dynamics, history and ideological roots. The relation between actors and setting is therefore dialectic and non-deterministic. (Jäger & Springler, 2015) Political economists assume that ideas, discourses and institutions are societally contested. The state and its institutions are the expression of a consolidation of social power relations between interest groups. Conflicting class interests regarding institutions, discourses and ideas play a central role in the establishment of new modes of production or in changes within a mode of production. Humans and their actions are therefore regarded as the result of societal dynamics. Parallely, humans are also the ones with the power to actively manipulate the course of history. When analysing capitalist societies, it is considered useful to make at least an abstract distinction between two large and fundamentally different classes: Capitalists own a substantial amount of capital and are therefore capable of directly or indirectly¹² organizing the production process. They can usually live off the profits their undertaking generates. The second important class consists of people who generate income through selling their labour on the factor market. This class used to be referred to as “workers”. However, nowadays the term “wage earners” is more common. (ibid.) Within these two classes, further differentiation is desirable, as “class fractions” have varying and sometimes very contradictory interests with therefore wildly different political positions and strategies. (ibid.; Budd, 2013) Distinctive features can include gender, race, or ethnicity (Sayer, 2009), but also (geo-)economic position. The opposing position of dominant and dominated classes is even more evident in some peripheral countries than in European countries, most of which have a long history of industrial action and its achievements behind them. (Becker, 2018) Wage-dependent workers in the global north have a way more stable standing and are economically wealthier than in the global south. Wage earners in Europe are happy about cheap goods produced in the global South. Higher wages and better working conditions would improve the standard of living in the periphery, but this would also entail higher costs for the products. Furthermore, a considerable proportion of the population in industrialized countries holds financial assets or shares, at least through pension funds. This technically earns them dividends from owning property but does not

¹² Directly as the owner or indirectly as a shareholder

make them capitalists. According to Jäger & Springler (2015) only around 0,5 to two per cent of the population have sufficient capital to be able to earn a living from capital income (dividends, interest, profit). The rest no choice but to sell their labour to live. There are also people, such as managers or senior employees, who receive a wage income that is many times higher than the average wage. This means they earn more than some entrepreneurs. Furthermore, many wealthy people work as managers in companies. Another example are self-employed workers. They are not capitalists, so they do not sell their labour and are not bound by instructions. Civil servants also enjoy a special and comfortable position within the wage-earner class. All these groups are characterised by very different problems, interests, organisational possibilities and political strategies. This dynamic, which is inherent to the capitalist accumulation regime from the perspective of Political Economy, can be cushioned by the existence of a welfare state. Disabled people, students with study grants, the unemployed and pensioners, for example, participate in the sense of a community of solidarity through redistribution from other employees and can thus ensure their survival at least temporarily or, in the event of incapacity to work, permanently. In countries without a functional welfare state, being able to sell one's own labour force can be a blessing, as the lack hereof can quickly mean social exclusion or even become an existential threat. (Jäger & Springler, 2015) Political Economy views unemployment as an integral characteristic of capitalist societies. A clearing of the labour market is impossible in the long run, because the unstoppable technological progress leads to increased productivity. Increased productivity implies a reduction in labour needed to reach a point on the production–possibility frontier. This can only be offset by an increase in production or a redistribution of labour (e. g. a reduction in working hours). (ibid.) Furthermore, a small amount of unemployment is desirable from a capitalist point of view. Unemployment means that jobs remain contested, workers have less bargaining power and wages and working conditions can be exacerbated. The more threatening the prospect of unemployment, the more effectively it can be instrumentalized. (Toporowski, 2023)

Critique of commodities, values, and labour under capitalism

Commodities represent a centre point in capitalist mode of production. Marx (1979 [1890]) wrote that societal wealth under capitalism takes the form of enormous collections of goods. In Marxist theory, every commodity has a *use value* and an *exchange value*. The use value is the utility of a product, while the exchange value represents the price of a commodity on the goods market. The exchange value puts commodities in a comparative relation with one another, while externalizing the societal conditions of production. This externalization happens due to the

strict separation of exchange value from use value: Use value is tangible and qualitative, whereas exchange value is abstract and quantitative. The exchange value can change for various reasons (like technological innovation, shocks, an improvement of labour conditions), while the use value remains the same. The use value of a good exists independently from markets or trade, while its exchange value is only present in societies with division of labour and trade. Money and capital are special kinds of commodities, because in Neoclassical theory they can create surplus value. Soil (or land), for example, can bear fruit and is therefore valuable capital. Machines can be used to produce goods and therefore fall under the same category. In Political economic theory, values and surplus values can only be created by the transformation of nature through human labour. Production capital like machines is considered “dead labour”, the result of past expenditure of labour. Machines were created by machines that were created by machines which were – at the end of the chain – created by human labour. A material characteristic of the capitalist mode of production is that labour is seen as an essential commodity. It can be distinguished from other commodities because it is the only one that can create surplus value. This peculiar feature stems from the fact that labour’s use value is higher than its exchange value. If this was not the case (i. e. if the market value of labour was at least as high as the value it produces), the concept of wage labour wouldn’t function, because employers would at least be indifferent about whether a worker would work for them. The created surplus value is appropriated by the employer. (Shapiro, 2008)

Profit, interest and rent are economically different forms of surplus value, skimmed of the top of the product of labour input under varying conditions. Political economic perspective often occupies itself with the *rate of surplus value* $\frac{m}{v}$, which describes the surplus value in relation to the variable capital invested. When describing surplus appropriation of the product of labour, v can also express the paid wage (the price for labour hours put in). Surplus value can also be analysed in relation to all wage, capital and resource inputs, the latter parameters being summed up as c , i. e. constant capital input. That gives the *rate of profit* $\frac{m}{c+v}$. Unlike in Neoclassical economics, price is not equated with value in the political economy paradigm, as the terms use value and exchange value already imply. The *value of a commodity* is $c + v + m$. In the case of more complex modelling assumptions, the distinction sometimes leads to the respective values falling apart and was discussed in detail as the so-called “transformation problem”. There have been various approaches to solving this problem. Piero Sraffa (1898-1983) presented a consistent idea, attempting to solve this problem precisely by treating and valuating capital as the product of labour from previous periods. (Pirker, 2009) The Neoclassical notion, that the value of a

commodity is determined by its market price, underlies heavy political economic critique. Supposedly, it benefits those profiting from the capitalist mode of production, and its existence is important to uphold that mode of production ideologically. The capitalist mode of production can be distinguished from previous dominant modes of production by the existence of the so-called *accumulation imperative* and the resulting dynamics, especially for the development of the productive forces. If a capitalist does not invest and innovate, they risk falling behind in the competitive environment and consequently perishing. This accumulation imperative represents a central mechanism to ensure constant change and development of the productive forces and a constant productivity increase. (Jäger & Springler, 2015)

Production, circulation, and reproduction

In Political economic value theory, value production and value distribution extend over two abstract spheres: The sphere of production is the place where value and productive capital are produced. The sphere of circulation represents the area where surplus value is realized through selling commodities on the market, and where the same surplus value is distributed. The distinction implies that production and consumption are separated, potentially leading to realization and utilization deficits. In the context of this separation, political economic theory equally distinguishes multiple types of capital related to the specific spheres: Production or productive capital (production sphere) is seen as separated from monetary and trade capital (circulation sphere). The origin of the realized profits, however, is value creation through labour, and remains in the production sphere. While production under capitalism is inherently fraught with uncertainty and therefore speculative by default (examples include fluctuating sales numbers, business cycles, externalities, and shocks), value circulation in the form of pure speculation (like stock trade, deliberate vacancy of apartments) does not create any value whatsoever. Profits realized on such speculation classify as pure redistribution of expropriated surplus value without and surplus value creation in the process. (Heinrich, 2013; Gamisch, 2021) A political economist analysis of production includes production in a narrow sense, but also the reproduction processes necessary to upkeep it. An important category is the reproduction of human labour, i. e. providing food, living space, and having children. This “subsistence wage” does not only include necessities for survival, as in Neoclassical theory. Rather, it is aligned with the contemporary conventional living standards for workers and relations of production. A development of relations of production implies a change of living standards, for example a productivity increase resulting in a subsequent wage increase. (Jäger & Springler, 2015)

Societal and research goals

The political economist paradigm stands in a critical-idealistic post-enlightenment tradition. The main goal for Political economists is a critical analysis of the society and the economy, to build a theoretical framework for changes towards an emancipatory society. Political economists want to achieve that goal through focusing on the critique of exploitation and power relations, and on the “alienation of man”. From a Political economic point of view, autochthonous traditions and ideology manifest in general knowledge as well as scientific discourse. Questioning such supposed self-evident realities and visualizing ideologies that support exploitative structures are frequently used analytical tools. The aim is to deconstruct established ideas and social structures and analyse their meaningfulness in contemporary society. (Beigewum, 2010; Bruff, 2011) One important way to do this is to show how societal notions and discourses emerge, develop their impact and how they change. Production relations are not the only one, though a central parameter for the analysis. Others include the role of state and civic actors, as well as the influence of historical developments. However, the analysis must not be carried out independently of production relations, as this would mean to neglect important social contexts, dynamics and determinants. Political economic analysis endeavours to investigate the causes of specific developments and problems without losing sight of the overall social context (Jäger & Springler, 2015) Contrarily to Neoclassical theory, humans are not analysed exclusively for their role as consumers, but holistically. Social groups are investigated for structures that disadvantage them, social and economic aspects considered problematic should be overcome. For achieving this, the perspectives of affected individuals play an essential contributory role. The Frankfurt school of economics was an important source of ideas for the paradigm. Although Political economists point out the unjust position of economically disadvantaged groups, the position of the powerful is ultimately not considered desirable either. The goal is a solidary, egalitarian and society sensible to the needs of all. All positive changes made to the living conditions of disadvantaged groups are considered favourable. It is generally accepted that the deconstruction of traditional structures and a transformed organization of labour relations will be connected to strong interventionist and redistribution policies. I. e. hitherto advantaged social classes and class fractions will have to part with part of their privileges and are assumed to offer resistance. (Schwandt, 2010) There are varying conclusions as to how the desired changes should be achieved: Political economists do see the advantages of a largely unrestricted implementation of the capitalist mode of production for efficient production and allocation of resources. It is also recognized that it promotes a dynamic development of the productive forces. However, this in no way leads to an improvement in the living conditions of large sections of the population by default. Here, followers of the paradigm directly contradict

Neoclassical theory, which trusts in automatic market forces and economic incentives to create widespread societal prosperity. Changes within the capitalist system, which could establish alternative institutions and structures because of reforms, are regarded with favour and play an important role in the improvement of living and working conditions. (Hirsch, 1990) This *radical reformism* is imagined as a dialectic process of transforming the mode of production, rendering it more solidary and egalitarian in the process. Due to the dynamics and contradictions Political economists identify within the capitalist accumulation regime, a permanent reduction in exploitation seems hardly achievable. (Jäger & Springler, 2015) The most prominent contradictions within capitalism are the wage-related contradiction¹³ and ecological contradictions¹⁴. In the perspective of Political economists, those contradictions lead to cyclical crises and negative externalities. (Bontrup, 2019) Nevertheless, Political economic theory finds that it is generally possible to positively alter the reality of disadvantaged groups under capitalism. Examples include a more equal distribution of income and wealth at transnational level, the implementation of comprehensive social security programmes, an expansion of co-ownership in the production process and generally an effective democratisation of economic policies. There is widespread belief that such changes could be achieved in a fraction of the time through revolutionary disruption. Experiences with revolutions in the past and totalitarian socialist regimes, however, have left many sceptical as to what extent it is an adequate strategy. Even if it is recognised that in the past, major social changes have often been realized in a violent form. Moreover, it has also been shown that non-capitalist modes of production do not automatically produce classless societies. Empirical evidence from the Soviet Union, for example, show that non-capitalist modes of production can also be far from emancipatory. (Jäger & Springler, 2015)

Methodology

Political economic approaches are inherently transdisciplinary, systematically crossing the boundaries of established disciplines. They often adopt a constructivist perspective by viewing science, society, and institutions as products of historical social structures, where

¹³ The wage-related contradiction in capitalist production exists between macroeconomic aggregate demand and microeconomic entrepreneurial rationality. Since aggregate demand rises with consumers' purchasing power ($Y = C + I + G + X$), high real wages are beneficial to producers. However, on a microeconomic level, producers can increase their profit margin by paying lower wages, maximizing profits when wages are at subsistence level. (ibid.)

¹⁴ The expansive logic of capitalism leads to the push for unlimited (over)utilization of resources and thus to a collapse of the carrying capacity of ecosystems. (ibid.) Elaboration on ecological environmental issues in the three major paradigms will be subject of section 1.2.

subjective meaning and interpretation play crucial roles in analysing social order. Yet, these mental constructions remain interdependent with material processes. (Jäger & Springler, 2015) Nowadays, Political economic largely relies on Critical Realism as its methodological foundation. Rather than seeking universally valid laws, it accepts the openness and contingency of social phenomena, with economic aspects as an integral part. (Jessop & Morgan, 2022) Its primary tool is the *method of abstraction and concretion*, which focuses on the causalities and connections central to epistemological research. The idea is to reduce complexity to a minimum without oversimplifying. (Jessop, 2007) This is achieved by linking adequate theoretical abstractions with tangible phenomena. (Sayer, 2010) Unlike positivist approaches that rely solely on surface-level quantitative data, Political economy systematically reflects on observable phenomena to uncover deeper interdependencies. Within a Critical Realist framework, neither the economy nor society can be fully explained by individualism alone: Both behavioural and structural dimensions must be considered. Structures are simultaneously constraining and enabling: Individuals act within existing structures (at time t_1), reproduce or transform them, and thereby create new structures (at time t_2). Those structures, in turn, influences future actions. (Pühretmayer, 2005) Some within the paradigm make use of positivist tools (Harvey, 2010), as Critical Realism upholds methodological pluralism and openness.

In abstraction-concretion, reality is understood as complex and ever-changing, necessitating continuous adaptation of abstractions to more accurately capture it. Analysis begins with a specific phenomenon (the concrete). Despite often appearing as the endpoint of the process, the concrete is in fact the starting point for further theoretical elaboration. Scientific analysis thus requires both theoretical insight and empirical-historical knowledge. Abstracted concepts acquire meaning only when they are concretized and put into relation, which requires a constant rethinking of established categories. (Heinrich, 2010) This iterative process can be visualized as a spiral: a concrete fact — even when presented as quantitative data — must be organized and interpreted through theoretical instruments that are themselves subject to revision. (Jäger & Springler, 2015) There are multiple levels of abstraction. The mode of production or class are high-level abstractions. They aim to explain fundamental capitalist relationships. (Heinrich, 2010) More concrete concepts, like wage negotiations, illustrate how these ideas condense in the tangible reality. (Jäger & Springler, 2015). (More concrete) Concepts on a lower level of abstraction (i. e. theories) can be used as a link between abstract concepts. One example of such more concrete abstractions is regulation theory. Over the course of this dialectical process, other elements (such as gender issues, the economic context of certain groups or power

relations) are included if they are considered important for clarifying the concrete. Conceptualisations from other scientific fields and disciplines can also be used. (Jessop & Sum, 2001) Ultimately, political economy seeks to explain the interplay between individual action and social structure without reducing one to the other. Its dialectical method — continuously shifting between abstraction and concretion — emphasizes non-linear dynamics instead of static mechanisms. This process-oriented approach defines “process” differently from positivist disciplines like Business Administration, which treat processes as standardized, repeatable procedures. (Jäger & Springler, 2015)

To illustrate the concept of abstraction-concretion, here is an example using the climate crisis as the subject of the analysis:

The observation of increasingly frequent and intense extreme weather events - such as heavy rainfall or prolonged heatwaves - prompts an analysis of underlying climatic developments. Scientific climate research begins with abstract concepts like global climate dynamics to understand the interactions among the atmosphere, oceans, and land masses. These theoretical assumptions are then applied in concrete models, such as numerical climate simulations, to assess the impact of human activity on the climate. Empirical data — like long-term temperature records, CO₂ emission statistics, and satellite observations — are analysed statistically, with a constant reflection that these numbers rest on underlying theoretical assumptions. These assumptions are refined through comparisons with similar climatic phenomena, leading to a more precise understanding of the causal relationships between anthropogenic emissions and climate change. Each iterative move between abstract theory and concrete data sharpens the perspective and enhances the scientific explanation of observed climate phenomena. Neoclassical modelling operates differently. It typically begins with high-level abstractions (optimizing agents, exogenous preferences, stable functional relationships) and subsequently derives concrete outcomes mathematically. In the climate context, this takes the form of integrated assessment models, where representative agents maximize welfare over time, carbon emissions are treated as a costed externality, and climate damage functions are parameterized to generate optimal carbon prices. In Neoclassical methodology, concretion is not a dialectical refinement but the numerical specification of a pre-given formal structure. Historical and institutional specificity plays a minimal role, due to the model’s presumed ergodic core relations.

Kommentiert [A21]: The climate crisis example is excellent. Expand it to show how Political Economy’s abstraction-concretion differs from Neoclassical modeling

1.2 Environmental Issues From an Economic Perspective

a) Climate Change

Neoclassics.

In the Neoclassical paradigm, climate change does not pose a problem until the resulting reduction of natural capital can be compensated with other forms of capital. Since climate change stems from growth-oriented economic activity, it occurs in the name of increasing general societal capital. Therefore, as long as climate change does not endanger the generation or economic surplus value, its results are acceptable. The basis of this is the Neoclassical assumption that markets naturally reach equilibria in the long run, and that capital types are infinitely substitutable. The theoretical mechanism behind this is the following: Once the overuse of natural capital starts impeding economic growth (i. e. once it becomes scarce), its cost-effectiveness falls, which renders it less profitable to utilize. Said scarcity provides monetary incentives for product and process innovation to preserve resources and sinks. The price mechanism leads to internalization of environmental externalities. If this price mechanism fails to regulate the overuse, it is describing as a market failure. (Wissen, 2015) Stern (2007) describes climate change as the greatest market failure possible. Market failures call for rule-bound regulatory policies. Environmental policies in that sense do not limit the free market but use its mechanisms to reduce the overuse of natural resources and sinks. One example is the EU Emissions Trading System (EU ETS), as set out in Article 17 of the Kyoto Protocol. The Kyoto Protocol aims to reduce greenhouse gas emissions in accordance with the 'cap and trade' principle, among other things. An upper emissions limit is set that is below the current level of emissions. The parties obliged to reduce emissions are then allocated emission certificates. Each certificate authorizes the emission of a certain quantity of greenhouse gases, whereby the total quantity of permitted emissions may not exceed the specified cap. If an actor emits more than it is entitled to, it must buy additional allowances from actors that emit less than they are entitled to. (German Federal Ministry of Environment, o. D.) That way, the use of global sinks receives a price tag and internalizes external results of economic activity. Said price-setting is supposed to raise the costs of natural capital use and incentivize investments in more environmentally friendly products and processes. For some companies, it may be more cost effective to buy certificates. Through this mechanism, monetary capital is automatically

allocated into the areas with the most cost-efficient investments. Natural capital becomes more expensive without limiting the growth of the overall capital stock. (Lohmann, 2006)

Keynesianism.

Keynesian theory does not simply see market failure as the main cause for climate change. From a Keynesian standpoint, markets do not reach states of equilibrium in the long run per default. What causes markets to fail is its tendency towards cyclical crises. Said tendency is also why the economy needs stabilization through anti-cyclical economic policies. These policies can make use of market mechanisms; but regulating the market is equally within the realm of possibilities. Examples include a CO₂-focussed tax, CO₂-tariffs, but also cap-and-trade systems like the aforementioned European emissions trade. The idea that climate change is a negative external effect that needs to be internalised through a state-supported price mechanism can also be found among Keynesian economists. Keynesian climate change policies are not limited to shaping the framework conditions for economic processes, because they are not seen as sufficient to stabilize the market in a sustainable way. Measures can also include direct state intervention like bans or restrictions. Stimulus spending can include subsidies for renewable energies, energy saving and expanding public transport. Government mandate spending could be coupled to social and ecological criteria. Raising charges on the use of natural capital can create room to relieve the burden on the input factor work. That way, employment and aggregate demand can be stimulated while potentially reducing environmental impacts. (Wissen, 2015) An example for meaningful ecological successes through Keynesian policies is the American Recovery and Reinvestment Act (ARRA) of 2009, which used public investments to expand renewable energy, support green innovation, and stabilise employment during the recession. Empirical studies (e. g., Aldy, 2013; Mundaca & Richter, 2015) show that ARRA accelerated wind and solar deployment and lowered costs for renewable energies. Political economists view such measures as helpful but ultimately limited, as they view it as mere short-term ecological improvements while not limiting the damaging externalities of capitalist dynamics in the long run.

Kommentiert [A22]: stimulus spending idea is good. You can link it to recent policies such (Covid green recovery) for timeliness.

Political Economy.

The political economic perspective criticizes the Neoclassical as well as the Keynesian approach. Political economists are of the opinion that externalities cannot simply be internalized under capitalism, because the system inherently relies on an external sphere to absorb ecological and economic side effects. The Keynesian attempts to stabilization are said to not go

far enough. Political economic theory sees the cause for climate change in the social and ecological contradictions within the capitalist mode of production, which Keynesianism does not address. The first contradiction is that the capitalist mode of production is propelled by profits, not by the motivation to fulfil human needs. That focus creates blind spots in the system regarding the social and ecological prerequisites necessary to reproduce the foundation of the mode of production itself. (Wissen, 2015) Capitalism, in this perspective, undermines its own foundation: The planet and the humans. (Marx, 1979 [1890]) Fossil fuels are valuable to the capitalist mode of production. Their high energy density and their mobility enabled its expansion to much further places in a fraction of the time. Since burning fossil fuels is an important driver of climate change, there is a causal relationship between the capitalist mode of production and climatic changes against which Keynesian instruments may not be effective. The other reason why political economists criticize the Keynesian approach is because it fails to see the state in the context of societal and power structures. The capitalist mode of production is driven by control mechanisms that go beyond individual decision-making. Individual, utility-maximizing decisions usually contradict societal needs when it comes to anti-climate change-processes. Keynesians, in this view, see the state as an actor capable of directly influencing societal developments. Since the state is itself an expression and agglomeration of societal relations, it can only ever postpone until the next crisis but never cancel out contradictions. Some political economists see the trend towards the depletion of important resources (e.g. oil) and the overloading of sinks as an intensification of the ecological contradictions of capitalism, which can only be overcome through its fundamental transformation towards a solidarity-based economy based on decentralised renewable energies. (Wissen, 2015)

Kommentiert [A23]: The critique of Keynesianism is sharp. Better to soften it with an example of a successful Keynesian policy to avoid one-sidedness.

b) Resources and Scarcity

Neoclassics.

In Neoclassical resource management, “the environment” is not a comprehensive system, but considered a source of “natural capital”, namely fuels, materials or land. Activities that do not produce surplus value are externalized in the theory. The environment produces inputs for the production and consumption process. (Brand, 2015) As previously mentioned, Neoclassical economists assume a general substitutability between types of capital. (Daly, 2007; Fontana & Sawyer, 2016) Economic growth and technological progress are prerequisites to utilize capital efficiently, and to reduce the share of natural resources and energy in the production

process. Overuse and detrimental utilization of resources and sinks are a result of too low prices and/or missing property rights for natural components. That leads to an externalization of the costs of destruction and misuse. Possible remedies include setting taxes or royalties, the allocation of property rights, or prohibitions. However, such measures need adaptable markets with appropriate consumer price elasticity of demand. Creating new markets can also be an effective element of resource efficiency. Central agents in the field of ecological innovations are companies which see sustainability as a source of competitive advantage and consequently introduce sustainable management systems, production processes or greener products or packaging. The own supply chain can also be modified or diversified as a reaction to resource shortage. (Brand, 2015) While technological changes are considered important, consumers are the sovereign and guide the supply side via their demand. However, Vollero (2022) questions the true motivation of companies and accuses them of presenting environmental responsibility even when their business activity suggests otherwise. This practice is commonly referred to as *greenwashing*, which will be leaned into in more detail in subchapter 1.3.

Kommentiert [A24]: Any specific case?

Political measures are within the realms of possibility, however regulations, taxes and standards for economic activity should always incentivize innovations, never inhibit or otherwise cause inefficiencies. Imaginable public instruments include state-run hedging of high-risk investments, subsidies for research and development, education, and investments into infrastructure. Beyond that, the supply side should rather not be subject to excessive regulation. Cost-benefit analyses should be used to determine where environmental policies would yield the greatest effects. (Brand, 2015) Ekardt (2011) claims such analyses cannot capture non-market damages well and can therefore only ever be a supplementary instrument. From a Neoclassical perspective, there are no "limits to growth", but rather a "growth of limits" made possible by companies and government policies. The overuse of resources is in no way a reason to question economic growth. Consequently, limiting growth must never be the goal or the side effect of environmental policies. (Brand, 2015) As previously discussed, the environment in Neoclassical theory is reduced to a source of capital. As a logical consequence, overuse of resources stops when the resource price rises to its socially optimal equilibrium level, either as a result of demand exceeding supply, or the supply becoming too costly in monetary terms. Environmental and social costs resulting from this practice can only be internalized through property rights and are depoliticized. Questions of distribution and the access of different social groups to natural resources are not part of Neoclassical resource economics. (ibid.)

Keynesianism.

As previously discussed, Keynesian theory generally assumes growing productivity and technical progress on generally efficient, though imperfect and instable markets. This applies to resource markets as well. Biophysical processes are not systematically considered. Keynesians argue that the costs of destructive resource use and environmental degradation in general must be internalised through economic policies, and an ecological restructuring must be promoted. The capitalist mode of production or the way of life based on perpetual growth as such is not scrutinised; instead, it is to be designed in a socially and environmentally compatible way. Prospects focus on qualitative, socio-ecologically sensitive growth, achieved through future investment programmes and the expansion of public services and corresponding employment. (Brand, 2015) A famous Keynesian-ecological concept is the “Factor 5”-approach by von Weizsäcker et al. (2010). It describes how a new global economy can be developed while reducing climate change. The authors analyse energy efficiency, fuel switching, heat and power recovery, renewable energy, feedstock change, product change, improving material efficiency, and reducing non-CO2 greenhouse gases for their effect on resource productivity. They claim that an 80 percent increase in resource productivity is possible in industrialized countries. (Polimeni, 2011) Implementation would require a corresponding policy of “green renewal of the economy”, or the *Global Green New Deal*. In addition to a significant increase in resource productivity, the focus would be on promoting renewable energies, technologies modelled on nature (biomimicry), sustainability and political framework conditions. (Brand, 2015) In addition to economic instruments similar to those in Neoclassical models (such as environmental taxes, feed-in tariffs and environmental management systems) the state could also make use of regulatory bans, charges, pollutant controls or the corresponding orientation of public procurement. (Weizsäcker et al., 2010) Other Keynesian approaches include societal movements of abstinence and international cooperation. In all scenarios, the state is the central acting agent. The question of distribution is hereby central, which is why all measurements must be analysed for their social effects. (Brand, 2015)

Political economy / Political ecology.

The Political ecological perspective is a sub-branch of Political economic theory and follows no one approach but is heterogenous. It is inspired by schools of thought like Marxist theory, Critical theory (Dietz & Wissen, 2009), Frankfurt school of economics, and feminist and post-colonial disciplines. (Gottschlich et al., 2022a) Political ecological theory is based on the

idea that Capitalist dynamics systematically ignore the qualities and benefits of nature and the environment, beyond being a source of profit. (Brand, 2015) As described before, business activity and social dynamics under capitalism are entirely driven by the exchange value of commodities. The qualities of nature for health and leisure are completely detached from any monetary value. In Neoclassical and Keynesian theory, natural ecosystems are only considered valuable as long as they bear resources that can be traded. (Carrero et al., 2020) Non-tradeable benefits of ecosystems like natural fertilization, soil regeneration, air filtering or climate regulation are meaningless for a GDP-oriented approach. (Fioramonti, Coscieme & Mortensen, 2019) As are leisure benefits like being in green spaces, educational purposes or sports and outdoor activities.

Political ecology does not identify overuse of resources or natural destruction as the cause of environmental problems. The starting point for the analysis Nature is subject to societal appropriation, i. e. socioeconomic, cultural and political-institutional. Instead of observing “the environment” as separate form “civilization”, the focus shifts to societal ways of consuming and appropriating nature: For Marx (1979 [1890]), the transformation and utilization of nature for human purposes is “an eternal natural necessity which mediates the metabolism between man and nature, and therefore human life itself”. Essential parts of human life like alimentation, habitation, mobility, communication, health, reproduction are the result of transformative processes and subject to consumption. Society cannot escape its dependencies in relation to nature. This is an insight that is highly topical, especially in view of the supposed post-industrial digitalisation and its virtual globalised spaces. It recognises that social processes always involve material elements and that these processes are therefore dependent on the exchange with nature. For example, through the availability of specific minerals or energy sources. (Brand & Görg, 2022) This concerns areas like division of labour, price development, political framework, and the conception of a “good life”, among other things. Various forms of natural appropriation produce differing living conditions, often under conflicts of interest between individuals or interest groups. (Brand, 2015) For example, the production of and access to basic alimentation is structurally different along the lines of income, wealth, gender, class, and region of origin (FAO et al., 2024): According to the UN (2019), “enough food is produced globally to feed everyone on the planet”. Yet global hunger is persistent with around nine percent of the population (between 713 and 757 million people globally) considered undernourished. While global hunger has risen in recent years, global rates of overweight have risen. (FAO, 2024)

Based on Regulation theory and Gramsci's Cultural hegemony-theory, Political ecological discourse emphasizes the adaptability of capitalism to ecological crises like the overuse of resources. Nonetheless, the main point of criticism concerns the capitalist way of dealing with problems: economically and politically powerful players (including oil and energy companies) usually heavily influence decisions. If problems are dealt with, it usually happens highly selectively and with a tendency towards further valorisation. (Brand, 2015) Examples of this include the relocation of dirtier production steps to other parts of the world and the realisation of the "green transformation" of the Western world with resources from the global South (green extractivism) (Barbesgaard & Whitmore, 2024) So far, it seems unlikely that the adaptability of capitalism will be sufficient to stop the degradation of the natural foundations of life in time. The Political economic perspective on resource policies opposes dealing with problems primarily through voluntary cooperation with firms, and that only in the event of market failure, the state steps in to regulate. This phenomenon can be observed in state as well as intergovernmental politics. The Political economic analysis is focused on the role of politics in the (currently dominant and often problematic) developments around resource use. In this perspective, politics under capitalism is generally able to achieve weak environmental changes. However, on a bigger scale, it safeguards the existing and largely unsustainable socio-economic structures at local, national and international level. This is seen as the root for implementation problems of many socio-ecological policies, especially regarding resource efficiency. This has little to do with a lack of insight on the part of politicians. Rather, with the social balance of power and forces, the shifting of societal discourses, and alleged self-evident facts. Political economic theory identifies civil society as the main potential driver for change, rather than the state or firms. Criticism of economic growth as an unquestionable economic policy orientation, including in the ideas of a 'green economy', is most likely to come from society, sometimes supported by critical science. (Brand, 2012; Opratko, 2012; Brand, 2015) To give an example: Ecuador has adopted the concept of "*Buen vivir*" (eng.: "*good life*") into their constitution in 2008, after arousing the interest of academics, politicians, and social movements. (Caria et al., 2016)

From a feminist perspective, contested access to resources and policies is measured by the extent to which they contribute to the well-being and reproduction of society outside of market-based processes. Like Political economy, feminist Political ecology (FPE) understands ecological crisis phenomena as socially mediated and analyses them in their historical, political and economic context at all levels in an intersectional manner. Human relations with nature are understood as an expression of social relations of power and domination. The FPE explicitly

focusses on gender-specific power relations, by drawing particular attention to the patriarchal structures of access to and control of resources, and examines the gender dimension of ecological destruction, nature conservation and environmental responsibility in an intersectional way. This includes the gender-specific consequences of the economic valorisation and exploitation of nature. Post-colonial approaches can vary strongly, depending on their geographical context, the subject of their research and its theoretical concepts. Beyond the question of resource exploitation in the former colonies, postcolonial and decolonial approaches seldomly deal explicitly with social relations to nature. This could be due to the anthropocentric nature of their central object, which is emancipation, resistance and abolitionism. The most famous theories include the Dependency theory that emerged in South America in the 1960s, the "Green colonialism"-theory and the "Green extractivism"-theory. What these theories have in common is that colonial patterns of power are seen as still effective today, through which the colonial character of power, knowledge and being is regulated and reproduced, and access to resources is secured. This mainly benefits the global north, where resources from the global south are used to generate profits and fuel the green transformation of the economy. (Gottlich et al., 2022)

c) Agricultural Policies and Hunger

The previous subsection illustrates the perspective of the three paradigms on resource use and management and used alimentation as an example. This subsection will illustrate the topic of agriculture and alimentation in more detail and put the topic into the same theoretical economic framework. Hunger has risen sharply in recent years and remains at a high level, affecting nine percent of the global population. An estimated 28,9 percent of the global population (i. e. 2,33 billion people) were moderately or severely food insecure in 2023. One year prior, about 2,8 billion could not afford a healthy diet. That is more than a third of the global population Agriculture is not only a foundation of human life, but it is also a topic that possesses a permanent relevance and will have to undergo measures to improve its resilience to climate-related risks for decades to come. (FAO, 2024) It is essential to integrate the topic into economic analysis to be able to provide effective solutions. The Neoclassical and a Political economic perspective are compared below. The research did not identify any significant Keynesian currents around agricultural policy that go beyond the theories already presented.

Kommentiert [A25]: Adding a sentence afterward like:
„To explore this further, we compare Neoclassical and Political Economy approaches’

Kommentiert [A26]: Can you add some numeric figures about this claim?

Neoclassics.

Neoclassical theory assumes a (near-)perfect competitive market which allocates resources efficiently. The market mechanism is viewed as the most efficient and therefore favourable way to distribute land, resources, labour, and capital. Manipulation of these markets causes distortions and a loss of societal welfare. Such manipulations can include subsidies, tariffs and import restrictions, price controls or impacts from non-agricultural policies. This principle persists in agricultural economics. Therefore, Neoclassical economists advocate for free trade to enable every country to find a niche for themselves and source of competitive advantage. Equally important in this context is the idea of economies of scale through the expansion and industrialisation of long-term production. Forster & Baar (2015) see Neoclassical domination in European agrarian economics and Agri-policies. The first example of this coming to mind is Art. 26 Treaty on the Functioning of the European Union (TFEU) (EU 2016). Instruments and goals that can be identified as supply-side oriented are the goal of increasing productivity and stabilizing markets, supply-side policies like support for farmers through direct payments or loans, or the idea of the Single Common Market. However, there are also instruments with clear Keynesian characteristics like providing fair living standards to farmers or ensuring the availability of food at reasonable prices, or sectoral interventions. The price reduction should for example be achieved through food demand subsidies, the counterpart to the supply-side subsidies for farmers. (EU, 2022; European Commission, 2023) These latter goals do not wear Neoclassical handwriting, as they imply active steering. Neoclassical economists would leave affordability and subsistence to the market. The authors add to their analysis that national agricultural policies are "nevertheless" largely interventionist and protectionist. (Forster & Baar, 2015) Whichever economic paradigm they may follow; the effects of comprehensive European regulations have always been the subject of political controversies. It was for example criticized that agricultural price support payments, which went beyond mere price stabilisation, led to overproduction. (Forster & Baar, 2015) To find the balance between subsidizing farmers and fulfil WTO requirements, the EU introduced "decoupled" agricultural support payments in 2004, not tied to their production quantities, but only to their production capacities (the size of their land, the number of animals). As a result, producers continue to be incentivised via direct payments, as per the 1992 programme, to produce as much as possible, while at the same time investing into expanding their production capacities. (Mennig & Sauer, 2024) The neoliberal response to the food crisis and hunger is therefore to increase productivity and efficiency through market liberalisation. The specific tools discussed earlier support this. These productivity increases promote large companies and strengthen their competitiveness. Small, "uncompetitive" companies discontinue. From a Neoclassical perspective, the cause of rural poverty is based on

the belief that people have not yet been reached by the market and its benefits. The proposed solution is therefore to bring the markets to the poor and integrate them into the markets. (Borras, 2009)

Political Economy.

Critical agrarian political economy is an academic field that studies the social relations of production, property, and power in rural and agricultural systems, analysing how these structures change over time. In contrast to Neoclassical economics, it identifies the causes of poverty and hunger embedded in social conditions. From this perspective, transformative policies that change the social framework around poverty and hunger can solve these problems. (Aguilar et al., 2023) Four key questions illustrate the focus of the Political economic analysis: „*Who owns what? Who does what? Who gets what? What do they do with it?*” The underlying theme is therefore a thorough analysis of property relations and the division of labour, which underpin the relations of distribution, consumption, reproduction, and accumulation. (Bernstein, 2017) Special attention lies on the production sphere. Especially the analysis of power relations inscribed in production processes play a significant role. Social relations are assumed to be historically grown and subject to social contesting. Political economy therefore also criticizes Neoclassical theory for naturalizing given social relations as fixed on broader scale, and as following natural laws. (Forster & Baar, 2015) This forms the basis for research illustrating how societal relations behind for-profit food production creates problems and contradictions: Structural change leads to the destruction of the intended polypolistic market form through market concentration dynamics. The strong position of large farmers in relation to small farmers is not only leading to the death of farms within European economies but is also putting pressure on farmers in the Global South. This happens due to increasing market liberalisation because of free trade agreements. Dysfunctional effects such as declines in farms can be the result. Additionally, big supermarket chains use their powerful market position to press down prices for produce, further putting pressure on farmers. (Stappel, 2018; Wiggerthale, 2007; Witzke, Noleppa & Schwarz, 2010) Decoupled subsidies, like the EU subsidies described earlier in this section, lead to price distortions: In Germany, for example, various agricultural products are sold below their production costs, which should not really be the case with decoupled payments. (Witzke, Noleppa & Schwarz, 2010) There are reliable studies and numerous media reports showing that milk and dairy products (e. g. butter), eggs, and poultry meat have such a strong position in the market and subsidy structure in Germany and the EU that producer prices are often below cost-covering production costs. At the same time, discounters are offering aggressive low prices (e.g.,

Kommentiert [A27]: Can you specify which products or how widespread this is to strengthen the argument?

butter for a few cents per pack). (BUND, 2021; Holdinghausen, 2016; Forstner, 2023) As European farmers export their production below cost, these exports lead to dumped prices in countries which would otherwise be competitive due to favourable climatic conditions and low-price levels. (Witzke, Noleppa & Schwarz, 2010) Watts (2013) showed that local food networks in Nigeria showed disruption as they became part of highly integrated global food trade networks. It shows that the increasingly difficult access to resources further increases the social and political dependence of small farmers. This highlights the fact that while droughts are climatic events, famines are social and political events.

d) Environmental Protection and Biodiversity

Neoclassics.

Neoclassical economists usually opine that there is no limit to growth. On the contrary, society and state must set the framework to facilitate growth without limits. (Whitehead et al., 2011) Environmental damage as a result of business activity is externalized, which is why it must be internalized via property rights and a price mechanism. The only time situations where environmental issues become relevant is when they impede or hinder further business activity. Following typical Neoclassical methodology, this is usually determined via mathematical deduction and abstraction from real world phenomena. Coase (2013) spotlights an example for this in the description of the theorem carrying his own name: He quotes the example of a factory polluting a stream of water which provides subsistence for a fisher. The famous conclusion is that under certain circumstances, the assignment of property rights can lead to the point of Socially Optimal Outcome which can be found on a graph. When the factory owns the river, they can make the fisher pay for every unit they reduce their business activity by to cause less pollution. If the fisher owns the river, they can make the factory pay for every unit they want to pollute the river with their activity. In other words, the socially optimal outcome represents just the right amount of pollution in the river to facilitate the business activity of both parties. Although the outcome represents an economic optimum, not an environmental ideal, the idea to pinpoint the optimal quantity of environmental pollution seems outdated from today's perspective, but it is suited to illustrate how Neoclassical theory manages environmental externalities.

Political Economy.

Kommentiert [A28]: Like the previous section, consider adding a brief opener like 'This section examines environmental protection through Neoclassical and Political Economy lenses

Kommentiert [A29R28]: I will. The state of the thesis right now is the substantial part. Introductions, formatting, tables, graphics and so on will be added for clarity.

Kommentiert [A30]: The Coase example is clear, but 'just the right amount of pollution' might confuse readers. Clarify that it's an economic optimum, not an environmental ideal

McAfee (1999) criticized the idea of “green development aid” at the end of the last century. The source of her criticism was an intergovernmental movement to provide indirect development aid to regions in the global south by integrating their ecosystems into the international market regime. As a positive side effect, the Convention on Biological Diversity (CBD) (2011) predicted preservation effects for natural habitats, as per the Coase theorem. McAfee counters with nature degenerating into a global currency, and ecosystems becoming warehouses of resources for biotechnology. The author sees the Convention on Biological Diversity, which was agreed upon in Rio de Janeiro in 1992, as a claim by the “global elites” (ibid.) to the largest share of the earth's natural resources. In her eyes, this happens because nature and its significance, effect and impact are set in relation to international markets. The official position at the CBD was that the entire world must have an interest in preserving the planet as the basis of our existence and agreed on transnational and intergovernmental instruments and mechanisms. (Secretariat of the Convention on Biological Diversity, 2011) In her text, the author criticises the privatisation and commercialisation of nature, and that the value of nature and its right to preservation are only determined now, on the world market. By applying a “post-neoliberal” (McAfee, 1999) version of environmental economics, property rights and commodification should lead to reduced damage to the environment and reduced waste quantities, but only to the extent that corporate profits did not suffer. At the same time, the plan would be to socialise the costs arising from environmental pollution. (ibid.) Brand & Görg (2022) argue that a valorisation of ecosystems in monetary terms per default contradicts holistic approaches which understand society as part of the environment that surrounds it. Political economy dissents from the notion that commodification of nature is an effective way to protect it: The compound value of a given piece of nature can never be reflected by its market value as productive capital, especially to non-natives: The knowledge of the local inhabitants is of enormous value, for example, for the balance of the specific ecosystem or cultivation practices. But it is only by opening the market that this implicit and explicit knowledge can be assigned a market value. This means that the competitive market value of a piece of nature is realised exclusively for people from outside. (McAfee, 1999) The focus lies therefore on those aspects of nature that can be extracted from their local context, developed with private industrial technology and sold on international markets. This perspective ignores the complex ecological and social relationships in which biodiversity is embedded and views ecosystems as a storehouse of raw materials for the global market rather than the basis of local and national life. It also devalues countless non-commercial benefits of biodiversity that are essential to people. Finally, this approach distracts from the political and economic causes of the threat to many forms of biodiversity, which can only be understood in the respective historical and local context.

Due to the short time frame, there is no empirical evidence yet how exactly the countries would benefit from "green development aid". Despite increased competition and regional competitive advantages, Political economists question if regional suppliers of gene material would be able to prevail on a globalised competitive market against companies with large capital stocks. It is possible that they would hardly stand a real chance in a mutually undercutting production competition. Only few developing countries might develop such a high opportunity cost advantage with their location or resource deposits to become a production centre against industrialized countries. (McAfee, 1999) New technologies render processing mineral and genetic resources less cost-intensive and create opportunities for regional producers. However, Political economic theory points to the fact that the Neoclassical theory regarding development aid predicted similar dynamics in Africa, South America and Asia over the course of the 20th century. Today, these regions are still viewed as underdeveloped, and Political economists ascribe this to global asymmetries and dependencies as described by the "Dependency theory", developed in South America during the 1960s. The theory describes global systems and dynamics of theoretically open and competitive markets. Ricardian theory of competitive advantage forms the basis of the analysis. It states that economic relations between the industrialized and developing countries tend to increase the distance between them and reproduce the conditions of underdevelopment. According to the theory, the main reason for this are discrepancies in global productivity growth rates between manufacturing countries and those which produce the necessary resources. Their larger capital stock and technological advantages give a competitive advantage to industrialized countries, which then extract (agricultural and mineral) resources from the global south for further processing. Since the majority of price and technological growth happens in these sectors and not in production, growth does not fully spread to the primary sector through equalization of the prices because of union pressures and the presence of oligopolies in the developed countries. Empirically, a deterioration of terms of trade and a growing concentration of technical progress and wealth realisation in the manufacturing countries have been the result. Developing countries were left with proportionately low surplus value realisation, despite delivering the invaluable and necessary resources. (Sonntag, 2001) Political economists believe that green development aid may occur the same dynamic flaws.

After extensive discussion of environmental externalities in the framework of economic public discourse, the following conclusions can be drawn to answer the second research

question (**q1.1**¹⁵): In current economic discourse, environmental issues have become a central concern, increasingly recognized as critical to the sustainability and stability of economic systems. They are often discussed in terms of market failures, externalities, and the need for regulatory interventions to internalize environmental costs (e. g. pollution taxes, emission trading systems, environmental standards). There is also a growing acknowledgment of the limitations of traditional growth-oriented models to address ecological limits. Scientific debates now frequently explore alternative approaches that emphasize resource efficiency, the importance of ecological boundaries, and the integration of environmental considerations into economic planning. Overall, environmental issues are no longer peripheral but are integral to shaping policies, strategies, and the development of new economic paradigms aimed at achieving sustainable development.

1.3 Discussion

To conclude the first chapter, it can be valuable to summarize the theoretical foundations of the three major economic paradigms and their perspectives on environmental issues. This provides readers a framework for drawing first conclusions and establishing a theoretical foundation for chapter 2 which will examine societal welfare, the economic indicators developed to measure it, and their implications. Section 1.1 and 1.2 explored Neoclassical, Keynesian and Economic political theories, outlining their developments, interconnections and societal and political goals, for a better understanding of economic phenomena. The three paradigms were placed within their historical evolution, asserting that economic theories cannot be divorced from their socio-historic contexts, as they evolve in response to broader societal changes. The Neoclassical paradigm, rooted in market efficiency and individual rationality, conceptualizes the environment as "natural capital", viewing environmental concerns as market failures. It assumes that externalities (such as pollution or resource depletion) can be internalized through mechanisms like property rights or market-based solutions (e.g. carbon trading) as long as the instruments do not impede economic growth. In reality, many companies engage in strategies like creating the illusion of sustainability without (substantially) changing business practices, confirming that the theoretical incentives do not always translate to the expected corporate actions. Similarly, Keynesian approaches emphasize state intervention, but firms respond

¹⁵ q1.1: Which role do environmental problems play in contemporary economic discourse, and how are they framed within dominant economic paradigms?

differently depending on industry pressures, shareholder interests, and institutional constraints. A firm-level analysis is therefore essential to bridge the gap between theoretical economic incentives and actual corporate practices. Critics argue that Neoclassical theory reduces environmental valuation to economic terms, neglecting broader ecological and social implications, particularly for marginalized communities. In contrast, Keynesian economics advocates for active government intervention to regulate markets, address externalities, and promote an ecological restructuring of the economy. It suggests that tackling unemployment and inequality can lead to more sustainable environmental outcomes by furthering economic stability and discretionary measures. Keynesian perspectives emphasize resource productivity and innovation as pathways to sustainability but are critiqued for their limited engagement with systemic inequalities underpinned by environmental exploitation. While Keynesians propose policy solutions such as green investment and state-led environmental initiatives, critics argue that such measures often fail to challenge the deeper structural forces driving ecological crises. The Political economy approach emerges a critique of both Neoclassicism and Keynesianism by emphasizing the importance of power dynamics and the distribution of wealth within capitalist systems. It posits that capitalist structures lead actors to prioritize profit over ecological balance, reducing ecosystems to mere resources for extraction and consumption. This perspective underscores the need for a fundamental transformation of economic systems toward more equitable and sustainable practices, rather than relying on market mechanisms or state intervention alone. Political Economic scholars argue that ecological crises must be understood within a broader socio-historical context that accounts for wealth distribution, labour exploitation, and global inequalities. Overall, there is need for a nuanced understanding of economic theories that recognizes their historical origins, methodological implications, and the necessity of integrating diverse perspectives to address current global challenges, particularly in the realms of environmental regulation and sustainability.

By examining concepts such as sustainable business models, Greenwashing, and Corporate Social Responsibility (CSR), the next subsection will explore how firms navigate the intersection of economic constraints, environmental responsibility, and strategic positioning. While a comprehensive analysis would go beyond the scope of this thesis, presenting key business challenges and relevant research can help outline a framework for a more sustainable economic system.

Corporate Governance and Corporate Social Responsibility.

To analyse corporate sustainability on a firm level, it is essential to examine corporate structures in detail, to analyse how they would respond to cultural change or environmental regulations, and why. The majority of corporations are stock corporations with equity stock or shares. Stocks and shares are ownership certificates which confer control rights and often voting rights. Voting rights allow holders to vote at the annual general shareholders meeting. The number of votes a shareholder has corresponds to the number of shares they hold. Among the critical decisions shareholders can vote on, is appointing the board of directors, which is ultimately the governing body within a firm. Directors, especially non-executive ones, represent the shareholders and look after their interest. However, they also look after the interests of other stakeholders, such as the employees'. (Meyer, 1994) After due research, there seems to be no universally agreed up definition corporate governance (CG). Rather, most approaches contain descriptions and assumptions about the main (individual and societal) objective of the firm (Rossouw 2009) or different dimensions of GC. The term describes all procedures, rules, guidelines and laws that determine the management of a company. It therefore outlines the legal and factual regulatory framework with regards to management and control of the company. (Stuebs & Sun, 2015) Shleifer & Vishny (1997), for instance, argue that CG deals with the ways in which suppliers of borrowed capital assure themselves of getting a return on their investment. This definition implies the main objective of the firm to maximize shareholder value. This is based on the idea that capital investors "sink" their funds into the company, with no returns other than financial ones. Since outside capital is essential to companies and managers are going to want to borrow money in the future, there is an incentive to make it worth the investors' while. Other stakeholders have more protections from expropriation, which is why shareholders need duty of loyalty. (ibid.) In combination with the Trickle Down-theory, Shareholder value-maximization rises to an integral duty for managers.

Following Neoclassical theory, this approach has a second dimension: As the sovereign of the model, consumers exercise power over the market through their demand. For instance, if consumers want a change towards more sustainable business activities, companies have no choice but to comply and become more sustainable. Otherwise, people will take their business elsewhere, where their demands are met. And looking around, it certainly appears that way. It is hard to find a company that does not self-advertise with lower water consumption, lower plastics share in their products and packaging, or other indicators of sustainability. And corporate action

seems to take effect as well: total net GHG emissions in the EU decreased by 8,3 percent in 2023, compared to 2022. This is the largest cut in decades, excluding the covid year of 2020. Going forward, the EU only needs a 2,8 percent annual reduction (of 1990 emissions, around 134 million tonnes of CO₂ equivalent) to meet its 2030 targets. (European Commission, 2024) On first glance, all of this seems like European industry is marching towards the goal of environmental sustainability in absolute numbers. Unfortunately, these numbers paint a different picture when put into context: 2023 was also a year of economic stagnation, with 0,5 percent economic growth across the EU. Out of all climate change targets, the EU takes insufficient action in all areas except for the carbon neutrality goal for 2050. With all its planned policies and actions, the EU is on track to contribute to a ~ 2,3-degree global temperature increase, which lies above the agreed upon target of limiting global temperature increase to below 2 degrees Celsius, while pursuing efforts to limit the increase to 1,5 degrees. (Climate Action Tracker, 2024a) So if the economy is guided by the consumer, and 77 percent of people are concerned about the environment (Wodnicka, 2023), then why are neither the EU, nor any of the larger, industrialized countries currently on track to meet the 2° Celsius goal? (Buchholz, 2024) One possible explanation lies in Neoclassical theory itself. (Near) Perfect competition implies transparent information about and for all demanders about suppliers. In theory, creating a more sustainable product, service, production process or other business activities, should give producers a competitive advantage over companies who do not fulfil customer needs in that way. And indeed, that is observable. Saari et al. (2021) found that environmental knowledge and risk perception have an impact on environmental concern, and all three have a direct impact on sustainable consumption behaviour. Ergo, consumers' demand *should* guide the supply side towards more sustainable business practices over the long run, which raises the question why it does not in practice. And if the consumers' role as "rational, utility-maximising sovereigns" of the Neoclassical model can be upheld in this instance. Business-driven economic activity plays a central role in climate change. (OHCHR o. D.) Especially companies whose business activity is detrimental to the environment therefore have a responsibility towards the people it shares it with. Shifting the blame to consumers equals irresponsibility. The societal duty of companies to create shareholder value therefore must be reassessed.

Stakeholder-approach.

So how can businesses be incentivised to feel responsible? The actions of businesses affect a range of communities locally, regionally, and beyond that. Corporate behaviour can

either be socially responsible, in which case it is referred to as “corporate social responsibility” (CSR), or detrimental in which case it is called “corporate social irresponsibility” (CSIR). Neoclassical theory traditionally aligns with Shareholder Value theory, where firms prioritize profit maximization to the benefit of society. Keynesian and Political economic perspective acknowledge broader social and environmental responsibilities, aligning more closely with approaches like CSR, Corporate Sustainability and Stakeholder theory. However, the paradigms offer vastly different perspectives on the concept CSR: While in the Neoclassical theory, CSR can be seen as a voluntary, market-driven strategy to improve reputation and consumer trust, the Keynesian view sees it functioning properly only as a response to state intervention and regulation. Political economy supports CSR initiatives over the libertarian alternative, as it can generally reduce exploitation of humans and the planet. However, Political economists also view CSR as a tool for legitimization and control, rather than true sustainability. When exploitation is always kept below a certain threshold that people accept, this may prevent people from abandoning exploitation altogether. Shareholder-focussed models centre on profit for investors. In contrast, Stakeholder theory, first introduced by philosopher and professor for business administration R. Edward Freeman (*1951), argues that businesses have responsibilities toward employees, consumers, locals, the government, and the environment as our life foundation. (Phillips et al., 2019) This perspective challenges the Neoclassical assumption that market mechanisms alone ensure optimal outcomes. Firms increasingly justify CSR initiatives through stakeholder engagement, balancing economic and environmental goals. However, selective stakeholder engagement can distort sustainability efforts, as firms often prioritize investor-friendly initiatives over meaningful ecological transformation. (Singh & Manoharan, 2024) Political economists argue that power asymmetries shape stakeholder influence, meaning corporate sustainability efforts may reinforce existing inequalities. In continuation, approaches like Postgrowth question whether firms can ever be truly sustainable within a growth-driven system.

Greenwashing.

These findings, along with a vast field of research with similar results (see also Bammer, 2023; Szabo & Webster, 2021) has two major implications: Neoclassical theory assumes that market forces, driven by well-informed consumers, guide companies in a societally desirable way, with dishonest or low-quality producers being penalized. However, Vollero (2022) questions the true motivation of companies and accuses them of presenting environmental responsibility

even when their business activity suggests otherwise. This practice is commonly referred to as *Greenwashing*. Indicating a false environmental intent may stem from the motivation of “*gaining an unfair competitive advantage by marketing a [...] product as environmentally friendly, when in fact basic environmental standards have not been met*” (European Parliament, 2020). The European Securities and Markets Authority (ESMA) defines greenwashing¹⁶ as “*not clearly and fairly reflect[ing] the underlying sustainability profile of an entity, a financial product, or financial services*” and see the practice as “*misleading to consumers, investors, or other market participants*” (ESMA, 2023). A good example is the fast fashion industry. Since the concept of fast fashion is not compatible with green values, these companies resort to greenwashing tricks to meet social and legal demands. They do so by switching from plastic to paper bags, change their use of material or reduce the amount of water used in their production. These measures are in themselves desirable. However, while their absolute impact may be reduced and sounds good when expressed in absolute numbers and technicisms, their actual impact remains negligible. (Bammer, 2023) Indicating a false environmental intent may stem from the motivation of “*gaining an unfair competitive advantage by marketing a [...] product as environmentally friendly, when in fact basic environmental standards have not been met*” (European Parliament, 2020). Greenwashers are not transparent with the market (Szabo & Webster, 2021) While economic paradigms provide a broad framework, they do not dictate corporate behaviour. Companies are influenced by additional factors like market pressures, stakeholder expectations, regulatory environments and corporate governance. Issues like greenwashing, CSR, and sustainability strategies must be analysed beyond macroeconomic theory, focusing on how firms interpret and implement economic incentives and environmental policies. For example, Neoclassical economics assumes that profit-maximizing firms will design their activities more sustainably if market mechanisms or regulatory policies incentivize them to do so. However, if this effect were generalizable, greenwashing would not be an effective marketing strategy. Instead of incentivizing genuine sustainability, market forces often reward companies for creating the illusion of it, either by misleading consumers or by catering to their desire to feel good about their purchases. As a result, sustainability becomes, at best, an indirect market outcome. Moreover, as long as it remains more cost-effective to simulate sustainability rather than invest in genuine sustainable practices, an unregulated market is unlikely to drive meaningful change.

¹⁶ As there is no official definition and classification of greenwashing practices to the author’s knowledge so far, readers are assumed to understand the basic concept sufficiently to capture its role in this context

2. Societal Welfare

Economics can be understood as the science of generating and utilizing wealth and well-being¹⁷. Adam Smith already incorporated this concept in the title of his main work *Wealth of Nations*. (Fellner, 2015) The core question behind all economic activity is who produces for whom, and why and under which circumstances they do it. Centre point of economics is therefore the production process, i.e. the transformation of nature through human labour, and the distribution of the produced surplus value in the form of wealth and goods (Jäger & Springler, 2015) How exactly that wealth is defined or measured has changed over the course of history. In the age of Mercantilism, wealth was defined as the amount of physical money (gold) a nation owned. The function of economic policies was to increase the volume of money. William Petty (1612-1687) questioned this understanding of prosperity, as in his view money only presented around one to three percent of national English assets. The majority of assets was held in the form of landholdings, real estate, ships, and furniture. (Fellner, 2015) For Petty, money supply remained a part of richness, though as part of a Nation's production capabilities. Production capabilities formed the basis for his definition of wealth in the form of societal production surplus value. Notably, Petty was not referring to profits. At the time, producers were mostly craftspeople and artisans, and profits were hardly distinguishable from wages. (Kurz & Salvadori, 2005) In the Classical era of economics, analyses centred on the understanding of production processes, which makes Petty's conclusions a logical consequence. The function of economic policies shifted towards increasing production, especially in phases of extreme poverty. (Fellner, 2015) Over the course of the so-called *Marginalist Revolution* post-1870s, the concept of wealth shifted from production to consumption capabilities: Production was no longer seen as end in itself, but as a means to satisfy human needs. The high time of Marginalist theory coincided with a surge in the spread of socialist theory. (Steedman, 1995) However, practical implementation of the developed theoretical models proved difficult. Out of all schools of economic thought which developed out of Marginalism, Neoclassical theory is the most prominent. Neoclassics developed an understanding of consumption based on endless individual needs. When needs are potentially infinite and individual, research focus shifts back to production, as it is the determining factor limiting need-oriented consumption. The Neoclassical view on consumption essentially rolls back developments in welfare theory. Since the establishment of Neoclassical theory, scientific discussions of welfare have not yielded substantial developments of the

¹⁷ The terms "welfare" and "well-being" are used interchangeably in this context, unless otherwise specified.

predominant theoretical and economic political understanding. (Fellner, 2015) However, there have been ongoing civic and academic discussions about the mode of measuring societal wealth and well-being. Agrawal et al. (2024) describe a new (sub-)discipline in economic research, which concerns itself with so-called happiness economy. Hirschauer, Lehberger & Musshoff (2015) found that recent well-being focussed studies centre factors beyond consumption possibilities alone. In the subsequent section, the concepts of happiness and well-being will be categorized and analysed for their definition and standing in the three major economic paradigms¹⁸. Subsequently, some of alternative models of measuring well-being will be analysed and discussed against the open question of how society wants to measure wealth and richness. The production-centred GDP approach is also going to be analysed against the context of contemporary developments, to build a base for the discussion of the Postgrowth paradigm in the third part of this work.

Neoclassical theory.

As indicated previously, Neoclassical economics equates well-being with a certain level of utility provided by consumption. People make rational choices to maximize their satisfaction. More purchasing power therefore leads to greater happiness. Economic growth and rising incomes are considered the primary drivers of societal well-being. Increased production and consumption improve living standards, which in turn enhance happiness. A well-functioning market ensures optimal resource allocation, leading to overall societal welfare (through consumer surplus and producer surplus). The focus therefore remains on the individual as the centre of the analysis.

Keynesian theory.

Keynesians argue that well-being is closely linked to macroeconomic stability, full employment, and a welfare state protecting individuals from economic downturns. Unlike the Neoclassical view, Keynesianism sees an active role for governments in promoting well-being through fiscal policies, social spending, and investments in infrastructure that improve quality of life. It is therefore apparent that the Keynesian concept of well-being focusses more on societal conditions which effect individuals in the second instance.

¹⁸ To recall the theoretical bases of the paradigms, consult subsections 1.1 a) and b)

Political economy.

Political economic theory critiques both Neoclassical and Keynesian approaches for ignoring how power relations, conflicting class interests, and capitalist dynamics shape people's well-being. It argues that happiness is not just an economic outcome but a function of broader social and political implications. Happiness for the majority is seen as inseparable from social justice, democratic participation, and ecological sustainability. Individual well-being cannot be understood isolated from communal well-being and environmental health. Political economic perspectives reject the notion that economic growth inherently leads to greater happiness. Instead, they emphasize alternative indicators for well-being, which will be discussed further into the analysis, in subsection 2.2. Some branches of Political economy, particularly Degrowth theory, argue that well-being should be decoupled from economic growth. They advocate for redistributive policies, reduced working hours, and community-based economic models as pathways to a happier, more sustainable society.

To give the discussion about welfare a meaningful direction, it requires a benchmark against which it can be analysed. However, in first instance, the attempt to formulate a societal well-being objective is ultimately philosophical, as there is no objectively right or wrong answer. Agrawal et al. (2024) cite studies suggesting that once a certain economic standard of living is reached, government policies should shift focus toward non-economic aspects of life. The authors argue that the true driver of human motivation — across economic, social, environmental, and political spheres — is not monetary incentive, but happiness. This aligns with a 2011 UN General Assembly resolution recognizing happiness and well-being as universal goals. (Ugyel, Givel & Chopel, 2023) In the past years, research investigating happiness, personal satisfaction and subjective well-being have emerged across various disciplines. Some examples are the fields psychology, philosophy, sociology, economics and management as examples. (Agrawal et al., 2024; Hirschauer, Lehberger & Musshoff, 2015) The OECD (2011) emphasized the importance of including many dimensions of well-being to better understand, measure and enhance well-being. (see also Stiglitz, Sen & Fitoussi, 2010) A few years later, the OECD (2016) even proposed a framework for a well-being-oriented economy. Since 2016, there has been a growing shift toward basing government decisions more on human well-being rather than financial wealth and economic growth. Alternative ways of measuring personal welfare have become increasingly important in both academic and political discourse. Nevertheless, despite

decades of research on happiness, the field remains marked by conflicting concepts, with no consensus on terminology or definitions within the scientific community. (Agrawal et al., 2024; Hirschauer, Lehberger & Musshoff, 2015)

However, this should be a relatively new development. And societal discourse seems to trail behind on the matter. The World Bank (2000) defined poverty as “*pronounced deprivation in well-being*”. The German *Federal Centre for Political Education* (ger: Bundeszentrale für Politische Bildung – BpB) (o. J.a) defines prosperity and wealth “*in an economic sense*” as the “*degree to which individuals, private households or society as a whole are supplied with goods and services*”. (ibid.) BpB names GDP or income-per-capita as examples for indicators to measure wealth by. However, the BpB also defines three indicative dimensions for wealth: “*material prosperity, the social and participation dimension and the ecology or environment and sustainability dimension*” (ibid.). Even though the BpB does include a social and environmental dimension, the aforementioned description focusses heavily on economic factors. The ecological and environmental dimensions are abstract and undefined. Financial poverty is believed to have potentially strong negative implications for social participation. (e. g. Sommer et al. 2024) Gintis (1972) generally observes that while capitalist societies produce great quantities of both public and private goods and services, social life falls into progressive decay. BpB (2016) also defines the term *quality of life* as “*the degree of supply with goods and services to persons or households in an economy in terms of material wealth*”. The institute adds adequately paid work, a clean environment, and participation in political decisions or the personal well-being as important factors. This selection of factors implies interesting aspects: Again, there is a straightforward economic dimension represented by “the supply with goods and services”, “material wealth” and “adequately paid work”. The other factors seem to diversify the BpB’s concept of wealth and well-being at first glance. Notwithstanding, considering that a satisfactory housing conditions (Stangl & Raml, 2023), political participation (Becker, 2002) and an individual’s level of personal well-being (Office for National Statistics, 2015) are all dependent on one’s economic status, this approach to wealth remains one-dimensional. Son (2011) acknowledges that financial wealth can be identified as an influential factor for personal well-being. Yet, poor people can be happy. Monks or other religious devotees are good examples. Some believers even find faith in purposefully depriving themselves of earthly goods. Son also writes that poverty is not a prerequisite for someone to suffer from happiness deprivation. If a wealthy person says they are unhappy, it should hardly spark strong disbelief. (ibid.) If anything, it might induce spite.

When reflecting on these findings, the question arises where this mental link between material prosperity and overall well-being originates from. According to Son (2011), the GDP per capita and aggregate income measures have been a standard economic indicator for economic growth and therefore success. Agrawal et al. (2024) describe a historically observable causal relationship between access food and necessities, or one level above that, an increase in purchasing power and an increase in well-being. Son (2011) suggests that economic growth provides people with greater utility through increased purchasing power. Furthermore, he mentions higher per capita income as an important factor for life expectancy at birth, literacy rate, enrolment rate, and child mortality. However, higher economic growth does not always lead to a higher level of well-being in industrialized countries. (ibid.; Agrawal et al., 2024) Fellner (2015) reports that there has been no significant increase in subjective well-being in many countries, despite increasing income as well as GDP. Hirschauer, Lehberger & Musshoff (2015) describe that the belief in GDP as an appropriate guiding indicator for economic policies has been fading for the past decades. The link between national productivity and personal and societal welfare will be the subject of a subsequent general analysis of welfare indicators. However, there are other economic variables which influence social welfare: Santos & Simões (2021) for instance have studied how globalisation in its different manifestations influences welfare state expenditure, controlled for their specific configuration. While spendings on health and education prove independent from globalization, other areas across welfare models are positively influenced.

2.1 Economic indicators of societal welfare

Kallis et al. (2018) emphasized that the supposedly naturally growing form of the national economy in its own right is relatively novel. And that economic growth as a policy goal was first formulated in the 1950s, in unison with developing accounting techniques and statistical tools to measure it. The previous section also showed that there is more to individual and societal happiness than just monetary wealth. *“Money does not buy happiness”*, as the saying goes. Indian economist and philosopher Amartya Sen (*1933) once drew the following link between economic wealth and personal satisfaction:

“If an immensely rich able-bodied, healthy, well-educated person were to tell us that he is unhappy, we would have no prime foci reason to disbelieve him (he could be really unhappy), but we would scarcely think that his unhappiness indicates that his standard of living is low. He is unhappy despite his high standard of living. The fact that we see nothing unbelievable or absurd in such a possibility indicates quite clearly that the notion of living standard and that of utility or happiness are not identical.” (Sen 1989)

While economic success may, up to a certain level, have a positive influence on personal satisfaction, the Neoclassical notion of equating one with another seems like a stretch. The correlations between happiness, income and all sorts of other social indicators do not paint a clear picture: Agrawal et al. (2024) report that as individuals in a society become wealthier, their well-being becomes less dependent on finances and more on their social life and their job satisfaction. In the opposite direction, however, individuals reporting a high level of well-being outperform those who report low well-being on a professional level. I. e. in terms of income and performance, happiness has positive effects on income, unemployment, inflation and income growth. However, market-related indicators are not the only ones to consider. From a feminist perspective, for instance, resource-related or scarcity-related policies are measured by the extent to which they contribute to well-being and reproduction processes of society outside of market mechanisms. (Deutscher Frauenrat, 2011) This leaves the question how societal wealth can be measured effectively. The following section will contain an analysis of commonly used economic indicators to measure societal wealth. Section 2.2 will subsequently elaborate on non-economic indicators. This is a means to the end of inciting an open discussion about how wealth within a community should be measured. And ultimately about societal goals and directions.

GDP.

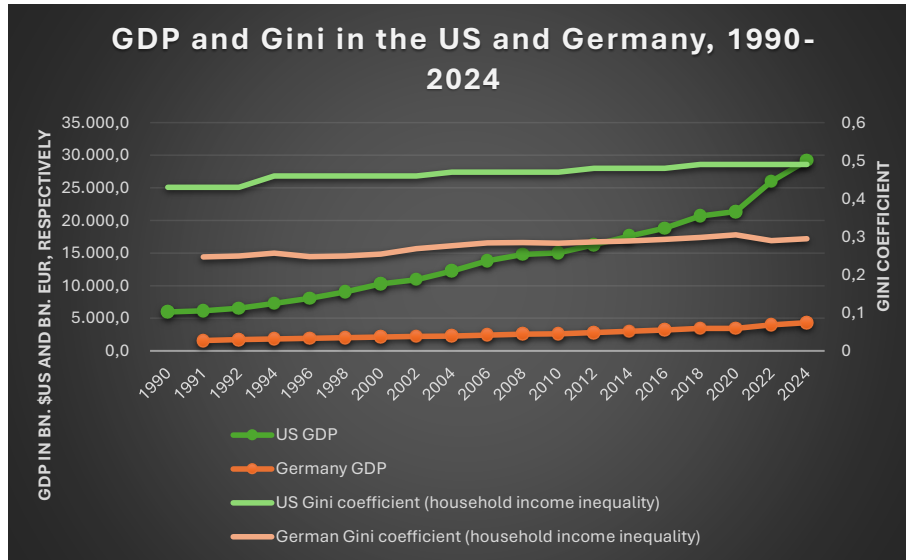
GDP is the most famous measurement for economic activity. It is an indicator which shows the total value of all goods and services generated as end products within the national borders of an economy during an economic period, after deducting all intermediate consumption. Since it is evaluated using market prices, it is discernibly founded on the principle of “wealth in the form of production capabilities”. In that sense it is neutral, as it does not distinguish those goods and services beneficial to society from those that are harmful. (Fellner, 2015; Jäger & Springler, 2015; Mason & Büchs, 2023) It was first proposed by British economist William Petty (1623-1687). (Lepenies & Gaines 2016) The modern concept of GDP was developed

by Simon Kuznets (1901–1985) in 1934 in a report to U.S. congress. Mr. Kuznets himself warned of the limitations and advised against using it without measure. (Mason & Büchs, 2023)

The suitability of GDP as an indicator for societal wealth has been the topic of reoccurring discussions since the 1970s. (Fellner, 2015) Son (2011) writes that there is an increasingly present realization that GDP is an inadequate measure of societal well-being, despite economic growth still being a widespread measure of success. And that higher economic growth does not imply a higher level of popular well-being. Fioramonti, Coscieme & Mortensen (2019) claim that there is a growing consent among experts about the adequacy of abandoning GDP as the primary economic indicator for wealth (increase). Mason & Büchs (2023) report that the growth reliance of current economic systems is increasingly being criticized by academia and climate organizations, especially in the context of the climate crisis, social inequalities and arising conflicts. One major flaw with GDP as the main indicator for societal wealth lies within its neutrality: it offers no information about how the produced value is distributed. A society with a monopolized value production could have a higher or lower GDP than a country with a more equal distribution of wealth. (Fellner, 2015; Fioramonti, Coscieme & Mortensen 2019; Mason & Büchs 2023) Son (2011) argues that the benefits of economic growth are seldom distributed equally. While economic growth bypasses a large part of the population entirely, others benefit disproportionately much. This comes with negative externalities: Social equality in a society improves well-being, while an increase in inequalities has the opposite effect. (Agrawal et al. 2024; Mason & Büchs 2023) Free market economics argue that the Trickle-down effect mitigates inequality. According to the theory, it is an inherent mechanism to the capitalist accumulation regime. Under the right market conditions, one of which being well-defined property rights, privately accumulated wealth would “trickle down” to the bottom in the form of employment and private investments. Therefore, societal wealth would always reach the lower social strata with a certain delay. Milton Friedman (1912-2006) and Friedrich August von Hayek were notable supporters of this idea. The idea behind this is that private individuals with a lot of equity would use it to build production facilities or expand their businesses and thus create jobs. That way, society as a whole benefits from economic growth. (Butterwegge, Lösche & Ptak 2017) However, empirically this effect is not sustainable. A lot of countries experienced rapid growth in the decades after the Second World War, while poverty levels remained persistently high. (Son, 2011) If we look at purchasing power as a means to secure one’s own life foundation, the picture does not change much: While purchasing power for the *lower* ten percent of Germans rose by five percent between 2002 and 2017, the *upper* ten percent of society have increased their

consumption possibilities by 40 percent. (Grabka, M. M., & Halbmeier, C. 2019) GDP does not take into consideration if the increase in consumption capabilities goes for society as a whole, a big part of the population or just a small group (Fellner, 2015) The national statistic for Germany supports that point: The German GDP rose from 1.591,6 billion euro in 1991 to 2.542,2 billion euro in 2015. (Statistisches Bundesamt, 2024) In the same period, the German Gini coefficient rose from roughly 0,261 to 0,290. (Sachverständigenrat, 2010) This means that Germany had become more unequal, while its GDP had increased by roughly 60 percent. In 2022, the German GDP had risen to 3.953,9 billion euro, and the Gini coefficient had decreased to 0,288. This is the Gini-coefficient for household income. The Gini-coefficient for wealth distribution laid at 0,8 in 2017. In the same year, the wealthiest ten percent in Germany owned more than 50 percent of accumulated wealth, while the lower 50 percent of the population owned 1,3 percent. (Grabka, M. M., & Halbmeier, C. 2019) To consult a different set of numbers more directly linked to social welfare, household income in the United States paints a similar picture: The U.S. Gross Domestic Product rose from 5.963,1 billion dollars in 1990 to 23.594 billion dollars in 2021. That means that the national level of value production rose by 295,67 percent. (BEA 2024) Meanwhile, the American Gini-coefficient changed from 0,43 in 1990 to 0,49 in 2021. (US Census Bureau 2024) I. e. wealth is now less equally distributed in the United States than it was in 1990. Without a comprehensive analysis of several economic parameters, it is difficult to draw a meaningful conclusion. However, these developments occurred in the context of extensive market deregulation and tax cuts on ROI, a wave of privatization policies as well as a liberalization and deregulation of the financial markets. (Jäger & Springler 2015; Butterwegge, Lösch & Ptak 2017) The rise in productivity can partially be explained by a surge in return on capital starting in the 1970s. Meanwhile, real wages mostly stagnated since 1979. (Jäger & Springler 2015) This means that owning capital became more profitable, while wage labour did not. While a more profound analysis will not be conducted in this context, an automatic redistribution mechanism inherent to the Neoliberal school of thought or the Capitalist accumulation regime can be excluded. More likely, it seems that economic growth and wealth distribution are not directly linked for industrialized countries.

Figure 1: GDP and Gini in the US and Germany, 1990-2024. Own depiction from (BEA 2024), (US Census Bureau 2024), (Sachverständigenrat, 2010) & WSI (2022)



If national production capacities are not relevant to happiness or well-being, maybe individual financial wealth is more significant. After all, the 2010 Human Development Report does attest a positive association between GDP and income per capita. (UNDP, 2010) So maybe the relevant indicator here is income, with GDP serving as an intermediary index. Even though Proto & Rustichini (2013) found no significant relationship between happiness and aggregate income in time-series analysis, they did observe a strictly monotonically increasing relation between life satisfaction and income. This relation increases in countries with a per capita GDP below 15.000 US-dollars and flattens for richer countries. The authors refer to this effect as the “Easterlin paradox”. That paradox was first formulated in 1974 by Richard A. Easterlin (*1926). It states that happiness is influenced directly by income. However, in the long run, growth rates of happiness and income are not significantly related. (Easterlin & O’Connor, 2020) Kallis et al. (2018) support this idea. The authors found that above a certain level, an increase in GDP does not automatically result in a significant increase in well-being. However, equality does. Income has an influence on people’s relative social rank compared to others. Social rank affects personal well-being in low and high-income countries. The authors highlight a causal relationship between equal income distribution and happiness. Jones & Klenow (2016) found out that GDP is not an accurate measure of quantified living standards. The authors emphasize living standards in

Western Europe being much closer to those in the United States than GDP per capita would lead on.

Another reason for the GDP possibly being misleading is that it excludes many factors that contribute to well-being while incorporating societally undesirable ones. For instance, its link to market prices leads to the exclusion of certain important human activities: Transactions that are not processed via the market and for which no market prices exist are either not adequately recognised or ignored. The most prominent example of this is *care work*. (Fellner, 2015; Son, 2011; Fioramonti, Coscieme & Mortensen 2019; Mason & Büchs, 2023) Coffey et al. (2020) estimate that unpaid care work accounts for at least 10,8 trillion dollars annually, which is three times the size of the world's tech industry. The report also states that 42 percent of women and six percent of men globally are outside the paid labour force, because they conduct unpaid care work. In Northern, Southern and Western Europe, roughly half of a country's total product (an estimated 53,12 percent of total work minutes) is unpaid care work. (Charmes 2019; Fellner, 2015) This value produced for society is not reflected in national GDPs, which implies a flaw in its very purpose. (Fellner, 2015) Another factor not considered by GDP calculation is *ill-effects resulting from economic activity*, like pollution. As these effects lower present and future production capabilities by making people sick, ill-effects lower a country's production level as well as standard of living. However, expenditures for battling such ill-effects, like hospital bills and treatments, are accounted for, which means that a sick society can produce a higher GDP than a healthy one. (Son, 2011; Fellner, 2015) Additionally, human ailments are not the only externality economic activity produces. Environmental damages include air, water and soil pollution, reduction in natural diversity, environmental destruction and the spread of microplastic through everything organic. (Aruga, 2022) Agrawal et al (2024) have analysed studies claiming that excessive production can create detrimental externalities for the climate as well as people's health. Not only do we therefore produce at the cost of future production capacities; Those effects gnaw at the basis of human existence and need to need to be repaired and remediated. Those repairment and remediation processes in turn increase the GDP. I. e. a society with production regime which destroys the environment produces a higher present GDP than one with an environmentally more sustainable one. (Fellner, 2015; Mason & Büchs, 2023) These problems are systemic in nature and stem from the fact that in GDP-oriented economics, natural ecosystems are only considered valuable as long as they bear resources that can be traded. (Carrero et al., 2020) Non-tradeable benefits of ecosystems like natural fertilization, soil regeneration, air filtering or climate regulation are meaningless for the GDP-approach.

(Fioramonti, Coscieme & Mortensen 2019) So are leisure benefits like being in green spaces, educational purposes or sports and outdoor activities. (Agrawal et al. 2024) New and innovative business models based on self-reliance or co-production are not properly registered by GDP, as it only values market transactions, sending wrong signals to policy makers. (Fioramonti, Coscieme & Mortensen 2019)

All of this poses the question if GDP is a suitable indicator for national wealth for industrialized countries. While developed countries have a higher standard of living than developing countries, the directly proportional relation between higher income per capita in an economy and standard of living is not as straightforward as it may seem at first glance: A country which succeeds in reducing its mortality rate to a degree where its population rises significantly will subsequently lower its GDP per capita and income per capita. The fall in per-capita income suggests that the country has become poorer. However, the country has increased societal life expectancy. Did the country consequently raise or lower its living standard? This example demonstrates the complexity of the problem and how GDP as the main economic indicator of increasing living standards is one-sided. The question remains who benefits from GDP as an indicator for societal wealth, when in recent decades, economic growth and the broad development of prosperity and employment have become decoupled. (Brand, 2015) GDP amalgamates qualitative development with quantitative growth. It would be possible to qualitatively improve product design without increasing the amount of resources used. (Daly, 2007) All the while, the alignment of economic policies with the GDP encourages industrial output, while the provision of services has surpassed industrial production as the main driver of prosperity. Among other things, this is due to drastically reduced marginal costs at steady value creation through sharing platforms like Uber, AirBnB, or Whatsapp. The GDP fails to capture such consumer surplus appropriately. (Fioramonti, Coscieme & Mortensen, 2019) Mason & Büchs (2023) see GDP as an insufficient tool for cross-country economic comparison, as it does not account for different sizes of the informal economy.

Utility.

Utility is a term used to determine the worth or value of a good or service. More specifically, utility is the total satisfaction or benefit derived from consuming a good or service. Economic theories based on rational choice usually assume that consumers will strive to maximize their utility. The amount of utility a good or service provides an individual with directly

influences their demand and willingness to pay for said good or service. Utility is an abstract value and cannot be measured, but only abstractly approximated. Marginal utility is the quantity of needs that are satisfied by going from consuming one unit more of a given good. Marginal utility is usually depicted as a falling function, as each unit consumed gives an individual a little less satisfaction than the one before. According to Neoclassical theory, aggregated individual utility maximization leads to guided increase in societal wealth. When everyone thinks of themselves, everyone is thought of. Son (2011) criticizes that real income measures on the basis of utility maximization are widespread to capture changes in people's welfare. The author sees the main disadvantage of that approach in the utility function being defined as a function of a commodity bundle, turning it into an index of opulence or an index of the command people have over commodities. The author sees personal characteristics neglected in this view, while economic wealth is overvalued.

The Diamond-Water-paradox

The Diamond-Water-paradox is a concept around the fact that diamonds are much more expensive than water, despite the higher use value of water for humans. Without water, no one can survive. This is not the case for diamonds. Traditional labour theory of value does not view this as a paradox. Diamonds have a higher "exchange value" because it takes more units of labour to extract them. (Kallis, 2018) In university economic curricula, this phenomenon is explained through marginal utility. An additional diamond provides greater utility than a unit of water. For a person dying of thirst, the positions may reverse: A life-saving amount of water should have a much higher exchange value than a diamond in that scenario. It boils down to an individual's marginal utility being expressed in their willingness-to-pay (WTP) for a (additional) unit. (Sagoff, 2008) Following the laws of supply and demand, the exchange value of an item increases with scarcity. Kallis (2018) criticizes lack of clarity about why a shiny stone is more useful or pleasurable than having a green lawn or quenching your thirst. The typical Neoclassical response would be that utility is expressed through preferences by market participants, and preferences need not be questioned or judged. The author finds that this line of argumentation leads to a tautology: If prices are the sole way to express utility, it can never be proven that they indeed reflect utility, for a lack of quantifiability; It can only be asserted. Mr. Kallis claims that utility theory of value has never been tested or scientifically proven, for that matter. There is no way to precisely measure usefulness, pleasure, or utility, let alone their correlation with prices of WTP. We can never know the value of a commodity separately from its price. Prices are observable, but there is no plausible way of telling how close or far they divert from equilibrium, especially for

commodities which have a strong price volatility like crude oil, industrial metals like copper or nickel, or consumables like coffee or rice. (Kabundi, Vasishtha & Zahid, 2022) Global markets are not perfect markets and are therefore in constant disequilibrium and subject to inefficiencies. Kallis consequently accuses Neoclassical theory of normativity and ideological, despite its positivist aspirations. In the author's perspective, Neoclassic economists seek to change institutions to optimize fictional market conditions to have peoples' values revealed. (Kallis, 2018)

2.2 Beyond GDP - Alternative forms and concepts of measuring prosperity

Continuing the open search for adequate indicators for societal welfare, the focus shifts from growth-based indicators to alternative ways to measure well-being. While in Neoclassical theory growth is considered critical, ecological economists¹⁹ criticize mainstream economics for externalizing social and ecological costs. Analyses taking these factors into consideration consequently show a point where excessive growth becomes uneconomical, as these costs are detrimental to society and must be remediated. (Daly, 2007) Son (2011) considers economic growth by itself an inappropriate indicator to judge changes in well-being, provided the objective is to increase it for every single individual in society. The author suggests that growth should be supplemented with other relevant, more tangible indicators on an individual level. Brand (2015) goes as far as calling out for a steady state economy. Instead of a constantly quantitatively growing economy, the author demands qualitative development in an economy that provides the capacities to deconstruct growth or even shrink quantitatively. Accordingly, economic indicators for measuring prosperity would also have to be fundamentally reformed because of changes in GDP. In the past decades, the world and the economy have changed tremendously. Moving beyond a GDP-oriented framework toward more suitable well-being indicators may help reflect modern society and values. That could support a governance of value creation that indicates more than the monetary value of modern developments. (Fioramonti, Coscieme & Mortensen, 2019; Agrawal et al., 2024)

¹⁹ Ecological economics is a critique of neoclassical economics. It is a field within economics that only assumes the limited substitutability of nature or individual natural resources. From this perspective, the the economy is an open subsystem of a larger system, the biosphere, which is finite and non-growing (Daly 2007)

Beyond GDP is an initiative by the European Commission for the development of more inclusive indicators. The goal is to include environmental and social aspects. The movement receives support by world stage organizations like the UN, the OECD, and the World Bank and several governments. (Fioramonti, Coscieme & Mortensen 2019) Hereinafter, a couple of propositions for alternative measurements will be discussed, which do not or not only rely on the economic indicators mentioned previously.

Capabilities approach.

The Capabilities approach, first developed by Sen in 1985, redefines how well-being is assessed by shifting the focus from economic output to individual freedoms and opportunities. Traditional welfare economics often measures well-being through income or GDP, assuming that greater financial wealth translates into higher living standards. Sen challenges this notion, arguing that well-being is not about the possession of commodities but about the ability to lead a fulfilling life. Sen distinguishes between *functionings* and *capabilities*. Functionings are the achievements of an individual – such as being healthy, educated, or socially engaged. Capabilities represent the freedom and real opportunities to achieve those functionings. This distinction highlights limitations of classic monetary indicators. While income grants access to commodities, not all individuals can convert commodities into well-being to the same degree. Sen provides the example of a disabled person not deriving the same benefits from economic resource as an able-bodied person, thus emphasizing the need for a broader framework. (Sen, 2011) Sen's approach has strongly impacted welfare economics. For his contributions to understanding well-being as more than financial wealth he was awarded the Nobel Memorial Prize in Economic Sciences in 1998. (Fellner, 2015) Unlike traditional models, the Capabilities approach acknowledges consumption as an important but incomplete measure of welfare. (Sen 2002). An important aspect to consider is that approach does not reject Neoclassical economics but rather seeks to complement it by addressing its blind spots (particularly its shortcomings). (Fellner, 2015) It shares that origin with Keynesian theory. For businesses, this approach suggests that corporate sustainability should be assessed by its contribution to real human capabilities rather than by profitability alone. It offers a lens through which corporate social responsibility (CSR), environmental policies, and sustainability strategies can be evaluated—not just in terms of compliance, but in terms of their actual impact on people's ability to lead better lives.

EF - Ecological Footprint.

Rafique et al. (2021) describe the ecological footprint (EF) as the most important measure for environmental performance and sustainability over time. According to the authors, it measures the pressure of human activity on environmental condition through resource consumption in the form of finished goods. Kallis (2018) defines EF of a good or activity as the amount of land required to support it. The ecological footprint also has a second dimension: Because of finite capacities of earth's ecological sinks and resources, the ecological footprint also influences future consumption possibilities. The more CO₂ humanity produces today, the worse the effect of climate change will become and the more it will impact life and production. The more non-renewable resources humanity uses up today, the less will be available in the future. (Wackernagel & Beyers 2019; Fellner, 2015)

GNH - Gross National Happiness.

The government of Bhutan adopted an alternative development paradigm to GDP after transitioning from an absolute monarchy to a democracy with constitutional monarchy in 2008. The new paradigm is called "gross national happiness" and is supposed to be an addition to the pursuit of the gross national product. It was first introduced to arrange modern economic developments with the country's age-old culture and natural environment. The concept of GNH includes nine domains: (1) living standard, (2) good governance, (3) education, (4) health, (5) ecology, (6) community vitality, (7) time use and balance, (8) culture, and (9) psychological well-being. The domains are further split into 22 indicators. The paradigm follows the teachings of Buddha, and consequently the concept of "Happiness and well-being of both human and nonhuman inhabitants within the purview of the state" (Ugyel, Givel & Chophel, 2023). In that view, the main purpose of the government is to increase the happiness of its people. Without it, the government fails its main task.²⁰ Upon inspection, there is a high level of integration between the UN SDGs and GNH. (Ugyel, Givel & Chophel, 2023)

Frey & Gallus (2013) generally support the idea of a happiness index and see the idea as feasible. However, the authors do see problems with basing state policies on the measurement of subjective happiness, as surveys etc. could be manipulated easily. Frey/Gallus propose that

²⁰ This may seem amusing to the European reader at first. However, in wording, it does not fall far from the German chancellor's oath when assuming office: "I swear that I will dedicate my efforts to the well-being of the German people, promote their welfare, protect them from harm [...]" (German constitution, article 56: [Oath of Office]).

the government should instead establish living conditions that enable individuals to live a happy life.

GPI – Genuine Progress Indicator.

GPI was then created by C. Cobb, T. Halstead, and J. Rowe in 1995. (Long & Ji, 2019) The Genuine Progress Indicator is a method aligning various economic well-being indicators with 14 out of the 17 economic, environmental, and social dimensions covered in the United Nations Sustainable Development Goals (SDGs). (Agrawal et al., 2024) It consists of an economic, an environmental and a societal dimension. Each dimension contains positive items (like value of domestic labour, services from public infrastructure), which increase welfare, and negative items (like long-term environmental damage, depletion of non-renewables, and income inequality), which represent a welfare-loss. With increasing data availability, the index has been recognised as a feasible approximation of economic welfare. Its advancement, the GPI 2.0, directly links social welfare to utility. (Long & Ji, 2019) Agrawal et al. (2024) describe that SDGs are seen as representative for the neoclassical and growth-based approach to well-being economy. GDP has significant influence on SDGs as well as GPI. Excess energy use, for instance, will expand macroeconomic activity, in turn measured by GDP. Main criticisms are that the GPI neglects technological development and the change in human capital. And that it oversimplifies and assumes a perfect rate of substitution between natural capital and other forms of capital. (Long & Ji, 2019) Another angle for critique is that SDGs as the basis for the GPI are contradictory, as they focus on GDP in the context of economic development. However, as mentioned before, an excessive GDP growth rate would hinder environmental targets and worsen inequality. (Agrawal et al., 2024)

HDI, EPI and EHI – Environmental Human Index.

The Environmental Human Index (EHI) is a sustainability assessment tool developed by Zhang & Wu (2022), which combines data from the Environmental Performance Index (EPI) and the Human Development Index (HDI). (Jason, 2023) According to the United Nations Development Program (UNDP), its aim is to depict the development of people's choices in a region and their well-being. (Son, 2011) The HDI summarizes and evaluates average achievements in identified key dimensions of societal development: It comprises factors like life expectancy, health, education, and gross national product. The HDI recognizes the

diminishing importance of income with increasing GNI. It uses the geometric mean of normalized indices for each dimension and therefore relies strongly on quantifiable indicators. (Anand & Sens, 2002; Jäger & Springler, 2015) the original idea of the HDI was to shift focus away from income towards more comprehensive measures of development. Sagar & Najam (1998) highlighted that the HDI neglects sustainability, as it does not account for overuse of resources. The authors argue that therefore it fails its purpose by ignoring factors that have long-term effects on national income. The EPI as the second half of the EHI measures national environmental performance. It provides tools for problem identification, target setting, trend tracking, and understanding outcomes, and identification of best practices. The aim is to determine how close or far countries are to meeting international environmental policy targets. (Block et al. 2024, Esty et al., 2008)

The idea behind the EHI is that its value increases both with socio-ecological development and sustainability. There are observable synergies between HDI and EPI which indicate that an increase in human capital leads to less environmental damages and improved environmental performance in the observed Southeast Asian nations. (Philips, 2023; Pimonenka et al., 2018; Jain & Nagal, 2019) These findings are supported by Lai & Chen (2020), Tang et al. (2020), and Van den Bergh (2017)²¹, all connecting higher level of education and income with higher economic development and increased environmental awareness. On the other hand, Samimi et al. (2011) found no significant correlation between an increase in human development and the increase of environmental performance in developing countries. According to Philips (2023), there have been ongoing efforts to integrate the EPI and HDI indices into one single framework, which the EHI now provides a solution for. The EHI is calculated using the formula $EHI = \frac{\left(\frac{EPI}{100}\right)}{(1-HDI)}$ and ranges from 0 to ∞ . The EHI value has no assigned unit. The higher the EHI value, the greater the level of achieved sustainable development. Nevertheless, the functionality of the EHI has been criticized for ignoring fundamentals of sustainability research: There is no value that indicates unsustainability. It follows a linear idea of development, indicating that the desired outcome will always follow because all societies are bound to reach a natural, undefined end goal of human development. This undermines established principles of sustainability theory, because it is

²¹ A study claims that since 2000, 21 countries have achieved absolute decoupling of CO2 emissions. However, these countries are not globally representative, and the study does not consider the relocation of CO2 emissions. A recent input-output study for various countries concludes that the correlations between carbon intensity and growth indicators at sector level do not indicate that green growth is taking place. (Kallis et al., 2018)

based on the acknowledgement and analysis of unsustainability to develop methods against it. (ibid.)

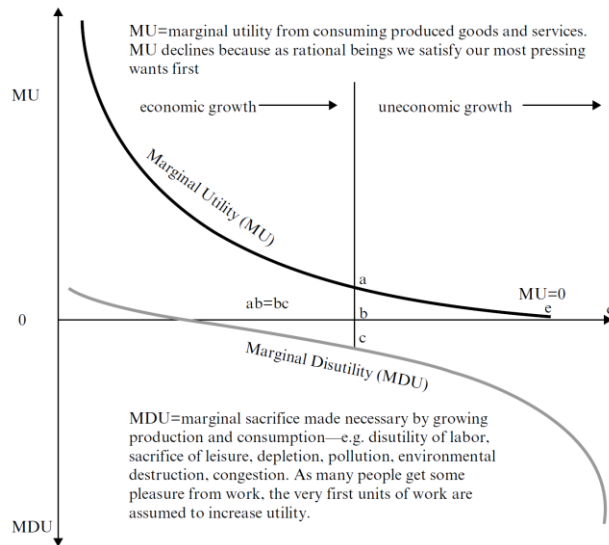
ISEW - Index of Sustainable Economic Welfare.

Herman Daly and John Cobb proposed the Index of Sustainable Economic Welfare (ISEW) in 1989 as an alternative to GDP. It was developed due to concerns that GNP is not an adequate measure for current welfare or sustainability. The main points of critique were that GDP does not account for care work or effects of income inequality on societal welfare, nor does it take into consideration welfare loss caused by environmental degradation. (Neumayer, 1998) Creating the ISEW was an attempt to rectify the GDP, and to create an alternative which takes into consideration the above-mentioned critique. (Stockhammer & Fellner, 2009) Computation usually begins with personal consumption expenditure values. These are weighted with an index of distributional inequality. Factors representing welfare relevant contributions are added, welfare relevant losses are subtracted. (Neumayer, 1998) The most famous example for an ISEW proposition is an observed trend in the U. S., whereby the national standard of living has shown deceleration of the ISEW since the 1950s, followed by stagnation tendencies. In the same period, the American GDP has tripled. (Kallis et al., 2018) A major problem with the ISEW is that it lacks a proper theoretical foundation, and its conclusions are highly dependent on a couple of key assumptions regarding the importance of income distribution, the depletion of non-renewable resources, and long-term environmental damages. It also neglects technical progress as part of increases in human capital. (Neumayer 1998) Kallis et al (2018) also point out the problem of a large enough quantity of sound, available data about national consumption and standard of living.

Maximum Net Utility.

Daly (2007) proposes an opposing concept to the concept of utility: “*Disutility*” (DU). Disutility refers to sacrifices necessary to sustain a certain level of consumption (or production). Examples for such sacrifices include excess labour, loss of happiness and/or leisure, depletion of (natural) resources, pollution, or congestion. Consequently, the opposite of marginal utility is “*marginal disutility*” (MDU), which refers to the amount of dissatisfaction necessary to achieve one additional unit of consumption.

Figure 2: Marginal Utility and Marginal Disutility over time. From: Daly (2007): 16



Congruently to the optimal quantity of production in Microeconomics, the optimal quantity in consumption is the one where marginal utility equals marginal disutility ($MU = MDU$). That point would yield maximum net utility. Any consumption below that point would not maximise individual or societal utility. Any unit of consumption beyond that point would lower our net utility. Growth becomes uneconomic. At a given point, ever increasing consumption reaches its “futility limit”. At that point, increased consumption does not add any utility which is also the point where MU intersects with the x-axis. Any point, which can lie before, at, or after the futility limit, society may face an ecological catastrophe. That catastrophe represents a large increase in disutility and an equal decrease in utility. This is represented by the vertical fall of the MDU curve. Innovation in the form of new technology or more sustainable resource use may shift the curve to the right, allowing future growth in consumption and moving the futility limit back in time. It is important to note that the graph represents our knowledge about a situation at a given time, and that technology may not always shift the curve to the right. The technological innovations that allowed us to observe the ozone hole and the results of climate change (both consequences of technology themselves), shifted the MU-line downwards, the economic limit to the left and constrained expansion. (Daly, 2007)

Quality of Life-approach.

The Quality of Life-approach is a framework particularly researched by Cui et al. (2024) in the context of Chinese national development. It reflects the idea of a “people-oriented” development and emphasizes the importance of individual well-being and living conditions as a focal point in socio-economic development. It considers both subjective and objective aspects of life, integrating factors like economic stability, social equity, environmental stability, and access to essentialia like education and healthcare. Social equity in this context is defined as ensuring fairness and justice in the distribution of resources and opportunities within society. The concept emphasizes the need for policies that address disparities and promote equal access to education, healthcare, and other vital services.

In the context discussed in the paper, the QoL-approach is used to analyse how improvements of living standards and overall well-being can influence regional economic development. The study found that quality of life is not only a goal in itself but can be a strong driver for economic growth. The approach advocates for policies that are tailored to peoples’ specific needs and expectations. The study claims that this approach can be used to create a more balanced and sustainable development model that benefits all parts of society.

SWI - Sustainable Well-being Index.

The SWI is a measurement of societal welfare capable of denoting value created by natural capital and ecosystems, as well as positive effects of social capital. It is aligned with the SDGs and accounts for net economic contributions of *all* (formal and informal) productive activities. The SWI works with the GPI to value said net economic contributions, considering limiting factors. It measures balanced prosperity over infinite growth and indicates how and when a system efficiently allocates resources on a sustainable scale, while at the same time supporting fair distribution. (Fioramonti, Coscieme & Mortensen, 2019) However, the authors do not specify what they mean by “fair” in this context.

WE - Well-being Economy.

The WE is a concept proposed by the Well-being Economy Alliance (WEAll) in 2018. Well-being economy is defined as “an economy that pursues human and ecological well-being instead

of material growth” (Fioramonti et al. 2022: 1). In 2018, WEAll helped with the formation of so-called WEGos, Well-being Economy Governments: Scotland, Iceland, and New Zealand, Wales and Finland are member states. Furthermore, the creation of the WE concept was supported by several think tanks and third sector organizations. WEGos aim to introduce policies and strategies to move forward the well-being economy agenda at a national level. In the long run, the idea is to implement the idea of a well-being economy on a global level. (Mason & Büchs, 2023) Well-being economy includes parameters like work, technology and productivity. New tools to monitor ecological and human well-being contributors were added (Agrawal et al. 2024: 5517), while adding ten new dimensions. These dimensions include sustainable development, community wealth, economic democracy, inclusive growth and circular economy. (Well-being Economy Alliance Aotearoa New Zealand o. D.) WEAll advocates deprioritization of economic growth as the main economic policy objective. While members define well-being economy slightly differently, there are overlapping narratives. More narrowly, the focus remains on complementing GDP with other indicators. While steps towards a “weak post-growth approach”, i. e. small steps to deprioritize growth are observable in some member countries, stronger measures have not been implemented so far. The main barriers for implementation which researchers have come across seem to be a) dominant Neoclassical economics within policy influencing institutions, b) short-term approaches to policy making rather than long-term perspective, and c) the role of vested interests in state politics. (Mason & Büchs, 2023)

2.3 How much economic growth is enough? And how much is desirable?

Today, the question is more topical than ever: in a finite world, do we really need to keep expanding to prevent the economy and prosperity from collapsing? Since the classical economics movement, which emerged in the 18th century, the question has usually been vehemently answered in the affirmative. The short version goes like this: without growth, companies make savings and cut jobs. First the labour market collapses, then consumption. At best, this leads to stagnation. The standard of living weakens the gains in prosperity fail to materialise. In the worst case, a spiral of permanent recession or depression ensues. Not something politicians want to experiment with voluntarily. However, it is now debatable how much longer the reduction in growth will be voluntary if the planet continues to heat up so quickly. Does every sneaker manufacturer really need to sell five million more pairs of trainers every year?

Must every medium-sized screw manufacturer earn ten million euros more every year? Must the retail trade immediately break out in collective lamentation if Christmas sales are not at least three per cent up compared to the previous year?

Neoclassics and Keynesianism²² are both economic paradigms that rely on growth, as shown in section 1.1 c). Neoclassical economics rely on competition to incentivize and force companies to innovate and grow (profit maximization imperative). Automatic market mechanisms allocate the surplus value created in a growing economy. In Keynesianism, the state increases aggregate demand to provide full employment by stimulating consumption and investment. In both paradigms, investment means building bigger production capacities which allow full employment in the future. Both paradigms rely on everlasting growth to increase societal wealth and quench uncertainties about the future. This motivates consumers and investors to consume and invest even more in the next period. The cyclical results are increased confidence in the market, aggregate demand, high utilization of production capacities and therefore employment. Economic growth is the means and the end to economic activity (see also section 2.1). According to both theories, growth should have no artificial limit, because surplus value creation secures funds and facilitates all human activity. However, society is slowly starting to experience the side effects of growth-oriented economy, as shown in section 1.2. Daly (2007) claims that the environmental and social sacrifices outweigh the production benefits. And that such growth decreases societal wealth rather than increasing it. The author illustrates a tendency to “outgrow” social problems for the past 150 years. A temporary solution to problems now reinforced by the same dynamics. As a growing economic subsystem imbedded in a non-growing ecosystem, the economy bears characteristics which make it unsustainable in a finite system: infinitude, wasteful cycles, and reliance on finite resources pollute the basis of our existence. Growth-oriented economic systems have been identified as one of the main drivers of ecological as well as social crises. (Mason & Büchs, 2023) Coscieme et al. (2019) researched the synergy between unconditional GDP growth as per the SDG 8²³ of the United Nations and the other SDG goals. The authors highlight that pursuing unconditional GDP growth puts the UN SDGs at risk of failing overall. The authors recommend changing SDG 8 to better support economic growth that

²² The reason why only two out of the three most important paradigms are mentioned here, is because Neoclassics and Keynesianism inherently rely on growth and see universal improvements of living standards as a byproduct or side-effect of the efficient allocation of resources. Political economy sees economy as a social construct that should be formed and reformed tailored to human needs with the goal of the improvement of living standards for all. It is therefore not inherently growth-oriented, which is why it was not specifically mentioned in this context.

²³ SDG 8 - Decent work and economic growth

resonates with environmental and social advancements. At latest since the release of the report “*The Limits to Growth*” published in 1972, the concept of finite growth in demographic as well as economic systems has gained global notoriety. Ecologically, the term refers to the storage capacities of the ecosystem in terms of wastewater and air pollution and replenishment of raw materials to sustain economic activity. (Daly, 2007) Despite the apparent externalities coming with GDP growth oriented economic systems, the imperative of a growth-oriented economy and decision-making based on profitability remain widely uncontested. In 2010, only a few years after the crisis of 2007/08, the European Commission (2010) explicitly emphasized the importance of quantifying costs and benefits whenever feasible. However, even with considerable efforts in policy impact analysis, its procedural steps may be flawed due to inadequate measurement. Basing policies solely on market failure analyses results in analyses concerning themselves exclusively with material well-being. As previously highlighted, other dimensions are systematically ignored even though they may contribute significantly to people’s overall satisfaction. While the shift from Neoliberal laissez-faire economics towards correcting for market failures may leave a positive imprint on business externalities, the shift has fallen short of a more drastic change towards well-being-oriented policies and intergenerational justice. (Hirschauer, Lehberger & Musshoff 2015) Economics Nobel prize winner Robert Solow (2020) said that essentially, nothing depends on the absolute size of an economy. A non-growing economy can be successful, if accompanied by appropriate fiscal and monetary policies. Although, the transition away from a growth-based economic system would cause temporary consequences like rising unemployment and sinking incomes. (Beyer, Book & Schulz, 2022) For most people, the idea of an accumulation regime which does not prioritize the endless accumulation of capital seems unthinkable. (Daly, 2007) It is unimaginable how a system without privatized control over the allocation of resources could function (even though non-economists would certainly word it differently). Or, as a result, one that limits growth below the threshold of the profit maximization imperative²⁴. Fisher (2022) formulated that “*it is easier to imagine the end of the world than it is to imagine the end of capitalism*”. Latouche (2004) describes that society has been locked into the thought of inevitable growth, which made discussions about alternative models impossible. In other words, a world without economic growth is inconceivable; and any proponents are not taken seriously. This notion is called *Capitalist Realism*. It describes the widespread idea that Capitalism is the only viable accumulation regime, and that there is no imaginable, functional alternative to it. (Fisher, 2022) According to Stiglitz, Sen & Fitoussi (2010), the resilient societal focus on economic growth is not surprising. Reflecting on past developments in research and

Kommentiert [DB31]: Das noch in 1.1 c) besser ausführen (accumulation imperative)

²⁴ See also 1.1 c)

society, they write: *“What we measure affects what we do. If we have the wrong metrics, we will strive for the wrong things.”* (ibid.)

It is already open to debate how long the renunciation of growth will remain voluntary and at what point it will take place without our consent if the planet continues to heat up at this pace. To strengthen resilience across economies and political systems, innovation must be a strong driver of technological progress because unforeseeable problems from a present-day view are likely to arise. (EEA, 2021) If the market does not react by itself in time, all three described economic paradigms classify situations with similar characteristics as market failures (see section 1.1c). In such a case, all call for state intervention, at least to uphold the functionality of the market. Examples include state subsidiaries, ban of certain materials, or supply side policies like the implementation of the EU Emissions Trading System (EU ETS). Risk management needs to be transdisciplinary, because climatic and biospheric changes bear potential for unforeseen compound risks. That includes supply chain risks like Net Zero transition and climate impacts. Other sources of supply chain disruption stem from the Covid-19 pandemic and the Russian invasion of Ukraine. Transdisciplinary efforts to increase resilience should also incorporate increased digitalisation and changing trading patterns. (CCC, 2022) The challenge lies in institutionalizing the necessary changes and expressing them in policies:

“We not only need to know what scale of economy and throughput will terminally disrupt the ecosystem, we need to know when the extra ecosystem disruptions required by a growing throughput begin to cost us more in terms of sacrificed ecosystem services than they benefit us in terms of extra production.” (Daly, 2007: 10)

This quote indicates that we must find the optimum growth rate or scale of our economic subsystem. Beyond this point growth becomes uneconomic, in the very sense that the resulting costs surpass the benefits (see subsection 2.2). In spirit of a multidimensional approach, limiting economic growth rates must be considered as an option with the goal of limiting its side effects. Another factor to weigh in is uncertainty about future of growth in the global North. A decelerating pace of technological innovation, a decline in labour force participation rates, and slowing global population growth make the idea of growth resilience noteworthy. Even the International Monetary Fund (IMF) argues that the costs of growth policies may have exceeded their benefits. (Ostry, Loungani, & Furceri, 2016)

It has become clear that economic growth only makes a limited contribution to quality of life in industrialized countries. (Jäger & Springler, 2015) However, an economic system limiting the expansion of its own production capacities poses several questions. This is where the existing economic paradigms diverge: From a Neoclassical perspective, there are no “limits to growth”. Rather there should be an expansion of limits. Economic growth should not be questioned for overuse of resources. And limiting growth should never be the goal of economic policies. (Brand, 2015) Stagnating or shrinking economies have negative effects like rising unemployment rates. This is due to the use of aggregate expenditures to expand production capacities y_0 to increase employment U_0 in t_0 : Future increases in aggregate expenditure will have to turn out even higher to maintain high employment U_1 . (Victor & Jackson, 2021) Ecological economists criticize Neoclassical theory for externalizing social and ecological costs. (Brand, 2015) The question remains how states would help fight poverty or provide development aid for poorer countries without annually growing budgets. A steady increase in surplus value is used to cover the costs of environmental damages and finance our social welfare states.

Despite the climate crisis, global warming projections have not improved since 2021, with projections indicating the world is on the path to 2.7°C of warming, with the optimistic scenario still indicating an increase in global temperature of 1.9°C. Although the exponential growth of renewable energies has reached an all-time high and allows for a faster decline of emissions after 2030, much depends on how governments define their longer-term climate goals and how they will implement them. Almost of industrialized and developing countries undertake “insufficient” climate action, with the rest practicing “almost sufficient” changes. Present or future right-wing rulers of industrialized countries like Donald Trump or Georgia Meloni are unlikely to strengthen environmental action. (Climate Action Tracker, 2024) However, if governments do pass the right policies; and if the necessary innovations are found, the conflict may only be postponed. As society would still live, work and breathe in a system relying on infinite growth in a finite overarching system. (Daly, 2007) Currently available research suggests unlikely technological feasibility for staying within planetary boundaries with continued economic expansion. Empirical evidence has proved the possibility of decoupling GDP growth from GHG emissions and material use in some rich countries. Nonetheless that effect has only occurred at very low rates of growth and slowing rates of environmental impacts prove incompatible with planetary boundaries. (Mason & Büchs, 2023) Overall, it seems like society is trapped in the conflict between the physical reality of limits to growth and the political impossibility of limiting said growth. Research and policies highlighting potential innovations for more sustainable infinite growth shows to

which extent growth is the dominating factor around which peoples' lives are centred. (Daly, 2007) It is therefore important to question the basics of academic discourse and reevaluate. And if it turns out that a growth-based economy is the best solution, then we need to find the right rate of growth for our economic subsystem.

When exerting theoretical considerations about the basics of economic growth rates, one must first revalue how growth rates constitute. In Neoclassical theory, growth is an exogenous epicentre the economy is inexorably drawn towards. The initial point in Neoclassical growth theory is the assumption that an economy produces as much output as possible at full use of production capacities. Growth in Neoclassics is strongly tied to input of resources and the production-possibility boundary. Long-term, balanced growth is dependent on the rate of investment i and the productivity of labour. A higher rate of investment leads to an increase of the production factor K in the production process. Because of diminishing returns on capital, an increase of the rate of investment leads to a decrease in capital productivity. This means that economies with a bigger capital stock, and therefore a bigger share of the input factor K , tend to show lower rates of growth. Whereas economies with significant increase in population (labour force) and labour productivity tend to have higher growth rates. In any case, the specific rate of growth is only possible through an increase in factor productivity. If capital can move freely across borders, growth rates between economies converge over time. Ultimately, in Neoclassical paradigm, more growth is always better. (Jäger & Springler, 2015) The Keynesian paradigm treats growth as both endogenous and path dependent, with investments (I) in the centre. On the one hand, investments increase aggregate demand and therefore play a crucial role in reducing the deflationary gap. On the other hand, investments facilitate capital accumulation and capacity expansion which in turn increase the growth rate. Investments leverage economic development and effective demand, which in turn raises the level of production and employment. As previously illustrated in this subchapter, investments facilitating an expansion of production capacities lead to the necessity of even bigger investments in future periods to maintain full employment. These future investments depend on the level of expansion of the production capabilities in the present period. Additionally, if the desired²⁵ rate of accumulation g^* diverges from the natural rate of accumulation g_n , this can cause negative externalities. If $g^* > g_n$, then demand is not sufficiently high to stimulate investments, which can lead to economic recession. If $g^* < g_n$, then the level of aggregate demand is too high. The rate of investments is below par for effective demand and production capabilities do not expand at the necessary paces, which forces employment rates

²⁵ Desired to establish full employment

down. Long-term economic development therefore entails the question of optimal growth rates of investments. In Keynesianism, the optimal rate of growth g^* is the one that allows optimal utilization of capital, as per the Rosenbrock function. In every case, empirical evidence shows that economies do not grow steadily, and Keynesian theory attests a natural tendency towards disequilibria in economic development (as shown in 1.1 c)). Due to this natural uncertainty, post-Keynesian macro-dynamics propose a dynamic institutional framework to incorporate growth and cyclical processes and find discretionary solutions. (ibid) Political economy is centred around the analysis of growth, development and crisis. Challenging the desirability of growth is part of the fundamental approaches in this paradigm. Political economy assumes that under capitalism, the transformation of nature through labour underlies constant evolution, due to the accumulation imperative. Because of that function, theory concludes constant expansion of production and therefore consumption of natural resources. The mechanism of production expansion and growth functions similarly to the other two paradigms. Using a more holistic approach, political economists see differences and inequalities between regions when observing geographical inclusion into capitalist accumulation processes. Growth is the means and the end in school of thought, as the end goal of said processes is not to create use value, but to increase profits. Profit maximization incentive leads to the suppression of wage increases. Low wages lead to lower aggregate consumption which contradicts and limits production expansion. This essential contradiction inevitably leads to crises, as profits are only realized when market transactions are complete. The most common type of crisis under capitalism is accumulation slumps which lead to stagnating or shrinking GDP. Another form of crises is overaccumulation or overproduction crises, where excess investments lead to a surplus supply in capital which now fails to realize profits, due to a lack of aggregate demand or willingness to pay. The contradiction resulting from private appropriation of societal production benefits can be institutionally stabilized to prevent crises over longer periods while maintaining high growth rates. Political economists criticize the idea of economic growth as a synonym for progress. In that perspective, that kind of thinking stems from the direct relation between growth and employment in capitalist societies. This leads to a general acceptance of sacrifices made in the name of growth, even among making the sacrifices. Examples include the shortage of welfare state policies or the image of taxes impeding economic growth. Political economists recognize that growth stimulates the production of cheap basic goods and the development of the productive forces (see also section 1.1 c), resulting in a transformation of social structures. However, they reject the assumption that such developments are always desirable. Due to the specific production relations under capitalism, the fruit of societal production are generally unequally distributed.

Many people receive no share of higher economic societal wealth. Increased productivity on no account lead to an automatic increase in real wages. (ibid.)

Can infinite growth be sustainable at all? Is it a decent standard of living for all possible without throughput and output growth? Is the idea of “Green growth” the solution to growth-induced problems? And is growth even desirable in industrialised countries? Kallis et al. (2018) argue that prosperity does not depend on high levels of consumption or production. While it is true that output growth can be rendered less material intensive through innovation and research and development, such adjustments are limited. To give an exaggerated example: Through innovative production processes and resource mining, production input for a given good x can be lowered from y to y' , where $y' = 0,00001 * y$. But in infinite production and growth, $y' * \infty = \infty$ nevertheless. With regards to solar energy as a large resource pool, we have an energy source that provides somewhat limitless energy. However, the sun does not grow either. Moreover, In the light of the current climactic developments the question arises if the above-mentioned innovative breakthroughs will come in time. (Daly, 2007) The resource use of mid-income countries would not be sustainable if they were to be generalized to the whole planet, let alone that of the United States. There is not a single country that currently satisfies social standards while maintaining a sustainable economic activity suited for their portion of the planetary boundaries. Be that as it may, the stability of economies depends on growth because of the way they are currently structured. It is necessary in order to avoid unemployment, reduce debt, and uphold public services. Therefore, questioning the concept of GDP as an economic indicator is a technically, politically and culturally challenging project. It would require the reorganization of institutions, labour, markets, property structures, and social security. Recent research points to certain conditions under which economies may function without economic growth. This Postgrowth concept will be the centre point of the subsequent section. This would require a modern approach to production and use of materials, in conjunction with an adapted system of wealth distribution. (Kallis et al., 2018; Agrawal et al., 2024)

After thorough research on the three major economic paradigms and their conceptualizations of environmental sustainability and welfare, the following conclusions can be drawn to answer the first research question (**q1.2**²⁶): Neoclassical economics views

²⁶ q1.2: How do Neoclassical, Keynesian, and Political Economy traditions differ in their conceptualizations of societal welfare and their treatment of environmental sustainability?

environmental assets primarily as marketable natural capital, emphasizing market-based solutions and internalization of externalities, often reducing ecological concerns to economic terms. Keynesian economics advocates active government intervention to address market failures and externalities, promoting policies aimed at stabilizing the economy and supporting a more sustainable and equitable distribution of resources. In contrast, Political Economy emphasizes the importance of power relations, social inequalities, and systemic structures; it critiques the profit-driven motives inherent in capitalism, arguing that true sustainability cannot be achieved without addressing underlying social and economic inequalities and questioning the very models of growth and resource use that dominate contemporary thought. Understanding these paradigmatic differences is crucial for developing holistic approaches to integrating environmental and societal welfare considerations into economic policy and strategy. While each paradigm offers distinct assumptions about societal welfare, their implications for well-being and sustainability vary significantly. Neoclassical economics tends to equate welfare with consumption, utility maximization, and efficiency, often relying on GDP as a primary indicator, which neglects broader social and ecological dimensions. Keynesian approaches expand this view by emphasizing the importance of full employment, social stability, and investment in public goods, thereby recognizing welfare as encompassing economic security and social cohesion. Political Economy, however, challenges these perspectives by arguing that true societal welfare must address the distribution of wealth and power, social justice, and the intrinsic value of ecological health, recognizing that conventional indicators like GDP fail to capture the quality of life and sustainability. These paradigmatic differences highlight the need to reassess how societal welfare is defined, measured, and achieved within future economic models aiming for ecological and social sustainability.

Summarizing the recent findings about societal welfare does not only help reflecting on the findings but also serves to provide an answer to research question **q1.3**²⁷: Core definitions of societal welfare traditionally often rely on one-dimensional economic indicators such as GDP, which measure economic activity but neglect social and ecological dimensions. To develop a more comprehensive understanding, welfare must be expanded to include various qualitative and multidimensional indicators that capture well-being, social equity, health, education, and environmental quality. The most critical learning here might be that one singular indicator can never accurately measure societal wealth or welfare. Only when assessed in combination,

²⁷ q1.3: "What are the core definitions and dimensions of societal welfare, and how can they be integrated into economic frameworks beyond GDP?"

various indicators can deliver a clear picture of how prosperous or healthy a society really is. Integrating these dimensions into an economic framework requires a shift towards holistic assessment models that prioritize genuine human needs and ecological sustainability, moving beyond purely financial metrics to foster policies that promote genuine societal welfare within ecological limits.

It is now time to circle back and answer research question **Q1**²⁸, as the investigation of all sub-questions has delivered promising answers: Different economic paradigms offer contrasting perspectives on societal welfare: Neoclassical economics equates welfare with material consumption and satisfaction of needs. Welfare is achieved through market efficiency and the trickle-down effect, and measured via the GDP, which neglects social and ecological dimensions. Keynesianism has a broader concept of welfare, emphasizing full employment, purchasing power, and investment in public goods. Thereby it includes economic security and social cohesion. Conversely, the Political economic paradigm underlines the importance of systemic power relations, social inequality, and environmental health, criticizing monetary value-driven motives and emphasizing social justice. Regarding environmental sustainability, Neoclassical models tend to internalize externalities through market mechanisms but reduce ecological concerns to economic terms. Keynesian policies promote government intervention to correct market imperfections, directly or indirectly supporting ecology. Political economy identifies underlying systemic drivers of environmental degradation, emphasizing that sustainable development cannot be achieved without tackling social inequalities and perpetual growth models. Growth-oriented frameworks are limited by their reliance on economic upswings and reliance on narrow, quantifiable indicators, which fail to account for qualitative aspects of well-being and ecological health. This narrow focus can lead to policies that prioritize economic expansion at the expense of long-term sustainability and social equity.

3. The Art (and Science) of Not Growing

In the last chapters, it has become clear why unlimited growth has detrimental consequences for the economy, the environment, and for social questions. But from established

²⁸ Q1: How do different economic paradigms conceptualize societal welfare and environmental sustainability, and what limitations arise from growth-oriented frameworks?

economic theory we know that the consequences of lacking growth, stagnation or even a shrinking economy can be brutal. So, what kind of system should we aim for as a society? Does capitalist realism imply an understanding of economic processes and history which critics simply lack? For Tim Jackson, the director of the Centre for the Understanding of Sustainable Prosperity (CUSP), the answer is no: Jackson (2022) opines that public understanding is less about "economic hard facts", and more about a cultural growth myth that has been built up over almost two centuries and has dug deep into the psyche of industrialised nations. Even the "first warning shot" over 50 years ago was unable to change this. (Beyer, Book & Schulz, 2022) "Limits to Growth" was the first comprehensive study on the consequences of incessant human expansion. It was commissioned by the Club of Rome (1972), a non-profit organisation that has been campaigning for a sustainable future since 1968. The scientists used new computer models at the time and came to a clear conclusion: The planet's resources would not allow the economy and population to grow at the same rate beyond the year 2100. There was a threat of dramatic consequences for people and the environment. The study was sharply criticised, and its conclusions were categorically rejected by many opponents, even in the decades that followed. Although the calculations were confirmed time and again. (Jackson, 2019)

A new transnational field of research has emerged since 2008, occupying itself with the question if growth can be sustainable, if more growth is desirable under the current conditions in the first place, how modern societies can be restructured as to not be reliant on growth anymore, and what the answers to these questions imply for our image of a good life. The field is recognized as "Degrowth" or "Postgrowth" and has been the topic of numerous publications, debates and conferences. Degrowth is a transdisciplinary approach, drawing mainly from economics, environmental studies, social studies and humanities, although not exclusively. Postgrowth questions the implicitness of growth as the goal of economic policies and suggests theoretical and practical alternatives. (Schmelzer & Vetter, 2019) Broken down, the degrowth hypothesis represents the possibility to organize a transition towards and live well under a different political-economic system with a radically smaller resource throughput. Degrowth is normative in nature, using analytical tools to propose practical applications in a discretionary manner. While the explicit term is young in scientific literature, economists have discussed the end of economic growth for centuries. Classical economists predicted the concept of a stationary state, an eventual unintentional economic stagnation. Adam Smith and David Ricardo projected high levels of economic inequality. John Stuart Mill painted a less dark picture in the context of distributional policies, which would lead to a high level of social welfare. The post-development

studies of Serge Latouche provided important groundwork for degrowth, as they examined the ideology of growth-bound development as a false narrative. The global West has depicted sociohistorical processes as linear, monotonous, cumulative and irreversible, justifying the global expansion of markets and economic growth in the name of “development”. (Kallis et al., 2018; Jäger & Springler, 2015) Since then, various post-growth approaches have been developed to transform economic systems to achieve well-being within planetary boundaries, without the need for everlasting expansion. Such approaches include steady-state economics (Daly, 1992), Post-growth (Jackson, 2009), Degrowth (Schneider, Kallis & Martinez-Allier, 2010), doughnut economics (Raworth, 2017), and well-being economics (Trebeck & Williams, 2023). These approaches have in common that a) they share the view that the economy and peoples’ well-being are part of ecosystems and are dependent on their functioning, b) they replace the sole focus on production with broader conceptions, including a range of needs and capabilities, and c) they require and propose policies to prioritize environmental and well-being objectives over economic growth. (Mason & Büchs, 2023) Buch-Hansen & Nielsen (2023) identify three possible ways from here on forward: Keeping up the status quo of business and economic activity; Green growth; and Degrowth. They underpin the three concepts as vastly differing political concepts regarding societal goals and policy instruments: The authors boil it down to differing views on whether and how continued economic growth can be consistent with slowing the climate crisis. The terminology of the Postgrowth paradigm will be subject of the subsequent subchapter.

It is already open to debate how long the renunciation of growth will remain voluntary and at what point it will take place without our consent if the planet continues to heat up at this pace. Furthermore, Jackson projected in 2022 that economic growth will yield in the global West in the foreseeable future. (Beyer, Book & Schulz, 2022) Jackson speaks of a gradual decline of growth rates that is not explicable with the war against Ukraine, Covid, or the long-term consequences of the financial crisis or the austerity policies that attempted to fix it. (Jackson, 2023) Instead, Jackson observes but a “secular stagnation” across the OECD nations that has been creeping up on us for decades. (Beyer, Book & Schulz, 2022) Official European data seems to confirm Jackson’s projection, as the European Union has only grown by 0,4 percent in 2023, and by one percent in 2024. The average growth of the years 2018-2022 in the European Union amounts to 1,64 percent. (Eurostat 2025) Kallis et al. (2018), agree that a slowing of the economy does not necessarily imply an economic crisis. On the contrary, the authors identify decreasing growth as a side effect of the transition they envision for the economy. They highlight an approach called “a-growth”, which entails ignoring the effects of policy measures on GDP. They advocate for a global

carbon price, neglecting if the economy grows or not, and making plans for managing it if it does not. The end goal for them would be a transition toward equitable well-being and environmental sustainability.

This chapter contains a profound analysis of the Postgrowth paradigm, its terminology, methodology, central ideas, its distinctive implications from the concept of Green growth, and another examination of the environmental issues highlighted in 1.2. through the lens of the Postgrowth framework.

3.1 Green growth vs. Degrowth

This section contains a comparison between the concepts of Degrowth and Green growth, and their economic and ecological implications. Van den Bergh (2017) defines Green growth as a state where the economy grows, while material and energy throughput do not. Optimally, they even decline. If the throughput declines because the economy shrinks, that would contrarily be called a recession (or depression in prolonged situations). Degrowth, in the author's perspective, is the improvement of social and environmental conditions with declining GDP as a result. The author observes that civilians, academic and politicians worry that stringent environmental preservation policies will harm economic growth, as in GDP growth. Many economists – like Jänicke (2012), Smulders, Toman & Withagen (2014) and Lindner (2023) – believe that combining growth and a stable climate is possible. Bowen, Cochrane & Frankhaue (2012) for instance, believe that growth policies simply need to be revised to assure investments in the educational, infrastructure and business sector need to be directed towards recognizing climate risks and opportunities. Millner & Dietz (2015) argue that investments in traditional, productive capital and adaptive capital need to be balanced, the further being vulnerable to climate change, whereas the latter increases in productivity through opportunities opened up by it. Authors like Stern (2014) even attribute innovative growth opportunities to climate policies or find that Green growth is not only feasible, but that growth is necessary to keep income above a critical threshold to solve environmental problems. The Environmental Kuznets Curve incorporates such approaches. After an initial rise in pollution due to increased individual income, the concept assumes an inverted U-shaped relationship to express that at some point, individual pollution declines once more. Due to lack of strong evidence, there is no consensus in academic literature about the hypothesis that income and CO₂-emissions delink beyond a

certain income threshold. (Delgado, 2023; Van den Bergh, 2017; Bassetti, Benos & Karagiannis, 2013; Wagner, 2008; Stern, 2010) Critics, among them Van den Bergh (2017) argue that such models for overestimating rates of growth while underestimating the likelihood of irreversible damages caused by climate change. Historically, innovation-based growth was founded on increases in consumer surplus through product quality improvements or added features. Low-carbon innovations, however, are generally perceived as complementary, not as innovative substitutes to carbon-intensive products. Green electricity has no productive, functional or aesthetic advantage for consumers over fossil fuel-based energy. (ibid.)

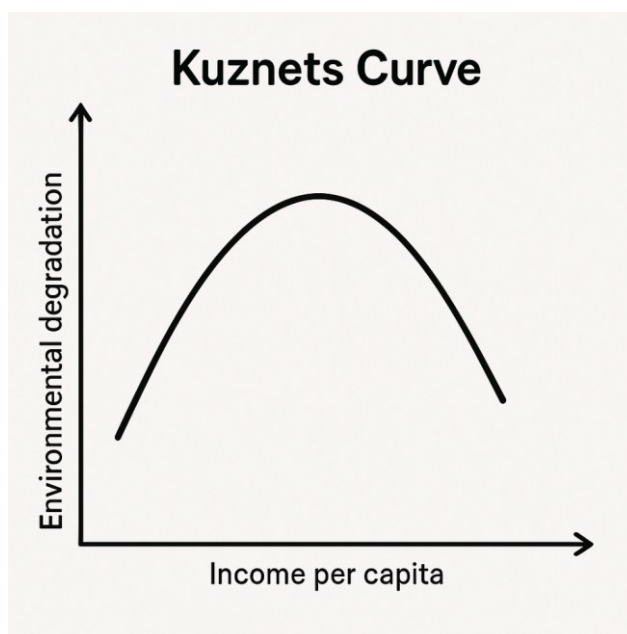


Figure 3: Kuznets Curve, own depiction after Delgado, 2023

Theoretically, the decoupling of economic output and material throughput seems possible, by improving resource and energy efficiency of production. In Neoclassical theory, this kind of innovation is driven by the economic sustainability precept and supply-side oriented investments into research and development. Ecological economists argue that in practice it is very difficult to deliberately decouple the entire economy, even though relative decoupling is common. An important misconception is the confusion of scale with efficiency. The “energy

rebound"-principle (sometimes also referred to as Jevon's paradox or rebound effect; see also Polimeni, 2011) states that energy efficiency improvements often increase energy consumption, contrarily to the desired effect. Causes are lower energy prices and steady economic growth, for instance. The increased consumption eats up the savings due to efficiency. (Wang, Han & Lu, 2016) The pitfall is that through more efficient production the inputs become cheaper, which is why producers end up using more of them. This can be illustrated by an increase in labour productivity leading to more and new jobs. Following Neoclassical decoupling theory, said increase should lead to less employment. In the same way, increases in resource productivity lead to increased output and resource use. Capitalist economies grow by using more resources more intensively. It is unlikely that increased resources efficiency would lead to the use of fewer resources. (Kallis et al., 2018) Steinberger et al. (2013) find that technological progress could either be used to reduce resource consumption, or the opposite: to exploit resources more and at a lower cost. Kallis et al. (2018) see a way for cleaner, greener growth by substituting fossil fuels for renewable energy sources, for instance. Scarce, environmentally damaging materials could be replaced with more abundant, more easily obtained materials. However, new resources have different resource requirements and life cycles. Principles of efficient use cannot be transferred 1:1 to new substitutes: Energy, for instance, is a great accelerator of work. The industrialised revolution and subsequent growth have only been possible due to fossil fuels taking over tasks human labour alone could not achieve. (ibid.) Fossil fuels have incomparable energy density and portability. Ending their use would most probably result in a decrease in productivity. Renewables like solar and wind are mainly limited by their flow rate; but they are diffuse and must be collected over time. Fossil fuels are more concentrated and can be densely stored in easily extractable deposits. Collecting and concentrating diffuse flows of energy reduces their degree of efficiency, since extraction requires more energy, and collection needs more space. To illustrate: Oil and coal have a return on energy investment (EROI) of 50:1, meaning that you get out 50 times as much energy as you put in. The EROIs of renewables lay between 10:1 and 20:1. (Kallis et al., 2018) Fizaine & Court (2016) calculated that a growing economy requires a minimum EROI of 11:1. Most likely, an economy entirely turning its back on fossil fuels will subsequently have a lower net energy and lower output, as lower EROI means less labour productivity, and consequently less growth. (Jackson & Webster, 2017) Van den Bergh (2017) discusses the prospect of worse average energy quality as a result of future large-scale transitions to renewable energy. Economic growth may slow drastically, which would be detrimental to the basis of our current economic system. The author concludes that not only energy quantity, but also quality matters. Ayres, Warr & Correa (2014) found that net energy after conversion losses accounts for a big share of the United States' TFP and economic growth. I. e. switching from fossil to renewable energy sources will inevitably

put a dent into national economic growth. And the substitution of energy with other production factors does not seem any more promising. Ayres et al. (2013) argue that numerous theoretical and empirical studies rely on production functions that make overly optimistic assumptions about the ease of substituting away from energy. Improved energy quality (e. g. due to substitution of fossil fuels with other fuels) has been a more important facilitator for growth than substitution away from energy. (Van den Bergh, 2017) Another point worth considering is that the necessary land to install solar panels or wind turbines is land that cannot be used for food production. Furthermore, building the necessary infrastructure requires batteries built with rare materials to store their inconstant flows of energy. (Kallis et al., 2018)

At the global level, GDP and material use have grown approximately by the same rate over the past decades. The growth rate of carbon emissions was slightly lower. (Kallis et al., 2018) Cross-panel data analysis by Steinberger et al. (2013) show that every percent growth of a national economy goes along with a 0,6 to 0,8 percent increase in carbon emissions. Resource throughput grows by approximately 0,8 percent for the same scale of growth. (Kallis et al., 2018) In the long run, developing economies show a strong correlation economic growth and material use than industrialized economies. This effect may be aggravated by trade patterns. In the short run, the opposite is true. Dematerialization limits growth, and industrialization of developing countries is material intensive. A maximum income growth rate consistent with dematerialization and decarbonization would produce growth rates below historic growth rates. (Steinberger et al., 2013). Current global resource use follows the scenario the “Limits to Growth” report from 1971 describes as “collapse by 2050” scenario. Accounting for imported goods, material consumption in OECD countries has grown at the same rate as GDP, with no observable decoupling. (Kallis et al., 2018) Steinberger et al. (2013) find that increased efficiency of material consumption is not sufficient for decoupling economic growth and environmental resource use. There is no empirical evidence for decarbonization or dematerialization at higher economic growth rates or incomes. When it comes to water use, growth effects largely outweigh any imaginable savings from technological innovations. (Disteffano & Kelly, 2017) Even in regions like California, where water withdrawal was stabilized, water footprints have increased as a result of economic growth. (Kallis, 2017)

According to Kallis et al. (2018), carbon emissions in some EU countries have been declining lately, even when accounting for trade. They suggest some substitution of fossil fuels

by cleaner energies. Although understandably, recession played an important role as well. Friedlingstein et al. (2025) report that global carbon emissions have grown by 1,47 percent annually between 2014 and 2024. However, the reduction lies not anywhere near the eight to ten percent annual reduction necessary to limit global warming to two degrees Celsius. In a growth-oriented scenario, carbon intensity would have to fall by 4,4 percent for 1,5 percent economic growth every year to maintain 2 degrees Celsius relative to pre-industrial levels. (Kallis et al., 2018) To limit global warming to 2 degrees Celsius with a probability of more than 66 percent, the emission levels would have to remain on 2014 levels for 15 to 30 years. (Gebauer, Lange & Posse, 2017) Van den Bergh (2017) argues that technological innovation alone will be insufficient to counteract emissions associated with global income growth. Jackson (2015) criticizes the idea of a green growth economy and claims we would have to somehow reduce the carbon intensity of every dollar of output by 130 times in 2050 than it is today. In a world of 9 billion people all aspiring to live a Western lifestyle, this idea indeed seems ambitious, when comparing to current developments. Aden (2016) reports absolute CO₂-emissions decoupling for 21 countries since the year 2000. However, the author does not take carbon leakage into account, i. e. the shift of emissions abroad. A study by Gazheli, van den Bergh & Antal (2016) does not hint at Green growth to be happening.

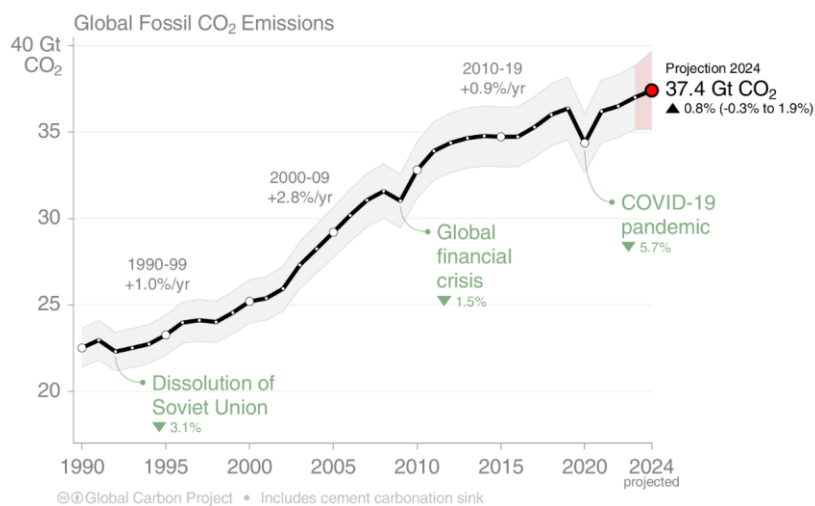


Figure 4: Global Fossil CO₂ Emissions (Friedlingstein et al., 2025)

There is no definitive answer as to whether environmentally sustainable activities are profitable enough to keep an economy running and reasons that there is no empirical evidence. (Jackson, 2015) Van den Bergh (2017) doubts the feasibility of Green growth for two reasons: Stringent green policies may impede growth. Or weak policies with the goal of not harming growth, will not deliver ecologically sustainable outcomes. The author recognizes that public concerns about growth impede public and political support for urgent climate policies. Overcoming this sort of discourse provides another motive to become less occupied with growth. Moreover, the credibility of a facile transition towards Green growth would require non-negligible investments, research and development into reducing carbon intensity; Resources that could not go into improving labour productivity. Supporting shifted taxes from labour to carbon would further weaken incentives for firms to invest into increased labour productivity. This would undermine the very basis of growth-oriented economies. (ibid.) Jackson (2015) argues that he would like to change the premise of the discussion: rather than contemplating how to sustain growth in the long-run, maybe societal and academic discourse should start by identifying what we want an economy to look and act like. Stability, equality and ecological bounding are focal points for Jackson. Collapsing economies threaten human existence directly. Unequal societies drive competition for unproductive statuses rather than further well-being. Considering planetary boundaries need to be a part of the groundwork for economic activity. The valuation of ecosystem services and the identification of an ecologically bounded production function are essential to building a sustainable economic framework. This does not mean that an economy should never increase labour productivity. There are various fields and places where substituting away from human labour makes sense, especially where working conditions are poor. But the idea that labour input is always something that needs to be minimized or substituted is neither sensible nor societally desirable. Some services constitute their value specifically from human input.

Material decoupling and sustainability in developing and developed countries.

The prevailing economic growth model presents critical challenges to ecological sustainability, both in developed and developing countries. Degrowth theorists argue that material decoupling has not reached the necessary scale to ensure the honouring of planetary boundaries. In this context, Latouche (2004) emphasizes that Degrowth must be a global strategy and must not be applied globally selectively. Southern societies are often pressured to follow a linear idea of development by following the developmental trajectories of the global North. Rather than pursuing conventional development, these societies should try and “disentangle” from

dependence and environmental degradation that growth economies bring. This process involves re-localizing economies, reviving indigenous traditions and restore autonomy disrupted by colonialism and globalization. Moreover, the ideology of growth is similar to a form of systemic addiction (refer back to the concept of Capitalist Realism). Latouche (2004) likens economic expansion to a viral or narcotic spread, weakening societal resilience and fostering other dependencies. Transnational corporations, the key beneficiaries of the growth imperative, reinforce unsustainable consumption patterns globally. According to the author, a global shift away from the current model is therefore imperative to avoid ecological collapse.

Rapidly growing emerging economies increase their energy consumption. Kallis et al. (2018) point to phenomena like Simpson's paradox to explain why increases in energy efficiency at the national level may not translate into global reductions. Even if all countries improved their energy efficiency, emerging economies have higher energy intensities and high growth rates, which deteriorates global the benefit. This further strengthens the doubts about relying on innovation as a sole mitigation strategy. Van den Bergh (2017) supports this view, arguing that technological improvements are insufficient to offset the environmental consequences of income growth. The decoupling of emissions from production may offer some optimistic signals; however, consumption-based emissions, which more accurately reflect the environmental footprint of affluent societies, remain tightly correlated with income. Indeed, while some projections for large emerging economies like China suggest that continued growth may be compatible with climate goals, others offer a more pessimistic assessment, casting doubt on such optimistic scenarios (Kallis et al., 2018). Additionally, Smulders, Toman & Withagen (2017) notes that environmental policies do not necessarily yield positive effects on income growth, further questioning the compatibility of ecological and economic objectives.

Concluding on the concept of Green growth, there is an urgent necessity for alternative development approaches for both developed and developing economies. The goal must be to reduce absolute consumption levels in the former, while avoiding resource intensive economic and human development for the latter.

3.2 History and methodology of the Postgrowth paradigm:

History.

The deepest roots of Postgrowth influence can be identified in radical Western environmentalism of the 1960s and 70s, especially Rachel Carson (1907-1964) and Donella Meadows (1941-2001). Carson published her book *Silent Spring*, in which she documented how pesticides damaged environments and people alike. Meadows was co-author of *The Limits to Growth*. The 60s and 70s were characterized by a criticism of growth that went beyond environmentalism. Amidst the post-war boom there was still poverty; and people still saw the ongoing wars and looming threat of a nuclear catastrophe. Herbert Marcuse (1898-1979) described how industrial capitalism created artificial demand for private goods. This fell in line with the post-war declaration of GDP as the main indicator for societal wealth (refer back to subsection 2.1 of this work). The 70s were the decade of Fred Hirsch and his book *The Social Limits to Growth*, in which he challenged the narrative of middle class. In his view, growth can never produce a middle class, because as soon as propositional goods become accessible to a wide range of people, they lose their status value. It was also the birth decade of Ecological Economics. (Kallis, 2018) Georgescu-Roegen wrote in 1975, that human activity will have to decrease to a scale that is supportable by the flow of solar energy, since mineral stocks and fossil fuels are finite. (Georgescu-Roegen, 1975) The author supported the models around *Limits to Growth* with his knowledgeability thermodynamics and economics. One of his most students was Herman Daly, who was previously introduced in this work and a famous supporter of steady state economics. After Georgescu-Roegen and Daly, economists standing in the Ecological economic tradition kept criticizing growth, however until more recently did not advocate for Degrowth anymore. In 1977, André Gorz (1923-2007) argued that ever-lasting growth was impossible, and his views on ecological realism are part of the foundation of the then-emerging field of Political ecology, a sub-stream of Political economy. Meanwhile, the Green party formed in the Federal Republic of Germany, and together with Petra Kelly criticized industrialism and the growth-orientation in the country. In the 1990s and early 2000s, activists (among them Bertille Darragon, Sophie Divry, Bruno Clementin and Vincent Cheynet) published a weekly newspaper called *Décroissance*, and tried to mobilize against advertising and for car-free cities. One of the most famous Degrowth academics to this day is Serge Latouche (*1940), French economist and anthropologist. Latouche adds to the field of Post-development studies, a school criticizing Western doctrines of development and their influence on indigenous societies. (Kallis, 2018) Latouche (2009) brought together the ecological economic ideas of Georgescu-Roegen with the Political ecology of Gorz and Hanna Arendt's (1906-1975) philosophy. He transferred the ecological, economic and social critique from *Limits to Growth* to postcolonial approaches, developing a critique against market expansionism. (Kallis, 2011) In 2008, the first international

conference on Degrowth took place in Paris, organized by the collective “Research & Degrowth”. In the same year, Tim Jackson (*1957), Director of the Centre for the Understanding of Sustainable Prosperity (CUSP) and professor of Sustainable Development at the Centre for Environment and Sustainability at the University of Surrey, published his book *Prosperity without Growth*, in which he claims that a growing economy and the fight against climate change are irreconcilable. (Jackson, 2009 [2008])

Methodology.

As previously discussed, the Postgrowth paradigm incorporates a wide range of approaches, including Degrowth, Steady state-economics, and the well-being economy. So far, the result of the conducted literature review has shown that most ecological-economic research criticizes growth-oriented theory (i. e. the foundation of the Neoclassical and Keynesian paradigm) and the market and growth-orientation of modern economies. An attempt at describing Postgrowth methodology could not only further illustrate why the two seem incongruous but may offer deeper insights into the method of operation of modern literature. There seems to be little literature on the methodology of the comparably young and transdisciplinary Postgrowth paradigm. One could argue that Keynesianism is not much older and equally keeps a methodological openness. However, Keynesianism developed on the basis of the existing Neoclassical paradigm and incorporating some contemporary Political economic influences. Furthermore, Postgrowth has arguably been cast aside, and often camouflaged as anti-capitalism or anti-industrialism in recent decades. Thus, it is unsurprising that comprehensive analyses are scarce today.

Buch-Hansen & Nielsen (2023) suggest that much of climate science is consistent with Critical Realism (refer back to 1.1 b), even if not explicitly grounded in it. However, they do admit that in key respects, the shoe does not quite fit. The authors highlight that while Critical Realism is a philosophy of science, its perspective is under continuous development and negotiation. There is a certain amount of cherry picking involved, as Critical Realism keeps methodological and disciplinary openness. Interpretations of concepts diverge regularly, new concepts are introduced, and Critical Realism is synthesized with other strands of thought; Few (if any) components remain uncontested. Although, that does not mean that anything goes. Besides the core of what Critical Realism is (which for brevity's sake is not going to be part of this discussion, for closer inspection refer back to subsection 1.1 b), there are spheres of what Critical Realism can potentially be, and of what it definitely is not. Positivism, for instance, falls into the sphere of

what it is not. Critical Realists would agree that the climate crisis is material and not simply a construction of ideas about it. Critical Realists would moreover agree that analyses of deeply rooted structures and mechanisms are critical to understand the nature of the crisis. However, as a philosophy of science, Critical Realist theories cannot tell us which mechanisms specifically are causing climate changes. That is the job of empirical research and substantive theories. The authors conclude that Climate science is broadly however implicitly compatible with Critical Realism. They reason climate science continuously evolving new insights and changing continuously, while the core agreement that climate change exists never changes. Moreover, climate science is not value neutral, calls for more research as well as for action to prevent scenarios. Projecting various scenarios is a key element of climate science. The projections combine existing research about trends with assumptions about interventions and developments. Critical Realists are sceptical towards forecasts, especially in the form of quantitative predictions. (ibid.) Hausfather et al. (2020) argue that contrary to economic models, climate model forecasts return a remarkable accuracy.

Postgrowth science is inherently normative, with the clearly defined goal of downscaling throughput connected to economic activity, while securing peoples' well-being. If there is a fundamental coupling of economic activity and resource use, then stringent and serious environmental policies will slow down the economy. Postgrowth literature inherently recognizes this. Reciprocally, a slower economy will reduce resource use and carbon emissions. (Kallis et al., 2018) This is not the same as claiming the ultimate goal is to slow GDP growth. (Van den Bergh, 2017) Slowing down the economy is the means to the end of a transition toward equitable well-being and a sustainable society. Postgrowth literature (Hickel, 2020; Jackson, 2021; Kallis, 2018; Trebeck & Williams, 2023) identifies nine planetary boundaries, four of which have already been broken. Climate change, land-use and ground sealing, nitrogen and phosphorous flows are already at critical levels and threaten human society. (Mason & Büchs, 2023)

As previously mentioned, Postgrowth is transdisciplinary and open in its methods. Economists like Daly, Victor, Jackson or Mellor tend to develop critiques within the field of economics, making use of Neoclassical and Keynesian models. They use these models and data to investigate conditions for a stable economy without growth. It is a new version of economics, but it is economics nonetheless; Proposals regard labour, taxation, or monetary policies to reduce material and energy flows, while stabilizing a contracting economy. Most Postgrowth

economists are from Europe or North America, i. e. their models largely concern developed capitalist economies. Latouche, Illich, or Shiva write about the Southern perspective, criticize (post-)colonial relations of dependence, and challenge Western ideas of progress and development. (Kallis, 2018)

3.3 Central ideas

It has been established so far that if humanity is not to destroy its own support system, global economy must slow down. This subsection combines a summary of the findings on Degrowth research so far and adding some. Subsequently, it will all be boiled down to tangible implications for existing firms in chapter 4. To prosper independently from growth would not be easy, as anyone with an economics degree can imagine. It implies building capacities and establishing a radically different economic system and way of living. Latouche (2004) elaborates that Degrowth is not a concrete project, but an abstract keyword. For him, contemplating a contraction-based society is mainly a way to provoke thinking outside the box. Growth is a recent phenomenon of industrial capitalism. Economists first measured it in the 1930s, and its pursuit only became widespread in the 1950s. And with the current conditions, it is no longer desirable. Its costs have long started to outweigh its benefits. Growth has become uneconomic. Degrowth is no mere reduction of GDP at any cost. (Kallis, 2018) Especially, since the exact interplay between GDP, climate change, and various other factors is too elaborate to determine exactly, the required magnitude of GDP reduction is impossible to calculate. This means we cannot plan for it: any concrete degrowth rate would be arbitrary. (Van den Bergh, 2017) Such a phenomenon would be called “recession”; or when persistent, “depression”. Degrowth refers to a development of decreasing throughput with simultaneous increase in well-being. This is where mainstream economic discourse is inundated. Degrowth literature describes something bigger than some numbers going up or down in the result of a predefined calculation. Degrowth wants to change the calculation. GDP will not be measured in a degrowth society. If production were to be measured, it would all but certainly be smaller. Markets would recede, and nature and labour decommodified. People would work less. (Kallis, 2018) The transition would be all but easy. A lack of growth in the current economic model could be disastrous. This qualitative imagination of what degrowth is has utopian elements. It is something very different from what exists. Latouche argues that we can produce this utopia with concrete actions starting today. The transition, however, is unlikely to be easy: lack of growth in a growth society can be disastrous. And here

there is a link to more “economistic” studies of the ways in which we may “manage without growth”, becoming “slower by design, not disaster” (Victor, 2008; Robert Solow in: Beyer, Book & Schulz, 2022).

One goal of Degrowth is to stabilize economies and achieve social and ecological goals. Recessions destabilize and occur when growth-oriented economies fail to grow. Policies to support a Degrowth strategy are: The reduction of sub-necessary production, improved public services, the introduction of a universal jobs guarantee and reduced working time, and the facilitation of sustainable development. Reducing less-necessary production means scaling down destructive sectors like fossil fuels, mass production of meat and dairy, fast fashion, advertising, cars and aviation. This goes together with ending deliberate obsolescence of products, lengthening their life span and reducing the purchasing power of the rich. Improving public services means ensuring universal access to high-quality healthcare, education, housing, transportation, communication, renewable energies and high-quality food. Universal public services create high levels of societal benefits without high levels of resource use. A job guarantee would ensure a good transition for workers in declining industries. (Hickel et al., 2022) Unti (2015) describes that the wage and benefit package serve as a national floor for wages throughout the economy and erases unemployment. The quantity of labour that the government demands is allowed to float over the business cycle. Its benefits exceed simply creating jobs. Eliminating unemployment might help with problems like poverty, inequality, labour exploitation, crime, discrimination, mental illness, and drug abuse. A job guarantee will not only offer jobs, but training, skills, and work experience. The benefits will also affect non-participants in the private sector, pressuring employers. The two most common objections regard inflation and affordability. Conventional economic teachings hold that full employment and price stability are not compatible, because low unemployment rates put pressure on wages and prices. Unemployment is seen as necessary to fight inflation. The author argues that the programme contrarily increases price stability by acting countercyclical. Having a stock of workers, a “reserve army” so to speak, available for the free market could allow for loose labour markets at full employment. (Forstater, 1998) If traditional economics stay true and the pool of guaranteed state workers becomes too small, and the rate of inflation increases in economic upcycles, the state could raise taxes or cut discretionary spending, replenishing the stock of state workers. Wray (2003 [1998]) estimates the monetary cost of a job guarantee programme at less than one percent of GDP for American purposes. The authors says that a big part of the costs would be absorbed by reduced spendings on social welfare such as unemployment benefits. In Austria and Germany

this includes money, housing, and insurance. Modern Monetary theory (MMT) suggests that a sovereign currency can always be used to finance job guarantee. What differentiates public from private employers is that the state is not bound by efficiency, which forces labour to create surplus value and its compensation to be pushed to the minimum. Workers under a job guarantee programme can be employed in any field society deems of value: Care work, improving the city scape, education, restoration, arts, etc. (Unti, 2015) Reduced working hours are seen as a must under the societal goal of reducing throughput, especially with high levels of productivity. (Hickel et al., 2022; Kallis, 2018)

In later works, Latouche (2010, as cited in Kallis, 2011) describes Degrowth as abandoning a goal of abundant growth. The author adds the ultimate goal of building an autonomous, convivial society. (Latouche 2012a, as cited in Kallis, 2018) This goal should be achieved through cyclical contractions of business activity and society which involve “eight Rs”:

1. *Reevaluate* immaterial goods like leisure and give less importance to material possessions.
2. *Reconceptualize* dualisms that shape the growth imaginary poverty and wealth, scarcity and abundance, under-development and development, backward and modern.²⁹
3. *Restructure*, which should be understood as “adapt the productive forces and social relations to modern values and developments”.
4. *Redistribute* wealth and income both between North and South and within economies.
5. *Re-localize* value networks to avoid long-distance trade, produce goods in proximity to their destination of consumption, and circulate and reinvest surpluses locally.
6. *Reduce*, i. e. produce, consume, work, travel and waste less.
7. *Reuse and recycle*: Stop the deliberate inferior quality of appliances and recycle that which cannot be reused. (Latouche, 2009, as cited in Kallis, 2018)

A strongly sustainable society does not aim for growth in number of businesses, turnover, or other financial indicators. This offers opportunities to abandon profit-maximizing businesses in the form of corporations and limited companies. (Lawson, 2014) Only if businesses are liberated from competitive environment and the chokehold of profit maximization can they be

²⁹ Mr. Kallis does not specify in which way these dualisms are to be reconceptualized. One possible explanation is that those concepts should be analysed for their systemic origins, dynamics and effects in and on society, instead of traditional stereotypes.

compatible with a strongly sustainable society. (Nesterova & Robra, 2022) Such a socio-economic transformation requires shifting from financial competition towards so-called “coopetition”. Coopetition refers to the cooperation between competing organizations to achieve higher levels of efficiency. One characteristic of coopetition among organizations is open and unrestricted sharing of knowledge and experience. Parallely, a healthy level of constructive competition for development exists and is accepted. (Köves et al., 2021) In our current system, coopetition describes a relationship which is composed of shared value creation through pursuing common benefits and a parallel value appropriation of pursuing private benefits. It can be used to acquire technical skills, capabilities, resources, and knowledge. Studies on shared firm learning have shown that firms with a similar competence base can acquire new capabilities. This is because competitors usually face similar issues and therefore develop similar – and often compatible – solutions. In recent years, firms’ tendencies to cooperate with competitors has even increased. One example for this is Coca Cola, Pepsi Co., Red Bull and Unilever and others, working together to develop “natural refrigerants” to deal with environmental issues caused by former techniques. (Kim, 2020)

Now that the analysis of Degrowth and the broader Postgrowth paradigm is complete, it is time to answer research sub-question **q2.1**³⁰: The Postgrowth paradigm offers a comprehensive and integrative framework for reorienting economic activity by emphasizing ecological sustainability, social well-being, and equitable distribution over mere GDP growth. It is fit to broaden the conception of prosperity to include human and ecological dimensions, promoting models that prioritize needs, community resilience, and environmental boundaries. By being neutral towards growth, the paradigm encourages policies that foster ecological limits, reduce resource throughput, and value social and environmental goods. This holistic approach aims to create an economy that supports well-being within planetary boundaries, thereby providing a more sustainable and just foundation for future development.

³⁰ q2.1: “In what ways does the Postgrowth paradigm provide an integrative framework for reconciling economic activity, societal well-being, and ecological boundaries?”

4. Practical implications and considerations Growth-neutrality

Among ecological economists, the concept of a circular economy and the focus on technological advancements to enable decoupling for continued growth have been popular lately (Nesterova & Robra, 2022): Giampietro (2019) argues that these ideas fail to take biophysical limits of the planet into account, and that circular economy has the potential to even increase overall production, which contracts the benefits gained from implementation (rebound effect). While the idea of avoiding waste is generally compatible with Degrowth, Circular economy as it is conceptualized should consider the irreversibility of material degradation. It is perceived as a less detrimental way to produce more, when we should strive for producing just enough. (Nesterova & Robra, 2022) As Robra et al. (2020) put it, efficiency can only help the cause of sustainability if it is complemented with sufficiency to remediate the rebound effect, and if the overall goal of production and economic activity is reflected upon. In chapter 2, the original purpose of all economic activity was defined as generating and utilizing wealth and well-being. Chapter 3 showed that the increase of aggregate production and money is not the same as societal prosperity and welfare. If profit is the primary incentive, businesses will aim to increase their return on capital. Humans and nature are integrated into the production process and degraded to nothing more than human resources and natural capital. In a strongly sustainable society, the centrality of profit would need to be replaced with the centrality of satisfaction of everyone's genuine needs. (Nesterova & Robra, 2022) The abandonment of the profit maximization imperative would not be easy. Antonio Gramsci illustrated in his Theory of Cultural Hegemony that systems are stabilized by people internalizing and reproducing its core ideas. (Opratko, 2012) As long as people are taught that the only alternative to Neoclassical economics is living under an authoritarian regime, people will be hesitant to accept deep structural changes. And as long as the trickle-down myth and the myth of structural social and economic permeability are taught and reproduced, people will see the principles of capitalism as their only way to mend personal and societal economic problems. Margaret Thatcher and Ronald Reagan used think tanks and information campaigns to prepare and propagate the Neoliberal economic turn. (Jäger & Springler, 2015) It would therefore not be an intentional single step to be taken, but a transnational and transdisciplinary effort to deviate from the idea that profits should be our highest priority. Businesses must play an active role in a potential transformation towards a strongly sustainable society, and subsequently in sustaining it. And our concept of businesses

would need to change profoundly. There is another reason why the abandonment of the profit motive is not immediately possible: It is because our current economic system forces agents to make profits to survive. Profound structural are restrained by the capitalist environment imposing its logics of the invisible hand on individuals and businesses. Even when businesses attempt to operate in a different manner which is more in line with strongly socially and ecologically sustainable values, they are still embedded in capitalist structures which force them to maximize profits and keep wages to a minimum. Even founding and upkeeping NGOs and alternative economic organizations is hardly possible without borrowing money when you cannot rely on a wealthy patron. Borrowing money results in repayment with interest, ultimately evoking a profit motive and encouraging growth. (Nesterova & Robra, 2022; Jäger & Springler, 2015) There is therefore a dialectical relationship between the system and the conditions necessary for stabilizing it.

Kommentiert [DB33]: Considering the inter-relation between agents and structures (Bhaskar, 1989, 1998), businesses exist as agents in the economy within structures that constrain their transformation. For instance, one of the key implications of thinking in terms of strong sustainability is the deviation from profit maximisation (Nesterova, 2020a). However, capitalism, with its inherent drive for capital accumulation, necessitates and dictates profit-seeking, making, and maximisation (Foster et al., 2010).

4.1 Illustrative cases and observations

Gross National Happiness (GNH) in Bhutan.

The GNH was instituted as a constitutional goal in 2008. In 2010, the measured value was 0,743. Since then, the GNH was measured again in 2015, when it had a value of 0,756. The upwards trend continued until 2022, when it had further increased to 0.781. This points to an improvement in the people's overall wellbeing and happiness. To classify as "happy" under the definition of the index, a person needs to have sufficiency in 66 percent of 33 weighted indicators across nine domains, including sectors like health, psychological wellbeing, education, community vitality, and living standards. The Index captures the rate of improvement across both happy as well as "not-yet-happy" people. (Ura et al., 2023) This upward trend computes the government's commitment to creating an environment that fosters wellbeing and happiness, despite situations like the covid-19 pandemic. 48,1 percent of interviewed people were classified as happy in 2022, compared to 40,9 percent in 2010. (ibid.) The findings of the GNH report challenge the assumption of a strong association between income and happiness. (OPHI, 2023) However, they demonstrate a weakly positive association between income and GNH. (Ura et al., 2023)

The example of GNH in Bhutan profoundly illustrates the integration of holistic wellbeing and environmental sustainability within a development paradigm that aligns with the degrowth

and postgrowth perspectives discussed in this work. The framework reflects the argument that societal progress should transcend material wealth, focusing instead on collective wellbeing, social cohesion, and environmental health – the fundamental principles of degrowth and happiness economics. The GNH approach exemplifies the integration of social and ecological sustainability, aligning with the idea that increased consumption and economic growth threaten environmental stability and human happiness. The focus on ecology and cultural sustainability within GNH directly addresses environmental limits and cultural preservation, core concerns of the Degrowth movement. It embodies the paradigm shift towards valuing quality of life over quantitative economic indicators, emphasizing "happiness and well-being" of both humans and non-human inhabitants (e. g. ecological health), consistent with the analysis of alternative wellbeing metrics in chapter 2.2. Furthermore, GNH's emphasis on good governance and community vitality reflects the importance of social cohesion and participatory decision-making: elements central to the collective wellbeing models critiqued in the research. Its high degree of alignment with the UN Sustainable Development Goals demonstrates coherence with international efforts to prioritize sustainable development beyond GDP, reinforcing discussion about measurement challenges and the importance of holistic wellbeing indicators. The philosophical underpinning of GNH, rooted in Buddhist teachings advocating happiness and well-being, exemplifies the work's argument that societal values and cultural frameworks are vital for fostering sustainable happiness. It also aligns with the discretionary and philosophical-scientific methodology of Critical Realism.

Vienna, the (former) most liveable city in the world.

In 2024, Vienna, the capital of Austria, was named as the most liveable out of 173 cities in the world for the third time in a row by the Economist Intelligence Unit (EIU). The EIU is part of the renowned “The Economist” Group and has been delivering political, economic and policy forecasts for 200 countries for over 75 years. Vienna received perfect scores in the fields of stability, healthcare, education and infrastructure. The assessors found that there is room for improvement in the fields of culture and environment. (EIU, 2024)

City	Location	Rank	Index	Stability	Healthcare	Culture &	Education	Infrastructure
						Environment		
Vienna	 Austria	1	98.4	100.0	100.0	93.5	100.0	100.0

Table 2: Extract from the table “Top ten positions”. From: EIU (2024): 2

During the process, 173 cities across the world undergo assessment based on 30 indicators from five categories: stability, healthcare, culture and environment, education, and infrastructure. The reporters aim to make a statement about how comfortable these cities are to live in. This year, Vienna once again scored perfectly in all categories except for culture and environment, where its score was a less-perfect 93.5 out of 100. The points were deducted due to a lack of major sporting events. *Liveability* as per the report quantifies the challenges presented to an individual's life and lifestyle in a city.

Table 3: Rating Description. After EIU (2024): 7

Rating	Description	Suggested Allowance in percent
80-100	There are few, if any, challenges to living standards	0
70-80	Day-to-day living is fine, in general, but some aspects of life may entail problems	5
60-70	Negative factors have an impact on day-to-day living	10
50-60	Liveability is substantially constrained	15
50 or less	Most aspects of living are severely restricted	20

The five categories are weighted and composite the following way: **Stability** accounts for 25 percent of the total and is assessed through indicators such as the prevalence of petty and violent crime, threats of terror, military conflict, and civil unrest. **Healthcare** represents 20 percent and includes metrics on the availability and quality of both private and public healthcare services, the accessibility of legal drugs, and broader health indicators derived from external data sources. The category **Culture & Environment**, which makes up 25 percent of the score, considers climatic factors such as humidity and temperature, the level of climate discomfort, and issues related to corruption, social or religious restrictions, censorship, as well as cultural amenities, food, and consumer goods availability. **Education** accounts for 10 percent and evaluates the availability and quality of private and public schooling, informed by external sources like the World Bank. **Infrastructure**, representing 20 percent of the total, examines the quality of roads, public transport, international links, housing, energy, water supply, and telecommunications. Each indicator is rated on a scale from acceptable to intolerable, based on expert judgment for qualitative factors and external data for quantitative measures. The ratings

are weighted according to the category importance, and the combined scores generate a final liveability score between 1 and 100, where higher scores denote more liveable cities.

In the newest edition of index, published in 2025, Copenhagen has surpassed Vienna to become the most liveable. (EIU, 2025) Vienna outscored Copenhagen on healthcare. However, Copenhagen scored a perfect 100 for stability, education and infrastructure, assuring its first place. Vienna received a sharply lower score for stability, in the wake of a terrorist threat against a (subsequently cancelled) Taylor Swift concert in summer 2024, as well as the discovery of a planned attack on a city train station in 2025. Vienna still attained perfect scores for healthcare, education and infrastructure.

This example points to key themes discussed in the work regarding urban well-being, environmental resilience, and societal stability within the Postgrowth paradigm. Vienna has achieved high scores in stability, healthcare, education, and infrastructure, emphasizing its effective management of social and environmental systems. The city's perfect scores in these categories reflect how prioritizing stability and social services can result in high liveability, aligning with the Degrowth emphasis on wellbeing and social equity over relentless economic expansion. However, the report also notes areas for improvement in culture and environment, such as the lack of major sporting events, illustrating limitations in cultural amenities and environmental richness. This underscores a critical point: traditional measures of urban quality of life often focus on quantitative indicators like infrastructure and healthcare but may overlook the importance of cultural and environmental vibrancy. These aspects carry strong features of Degrowth theory of a richer, more meaningful quality of life beyond material consumption. However, it is important to note that while Vienna's built environment creates a lot of benefits, it also produces socially felt problems when looked at from environmental and infrastructure angles. This includes heat-related health and comfort problems from urban heat islands (City of Vienna, 2022), flooding and stormwater stress that hit disadvantaged neighbourhoods harder (City of Vienna, o. D.) The discussion about Vienna's stability scores being threatened by external security concerns (e.g., threats related to terrorism) suggests that high liveability requires social stability, which is one of the weighted categories in the assessment. This exemplifies the complex interdependencies seen in advanced cities where achieving sustainability and wellbeing involves managing both social cohesion and environmental factors, resonating with the Postgrowth idea that social stability and environmental health are essential for genuine liveability. Furthermore, Vienna's case demonstrates how cities can serve as models for implementing policies

aligned with the Degrowth theories, focusing on quality over quantity, fostering social cohesion, and maintaining stability. While also facing the challenges of balancing economic, social, and environmental priorities (see also chapter 3.1). The city's experience exemplifies that high liveability can be achieved not necessarily through increased growth or material expansion but via investments in social infrastructure and environmental protections, consistent with the principles of Degrowth and Postgrowth models.

4.2 Macroeconomic models:

Although literature directly addressing Degrowth economics is a recent phenomenon (Kallis, Kerschner & Martinez-Allier 2012), economists have raised similar questions for a long time. In chapter 1.1, the short glimpse into the history of economic thought revealed that both Adam Smith and David Ricardo considered a future stationary economic state, where economic growth would eventually unintentionally end, albeit for different reasons. While both authors painted a dark picture about its consequential economic inequality, John Stuart Mill thought that advanced economies might reach a point of stable wealth and population. He believed this would allow for the prioritization of higher living standards and social welfare over unbounded economic growth. (Luks, 2013) While many economists and politicians share an obsession with growth, Irmen (2011) claims that *not only* do market economies not always produce growth; they also do not *need* it to function. And following Keynesian models, what market economies really need is higher aggregate demand, not an increase in production. Production capacity growth is only the means to the end of increasing demand. Contrary to social scientists in other fields, heterodox economists like Daly, Victor and Jackson develop a critique of the current economic paradigm from within economic logic itself. They accept some findings of Neoclassical and/or Keynesian teachings, but not all. Unlike thinkers from other disciplines, they use economic theory, models and data to research the possibility of economic prosperity and stability without growth. Or they propose taxation, labour and monetary policies to reduce energy and material throughput while trying to find ways to maintain a contracting economy. Their aspirations reflect a new kind of economics, but economics, nonetheless. However, the result of their thought process is a model of the world which is too vast to capture within one field of research. Rather, it is of transdisciplinary nature, its dialectical influences and effects acting as puzzle pieces fitting in with many other disciplines. (Kallis, 2018)

Hardt & O'Neill (2017) analysed 22 macroeconomic Postgrowth models and found that the topics *environmental interactions* and *the monetary system* were treated the most extensively. The eight most prominent policy themes in the analysed Postgrowth literature were *the integration of environment, the ability to include income inequality, a realistic representation of the financial system*³¹, *disaggregated production and consumption, work patterns, business models*³², *cross-scale interactions*, and *indicators of well-being*.³³ The authors conclude that to model a Postgrowth economy properly, we need to improve our understanding of how various (Postgrowth) policies affect the economy. They provide the example of stronger workplace democracy and its effect on firm behaviour. Sensible models usually simplify complex dynamics to integrate them into an aggregate model in a meaningful way. However, there is no unison about the range of important Postgrowth principles that should influence a meaningful model on an aggregate level: Hardt & O'Neill provide findings about some of the models deliberately leaving out distributional effects and poverty, as those were best investigated on the microeconomic level. Other models consider inequality to deeply impact macroeconomic modelling. So, the authors attest the need for more research on the channels through which changes in working time, business models, and consumption patterns affect the economy. What makes postgrowth modelling even more difficult is that all models are, by definition, mere simplifications of reality. Most of the researched models are empirical, as they use large quantities of past data. A difficulty of Postgrowth modelling is the essential assumption is that the parameters used will hold up in the predicted future. Moreover, Postgrowth models try to describe conditions under a very different system to the one we currently live in. Nevertheless, overall Hardt & O'Neill see promising developments in Postgrowth research as it incorporates important elements common in Postgrowth-literature. The authors identify Post-Keynesian approaches to macroeconomics as a good theoretical foundation for modelling techniques, although the biggest challenges for demand-driven models seemed to lie in environmental supply constraints. A combination of input-output-analysis and stock flow consistent-modelling was identified as most promising. One of the major challenges of all Postgrowth-oriented models is that the current system usually associated low or negative growth rates with adverse social impacts like high unemployment. Overcoming this proves difficult because as there is a lack of tools and macroeconomic frameworks to test how Postgrowth-policies could be used to smoothly transition towards an alternative to economic growth. The authors call for the development of such tools and frameworks or the adaptation of existing ones and see potential in including the ecological

³¹ These three themes capture the challenges Jackson (2014) identified for macroeconomic models in general.

³² These themes are based on the attempt to capture needed structural changes towards a Postgrowth-economy.

³³ The last are concerned with the dynamics between local, national, and global processes, and the need to include well-being indicators

macroeconomics community. (ibid.) While not all its members subscribe to the normative Postgrowth vision, managing a stagnating or shrinking economy (in terms of GDP) is becoming more important, as a growing number of economies are struggling to achieve growth anyway. (ibid; Jackson, 2009) This emphasizes the importance of understanding how to manage effects like a reduction in income inequality or a reform of the monetary system.

People tend to forget that the purpose of economic organizations is not profit maximization as an end to itself. But to serve human needs, solve problems and make our lives better or easier. Even in Neoclassical theory, profits are supposed to trickle down from the top to the bottom and create widespread prosperity. Profit from a societal perspective is a placeholder for value creation in a specific cause. The nodes of business networks are built around core competencies that are needed to address some of the causes at the heart of economic organizations. If profit-seeking is replaced by a social or ecological cause, and organizations follow it in the same manner they strive for profits, the result is called “cause-driven organizations”. (Köves et al., 2021) Alleged cause-drivenness is something companies already use for advertising-purposes. They pretend to be passionate about a popular cause to convince consumers to buy their products or services. (Fennis & Stroebe, 2020) This is in line with Neoclassical theory, where profit-orientation creates incentives for problem-solving and moves the invisible hand, while consumer satisfaction increases their utility. In a true cause-driven organization, profit-seeking must be replaced by with dedication to a (social or ecological) cause, competition by coopetition, and self-serving systems by network-based embeddedness. (Köves et al., 2021) When the profit-objective of companies is societally reflected upon and replaced by cause-drivenness, then the existence of boards of directors and similar functions starts seeming profane. How would a group of people which are ready to harm people and the planet to increase their own wealth help us solve social or ecological problems? Köves et al. (2021) write that for a strongly sustainable society, business decisions must be made in a decentralized manner within a ‘business’ network, at the level closest to the point where a problem occurs, and in a collaborative manner with affected stakeholders. This is in line with the stakeholder approach and the concept of share value creation, which was introduced in chapter 1. The brand of any economic organization must be the embodiment of the cause it follows with its core business. The success of a company must be measured by how effective it has been in following their cause, not by the size of their balance sheet. The responsibility of an economic organization extends along its entire supply network, beyond shareholder value. If economic organizations become the venue for debate and democratic decision-making between internal and external

stakeholders, communities can participate meaningfully in strategic decision-making and planning processes. If they have the necessary authority to do so, this provides an inherent self-regulating mechanism in the network that prevents exploitation of human and nature. (ibid.) The concept is straightforward: If community stakeholders are integrated into corporate decision-making, it is unlikely that they would vote for the pollution or destruction of the natural environment around them. Similarly, if workers get a vote in strategic orientation of the firm, arguably they would not vote for displacing production to a low-wage region or for cutting their own jobs to reduce costs. (Jäger & Springler, 2015) The authors mention another self-regulating mechanism in this idea: They think characteristics of the product should make it clear what social and natural impacts are attached to the life cycle of a product. The operation of the economic organization and production processes should be completely transparent. Although, this idea is already an integral part of Neoclassical theory (as shown in chapter 1) and once again reduces societal regulation to individual consumer preferences, relying on market mechanisms to punish subpar corporate behaviour.

Trainer (2020) sees a cultural transformation away from affluence, and towards cooperation, self-sufficiency and localized production where possible as a prerequisite for a shift away from the capitalist production regime. That involves the creation of cooperative and participatory governance systems. Changing governance and decision-making structures would have considerable implications for the mode of production, as employment-related decisions would become more democratic and not aligned with profit maximization pursuits. (Nesterova & Robra, 2022) Linking the concept of strong sustainability back to Critical Realism, it must not exclusively be seen through an economic lens, but has a philosophical, ethical and moral side to it as well. It involves consideration and respect for other beings we share the planet with. (Bhaskar, 2012) To facilitate such a cultural shift, society needs to deviate from teaching and preaching Neoclassical economics, which cannot capture the complexity and interdisciplinarity of the modern world, nor provide sensible solutions for modern problems. Neoclassical economics propagates the theoretical foundation of weak sustainability, remains oblivious to the way the economy is embedded within larger systems (e. g. social dynamics and the environment) and facilitates the destruction of the very foundation society and hence the economy are built on. (Nesterova & Robra, 2022) Moral questions are externalized in neoclassical models, which is why weakly sustainable approaches do not hold any axiological positions. This approach is bound to result in the destruction of human lives and nature in favour of profit maximization. It is therefore unsuitable for any normative considerations (Spash, 2012), which we need to overcome the big

challenges caused by our positivist economic paradigm.³⁴ (Nesterova & Robra, 2022) It is foolish to expect that business and economics education based on Neoclassics will produce anything else but managers and business directors aligned with capitalist ideas, who use their elevated knowledge to benefit from it. The capitalist system provides no incentive to educate people, workers and consumers on alternatives which would undermine it, nor provide tools to deviate from the tools and mechanisms sustaining it. (Ruuska, 2019)

4.3 Microeconomic models:

There is no evidence that our current understanding of economic activity can be sufficiently decoupled from environmental externalities to allow for perpetual, sustainable economic growth. To reorganize economies to not drive unceasing growth and subsequently destroy its own ecological foundation, two imperative questions would need to be asked: “What should businesses look like?” and “Which features must they have or not have to align with social and ecological sustainability?”. (Hinton, 2021) In critique of persistent globalization and rising inequality, for instance, Postgrowth authors identify part of the problem in corporate governance and incorporation structures, and demand shareholder corporations to be replaced by cooperatives. Businesses must not be driven by growth in a strongly sustainable economy. (Johanisova, Crabtree, & Franková, 2013; Gebauer, 2018; Gabriel, Nazar, Zhu, & Kirkwood, 2019) Other authors like Upward & Jones (2016), Johanisova, Fraňková & Spash (2017), Bocken & Short (2016) and Kostakis & Bauwens (2014) propose shifting business scopes away from a single focus on profit maximization towards sustainable business models, non-profit goals, sufficiency and for-benefit production. Considerations share the common denominator that they identify the profit maximization-orientation as the main impediment for the implementation of such goals. As previously mentioned, authors like Jackson (2017) claim that the profit-drivenness of business is the motor of economic growth, consumerism, inequality and environmental externalities.

Hinton (2021) identified five dimensions for determining if and why different types of businesses might be compatible with the concepts of Postgrowth and a strongly sustainable society: “relationship-to-profit”, “incorporation structure”, “governance structure”, “strategy”, and “size & geographical scope”. “*Relationship-to-profit*” is a legal or organizational form which refers to whether an organization is profit-oriented or not. Differences are mainly legal in nature,

³⁴ Refer back to chapter 1.1 for a reminder on economic paradigms and their methodological foundations

but they include for example the right to earn profits and assets for private owners. Non-profit organizations must make sure that all resources are used for the public good. Hinton (2020) believes that the dynamics of a market without profit as primary objective may allow for more effective sustainability efforts. The author constitutes her claim with the non-distribution constraints and requirements for social benefit. “*Incorporation structure*” describes the specific legal and organizational framework under which a business is formed and operates as a separate legal entity. When a company incorporates, it chooses a structure that defines its ownership, governance, liability, taxation, and regulatory obligations. The focus of Postgrowth literature lies on publicly traded shareholder companies as well as cooperatives. *Governance*, as part of the incorporation structure, refers to rules, protocols, and decision-making processes in an organization. (Hinton, 2021) Postgrowth authors like Khmara & Kronenberg (2018) and Schmid (2018) advocate for democratic, inclusive, decentralized, collaborative and adaptive and networked businesses. They describe the governance structures of many publicly listed shareholder companies as unsustainable and benefitting the economically most powerful. Upward & Jones (2016) hold the view that sustainable business models must determine which stakeholders need to be involved in which decisions. Cyron and Zoellick (2018) and Reichel (2017) agree that more stakeholders should be included in management and decision-making. Latouche (2006) was one of the first Postgrowth authors to claim that worker self-management is an essential component of sustainable businesses. “*Strategy*” is an area of great importance in Postgrowth literature and refers to the way a business uses resources to achieve a certain purpose. In this context, its most important aspects are management, planning, and business practices. Strategic concerns that receive the most attention in this context include supply chain management, sourcing, production, third-party audits, (sustainability) accounting, voluntary objectives, non-market behaviours and day-to-day practices. Prominent key words are circular economy-related concepts like closed-loop processing; life-cycle analysis; material and energy efficiency; sharing resources; using renewable resources; usage of natural processes; serviceability (functionality over ownership); sufficiency; and making products that last and are repairable. (Hinton, 2021) As mentioned in chapter 4.1, inter-company cooperation is generally considered beneficial, if not critical. This entails open-access knowledge and open-source technology. (Reichel, 2017; Schmid, 2018) Schaefer, Corner & Kearins (2015) argue from a humanistic perspective, by claiming that sustainable businesses must include a philanthropic tendency, importance of social justice and equity, understanding of the interrelatedness of complex systems, identification of root causes of ecological problems, critical self-reflection, seeing profit as a means rather than an end and respect for planetary boundaries. Reichel (2017), with regards to workers, includes in her framework reduced working hours, a focus on meaningful

work, and the development of human potential. The last dimension is “size and geographical scope” and refers to how large or small, how local or global a company is. Authors like Latouche (2006), Johanisova, Fraňková & Spash (2017), and Nesterova (2020) advocate for small, non-growing businesses. These five dimensions identified by Hinton (2021) can be used as a taxonomy framework to identify the degree of alignment of a company with Postgrowth-concepts. The author further investigates existing certifications and their implications about how aligned companies are with Postgrowth goals. However, this seems like a moot point, given that the dynamics of capitalism, especially market forces like the profit maximization imperative, drive certain business decisions uncontrollably. Also, even though these entities may be certified in one or more criteria that align with Postgrowth principles, such entities already exist today, with all social and ecological problems discussed so far still in place. Large for-profit corporations like Unilever may have sophisticated sustainability strategies like B Corp-certification and life cycle-analysis, but the risk is high that the perspective of financial gain, shareholder interests and private profit distribution undermine such strategies. Moreover, in both scenarios there are no legally binding mechanisms that hold any consequences for deceivers. (ibid.) Theoretical considerations about how a world with its organizations could be organized differently are more interesting.

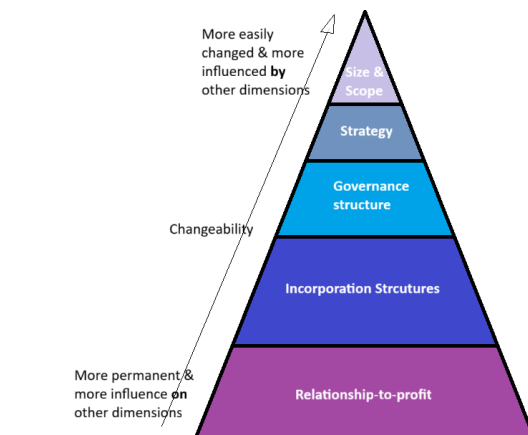


Figure 5: The five dimensions of businesses. Recreated from Hinton (2021)

The above illustration shows how the five dimensions relate to each other. All the dimensions represent aspects of business that are essential to Postgrowth economies. The dimensions are ordered by the degree of changeability and their influence on other dimensions.

Dimensions on the bottom are legally binding and/or structural in nature, and therefore more difficult to change. Equally, they have a stronger influence on the other dimensions. The ones near the top of the pyramid are easier to change, as they relate more closely to goals and purpose. These dimensions are more strongly influenced *by* the other dimensions. To change the incorporation structure or the relationship to profit of companies necessitates changes in the legal constitution of business forms, including regarding financial rights. Changing strategic alignments of a company, for instance, is much easier, as it only requires an executive decision. Moreover, legal relationship to profits heavily influences the strategy of a company, but much less so in vice versa. Size, scope, and strategy are guided and constrained by the other dimensions but do not have much of an impact on those lower dimensions. Governance can be seen as a mediating dimension, which is guided and constrained by the lower dimensions, and has a high degree of influence on the upper ones. The degree of changeability thus illustrates to what extent dimensions guide and constrain other dimensions; or are guided and constrained by them. While this illustration helps bring the point across, the five dimensions should not be seen as separate or fixed; but they are more dynamic and interrelated than depicted in the illustration. (Hinton, 2021)

There is a common assumption that businesses are naturally for-profit, even among scholars and practitioners. And there is a lack of awareness for non-profit businesses. (Hinton, 2020) At latest since Milton Friedman, the belief that a business owner's first concern must be maximizing shareholder value, has become widespread. (Bapuji et al., 2018) However, non-profit structures prohibit private appropriation of profit, offers accountability, and facilitates the prioritization of social benefit. Cultural factors, such as societal discourse, influence entrepreneurs' decisions to start a business in the first place. Other factors include market pressure and regulatory environment. When starting a business, entrepreneurs must take sources of investment and types of incorporation into consideration. If certain terms are better or access is easier, or if some forms of business are more recognized than others, then that may guide the way they set up their business. For-profit legal structures are taken for granted when it comes to ROI or ownership-decisions. Traditional firms won't even ask the question for relationship-to-profit. If an entrepreneur seeks to pursue a cause-driven social benefit purpose, however, relationship-to-profit becomes part of the foundational questions. Entrepreneurs that choose a non-profit-oriented form generally do so to minimize the possibility of drifting away from their mission. Transitioning from a for-profit to a non-profit economy without a larger social movement to unite behind seems unlikely. To conclude, scholars have largely focused on

Governance, Strategy, Size and Scope-related aspects of firms in the past. However, deeper, legally-binding and culturally cemented structures have either been overlooked or declared natural state. Those structures can guide or constrain more changeable processes. Considering the five dimensions named in the above framework might help researchers, entrepreneurs and policy makers find ways of better aligning economic activity with social and ecological sustainability. But even with all the information at hand, firms operate in a network of economic and social contexts and are constantly under pressure from multiple sides. It is therefore difficult to say how contemporary for-profit-entities might act in a predominantly non-profit market (Hinton, 2021)

Nesterova & Robra (2022) opine that the enablement of a strongly sustainable Degrowth society and economy requires businesses, structures and agents to be transformed, rather than reformed. They claim that the rebound effect described in subchapter 4.1 especially holds in the context of capitalism, where firms reinvest resource or energy savings for higher capital accumulation and consumers spend savings on seemingly unlimited products. Reinvestment and the need for evermore consumption are harmonized via the mechanism of artificial demand and the creation of wants. Commenting on efficiency increases, the authors write that technology and market-based sustainability approaches are not necessarily a bad thing; Rather, the problem lies in uncritical and unrestricted “techno-optimism” (p. 204). The reform of businesses remains superficial. The transition fails to question the societal goal and responsibilities of business activity and companies as well as the guiding principles of business. Nesterova & Robra underline their point with attempts to supplement profit with other ESG considerations, such as B-Corp or Future-Fit. B Lab (2020), the company that invented the B-Corp certificate, states that any company can obtain the certification, if it is able to demonstrate its commitment to environmental and social impacts. It should be apparent that arguably ambiguous positive actions will not outbalance the destructive core activity of an oil company. In a strongly sustainable society, ecologically destructive business activity must “simply” cease to exist. (Nesterova & Robra, 2022) Heikkurinen & Bonnedahl (2019) claim that society needs an overall reduction in resource and energy use as well as deviation from the profit maximization imperative, instead of pledges and carbon neutrality certificates. This bears the question, however, whether the necessary transformation of business would be so profound that the term “business” would still fit, according to our current concept of the term. (Nesterova & Robra, 2022) Although, this does not imply that businesses will disappear as social entities. (Lawson, 2014) Rethinking businesses in terms of economic organization rather than entities of business activity changes

their form, but they can keep using their existing capabilities like equipment, materials, and skills; the manner and end to their activity would just be radically different. Alternative organization might comprise community-owned entities, independently owned small-scale artisanal businesses, community-supported energy and agriculture projects, or amateur and peer production. Some production may be organized in an informal manner and include a variety of sources like household production or community production; for own use or to be shared. (Nesterova & Robra, 2022) Thus, much of the transition towards a strongly sustainable society needs to happen within us and the legal framework. The quest for strong sustainability is not the search for ideal organizational forms, but rather the development of a radically different societal world view and interrelations between humans and the world. Without that psychological and ethical change in culture, potential changes in economic organization will either not occur or not be tenable. (Nesterova, 2021a) At the same time, a transformed business would not be able to operate as a business in the current system if it internalized strong sustainability concepts. This indicates that “business” in a Postgrowth society would be very different to how we imagine businesses today. (Nesterova & Robra, 2022) Would that mean that private companies could not exist at all under such a radically transformed system? Trainer (2020) opines that small firms could have a place in a transformed society under a Postgrowth paradigm. The existence of a firm may be connected to the scale and scope of its externalities on the socio-economic system. A small, artisanal craftsperson with low impact would still be compatible. Such small firms would also operate in much smaller markets with much smaller impact themselves than today. Firms should not be forced to grow in any case, which means avoiding having to borrow and repay money with interest. (Nesterova & Robra, 2022)

Bloemmen et al. (2015) outlined a grassroots model for an exemplary business during the transition phase between a capitalist economy and a potential Degrowth economy. In their view, humans constantly show behaviour that cannot be explained by the concept of *Homo Oeconomicus*. They use the example of a food production company in line with the concept of “Community Supported Agriculture” (CSA). The authors’ intention was to identify and analyse bottom-up initiatives rather than write a normative paper. In their model, consumer behaviour embraces simplicity, sobriety, and enjoyment of life in a sustainable manner. Consumers have common goals with the producers: they satisfy their needs and parallelly assure the producer a decent life through a yearly agreement upon the producer’s recompensation. They buy locally and the price they pay covers all production costs. Quality is generally preferred over quantity, as long as the quantity is sufficient to still hunger. Consumers partake in the production process, by

taking over small tasks or by paying a fair price. Consumers also have the preference to increase their leisure time, which they spent interacting with other consumers in a sociable manner. The leisure time bears the opportunity to buy goods and services, contribute to the quality of life the community or enjoy knowledge or culture. The producer's primary goal is enjoyment of life. Production is aimed at feeding people, while creating value and fulfilling the need for enjoyment of life for both sides, producer and consumers. Their relationship is not market based but direct, trusting and convivial. The producer and consumers spend time together and discuss common values. That way, leisure and working hours can be combined. The producer operates on a small scale with sufficiency in mind, using and preserving limited, locally available resources. Overproduction and speculation are avoided by on-demand production, which is agreed upon beforehand together with remuneration. The selling price is established conjointly in a fair manner. Eventually, the producer may delegate work to consumers and pass on their knowledge and skills. They collaborate with other producers, organize exchanges, and share their experience in a communal manner. This is a departure from any selfish or competitive behaviour in line with "survival of the fittest". The risk is not on the producer/entrepreneur side but is shared between consumers and producers. That way, risk of failure is overall reduced, and many local stakeholders share potential investments. Mental proximity complements geographical proximity. Profit maximization is never an incentive for investment. In this scenario, there is a convergence between producer and consumer interests around the notion of life. Many mechanisms from business administration still work in non-capitalist models like this one, according to the authors. The authors do admit that in practice, members of the community could have an incentive to cheat on their fellows. Although, they also cite studies showing economic agents replicate the behaviour they perceive from their peers, with altruism appearing as the most contagious behaviour. The authors speculate that on an individual level, the gains in well-being through non-material quality of life and conviviality may surpass the gains through cheating. If everyone has enough food, there is no real incentive to cheat others for food. If society is built around sufficiency and fulfilment of needs for everyone, there is no incentive to cheat others for money. The authors call their model "Utopian Realism" and aim to show that utopias in a Neoclassical perspective may appear more realistic from an Ecological Economic perspective. (Bloemmen et al., 2015)

After thorough analysis in theory and modelling, **q2.2**³⁵ can be answered as follows: The Postgrowth paradigm fundamentally challenges traditional growth-oriented models by emphasizing ecological sustainability, social equity, and well-being, even at the expense of economic expansion. It argues that infinite growth is incompatible with finite ecological resources and highlights the need to reduce consumption and production levels to achieve a balanced relationship with the environment. Theoretically, Degrowth is supported by critiques of conventional economics that externalize ecological costs and overlook social inequalities. It draws on ecological economics, feminist as well as post-colonial theory, and growth neutrality perspectives to justify a reorientation of values and priorities. It advocates for a redistribution of resources, reduced work hours, and the promotion of conviviality and community resilience.

4.4 Discussion

After due research, the theoretical part of the thesis is slowly drawing closer to the end. The following chapter will distil the essence of the findings of the past chapters. While those are important, few concrete ideas have been developed about what a strongly sustainable society should look like. The following ideas reflect my synthesis of the conducted research, deducting personal conclusions and my attempt at qualitatively modelling a Postgrowth society.

Firm Design In a Strongly Sustainable Society

On a macro-level, economic structures would favour cooperatives, non-profit organizations, and local economies over profit-driven, shareholder-centric corporations. Business practices would focus on sufficiency, circularity, and purpose rather than volume and growth.

As shown previously, the nature and the structure of firms would have to change drastically, to the extent where it is questionable if our concept of a “business” or a “firm” would still hold. In our model, firms must be cause-driven and follow performance indicators not based on or deducted from profit maximization. Performance would be measured in terms of how well a firm does in achieving or striving towards its goal. Between each other, firms would participate

³⁵ q2.2: “How do the Postgrowth paradigm and its Degrowth theory challenge traditional growth-oriented economic models, and what theoretical justifications underpin its critique?”

in cooptation, meaning that they compete against other firms in the same field in a friendly manner, while at the same time cooperating in fields like knowledge-sharing or overcoming common obstacles. The main objective – after all – is not being better than others, but to achieve the set goal and making life better and easier for the community. The following archetypes could represent common business forms. This is not a complete list, but a conglomerate of innovative business model ideas which would need to be modified, mixed or adapted to the current socio-economic situation of the region at the time:

1. **Provision Co-ops:** Worker–community co-operatives delivering necessities like food systems, repair, care, local mobility. They come as multi-stakeholder cooperatives governed by a board consisting of workers (40 to 60 percent, consumers and the local community affected by the externalities the firm produces (20 to 40 percent) and public interest trustees representing further stakeholder groups (ten to 20 percent). Economic surplus is reinvested with a quota of at least 50 to 60 percent. Dividends can be paid to recompensate people for their investment. However, reinvestments must be executed first, and workers' wages need to follow the idea of “institutionalized compromise” common in Western post-World War II-economies up until the late 70s: Wages must rise at least at the same rate as productivity. (Jäger & Springler, 2015)

2. **Steward-Owned Manufactories:** Manufacturers are also cause-driven in the way that they make long-life, repairable goods (appliances, tools, building components). They are legally built after the principle of Steward-ownership. The idea behind this is to legally separate money and power. The entity making the decisions must not be the same entity that benefits of them financially. Value created in the company cannot be extracted by the shareholders. Profits are reinvested, used to cover capital costs or donated. An example for an organization holding economic rights could be charitable organizations. This idea is similar to the present-day idea of cooperatives. The business model follows the Product-as-a-service approaches with lifetime upgrades and repair and mandatory spare-parts availability for 20 years. Success is measured in how well products are made and upkept, i. e. how much use value they offer to consumers.

3. **Commons Utilities:** This archetype concerns critical suppliers like energy retrofits, district heating, water, data commons. Their legal form is based on so-called Public-commons partnerships (municipality + citizen assembly + workforce board). Revenue comes from cost-based tariffs, and any surplus produced goes into resilience funds.

4. **Regenerative Land Enterprises:** Firms working in sectors like Forestry, agriculture, and ecosystem restoration. They are legally structured like land trusts with productive leases; They are paid for the ecosystem functions they are upholding, not volume outputs.

On a strategic level, every business decision must pass internal considerations about societal needs and their relevance for increasing societal welfare. Products and services must be proven not to cause lock-in of high-carbon infrastructure. The OECD defines lock-ins as the continuous use of high-emission infrastructure or assets, despite possible substitution with low-emission alternatives. This can delay or sometimes even prevent the transition to (near-)zero-emission alternatives. (OECD, 2023) If a business decision fails these considerations, it is not pursued. Moreover, business decisions require publication of ecological budget use, pay bands, and major contracts in the spirit of transparency. Paas (product as a service) must become a default concept. Repairability would have to become a mandatory for any product sold, with voiding warranties for third-party repair being illegal. Further innovations that would need to be promoted are tool-less access and modular parts. An illustrative example for such needs-oriented (as opposed to market-oriented) production are Superfest glasses produced in the former German Democratic Republic. Scientists found a way to make drinking glasses that wouldn't break. The attempt to export them to Western Germany failed because West German stores would not want to sell them, as their durability would prevent people from buying more glasses in the future. The original company went bankrupt with the fall of the iron curtain and the reunification of Germany. (Widman, 2024)

One principle that would be kept from Capitalist mode of production is efficient use of production capacities: However, in our model society, efficiency would be paired with sufficiency. If productivity increases in a firm, this must not lead to an increase in total units produced in every case. This would lead to undesired rebound effects. Instead, the capacity factor of production facilities should be maximized by pooling and sharing the facilities with other firms in the spirit of coopetition. Utilization should never undershoot certain utilization thresholds, which would have to be determined by legislation. The other side of the coin is that firms would have multiple throughput caps: Such as an internal Material Intensity Budget (MIB) and a GHG budget. Both budgets would need to decline every so often to be consistent with 1.5°C-aligned absolute contraction. Suppliers would be categorized into tiers by distance from the locality. When choosing a supplier, firms are required to choose based on lowest distance to

avoid transport pollution, unless the ecological case proves otherwise. Purpose-fit scoring should override price-considerations when the marginal costs prevent ecological budget compliance. Open standards must be adopted for many products, to avoid vendor lock-in and enable repair commons. A model economy would furthermore be based on the Zero Waste-to-landfill-principle: Cooperative re-manufacturing and recycling hubs close material loops and avoid waste.

Workforce-related changes might seem the strangest to us, as they symbolize the biggest cultural change in how firms operate: When quotas tighten, there must be no immediate layoffs. Firms must first try and guarantee continued employment, reduce working hours, train for repair and refurbishment, and organize job-sharing. The societal baseline for labor should be as low as possible. Keynes predicted a 15-hour workweek in 1930. (Keynes, Pecchi, & Piga, 2010) While the exact number may vary, the amount of societal labour must be aligned with general reflection of the purpose of economic activity: to make peoples' lives better and easier (instead of increasing Shareholder value). Wages should increase at least with productivity every year, as used to be the case in Western economies up until the late 1970s. (Jäger & Springler, 2015) A factual wage floor is provided by state job guarantee: If your wage is lower than what you could earn when working for the state, people would rationally not keep the underpaid position.

Capped returns: Equity instruments convert to redeemable, capped-return purpose shares (e.g., 3–5% IRR cap, time-limited to 10–12 years). Cash flows stop at the cap. Voting rights are decoupled from profitable shareholding. Perpetual dividend rights and leveraged buyout should be abolished, and buybacks should be limited. Public exchange should be reoriented to cover purpose-tied securities. Their price depends on risk of mission breach and ecological performance, not growth prospects. Firms need to hold so-called Resilience buffers: Statutory Ecological Compliance Reserves (ECR) equal to 12 months of expected remediation or spill costs plus the equivalent of 6 months payroll.

To ensure compliance with ecological and social goals, the state in our model society would adopt certain binding constraints, such as absolute ecological licenses: Each firm holds a multi-year license that includes a GHG allowance (Scopes 1–3) in tonnes CO₂e/year, declining on a pre-set glidepath; a material allowance in tonnes DMC-equivalent per year as well as water caps. Exceedance triggers production throttles and fines. Repeated breaches can result in

license suspension. Resource use and carbon release would be taxed at a higher rate, while income tax on wages would decrease. Legal safe harbours for cooperation in sufficiency & circularity, bans on planned obsolescence and mandatory IP pools for repair diagnostics could be the subject of further considerations. Current accounting methods and metrics would be replaced by Planetary Accounting, an accounting framework which translates absolute planetary boundaries into science-based actionable environmental budgets. (Meyer & Newman, 2018) Hard limits every business entity would have to adhere to include absolute GHG emission levels, material throughput, no critical biodiversity risk breaches and – on the social side – a living wage & pay ratio. Relative metrics could include measurements like “Service delivered per unit throughput” (e.g., person-km per unit material; appliance-hours per kg), utilization rate, “repair/refurb share of revenue” (e. g. > 40 percent target for durable goods firms by year 7), job quality (stability, hours, participation indices), and community co-benefits (e. g. share of expenses into local sources and programmes, apprenticeships) Risk management must include planetary and social risks. Such risks need to be accounted for in the company reserves and mitigated before borrowed capital is paid back (e. g. in case of bankruptcy). For policymakers and municipalities, enabling measures could include passing a Right-to-Repair+ (parts, documentation, diagnostics, multi-year availability), funding public procurement PaaS-hubs, the establishment of an ecological authority and publishing sectoral glidepaths; and setting up a centralized “mission bank” with 3–5 % capped instruments.

The economy in a Strongly Sustainable Society

A model society built after Degrowth and strong sustainability principles would highly prioritize the preservation of its natural capital (climate stability, biodiversity, freshwater, soils). It would also recognize the non-substitutability of natural capital and be aware of biophysical limits. Our model society would prioritize needs over wants: Production would serve sufficient satisfaction of needs while avoiding incentives for exuberant production or the creation of artificial demand. The economy would be driven by demand instead of perpetually expanding the supply-side. Accordingly, GDP as the primary indicator of societal progress would be replaced by alternative metrics such as ecological footprint, happiness indices, or social equity measures. Economic activity would generally be decoupled from growth. Economies would aim for negative growth or growth-neutrality and contraction especially in resource use and emissions, while maintaining or improving societal well-being. Additional to building ecological resilience, the state could implement policies like a job guarantee and shorter working hours and reduce labour

but maintain social and economic stability. The aim would be to cushion the effects of business cycles and of missing growth. Moving away from growth dependency could lead to more stable economies, with less susceptibility to boom-bust cycles and greater focus on community and social bonds. The state could also support job transition programs towards sustainable sectors and community-based activities as well as foster participatory governance models that enable workers and communities to influence economic decisions. Food & water, shelter, mobility, care, community, and culture would be classified as common goods or even as basic rights. Health, care work, mobility, basic digital access (as part of participation), housing, and education are publicly owned and decommodified to reduce growth pressure on private markets and decrease the rate of inflation. These are non-negotiable foundational principles of our model society. This shift aims to prioritize ecological integrity and well-being over material wealth.

Governing legislative bodies would set binding, declining national budgets for GHGs, material throughput, land-use change, freshwater withdrawals, and nitrogen/phosphorus releases. Budgets and limitations would be determined via an independent authority making decisions based on scientific research. The set budgets cascade down to the industrial sectors, and subsequently to firms. The budgets are multi-year contraction quotas, and trading of budget licenses would be limited to intra-sectoral balancing within tight collars to prevent speculation and big agents abusing their economic strength. In the money and finance sector, public banks, community development finance, and purpose-driven credits would dominate. Distribution, political and cultural participation as well as the stabilization of intergenerational equity would be embedded into policies, not only set as voluntary CSR goals. Policies would emphasize more equitable sharing of resources, reducing inequalities that are often exacerbated by growth-focused systems.

4.5 Limitations, constraints, and practical steps towards a strongly sustainable society

The transformation of business is challenging, as businesses are not isolated from the world around them. Constraints are of systemic (socio-economic structures) and agential nature (those relating to individual humans, agents). Hence, the transformation of business cannot not be thought separately from the transformation of the socio-economic system or the change in individuals involved in business.

Systemic constraints.

The transformation of businesses is constrained by the fact that businesses do not exist in a vacuum. They are embedded within a network of other agents and the system of capitalism, which imposes its logic and mechanisms on individual and businesses. As previously shown, one of the key implications of strong sustainability concepts is the deviation from profit maximization. Capitalism, with its inherent drive for capital accumulation, requires and dictates profit-seeking. Since all agents and structures are interrelated (Bhaskar, 1989, 1998), businesses exist as agents in the economy; within structures that constrain their transformation. (Foster et al., 2010). Even businesses that attempt to operate differently cannot be regarded as operating fully in line with a strongly sustainable society as long as they remain embedded within capitalist structures. Not to mention that for starting an economic organization in the first place, you either need starting capital or to borrow money. Borrowing money necessitates paying interest, ultimately triggering profit motives and encouraging growth and participation in capitalist dynamics. A full transformation is only thinkable if businesses are liberated from capitalist culture and its competitive environment. Without a holistic concept for society with a vision and a strive, considerations about the transformation of the economy and business units remain moot. That is a result of the systemic and expansive nature of economic dynamics under capitalism. The actions of individual actors, however radical they may seem, will not suffice. The only way to challenge this directly from the firm side lies in creating networks of solidarity. For instance, by sharing knowledge for free, firms can provide others with the opportunity to not pay for knowledge elsewhere, thus allowing them to withdraw from participation in a capitalist system on specific occasion (Nesterova, 2020). Visions and conceptualizations of a different society would need to be cast into comprehensive laws. Only when a great amount of people does things differently from before, the *Zeitgeist* can change, and a paradigm shift can be achieved. Envisioning a new system should not only be a technocratic process, but democratic participation must be encouraged to avoid elites reproducing their own position of power and benefit. Additionally, changing the socio-economic system requires a cultural transformation towards cooperation and away from affluence. It necessitates that efficiency is complimented with sufficiency; and localised production where possible, while internalizing environmental and social externalities. Moreover, it involves creating cooperative and participatory systems (Trainer, 2020). Such governance and decision-making will influence the mode of production. Economic decisions regarding employment and needs satisfaction would entail larger considerations than the firms' pursuits of profit maximization. Communities must be able to identify and decide what needs to

be produced, when, how, by whom and to what ends, as well as how the final product could become accessible to everyone who needs it. If the right to control distribution lies in the hands of a few, the system will always work in favour of the few. It will only serve the interests of the many if those interests by chance align with profit maximization. The Neoclassical idea of efficiency and self-regulating distribution through individual preferences does not hold, as has been shown in chapters 1 and 2 of this work.

Agential constraints.

The term “agential constraints” refer to individuals involved in business and the prevailing values and beliefs they hold. (Ruuska et al., 2020) Those values and beliefs often contribute to conserve economic or social systems, by actively fulfilling a task as a part of the whole and by participating in public discourse. Transformation of a system necessitates a fundamental change in culture and participation, otherwise it will not be supported by the people living in it. (Opratko, 2012) At its core, strong sustainability is based on the notion of harmonious and considerate co-existence between humans and nature. Humans share the planet with other beings. This implies the need to relate to them and consider and respect their existence and needs. Philosophy, ethics, and morality play a central role in its methodological foundations (Critical Realism). Contrary to that, Neoclassical theory of individualist satisfaction entirely externalizes such values as well as any moral considerations. While decision-making in the Neoclassical paradigm is grounded in Critical Rationalism and its notion of hard truths as guiding principles, strong sustainability is typically based on evidence-informed (though non-positivistic) scepticism and methodological openness. (Ruuska et al., 2020; Bhaskar, 2012). These differences in worldview allow for completely diverging conclusions regarding socio-economic dynamics and actions.³⁶ That includes the process of production and each organisation involved in this process, as well as the individual humans that form society. Antonio Gramsci claimed that societal change not only necessitates a change of relations of material production, but on means of thought production and reproduction as well. (Opratko, 2012) Simson & Willer (2015) found that institutions or policies designed with self-interested citizens in mind can reproduce the problem by creating self-interested citizens. This can happen via numerous different mechanisms. For instance, institutions that invoke extrinsic incentives for prosocial behaviour alter individuals’ perceptions about what motivates others, inadvertently signalling that self-interest is normal. Those individuals develop certain worldviews based on the education society provides and

³⁶ Refer back to chapter 1.1 c for an overview of the three major economic paradigms.

manifest them through their actions. Thereby, they reproduce and reinforce predominant paradigms and world views. To facilitate such a critical change in values necessary for the desired socio-economic transformation, we need to completely deviate from teaching Neoclassical economics the way we have in the past decades.

Implementing Degrowth policies at micro and macro levels faces several significant obstacles. This summary will provide the answer to research question **q2.3**³⁷: Culturally, there is a deeply rooted societal belief in perpetual economic growth as synonymous with progress and success, making shifts toward degrowth challenging. Institutionally and politically, existing frameworks are heavily geared to growth-oriented objectives, which often conflict with Degrowth principles: Policies promoting reduced resource use or lower consumption are frequently met with resistance from vested interests and a lack of broad political support. Economically, concerns over stability, unemployment, and social cohesion in the face of economic slowdown hinder adoption, as many stakeholders fear crises or reduced standards of living. Additionally, practical constraints include the need for profound structural reforms, such as overhauling financial systems, redistributing wealth, and redefining success metrics beyond GDP. Overcoming these barriers requires significant cultural change, political will, and innovative policy design that effectively addresses social equity and economic stability within environmental limits.

Having addressed all three sub-questions, it is now time to offer an answer to research question **Q2**³⁸: The Postgrowth paradigm offers a comprehensive alternative by balancing economic activity, well-being, and ecological limits. It emphasizes sustainability, social equity, and alternative indicators like happiness and ecological health and challenges growth-focused models by advocating for resource reduction, local economies, and systemic reforms that prioritize quality of life over GDP. However, its implementation faces obstacles such as deep-rooted cultural beliefs in endless growth, political resistance from vested interests, and institutional inertia at both micro and macro levels. Overcoming these barriers requires significant cultural change, policy shifts, and grassroots action to realign societal values with ecological limits.

³⁷ q2.3: "What challenges constrain the implementation of Degrowth policies at micro and macro levels?"

³⁸ To what extent does the Postgrowth paradigm offer viable alternatives for reorienting economic systems toward well-being within ecological limits?

Practical steps towards an economics of Degrowth.

A strategy like Degrowth can seem odd in a world with Capitalist Realism and politicians which panic over low growth rates. Politicians are under permanent pressure to focus on economic growth, although most economists accept that GDP per capita is not a good measure for societal welfare. (Van den Bergh, 2017) Parallely, a transition to a steady-state or Degrowth economy will likely not be possible without significant cultural change. It is highly unlikely to arise within cultures dominated by *individuals* seeking ever-higher income and consumption levels. (Alexander, 2013) Even growth-focussed economics should put a stronger educational focus on the shortcomings of GDP, but particularly in economics and Business Administration studies. Another step would be to start critiquing GDP-oriented automatisms in journalism and public communication. This concrete step may require dealing with biases and the tough challenge of changing peoples' minds about the currently predominant economic paradigm. Furthermore, political leaders of developing countries must be made aware that a Degrowth-strategies reduce dependencies, economic inequality, mend climate damages and contribute to a more sustainable development. Political pressure is needed on organizations like the IMF, OECD, and the World Bank to accept a shift towards growth-neutrality. These organizations show strong concerns for environmental issues but are caught up in traditional growth-oriented economics. To do so, national politicians would have to be convinced to give up excessive growth expectations which contribute to disappointment and economic instability. Instead, society, media and politics should focus and discuss the relevance of non-monetary societal well-being. While non-growth-oriented positions do not require a metric such as GDP to quantify and measure success, it may help people accept the new paradigm. Support by the United Nations would be favourable.³⁹ Even without a good aggregate of measuring societal welfare, Degrowth may result in a considerable improvement of standard of living over unconditional growth-based models. Sensible weighing of social and environmental against economic goals will no longer be hindered by a stiff focus on GDP growth. (Van den Bergh, 2017)

However, it is not enough to offer a critique of growth-structures. It is just as important to explore and teach a way of living in opposition to them. (Alexander, 2013) Civic self-organisation like the example of the Voluntary Simplicity Movement claim we need lower consumption levels and more quality of life-lifestyles. People following this way of living usually try to downshift the

³⁹ Refer back to subchapter 2.2 of this work for concrete well-being models and metrics.

impact and level of their material consumption while creating for themselves a differing concept of “good life”. The movement generally stands in opposition to Western individualist economics and consumerist lifestyle. It is characterized by progressively transferring a greater part of one’s time and energy away from materialistic sources of utility, toward social relations, community engagement, creative activity, domestic production, relaxation, etc. So-called “post-consumerist” sources of satisfaction. (o. A., 2008) Alexander (2013) argues that the VS-movement will need to grow, organise, and politicize if Degrowth is supposed to emerge in a democratic way. Economic, legal and political structures will not propagate Postgrowth-ethics of macroeconomic efficiency until microeconomic sufficiency is culturally embraced and mainstreamed. Microeconomic pursuits of “more” and individualism will always produce and reproduce macroeconomics of growth and exploitation. (ibid.) This idea reflects strong influences by Antonio Gramsci (Opratko, 2012) and Simson & Willer (2015).

Jackson (2015) identified three obligatory operational principles for the new economic activities of ecological enterprises: Contributing positively to human flourishing, supporting community and providing decent livelihoods, and using as little as possible in the way of materials and energy. Jackson says that the societal seed for this new economy is *community*, and that we can already find it in this form in local, community-based social enterprises: As examples, the author mentions “*energy projects, local farmers’ markets, slow food co-operatives, sports clubs, libraries, community health and fitness centres, local repair and maintenance services, craft workshops, writing centres, water sports, community music and drama and local training and skills*” (pp. 180), some of which would often barely even register as a business unit in a formal sense in the first place. “*They sometimes employ people on a part-time or even voluntary basis. Their activities are often labour intensive. So if they contribute anything at all to GDP, their labour productivity growth is of course ‘dismal’ – in the language of the dismal science.*” (ibid.) Jackson opines that ecological enterprises need to work with the and the long-term *good cause*, rather than against it. Moreover, Chevrollier et al. (2025) found that companies with a Degrowth conceptualization in their business model outperform their unsustainable competition. They do so by de-emphasizing profit distribution and prioritizing social, ecological and economic value while promoting growth in size and revenue. Value increases by quality growth instead of sales growth. A reduction in resource use and output within production, in combination with durable designs, repairability and longevity facilitated value maintenance. Examined companies also create shared value by exchanging physical resources, knowledge, and skills and thereby help advance the sustainability transition in the industry. Another stepstone was to unlock value by

operationalizing Degrowth while operating as sustainability influencers. This way, they demonstrated sustainability transparency within their operations and products.

Current trends show that emerging economies have been increasing their production and consumption and catching up with the Western standards of living; thus adding to resource use and endangering global sustainability aspirations. (Bloemmen, Bobulescu & Vitari, 2015) Mariana Mazzucato, the Professor in the Economics of Innovation and Public Value at University College London, said that the only way to achieve a sustainable economy within the limited time frame climate change sets for us is not to nudge companies and industry branches in the right direction gently; Instead, we must force the market into the right direction and set ambitious goals. Mazzucato wishes for a reversal in societal orientation. She compares to projects like the moonshot in the 1960s, when John F. Kennedy announced that humanity would land on the moon within the decade. Mrs. Mazzucato wants to erase old narratives like that of the state only serving as a straightener of market failures. She describes the carbon tax as insufficient and sees higher effectiveness in what can only be described as a *carrot and stick*-approach: She chooses the example of forcing the industry to only use green cement instead of traditionally produced cement. In return, the state should provide financial incentives or subsidies. Another example would be to make decreased GHG-emissions a prerequisite for receiving any subsidies at all. Mazzucato opines that the state should create incentives for companies to invest in greater goals; for example, switching to the production of greener goods, while the state carries the excess costs of this changed production. (Beyer, Book & Schulz, 2022) While Mrs. Mazzucato's proposal may seem radical in the light of contemporary economic discourse, she shows that calls for a change of economic paradigm have found their way into academia. This thesis has so far covered the theoretical foundation of the Postgrowth paradigm and Degrowth theory. What is left now is to try and model concrete examples for practical applications. What would Degrowth mean on the microeconomic level? Which role do grass-root initiatives play? And how would economy as a whole and in its microeconomic parts be different from now? Investigating the role of businesses in achieving a strongly sustainable society is a complex matter. It involves theorising about the approaches that should be avoided and those that should be welcomed. (Nesterova, 2022)

5. Conclusion

Over the course of this work, the predominant economic paradigms have been analysed and critiqued, especially against their stance towards the concept of perpetual, unlimited growth that continues to shape modern societies' economic, social, and environmental landscapes. Through the analysis of their assumptions, goals, and impacts it has become clear that while historically, growth-oriented models successfully contributed to economic prosperity, it now shows that they provide no foundation to deal with the issues of planetary boundaries and social justice we face today. The analysis confirms that the societal focus on GDP as the main indicator for societal progress is utterly inadequate, as it factors out important dimensions of social justice, societal well-being and environmental sustainability. The dependence of a singular, narrow quantitative indicator leads to a distorted understanding of national prosperity. This can result in policies and business activity that further increases inequality, drains the planet of its natural resources, and contributes to climate change and loss of biodiversity. When traditional economic schools seem unfit to tackle these modern problems of our time, a paradigm change is essential, one that aligns societal goals with the achievement of high living standards, ecological integrity and social cohesion and ethical considerations.

Subsequently, the emerging Postgrowth paradigm was analysed within the same methodological framework. It appears as a compelling alternative that challenges the assumptions underpinning traditional economic thinking. Postgrowth authors promote a decoupling of human well-being from economic growth, advocating instead for redistribution, a reduction of unnecessary consumption, and the fostering of social and ecological resilience. They stress the importance of redefining economic success with alternative metrics like ecological footprint, happiness index or social equity, rather than solely measuring it in monetary terms. Such changes are crucial to translate ecological and social sustainability from abstract ideals into concrete policies and corporate strategies.

The transition towards a growth neutral society meets considerable obstacles anchored in cultural narratives, political inertness, the structure of influential institutions and economic dependencies. These obstacles include vested interests, cultural resistance, and short-term political calculus that prioritize economic expansion for electoral gains. Nonetheless, the

urgency imposed by climate change, resource depletion, and escalating inequalities necessitates innovative, bold interventions. Growth has become a societal myth, deeply rooted in notions of progress, success and national wealth. Questioning this myth necessitates dismantling the belief that economic non-growth necessarily entails poverty and hardship. Furthermore, new cultural narratives centred on sufficiency, resilience and communal well-being need to be cultivated. The political challenge lies in developing inclusive policies which protect vulnerable groups during the transition, uphold social equity, and foster democratic participation in decision-making. Institutional reforms like the reconfiguration of finance policies, regulatory frameworks and metrics must be aligned with sustainable objectives. In practice, this means redefining the purpose of businesses beyond profit maximization and embracing stakeholders, social responsibility and environmental protection. As demonstrated by the reviewed studies and business models, firms can function as motors of sustainability by integrating ESG-criteria into their business activity, adopting circular economy principles, and promoting purpose-driven coopetition. However, current business practices are often insufficient, resorting to greenwashing and superficial sustainability claims that obscure ongoing environmental degradation and social inequalities. To achieve meaningful change, regulatory frameworks must incentivize sustainable business practices, facilitate mandatory sustainability measures and penalize practices that harm ecological and social causes. The global community, policymakers, businesses, and civil society must cultivate an ethos of cooperation, collective responsibility, and ecological literacy to foster a societal shift that values well-being over growth.

Moreover, this work underlines the importance of further developing alternative indicators for societal progress, which reflect holistic well-being approaches. Real-life examples like Vienna, putting their focus on quality of life, social inclusion and environmental health demonstrate how such politics can foster resilient communities and secure long-term prosperity by actively working towards increasing overall well-being. Such approaches put traditional growth paradigms into perspective and exemplify ways towards comprehensive development. Nevertheless, the practical implications extend to macroeconomic policies as well. Existing models do not accommodate for thinking outside of the growth-oriented paradigms, yet they must evolve and open up for thinking outside the box. Policies that promote workplace democracy, reduce working hours, and facilitate distributed ownership can contribute to social equity and environmental sustainability. They are not a luxury good we can only afford in times of economic upswing, but necessary tools to cushion the effects of downward cycles and protect the working population from their ramifications. There are clear indications for the benefits of

fostering community-based initiatives and localized economies and integrating sustainability education into mainstream curricula. Such efforts must be grounded in a shared understanding that economic activity should serve human and ecological flourishing, not vice versa. Simultaneously, international cooperation and multilevel governance play crucial roles in managing cross-border externalities and ensuring cooperative and solidary growth among peoples. Especially as all regions face the brunt of ecological crises, while some do sooner than others.

In closing, this thesis provides a compelling call to rethink what constitutes progress and success in the 21st century. It underscores that the transition toward sustainable societies, though complex and fraught with difficulties, is both a moral imperative and an ecological necessity. Aligning with Postgrowth ideas, supported by rigorous critique and empirical evidence, offers promising frameworks for aligning human activity with the planet's ecological boundaries. Achieving this transition will not only require technological innovations but also a fundamental transformation of societal values, cultural narratives, and global cooperation. Only through such a comprehensive and collective effort can we aspire to build resilient, equitable, and sustainable societies rooted in ecological harmony and genuine human well-being.

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