

# Analysing the Beyond Growth Debate

Appendix A and B



TNO 2024 R11088 – September 2024

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## Appendix A and B

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Classification report	TNO Publiek
Report text	TNO Publiek
Appendices	TNO Publiek
Number of pages	68 (excl. front and back cover)
Number of appendices	2
Programme name	Social Innovation
Project name	Project Name
Project number	Project number

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## Appendix A

# International concepts

## A.1 Wellbeing and broader welfare economies

There is a range of alternative economic concepts that focuses in particular on new measurement frameworks beyond GDP. These concepts are grouped here under the term ‘wellbeing and broader welfare economies’.

### A.1.1 Main actors

The notion that welfare is broader than material welfare finds its origin in the ‘The Limits to Growth’ report by the Club of Rome in 1972. On request of the French president Sarkozy the concept was further explored by the ‘Commission on the Measurement of Economic Performance and Social Progress (CMEPSP)’, led by professors Stiglitz, Sen and Fitoussi (2009) and later by Stiglitz, Fitoussi, and Durand (2018). With their focus on broader measurement of wellbeing and welfare based on these reports, statistical offices play an important role gathering data and monitoring on the new measurement frameworks. Several countries, including New Zealand, Australia, Finland and Iceland, now have developed wellbeing and broader welfare frameworks, some of them being united in the ‘wellbeing economy alliance’, which also includes a range of organisations, academic institutions and individuals (Truijens & Georgieva, 2021; WEALL, 2023). Other countries that have developed such indicator frameworks or composite indexes include the Netherlands, where a dashboard of ‘broad welfare’ indicators are in a process of being integrated in governmental policies (WISE, 2024).

### A.1.2 The concept in short

The concept of the ‘wellbeing’ or ‘broader welfare’ economies encompasses the call for a different interpretation of welfare, in particular to conceive welfare, societal progress and wellbeing beyond material and financial aspects. Such a broader welfare interpretation can include objective as well as subjective indicators, such as ‘trust in government’. The aim is to develop measures that align with this broader conception of human wellbeing and ultimately to direct policy efforts to this broader wellbeing.

In the Netherlands, a ‘Monitor of well-being’ or ‘Monitor of Broad Welfare’ has been set up motivated as follows: ‘Well-being was hitherto measured in terms of GDP, which mainly say something about economic growth; but well-being is more than just that. Other important indicators of well-being include our health, the quality of our air and the level of trust in public authorities, for example. These indicators have been measured in the Monitor of Well-being. Hence, the monitor provides a broader picture of increased well-being’ (Sandijk, 2018). In a more general sense, wellbeing approaches can be seen as ‘addressing specific challenges in a holistic and preventative way, using a range of tools (such as a wellbeing vision, holistic thinking, wellbeing dashboards, and wellbeing budgeting)’ (Trebeck & Smith, 2024).

The common notion of focus on provision of a wide set of indicators while not prescribing a specific policy makes that ‘broad welfare’ and ‘wellbeing economies’ are regarded here under the general umbrella of ‘broader welfare economies’. In a general sense, they are rooted in the notion that individual wellbeing, broader welfare or also happiness - terms that in this context are used interchangeably (e.g., Fox, 2012) – are not fully reliant on material welfare (Easterlin, 2004; Layard, 2006). They build on the overall view that “...we can think of a person’s wellbeing as arising from a combination of what they have (material), how they are able use what they have (relational) and the level of satisfaction or subjective quality of life that they derive from what they have and can do” (McGregor and Pouw, 2017, p. 1124). They are furthermore rooted in Ayrton Sen’s ‘capabilities approach’, which states that wellbeing should be understood in terms of people’s capabilities and functionings (SEP, 2011).

Setting human wellbeing as a general policy target is not in itself revolutionary. “People's wellbeing, both subjective and objective, is often the ultimate objective of public and private policy” was already stated e.g. by the British National Research Council in 2014 and economics as a science can be seen as to aim at improving human wellbeing and welfare since the times of Adam Smith (Hill, 2020). However, the conceptualization of wellbeing economies in recent years offers as a new perspective on the actual measuring and tracking of wellbeing by a range of indicators, or with one composite indicator that also includes non-material aspects. Aim is to subsequently adopt policy measures based on the frameworks developed, that serve both to guide design, and to evaluate policy-making (OECD, 2011).

In this vein, the Commission on the Measurement of Economic Performance and Social Progress (CMEPSP) states that “it has long been clear that GDP is an inadequate metric to gauge wellbeing over time particularly in its economic, environmental, and social dimensions, some aspects of which are often referred to as sustainability” (Stiglitz et al., 2009:8). This notion gained relevance with the 2008 Global Financial Crisis, as it demonstrated that a focus on GDP had not led to long-term welfare (Stiglitz et al., 2009:8-9). In 2018 the Commission, then led by Stiglitz, Fitoussi and Durand, published a follow-up report which stressed that there is a need to “... complement GDP with a broader dashboard of indicators that would reflect the distribution of wellbeing in society and its sustainability across its social, economic and environmental dimensions. The challenge is to make the dashboard small enough to be easily comprehensible, but large enough to summarize what we care about the most” (Stiglitz et al., 2018:13).

### **Wellbeing and broader welfare measurement frameworks**

A series of wellbeing and broader welfare measurement frameworks has been developed in recent years. Most of these in the form of dashboards (a set of indicators that are all graphically represented separately) and some in the form of composite indicators (containing e.g. material, non-material and subjective components, all weighted in order to form one indicator). In addition, there are several models already implemented at a national level, such as the German National and Regional Welfare Index (e.g. Held et al., 2018), the Australian Unity Wellbeing Index (e.g. Cummins et al., 2003), the law on the New Indicators of Wealth in France (e.g. IDDRI, n.d.) and the Dutch ‘Broad Welfare’ dashboard (see Annex B.1). Textbox A.1 presents a few of the most-used international dashboards and composite indicators that incorporate material welfare alongside with other dimensions of wellbeing.

**Text box A 1:** Some key Wellbeing and Broader Welfare measurement frameworks

**The Better Life Index** from OECD offers a dashboard comparing the 447 OECD regions. It explicitly builds upon the work of Stiglitz et al. (2009) (OECD, n.d.), stating that “there is more to life than the cold numbers of GDP and economic statistics”. It embraces a multidimensional take on wellbeing is embraced where 11 dimensions in the domains of material living conditions, (objective and subjective) quality life, and sustainability are jointly considered to track societal progress (OCED, 2011). These dimensions are: safety, housing, life satisfaction, work-life balance, civic engagement, education, jobs, community, environment, income, and health.

**The Genuine Progress Indicator (GPI)** was first developed by Cobb, Halstead and Rowe (1995) and is a composite indicator that calculates a financial figure that is the result of combining the nets positive and negative results of economic growth to examine whether or not it has benefited people overall (Gross National Happiness USA, n.d.). The Index of Sustainable Economic Welfare resembles GPI in many aspects, hence is not discussed here. The GPI 2.0 as developed by the state of Maryland and the city of Baltimore (Talberth & Weisdorf, 2017) consists of 12 indicators in three dimensions: market based wellbeing, non-market based wellbeing, and environmental and social costs. The indicators are: household budget expenditures, household investments, defensive expenditures, costs of income inequality, public provision, services from human capital, services from social capital, services from build capital, services from natural capital, depletion of natural capital, costs of pollution, and social costs of economic activity.

**The Human Development Index (HDI)** is a composite indicator, created “to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone” (United Nations, n.d.). The HDI consists of three dimensions: a long and healthy life, measured by a life expectancy index (life expectancy at birth), knowledge, measured by an education index (expected years of schooling; mean years of schooling), and a decent standard of living, measured by gross national income per capita.

**The Sustainable Society Index (SSI)** presents a composite score for three dimensions, namely human wellbeing, environmental wellbeing, and economic wellbeing. It also presents its in total 21 underlying indicators as a dashboard (TH Köln, n.d.). These indicators are: sufficient food, sufficient drinking water, safe sanitation, education, healthy life, gender equality, income distribution, population growth, good governance, biodiversity, renewable water resources, consumption, energy use, energy savings, greenhouse gases, renewable electricity, organic farming, genuine saving, GDP, employment, and public debt.

**The Transitions Performance Index (TPI)** is a composite indicator that monitors and ranks countries on their transitions to fair and prosperous sustainability (European Commission, n.d.). It encompasses four dimensions: economic, social, environmental, and governance transition. Based on their score on these four dimensions countries are labeled as transition leader to strong, good, moderate or weak transition. While the other described dashboards and composite indicators also include economic, social and environmental dimensions, the TPI is unique in its account of governance.

**Social Progress Index (SPI)** is a worldwide index managed by the Social Progress Imperative, a collective for data-driven policymaking. It shows a score on three dimensions: basic human needs, foundations of wellbeing, and opportunity. Each of these dimensions is built up by several indicators. The SPI shows per dimension and per indicator how strong or weak this score is (Social Progress Imperative, n.d.). Hence it can be used as a dashboard similar to the Better Life Index, yet it is more normative on labelling scores from weak to strong. The SPI does not include measures of material welfare.

**The Happy Planet Index (HPI)** was developed by the New Economics Foundation and currently managed by the Hot or Cool Institute. With a score based on three indicators (ecological footprint, life satisfaction, and life expectancy) it assesses the extent to which countries enable long, happy, and sustainable lives for their citizens (Saisana & Philippas, 2012). The HPI does not include material welfare

### A.1.3 Taxonomy assessment

**Key focus** The broader welfare dashboards and composite indicators are meant to be a measurement tool in the first place. They aim to measure welfare in broader terms than financial and material welfare only. They are all evaluative, i.e. looking at the results of policy making with hindsight. Compared to other alternative-economy concepts, the wellbeing and broader welfare frameworks aim to be ‘policy neutral’, i.e. they do not want to advocate a certain normative worldview or a moral stance. Stiglitz et al. (2009:9) state that their report “is about measurement rather than policies, thus it does not discuss how best our societies could advance through collective actions in the pursuit of various goals”.

However, the wellbeing and broader welfare frameworks also recognize the impact they have on policy making: “as what we measure shapes what we collectively strive to pursue – and what we pursue determines what we measure – the [current] report and its implementation may have a significant impact on the way in which our societies look at themselves and, therefore, on the way in which policies are designed, implemented and assessed” (Stiglitz et al., 2009:9). About the Better Life Index, for instance, the OECD mentions that the dashboard is not only useful for benchmarking, but also “as a catalyst for policy-makers, to spur public support for action and to create a mechanism for prioritizing resources” (OECD, 2018:5).

Wellbeing and broader welfare frameworks aim to measure welfare by including non-economic measures, as this is considered to be a better way of measuring human welfare. They aim to influence policymaking with this representation of welfare that is ‘broader’ and considered more suitable for representing human welfare than GDP alone. In this sense, the frameworks take a viewpoint on what wellbeing and welfare should look like, hence are to some respect normative. This holds even more true if the results of the indicators are qualified (e.g., getting a ‘red’ or a ‘green’ label, depending on the outcome that is measured).

**Role of GDP** GDP growth is not conceived as the ultimate policy target by the wellbeing and broader welfare frameworks. This is for instance illustrated by the OECD in developing its Better Life Index: “Over the past 50 years, the OECD has developed a rich set of recommendations on policies that can best support economic growth. The task that we face today is to develop an equally rich menu of recommendations on policies to support societal progress: better policies for better lives.” (OECD, 2011, p.1). Relatedly, the wellbeing (economy) concept underscores the cost of narrowly focusing on the growth of material means rooted in the potential tradeoffs between wellbeing dimensions: “While material conditions may improve, other aspects wellbeing may suffer (e.g., the quality of the environment that one is able to live in, work–life balance, the social institutions of neighbourhood and community)” (McGregor and Pouw, 2017:1134). This also relates to a discussion on the importance income for subjective wellbeing, see Text box a 2).

Broader welfare dashboards and composite indicators move beyond but do not exclude GDP. An indicator that has most similarities to GDP in terms of what it measures is the Genuine Progress Indicator (GPI), as economic, social and environmental markers are expressed in financial terms. The GPI indicator adds to GDP other figures that represent the cost of the negative effects related to economic activity, such as the cost of crime, cost of ozone depletion, and cost of resource depletion. In the SSI, GDP is presented next to other indicators. The TPI uses GDP as one of the assessments of economic welfare, both directly and to assess the education expenditure per student, the gross added value added of manufacturing, the output per worker and the gross expenditure on R&D as part of GDP.

Other indicators use different measures for individual or household economic welfare. The Better Life Index includes household net adjusted disposable income and household net wealth. The Human Development Index uses Gross National Income, which measures the total income of the country's residents, as economic metric instead of GDP.

**Text box A 2:** Subjective wellbeing and income

The indicator 'subjective wellbeing' is included in some wellbeing and broader welfare frameworks. The Better Life Index includes a measure of life satisfaction. The Social Progress Index encompasses satisfaction with water quality, satisfaction with availability of quality healthcare, and perception of corruption. Life satisfaction is one of the three indicators that form the Happy Planet Index. The GPI, HDI, SSI, and TPI do not include indicators of subjective wellbeing.

An important consideration regarding subjective wellbeing is its relation to GDP, particularly of GDP per capita as a measure of average income. When focusing specifically on the subjective dimension of wellbeing, the influential contribution by Easterlin (1974) empirically establishes that an increase in average income (i.e., GDP per capita) does not lead to increase in average wellbeing. This is the so-called Easterlin paradox. Similarly, Layard (2006) points at evidence suggesting that despite the substantial increase in average income experienced by western economies over the second half of the twentieth century, people in these countries are not happier than before.

**Stance on redistribution** Although the concept does not take a stance on the desirability of redistribution, some frameworks do allow to steer policies towards it. For example the GPI encompasses the costs of income inequality, the SSI includes a measure on income distribution. The OESO Better Life Index presents an inequality ratio of each indicator (e.g. income, job opportunities).

**Technology** There is no explicit role for a specific technology development in most of the frameworks, as they aim to be technology neutral. However, implicitly technological innovation influences the development of some indicators that are included (e.g. life expectancy in the HDI). Technological innovation is however explicitly included in the TPI framework, which measures labour productivity and R&D intensity by output per working individual and gross expenditure on R&D, with the rationale that "scientific progress, innovation, and human capital adapted to the digital transformation enable economies to be resilient" (European Commission, 2021:I-10).

**Change of behaviour, individual norms and values** Individual behaviour, norms and values are recognized in some wellbeing frameworks, such as community and civic engagement in the Better Life Index or health in the TPI; yet, tracing, rather than influencing, changes in behavioural elements is the immediate goal of these measurement tools. As they aim to be policy neutral, the frameworks do not present a view on the need, or not, for behavioural policymaking.

## A.1.4 Theory of change assessment

**Policy impact chain** Wellbeing and broader welfare frameworks are primarily directed at politicians and policymakers. No specific activities, aimed outputs and desired outcomes are identified, as the frameworks aim to be policy neutral. Impacts aimed at are therefore not specified either, although this is implied by raking impacts as weak or strong or from red to green in some dashboards. Moreover, the implicit rationale is that a more comprehensive measurement of wellbeing will better inform policymaking and facilitate a different prioritization of resources (e.g., Better Life Index). As Stiglitz et al. (2009) state that 'what we



measure matters for what we pursue’, the apparent underlying logic is that measuring wellbeing should ultimately result in wellbeing improvements along its different dimensions: material, social, and environmental welfare (and ‘governance welfare’, in case of TPI).

Hence, a view on what constitutes wellbeing or broader welfare is the start of the policy impact chain. This is expressed in the statistical measurement of a set of indicators that is broader than only GDP, or that even aims to replace GDP. The measurement has to inform policy makers, leading to different policies. In turn, it is assumed that adapted policies lead to different outputs (achievement of new policy targets) that then lead to different overarching policy goals or outcomes (e.g. energy transition). As a final impact, an improved wellbeing of citizens is foreseen. See Table a.1.

**Table A.1:** Policy impact chain of wellbeing and broader welfare economies frameworks

Stakeholders	Inputs	Activities / policies	Outputs	Outcomes	Impacts
State	A comprehensive framework to measure wellbeing	Policy making	Evaluation and communication of policy results along multiple dimensions	Novel policy (and policy evaluation) toolkit	Improved, ‘broader’ wellbeing (of citizens)

**Assumptions** Main underlying implicit assumption is that different and expanded measurement of indicators will also lead to different and better policy making, that is more in line with (a normative view on) wellbeing.

**Scaling mechanism** The scaling mechanism of wellbeing and broader welfare economies is predominantly top-down: Adapted measurement frameworks are supposed to lead to changes in national and increasingly also regional and local policy making, which will improve wellbeing of citizens. Various governments worldwide and regional authorities have already adopted these frameworks, e.g., the Dutch Broad Welfare Monitor, the New Zealand Living Standards Framework, the Australian national wellbeing dashboard, state of Maryland, city of Vancouver.

Some of these have united in the Wellbeing Economies Alliance (WEALL, 2023). Currently the national governments of Scotland, New Zealand, Iceland, Wales, Finland and Canada are part of this collaboration. Scaling therefore also works from national to an international level, where the Alliance might find other governments and authorities participating in the future. In addition, international organizations like the United Nations (Human Development Index), the OECD (Better Life Index), and the European Union (Sustainable Society Index, Transitions Performance Index) have adopted wellbeing and broader welfare economy frameworks, which might also exert some influence on further national governments that are not yet participating to adopt such frameworks.

**Potential risks** Potential risks, counteracting interests, negative side-effects and drawbacks of implementing the frameworks are generally not specified or discussed, other than the general statement by Stiglitz et al. (2009) that measurements matter for what we do. Though this is the impetus for creating new metrics next to GDP in the first place, the impact of bad measurement, and the ad-hoc valuation of different dimensions, is not discussed as a potential risk for newly designed metrics.

**Dutch circumstances** The Better Life Index and others offer a dashboard presenting results also for the Netherlands on both national and regional (province) level. The Monitor Broad Welfare has been developed specifically in and for the Netherlands, see appendix B.1.

## A.1.5 Questions for further research

Wellbeing and broader welfare frameworks are presented as a measurement tool. At the same time, they have impacts on policy making. However, the links between measurements and impacts on policy making are still unclear. Further research questions therefore include:

- How does the adoption of well-indicators ultimately impact policymaking?
- If policies are informed by wellbeing indicators, what effect do they have on the desired final impacts? E.g., Malay (2019) questions the transformative potential the wellbeing and broader welfare frameworks have as they turn out to largely correlate with GDP.
- How can policymakers deal with gaps in the data, for example when they use indicators that were not measured in the past? This is a concern for practitioners that for example the state of Maryland walked into.
- Can the determinants of, what individuals perceive as subjective wellbeing be further incorporated in policy making to facilitate policy implementation?

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## A.2 Green Growth

Over the last decades, the concept of green growth became well established as a multilateral and national policy term. It was adopted by a number of multilateral organisations and by several national governments. However, policy adoption of the term and its academic definitions do not necessarily coincide.

### A.2.1 Main actors

The aim to strive for ‘green growth’ derives from a long-held policy concern for achieving environmentally sustainable development and the need to address the linkages between economic development and environmental quality (Smulders et al., 2014). In the context of this agenda, Bowen and Hepburn (2014) identify the use of the ‘green growth’ term dating back to 1989. Nevertheless, ‘green growth’ as a label for a novel economic model of growth and multilateral policy agenda appears to date from the 2000’s: “As a multilateral agenda, green growth was first adopted in 2005 by 52 Asia-Pacific countries at Seoul’s 5th Ministerial Conference on Environment and Development (MCED)” (Sarkodie et al., 2023; p.1).

In the 2010’s, the concept gained significant attention due to the initiatives from various major international organizations to delineate and promote the implementation of green growth strategies, which were disseminated in flagship publications, in particular:

- OECD (2011) - Towards Green Growth
- UNEP (2011) - Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication
- World Bank (2012) - Inclusive Green Growth: The Pathway to Sustainable Development

These publications were accompanied by a call to facilitate the development of theoretical and practical knowledge around the concept of green growth at different scales. A prominent example of this was the establishment of the Global Green Growth Institute (GGGI) as international organization (GGGI, 2014) and the Green Global Knowledge Platform (GGKP) in 2012. The GGKP was founded as a joint effort of the UNEP, OECD, World Bank, and Global Green Growth Institute. This platform brings together the knowledge of green growth experts and practitioners from the different spheres that are relevant to enable a transition towards a green growth: public policy, industry, finance (GGKP, n.d.).

At the scale of national governments, South Korea is recognized as a pioneer in the implementation of a green growth strategy in 2008. Ever since, more than 200 developed and developing countries, including the Netherlands and many EU countries, have implemented national green growth strategies (Sarkodie, 2023).

### A.2.2 The concept in short

According to Smulders et al. (2014), green growth can be understood as “a call for balancing longer-term investments in sustaining environmental wealth with nearer-term income growth to reduce poverty”. To achieve this, a green growth strategy “must catalyse investment and innovation which will underpin sustained growth and give rise to new economic opportunities.” (OECD, 2011:9).

Green growth can be understood as being built on three main elements. First, it recognizes economic growth as a means to produce societal benefits (e.g., income growth) and poverty

and inequality reduction. The latter in particular under the subheading ‘inclusive green growth’ pursued by for instance the World Bank. Second, it acknowledges the undesirable environmental consequences of economic activity due to environmental externalities in production and consumption of goods and services. These consequences are understood to be long-lasting and typified as depletion of environmental capital (e.g., biodiversity losses, deforestation, depletion of carbon budget). Third, the depletion of environmental capital is considered as detrimental for societal welfare. The elements together entail that pursuing ‘conventional’ growth (at all cost) strategy is inadequate and likely self-defeating from a welfare perspective.

The concept highlights that there currently exists a trade-off between economic growth and environmental capital preservation and aims at softening this trade-off. A distinction can be made between ‘weak’ and ‘strong’ green growth (Jakob and Edenhofer, 2014; Smulders at al., 2014). “The weak view holds that typically there are trade-offs between income growth and the environment, but that appropriate policies can soften this trade-off...”. “The strong view sees complementarities between maintaining natural capital and maintaining income as more the norm.” (Smulders at al., 2014, p.424) and thus “environmental policies would have positive effects [on the economy] put even in the short run” (Jakob and Edenhofer, 2014, p.449). Weak green growth can be seen as to aim at a relative decoupling of depletion of natural capital and economic growth, strong green growth aims for an absolute decoupling between these variables. ‘Ecomodernism’, developed by Nobel Prize winner Ted Nordhaus and Michael Shellenberger (2004) can also be seen as a subbranch of Green Growth (See Text Box A.3).

#### Text box A 3: Ecomodernism

Ecomodernists strive to reduce mankind’s impact on the planet by concentrating its activity on as little land as possible. The concept strongly focuses on technological innovation for doing so (Boersma, 2021). Concrete policy ideas therefore include (the stimulation of technological innovation for) intensive agriculture, nuclear energy, urbanisation, high-tech materials, circular economy, digitalisation, miniaturisation and others. With its focus on technology and markets, ecomodernism can be seen as a specific variant of green growth.

In 2004, Ted Nordhaus and Michael Shellenberger introduced the term ‘Ecomodernism’ with their essay on ‘The death of environmentalism’. Several publications followed that further detailed the ideas of Ecomodernism, including ‘Breakthrough’ (2007) and ‘Abundance’ (2012). Aiming to promote the ideas of Ecomodernism, in 2007 Nordhaus and Shellenberger also founded the thinktank ‘Breakthrough Institute’. Worldwide, the concept found followers in many countries and in 2015 an ‘Ecomodernist Manifesto’ was published. In the Netherlands, Marco Visscher & Ralf Bodelier published a book on ‘Eco-modernisme’ (2017).

## A.2.3 Taxonomy assessment

**Key focus** Green growth aims at achieving ‘sustainable economic growth’, where sustained economic growth leads to increased societal welfare and individual wellbeing poverty reduction compatible with the preservation of the natural environment. This is encompassed by the definition in the green growth strategy outlined by the OECD (2011, p.9): *“Green growth means fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies.”*

**Role of GDP** GDP growth, as measure of economic growth, is a central concept in green growth. The concept aims at a sustained increase in the total value of goods and services (per person) that the economy produces (i.e., an economy's GDP per capita), while the total environmental impact of the economy is reduced. By construction this requires producing differently, which entails both producing some of the same final goods and services with different methods, and producing new types goods and services. This ultimately results in a structural re-composition of GDP to become 'greener' (Bowen and Hepburn, 2014).

The concept also recognizes that the depletion of environmental capital (i.e., environmental degradation) is detrimental for societal welfare and that better metrics beyond growth are required. This "*underscores a need for better ways of measuring economic progress: measures to be used alongside GDP which more fully account for the role of natural capital in economic growth, human health and wellbeing*" (OECD, 2011, p. 17). In particular, the green growth concept recognizes that degradation of environmental capital is not yet fully incorporated in market prices. Therefore, policy interventions to include such environmental 'externalities' in prices are needed.

**Stance on redistribution** In the concept of green growth, economic growth is seen as the engine for poverty reduction, both intra-generationally and between generations (e.g., Dollar and Kraay, 2002; 2004; UNEP, 2011). While redistribution of wealth and capital in societies is not an explicit aim of green growth, some strategies and policy agendas explicitly include this distributional goal by design and place it at the forefront by referring to "inclusive green growth" (World Bank, 2012).

However, green growth is also posed to create "winners and losers" in society as, from an aggregate point of view, green growth is to result in a structural transformation of the economy, where the economic contribution of some sectors is set to shrink and of others to grow. This will be favorable for workers with the skills and educational background required by the thriving sectors, and detrimental for those workers with a profile that is mostly demanded in shrinking sectors (e.g., Bluedorn et al., 2023; Vona et al., 2018).

**Technology** Technology, and more specifically technological progress and the creation of new knowledge are key to green growth (Bowen and Hepburn, 2014). These are seen as the result of purposeful and costly innovation efforts by, profit-driven, economic agents. As such, innovation efforts are responsive to market incentives (e.g., R&D subsidies) and framed by institutions (e.g., property rights protection). Technological progress in the concept of green growth is seen as not necessarily 'environmentally neutral'. Therefore, innovation efforts and policies need to be explicitly directed to the stimulation of green technologies (Aghion et al., 2016).

**Behaviour, individual norms and values** In the green growth narrative, change of individual norms and values are not explicit goals. Existing preferences are taken as a given. Desirable changes in behavior are to be brought upon policy interventions that affect behavioral incentives directly, without altering underlying norms and values. Nevertheless, green growth policies might also result in behavioural changes, as the concept encompasses demand-pull as well as technology-push policies (Capasso, et al., 2019).

**Other features** There are two fundamental market failures at the heart of the green growth concept which call for policy intervention to attain societal welfare gains. First, the environmental externalities associated with economic activity. The second market failure are knowledge externalities that need to be dealt with to overcome a technological lock-in into brown technologies and to ensure that R&D efforts are directed towards green

technologies (Hemous et al., 2016). The two externalities together call for the implementation of more than one policy instrument. Hence, a typical policy prescription of green growth would be to combine environmental taxation to price in the environmental damages of economic activity with R&D subsidies in green technologies to stimulate the development of green technologies.

## A.2.4 Theory of change assessment

**Policy impact chain** Green growth policies are predominantly implemented in a top-down way by governments as a main stakeholder. As an input, the government needs to find budget to implement expenditures associated to green growth policies. Next to budgetary needs, governments need to mobilize governance capacity to implement policies (e.g., determine which sectors will become subject to carbon pricing), verify compliance, monitor the evolution of intended outcomes over time, and to adjust policies as needed.

Governments will in particular design and implement policies and measures directed at decoupling environmental impacts from economic activity. These generally include environmental taxation (on domestic and foreign production) and cap-and-trade systems to price the environmental externalities, as well as environmental standards to phase-out damaging production practices. Furthermore, green growth policies aim at creating incentives for innovation, including innovation (R&D) subsidies, tax credits, and grant schemes. Sometimes environmental and innovation policies are supported by industrial policies directed at sectors that are strategic for the green transition and by educational policies directed at skills development.

The outputs of these interventions are changes in the prices of emissions, resources and energy, public expenditures on R&D, as well as public revenues from environmental taxes. Primary outcomes are lower emission and energy intensity of production and consumption, the development of 'green' technologies (as measured for instance by a growing relative number of green patents). These changes are to spur economic activity as well, hence have to result in GDP growth. The ultimate impact of green growth is a growing economy that does not deplete its environmental capital, hence a decoupling of economic activity and environmental impacts.

Government actions are intended to trigger a bottom-up reaction by households and firms. For households, the main inputs are their budget and their labor endowment, where activities include the demand of goods and services, supply of labor, and investment decisions related to the adoption of available technologies, as well as investment in human capital (e.g., education). In response to policy interventions by the government, outputs for households are meant to include the demand for new (or improved) less environmentally harmful goods and services, the level of adoption of green technologies, and the enrollment in training/educational programs to develop skills needed for the green transition. Outcomes from the perspective of households are a reduced energy and emission intensity of consumption, and an increasing supply of skills that is in line with the requirements of an economy in a green growth path. The ultimate impact for households is growing income and environmentally sustainable consumption.

From the perspective of firms, inputs include their production and investment expenditures, aiming at adapting production methods and investing in the development and/or adoption of new green technologies and new business models. Output is the continuous introduction of new (or improved) less environmentally harmful products and services, the creation of new green technologies and production processes. The main outcome for firms is reduced

energy and emission intensity of production, possibly a change in the product portfolio, and overall a reduced exposure to restricting environmental regulation. The growing business opportunities enabled by innovation should lead to growing profits accompanied by an overall lower environmental impact of production.

**Table A.2:** Green growth policy chain

Stakeholders	Inputs	Activities	Outputs	Outcomes	Impacts
Government	Financing of GG policies  Governance capacity to implement policies, verify compliance, and monitor evolution	Environmental policies (in particular pollution taxes, cap-and-trade schemes, standards)  (Technological) Innovation policy	Increasing prices of environmentally damaging resources and fossil energy  Increasing emission prices  (green) R&D expenditure	Development of green technologies (e.g., number of green patents)  Reduced energy and emission intensity of production and consumption	Environmentally sustainable economic growth, decoupling of economic growth and use of environmental capital

**Assumptions**

From a theoretical perspective, green growth is feasible insofar as economic activity can grow at a sustained rate without depleting the stock of environmental capital. This requires in particular the following (Smulders et al., 2014):

1. Technological innovation that contributes to (absolute or relative) decoupling of environmental capital use and economic growth
2. Substitution possibilities that allow the economy to replace the use of inputs which deplete environmental capital for inputs that do not deplete it.

More fundamentally, the underlying assumption of green growth is that, with the right set of incentives, technological innovation can lead to absolute decoupling of environmental impacts from economic growth, or to a relative decoupling that still keeps the economy within environmental borders so as to result in (inter-generational) sustainable development.

**Scaling mechanisms** The concept of green growth has been adopted by various multilateral organizations (e.g., OECD, UNEP, World Bank) and by a wide range of national governments as a framework to design development agendas and set policy goals (Sarkodie, 2023). Current policies, however, still fall short of fully correcting the environmental externalities of economic activity and be on track of achieving absolute decoupling. As such, the adoption of a green growth strategy can be seen as striving for green growth, rather than a full-fledged implementation of green growth.

The concept relies on a top-down scaling, where the implementation of adequate policies by national governments serve to internalize the environmental and knowledge externalities via market mechanisms. The latter, in turn, have to create the incentives for households and firms to reduce the environmental impacts of their consumption and production activities, and for firms to stir innovation efforts in the right direction.



**Risks, draw-backs and side-effects** Risks of relying on a green growth strategy for sustainable development are relatively poorly researched. One fundamental risk of green growth is the over-reliance on technological innovation and the extent to which absolute decoupling of environmental impacts and economic activity can be achieved by means of technological progress. While claims are made as to achieved absolute decoupling for some sectors and some periods of time (e.g. Haberl et al., 2020), no evidence exists of long-term and all-encompassing decoupling of economic growth from degradation of environmental capital.

Next to this, and related to a side-effect of green growth policies, the gap that may exist between required and implementable policies poses a threat to achieving a green growth path. A widespread or sufficiently strong resistance to the implementation of green policies and measures constitutes a fundamental challenge to achieve the goals of green growth. At the individual level this resistance may be triggered by intra-generational equity concerns and the perceived impact on own conditions (Dechezleprêtre, et al., 2022). This reinforces the call for envisioning the impact of green growth policies within the larger framework of fiscal and welfare system policies (Barrage, 2020; Beiser-McGrath and Bernauer, 2019; Bovenberg and Goulder, 1996).

A third risk of a green growth strategy is to be found in the geopolitical sphere. Besides from undermining international cooperation, external geopolitical shocks can reduce the availability of (raw) resources necessary for economies to transition into a green growth path (IRENA, 2023; Nygaard, 2023). This risk can ultimately impact the cost and feasibility of achieving a green growth path at the relevant scale on a timely manner.

**Adoption to Dutch circumstances** The Dutch government has supports green growth as a policy strategy, where environmental sustainable innovations are seen to create economic opportunities, and “economy and the environment can go well together” (Government of the Netherlands, n.b. a). Moreover, together with other 16 European countries (14 EU members, Norway, and the UK) the Netherlands is part of the Green Growth Group. This Group “works together with a view to exploring, promoting and pursuing a cost-effective and growth-enhancing ambitious EU low carbon agenda and an ambitious, constructive and effective EU contribution to the international climate negotiations.” (Government of the Netherlands, n.b. b).

Furthermore, in 2011 CBS Statistics Netherlands, presented a monitoring framework dedicated to green growth. In line with the OECD recommendations the monitoring framework for the Netherlands consists of a dashboard of 20 indicators organized in 4 groups: environmental efficiency, natural asset base, environmental quality of life, and policy responses and economic opportunities (Statistics Netherlands, 2011). This dashboard was last updated in 2018 (Statistics Netherlands, 2018). A recent and specific application of green growth to the Netherlands is given by Barbara Baarsma (2023; see Annex B).

## A.2.5 Questions for further research

The concept of green growth relies on the assumption that decoupling of degradation of environmental capital and economic growth is possible, and that technological innovation can play an important role here. Questions for further research towards full implementation of this concept therefore lie in particular here:

- Can we achieve decoupling of economic activity and emissions within the required timeframe and scale? And, can this decoupling solely rely on technological innovation?

- What are the main challenges to implement ambitious and timely green growth policies?
  - Is there room in green growth to think of impacting norms and values to facilitate policy intervention?
- Due to recent political developments (Inflation Reduction Act, EU Green Deal) industrial policy has regained attention in the academic debate.
  - Is there a role for further dedicated industrial policy as part of the green growth tool kit to speed up the transition?
  - Which would be the key elements of such a European/Dutch green industrial policy to foster green growth in a competitive world?

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## A.3 Mission economy

The 'Mission Economy' is an alternative economic concept focusing on strong state intervention in markets to solve all kinds of 'wicked problems' in society, including climate change. Inspired by the 'Moonshot Mission' defined by president Kennedy in 1962, 'missions' formulated by politics and closely supervised by government play a central role.

### A.3.1 Main actors

The concept was developed by Mariana Mazzucato, professor in the Economics of Innovation and Public Value at University College London. She is the director of the UCL Institute for Innovation and Public Purpose and a policy advisor to the European Commission. Her work centers around the role of the state and the private sector in innovation.

The mission economy concept was presented in detail in her book 'Mission Economy: a Moonshot Guide to Changing Capitalism' (2021). The book builds upon earlier work, such as *The Entrepreneurial State, Debunking Public vs. Private Sector Myths* (2013), which emphasizes the important role of the state for creating opportunities and covering risks for innovations. Other work published by her on the Mission Economy includes 'The Value of Everything, Making and Taking in the Global Economy' (2017) and, with Rosie Collington, 'The Big Con, How the Consulting Industry Weakens our Businesses, Infantilizes our Governments and Warps our Economies' (2023).

### A.3.2 The concept in short

According to Mazzucato, the current economic system is not designed to adequately address climate change and inequality (2021). More specifically, in her view we currently face four issues: the short term focus of the financial sector, the financialization of firms (where the largest part of finances is spent on financial activities instead of productive activities), the climate crisis, and slow or absent governments (2021:28). Therefore, we need a 'Mission Economy' in which the government takes a leading role in boosting innovation by focusing on specific societal 'missions'.

According to Mazzucato, societal issues persist because governments focus on market fixing instead of market steering, and on creating a level playing field for business instead of tilting the playing field in a green direction (Mazzucato & McPherson, 2018). Key to achieving a Mission Economy is therefore a 'redefinition of capitalism' and a restructuring of organisations, including a transition in how government is structured, how the private sector is governed, and how private and public organisations relate to one another (Mazzucato, 2021: 22).

Concerning the role of the government, Mazzucato (2021) states that governments need to move away from a mere focus on controlling public finances. Instead, this finance should be mission-driven. These missions are called ‘Moonshots’, in reference to the moonshot speech by US President J.F. Kennedy in 1962, in which he presented the mission to put a man on the moon by the end of the decade. According to Mazzucato, governments should pursue such Moonshot Missions by setting ambitious goals and then determine how they will finance those: “The wrong question is: how much money is there and what can we do with it? The right question is: what needs doing and how can we structure budgets to meet those goals?” (Mazzucato, 2021:8).

A Mission Economy according to Mazzucato would be a way to overcome pure profit-focused capitalism: “This [mission orientation] means restoring public purpose in policies so that they are aimed at creating tangible benefits for citizens and setting goals that matter to people – driven by public-interest considerations rather than by profit” (Mazzucato, 2021:6). By assuming that it is possible to remake the current capitalist system by a strong governmental strategy (Kibasi, 2021), a Mission Economy thus opposes to neoliberal economic ideas of promoting market competition as the primary means to achieve societal outcomes.

### A.3.3 Taxonomy assessment

**Main impacts** The main aim of the mission economy is to solve “wicked problems” in order to achieve a “more just and sustainable society” (2021:21). It is argued that these wicked problems require also social, organizational and political innovations, next to technological solutions (2021:5).

**Role of GDP** The Mission Economy view is that pursuing societal goals and profit can go hand in hand (2021:129). The concept supports economic growth, but has a normative stance on the way it is achieved: “[missions] are an admission that growth has not only a rate but also a direction” (2021:168). However, making room for economic growth prevents that public expenditure leads to inflation (2021:186-187). GDP is not rejected and is still seen as a key indicator for societal welfare. Hence, a mission economy would not require a change of the main paradigm about the importance of economic growth.

**Stance on redistribution** Social (re-)distribution is part of the mission economy concept, with a focus on “inclusive, sustainable economic growth that brings everyone along with it, including traditionally overlooked groups” (Mazzucato & McPherson, 2018:2). Both *redistribution* and *predistribution* are needed. Redistribution could be done by ‘just’ taxes and benefits. *Predistribution* would encompass “structures that lead to fairer outcomes in the economy, such as contracts which ensure that the public and private sectors share the risks and rewards of value creation” (2021:189). Moreover, Mazzucato points out that innovation investments, whether or not they are directly related to social goals, can benefit society via spillover effects such as spin-off technologies and increased labour demand (2021:77-88).

**Technology** The role of innovation is large in a mission economy and technologies have a central role in the core work (Mazzucato, 2021). Mazzucato (2021) pleads for innovation in broader sense than technology alone, as modern missions are more complex than for example the purely technological mission of going to the moon.

**Behaviour, norms and values** Behavioural change is important for the mission economy: “It [a mission] requires not only innovation in technical terms but also societal innovation and behavioural change” (Mazzucato & Dibb, 2019:3). That is, because “[s]ocial problems are ‘wicked’ in the way that social, political, technological and behavioural factors intersect. It is impossible to get greener cities, for example, without making many different changes in regulations, in citizen behaviours, and in incentives to use cleaner materials.” (2021: 108). Moreover Mazzucato (2021) poses that it might be more complicated to gain support for social missions than for technological missions, so she argues for citizens engagement (2021:111). However, the concept does not elaborate on how to achieve behaviour change.

**Other features** Mazzucato (2021) argues for top-down goal setting with a bottom-up strategy, implementation, and experimentation of how to reach goals (also see *Policy impact chain*). Moreover she pays attention to the question who decides on missions. This used to be “elite experts” (2021:137), but “[a] vital aspect of a mission-oriented approach is to represent different people and perspectives” (2021:138). Another distinctive feature is an ‘optimist’ strategy to change: investments in low-carbon innovation should be rewarded, because “only by turning climate change into positive opportunities for investment and innovation will a green transition come about” (Mazzucato & McPherson, 2018:1). Sustainable growth should be seen “as a common pursuit for humanity – a win win” (2018:2), and “[the green transition] must be guided not by fear, but by a positive vision for change” (Mazzucato & McPherson, 2018:1).

### A.3.4 Theory of change assessment

**Policy impact chain** The summary of the proposed policy impact chain is shown in Table a.3. To achieve moonshot missions, different actors need to create public value collectively by different actors, in public interest (2021:168-169). Therefore the role of governments should be redefined in a way that they can steer economic organisations in the desired direction. Public organisations need to develop ‘a dynamic capability for experimenting and learning’ (2021:174-180).

Following Mazzucato (2021: 174-180), five capacities are “central to modern bureaucracies’ ability to manage complex and ‘wicked’ problems” (2021:178): leadership and engagement, coordination, governance, risk taking and experimenting, and dynamic evaluation. Moreover, corporate governance should be altered in order to change the focus of the private sector from maximising shareholder value, to the interests of a range of stakeholders. ‘Social responsibility’ is too limited to achieve this.

Next to changes in bureaucracies and corporate governance, the *interaction* between governments and the private sector needs to be changed. Mazzucato (2021) argues for a top-down approach to setting goals, which should be undertaken by the government, supported by a bottom-up approach to achieving these goals. She states: “[t]he key is to specify what is needed without micromanaging the way in which it is done – so to stimulate as much creativity and innovation in multiple actors” (2021:127).

The interaction between governments and businesses should therefore be characterised by partnership: “[t]he private sector needs to work with the public sector to achieve society’s goals: not through corporate social responsibility or charity, but through the value chain – where money is made while supporting society’s aims – and through investment with public purpose” (2021:129). In addition, Mazzucato (2021) theorises missions as a ‘mobilizing concept’: they “offer an opportunity to reverse this trend [of individualism] by involving

citizens in solving grand societal challenges and creating wide civic excitement about the power of collective innovation” (2021:130).

In a mission economy, the state is thus in the lead of most innovations. An exception to this centralist approach is her recommendation on commons, which imply that “there is no need for overly centralized command and control (by government) or by companies through privatization” (2021:198). The state has a role in setting the mission, but implementation can be done in a decentralized way. Another decentralist feature concerns participation. Here Mazzucato states that experimenting should be based on ‘real’ participation, and that “[t]he European Union, for example, cannot dictate how cities become carbon-neutral: that must be discovered by the cities and their participants and organizations themselves” (2021:202).

**Table A.3:** Policy impact chain of mission economy, derived from Mazzucato (2021), Mazzucato and McPherson (2018)

Stakeholders	Inputs	Activities	Outputs	Outcomes	Impacts
Citizens		Engagement in mission setting and implementation of behavioural change			Economy is steered in desired direction
State	Investments (funds, loans, (venture) capital, subsidies with social and environmental requirements, scholarships) and awards  Public organisation culture of experimenting and learning	Formulation of Missions: Reward innovators for risk-taking; Public capital fund or public participation in firms; Tax on energy and materials; Supply side regulation; Public procurement; Network development; Monitoring; Engaging citizens	Multiplier effect of public investment; Crowding in private investments	Public and (re)distributed benefit of innovation	
Markets	Stakeholder governance; Intellectual property management with research	Patent pools		Solidarity in markets; Productive entrepreneurship	

**Scaling** Mazzucato (2021) is explicit on how a transition to a mission economy could take place: markets will not pivot in a sustainable direction on their own (Mazzucato and Perez, 2015), as businesses will not invest unless they see a growth opportunity (Mazzucato & McPherson, 2018). The formulation and implementation of a mission is a horizontal activity: “While technological missions have often been driven top-down by central government, social missions must involve a wide group of stakeholders in both definition and implementation” (Mazzucato & Dibb, 2019:3). The role of governments is to offer a stable and consistent (top-down) direction for investment, so regulation and innovation by businesses align with its missions (Mazzucato & McPherson, 2018).

Mazzucato and Dibb (2019) set out five criteria for the development of missions: they should be “bold, inspirational with wide societal relevance... Set a clear ambition – targeted, measurable, and time-bound... Be ambitious but realistic... Encourage cross-disciplinary, cross-sectoral and cross-actor innovation... Involve multiple, bottom-up solutions” (2019:4). Mission maps (see Figure a.1) can be used as a tool.



Figure A.1: Mission map. Source: Mazzucato & Dibb (2019)

**Risks, drawbacks, side-effects** Mazzucato (2021:109) mentions that it may be easier to get policy support for technological missions than for social missions, that might meet much resistance. The risk of paying the price at the next elections in a political cycle of four years can make missions, for example on climate policies, unattractive to political parties. To mitigate this risk, gathering support and engaging citizens is thus vital for following to Mazzucato (2021:109). There is no further extensive discussion of risks and drawbacks of the concept.

**Dutch adaptation** The mission economy concept as developed by Mazzucato has been adopted in a limited way in the Netherlands. Mazzucato herself points to the Dutch ‘Missiegedreven innovatiebeleid’ (referred to as ‘Dutch Green Deal’) as a good example of mission-oriented policymaking in cooperation with stakeholders in her advice for the European Commission (2019). A mission narrative was studied in the Dutch case of circular cities, concluding that “[t]he results highlight that a mission alone is not enough to create an innovative and inclusive system, as the underlying narrative lacks congruence; this, thus, suggests that the circular economy may not be the most compelling narrative for the mission of cities toward a more sustainable development” (Sonnier & Grit, 2022:1).

### A.3.5 Questions for further research

Mission economics has gained much academic attention, including critical reviews (see below). Questions for further research could therefore be:

- What could the concept of mission economy add to the Dutch innovation landscape? Mission thinking in general has been applied to Dutch cases, for example in studies on mission oriented innovation systems (e.g. Hekkert et al., 2020; Wanzenböck et al., 2020). Though not referring to Mazzucato, these studies mention the influential role of governmental interventions and hence seem to at least partly



align with the concept of mission economy. Moreover, Gengnagel and Zimmermann (2022) argue that the moonshot and the European Green Deal already share several characteristics and as described above. Mazzucato refers to the Dutch Green Deal as an exemplary case. It would be interesting to put this to the test and see to what extent the Dutch Green Deal and other innovation policies align with the mission economy concept. A potential follow-up question is whether the mission economy concept is actually innovative for Dutch circumstances, or that it perhaps could be expanded further in the Dutch context.

- Is mission economy-thinking able to solve large societal issues? Mazzucato argues that the mission approach to the *technological* challenge of putting a man on the moon could also be used to address *societal* challenges. However critics argue whether this is actually the case, due to the more ambiguous nature of societal issues (Nelson, 2011; Mowery et al., 2010; Sandström, 2022; Kibasi, 2021): “can the missions she describes really solve systemic problems such as social care or the climate crisis, where success is less clear-cut than landing a man on the moon? Can missions really work when both the outcomes and the means are politically contested?” (Kibasi, 2021:1).
- How will behavioural change or societal innovation take place in a mission economy? Its importance is mentioned (Mazzucato, 2021; Mazzucato & Dibb, 2019), yet it is largely not elaborated upon.
- How can the process of defining a mission safeguard the formulation of a mission that is desirable? Sandström (2022) mentions that many mission-oriented policies have not led to great outcomes and that some missions have even had destructive effects, such as oil drilling in Brazil. Mazzucato (2021) states that missions should be formulated with social engagement. However, societal consensus does not seem to guarantee desirable outcomes.
- How will economies make the transition from a ‘wrong’, profit-focused capitalism to a mission-oriented capitalism? While Mazzucato (2021) is vocal on the need for governmental policies to achieve a mission economy, she refrains from addressing the question of why and how firms that benefit from the current mode of economy will give up their power. Therefore Sandström (2022:417) criticises: “[o]nce the economy is organized around missions, Mazzucato seems to believe that firms and governments become visionary, altruistic and capable. But she never explains why such fundamentally different behaviors are to be expected or how they will come about.” The transition of power that the concept requires thus needs further investigation.

### A.3.6 Literature

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## A.4 Doughnut economy

The doughnut economy is an alternative economic concept that sees economic development as limited between an 'inner' layer of social goals and an 'outer' layer of ecological planetary boundaries. Graphically it is therefore represented as a 'doughnut' (Figure a.2).

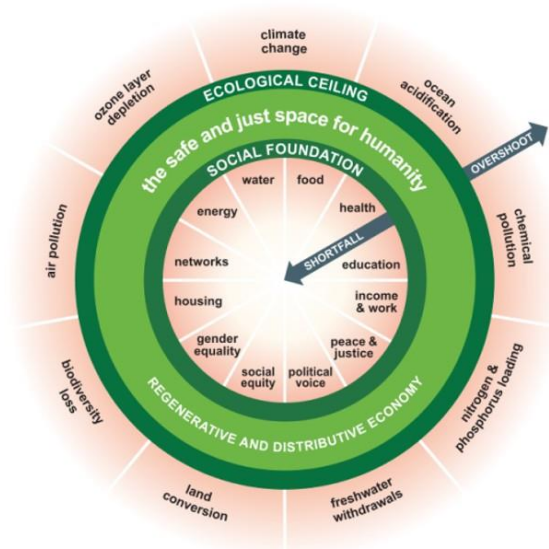


Figure A.2: the Doughnut (Raworth, 2017:44)

### A.4.1 Main actors

The doughnut economy concept was developed by Kate Raworth and first presented in the book *Doughnut Economics: Seven Ways to Think Like a 21<sup>st</sup>-Century Economist* (2017). Raworth is an economist at Oxford University and affiliated with the University of Applied Sciences in Amsterdam and was previously a researcher at Oxfam. The Doughnut Economy concept is now applied as a policy experiment in several cities worldwide, including Amsterdam, Barcelona, Philadelphia and Wellington.

## A.4.2 The concept in short

According to Raworth (2017), we currently fall short on fulfilling the basic needs of all people, while at the same time we are overshooting ecological boundaries. Therefore we need economies that enable all people to live above a social subsistence level within the limits of the planet's ecological boundaries. This leads to 'outer' ecological boundaries and 'inner' social boundaries, depicted as a doughnut.

In the Doughnut Economy, the economy is seen as an open subsystem of the closed Earth system, where everything that is produced depends on energy and material input. Reintroducing the planet into our understanding of the economy logically leads to the question "how big the global economy's throughflow of matter and energy [can] be in relation to the biosphere before it disrupts the very planetary life-support systems on which our wellbeing depends" (2017:76). Furthermore, Raworth (2017) views the economy as consisting of households, state and market, but also gives an important role in the economy to the commons.

## A.4.3 Taxonomy assessment

**Key focus** Doughnut economics aims at meeting social needs while not overshooting environmental boundaries. Raworth (2017) explains: "[t]he essence of the Doughnut is: a social foundation of wellbeing that no one should fall below, and an ecological ceiling of planetary pressure that we should not go beyond. Between the two lies a safe and just space for all" (2017:11).

**Role of GDP** GDP is subordinate to social and ecological needs in the Doughnut Economy: the key is "to create economies that make us thrive, whether or not they grow" (2017:245). Raworth (2017) argues that the economics discipline should stop focusing on GDP growth "so that economics can reconnect with the purpose that it should be serving" (2017: 32). Raworth (2017) argues that GDP growth is not essential to promoting prosperity. Instead, Doughnut Economics is agnostic to economic growth, explained as follows: "By agnostic I do not mean simply not caring whether GDP growth is coming or not, nor do I mean refusing to measure whether it is happening or not. I mean agnostic in the sense of designing an economy that promotes human prosperity whether GDP is going up, down, or holding steady" (2017:245). Instead of seeing GDP growth as progress, progress should be understood as thriving in balance (2017:53).

This will require a paradigm shift: it "calls for transforming the financial, political and social structures that have made our economies and societies come to expect, demand and depend upon growth" (2017:245). Text box a 4 elaborates on Raworth's (2017) point that growth might still be needed in lower-income countries, which also affects decoupling strategies.

In order to better understand growth, Raworth (2017) proposes to change the now conventional exponential model of growth for the traditional S-curve model. The S-curve model projects that economic growth will slow down rather than exponentially increase, helping us to understand our economies differently: "If we now recognize that the S curve depicts a desirable long-term path for GDP growth, a far more interesting question comes into view: not 'is endless economic growth possible?' but rather, 'where are we now on the growth curve: still near the bottom or close to the top?'" 2017:253).

GDP is not used as an indicator in doughnut economics-inspired measurements (University of Leeds, n.d.). Instead, economic welfare is assessed by the proportion of the population living beneath the international poverty line and the proportion of young people seeking, but not able to find work in the dimension Income & Work (see Text box a 4).

**Text box A 4:** High and low income countries and decoupling

Raworth (2017) recognises the importance of GDP growth for developing countries to ensure that basic needs can be met. There, economic growth would benefit society (e.g. increased life expectancy, more children going to school), hence “significant GDP growth is very much needed and it is very likely coming” (2017:254). Raworth (2017) argues that with international support “these countries can seize the opportunity to leapfrog the wasteful and polluting technologies of the past” and reaching the social foundation while staying within planetary boundaries “if they channel GDP growth into creating economies that are distributive and regenerative by design” (2017:254).

In high-income and low-growth countries, however, GDP growth is accompanied by widening income inequalities. Raworth therefore poses the more or less rhetorical question whether “while aiming to get into the Doughnut, high-income countries should give up on the pursuit of GDP growth and accept that it might no longer be possible?” (2017:255). Here the role of the OECD is problematised, as “one of the 28 organization’s founding objectives is the pursuit of economic growth” (2017:255). That is why, according to Raworth (2017), the possibility that these economies are at the top of the economic S curve model, thus reaching their limits to growth, is ignored by the OECD.

Moreover, the different position of high- and low-income countries leads to different decoupling strategies. For low-income countries, relative decoupling would be adequate. But for “high-income countries – where consumption levels have long exceeded what Earth can sustain – It [relative decoupling] would clearly be by no means enough. Any further GDP growth in these countries would at least need to be accompanied by absolute decoupling so that resource use falls in absolute terms as GDP rises” (2017:259-260). And Raworth (2017) goes even further than ‘just’ absolute decoupling, as she argues that emissions do not decrease fast enough. For this purpose, “sufficient absolute decoupling - sufficient because it is on the scale needed to get back within planetary boundaries” would be needed (2017:260).

Raworth (2017) does not reach a conclusion as to whether sufficient absolute decoupling can go hand-in-hand with GDP growth. Still, the road ahead is clear to her: “regenerative and distributive economies [call] for many sectoral transformations, including a strong contraction of industries such as mining, oil and gas, industrial livestock production, demolition and landfill, and speculative finance, offset by a rapid and lasting expansion of long-term investment in renewable energy, public transport, commons-based circular manufacturing, and retrofit buildings” (2017:267).

**Stance on redistribution** Redistribution of income and capital is central to doughnut economics, next to bringing the economy back within the planetary boundaries. Social thresholds such as gender equality, sufficient food, and education (see Figure A.2) which form the inner circle of the donut need to be reached. The rationale for Raworth to combine social thresholds with environmental boundaries is that without (social) redistribution, regenerative strategies in her view continue to privilege the affluent (Wahlund & Hansen, 2022). She argues that “extremes of inequality push humanity beyond both sides of the Doughnut’s boundaries” (2017:58), as responsibility for greenhouse gas emissions is skewed towards those that emit and consume more. Moreover, she argues that the fact that the decrease of the population growth rate due to investment in child health, girls’ education and reproductive healthcare shows that “the most effective way to stabilize the size of the human population is to ensure that every person can lead a life free of deprivation, above

the social foundation” (2017:58). Hence, meeting a social subsistence level and redistribution of wealth and capital are needed to stay within environmental boundaries.

**Technology** In her book, Raworth (2017) pays attention to the role of open source innovation and the creation of digital commons as a regenerative policy instrument. She argues that technology should be developed in a distributive network rather than a centralised model. The merits of digital commons, she argues, “is that a growing range of products and services can be produced abundantly, nearly for free, unleashing potentials such as open-source design, free online education, and distributed manufacturing. ... What’s more, the value generated is enjoyed directly by those who co-create in the commons, and it may never be monetized” (2017: 84).

**Change of behaviour, individual norms and values** Raworth explicitly addresses the potential for change in behaviour, norms and values to achieve the goals of doughnut economics (2017: 93). She points out the ability to “nurture human nature” (2017:102). This can be done by nurturing ‘heuristic abilities’, which are the cognitive mechanisms that enable us to efficiently make many decisions all day, combined with interventions that subtly steer behaviour (also called nudges) that overcome our inability to assess climate risks well (2017, 111-114). Moreover, we should take social norms into account, being wary of “trickle-down behaviourism” (2017:111) that makes consumption patterns of the rich a status symbol strived for by others. Importantly, Raworth (2017) emphasises that preferences are not static. Instead, they can vary across cultures and individuals and can be dynamic in the way they depend on triggers, roles and contexts (2017: 106-109).

Raworth presents a view on humans whereby they are not (only) self-interested, calculating, isolated individuals with fixed preferences that dominate nature. Instead, they are (also) socially reciprocating, approximating, interdependent individuals with fluid values that are dependent on nature.

Raworth (2017) warns about the perverse effect of financial incentives on desired behaviour: “monetary payments often crowd out existing motivations by activating extrinsic rather than intrinsic values” (2017:117). She therefore concludes that drawing on reciprocity, values, nudging and networks are more beneficial and efficient means to motivate behavioural change.

**Other features** A first distinctive feature of Raworth’s (2017) work is the attention for unpaid work, which is currently overlooked by mainstream economic theories. Unpaid work in her view should be recognised in the model of the economy, as “the household provision of care is essential for human wellbeing, and productivity in the paid economy depends directly upon it” (2017:80-81). Hence, Raworth (2017) includes the household as one of the four subsystems of the economy, next to the state, the market, and commons (see Figure a.3).

Secondly, Raworth (2017) pays attention to power. Arguing against the tendency for economics to ignore power issues, Raworth (2017) is sensitive about the role of power and focuses on “the power of the wealthy to reshape the economy’s rules in their favour” (2017:91). She sees power as source of inequality in households and firms. Therefore citizen empowerment (see e.g. p. 174 and further) is central to the doughnut economic concept.

Thirdly, Raworth (2017) is sensitive about framing as she repeatedly points out that “the names we choose matter” (2017:116). For example, she illustrates that replacing the word ‘citizen’ for ‘consumer’ in policymaking and media has put more emphasis on what people

act like in the market only, next to their expressions in cultural, social and economic life. Calling people consumers even makes them feel less responsible for taking actions than if they would be referred to as individuals (2017:121).

Fourthly, Raworth (2017:206-211) is explicit in her rejection of both the Kuznets Curve and the Environmental Kuznets Curve, which theorize that economic growth will eventually solve inequality or environmental problems respectively.

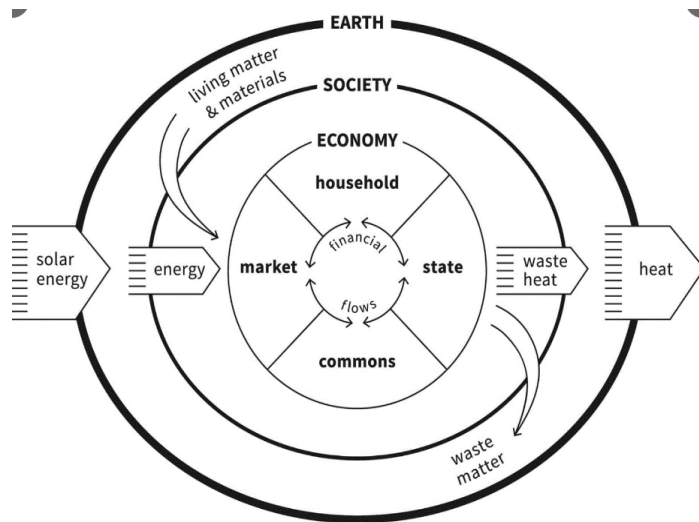


Figure A.3: the Embedded Economy: with the economy as an open system, consisting of the household, the market, the state, and the commons, embedded in the closed earth system (Raworth, 2017:71)

### A.4.4 Theory of change assessment

**Policy impact chain** The summarised policy impact chain of doughnut economics can be found in Table a.4. Raworth (2017) gives several policy examples, yet she explicitly does not aim to provide a complete and prescriptive policy framework (2017:30). However, she does present a view on actors in a doughnut economy and on a new economic design.

Concerning the actors, the *market* should be seen as embedded, rather than as a free market. More precisely, that means that “the market’s power must be wisely embedded within public regulations, and within the wider economy, in order to define and delimit its terrain” (2017:82). Markets are already shaped by laws, institutions, policies and culture. Therefore Raworth argues that “there is no such thing as deregulation, only *re-regulation*” (2017:82). In her view markets can contribute to a regenerative economy by separating customer’s deposit accounts from the speculative activities of securities firms, taxes and regulation that make it unprofitable to be too big and too complex, by taxing global financial transactions to rein in high frequency trading, and by adopting a more diverse set of performance indicators that capture human, social, ecological, cultural and physical wealth.

The *commons* have an important place in Raworth’s (2017) doughnut economy too. In the case of digital commons, “the result is that a growing range of products and services can be produced abundantly, nearly for free, unleashing potential such as source design, free online education, and distributed manufacturing” (2017:84).

The *state*’s role should be that of an “economic partner that supports the household, the commons and the market alike... by providing public goods ..., by supporting the core caring

role of the household..., by unleashing the dynamism of the commons..., [and] by harnessing the power of the market by embedding it in institutions and regulations that promote the common good” (2017:85). Referring to the earlier work of Mazzucato (2011), Raworth (2017) points to the ability of the state to take an entrepreneurial role. To be regenerative by design, the idea “that the business of businesses is to contribute to a thriving world” should be leading (2017:233). Concretely, the state should first steer behaviour with nudges, network effects and creating social norms.

Secondly, the state should pursue distributive justice policies, i.e. redistribute income, wealth, and land ownership by taxing resource use and wealth and closing global loopholes in tax policies for firms; enforce stricter monetary policies; encourage employee-owned firms and fixed-return bonds to finance firms rather than ownership shares; create public co-ownership of new technologies and knowledge; support social enterprises, civic organisations and makeplaces; channel part of overseas development assistance to people directly; ensure accessible education, health care, and basic incomes in the Global South; and create commons trusts for global commons.

Thirdly, the state has a role in regenerative design by creating patient capital for long-horizon investments, by complementary currencies, by taxing non-renewable resources instead of labour (backed by regulation), by adopting a more diverse set of metrics (human, social, ecological, cultural and physical wealth), by preferential public procurement, and by lower taxes for regenerative purposes.

On *citizens*, Raworth (2017) notes that they have many different roles in the economy, “as employees, citizens, entrepreneurs, neighbours, consumers, voters, parents, collaborators, competitors and volunteers” (2017:128). Our view of humans thus cannot be pinned down to one model, argues Raworth (2017), rather it is context-dependent. Citizens have a role in building a regenerative economy by setting up knowledge commons and open source circular manufacturing, with modularity, open standards, open source, open data, and overall transparency. Moreover, as investors, they can ensure both short-term speculative finance and long-term investment finance, and they can support regenerative enterprises.

Raworth (2017) suggests two main areas of reshaping the economy: an economy that is distributive and regenerative by design. An economy that is regenerative by design is also known as the circular economy; “It is regenerative by design because it harnesses the endless inflow of the sun’s energy to continually transform materials into useful products and services” (2017:220). This can apply to factories and industries as well as to urban landscapes. In addition to a distributive and regenerative economy, she makes several suggestions on steering behaviour. Table a.4 shows our assessment of the policy chain of Doughnut Economics.

Additionally she mentions several policies as examples in her book which are not included in her central thesis per se: public education, healthcare, roads and street lighting; maternal and paternal leave, early-years education investments, case support for seniors; laws and institutions for commons; ban of toxic pollutants, insider trading, protect biodiversity, and worker’s rights.

**Table A.4:** Policy impact chain of doughnut economics, derived from Raworth (2017)

Stakeholders	Inputs	Activities	Outputs	Outcomes	Impacts
State		Behaviour steering Distributive justice policies Regenerative policies		Public goods that deliver for all; support for the caring role of the household; unleash of the dynamism of the commons; harness of market power	“[E]conomies that promote human prosperity in a flourishing web of life, so that we can thrive in balance within the Doughnut’s safe and just space” (2017:287)
Individuals		Creation of commons and open source manufacturing Investment and support for regenerative enterprises		Tax income from resource instead of labour productivity	
Market		(Self-)regulation of the financial sector Steering diverse wealth outcomes			

**Scaling mechanisms** Raworth (2017: 239) mentions that currently regenerative economy initiatives are mostly applied on a city-scale. At the same time, doughnut economics mostly encompasses a global and national scale (Wahlund & Hansen, 2022). Although doughnut economics does not intend to provide a blueprint for policies (Wahlund & Hansen, 2022), Turner and Wills (2022) have described a doughnut economics framework for local governance. Experiments with doughnut economics on a local level are being designed by the Doughnut Economics Action Lab. In various municipalities internationally, experiments with putting the Doughnut Economy framework in practice are ongoing, such as in the municipality of Amsterdam. The results of these experiments still have to be evaluated in more detail, however a micro evaluation of the ongoing experiment in Amsterdam suggests that the Doughnut Economy can work as a mobilising concept, but that it is harder to pinpoint direct policy results of its implementation (Mensinga, 2023).

**Risks, drawbacks and side-effects** Potential risks, countervailing interests, negative side-effects and drawbacks are not specifically addressed by Raworth (2017).

**Dutch circumstances** The concept can be implemented at a global and national scale, and indicators are available for the Netherlands. With Raworth’s position at the University of Applied Sciences in Amsterdam and the experiment with the municipality of Amsterdam, the concept has gained extra attention in the Dutch context.

### A.4.5 Questions for further research

So far, relatively little academic research has been conducted into the opportunities and limitations of putting doughnut economics in practice. In addition, aside from Raworth’s (2017) core book and a couple of subsequent publications (Wahlund & Hansen, 2022; Turner & Wills, 2022), the concept has not been widely assessed scientifically. Available research has mostly focused on interpreting and measuring indicators across governance scales.



More specific questions for further research include:

- Wahlund and Hansen (2022) mention that the Doughnut Economy concept remains rather abstract, especially when it comes to specific policy proposals. The question therefore is: what specific policies would be necessary for transiting to a doughnut economy and how would they be implemented to achieve the suggested regenerative and distributive redesign of economy?
- What outputs and outcomes are these policies expected to have?
- Planetary boundaries in Doughnut Economy are outlined by Rockström's 'Planetary Boundary' model. However, the underlying motives for choice of the social boundaries are less clear. What indicators and standards for indicators therefore would be 'sufficient' to stay within planetary boundaries and in particular within social limits?
- How could behaviour of all people be triggered for change? Connecting to people's self-transcending values and intrinsic motivations might persuade people for whom those values are predominant to change their behaviour. However, in discussing the potential of connecting with people's values to achieve change, Raworth (2017) refers to insights that show that self-enhancement and extrinsic motivations are dominant for some people. Hence when faced with environmental effects they might even engage in distracting activities that place more rather than less burden on the planet (2017:126). Steering the behaviour of people with such predominating self-enhancing values and extrinsic motivations might thus be a key challenge.

## A.4.6 Literature

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## A.5 Degrowth

'Degrowth' is an alternative policy concept that has gained much attention in the public debate in recent years. By its proponents it is often presented as the key alternative to the, in their eyes failing, concept of 'green growth' (e.g., Kallis, 2011; Chertkovskaya, 2019; Hickel, 2020). Due to its often highly political framing and sometimes quite drastic proposals for policy and societal change, the concept has also attracted many opponents (e.g., Van den Bergh, 2011; Lennaerts et al., 2021; Hazekamp, 2023).

## A.5.1 Main actors

Academic literature in the field of degrowth has expanded rapidly in recent years. Over the period of 2005 to 2020, 1166 texts (articles, books, book chapters, and student theses) referring to degrowth were published, leading to a total of 530 policy proposals (Fitzpatrick et al., 2022). Policy topics covered span a large number of areas, including e.g., food, energy and environment, global governance, finance, technology, and work. Degrowth literature has also branched out into modelling, empirical assessments, and the study of concrete implementations (Weiss et al., 2017).

Several authors on degrowth in recent years (e.g., Hickel, Kallis, d'Alisa) are working at the ICTA Institute of Environmental Sciences and Technologies at the Autonomous University of Barcelona. Since 2008, an international network and movement of societal actors, non-governmental organisations and political parties interested in the topic has developed that centres around websites like degrowth.info and degrowth.net. The network has further evolved around a series of international academic degrowth conferences that were organised in recent years, including the 2023 Beyond Growth conference organised by the European Parliament (European Parliament, 2023). Some see that there has developed a certain 'degrowth movement', that is however 'still hard to pin down because of the intangible nature of [its] networks, which exist through diverse and often informal connections, without an overarching structure of communication, coordination or cooperation.' (Barlow et al., 2022).

## A.5.2 The concept in short

Degrowth finds its origin in 'Décroissance' (French for degrowth), a term first used in 1972 by French intellectual André Gorz in response to the Limits to Growth report by Meadows and colleagues (Muraca, 2013). It was popularised in the 1990s and 2000s in particular by Serge Latouche, who criticized economic development as a policy goal. In the early 2000s, 'degrowth' was used as a slogan by environmental and social policy activists in France, Italy and Spain (Lennaerts et al., 2021). In 2008, the English term entered academic journals (Kallis et al., 2015).

Since then, many interpretations have been given to the concept of degrowth. Van den Bergh (2011) distinguishes at least five different views in the degrowth debate: GDP degrowth, consumption degrowth, work-time degrowth, degrowth of the economy's physical size and 'radical' degrowth, referring to a comprehensive transformation of society and its governance. More recently, the degrowth debate seems to move from economic degrowth as a policy goal (e.g., Kallis, 2011) towards putting social and environmental goals above economic growth (e.g., Hickel, 2020). The latter could be seen in fact as an indifference towards economic growth, or 'a-growth' (van den Bergh, 2011).

Degrowth has been often criticised in the public debate as implying a policy steering with the goal to reduce economic and GDP growth and leading to less possibilities for increased material welfare in particular in developing countries (e.g., Milanovic, 2021). Indeed in some interpretations, degrowth will 'inevitably entail a smaller – and qualitatively different – economy' (Kallis, 2011). However, more recent interpretations of degrowth emphasise that economic degrowth is only one possible – but not a necessary - outcome of actual policy changes proposed under degrowth: 'degrowth is not about reducing GDP. GDP is not a dial we can turn. Of course, slowing down unnecessary production and decommodifying public services is likely to cause GDP to grow more slowly, or stop growing, or even decline. And if so, that is OK.' (Hickel, 2020; p. 30).

Hickel et al. (2022) also stress that the concept should apply in particular to richer economies: '[w]ealthy economies should abandon growth of gross domestic product (GDP) as a goal, scale down destructive and unnecessary forms of production to reduce energy and material use, and focus economic activity around securing human needs and wellbeing (Hickel et al., 2022). Hence, in this interpretation a *selective* degrowth of specific economic activities is suggested; this is supposed to lead both to reduced energy and material use, and to increased human wellbeing (sometimes also referred to as 'happiness' or 'a good life').

In the public debate, degrowth is currently a highly political term that is used as an umbrella by diverse social movements that have grouped around it while aiming at a wide variety of political goals. These range from proposals close to, or already existing policy practice in countries like the Netherlands (e.g., right to repair, end food waste), to far more fundamental governance reforms (e.g., nationalising banking and financial institutions), feminist and care policies and addressing North-South inequalities (Hanacek et al., 2020).

In general, recurrent key topics under various interpretations of the concept of degrowth seem to include at least: respect for planetary boundaries in all economic and social activities; a reduction of material throughput in the economy; a fundamental change of norms, values and behaviour of citizens towards 'sufficiency' and 'eco-centrism'; economic localization and promotion of local economies; re-evaluation of work and promotion of a shorter working week; reducing social and economic inequalities; increasing participatory decision-making; reducing the role of market forces in providing essential goods and services; and social and environmental justice in the transition process (e.g., Fitzpatrick et al., 2022; Weiss & Cataneo, 2017).

### A.5.3 Taxonomy assessment

**Key focus** In all interpretations of the concept of degrowth, a key underlying issue is the redefinition of concepts of societal 'welfare' and of individual 'wellbeing'. The aim is to define these concepts as 'broader' than on material and financial aspects only. 'Community' and 'cooperation' are often stressed by degrowth proponents (e.g., Kallis, 2018).

**Role of GDP** The degrowth concept generally considers the realisation of social and environmental goals as more important than economic goals currently expressed by the indicator GDP. However, a negative growth of GDP is not seen as a policy goal per se in more recent interpretations of degrowth (Hickel, 2022).

**Stance on redistribution** Redistribution and social justice aiming at reducing inequalities are important aspects of degrowth. Typical degrowth policy proposals are therefore include progressive taxes on resource use or wealth taxes (Fitzpatrick et al., 2022).

**Technology** While degrowth does not specify technology pathways or specific technologies per se, the concept implies several preferred design and application principles for technology (Kerschner et al., 2018; Kallis et al., 2018). Some of these are: reappropriation, with technology and knowledge becoming predominantly public rather than private property; (digital) commons; local manufacturing; low-tech and labour intensive production; design-embedded sustainability and convivial design that involves future consumers and other stakeholders in the design process.

**Behaviour, norms and values** According to degrowth proponents, human norms and values should become ‘eco-centric’, i.e. not seeing nature as ‘resources’, but rather as a holistic ecosystem of which humans are an integral part. Human behaviour should reflect such eco-centric values by ‘giving back’, rather than ‘degrading’ the ecosystems of which humans are dependent (Hickel, 2020). Policies to change human behaviour, partly by changing underlying the underlying norms and values are therefore an important part of the degrowth policy portfolio.

## A.5.4 Theory of change assessment

**Policy impact chain** Given the diversity of the degrowth movement and the different interpretations of the concept in practice, the construction of one single policy impact chain for degrowth is not feasible. That holds even more as there are also changes that are needed to realise the proposals made, but that are not dealt with in an intentional and explicit way by the one proposing the policy (Fitzpatrick et al, 2022). Therefore we choose to construct the policy impact chain implied in Jason Hickel’s prominent book on degrowth ‘Less is More – How Degrowth will Save the World’ (2020).

Hickel identifies the desired final impacts in three different dimensions: individual, collective and on the economic system. On an individual level, according to Hickel, human wellbeing, happiness, and a sense of meaning in people’s lives should be final impacts of degrowth. On a collective level, Hickel sees social solidarity as a key value to be developed within societies that have ‘robust welfare systems’ (p. 182). Economically, Hickel sees a degrowth system to lead to ‘radical abundance’ (p.236), i.e. changing the nature of capitalism by ‘liberation from artificial scarcity’, ‘less production, but also reduced needs’ and ‘reduced incomes of corporations and elites, but increased public wealth’. Geopolitically, degrowth would also lead to a ‘decolonisation of the Global South’ by reducing demands in the Global North (p.254).

Policy pathways towards these impacts are financial reform, political reform and a basket of five policy ‘steps’ that Hickel describes: 1) ending planned obsolescence (i.e. making products that are intended to have short lifetimes in order to increase sale volumes); 2) cutting advertising; 3) shifting from ownership to usership; 4) ending food waste; 5) scaling down ecologically destructive industries. The five policy steps would lead to a less labour-intensive economy and to scaling down excess production, which in turn would allow for a shorter working week, a job guarantee for all and the reduction of income inequalities by the introduction of capital taxes. In addition, decommodifying public goods and expanding common ownership rather than privatisation in sectors such as housing, education, healthcare, the internet, transport, energy and water could contribute to ‘an improved welfare purchasing power of incomes’ (p.231).

**Text box A 5:** Concrete Degrowth policy reforms based on Hickel (2020)

<p><b>Financial reform:</b> neutralising debts of the Global South on an international level, and of students on national levels; from a compound interest system to a simple interest system; state based money creation</p> <p><b>Political reform:</b> direct democracy, reforming international institutions, abolish shareholder voting based on financial shares</p> <p>Ending planned obsolescence: mandatory extended warranties on products, right to repair</p> <p>Cutting advertising: quotas to reduce total ad expenditure, legislate against the use of psychologically manipulative techniques, liberate public spaces from ads</p> <p><b>Shift from ownership to usership:</b> developing a sharing economy on a local level, in particular for cars</p> <p>Ending food waste: oblige supermarkets to donate unsold food to charities, oblige composting food waste with charges based on weight</p> <p><b>Scaling down ecologically destructive industries:</b> fossil industry, beef industry. The latter ‘switching [the human diet] to non-ruminant meats or plant proteins like beans and pulses’</p>
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This analysis leads to a policy impact given in Table a.5. It involves government, business and citizens activities alike. Final impacts are achieved by financial and political reforms, through the achievement of a set of policy outcomes. Several more specific policies are suggested by Hickel to realise these outcomes. However, no concrete targets (outputs) for any of these policies are given. It also remains unclear what inputs are needed for the policy reforms suggested, i.e. what are – starting from current government budgets in countries – the funds and resources that need to be reallocated in order to begin implementing the suggested policies (see Table a.5).

**Table A.5:** Assessment of Theory of Change of Degrowth, based on Hickel (2020) (TNO Assessment, 2023)

Stakeholders	Inputs	Activities (Policies)	Outputs	Outcomes	Impacts
Government, business and citizens	unclear	Diverse concrete policies from neutralising debts to changing diets	unclear	Financial reform, political reform and a package of five concrete policy ‘steps’ (goals): 1) end planned obsolescence (i.e. making products that are intended to have short lifetimes in order to increase sale volumes); 2) cut advertising; 3) shift from ownership to usership; 4) end food waste; 5) scale down ecologically destructive industries.	Individual wellbeing, happiness, sense of meaning; collective solidarity in societies with robust welfare systems; radical economic abundance; decolonisation of the Global South. Also: mentality shift towards ecocentrism

**Assumptions** Degrowth in Hickel’s interpretation makes assumptions about what exactly constitutes individual wellbeing and what makes collective welfare. Also, a causal relationship is assumed between a number of policies that are mentioned and the expected normative policy outcomes and final impacts, while important steps in the policy chain are missing. Furthermore, as an important precondition for the success of degrowth it is

mentioned that a mentality shift towards eco-centric norms and values is needed, while no explanation is given how such a mentality shift should be achieved.

**Scaling mechanisms** Degrowth is ambiguous in its way of scaling from first initiative to global implementation. An important aspect of degrowth is its origin in a bottom-up social movement. Hickel states that ‘the environmentalist movement will need to focus on building alliances with working class and indigenous formations in order to galvanise a movement capable of capturing political power or forcing incumbents to change course’ (p.244). Similarly, Kallis (2011) states that ‘a movement may grow which will extend this new alternative cultural story [of degrowth], build alliances with other similar cultural stories and movements, and in the void opened by the current [financial] crisis, create a convincing and popular alternative’. However, despite its claimed need for bottom-up action and direct democracy, the main actual changes proposed by degrowth will have to be implemented top-down by governments. In a review of degrowth literature, Cosme et al. (2017) found that three-quarters of degrowth policy proposals are top-down with a national focus.

**Risks, drawbacks and side-effects** Neither Hickel nor other degrowth authors seem to provide analyses of possible risks, drawbacks and positive or negative side-effects of degrowth.

**Adaption to Dutch circumstances** The Dutch alternative economic concept of ‘Postgroei’ (‘Post-growth’) can be seen as an adaptation of main degrowth ideas to Dutch circumstances, despite the fact that Postgroei avoids explicit ‘degrowth’ terminology ‘for communication reasons’ (Schenderling, 2022). Another Dutch author that defends post-growth positions is Hans Stegeman (2023).

## A.5.5 Questions for further research

Degrowth scholars recognise the need for further research in the area. Kallis et al. (2012) for instance identify the need for further policy assessments, scenarios, country comparisons and econometrics and case studies of existing social practices that fit with degrowth ideas, amongst others. Weiss et al. (2017) suggest the need for ‘rigid hypotheses testing’ by input-output modelling, material flow analysis, life-cycle assessments, or social surveys. In later work (2018), Kallis et al. identify research needs as given in Figure a.4.

These authors see a need for interdisciplinary research in various fields and answering questions like:

- › How does the history of GDP growth determine path dependencies?
- › How could stable economies exist without GDP growth?
- › How do societies as a whole manage without GDP growth?
- › What technologies would fit in degrowth societies?
- › What democratic models would fit with degrowth?
- › How can wellbeing be secured with lower throughput and output?

The questions formulated by Kallis et al. seem to be directed at stimulating a steering on economic degrowth as goal in itself, rather than at governance models with ecological and social goals that might or might not lead to economic growth or degrowth as Hickel (2020) suggests. Fitzpatrick et al. (2022) propose that ‘change-makers should carefully study the (positive and negative) synergies between their different proposals. The more proposals, the more synergies, which makes the study of a degrowth transition extremely complicated, especially since every policy has its own scale, timing, and cultural feasibility’. They furthermore note that ‘the degrowth agenda would become more convincing if it were to

account for the interactions between its proposals. Stressing the importance of sequence also helps us to identify potential contradictions between transitional changes and others that are meant to be permanent’.

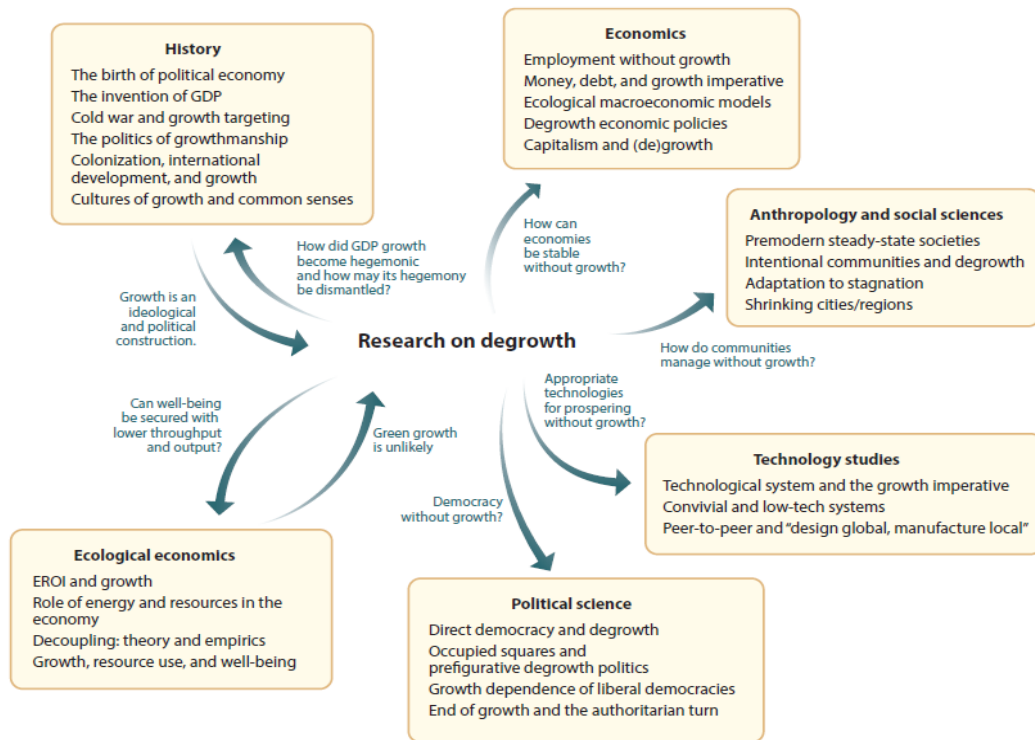


Figure A.4: Research needs on Degrowth as identified by Kallis et al. (2018)

Based on the assessment framework used in this report, additional research questions on degrowth as an alternative economic concept would be:

- How could the policy impact chain of degrowth from policy inputs, via concrete policies to final impacts be completed?
- What could be a possible scaling mechanism from local action to (inter)national implementation?
- What are potential side-effects and drawbacks of degrowth and how could these be mitigated?
- How could the desired change towards ecocentric norms and values be stimulated by policy making or activities by other stakeholders?
- What are the desired norms and values exactly? To what extent is there societal support for these norms and values, or how could it be created?
- What would adaptation to Dutch circumstances of degrowth ideas mean in practice?
- What would be the feasibility of such policy implementation?

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## A.6 The Great Mindshift

‘The Great Mindshift’ is an alternative economic concept that illustrates how transition and transformation research sees change towards a more sustainable society come about. An essential role for bringing about systemic change here is given to businesses and citizens as innovators on a niche level in the economy. With their innovative mindsets and actions, they can be important seeds for change.

### A.6.1 Main actors

‘The Great Mindshift’ is a book by Maja Göpel (2016), former director of the German environmental consultancy Wuppertal Institut. It brings together different lines of transition (sometimes also called transformation) research that are driven by social scientists, natural scientists and political economists. Prominent authors in the field frequently are Dutch scientists John Grin, Jan Rotmans, Frank Geels and Johan Schot, but also international thinkers like Donella Meadows, Thomas Kuhn and Karl Polanyi. Important institutions behind transformation research include the Sustainability Transitions Research Network, originally founded in 2005 as the European Sustainability Transitions Research Network), the German Advisory Council on Global Change (WBGU) and the Stockholm Resilience Centre (Göpel, 2016).

#### Jan Rotmans

One of the main authors in transition theory is Jan Rotmans, professor at the Erasmus University Rotterdam. The Great Mindshift partly builds on the theories of Rotmans, who sees the personal transition as “the most important transition, that forms the basis of everything”. “In essence, it [transition] boils down to overcoming our fear for radical changes. A different form of cognition is needed, that makes us feel that we are part of a larger unity. To create a global breakthrough, 25% of the people are needed to change consciously to a more sustainable lifestyle” (Rotmans, 2023).

### A.6.2 The concept in short

A ‘Great Mindshift’ is seen by Göpel as a basis for a successful transformation. This is defined as “a new set of values, institutions, laws and symbols with which people imagine their social whole”. In her view, we have to create “untried beginnings from which to evolve a fundamentally new way of living” (Göpel, 2016: 17).

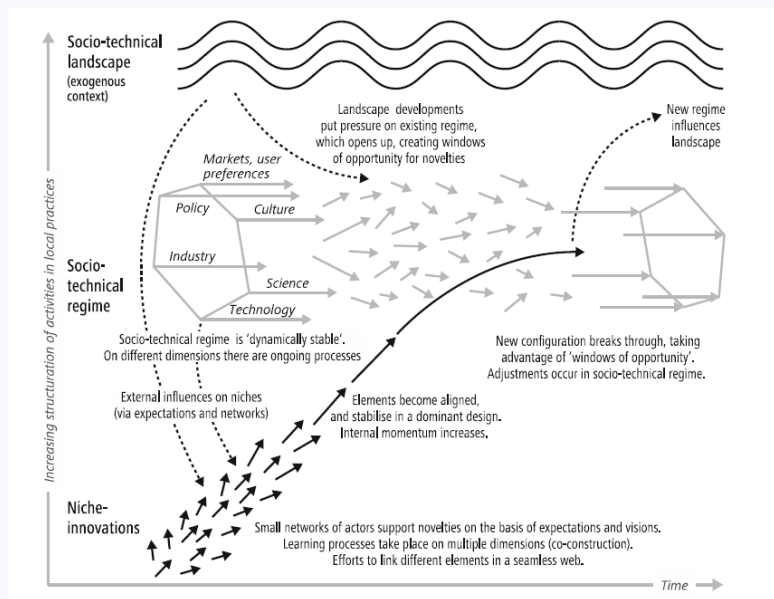
Göpel builds in her book on several aspects of transformation research, in particular the ‘multi-level perspective’ and the ‘multi-phase pattern of system change’ that distinguish between a ‘niche’, ‘regime’ and ‘landscape’ level of system change and see system change evolve over time as an S-curve (see Text box a 6). Successful systemic change in her view can originate on several of these levels and needs to be supported by all levels, but a key

role is often performed by innovators (either businesses or citizens) on the niche level, that with their innovative ideas and actions sow the seeds for change.

Göpel further stresses the need for fundamental economic change: “the most critical aspect for turning the wheel toward fulfilling the SDGs is changing the economic paradigm”, since the existing economic paradigm “informed the creation of the practices, norms, laws, rules, business and market structures, and technologies that delivered unsustainable development in the first place” (Göpel, 2016: 3). This is instrumentalised in four concrete policy directions: the Economy for the Common Good, Transition Towns, the Commoning movement and in beyond GDP accounting (see under Policy Impact Chain).

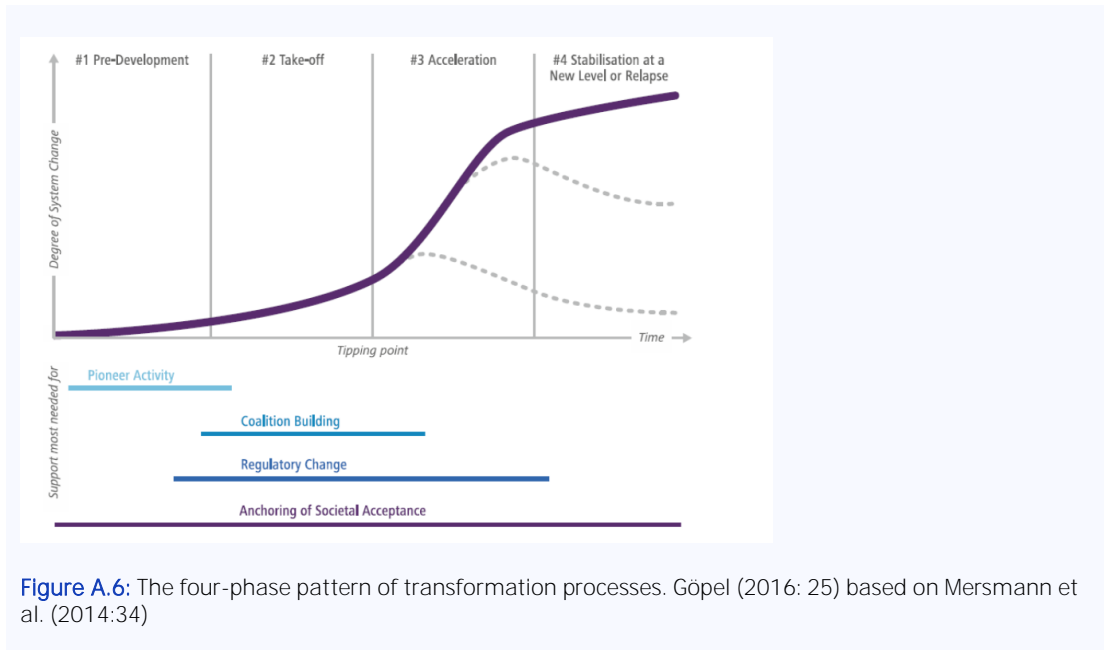
**Text box A 6:** The Multi-level Perspective and the Multi-phase Pattern in Transition Research

Two important concepts in transition research are the multi-level perspective and the multi-phase pattern of system change. The **multi-level perspective** distinguishes between transformative change taking place on three levels: niches, regimes and landscapes (Figure a.5). Innovations generally start on the niche level and are influenced by socio-technical ‘regimes’, consisting of well-established institutional setups in governments and markets, scientific standards and technologies or infrastructure, and by exogenous factors on a ‘landscape’ level, such as natural developments (e.g., climate change) and human-made institutions and paradigms (e.g., the market system, social values and cultural beliefs).



**Figure A.5:** The multilevel perspective on system transformation. Göpel (2016: 21) based on Geels and Schot (2010: 25)

The **multi-phase pattern** distinguishes between a pre-development, take-off, acceleration and stabilisation phase of change (Figure a.6). In the pre-development phase, a system is in a dynamic state of equilibrium and changes slowly but unobtrusively. At the take-off phase, more coordinated niche activity and regime reactions gain momentum. These may lead to a tipping point, followed by an acceleration or navigation phase in which structural changes become possible and visible but are hard to control. Eventually, at the stabilisation stage, a new dynamic system setting emerges (Göpel, 2016: 25).



### A.6.3 Taxonomy assessment

**Key focus** The overall aim of The Great Mindshift is “a new, properly integrated sustainability paradigm” (Göpel, 2016: 146). Such sustainable development has to lead to “finding solutions for improved utility that align with Earth’s ecosystems and people’s other needs for social relations, meaningful engagement and respect”. For finding out what this utility actually consists of, Göpel sees it as necessary to identify the “underlying needs that market-based consumption is actually serving and how many different options a society has to satisfy them” (Göpel, 2016: 77).

**Role of GDP** The Great Mindshift discusses the role of GDP explicitly. It states that “the biggest challenge is apparently to dethrone the dominance of economic indicators over social and environmental aspects of development” (Göpel, 2016: 131). For doing so, Göpel suggests to follow the Stiglitz-Sen-Fitoussi Commission (2009) in that “a small dashboard of lead indicators that are easy to understand would be most helpful. These should mix monetary as well as physical measures for objective progress” (Göpel, 2016: 132). She stresses that the development of such an indicator dashboard should be participatory: “if carried out in a participatory manner, many such indicator processes already lead to social benefits and reflexive processes around which values, norms and the goals a community wants to base its development (Göpel, 2016: 132).

She also states that indicator dashboards should be combined with an integral vision on what constitutes a ‘good life’, thereby quoting an examination by the Bertelsmann Stiftung and IISD of different visions on development strategies: “the best practice examples [in the examination] included those that have a clear mission statement... connecting the otherwise abstract goal of sustainability with culturally vibrant local notions of what constitutes a good life” (Bertelsmann Stiftung, 2013: 15-16).

**Stance on redistribution** The Great Mindshift does not address (re)distribution directly. Indirectly, however, ideas from Raworth’s Doughnut Economy are borrowed: “[r]elational qualities like sharing and the notion of sufficiency, or enough output, are (...) very much the

backbone of the imaginary of a safe and just development corridor that is captured in the sustainable development” (Göpel, 2016: 143). Redistribution is also taken indirectly into account as one of the aims of a wider dashboard of beyond GDP indicators.

**Technology** The Great Mindshift seems overall indifferent towards technology. However, it is suggested that path dependencies of current technologies should be broken and in general the choice of technologies should be based on a wider sense of alignment between humans and nature: “[i]f we change our ideas and goals of development or progress, our choice of technology and social organization, humans and nature can both flourish over the long run” (Göpel, 2016: 80). A special role in this transformation process is given to information technology: “information technology can contribute to a decentralised, resource-light wellbeing”, but only in a context “that takes circumstances into account when undertaking intellectual and empirical investigations” (Göpel, 2016: 116).

**Behaviour, norms and values** A ‘Great Mindshift’ is seen as a starting point for transition by Göpel. More specifically, she calls for a ‘Second Enlightenment’ that is need to ‘fill the reservoir of social and cultural inventions with ideas, norms, principles and values that support a de-commodified view of human needs, nature and money, based on twenty-first century natural and social sciences that include many non-quantifiable variables. They provide alternative meaning, legitimacy and practice options for everyone engaging in the highly political struggles over transformations for sustainable development’ (Göpel, 2016: 5). She further argues that “both the individual-psychological and the sociopolitical are important to the transformative leverage of a Great Mindshift: an understanding of the imaginaries [norms and values], identities and narratives that guide individual and collective actions provides explanations for the perpetuation of the status quo, [as well as] an understanding of which alternative solutions might find support and who might bring them about (Göpel, 2016: 143).

Pioneers have to pave the way in this mindshift by challenging the default solutions and have an ‘irritating’ effect that can lead to transformative dynamics (Göpel, 2016: 120) : ‘(...) all pioneering practitioners started with principles, guidelines, indicators and measuring tools to express the purpose of their particular initiative and how it can be enacted’ (Göpel, 2016: 150).

## A.6.4 Theory of change assessment

**Policy impact chain** The Great Mindshift aims at systemic, as well as individual change. Systemic change generally occurs through innovations driven by innovators at the niche level, but can also start at regime or landscape levels: “pioneering initiatives can also be little hubs of deviation and innovation within entities that fall into the regime grouping—for example, research and development units in big corporations or inter-ministerial units in government” (Göpel, 2016: 22) and “the landscape on which the regime operates shifts as new long-term trends emerge or sudden events drastically impact the general availability or persuasiveness of particular solutions” (Göpel, 2016: 48) (Figure a.6). Individual mindset shifts can take place at the niche, regime or landscape level. While overall mindset shifts are often situated on the landscape level, individual mind-sets [on a niche level] carry the seeds for alternative paradigms that influence pioneering strategies (Göpel, 2016: 47).

Four main existing policy initiatives are presented as concrete examples of how to bring about a Great Mindshift: the Economy for the Common Good, Transition Towns, the Commoning Movement and ‘Beyond Growth’ accounting. The Economy of the Common Good is directed at businesses and aims, amongst others, at shifting their balance sheets

towards the ‘use value indicators’ human dignity, solidarity, ecological sustainability, social justice, democratic co-decision-making and transparency ; Transition Towns is a civil society initiative aiming at more sustainable and inclusive city policies and actions; The Commoning movement works on changing governance systems towards adopting communing or sharing principles; and beyond GDP aims at wider indicators sets for governments to take into account more non-economic indicators in policy making (Göpel, 2016: 119-148).

While the four initiatives are described as promising examples of systemic change, Göpel does not propose tangible desired outputs for each of them to be achieved. Rather, she discusses some more general intended ‘outcomes’. For instance, the switch to using value accounting by businesses will, according to Göpel, lead to ‘double-decoupling’: decoupling the production of goods and services from unsustainable, wasteful or uncaring treatment of humans, nature and animals (do better) and decoupling the satisfaction of human needs from the imperative to deliver ever more economic output (do well) (Göpel, 2016: 121). Furthermore, the adoption of transition town principles will make local communities more ‘resilient’ (Göpel, 2016: 129), using beyond GDP indicators will ‘dethrone the dominance of economic indicators over social and environmental aspects of development’ (Göpel, 2016: 131), and ‘communing’ will ‘capture a mind-set that favours collective ownership and development’ (Göpel, 2016: 142). As a final impact, the Great Mindshift will lead to ‘a new, properly integrated sustainability paradigm’ (Göpel, 2016: 146).

**Table A.6:** Assessment of Theory of Change of The Great Mindshift (Göpel, 2016) (TNO Assessment, 2023)

Stakeholders	Inputs	Activities (Policies)	Out-puts	Outcomes	Impacts
Innovators (citizens, businesses), government	Niche or regime innovations, landscape changes	Businesses: use value balance sheets; Civil societies: Transition Towns; Governments: beyond GDP measurements; governance systems: communing and sharing	Unclear	‘Double decoupling’; ‘resilient’ local communities; ‘dethrone dominance of economic over social and environmental indicators’; ‘a mind-set that favours collective ownership and development’	‘a new sustainability paradigm’

**Scaling mechanisms** Change in the Great Mindshift generally starts at a bottom-up level with niche innovations by innovators and pioneers (Figure a.6). However, change can also start at regime or landscape levels as small changes in existing regimes or in prevailing landscapes of norms and values that subsequently provide room for innovations on the niche level. It is stressed that change starts with transformation of mindsets, norms and values: ‘to really innovate a system, transformation strategies also need to include futures literacy and the acknowledgement of mental path dependencies. This means engaging with core human aspirations, beliefs or values and what they mean in the historical context of any activity (Göpel, 2016: 149).

**Risks, drawbacks and side-effects** In the Great Mindshift, no references are made to potential risks, drawbacks and side-effects of the suggested transformation paths and policies.

**Adaption to Dutch circumstances** The concept is described as a general application of transformation science on a general, international level. No specific regional

(Northern/Southern) differences are made, neither are there references are made to the Dutch context.

## A.6.5 Questions for further research

The Great Mindshift can be seen as an example of ideas of transition and transformation science. The concept stresses the need for a shift in mindsets, but it is not made clear how this could be achieved, for instance it is not clear how the four concrete pathways for change are interrelated, nor how they could form the basis for further transformational change. Drawbacks or risks are also not considered.

The following research questions therefore seem pertinent:

- › How could a ‘Great Mindshift’ in terms of a fundamental shift in norms and values as envisaged by Göpel be stimulated in practice?
- › What are the interrelations between the four approaches that are outlined?
- › What other policies than the ones described in the book would be needed to achieve a transformational change and how would they interact?
- › What concrete outputs of such policies could be intermediate steps in the policy chain towards outcomes and final impacts?
- › What would be risks and potential negative side-effects of such policies?
- › How could final impacts intended by the Great Mindshift be made more specific?

## A.6.6 Literature

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## A.7 Buen vivir

Buen Vivir is a ‘Southern’ alternative economic concept that originates in Latin America and has found much attention there, but also in other parts of the world. It has been applied in practice in governmental policies in Ecuador and Bolivia.

## A.7.1 Main Actors

Buen Vivir is rooted in the worldviews of the Kichwa and Aymara indigenous communities from Ecuador, Bolivia and Peru, and it is also related to the outlooks of various other indigenous people's way of living in South-America (Acosta & Martinez Abarca, 2018). It has gained attention in national policy making in particular with its impact on the Ecuadorian and Bolivian constitution (also see Textbox A.7). Work by Eduardo Gudynas (2011), an Uruguayan environmental scholar, and Alberto Acosta (2018), an Ecuadorian economist and politician, have contributed to further international attention for Buen Vivir.

## A.7.2 The concept in short

Post-development scholars have criticised development economics for imposing a western dominated to other parts of the world (Latouche, 2009; Dearden, 2014). This includes 'sustainable development', which some critical scholars regard an oxymoron (Kothari et al., 2014). In the post-development movement in the beginning of the 21<sup>st</sup> century, the concept of Buen Vivir has gained much attention (Acosta & Martinez Abarca, 2018; Villalba, 2013): "after decades in which neither state-driven industrialisation nor neoliberal market-driven policies have been able to resolve the problems of poverty and inequality, a new post-neoliberal period seems to be opening up in some Latin American countries" (Villalba, 2013:1428).

Buen vivir is a concept that is a radical alternative to western development thinking altogether (Van Norren, 2020). Its philosophy is *good living* (Spanish '*buen vivir*') "based on living in harmony with (and not at the cost of) others or nature and in balance between spiritual and material wealth" (Van Norren, 2020).

Its central features include:

- a **biocentric** rather than anthropocentric vision, by moving away from dichotomy of humans and nature, rather seem both as part of a whole (Acosta & Martinez Abarca, 2018; Van Norren, 2020). Nature has intrinsic rights and human wellbeing is derived from earth wellbeing (Van Norren, 2020);
- a focus on '**living well**' instead of '**living better**' (Beling et al., 2018). The concept therefore lacks the Western notion of 'development' as a form of progress (Acosta & Martinez Abarca, 2018; Van Norren, 2020). Instead, life is about maintaining reciprocal relations (Van Norren, 2020);
- recognition of the significance of **community** (Acosta & Martinez Abarca, 2018; Van Norren, 2020);
- a call for **plurinationality**, a plurality of nations within a non-hierarchical state (Van Norren, 2020), and for **interculturality**, relations and exchange between cultural diverse groups (de Sousa Santos, 2008; Van Norren, 2020); and
- acknowledgement of **spirituality** (de Sousa Santos, 2008; Van Norren, 2020).



**Text box A 7:** Buen vivir in Ecuadorian national policymaking: rights to the people or semantic appropriation?

Buen Vivir is seen by many as an alternative concept to previous development economics in Latin-American countries and in particular in Ecuador and Bolivia (Villalba-Eguiluz & Etxano, 2017). Especially in Ecuador, buen vivir has been adopted in national policymaking. Policies have been enforced by president Correa, who came to power in 2007 as the political leader of the left wing party Movimiento PAIS.

The main Ecuadorian policies based upon buen vivir are as follows.

- › The new 2008 constitution (Caria & Dominguez, 2016)
  - Buen vivir was established as the foundational principle of the new constitution. It acknowledges the right for people to live in a healthy and ecologically equilibrated environment in order to guarantee the sustainability of (the indigenous forms of) buen vivir. Nature rights thus got embedded in the national constitution.
  - Moreover the constitution “protects the rights of communities, peoples, and nationalities and establishes that the integrity of their territory has to be respected”.
- › The national development plan for 2009-2013 (SENPLADES, 2010), which encompasses:
  - Goals on promotion and strengthening of the different identities of Ecuadorian society;
  - An outline for a long-term endogenous economic strategy, including democratization of production and property and export diversification;
  - A rejection of the conventional notion of development.
- › The national development plan for 2013-2017 (SENPLADES, 2013), which encompasses:
  - Goals on promotion and strengthening of the different identities of Ecuadorian society; and emphasis on the need for structural change in the production matrix that generates employment and reduces poverty and inequality.

However, the contribution of these policies to a society organised via buen vivir principles in practice is not evident. Despite the formal adoption of the policies on paper, “it is far from clear that the country is headed towards achieving such visions” (Acosta, 2013 in Kothari et al., 2014:372). The first step for the transition to a buen vivir economy as proposed in the 2009-2013 development plan was material accumulation. This would be needed to generate conditions (namely GDP growth) to later make the transition to buen vivir, a strategy also called ‘neo-extractivism’ (Villalba-Eguiluz & Etxano, 2017). Raw materials were indeed extracted, resulting in harm to nature and the territory of indigenous peoples, and continued deforestation (Caria & Dominguez, 2015). Exemplary is the decision to extract oil in Yasuni National Park and to ignore proposals of civil society in the so-called Yasuni-ITT initiative to refrain from extraction. Hence, it seems that the execution of the state policies in practice did not align with the key principles of buen vivir (Villalba-Eguiluz & Etxano, 2017). In the case of Ecuador, it is stated that “Buen vivir... excludes the concept of development from the symbolic order to let it return when established power needs to justify or legitimize its actions” (Caria & Dominguez, 2015:29). Contrary to what was mentioned in the national development plan for 2009-2013, the notion of (perceived Northern concept of) ‘development’ was in practice not rejected. It is argued that the government has only contributed in a limited way to a real transition to an alternative economy in Ecuador. Instead, “social improvement has been kept compatible with existing power relations” (Kothari et al., 2014:28).

However, citizen movements have recently contributed to an envisioned decrease of extraction and thereby contributed to alignment with buen vivir principles. Oil extraction from the national parks, including the the Yasuni National Park, continued until 2022, in order to fulfil export agreements with China (Marchand & Héroult, 2019). However since then, extraction seems to have come to an end as a result of the citizen referendum in August 2023. Here citizens voted in favour of safeguarding the unique biosphere of the Park. Moreover citizens voted in favour of protecting the biosphere in another biosphere reserve, Choco Andino, from further gold mining (Collins, 2023).

### A.7.3 Taxonomy assessment

**Key focus** The goal of buen vivir is “[a] self-sustaining and life-nurturing economy without growth (accumulation of production and consumption) ... with human beings as central to economy and not capital or speculation” (Acosta, 2015 in Van Norren, 2020: 443). Buen vivir thus aims at both environmental and social wellbeing: “[i]t is not only about consuming better, and consuming less, but also about getting better outcomes with fewer resources and improving the quality of life for all” (Acosta & Martinez Abarca, 2018: 137). A specific aim of buen vivir as an economic or political concept is to enshrine the rights of nature in international law. This “presupposes an economy that shuns capitalist principles and instead upholds foundational principles such as solidarity, sustainability, reciprocity, integrality, interrelatedness, complementarity, responsibility, sufficiency (and efficiency to some extent), cultural diversity, identity, equality and more democracy” (Acosta & Martinez Abarca, 2018:136).

**Role of GDP** The rejection or sidelining of the western notion of development is central to buen vivir (Acosta & Martinez Abarca, 2018; Van Norren, 2020), and as such, development in general and economic (GDP) growth in particular do not play a (big) role for Buen Vivir. In any case “[e]conomic aims must be subordinated to the natural systems’ laws while guaranteeing respect for human dignity and quality of life” (Acosta & Martinez Abarca, 2018:135). At the same time, buen vivir as practiced in Ecuadorian policies (see Textbox A.7.1) has a strategy to first obtain more welfare (GDP growth), before being able to shift to a Buen Vivir society. This is also called a neo-extractivist strategy (Villalba-Eguiluz & Etxano, 2017). However, it is questionable to what extent the *practice* of Ecuadorian policies aligns with the ‘actual’ (that is indigenous) *concept* of Buen vivir, as neo-extractivism appears to be “incompatible with the structural transformations that are required for moving towards BV [Buen Vivir]” (Villalba-Eguiluz and Etxano, 2017:9).

**Stance on redistribution** Buen vivir intends to redistribute on several levels. Not only does ownership, and with that, assets, need to move from governmental or commercial actors to the community. Redistribution also needs to take place from the Global North (who now rule foreign economies) to the Global South. More in general, buen vivir argues for a society based on needs, which would determine the desired distribution.

**Technology** Buen vivir is critical towards the current focus on technological development and western generation of knowledge in general. That is because technology-driven accumulation of goods is seen as progress in the dominant economic paradigm, which accelerates the destruction of nature (Gudynas, 2009 in Acosta & Martinez Abarca, 2018:134). Instead of the current dominant ‘western’ perspective of technology, buen vivir pleads for a decolonisation of knowledge (Walsh, 2011) and giving space for local knowledge that is now neglected in western technological development processes (Acosta & Martinez Abarca, 2018:140). For example, according to buen vivir scholars, organic agriculture has rendered ‘better’ outputs than (western) industrial agriculture (Acosta & Martinez Abarca, 2018:141). Technologies should circulate freely to prevent new models of dependency (Acosta & Martinez Abarca, 2018:141). As long as this is the case, technological advantages of the western world and other cultures can have a place in the pluriform approach to technology of buen vivir (Kothari et al., 2014; Acosta & Martinez Abarca, 2018).

**Behaviour, norms, values** A ‘buen vivir-society’ requires a radical shift in current ‘western’ behaviours, norms and values. Current cultural patterns of the majority of the population in many countries (accumulation of material wealth) need to be overcome (Acosta & Martinez Abarca, 2018:137). As buen vivir argues for collective leadership and

horizontal community governance rather than centralized state power (Van Norren, 2020), the change of behaviour, norms and values would need to occur bottom-up rather than top-down.

**Other features** Buen vivir holds a fundamentally different view on life on earth. This also goes for the concept underpinning Gross National Happiness and ubuntu (see Textbox A.7.2). In its indigenous interpretation in particular, buen vivir sees human life on earth as connected to the past and the future: “[h]uman life is just a moment of life understood in more general terms” (Acosta & Martínez Abarca, 2018:135). Care for the future (of nature) is embedded in the buen vivir view on life.

**Text box A 8:** Other concepts from the Global South: Ubuntu, Swaraj, Happiness

The Northern (or Western) concept of degrowth is partly based on worldviews from the Global South. The South-American Buen Vivir is discussed here because it has been applied to state policies. Several other concepts that share features with buen vivir also contribute to the base of degrowth.

The southern African philosophy of Ubuntu is defined as the ‘continuous motion of the enfolding of the universe’ (Ramosé, 2005). Central is the idea that one exists by the being of others: ‘I am because we are’ (Van Norren, 2020). It stresses compassion, relatedness, the intrinsic value of human life and valuing human life over capital, and respect to nature and people (Van Norren, 2020). Its focus on community and respect to nature are thus similar to buen vivir. Moreover, development is not the central goal in ubuntu: human relations and mutual aid are (Van Norren, 2020). Similar to buen vivir, care for the future is embedded in the philosophy in the form of the ‘bantu community’, existing of the born, yet to be born, and the deceased, is central (Van Norren, 2020). Several scholars have mapped the way ubuntu is expressed in African policies or how they could be (see e.g. Enslin & Horsthemke, 2004; Muxe Nkondo, 2007; Cornell & Muvangua, 2012; Letseka, 2012; Migheli, 2017). Nkosi (2018) argues that although South-African law does not mention ubuntu, ubuntu is embedded in the South-African Constitution’s social justice principles. Moreover, “judges continue to infuse the core values of ubuntu when interpreting the laws of the country” (Nkosi, 2018:17) thereby creating jurisprudence that aligns with ubuntu.

The Indian grass-roots concept of Swaraj and specifically ecological Swaraj “is a framework that respects the limits of the Earth and the rights of other species, while pursuing the core values of social justice and equity” (Kothari et al., 2014:368). It has a strong focus on democracy and self-rule. Swaraj has several elements that are similar to buen vivir. This includes the belief that humanity is part of nature and the idea that communities form the centre of the economy, rather than the state and corporations (Kothari et al., 2014).

Bhutan’s conception of **Happiness**, measured by Gross National Happiness, “can be defined as calling for material and spiritual development, that mutually reinforce one another, which aims at harmony between ‘inner skills’ and ‘outer circumstances’, respect for nature, compassion, and balance and moderation and interdependence of all things” (Van Norren, 2020). The Gross National Happiness index is an alternative to GDP and includes four pillars: culture as the basis for all development, socio-economic development, care for the environment, and good governance. This is measured in nine dimensions: psychological wellbeing, health, time use, education, cultural diversity and resilience, good governance, community vitality, ecological diversity and resilience, and living standards (Van Norren, 2020). While respect for nature and placing ecology over economy are shared features with buen vivir, Happiness leaves more room for the western notion of development than buen vivir. In Happiness there is the idea of reincarnation and karma. Similarly to buen vivir, the Happiness notion of karma and the belief that one reincarnates makes citizens part of future generations (Van Norren, 2020).

However, citizen movements have recently contributed to an envisioned decrease of extraction and thereby contributed to alignment with buen vivir principles. After continued oil extraction from the Yasuni National Parc, amongst others to adhere to selling agreements with China until 2022

(Marchand & Héroult, 2019), extraction seems to come to an end now as a result of the citizen referendum in August 2023. Here citizens voted in favour of safeguarding the unique biosphere of the Parc. Moreover citizens voted in favour of protecting the biosphere in Choco Andino from further gold mining (Collins, 2023).

## A.7.4 Theory of change assessment

**Policy impact chain** The policy impact chain is shown in Table a.7. An economy organised according to the principles of *buen vivir* would require a radical shift from a capitalist, to a 'needs-based' economy. Similarly, governance would have to change from a national government-led to a community-based society. Therefore, a plural transition strategy, with policies in many areas, is needed (Acosta & Martínez Abarca, 2018). This would include: rights for nature, community-based property, economic sovereignty (in specific for countries that produce and export raw materials), and a new view on production and labour. The most concrete policy instrument is legislative, namely legally protecting rights of nature (Van Norren, 2020).

*Buen vivir* has distinctive views on its stakeholders. It argues for a *state* form existing of plural 'nations' and communities in a non-hierarchical relationship with each other rather than powerful, centralised state governance (Van Norren, 2020). Acosta & Martínez Abarca (2018:137) argue that the (central) state can have an initial role in transiting to a *buen vivir* economy, for example in supporting and coordinating efforts to scale up rural political decisions to the national and global level. The state's role is furthermore to protect nature by embedding nature rights in the constitution, including the right to be restored and the right of water and access to it; to multiply and diversify property and production forms, amongst others, with a planned decrease in extractive industries and development of other industries; to invest in infrastructure and other conditions to boost small and medium-sized producers and allow (local or indigenous) technologies that support the local economy; to adopt reduction and distribution of working hours; to support and coordinate efforts to scale up rural political decisions to the national and global level; and to strengthen endogenous productive capacity (Acosta & Martínez Abarca, 2018).

The *market* would get a fundamentally different role in a society based on the principles of *buen vivir*, as capitalist-property rights cannot exist in such a society. However, the market does have an initial role in building community-based property. The domestic market is prioritised, but not as an import substitution model that benefits local capitalists. This results in production that allows self-sufficiency and is based upon needs and the value for the community rather than current consumption patterns (Acosta & Martínez Abarca, 2018; Van Norren, 2020).

Instead of speaking of *citizens* as individuals and consumers, *communities*, of which people are a part, are positioned at the core of economic structures. As new economic models are based on local level needs, the community role should hence be strengthened. Local level pressure can moreover help national transformation if the state does not contribute to transformation. The community organises itself via collective leadership, for example via a 'seven generation leadership council' that takes into account seven future generations and consults the perspectives of seven generations of ancestors (Clarkson et al., 1992; Van Norren, 2020). The community forms the basis of the economy and citizens contribute to local production. Moreover, citizens engage in self-management and co-management that allows them to control their own production process (Acosta & Martínez Abarca, 2018).

**Table A.7:** Policy impact chain of buen vivir, based on Acosta & Martinez Abarca (2018) and Van Norren (2020)

Stakeholders	Inputs	Activities	Outputs	Outcomes	Impacts
Citizens (or community)	Pressure to transform	Collective leadership; self- and co-management		Community-based property and solidarity-based economy that takes past, current and future generations into account	“A self-sustaining and life-nurturing economy without growth (accumulation of production and consumption), is the goal, with human beings as central to economy and not capital or speculation” (Van Norren, 2020:443)
Market		Diversification of property and production, decrease of extraction; community-based property		Needs-based production; self-sufficiency	
(Horizontal) state	Horizontal governance and representative governance to scale up policies	Protect nature, decrease extractive production and diversify production forms, support local producers, redistribute working hours		Nature rights; horizontal and democratic economic relations; heterogenous and diverse domestic markets; recognition of every form of work; employment for all	

**Scaling mechanism** The transition to a buen vivir economy starts from the bottom up. Acosta & Martinez Abarca (2015:139) see the scaling as follows: “[g]radual collective political decisions, coming from below from each region, then cumulatively translate into country-level political policy, expanding outwards from each country to the global market.” They state that the central government can have an initial role in supporting local initiatives to scale up to national and then global level. Van Norren (2020) suggests that buen vivir can inform current policy frameworks such as the Sustainable Development Goals by reshaping its principles. Focus would then shift from development to humanity, from anthropocentric sustainability to biospheric sustainability (humanity is part of nature), and from economic wellbeing to a broader definition of wellbeing which acknowledges importance of relationships. It should be noted though that some scholars, such as Gudynas (2011) see buen vivir as a life philosophy rather than a template for change (Balch, 2013).

**Risks, drawbacks and side-effects** A risk of buen vivir lies in its application by actors who do not adhere to the founding principles of the concept. Scholars (e.g. Villalba-Equiluz & Etxano, 2017) argue that the Ecuadorian government used the notion of buen vivir to adopt policies that were actually at odds with it, for example that promoted extraction of raw materials (see Textbox A.7.1). Kothari et al. (2014) warn for the claim that policies mirror indigenous notions of wellbeing when they in fact do not. The adaptation of indigenous buen vivir visions in national policies in South-America is called “semantic appropriation” (Kothari et al., 2014:371). With similar reasoning Van Binsbergen (2001) is wary that ubuntu as indigenous ideology is used in the interest of ruling elites. Other risks of application of buen vivir are not discussed in literature.

**Adaptation to Dutch circumstances** Indigenous visions of buen vivir have provided part of the roots for the degrowth movement in western societies. Adaptation to Dutch circumstances have thus been indirect. For adaptation of buen vivir to Dutch circumstances, we thus refer to the discussion on post-growth in Appendix B.3.

## A.7.5 Questions for further research

Buen vivir has been mostly studied from a cultural-sociological, critical perspective in qualitative studies (e.g. Kothari et al., 2014; Villalba-Equiluz & Etxano, 2017; Acosta & Martínez Abarca, 2018; Van Norren, 2020). For treating it as an economic concept that informs policymaking, questions for further research include:

- › How could buen vivir be practiced in (central state) policies, while adhering to the indigenous, founding roots of the concept? Buen vivir is a life philosophy and “not a ‘recipe book’, as was attempted by incorporating the concept into the Ecuadorian (2008) and Bolivian (2009) constitutions” (Acosta & Martínez Abarca, 2018:133).
- › How could buen vivir overcome existing dominating power structures in the phase of transition and upscaling? Acosta and Martínez Abarca (2018) mention that after diversifying forms of property and production, new relations of production and economic control would arise. In addition, Van Norren (2020) states that the role of communities would need to be strengthened. However, it remains unclear how these changes could occur under a dominant capitalist power structure. Who needs to take initiative, what is needed on a global level to create autonomy of extraction based economies, and what is the (intermediate) role of central governments?
- › Is the take-away from buen vivir that western societies should adopt such vision, or that these societies should refrain from the cultural universalist approach of imposing Western values on other societies? This question addresses the desirability of applying buen vivir or other indigenous concepts in a Western context. Buen vivir namely allows for pluriformity of knowledge, while models like the Sustainable Development Goals have the intention to be universal (Van Norren, 2020).

## A.7.6 Literature

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## Appendix B

# Dutch concepts

This section presents four alternative economic concepts that play a role in the current Dutch discussion about different societal futures for the Netherlands: ‘broad welfare’, ‘green growth’, ‘post growth’ and the ‘purpose economy’.

## B.1 Broad Welfare (‘Brede Welvaart’)

The Broad Welfare concept has found its way into the Dutch national governmental policy process based on a monitor that was developed by the Dutch statistics office in accordance with guidelines by the United Nations Economic Commission on Europe (UNECE, 2014). Use of the term ‘broad welfare’ dates from the 1990’s, when it was first mentioned by the Social Economic Council SER in the 1990’s (SER, 2021).

### B.1.1 Main actors

Main actors behind the ‘broad welfare monitor’ in the Netherlands are the Dutch statistical office (CBS) and the national policy assessment agencies. They are asked yearly by the Dutch parliament to evaluate the national budget based on several non-economic indicators. They are also asked by Government to develop the monitor into a forward planning policy instrument. Results of the monitor have also been integrated into the Dutch national budget report (Dutch Government, 2023). Currently, research by the Dutch governmental policy assessment agencies and TNO is under way how to turn the evaluative monitor into a forward looking policy planning instrument (CPB, 2022; TNO, 2024). Furthermore, academic and private actors developed the concept of broad welfare into an aggregate indicator (Universiteit Utrecht, 2023).

#### Dutch assessment agencies

In recent years, the general concept of ‘Broad Welfare’ has been developed in the Netherlands into an elaborated dashboard of indicators by the Dutch Statistical Office, CBS (2023). First, every two years a ‘Monitor Sustainable Netherlands’ was published from 2008 on. This was continued as an annual ‘Monitor Broad Welfare’ and later changed into a ‘Monitor of Well-being and the Sustainable Development Goals’ that has been published annually since 2018 (CBS, 2023).

Due to the work of a Parliamentary Commission on the topic, the Monitor was integrated into the yearly budget evaluation of the Dutch Parliament. The expected well-being effects now have to be discussed every year by Parliament on the 3<sup>rd</sup> Wednesday in May, in a session in which the Minister of Finance outlines the key results of governmental policies of the past year (‘Verantwoordingsdag’ – Accountability Day) (Tweede Kamer, 2019).

The Dutch Broad Welfare dashboard was developed in accordance with guidelines by the United Nations Economic Commission on Europe (UNECE, 2014). The dashboard is now further developed into a planning instrument by the Dutch Assessment Agencies CPB (Bureau for Economic Policy Analysis), PBL (Environmental Assessment Agency), SCP (Institute for Social Research) in order to support policy development. Thereby each of the



Assessment Agencies has its own focus area, e.g. CPB focuses on financial-economic welfare (GDP and consumption), labour, income division and poverty and human capital, PBL examines environmental aspects and SCP socio-cultural factors (CPB, 2022).

#### Utrecht university & Rabo Research

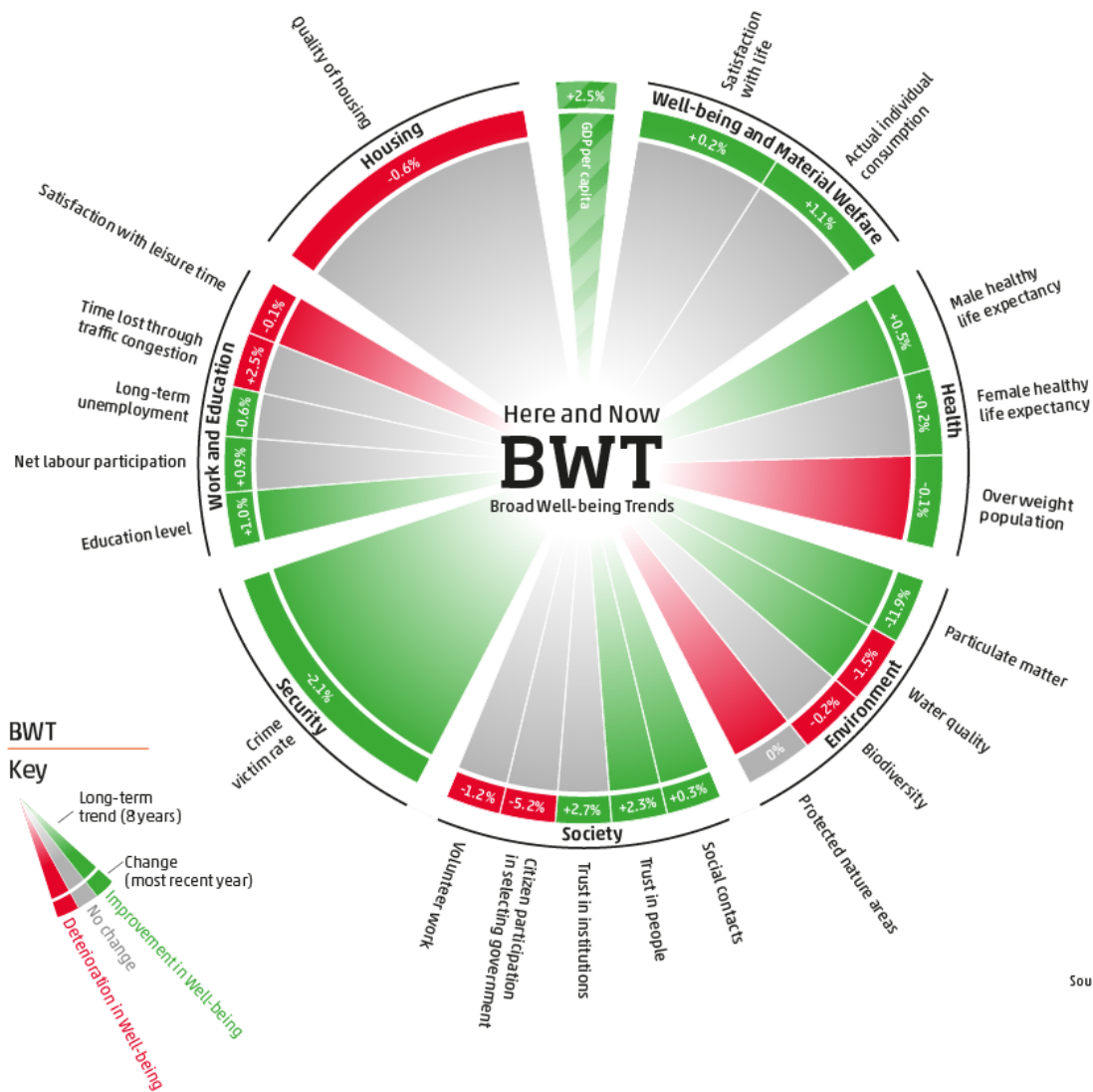
In addition to the dashboard approach by the CBS, there is also a Broad Welfare Indicator developed by Utrecht University and Rabo Research (Universiteit Utrecht, 2023). In contrast to the CBS dashboard, this is a *composite* indicator that encompasses indicators for the *present* situation in the Netherlands, rather than a *dashboard* with indicators for well-being in the *present*, the *future* and *elsewhere* (see B.1.2). The Broad Welfare Indicator builds upon OECD's Better Life Initiative.

#### Textbox B.1 Broad Welfare Networks in the Netherlands

In recent years, the general concept of 'Broad Welfare' has found many followers in the Netherlands, with a number of organisations that aim to develop the concept in more detail. There is now a 'Nationaal Netwerk Brede Welvaart' (<https://netwerkbredewelvaart.nl/>), a Centre of Expertise Brede Welvaart en Nieuw Ondernemerschap of Avans (<https://www.avans.nl/onderzoek/expertisecentra/brede-welvaart-en-nieuw-ondernemerschap>), Verbond Brede Welvaart of the infrastructure sector (<https://www.nginfra.nl/verbond-brede-welvaart>), VNO-NCW's agenda Ondernemen voor Brede Welvaart ([https://www.vno-ncw.nl/sites/default/files/ondernemen\\_voor\\_brede\\_welvaart.pdf](https://www.vno-ncw.nl/sites/default/files/ondernemen_voor_brede_welvaart.pdf)). Interpretations of 'broad welfare' vary between the networks. It is also sometimes difficult to distinguish where they focus on the general concept of broad welfare, and where they aim at further developing the broad welfare monitor as a measurement instrument of broad welfare.

## B.1.2 The concept in short

The 'Broad Welfare Monitor', officially 'Monitor of Well-being and the Sustainable Development Goals' (MWS), is a measuring instrument based on the concept of broad welfare developed in the Netherlands. The monitor describes the well-being of the population living in the Netherlands today ('here and now'), the impact of their present level of well-being on future generations in the Netherlands ('later') and on people living in other countries ('elsewhere'). More specifically, it shows how well-being 'here and now' is distributed across various population groups in the Netherlands by describing well-being of each of these groups in terms of eight themes and 13 indicators. The themes are: subjective well-being, material well-being, health, labour and leisure time, housing, society, safety and the environment (CBS, 2023). For 'later' and 'elsewhere', the monitor analyses the status quo of four sources of capital that need to be preserved: economic, natural, social and human capital (Figure B.1).



Source: CBS

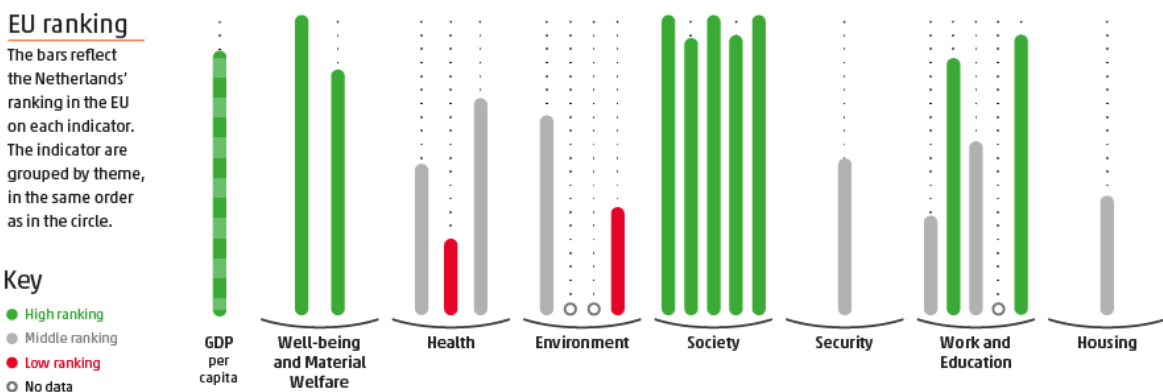


Figure B.1: CBS Monitor “Well-being and the Sustainable Development Goals’. Indicators shown are for well-being ‘here and now’ in 2023. Similar indicator wheels are provided for ‘later’ and ‘elsewhere’ (CBS, 2023)

### B.1.3 Taxonomy assessment

**Main impacts aimed at** The aim of the monitor is to provide support for governmental decisions, without preferences for any future scenario or policy.

**Role of GDP** The broad welfare dashboard measures ‘material welfare’ based on the indicators ‘median disposable income per household’ and ‘individual consumption’ (CBS, 2023). While GDP is not an indicator of the Broad Welfare dashboard itself, these two indicators are related to GDP. Material welfare is one of the eight themes in the dashboard, which are all presented without weighting factors between the themes.

**Technology** The monitor is technology-neutral, not specifying any individual technology in its indicators.

**Change in behaviour, norms, values** The dashboard does not provide indicators related to change in behaviour, norms and values required and is therefore neutral in this respect. However, the choice of some indicators indirectly suggests directions for intended behavioural policies, such as the indicator obesity (‘obesitas’) in the health theme. Apart from that, the monitor does include one direct indicator about ‘change in norms and values’ in general, but this indicator refers to overall perceptions of ‘moral decay’ in society.

**Other features** There is also a regional Broad Welfare Monitor developed, specifying broad welfare on a municipal and regional level (CBS, 2023b).

### B.1.4 Theory of change assessment

**Policy Impact chain** The monitor is primarily directed at policy makers. Its implicit assumption is that a broader set of welfare indicators will help policy makers to take different policy decisions that in turn will lead to improvements in societal welfare, as defined by the eight themes and 13 indicators for ‘here and now’, and the four main sources of capital (material, societal, human, environmental). It is unclear how the monitor will influence policy decisions, outputs and outcomes, other than that once a year policy makers have to reflect on Broad Welfare on ‘Verantwoordingsdag’.

**Assumptions** The implicit assumption behind the monitor is that by presenting a different dashboard of indicators to policy makers, it will lead to different (improved) policy decisions. Through the selection of these indicators, a policy vision on what constitutes ‘broad welfare’ is inferred.

**Table B.1:** Assessment of Theory of Change of the Broad Welfare concept (TNO Assessment, 2023)

Stakeholders	Inputs	Activities (policies)	Outputs	Outcomes	Impacts
Government	Broad dashboard of policy indicators	unclear	unclear	unclear	Broad welfare as defined by dashboards here and now, later and elsewhere, each having a different, internationally agreed indicator set.

**Scaling mechanism** The dashboard is policy neutral, therefore no scaling mechanism for policy implementation is provided.

**Risks, drawbacks and side-effects** It is unclear what the policy impact of the dashboard is in practice.

**Adaptation to Dutch circumstances** The dashboard is designed specifically for the Netherlands, i.e. to measure indicators in the Netherlands, or of the Netherlands in relation to other countries.

## B.1.5 Questions for further research

The Dutch 'Broad Welfare' dashboard provides an internationally agreed set of indicators for policy makers to steer towards broad welfare.

Research gaps for potential implementation in the Netherlands exist in particular regarding the way in which the indicator dashboard in practice can influence policy making. Currently, the governmental assessment agencies CPB, PBL and SCP are working on further developing a toolset on Broad Welfare that adds to the Dashboard a forward-looking instrument for ex-ante evaluation that can be used for policy planning by showing trade-offs between different sets of policy decisions. However, the question to what extent the instrument leads to actual change in policy making remains open. Also, a comparison could be made between the broad welfare dashboard and the broad welfare index. Does their application lead to the same results?

## B.1.6 Literature

CBS (2023) Dossier Well-being and the Sustainable Development Goals, <https://www.cbs.nl/en-gb/dossier/dossier-well-being-and-the-sustainable-development-goals>

CBS (2023b) Regionale Monitor Brede Welvaart, <https://www.cbs.nl/nl-nl/visualisaties/regionale-monitor-brede-welvaart/samenvatting>, retrieved 18-12-23

CPB (2022) Notitie 'Brede welvaart: het CPB voorbij het bbp', [cpb.nl](https://www.cpb.nl)

Stiglitz/Sen/Fitoussi Commission on the measurement of economic performance and social progress (2009) Report of the commission on the measurement of economic performance et social progress ([europa.eu](https://www.europa.eu)).

Tweede Kamer der Staten-Generaal (2019) Parlementair onderzoek Breed welvaartsbegrip, Vergaderjaar 2018-19, 34298, nr 28, 6 december 2019.

UNECE (2014) Conference of European Statisticians Recommendations on Measuring Sustainable Development, [https://unece.org/fileadmin/DAM/stats/publications/2013/CES\\_SD\\_web.pdf](https://unece.org/fileadmin/DAM/stats/publications/2013/CES_SD_web.pdf)

Universiteit Utrecht (2023) Brede Welvaartsindicator, website, <https://www.uu.nl/onderzoek/instituten-voor-open-samenlevingen/brede-welvaartsindicator>, retrieved 18-12-23

SER (2021) Brede welvaart: waarom de SER al 30 jaar hamert op het belang ervan, website notice 12 October 2021, retrieved 2 February 2024, <https://www.ser.nl/nl/Publicaties/brede-welvaart-ser>

Mulder et al., P. (2024) Socio-economic impact of green transitions, TNO

## B.2 Green Growth ('Groene groei') – Barbara Baarsma

A contribution to the debate about alternative economic concepts in the Netherlands was provided by professor Barbara Baarsma with the publication 'Groene groei – over de (on)zin van economische groei ('Green growth – about (non)sense of economic growth') (Baarsma, 2022). In the publication, the international concept of 'green growth' is taken as an outset and modified for proposed application in the Netherlands. More recently, other Dutch authors have also argued in favour of Green Growth in the Netherlands (e.g. Swets & Ederveen, 2023).

## B.2.1 Main actors

Barbara Baarsma is professor of applied economics at the University of Amsterdam, former CEO of the Rabo Carbon Bank which aims for more sustainable agriculture in the Netherlands, and chair of the Bank Council of the Dutch National Bank DNB. Currently she works as a chief economist at PwC.

## B.2.2 The concept in short

In her book, Baarsma argues that if we want future generations in the Netherlands to enjoy the same level of welfare as we currently do, an economic growth level of about 3% per year is necessary to finance, amongst others, the costs of an ageing population and a more equal welfare distribution on a national level. She discusses how such growth could be assured within ecological borders and while providing equal opportunities to all. The book first discusses five reasons why economic growth is necessary, then five reasons why economic growth alone is not enough and why a change would be necessary (2022: 11). Finally, five potential pathways towards 'meaningful' economic growth are outlined.

## B.2.3 Taxonomy assessment

**Main impacts aimed at** The core viewpoint of Baarsma's interpretation of green growth is that 'economic growth is a necessary condition for welfare (seen as government income to pay for e.g. healthcare) and wellbeing, but not a sufficient one' (2022: 243). Hence, adaptation of current policies is called for in order to maintain stable economic growth while improving in particular conditions in health care, housing, education and the labour market.

**Role of GDP** According to Baarsma, GDP is an imperfect measure for welfare, but 'as long as we don't have an alternative, we have to aim for improvement of the quality of growth within the current definition of GDP' (2022: 140). Dashboards with many welfare indicators according to Baarsma 'have as an important disadvantage that politics can shop within them as desired' (2022: 136).

**Technology** Baarsma says that technology is important for greener development, although its capacity to lead to absolute decoupling of resource use and economic growth is so far unproven: '[a]ccording to the 'Green Kuznets Curve', economic growth leads to more investments in green technologies and to a change of the economy into a services economy. However, there is as yet no scientific consensus that this curve applies'. In her view, we should therefore use the term 'greener growth' rather than 'green growth' (2022: 222).

**Change in behaviour, norms, values** Baarsma sees individual freedom as a key factor for life happiness. Economic growth can indirectly contribute to happier lives. 'Economic growth per se does not make people happy, but if the additional budget that becomes available as a result of [economic] growth is spent on for instance better education, more labour market security and an accessible housing market, it can give to people the feeling that they can direct their own lives. In this way, economic growth can make people happy' (2022: 86). As individual freedom to choose is the key factor for happiness according to Baarsma, norms, values and preferences of people should be regarded as a 'given'. Rather, the government has to invest in (her newly-invented word of) 'kanskracht', which can be defined as 'the degree to which people can direct their own lives as the most determinant factor for happiness' (2022: 83). Important policy areas to increase 'kanskracht' are health care, housing, education and modernisation of the labour market. However, it is unclear how

Baarsma relates the concept of a personal carbon budget which she also promotes in her book relates to personal freedom.

**Other features** Baarsma provides pathways and instruments towards greener growth, including the reform of the Dutch pension system and housing market, reform of the labour market to reduce insecurities, anticyclic investment policies, increase of labour supply and increase of labour productivity, support of international trade and cooperation, reform of the electoral system to better include the voice of younger people, economic growth within planetary boundaries, and tradable carbon credits in agriculture and for citizens (2022: 149-238).

### B.2.4 Theory of change assessment

**Policy impact chain** Baarsma aims at a self-reinforcing economic system that is based on economic growth (Table B.2): Economic growth provides the necessary financial means for policies that stimulate ‘kanskracht’. This in turn will lead to increased trust in society, which reduces transaction costs and therefore stimulates economic growth (2022: 87). As for staying within planetary boundaries, she sees a regulatory levy (carbon tax), transparency (EU Corporate Sustainability Reporting Directive) and direct regulation (i.e. the Ecodesign directive, maximum emissions of polluting substances) as key instruments. In addition, she mentions that next to the nine planetary boundaries defined by Rockström et al., resource depletion should be a tenth boundary (Baarsma: 220).

**Table B.2:** Assessment of Theory of Change of Baarsma Green Growth (TNO Assessment, 2023)

Stakeholders	Inputs	Activities (Policies)	Outputs	Outcomes	Impacts
Citizens Business and Government	Economic activities	Policies that stimulate ‘kanskracht’, in particular in the fields of health care, housing, education and labour market; Regulatory levy (carbon tax), transparency and emission limits of polluting substances	‘Kanskracht’ of citizens; internalisation of environmental externalities in prices, naming and shaming of polluting companies, limitations to emissions	Collective trust in society; environmentally ‘correct’ prices, voluntary and enforced action of companies	Individual freedom, life happiness; staying within planetary boundaries and avoiding resource depletion

**Assumptions** Economic growth is needed to provide income for the government to pay for collective welfare. The ‘environmentally correct’ level of prices can be determined in a socially accepted way.

**Scaling mechanism** Top-down measures like a carbon tax, enforced environmental transparency and direct regulation will lead companies to return to the planetary boundaries and to stay within resource availabilities. Tradable carbon permits, or ‘carbon wallets’, are mentioned as a possible alternative instrument, e.g. on sectoral level for e.g. agriculture, but also on individual level (2022: 223).

**Risks, drawbacks and side-effects** While the limits of the Kuznets theory that economic growth will lead to absolute decoupling of resource use and economic growth are

acknowledged, there is no alternative suggested that could lead to such an absolute decoupling. 'At this moment and in the near future, absolute decoupling [of negative environmental impacts from economic growth] is not yet possible. Relative decoupling seems the best that is attainable' (2022: 222).

**Adaptation to Dutch circumstances** The book uses the current Dutch economic situation as a starting point for suggested changes.

## B.2.5 Questions for further research

Research gaps for potential implementation in the Netherlands exist, specifically:

- A concrete policy impact chain that would lead the economy to stay within planetary boundaries and result in absolute decoupling of resource use from economic growth.
- A view on limitations and risks of the suggested approach.
- Analysis of norms and values underlying to the suggested approach: to what extent is individual freedom to design one's life a key factor for happiness, and what restrictions would be acceptable to stay within planetary borders?
- Further experimentation with the suggested example of an individual 'carbon wallet' approach and the implications for personal freedom.

## B.2.6 Literature

Baarsma, B. (2022) Over de (on)zon van economische groei, Uitgeverij Pluim, Amsterdam/Antwerpen

Swets, F. & Ederveen, S. (2023) Streef groei na die past binnen planetaire grenzen, ESB 108 (4827), 504-507

## B.3 Postgrowth ('Postgroei') – Paul Schenderling

'Postgroei – Er is leven na de groei' ('Postgrowth – There is life after growth') was published in 2022 and claims to provide a 'substantiated, attainable and broadly supported plan' for making the Netherlands 'happier, more just and more sustainable'. The concept is presented as 'very close' to the international degrowth literature, with a main difference in communication: '[w]here degrowth is more straight on, Postgrowth acknowledges that, while in the future we will consume less in a material sense, this can go hand in hand with more welfare, leisure time, happiness, community and democracy' (Schenderling et al., 2022: 130).

### Platform Sustainable and Solidary Economy ('Platform Duurzame en Solidaire Economie')

In 2023, the Dutch thinktank 'Platform Sustainable and Solidary Economy', characterising itself as a 'thinktank that criticises the existing neoliberal vision on welfare', published a manifesto for change consisting of six main points: 1) focus welfare indicators on wellbeing, inclusion and sustainability rather than on GDP, 2) reduce taxes on labour and increase tax on resource use and CO2 emissions, 3) the Netherlands has to become a member of the 'wellbeing economy governments' alliance, 4) expand teaching in the field of economics to important new concepts, 5) the Netherlands commit to reducing the global ecological footprint by 50% in 2030, 6) the balance between low- and high-paid labour has to be fundamentally changed (Platform Duurzame en Solidaire Economie, 2023). The manifesto

shares many suggested elements for change with Postgrowth, therefore it is not discussed separately here.

### B.3.1 Main actors

Paul Schenderling is an economist working in consultancy. He wrote 'Postgrowth' together with a writers' collective consisting of twelve policy makers and experts from eleven different political parties. He also co-founded a research and advice centre that disseminates the ideas around Postgrowth (Centrum onderzoek en advies brede welvaart, 2023).

### B.3.2 The concept in short

Postgrowth is presented as a 'plan for a happier, more just and more sustainable Netherlands. A substantiated, achievable and supported plan that is justified by the enormous urgency to make a policy switch at last' (Schenderling, 2022: 19). The central measure suggested in Postgrowth is a 'fair consumption tax', defined in the book as a progressive tax on CO<sub>2</sub> and materials consumption, together with a reduction of taxes on labour (2022: 38). This measure includes an absolute cap on per capita consumption and, together with a broad package of complementary measures in various sectors, will result in change in 'intrinsic values' of citizens and companies. The book first discusses in detail this measure and then specific supporting measures in the fields of labour, pensions, inequality, agriculture, energy and mobility and health care.

### B.3.3 Taxonomy assessment

**Main impacts aimed at** Postgrowth is 'in essence directed at safeguarding intrinsic values that we jointly have and want to pursue'. The eight intrinsic values outlined in the book are: 'improvement of the climate, biodiversity and other natural values, more free time and less stress, new forms of cooperation and cooperatives, welfare and earning capacity for the long term, more social equity, a stable governmental budget, more life security, more health and prevention of diseases' (2022: 246).

**Role of GDP** GDP growth within Postgrowth is subordinate to the realisation of social and environmental 'intrinsic values' that are the aim: [*we need to*] 'change our focus from quantitative growth (more stuff) to qualitative growth: more quality and good taste, more free time and less stress, more health and, above all, more happiness, more connectedness and more justice in a social and ecological sense' (2022: 16).

**Technology** There are no specific technology pathways or preferences for specific technologies indicated in the concept of Post Growth.

**Behaviour, norms, values** According to Schenderling a change of eight 'intrinsic values' has to be achieved. However, it is questionable if the eight 'values' presented in the book are indeed underlying human values that inspire behaviour as discussed in academic literature (e.g. Schwarz & Bilsky, 1987).

**Other features** Post Growth is focused around one central measure, the 'just consumption tax'. Three different pathways for implementation of this tax are discussed. The measure is flanked by a broad package of complementary measures for the Netherlands in the fields of labour, pensions, inequality, agriculture, energy and mobility and health care.



### B.3.4 Theory of change assessment

**Policy Impact chain** The implementation of a fair consumption tax, in addition to a package of supporting measures is forecast to bring about a change in eight ‘intrinsic values’ for citizens. However, three ultimate impacts are seen as the most important in the policy impact chain presented in the book: (1) more justice (ecological and social), (2) more connectedness and trust in democracy, (3) more happiness and quality of life (2022: 247).

**Assumptions** Due to taxation, companies will develop other business models and change their norms and values in doing business to include environmental and social targets. Citizens will change their behaviours based on the tax.

**Table B.3:** Assessment of Theory of Change of Post Growth (TNO Assessment, 2023, based on Schenderling, 2022: 247)

Actors	Inputs	Activities (Policies)	Outputs	Outcomes	Impacts
Citizens Business and Government	Financial inputs are unclear. Supposedly budget neutral for purchase power of 90% of population: ‘Only top-10% incomes will pay more net taxes’	Two impact pathways (1) ‘Fair tax on consumption’ and lower labour taxes; (2) supporting measures (in the fields of labour, pensions, inequality, agriculture, energy and mobility and health care)	Pathway (1) leads to Less waste in production chains, higher quality products, more sharing, taste and longer life span, reduced growth of consumption and GDP; Pathway (2) leads to ‘fair’ levy on capital, basic job, housing and health care guarantees, more plant based diets	Pathway (1) leads to better climate and biodiversity, new cooperation and cooperations, lang term earning capacity, more free time and less stress; Pathway (2) leads to more social equity, stable governmental budget, more life security, more health prevention	Joint final impacts of the two pathways are more justice (ecological and social), more connectedness and trust in democracy, more happiness and quality of life

**Scaling mechanism** Post Growth assumes that the core measure plus supporting measures will lead to behavioural change. Various pathways for gradual implementation of the core measure are proposed. How behavioural change will take place and what change will be achieved is not outlined.

**Risks, drawbacks and side-effects** The book does not detail any risks, drawbacks and side-effects of the suggested approach. Potential risks and uncertainties could include: there is no quantification of the consumption tax provided; more specific details would be needed on how individual categories of goods and services would be taxed, how to deal with uncertainties in underlying LCAs, how the absolute cap on consumption (effects) would work, what would be impacts if only the Netherlands would implement the measure, what would be risks of individual consumption data in hands of private banks. It is also unclear to what extent behavioural change would be achieved if-‘only the top-10% of incomes will experience net effects’. In addition, the ‘intrinsic values’ that Post Growth is directed at rather seem like policy goals than fundamental norms and values of people.

**Adaptation to Dutch circumstances** Detailed and innovative policies in various fields are provided and specifically adapted to Dutch circumstances, e.g., a much shorter working week, job guarantees, limiting commercials, higher taxes on housing sales. Some of these policies are already partly implemented in the Netherlands.

### B.3.5 Questions for further research

Research gaps for potential implementation in the Netherlands include:

- Examples of calculations for specific products and services.
- The impacts of an absolute cap on consumption on public support for the suggested policies.
- The macro-economic effects Netherlands compared to other countries.
- A comparison with other policies (e.g. ETS).
- The identification and mitigation of potential drawbacks.

### B.3.6 Literature

Centrum voor onderzoek en advies rondom brede welvaart (2023) Sufficiency  
<https://www.postgroei.nl/>

Platform Duurzame en Solidaire Economie (2023) Nieuwe Economie Nu!  
<https://platformdse.org/manifest-nieuwe-economie-nu/> Retrieved 18-12-23

Schenderling, P. (2022) Er is leven na de groei – hoe we onze toekomst realistisch veilig stellen. Bot Uitgevers.

Schwartz, S. H., & Bilsky, W. (1987). Toward a universal psychological structure of human values. *Journal of Personality and Social Psychology*, 53(3), 550–562.

<https://doi.org/10.1037/0022-3514.53.3.550>, or Rokeach, M. (2008). *Understanding human values*. Simon and Schuster.

## B.4 Purpose Economy (“Betekeniseconomie”) – Kees Klomp

The Purpose Economy aims to provide a view of a different economy. It connects change of norms and values within companies and by individuals on the one hand with changes on a macro level in the economy and society on the other.

### B.4.1 Main actors

The concept of the Purpose Economy was developed by Kees Klomp, lecturer ‘Purpose Economy’ at the Rotterdam University of Applied Sciences. He teaches and researches on this topic and has published the book ‘Betekeniseconomie – de waarde van verweven leven’ [Purpose Economy – The Value of Interconnected Living] (2022). He is also founder of the THRIVE institute, a think-tank to help organisations to ‘maximise their impact’ and ‘a system in which everybody can flourish’ (Thrive Institute, 2023).

#### Related concepts

The purpose economy puts the need for change of individual norms and values, and in particular the need for change of individual norms and values of entrepreneurs, as central to its approach. ‘Frontrunners’ in business will have to draw ‘followers’ with them. When the number of followers has become large enough, ‘laggards’ will then also be inspired to change. A similar theory of change is advocated by e.g. Jan Rotmans’ ‘Transition theory’. This theory does not explicitly aim for economic change, but rather sees societal and structural economic change as a result of bottom-up change starting with frontrunners (Rotmans, 2014).

## B.4.2 The concept in short

The Purpose Economy, according to its author, tries to address five interlinked crises: ecological, social, economic, individual and existential crisis. It is outlined as a successor of our current knowledge economy and is 'based on the virtues of social participation, engagement and solidarity' that lead to value creation by business (Klomp, 2022: 53). The end stage is a constructive, mutual relationship between people and nature, resulting from a cultural evolution (2022: 55), by connecting 'collective purpose' and 'individual meaning' (2022: 59-62).

The Purpose Economy is built on three pillars: a 'meta-economic' view that sees economy embedded in a larger political and socio-cultural context, a 'post economic' view in which ecology rather than economy determines our view on society, and a 'deep' perspective that envisages development of eco-centric views on life: 'The more we acknowledge life as a mutually dependent, complex and dynamic network of relations, the higher chances of [developing] a more inclusive and constructive behaviour will be' (2022: 75). In practice, the Purpose Economy pays much attention to change within individual businesses towards more sustainable, value based business models based on a 'changemaker canvas' developed by Klomp to guide businesses in their process of change.

## B.4.3 Taxonomy assessment

**Main impacts aimed at** The aims of the Purpose Economy are to balance state, market and 'the commons', leading to a more important role for citizens (taking more control of their own living environment), increasing interwovenness of producer and consumer roles, and more collective ownership (2022: 80). Maximising the commons might lead to a reduction of economic activity, but that is not a goal per se (2022: 89).

**Role of GDP** In the Purpose Economy, GDP is seen as less important compared to ecological and social goals. Ecological policy should dominate economic policy, while applying a 'broad welfare approach' (2022: 117).

**Technology** No information is provided in the Purpose Economy on preferred technological routes.

**Behaviour, norms, values** The Purpose Economy offers a holistic view on societal change needed, aiming for a broad package of societal reforms. However, with its focus on the necessity of individual change of norms and values towards eco-centrism, and in particular on change of entrepreneurial norms and values as key fundamentals for collective change, the Purpose Economy can be seen as a concept that starts from individual (entrepreneurial) wellbeing.

**Other features** The main focal points of the Purpose Economy are businesses, that should change their business models based on a 'changemaker canvas' developed by Klomp (2022: 184). The canvas helps entrepreneurs to change mission, strategy and operation of their firm, by first identifying the issue at stake, the desired goal and an intention for commitment ('heart issues' - mission). Then an inventory of external circumstances and internal possibilities of the firm is made, leading to new insights and finally a central idea for change ('head issues' - strategy). Finally an implementation plan is made, defining concrete interventions, required infrastructure and desired impact ('hands issues - operations).

### B.4.4 Theory of change assessment

Design principles of the Purpose Economy are an ‘adaptation of individual and economic activities to ecological principles’ (2022: 88). These lead to ‘meta, macro and micro-interventions’ (Table B.3.1).

**Table B.4:** Policy interventions in the Purpose Economy (source: Klomp, 2022)

Meta interventions	Macro interventions	Micro interventions
<ul style="list-style-type: none"> <li>› All life is interwoven (as a new narrative)</li> <li>› Ecology as a source (from primary education onwards)</li> <li>› ‘Thrive’ not ‘growth’ central</li> <li>› Economy is a pro-social science (normative towards behaviour)</li> <li>› Economy is post-anthropocentric (stimulating ecocentric perspectives)</li> </ul>	<ul style="list-style-type: none"> <li>› Economy as a means, not a goal (well-being as ultimate goal)</li> <li>› Ecological policy making (legislation to force companies not to strive only for financial goals)</li> <li>› ‘Rehumanification’ of the economy (introduction of care, respect, moral and spiritual life)</li> <li>› Commons as main organisation form (focus on integral value for world community)</li> <li>› Economy based on real value (internalisation of external costs)</li> <li>› Integral value as a basis (alternatives for GDP as an indicator)</li> <li>› Mission economy (societal problems based)</li> </ul>	<ul style="list-style-type: none"> <li>› Life creates conditions conducive to life (biomimicry as a design principle)</li> <li>› The ‘hole in society’ (aim of firms to solve societal problems rather than profit maximalisation)</li> <li>› The ‘hole-in-the-society product’ (products have individual and societal added value)</li> <li>› Constructive entrepreneurship (internal, external, social, ecological values)</li> <li>› Integral value creation by companies (from shareholders to ‘rightsholders’)</li> <li>› Impact as a basis (balance between financial, ecological, social and individual results)</li> </ul>

**Policy Impact chain** The theory of change of the Purpose Economy leads from ‘design principles’ via ‘interventions’ to ‘concrete steps’. In essence, the approach aims for a stepwise approach starting from attitude change (norms, values) via empowerment (capacity building, removal of institutional obstacles) to behavioural change. Focus point of the Purpose Economy are businesses, where a complete chain for the theory of change can be established most clearly (Table B.3.). For citizens and state, outcomes and impacts to be achieved are mentioned explicitly, but other parts of the chain are not explicitly outlined (e.g., How could policy making exactly stimulate a ‘deep ecological’ mindset of citizens? What ‘ecological legislation’ has to be implemented exactly? How should external costs be internalised?)

**Table B.5:** Assessment of Theory of Change of the Purpose Economy (TNO Assessment, 2023)

Stakeholders	Inputs	Activities	Outputs	Outcomes	Impacts
Citizens	unclear	unclear	unclear	Deep ecological mindset; Cooperative ownership; Citizens responsible for own environment	Well-being; Empowered citizens
Government	unclear	unclear	unclear	Ecological legislation; Internalisation of external costs	Government contributing to purpose economy

Stakeholders	Inputs	Activities	Outputs	Outcomes	Impacts
Business	Organisational advice	'Changemaker Canvas' directed at mission, strategy and operations of firms	Change of business plans of firms	Ecological entrepreneurship, profit maximalisation no longer central	Business contributing to purpose economy

**Assumptions** Individual change of frontrunners will lead followers to adopt similar 'ecocentric' norms and values.

**Scaling mechanism** There is no information provided on how the Purpose Economy would scale up from initial principles to a mature and implemented concept on national and international scales. A 'frontrunner – followers' approach is suggested, in which leading frontrunners will provide an example and a moral appeal that will inspire some followers and from there will lead to scaling by way of a snowball effect (2023). There is no information provided on how to take into account resistance by citizens not interested in change, by incumbent market parties and by geopolitical interests.

**Risks, drawbacks and side-effects** There is no information provided on possible drawbacks and negative side-effects of the Purpose Economy.

**Adaptation to Dutch circumstances** The Purpose Economy does not provide specific information for the Netherlands.

## B.4.5 Questions for further research

Research gaps for potential implementation in the Netherlands are:

- › Taxonomy; how would the change of individual norms and values be achieved? What are the preferred technology routes (if any)?
- › Policy impact chains; how would a change towards deep ecology norms, values and behaviours be promoted? And how would it be achieved on a state level? Which policies would need to be implemented exactly?
- › Scaling; incorporation of countervailing interests on individual, business, national and international levels; potential drawbacks and side-effects.
- › Implementation options in the Netherlands: how should the concept be applied in the specific Dutch context, starting from the existing societal and governance context?

## B.4.6 Literature

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