

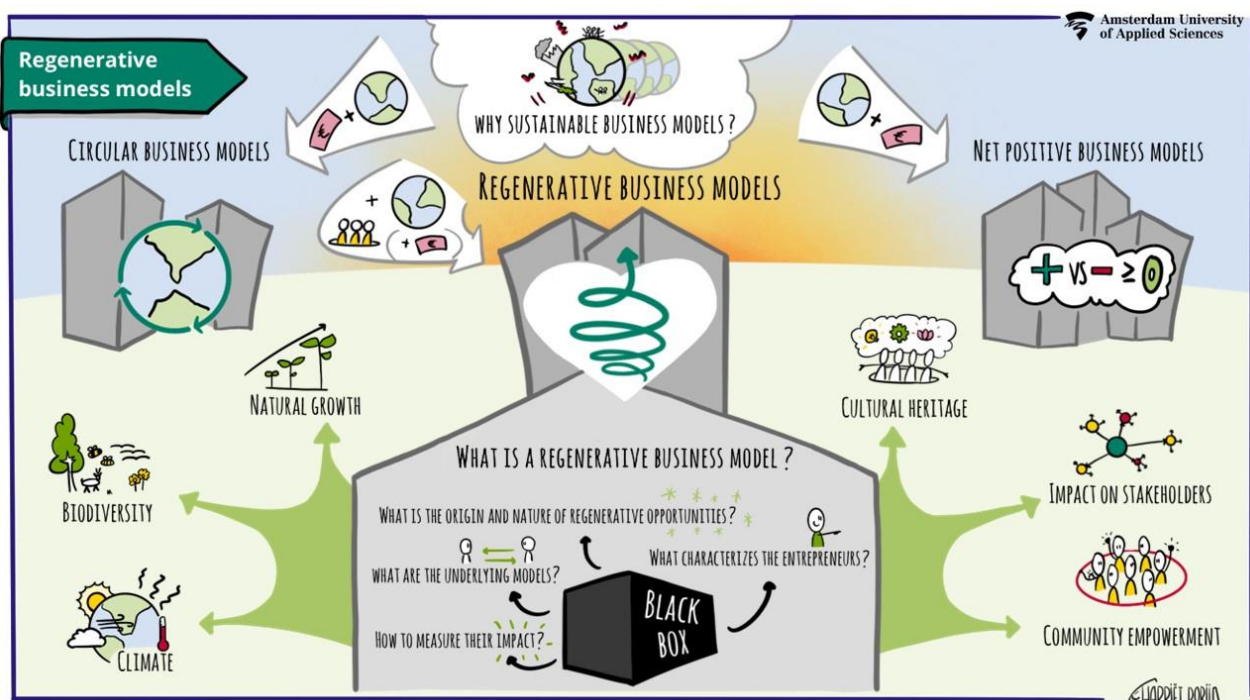


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Exploring Regenerative Business Models:

How frontrunners in entrepreneurship and business model innovation may contribute to economic transformation

This paper is a preliminary explanation of how we aim to study regenerative business models in the context of CET-AUAS. As our activities proceed, this paper may develop and grow. We welcome suggestions and ideas for collaborations in this field from both scholars and practitioners to enhance our efforts.





Background and aim

The Centre for Economic Transformation (CET) at the Amsterdam University of Applied Sciences is a platform where researchers, teaching staff and students team up with companies and organizations that want to accelerate towards sustainable, fair and future-proof business practices. The CET is based on the conviction that our economy and society are changing rapidly and that our current economic model is unsustainable, prioritizing growth and often resulting in the exploitation of people and depletion of nature. Therefore, the CET wishes to encourage new, sustainable approaches in finance, marketing, digital technologies, governance and the labour market. To accelerate the transformation to a fair and sustainable economy, the CET has chosen to focus on four ambitions:

- Transformation to new business models
- Transformation towards co-ownership
- Transformation towards fair economic ecosystems
- Transformation towards good work and craftsmanship

In the following paragraphs, we will focus on the first ambition and argue why regenerative business models, some of the most radical new models, are an appropriate and viable way to learn about economic transformation. Using a set of research questions that have previously helped to advance the field of entrepreneurship in general, we will then present a brief overview of what is known to date about this emerging field of research. We will subsequently explain how we use new and existing insights to advance the field through a series of activities set up within the context of the CET.

Entrepreneurship as a source of economic transformation

The announcement of the Sustainable Development Goals (SDG's) marked the first time that the UN had expressly called upon entrepreneurs – not just governments and NGOs – to take up an active and possibly even leading role in solving societal problems (Schmiedeknecht, 2019). Doing so made sense, as entrepreneurs and entrepreneurial ventures are eminently suited to generating change and fostering renewal. As first explained by Schumpeter (1934), their role in the economy is to come up with, translate and use innovations to create value. While for many decades such behaviour has been associated by many with individual profit-seeking or even profit-maximizing behaviour, both research and practice show that the value created by entrepreneurs is neither solely economic nor purely individualistic. Indeed, most entrepreneurs contribute directly or indirectly to the development of their communities and regions for their own sake and self-interest, as well as for more social and altruistic reasons, regardless of whether they have profit motivations or not (Murnieks et al., 2020).





Nevertheless, many of the most well-known business models emphasize individualistic profit-orientated and competitive behaviour, including many of the models taught in higher education. These models will not suffice to accomplish the global challenges set out in the 17 SDGs, nor do they paint a full picture of what and how entrepreneurs are contributing already.

Following authors such as Mazzucato (2011, 2018, 2021), Raworth (2017) and Henderson (2021), we believe in the need for new, mission-based sustainable models where the boundaries between for-profit and social entrepreneurship are blurred and where innovation and collaboration are seen as key drivers of multiple value creation.

Given the state of our planet and societies, it has been suggested that all entrepreneurs need to re-assess the way in which they create value for society and find ways to do so in a fairer, less polluting. This requires innovation. Although many incumbents and startups might benefit from the status quo and try to resist the pressure to change, research has shown that, over time, those who do not innovate will likely render themselves obsolete. For many ventures and entrepreneurs, innovation will be a gradual or incremental process. By taking one or more smaller steps towards developing new and more sustainable products and services and underlying business models, they will be able to survive and slowly but surely change their sectors as well as society at large. Some, however, are taking much more radical steps, engaging in what Schumpeter (1942) dubbed creative destruction. This involves a process of incessant and radical product and process innovation, replacing existing production methods and impacting entire industries, whether for better or for worse. In the past few decades, for instance, we have witnessed how the rise of platform companies such as Uber and Booking.com upset the taxi and hotel industry, how online learning platforms such as Coursera and EdX upset education by offering free access, and how mobile healthcare and drone technology are changing healthcare.

Creative destruction and radical innovation are relatively rare, yet the magnitude of their impact is significant. Given the massive scope of the economic transformation needed to reach the SDGs, it only seems logical to explore what today's entrepreneurial frontrunners or pioneers are doing to help solve the world's most pressing challenges. It is worth mentioning that, in the process, they are not just finding ways to do business without exacerbating current problems, but are even seeking to reverse damage done in the past.

Hence, we join the efforts of authors such as Hahn and Tampe (2021), Caldera et al. (2022) and Konietzko et al. (2023) to gain insight into "regenerative entrepreneurship" and "regenerative business models", which could be defined as doing business to solve the adverse effects of climate change, restore biodiversity and reduce inequality.





FOCUS ON FRONTRUNNERS

Our choice to focus on the frontrunners or pioneers automatically implies that, for now, we will largely ignore the joint efforts made by the much larger group of companies taking less radical steps towards sustainability, e.g. by reducing waste or going circular. While some might question this approach, as it effectively sidelines those working to affect incremental positive change, others might argue that the experimental nature of regenerative businesses might increase the risk of failure, which can be discouraging for others and might scare them away from embarking on the same mission. It might also be argued that pioneering businesses provide a poor representation of the broader population or context. Their success could be contingent on unique circumstances, resources or timing that are not easily replicable elsewhere. Therefore, relying solely on extreme examples might lead to unrealistic expectations and misguided strategies for the majority. While we recognize and acknowledge these concerns, we strongly believe that focusing on frontrunners also has a number of important benefits.

First of all, these extreme cases serve as inspirational beacons and catalysts for change. These regenerative entrepreneurs and regenerative business models showcase the full potential and possibilities of this emerging field. By highlighting such pioneers, we not only set aspirational goals but also energize and mobilize other entrepreneurs and organizations to aim higher and think more innovatively.

Second, frontrunners or pioneers in regenerative business can help identify the outer boundaries and limitations of economic transformation. They allow researchers and practitioners to explore the ceiling of the possible, revealing both breakthrough successes and notable failures. Understanding these limits is essential for fine-tuning more gradual and sustainable strategies. By pushing the boundaries, regenerative entrepreneurs and regenerative business models provide valuable insights into what does and does not work when it comes to economic transformation.

Third, regenerative entrepreneurs and business models might capture the attention of policymakers, investors and the media, drawing greater public awareness to this emerging phenomenon. This increased visibility can lead to increased funding, support and interest, benefitting not only pioneers but also entrepreneurs and ventures pursuing more moderate approaches. As such, a focus on regenerative business can help foster an entrepreneurial ecosystem in which various strategies, ranging from the extreme to the gradual, can coexist and cross-pollinate.

While we acknowledge the diversity of approaches within the wider landscape and recognize the importance of a balanced perspective that respects and integrates more gradual approaches into the wider debate, our attention will, for now, be directed at the frontrunners, as we seek to harness their energy and inspiration.





Framework for review

While the practice of regenerative business is not new, regenerative entrepreneurship and regenerative business models are only just emerging as a field of research and much is still unknown. Despite growing every month, the scientific body of literature is still very small, making popular and professional blogs and descriptions of emerging cases in the media important sources of information about regenerative entrepreneurship and regenerative business models.

As the information is rather scattered, it is essential that we first build a basic framework to structure what is and what is not yet known about the field. While there are many frameworks that could lend themselves to this purpose, we decided to focus on frameworks that have already proven their merits by advancing the field of entrepreneurship in the past.

Specifically, we will follow Shane and Venkataraman (2000)'s seminal work in which they defined the field of entrepreneurship research and the responses to this article by Erikson (2001), Singh (2001) and Zahra and Dess (2001). Together, these authors have suggested that the following set of four questions provides the key to understanding regenerative entrepreneurship:

1. why, when, and how do opportunities for the creation of goods and services regenerative businesses and business models come into existence?
2. why, when, and how do some people rather than others discover and exploit these opportunities for regenerative businesses and business models?
3. why, when, and how are different modes of action used to exploit regenerative opportunities?
4. what is the impact of discovering and exploiting these regenerative opportunities for entrepreneurs, their firms, industry and society?

These questions guided our initial search for and analysis of existing studies and descriptions in the field of regenerative entrepreneurship and regenerative business models. Given the emerging nature of the field and the wide variety of sources, it is important to note that we do not claim our overview to be entirely structured or comprehensive. We stress that it should be seen as a preliminary indication of where the field is heading and what entrepreneurs are doing in this field.

Before we focus on these questions specifically, we will first seek to position the notion of regenerative entrepreneurship and regenerative business models vis-à-vis related concepts such as sustainable business, circular business and eco-positive business.





State of the field

CONCEPTUALIZATION

As may be expected in an emerging field, scholars are currently devoting ample attention to uncovering and defining the meaning of the concept of regeneration in relation to entrepreneurship and business models and its potential differences from related concepts. The concepts of 'regenerative entrepreneurship' and 'regenerative business models' both consist of two elements: 1) regenerative and 2) entrepreneurship or business models. Since the latter elements are now relatively well established in the literature, it seems to make sense to define them first.

Entrepreneurship can be defined in various ways, but most accepted definitions today agree that it concerns the pursuit of opportunities to create value. The AUAS entrepreneurship research group, building on authors such as Stevenson & Jarillo (1990) and Venkataraman (1997), defines it as the pursuit of opportunities, regardless of the resources currently under control, in order to create social and economic value for the initiator, the market in which they operate and the community in which they are embedded (Wakkee, 2017). Opportunities, accordingly, are defined following Schumpeter (1942) and Kirzner (1997) as novel, possibly innovative combinations that are deemed technically and economically feasible and personally and societally desirable and could create value when enacted.

The concept of the **business model** was used in the 1990s during the boom of e-commerce to quickly and effectively communicate complex business ideas to potential investors (Zott et al., 2011). A business model is a conceptual tool for understanding the purpose of a company's existence that companies use for their internal analyses, comparison and performance evaluation, management, communication and innovations (Osterwalder & Pigneur, 2010). More specifically, these authors describe a business model as a set of nine elements: the value proposition, activities, resources, partners, customers and customer relationships, distribution channels, cost structure and revenue model. Bocken et al. (2014) describe business models using a framework rooted in three main elements: the value proposition, value creation & delivery and value capture.

Next, **regeneration** refers to a process of renewal, restoration and growth. In biology, this term is used for the natural process by which tissues and cells are replaced or restored. In a business context, regeneration revolves around a process of renewal driven by a particular product or service and the material. According to Hahn and





Tampe (2021, p. 460) regenerative businesses “enhance and thrive through the health of the SES (socio-ecological system) in a co-evolutionary process in which human activity is seen as integral.” This also aligns with the definition of Du Plessis (2012, p. 19) who states that regenerative design is a net-positive approach that is defined as “a co-creative partnership with nature to restore and regenerate the global social-ecological system”.

Based on the above definitions, we can therefore deduce that, in very basic terms, regenerative entrepreneurship concerns the pursuit of opportunities that restore, revitalize and generate the global social ecological system rather than just mitigating harm or maintaining the status quo, while a regenerative business model concerns the underlying value propositions, value creation & delivery and value capture processes that facilitate that effort.

RELATED CONCEPTS

As indicated, the concepts of regenerative entrepreneurship and business models are often used either in comparison to, in contrast to or synonymously with many seemingly related concepts. Regenerative business is generally considered a type of **sustainable business**, as it seeks to avoid doing harm and strives to do good while ensuring that resources are not depleted (Bocken et al., 2014). Sustainable business model might therefore be regarded as an umbrella term encompassing everything from the smallest step away from traditional exploitative models to much more radical types such as regenerative business models.

Circular business models aim to minimize waste and maximize resource efficiency and thus aim for no negative impact on the environment. by designing products and systems that promote reuse, recycling and closed-loop processes (Lüdeke-Freund et al., 2019) Jonker et al. (2022) explain how the shift towards a circular economy requires a radical change, including a transition to other forms of entrepreneurship and organization and new business models based on cooperation and value creation in chains and networks. One might argue that circular models are less radical than regenerative models in that they prevent doing further harm but do not take active measures to mitigate historical problems.

Net-positive approaches involve striving to have a net-positive impact on the environment, typically by offsetting or mitigating negative effects by giving back more than is used, e.g. from the environment (Steiman, 2013).





The positive impacts can have various different targets, such as employees, suppliers, customers, community and society at large or energy, water etc. Generally, net-positive impact is considered on a domain-by-domain basis: organizations can be net-positive on certain issues, rather than net-positive overall. Net-positive approaches are often associated with a highly targeted, isolated positive impact, such as carbon footprint reduction, but this is not always the case. Companies might strive to become net-positive overall, in which case the concept would virtually overlap with regenerative business.

Porcelijn (2011) has also coined the term '**eco-positive**'. This idea stems from the fact that we would need multiple planets to sustain our current way of living. To get back into 'safe waters', we need an eco-positive approach, in which the planet and its resources are restored. Eventually, an eco-positive approach results in planetary restoration, after which eco-neutral living would be fitting. Whereas Porcelijn (2011) uses the term 'eco-positive' to indicate a way of living that restores the equilibrium between people and planet, this concept seems to be synonymous with both 'net-positive' and 'regenerative' in the sense that an eco-positive business model "brings about more positive than negative impact by actually regenerating the environment. Such business models are circular, clean, efficient, global and fair." Specifically, Porcelijn's book draws attention to the fact that we often overlook the hidden environmental costs of specific products. While we generally recognize the direct impact of driving a car (emissions), we tend to overlook its hidden impacts, such as the emissions involved in production and shipping. In order to assess whether a product is truly eco-positive, all aspects – overt and hidden – should be considered.

All in all, there seems to be considerable overlap between the various concepts. Nevertheless, regenerative stands out as the most radical of the bunch, both in terms of scope – as it encompasses both social and environmental dimensions – and scale, in that it stretches beyond harm prevention and also touches on restoration and rejuvenation. This appears to be a useful distinction, but a deeper dive into the literature reveals that the differences between the concepts outlined above are not as clear-cut as suggested. Moreover, researchers, other authors and practitioners do not necessarily share a uniform interpretation. In reality, labels and concepts are mixed up, used in different combinations, or applied to a variety of initiatives, as will also become apparent in the following sections. While this is not surprising, given that the field is still developing, it might lead to confusion in communications with different stakeholders. We will return to this issue at the end of this position paper.





RESEARCH AND PRACTICE TO DATE

To explore what is known about regenerative entrepreneurship to date, in the next paragraphs we present a brief overview of what the scientific, grey and popular literature has thus far uncovered in relation to the underlying opportunities, the entrepreneurs driving the process, the underlying organizational methods and the impact it has generated or is expected to generate.

Origin and nature of opportunities for regenerative entrepreneurship

Business opportunities in general originate from four main sources:

- (technological) innovation (Sarasvathy et al., 2010; Schumpeter, 1934)
- recognition of underutilized resources (e.g. vacant plots of land) (Ardichvili et al., 2003; Sun et al., 2020),
- external shocks (e.g. war or natural disasters, sudden finds of natural resources)(Alvarez & Barney, 2007, 2008) and
- demographic changes (e.g. aging populations or influx of large immigrant groups) (Kohlbacher et al., 2015).

This is not different for regenerative business. Indeed, examples found in grey and popular literature show evidence of regenerative business driven by hardcore R&D (Banda & Huzair, 2021), e.g. in the textile industry (Aldieri et al., 2021), or extensive use of novel technologies, ranging from drones (Caldera et al., 2022) to blockchain to track and trace resources and materials throughout the production chain (Bumblauskas et al., 2020; Schletz et al., 2023) Additionally, a widespread interest in biomimicry can be observed throughout the field (Caldera et al., 2022; Hayes et al., 2020) Biomimicry refers to the design and production of materials, structures and systems that are modelled after biological entities and systems (Aversa et al., 2016; Shu et al., 2011), and this approach is rapidly gaining popularity in fields as architecture (Rao, 2014; Verbrugghe et al., 2023) and construction (e.g. bio-based building) (Ahamed et al., 2022).

In addition to such innovation-driven initiatives, many regenerative ventures are actually built on novel implementation of ancient wisdom or cultural heritage practices, aiming to take advantage of underutilized resources. The Dutch foundation Just Diggit (www.justdigg.it), for instance, uses traditional techniques to dig holes in the ground in developing countries to capture rainwater and re-green previous degenerated





agricultural land, which is attracting more rain and cooling down the area. These “holes” are then sold to individuals, mostly in developed countries, looking to off-set their own carbon footprint. Likewise, Wilder Land (www.wilder-land.com) works with local farmers to restore biodiversity by planting mixed indigenous herbs for a variety of teas, syrups and other products. While concrete examples of how exogenic shocks and demographic changes have given rise to specific new regenerative initiatives are more difficult to find, there are some indications that these drivers are adding to the growing awareness amongst individuals as well as institutions regarding the need for more regenerative business practices. This, in turn, is leading to a shift of resources (including funding) towards such initiatives. DeutscheBankResearch (2020), for instance, published a compelling report on the importance of regenerative practices to rebuild the economy after the COVID-19 pandemic. Similarly, Forrest and Dudok van Heel (2023) stress in a recent position paper that regenerative business models will be an important safeguard against exogenic shocks and make companies more resilient.

Regenerative entrepreneurs

Whereas mainstream literature on entrepreneurship devotes significant attention to the individuals and teams driving entrepreneurship, entrepreneurs remain largely invisible in the scientific literature on regenerative business. In popular literature, several interviews with regenerative entrepreneurs can be found, typically focussing on their mindset, motivation and drive to embark on such initiatives. While some articles do share information on the educational background or work experience of these entrepreneurs, relatively little attention is paid to their specific capabilities, needs and issues related to team composition. From the scarce scientific literature on the topic (Boluk & Panse, 2022), we can deduce that regenerative entrepreneurs recognize a strong need to educate others about regenerative practices and that they see themselves as agents of change, perhaps more so than as entrepreneurs (Quarshie et al., 2021). While visionary entrepreneurship certainly seems important for successful regenerative businesses, the literature also suggests that it is not necessarily individuals who take the lead. In line with the social entrepreneurship realm, many regenerative businesses are, in fact, the result of community efforts (Walther et al., 2021)

Modes of regenerative action

From a review of the literature, it is clear that most scholarly attention has thus far been gone to the organization or governance of regenerative business. This is evidenced





from the relatively large number of papers focussing on regenerative business models. Particularly in the past 3 years, numerous authors have addressed key components or dimensions of such business models or strategies. For instance, Hahn and Tampe (2021), have developed the restore-preserve-enhance scale for regenerative business strategies, reflecting a continuum of strategies for regeneration, building on a systems-based definition of the level of aspiration and an adaptive management approach. According to the authors, regenerative business practices need to be both local and decentralized, even if they address global ecological systems. Furthermore, following Neugebauer et al. (2016), strategies cannot be fully planned but need to be emergent, adaptive and iterative practices, based on robust actions and continuous feedback from social ecological systems (p. 461). Likewise, Konietzko et al. (2023) recently described important elements of regenerative business models, to clarify the concept and to distinguish it from related concepts such as circular business models. They found that organizations that adopt regenerative business models prioritize the well-being of both the planet and society, aiming to generate value for various stakeholders, such as the environment, communities, customers, suppliers, partners, shareholders, investors and employees. These organizations achieve this by promoting regenerative leadership, forming collaborative partnerships with nature, and upholding principles of justice and fairness (Konietzko et al., 2023). Their approach involves measuring value across different forms of capital and striving to have a positive impact on all stakeholders. Collaborative partnerships throughout the value chain are frequently emphasized. This notion is underscored by authors including Lewandowski (2016) and François and Goi (2023), who view it as a fundamental aspect of regenerative business models. Crucially, these partnerships extend beyond just businesses, often necessitating active engagement from civic institutions and governments. Indeed, in personal conversations we have had with entrepreneurs, they pointed to the pivotal role of governments in existing (e.g. food safety or building) regulations or in measures to protect existing local business communities. They indicated that these regulations and measures often hamper against regenerative practices, whether intentionally or unintentionally.

In terms of business models used, both recent studies and insights from practice suggest that stewardship and Product-as-a-Service (PaaS) models are used relatively frequently in regenerative businesses. Steward-ownership refers to a set of legal structures that prioritize the purpose of a company instead of the maximization of short-term profits, while also safeguarding the company's independence in the long-run. (Davis et al., 2018; Karns, 2011). Such models emphasize responsible management, prioritizing long-term sustainability over short-term gains.





They focus on ethical practices such as local sourcing and prioritizing employee well-being, accountability to stakeholders, and preserving resources for future generations, aligning business interests with broader societal and environmental goals. PaaS models involve offering products to customers on a subscription or pay-per-use basis, rather than selling them outright. This approach can support regenerative business practices via extending products' life span, promoting resource conservation and enhancing customer engagement. A notable example is Interface (www.interface.com), a flooring company that offers carbon-neutral industrial flooring (carpet tiles) as a service while also developing new fibres that actually remove carbon dioxide from the air, thus striving for negative emission and working to reduce climate change.

Outcomes and value creation

When it comes to outcomes and impact of regenerative business, it seems evident that profit maximization is not a top priority for the founders of such businesses. Nevertheless, some profit is generally deemed necessary to support further R&D and innovation and to facilitate scaling to create greater environmental and social benefits. Also, it can be argued that showing that regenerative businesses can be profitable might be an important lever for more ventures, startups and incumbents alike to invest in (more) regenerative business practices and the development of regenerative products and services.

While we could not find any studies focusing specifically on the profitability of regenerative business models, anecdotal evidence and reason suggest that the road to profitability is lengthy for many regenerative businesses. Indeed, the necessary R&D processes might be capital intensive and risky on the one hand, while fair compensation of actors along the value chain means prices for raw materials and services will be relatively high, on the other.

Lessons learned and need for future research

In this position paper, we stress the urgent need for economic transformation and posit that entrepreneurship and regenerative business models can play a crucial role in driving this transformation. We believe that entrepreneurs are well-suited to driving this change and creating value, not just for profit but for the betterment of the planet and communities. Focussing on the frontrunners amongst them, we aim to set aspirational goals and to energize and mobilize other entrepreneurs and organizations to aim higher and think more innovatively and to support these organizations. We also believe that these frontrunners allow us as researchers and practitioners to explore the edges of what is possible.





From the current literature and practices and based on a tentative positioning of regenerative business compared to related concepts such as sustainable, circular and net-positive business models, we have deduced a working definition on regenerative entrepreneurship and regenerative business models:

‘regenerative entrepreneurship concerns the pursuit of opportunities that restore, revitalize and generate the global social ecological system rather than just mitigating harm or maintaining the status quo while a regenerative business model concerns the underlying value propositions, value creation & delivery and value capture processes that facilitate that effort’

Since it is clear that there is significant overlap between this model and related concepts such as net-positive, we recognize that for some, the distinction may seem artificial and that in practice, people will use these concepts interchangeably. Others might prefer one label over the other, depending on their discipline. Indeed, our literature review shows that ecologists and economist use different words to describe similar or at least related phenomena and concepts. Given that the field of regenerative business is informed by many disciplines, it seems likely that this mix of terminologies will persist.

Having said that, for the time being we consider regenerative businesses and business models as the most radical type of sustainable businesses and business models in both scale and scope. Based on the literature, regenerative models go beyond their circular counterparts in the sense that they do not only close the resource loop to avoid exacerbating damage done to the climate, bio-diversity, and communities, but actually strive to reverse the damage and allow these to thrive. The main difference with net-positive seems to be the combination of ecological and social goals, as well as the ambition to extend such practices to all aspects of the venture. At the same time, we do recognize that further research is needed to create more specific definitions and classifications based on more precise attributes. Also, comparisons to other impact-driven enterprises might be necessary to clarify what distinguishes regenerative businesses, but also to learn from the body of literature in that field, for instance in relation to hybrid organizations.

Using four guiding questions pertaining to 1) the origin of regenerative opportunities, 2) the people who pursue them, 3) the modes or action they take and 4) the value they create, we set out to explore the emerging field in more detail.





From this exploration, it seems that most opportunities for regenerative businesses originate either in recent technological innovation or in the recognition that underutilized or misused resources can be used in a novel manner, albeit often inspired by ancient wisdom and/or cultural heritage practices. While it seems likely that exogenic shocks such as the pandemic and/or demographic changes such as migration and aging populations are important drivers of regenerative business, specific cases are not documented. Importantly, it should be noted that no expressly regenerative cases have been documented: other keywords may produce relevant studies.

In any case, there seems to be a clear need to investigate environmental and social triggers and other exogenic shocks that prompt entrepreneurs to recognize opportunities for regenerative business. Furthermore, scholars could conduct further research into the frequency, impact and applicability of the different sources in different sectors of industry and or geographical regions. Along a similar vein, future research could examine how entrepreneurs might replicate and adapt opportunities explored and exploited in one sector or region for exploitation in another. Moreover, the role of ancient wisdom and cultural heritage as levers for regenerative business may be another interesting avenue for further research.

When it comes to the people driving the transformation towards regenerative business, the literature is even more scant. While other impact entrepreneurs – particularly social entrepreneurs – are generally acknowledged as agents of change, hardly any research specifically explores what it is that they do and or what skill sets they possess or need. Also, while no references are made to the roles of entrepreneurial teams, it is clear that regenerative businesses are often run by communities looking to instigate change. Clearly, further research is needed to develop insights into why, when, and how some people and groups discover and exploit these opportunities for regenerative businesses and models, while others do not. Because of the emerging and complex nature of regenerative business, there seems to be a particularly urgent need to develop insight into how “regenerative entrepreneurs” collaborate, experiment and learn. Furthermore, future studies might explore the characteristics, backgrounds, and motivations of regenerative entrepreneurs, including their educational backgrounds and prior work experience and how these inform their regenerative practices.





Most literature, despite the limited quantity of output on the topic, is about the modes or actions employed in regenerative business. The literature shows how organizations that adopt regenerative business models prioritize the well-being of both the planet and society. When it comes to specific models used to deliver and capture value, both literature and practice suggest that stewardship and PaaS models are used relatively frequently in regenerative businesses. Potential avenues for future research might therefore be found in the domain of organizational and governance structures underlying regenerative business models. Collaboration in the supply chain may also merit further investigation.

Regarding outcomes and value creation, both literature and practice suggest that regenerative businesses aim to generate value for various stakeholders, such as the environment, communities, customers, suppliers, partners, shareholders, investors and employees. Few studies have thus far examined to what extent these attempts have been successful and what factors would contribute to such success. The lack of such studies is not surprising, given that both the field as such and the cases that have been documented thus far are in an early stage of development. Yet, there are indications that due to the high costs of R&D and principles of fair distribution along the supply chain, making regenerative business profitable in the traditional sense might involve long-term perspectives. Further research into the financial sustainability of regenerative models and or the challenges they face into terms of funding, impact assessment and revenue sharing is clearly needed. Additionally, it would be interesting to examine to what extent regenerative businesses can actually contribute to economic transformation at a sectoral or regional level by offering new templates that could ultimately lead to the creative destruction of the old models.

NEXT STEPS

Within the context of the CET, we have taken it upon ourselves to contribute to developing the field in several ways.

First, we have already set up a **Delphi study** to contribute to conceptual clarity, aiming to engage a broad range of scientific and field experts. Through a series of surveys, we have sought and used the viewpoints and insights of both scientific and field experts to generate a better understanding of what regenerative businesses and business models actually entail and how they can be distinguished from circular and net-positive businesses and business models. The initial results of these efforts have already been presented at a scientific conference on business models and will be used as the basis of a scientific publication.





Secondly, **two exploratory case studies** in Dutch businesses have been set up. Building on the findings from literature, the Delphi study and the expertise of the entrepreneurs, we created an initial list of features to describe regenerative business models. This **initial framework** includes features such as impact on biodiversity, quality of soil and the use of land, as well as social equality and equal wages. Although some of these features – such as impact on social equality – are hard to measure, they are still indicative of regenerative business and have been included to describe the real or potential impact of the business. Through observations, literature review and interviews, we collected relevant information on these aspects. We used these data to gain insight into the companies' business models and to leverage these insights for the further development of the framework. We plan to continue developing this framework so that it can be used to describe approaches to regeneration and to systematically compare and discuss such approaches.

Third, while few ventures and business models are completely regenerative, many companies are trying to set the first steps on a path towards becoming regenerative in at least part of their business. While their level of advancement varies, to celebrate their successes and inspire others to embark on the same path, we are currently working on **an inspiration booklet** showcasing these ventures and their activities.

CONCLUDING REMARKS

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