Received: 26 July 2021 | Revised: 19 May 2022 | Accepted: 5 June 2022

DOI: 10.1002/sd.2357

RESEARCH ARTICLE

Sustainable Development

WILEY

A balancing act between economic growth and sustainable development: Historical trajectory through the lens of development indicators

Tadashi Hirai

Centre of Development Studies, Department of Politics and International Studies, University of Cambridge, Cambridge, UK

Correspondence
Tadashi Hirai Centre of Development Studies, Department of Politics and International Studies, 7 West Road, Cambridge, CB3 9DT, UK.
Email: hirai.tadashi@gmail.com

Funding information
United Nations

Abstract

The evolution of the development discourse is profoundly political. Despite a range of innovations the situation remains much the same, and has led over time to the dominance of the economic growth model. Whilst academic/ideological vigour, policy relevance and institutional support, together with intellectual independence, are essential; too radical an alternative approach would be dismissed by mainstream opinion, either by design or neglect. To survive and to remain influential, any alternative requires the mainstream to engage with it for political feasibility. The development discourse has thus evolved through a delicate balancing act, acknowledging a need for a cautiously optimistic outlook. By tracing changes in two approaches to development (basic needs and human development) and in two global development goals (millennium development goals and sustainable development goals) through their selection and use of indicators, this article explores both the explicit and the implicit power of the mainstream in the past and present alternatives.

KEYWORDS
basic needs, economic growth, human development, MDGs, planetary boundaries, SDGs, strong sustainability, weak sustainability

1 | INTRODUCTION

The concept of development is evolving in step with intellectual and technological advances,[1] but the process is profoundly political. A range of innovations does not necessarily change the discourse, which has come to be dominated by the growth perspective, as we have witnessed in the field. Indeed, the development discourse has evolved through a delicate balancing act between mainstream thinking and its alternatives.

In the recent years, environmental protection has come under the development spotlight because of the 'planetary boundaries' framework (Rockström et al., 2009; Steffen et al., 2015). Unlike the previous attempts, this framework clearly defines the biophysical preconditions beyond which development would be unsustainable, and was naturally expected to be incorporated into the sustainable development goals (SDGs) (Elmqvist et al., 2014). Nonetheless, the role played by environmental issues in development is still at the best supplementary. Similarly, sustainability has been encompassed in the human development approach from the outset as one of the central issues in the first Report (UNDP 1990) and is explicitly argued by Haq, one of the founders of human development (Haq, 1995).[2] Although the planetary pressure-adjusted Human Development Index (HDI) was introduced after a lengthy delay (UNDP, 2020), it is only a supplement to the HDI, not an adjustment of it. The economy is surely important for our lives, but it tends to have a disproportionate impact, coming to dominate the discourse, despite the recent innovative arguments

favouring alternative ways of development that show concern for humanity and the natural world.

To render concepts of development, academic rigour (including intellectual and technological advance) should be combined with policy relevance, which in turn should be framed and supported within an institutional infrastructure (Bøås & McNeill, 2004; Gasper, 2000, 2011; McNeill, 2007). To this end, the mainstream economic growth model is grounded by economists for growth maximisation and supported by the top-down Bretton Woods institutions (Haq et al., 1995). In contrast, the human development approach is grounded by experts from a wide range of disciplines, not excluding economists, for improving overall human well-being and supported by the bottom-up UNDP (Murphy, 2006), and this is also true of the SDGs. Moreover, the Human Development Report enjoys editorial independence from the UNDP, to maintain intellectual integrity and facilitate local involvement (Haq, 1995). This helps to minimise influence from powerful countries, to which even the bottom-up UNDP is subject. It is not a coincidence that the Sustainable Development Report published annually with the SDG Index is managed by institutions independent of any UN bodies (Sachs et al., 2016). To help alternative views to survive and remain influential, however, academic rigour, policy relevance, and institutional support along with editorial independence seem insufficient; perhaps paradoxically, their proponents also need to involve the mainstream, if that is politically feasible.[3]

This article seeks to investigate an intricate power balance between the mainstream and its alternatives in development. It begins by reviewing the problematic relationship between sustainable development goals. It then explores the impact of the growth perspective, both explicitly and implicitly, now and in the past, by tracing the shifts in development paradigms (i.e. from basic needs to human development) and in development goals (i.e. from the millennium development goals [MDGs] to SDGs) through their selection and the use of indicators. It concludes with necessary conditions for the alternatives – ideologically powerful enough to compete with the mainstream, but flexible enough to gain attention from it – through the lens of human development and the SDGs.

2 | THE HOLISTIC VIEW OF DEVELOPMENT: SDGS AS A NESTED CONCEPT

The SDGs have 17 goals, which are typically categorised along economic, social and environmental dimensions. Nonetheless, the value of these global goals lies in integrated thinking, viewed as 'a nested concept' (Elmqvist et al., 2014; Griggs et al., 2013; Norström et al., 2014). This integrated view of SDGs contrasts with the MDGs, in which each goal was addressed as 'a separate silo', ending up with missed opportunities for the realisation of positive interactions between goals (Crabtree & Gasper, 2020; Kwon, 2017; Waage et al., 2015). Accordingly, the agencies dealing with SDGs ought to consider goals other than those in which they specialise, so that a single agency is put in charge of multiple goals whilst each individual goal is addressed by multiple agencies (Le Blanc, 2015). As such, the SDGs will succeed only if all of the goals are achieved concurrently. On this point, Jeffrey Sachs notes that: 'Success in any of these three categories (or subcategories within them) will almost surely depend on success of all three' (Sachs, 2012, p. 2208).

This integrated view is based, however, on a fundamental assumption that all SDG goals are achievable without competition amongst themselves. This prompts us to ask whether the SDG goals are internally consistent or if they are mutually contradictory (Hickel, 2019; International Council for Science and international Social Science Council, 2015; Kwon, 2017).

2.1 | SDGs in conflict

In general, environmental goals tend not to sit comfortably alongside economic goals, since overall improvements in economic growth are associated with an increased use of materials, thereby imposing stress upon environmental capacity (Pothen & Welsch, 2019). Regarding the relationship between environmental and social goals, O'Neill et al. (2018) show that physical needs (e.g. nutrition, elimination of poverty, sanitation, and access to energy) could be met for all people without exceeding environmental capacity. Nevertheless, whilst economic and social goals could be achieved simultaneously; this is not the case with goals that are environmental (Barbier & Burgess, 2019). Such a relationship between the SDGs has been described as 'oxymoronic' – i.e. as a contradiction in terms (Adelman, 2018; Kopnina, 2019; Spaiser et al., 2017). At present, it is not feasible to achieve endless economic growth, well-being improvement and environmental protection all together.

This conclusion has been endorsed by numerous studies. The conflicting relationship between economic growth (Target 8.1) and climate action (Goal 13) was pointed out when the SDGs were first finalised, by stressing that Goal 13 is not achievable without significant decarbonisation in the economy (Griggs et al., 2014). This point was reinforced when possible contradictions were discovered, not only between climate change and economic growth alone but also between several other goals (von Stechow et al., 2016), e.g. food security (Goal 2), energy access (Goal 7), full employment (Target 8.3), resilient infrastructure (Goal 9), and sustainable production (Target 12.4). More comprehensively, Pradhan et al. (2017) demonstrate that the goals associated with economic growth - Goal 8 (decent work and economic growth), Goal 9 (industry, innovation, and infrastructure), and Goal 12 (responsible consumption and production) - are in conflict with more than ten other goals. Focusing on agricultural productivity (as part of economic growth), Banerjee et al. (2019) also show that the expansion of irrigated agriculture conflicts with Goal 15 (life on land) by pursuing deforestation; it conflicts with Goal 13 (climate action) by increasing green gas emissions; and it conflicts with Goal 6 (clean water and sanitation) by increasing water consumption.[4]

The need for a better understanding of potential interactions has been emphasised since the initial SDG proposal (Elmqvist et al., 2014;

Griggs et al., 2014; Lu et al., 2015; Norström et al., 2014), because those interactions are not explicitly reflected in the proposed goals and targets (Diaz-Sarachaga et al., 2018; Le Blanc, 2015; Stafford-Smith et al., 2016). Accordingly, Nilsson et al. (2016) assess the interactions on a seven-point scale from the most positive (+3: most synergetic) to the most negative (−3: most antagonistic). These interactions are typically categorised either as 'synergies' by aiding another goal, or as 'trade-offs' at an another goal's expense (Banerjee et al., 2019; Barbier & Burgess, 2019; Griggs et al., 2014). Synergies are identified by positive correlations, whereas the correlations that identify trade-offs are negative (Pradhan et al., 2017). Most recently, Kostetckaia and Hametner (2022) reveal that trade-offs have a greater influence than synergies upon the progress of an overall SDG, suggesting that overcoming trade-offs is more important than enhancing synergies.

2.2 | Two types of sustainable development

The type of interaction (i.e. synergy or trade-off) differentiates between interpretations of sustainable development. Whereas the 'weak sustainability' discourse accepts both trade-offs and synergies, the 'strong sustainability' discourse accepts only synergies in line with the concept of planetary boundaries. This follows the interpretation of substitutability between human capital and natural capital (Hinterberger et al., 1997; Pearce & Atkinson, 1993).

2.2.1 | Weak sustainability in the SDGs

Those who support weak sustainability tend to set priorities as to goals. For example, Reyers et al. (2017) recommend the choice of representative indicators ('essential SDG variables', in their words) for monitoring purposes. More specifically, Pradhan et al. (2017) identify the most frequent interactions by assessing correlations between SDG indicators, so that salient synergies can be leveraged and salient trade-offs can be negotiated. Alternatively, Allen et al. (2019) and Huan et al. (2022) prioritise selected SDG targets using three criteria: level of urgency (determined by a baseline assessment of indicators), systemic impact (determined by an interaction assessment between targets) and policy gap (determined by an assessment of alignment with the existing strategies and plans). At the next step, supporters of weak sustainability favour the construction of a composite index to reflect an overall SDG progress. For example, Costanza et al. (2016) argue for the creation of a Sustainable Well-being Index that reflects three dimensions of the SDGs, whilst Sachs et al. (2016) introduce the SDG Index, which consists of 85 indicators from all 17 SDG goals, updated annually in the Sustainable Development Report and currently covering 165 countries (Sachs et al., 2021).

Now, although priority-setting and composite indexing may be practical for avoiding 'just another wish list of unattainable objectives' (Pongiglione, 2015), they mask the reality that not all goals can be achieved concurrently by singling out those connected more closely with others whilst eliminating those that are connected less closely. By means of network analysis techniques, Le Blanc (2015) points out that Goal 1 (poverty), Goal 8 (growth and employment), Goal 10 (inequality) and Goal 12 (sustainable consumption and production) each have links with more than ten other goals, whereas Goal 7 (energy), Goal 9 (infrastructure and industrialisation) and Goal 14 (oceans) each have links with no more than three other goals. This situation reveals the implicit dominance of economic goals (i.e. Goals 8, 10 and 12) in priority-setting. Similarly, whilst each study proposing a composite index (i.e. Costanza et al., 2016; Sachs et al., 2021) acknowledges the importance of dashboards in addition to a single number, the resulting indices value economic goals over environmental goals. Indeed, the SDG Index ranks countries with a high ecological footprint as high achievers (Jain & Jain, 2019) and thus pushes Europe, North America and Oceania to the top of the ladder (Diaz-Sarachaga et al., 2018).

Priority-setting and a composite index favouring weak sustainability thus result in overvaluing economic goals in relation to social and environmental goals, however, practical they might be. This tendency has been reinforced by saccharine epithets when growth is associated with descriptors such as 'sustainable', 'efficient' or 'substantial'. In the same vein, the sustainability concepts such as 'green growth', 'circular economy' and 'inclusive development' emerge in parallel with the SDGs. They all have neoliberal roots and presuppose a growing economy (Costanza et al., 2012; Elmqvist et al., 2014; Gupta & Veglin, 2016; Hickel & Kallis, 2020; Schröder et al., 2020). Although these deceptive terms could represent potential interactions across the goals (Le Blanc, 2015), we must review their compatibility without becoming complacent about them (Lu et al., 2015).

2.2.2 | Strong sustainability in the SDGs

From the opposite perspective, those who support strong sustainability advocate the need for degrowth. For example, Pothen and Welsch (2019) recommend a slowdown in the economy, on the ground that economic growth in its current form does not limit the use of materials. Similarly, in the context of the SDGs, Griggs et al. (2014) point out that Target 8.4 seeks to decouple economic growth from environmental degradation but without any quantitative specifications based on strong sustainability, whilst Brandi (2015) notes that Goal 13 aims to combat climate change and its impact but without any relevant threshold (e.g. a 2 °C limit based on the planetary boundaries). Accordingly, Hickel (2019) suggests removing the growth objective in Goal 8, so as to reduce resource use in high-income countries as well as reducing global income inequality, and asserts that economic growth can be justified only in low-income countries. Similarly, O'Neill et al. (2018) accept economic growth only if it is equitable and sustainable and, as a result, note the inevitability of degrowth in developed nations. Moreover, recognising the relentless economic expansion driven by consumerism, Jain and Jain (2019) call for degrowth in developed nations, by tackling the process of unlimited consumption from a spiritual perspective whilst justifying the need for

growth amongst developing nations. More drastically, Kopnina (2019) rejects the opportunity for growth, even in the developing nations, without first fundamentally altering the economic growth model, since those nations would otherwise be likely to follow the trend set by developed nations.

The necessity for degrowth in sustainable development as described above is nothing new. Whilst Victor concludes that "degrowth in materials use, fossil energy, land and water is clearly required, so degrowth of national economies may be unavoidable" (Victor, 2010, p. 371), Griggs et al. assert that "none of this [i.e. sustainable development for people and planet] is possible without changes to the economic playing field" (Griggs et al., 2013, p. 307). Further, Lorek and Spangenberg (2014) argue a need to reduce the physical size of the economy without relying on innovative and technological solutions, because it is not efficiency but an absolute reduction in consumption that matters for environmental protection.

Why, then, does the economic aspect of development remain a major component of the SDGs? It represents a delicate balancing act between the economic growth model and its alternatives, the importance of which is underlined by the historical analysis in the sections that follow.

3 | THE GROWTH PARADIGM IN THE ALTERNATIVES

The raison d'être of alternatives is to compete with the mainstream. However, it would go too far to ignore the mainstream completely. If, for example, poverty reduction were singled out in development strategies without a growth perspective (e.g. in the form of redistribution), the alternative would cease to exist. By analysing the two historical trends (i.e. from basic needs to human development and from MDGs to SDGs), this section demonstrates the necessity of the growth perspective even in alternative perspectives (i.e. 'explicit power' of the mainstream) if they are to survive and be influential.

3.1 | The human development approach Vis-à-Vis the basic needs approach

The basic needs approach focused on people in poverty. Although conceptually enriched by embracing the need to consider participation and freedom (ILO, 1977; Stewart, 1985; Streeten et al., 1981), which are relevant to everyone, it was simplified by focusing on basic access for improvements to well-being (Emmerij et al., 2001). Accordingly, a composite index, the Physical Quality of Life Index (PQLI), was proposed, consisting of three indicators: infant mortality, longevity and literacy (Sewell, 1977). Given the indicators in the PQLI, however, the most developed nations had almost perfect scores and lost interest in following up their performance. As a result, the PQLI soon ceased to be updated, and the basic needs approach lost impetus accordingly.

By contrast, the human development approach addresses that shortcoming by including the growth perspective. Human development sheds light on what people are able to do and be, i.e. well-being per se rather than the means of achieving it (Sen, 1989; UNDP, 1990). Subsequently, a composite index, the HDI, was proposed, consisting originally of three indicators: longevity, literacy and income (UNDP, 1990). Its aim is to be as simple as GDP but more reflective of our lives (Haq, 1995). Compared with the PQLI, the HDI replaces infant mortality with income without changing the other indicators. The inclusion of income in the index appears to undermine its guiding principle (namely to focus on well-being per se rather than the means of achieving it), but this is effective in making the HDI relevant to the powerful. Nevertheless, the story does not end here. To overcome the difference in the nature of each indicator (i.e. in terms of ends and means), longevity and literacy have been subjected to linear transformation, whereas income is treated according to the principle of diminishing returns (UNDP, 1990).

As a result, the human development approach covers the growth perspective, both by including income to reflect one of the three dimensions of the HDI and also by tactically reducing the impact of income by transforming its indicator value. This has allowed the HDI to be given greater attention during the previous three decades. In the past, some composite indices of development included income but failed to secure widespread attention, because income was only one of many indicators, and this reduced its impact (Hirai, 2017). The popularity of the HDI thus derives not only from the inclusion of income but also from its strategic treatment. Indeed, to remain relevant in development circles, the HDI has repeatedly revised the treatment of income with a tendency for reduced discount, as will be analysed in the following section.

3.2 | SDGs vis-à-vis MDGs

Unlike the MDGs created in a top-down manner by the Northern donor countries, the SDGs were created after a series of consultations across the North–South divide (Fukuda-Parr, 2016; Gasper, 2019; Fukuda-Parr & McNeill, 2019). Such an open governance structure encourages wide participation from different groups: not only from developed but also from developing nations; not only from the public sector but also from the private sector; not only from elites and technocrats but also from civil society in general and not only from economists but also from specialists across a wide range of disciplines. As Hajer et al. (2015) note, the SDGs have thus been managed by new agents of change who take action in their own fields of concern and expertise, instead of being managed in the conventional way by governments and international institutions.

In this context, the SDGs push the environmental issues to the forefront of the development discourse. Although their significance had been discussed repeatedly over time, their position had remained marginal. Indeed, the environmental goal included in the MDGs was weak, imprecise and limited in scope (Brandi, 2015; Waage et al., 2010). By contrast, the SDGs have succeeded through an open global consultation in positioning the environment at the same level as the economy and

well-being – at least, on the surface, to the extent that environmental issues are advanced as one of three agendas, although their significance tends to be marginalised by being treated as weak sustainability.

Now, it is important to point out that, with multiple agents on board by country, sector, rank and discipline, such an open global consultation allows the SDGs to incorporate the growth perspective in addition to topics characteristic of alternative approaches, such as well-being and the environment. Indeed the focus on economic growth was introduced by the High Level Panel co-chaired by the U.K.'s prime minister at the initial stage of the consultation process, as a priority for developed nations.[5] The presence of the growth perspective in the alternative approaches sounds contradictory, given that the alternatives are expected to compete with the mainstream. But, with regard to political feasibility, economic growth could not be completely detached from the alternatives, because growth is key to attracting the attention of the powerful (e.g. developed nations, the private sector, the elite and middle classes, and the economists). From this perspective, the MDGs had succeeded in poverty reduction but did not attract so much attention as the SDGs are currently attracting. This was because they aimed to promote international aid for poverty reduction and basic needs (Fukuda-Parr, 2016), in which redistribution rather than economic growth per se was the central concern. With this point in mind, the MDGs would not have maintained their influence after 2015 if they had continued in their original form, in line with poverty reduction. Instead, the SDGs have a strong driving force precisely because the powerful come on board in their own interests. Indeed, unlike the MDGs, the SDGs have been taken seriously by the business sector in view of its corporate social responsibility (Rosati & Faria, 2019; ElAlfy et al., 2020; Lu et al., 2021; Álvarez-García, 2022).

This trend hints at the need to embrace the growth perspective for the alternatives to survive or to be politically 'sustainable'. Although identifying ideologically with the social and environmental aspects of development, the growth perspective is required in the SDGs for reasons of polity. Whilst this seems paradoxical, it is essential in order to bring the powerful on board. In this context, the SDGs have faced a constant risk of erosion by the mainstream, as will be shown in the next section.

4 | ALTERNATIVES ERODED BY THE GROWTH PARADIGM

Without economic growth, alternative approaches are too weak to survive, let alone to become influential. The situation underlines the importance of the economy. Once the economy is acknowledged, however, its balance with non-economic elements of development becomes intensely political (i.e. 'implicit power' of the mainstream), as shown below through the lenses of the HDI and the SDGs.

4.1 | Treatment of income in the HDI

The inclusion of the growth perspective in human development is represented by the use of income as one of the indicators in the HDI. Change over time in the treatment of income in this composite index reveals a gradual erosion by the growth paradigm in human development.

The original influence of income in the HDI was barely marginal, as a consequence of being severely discounted: (1) by using log transformation to reflect the principle of diminishing returns, and (2) by setting up a cap equivalent to the poverty line of nine developed countries (PPP$4861) (UNDP, 1990). This means that the logarithm was applied only up to the threshold, above which no count was made. In the following year, the log transformation was replaced by a modified version of Atkinson's inequality measure, to make the discount less severe and thus to differentiate the performances by developed countries (UNDP, 1991). Whilst this formula avoided a complete cut-off above the poverty line by assigning a fractional weight above the line, the impact remained marginal given the resulting maximum value (PPP$5070) after adjusting the actual observed value of PPP $19,850 (UNDP, 1991). In 1994, the treatment of income changed in two ways: (1) the threshold level was changed to make it equivalent to the world average (PPP$5120); and (2) the maximum value for standardisation was fixed at PPP$40,000 (PPP$5385 after adjustment) (UNDP, 1994). Given the maximum after adjustment, however, the change was still marginal. After 5 years, whilst keeping the maximum value of income for standardisation at PPP$40,000, the modified version of Atkinson's measure was replaced by a log transformation but now without a threshold, to reduce the discount and to make the calculation less complicated (UNDP, 1999). As a result, income was assessed on the principle of diminishing returns up to PPP$40,000, above which no count was made. This way of treating income continued until 2010 when the maximum value of income for standardisation changed from the fixed value of PPP$40,000 to variable values set to the actual observed maximum values since 1980, on the ground that the maximum values do not much affect the percentage comparison with the geometric mean (which replaced the arithmetic mean in that the year's aggregations) and that the actual observed values avoid arbitrarily chosen maximum values (UNDP, 2010). Consequently, the maximum value of income jumped to PPP $108,211. Finally, the maximum value was once again fixed but at PPP$75,000 (UNDP, 2014). The shift in the treatment of income in the HDI over time is summarised below (Table 1).

Overall, the maximum values of income have markedly increased. It would be more than mere coincidence that the hike in 2010 occurred when the Report was led by economists from the World Bank. Shortly afterwards, the value was lowered (PPP$75,000) but it was still much higher than the previous level (PPP$40,000). Indeed, this value was exceeded by only three countries as at 2019 (UNDP, 2020).

In anchoring the impact to emotional well-being such as happiness, the current maximum value was justified by the well-known work of Kahneman and Deaton (2010). But emotional well-being is the subject about which human development has long been sceptical, on account of its whimsical nature caused typically by adaptive preferences (Nussbaum, 2000; Sen, 1987; Stewart, 2014). What matters here is not the argument against the validity of emotional well-being but the making of such a momentous decision without extensive discussion. Indeed, a single sentence in an appendix to the Report

asserted that: "There is a virtually no gain in human development and well-being from annual income beyond $75,000" (UNDP, 2015, technical notes: 2). This wording has been repeated in the subsequent reports without further justification or elaboration. It is against the virtue of human development, to the extent that it is supposed to make the values embodied by the methods as explicit as possible (Sen, 1997). This had been clearly promoted in the previous Report (UNDP, 1993) and implemented after scrutiny and revision in the subsequent Reports.

The increasing influence of income in the HDI can be seen as a lucid illustration of the way in which the alternatives are eroded by the growth paradigm (i.e. by overvaluing economic growth in development). The shift seems required to involve the powerful in this enterprise, so that human development can remain influential as an alternative approach. To illustrate this point, the timing of the revision largely corresponds to the improvement in the U.S. position on the HDI ranking, particularly both in 1991 and in 2010 (Figure 1).

Although the revision was not encouraged by the United States,[6] the HDI requires their attention to maintain its clout. Given the recent downward trend, another round of revision could be expected shortly; otherwise, human development will be another alternative approach destined to disappear, by losing support from the mainstream. Given the influence of the SDGs since 2015, this might already be happening.

4.2 | Quantifiability and non-comparability with planetary boundaries of indicators in the SDGs

As examined earlier, there is no consensus over interactions between goals in the SDGs. Such a loose structure between the SDGs, whilst beneficial in terms of wide attention and aspirations, allows the mainstream to secure a favourable position in relation to the quantifiability of existing indicators and their incompatibility with the concept of planetary boundaries.

As shown in Figure 2 (below), unquantifiable indicators (categorised as Tier 3) formerly varied across economic, social and environmental dimensions but had disappeared by 2021; and indicators with more frequent data updates (Tier 1) have increased across the dimensions to a varying extent.[7]

Higher progress in quantifiability and data availability with more frequent updates on environmental and social dimensions presents a positive view of the alternatives. Nevertheless, it is important not to be deceived by superficial trends. On the one hand, the sluggish progress of data availability with more frequent updates on the economic dimension (43% in 2016 to 56% in 2021) is largely due to a combination with environmental and social issues that are unimportant for economic growth per se (e.g. indicators 8.4.1 'material footprint per GDP', 10.1.1 'growth rates of household expenditure or income per capita amongst the bottom 40% of the population and the total

TABLE 1 Shift in the treatment of income in the HDI

	1990	1991	1994	1999	2010	2014
Formula	Logarithm	Modified Atkinson's measure		Logarithm		
Cap	Poverty line	World average		N/A		
Maximum value (per capita, USD PPP)	4861	5070 (adjusted value of 19,850)	5385 (adjusted value of 40,000)	40,000	108,211	75,000

Source: Author's elaboration based on a series of *Human Development Reports*.

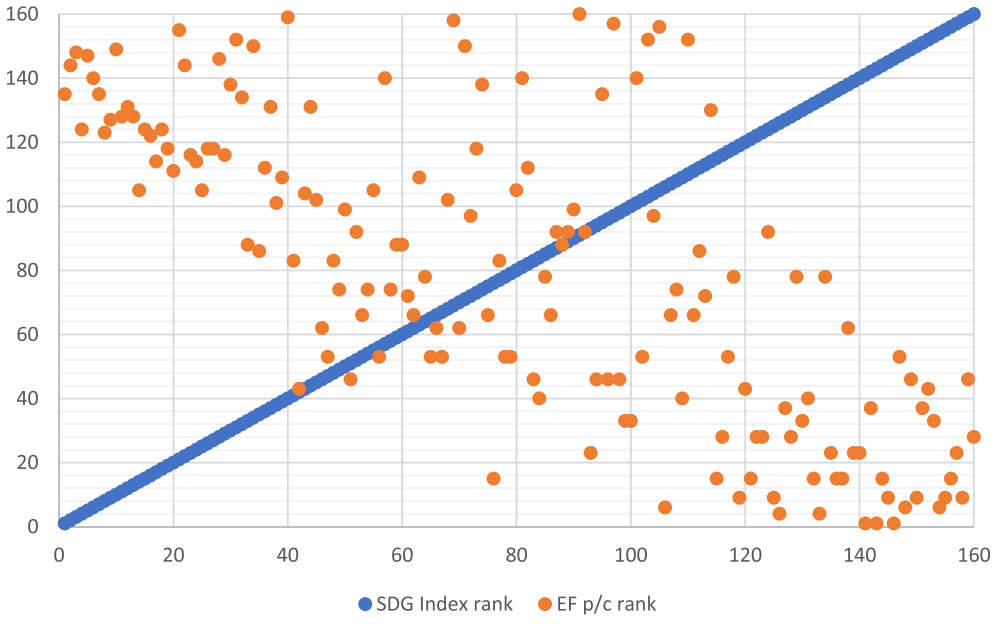

FIGURE 1 Rankings of SDG index and ecological footprint per capital Source: Author's elaboration based on Sachs et al. (2021) and Global Footprint Network (2021) [Colour figure can be viewed at wileyonlinelibrary.com]

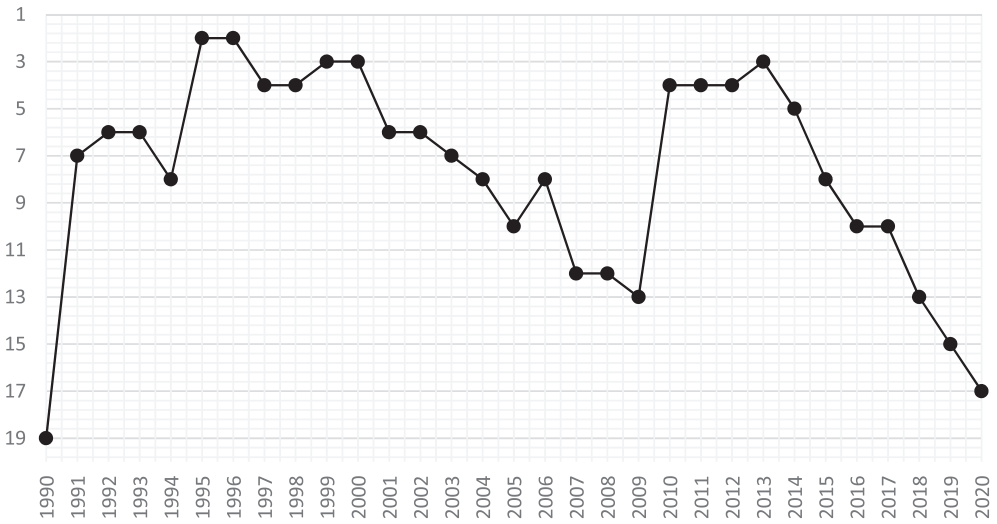

FIGURE 2 Shift in the U.S. ranking of the HDI Source: Author's elaboration based on a series of the *Human Development Reports*

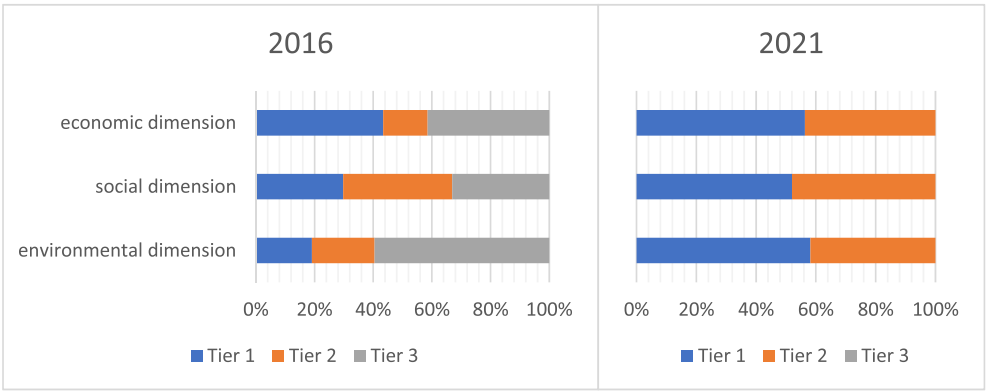

FIGURE 3 Shift in quantifiability of SDG indicators by dimension bracket Source: Author's elaboration based on Inter-Agency and Expert Group on SDG Indicators, 2016 and 2021 [Colour figure can be viewed at wileyonlinelibrary.com]

population' and 12.5.1 'national recycling rate'). On the other hand, most environmental indicators have no commitment to planetary boundaries, even if they are quantifiable and updated frequently, since they simply record the number, amount, level, proportion or change of incidence (e.g. indicators 6.4.1 'change in water-use efficiency over time', 13.2.2 'total greenhouse gas emission per year', and 15.1.1 'forest area as a proportion of total land area', amongst many others). Here, sustainability needs to be discussed separately from quantifiability, in line with previous research (e.g. Brandi, 2015; Griggs et al., 2014; Hickel, 2019).

The combination of quantifiability and non-commitment to planetary boundaries represents not only the maintenance but also the implicit prioritisation of the growth perspective in the SDGs. When this tendency is combined with the empirical evidence for economic goals having substantial trade-offs with the other goals presented earlier (e.g. Le Blanc, 2015; Pothen & Welsch, 2019), it would be most likely to understate the non-economic goals. This tendency is represented clearly in the inverse relationship between the rankings of the SDG Index and ecological footprint per capita as shown in the figure below (Figure 3).

In this way, the current structure of the SDGs continues to embrace economic growth for all nations – not only those that are developing but also those that are developed – without taking serious account of economic conditions compatible with social and environmental goals (Gasper, 2019; Stewart, 2015), and thus endorsing unlimited growth (Kotzé & French, 2018). This permits continuous overproduction and overconsumption rather than any reduction in the name of resource efficiency (Crabtree & Gasper, 2020; Gasper et al., 2019; Kopnina, 2019); it also endorses the unequal distribution of income and wealth rather than narrowing the gap in the name of inclusive growth (Gupta & Veglin, 2016; Kopnina, 2019; Fukuda-Parr, 2019, Hickel, 2019). Since the prioritisation of the economy is caused by the vested interests of powerful people who intend to preserve their power and wealth, the planetary boundaries framework has not been accommodated in the SDGs (Brandi, 2015; Fukuda-Parr & McNeill, 2019). Indeed, the avoidance of planetary boundaries and the protection of the vested interests of the powerful are synergetically intertwined and fortified.

As in the case of human development, this is another lucid illustration of the political reality: it is not feasible to address any development path by undervaluing economic growth. That is why Rockström and Sachs (2013, p. 7) propose a *cautiously* optimistic view by exploring the sustainable development trajectory "within the planetary boundaries through the deployment of new sustainable technologies and new global rules of the game", even though such technologies and rules are neither currently available nor guaranteed to be available

at any time soon. Note here that Rockström and Sachs are the very persons who advocate the concept of planetary boundaries (Rockström et al., 2009) and the necessity of simultaneous success on all three dimensions of the SDGs (Sachs, 2012). Given uncertainty in face of the ecological bar against technologies and the world order now and in the future, optimism is unrealistic, no matter how cautious that optimism might be. In this respect, Hickel and Kallis (2020) demonstrate the impossibility of an absolute decoupling of resource use and carbon emissions from GDP, even under highly optimistic conditions. But it is equally unrealistic to maintain the impact of the SDGs by minimising the growth perspective (i.e. the voices of vested interests). It is innovation and technological improvement that accommodate the prevailing ideology formed by the existing power structure, leading to the exclusive focus on weak sustainability (Lorek & Spangenberg, 2014). That line of work has flourished (e.g. Ahn & Park, 2022; Chindasombatcharoen et al., 2021; Koseoglu et al., 2022; Sehnem et al., 2022; Sinha, 2021). In this respect, Steffen et al. remark: "The PB (planetary boundaries) framework does not dictate how societies should develop. These are political dimensions that must include consideration of the human dimensions" (Steffen et al., 2015: 736, brackets added). This quandary reflects the current political spectrum, over which there is no option but to boost the influence of the growth perspective in SDGs.

5 | CONCLUSION

Human development emphasises the significance of the bottom-up approach through public discussion (UNDP, 1990). In open global consultation, the SDGs have enabled environmental issues to be pushed to the forefront. To that extent, the SDGs can be seen as an embodiment of human development. Deriving from this historical evidence is the possibility of open discussion on sustainability by involving the mainstream in its process. From this perspective, sustainability would not have been ready for wide enough discussion to secure attention from the mainstream at the initial stage of human development. But now it has reached the point where the Planetary Pressures-Adjusted HDI is proposed, albeit in its supplementary role, in the latest Human Development Report, followed by the establishment of the SDGs.

The development discourse necessitates a delicate balance. Paradoxically, alternative ideas must engage with the mainstream in order to survive and have clout. In consequence, superpowers such as the United States must be on board for development ideas to flourish (Lorek & Spangenberg, 2014; Weiss & Carayannis, 2005). Dethroning GDP outright is impractical in the current political situation. Amongst the previous alternatives, both human development and the SDGs have succeeded in this respect. Nonetheless, once the mainstream has been involved (i.e. as 'explicit power'), the alternatives are subject to take-over by the mainstream (as 'implicit power').

Development discourse requires academic authority and practical relevance, together with institutional support. Intellectual independence is also essential, particularly for alternative views. Nonetheless, the discourse should leave room for the mainstream whilst showing extra caution with respect to its potential erosion, as extreme alternative views are destined to disappear by failing to secure attention from the powerful. Political feasibility is thus as important as intellectual independence, which proponents of any alternatives should bear in mind whilst expecting the balance to shift over time towards sustainable development.

ACKNOWLEDGEMENTS

The author thanks the participants in the annual conferences at the Development Studies Association and at the Academic Council on the United Nations System in 2021 for their feedbacks, Dr Roni Kay O'Dell in particular. He also thanks Professor Sir Richard Jolly and Professor Sakiko Fukuda-Parr for their helpful advice. This work is inspired by the research project by SDGs Corporation where the author works as a consultant. The text, as it now stands, is my responsibility and mine alone.

ORCID

Tadashi Hirai https://orcid.org/0000-0001-9468-0980

ENDNOTES

[1] Technological advance is represented, for instance, by innovation for resource use efficiency, for example, recycling and renewables to improve resource consumption per unit of GDP; and by innovative measures to reduce pollution, e.g. electrification of vehicular transport and heating/cooling of buildings to reduce greenhouse gases, and catalytic converters to minimise NOx (Lorek & Spangenberg, 2014; Rockström & Sachs, 2013).

[2] "Sustainability is an essential feature of the human development paradigm. It matters little whether the paradigm is labelled "sustainable human development" or "sustainable development" or simply "human development". What is important is to understand that the essence of the human development paradigm is that everyone should have equal access to development opportunities – now and in the future." (Haq, 1995, p. 19)

[3] Initial studies of this kind have been made in the context of human development by Gasper (2011) and Hirai (2017). In the present article, these will be extended in the context both of human development and of the SDGs by analysing their selection and the use of indicators.

[4] That being said, Warchold et al. (2022) recommend a unified data base, as the relationship will differ according to the selection of data.

[5] Having said this, Goal 16 (which the developed countries had tried hard to include) ended up with a set of technocratic measures marginalising the critical and essential political dimensions of development (e.g. rights of the individual), after which the slogan "leave no one behind" was simply retrofitted. The author thanks a reviewer for suggesting the inclusion of these points behind the construction of the SDGs.

[6] According to Richard Jolly (Special Adviser 1996–2000) and Sakiko Fukuda-Parr (Director 1995–2004), governments did not lobby the Human Development Report Office to revise the HDI methodology but would challenge the data. On the other hand, the HDI methodologies generated a rich debate among economists and statisticians (personal communications, May 2022).

[7] Tier 1 is a group of indicators that are conceptually clear and have internationally established methods and standards, and for which the data are regularly produced by governments; Tier 2 is a group of indicators that are conceptually clear and have internationally established methods and standards but for which the data are not regularly produced by governments; and Tier 3 is a group of indicators that do not have internationally established methods or standards (IAEG-SDGs, 2021).

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How to cite this article: Hirai, T. (2022). A balancing act between economic growth and sustainable development: Historical trajectory through the lens of development indicators. *Sustainable Development*, 1–11. https://doi.org/10.1002/sd.2357