



Using Subjective Well-being as a Headline Indicator in Dashboards to Track Human Progress

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Abstract

Gross Domestic Product (GDP) has long been used as a proxy for human progress, despite growing recognition of its limitations. Recently, numerous “beyond GDP” initiatives have emerged, promoting multidimensional dashboards to assess quality of life. However, these often lack a clear headline indicator, limiting their usefulness for policymaking and public communication. This paper argues for placing subjective well-being (SWB) at the center of progress measurement in dashboards. SWB captures the overall impact of life conditions on people’s lived experiences and offers a clear, outcome-oriented metric aligned with what truly matters: a good life. We explore how SWB can serve as a headline indicator, complemented by measures of the conditions that support it, to improve policy relevance, accountability, and legitimacy. We also address key measurement challenges and propose ways to overcome them for more effective integration into decision-making frameworks.

Keywords Beyond GDP · Quality of life · Measures · Subjective well-being

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Introduction: Why go beyond GDP and dashboards?

Gross Domestic Product (GDP) was developed explicitly to measure a country's annual production, yet over time, it became a measure of human progress (Stiglitz et al., 2018). Numerous groups pushed back over the years as the limitations of GDP as a measure of progress became increasingly evident (Bleys, 2012; Gaukroger, 2023; Stiglitz et al., 2009; Veenhoven, 2002; Layard, 2020).¹ Economists commonly describe economic growth as an expanding pie from which everyone can get a larger slice, satisfy a larger set of needs and desires, and therefore lead longer and happier lives. This view reflects the implicit assumption that economic growth inevitably delivers better lives. However, since the seminal work of Richard Easterlin (1974), this assumption has been challenged (Beja, 2014; Easterlin & O'Connor, 2022). Although GDP growth has the potential to make lives more comfortable, healthier, enjoyable, and environmentally sustainable, in many countries, its negative consequences (inequality, unhealthy lifestyles, loss of social cohesion, pollution, loss of biodiversity and environmental degradation) offset its benefits. If we care about delivering socially and environmentally sustainable lives, then the quality of growth – how we organize and achieve it – matters (Mikucka et al., 2017).

The so-called 'beyond GDP' debate gained steam after the 2008 economic crisis (Fleurbaey, 2009). Particularly influential was the 2009 Stiglitz, Sen, and Fitoussi "Commission on the Measurement of Economic Performance and Social Progress", which recommended "*shift[ing] emphasis from measuring economic production to measuring people's well-being*" (Stiglitz et al., 2009, p. 12). The OECD followed with its Better Life Initiative (OECD, 2011) and Guidelines for the Measurement of Subjective Well-being (OECD, 2013). Since then, numerous initiatives have emerged to assess quality of life² beyond traditional income-based metrics (Jansen et al., 2024). These efforts aim to highlight the facets of life that GDP often overlooks.

Economic growth can be compatible with well-being in countries that promote full employment, social safety nets, protect social capital, and reduce income inequalities. In such countries, economic growth may be slow but better suited to support quality of life. Conversely, if economic growth leads to isolation, stress, inequality, and environmental degradation, then well-being may decline (Mikucka et al., 2017; Sarracino & O'Connor, 2023). This view is not new; for example, the 1996 Human Development Report (Ravallion, 1997) explicitly stated that if economic growth is not properly managed, it can be jobless (without employment growth), voiceless (without improvement in democracy or social inclusion), ruthless (only benefiting the rich), rootless (harming culture and social fabric), and futureless (destroying physical environment), and thus detrimental to human development. Hence, the *quality* of growth is pivotal for well-being (Helliwell, 2008).

¹ Ruut Veenhoven helped to draft the first version of this article before passing on December 9, 2024. Obituaries can be found in Bergsma et al. (2025) and Burger (2025).

² Unless specified otherwise, we use the terms "quality of life" and "well-being" interchangeably. While the terms reflect different concepts, in practice they are closely related – improvements in quality of life represent improvements in well-being. Further clarification of the terms is provided in Sect. "What is progress and how existing approaches fail to measure it".

Recalling that human progress is more than ‘GDP’ is one of the main reasons why countries worldwide are working towards integrating new measures of quality of life and well-being in their decision-making process (Mahoney, 2023). At the same time, there is considerable disagreement on how human progress should be measured and which indicators should be included in frameworks. Where economists tend to opt for adjusted GDP measures that correct for externalities, e.g., environmental degradation, other approaches typically rooted in capabilities and human needs theory tend to select a range of indicators that are presented separately or in a composite index. Most national and international initiatives nowadays build on the OECD Better Life framework or the UN Sustainable Development Goals and utilize a multidimensional set of indicators related to well-being, inclusivity and sustainability that are presented in dashboards (Jansen et al., 2024; Mahoney, 2023).

The lack of consensus about which indicators to include, as well as the absence of a headline measure (like GDP), limit the use of such frameworks. Dashboards containing multiple indicators enable users to selectively highlight data that supports their agenda and tend to overwhelm users with excessive information, limiting their effectiveness as communication tools, even when key messages are distilled into a few headline indicators (Stiglitz et al., 2009). Indicators are frequently displayed alongside one another without illustrating their interconnections. This leaves users without a clear understanding of the trade-offs, synergies, or causal links between different domains. Consequently, research indicates that dashboards are not designed with measuring progress and decision-making in mind (Seaford, 2013; Exton & Shinwell, 2018). They often lack audience-specific framing and a coherent narrative structure. Dashboards also tend to fall short in distinguishing the underlying conditions of a good life, like income and education, from the outcomes of a good life. As a result, they fail to clarify the objectives of policy interventions and trade-offs involved in allocating resources across competing policy priorities. These are some of the reasons why existing approaches to measure progress and go Beyond GDP have not gained significant political and public support, despite having been around for numerous years (Layard & Ward, 2020; O’Connor, 2024).

In this work, we argue that Beyond GDP dashboard should use subjective well-being (SWB) as a single headline indicator to enable simple and concise communication (UNDP, 1999, O’Connor, 2024). SWB provides a clear outcome indicator that focuses on what truly matters to people (a good life), allows governments and organizations to easily evaluate the real-life impact of policies, and is able to uncover what is needed to realize progress. Typically defined as “*the degree to which an individual judges the overall quality of his/her own life-as-a-whole favorably*” (Veenhoven, 1984: 22)³, SWB is suitable as it summarizes in one indicator the net result of all the changes in the salient dimensions of an individual’s life (Delhey & Kroll, 2013; Layard & Neve, 2023). In Sect. “[What is progress and how existing approaches fail to measure it](#)” we clarify the meaning of “human progress” and the limitations of existing approaches to measure it. In Sect. “[Why SWB should be used as a headline indicator of human progress](#)”, we propose SWB as a single headline indicator in

³ Although there are two primary forms of SWB – evaluative and affective – we focus on evaluative SWB, involving people’s overall assessments of their lives, e.g., life satisfaction, unless otherwise specified.

dashboards to gauge human progress and thereby overcome the limitations of alternative approaches (Barrington-Leigh & Escande, 2018).⁴ In Sect. “[Limitations of SWB as a headline indicator](#)”, we acknowledge that SWB is not free from limitations (see e.g., Hayden, 2025). Hence, in Sect. “[New frontiers in the use of SWB for Policy Use](#)” we review some extensions of traditional SWB metrics that could help to overcome some of the limitations discussed in the previous section. Concluding remarks are provided in Sect. “[Concluding Remarks](#)”.

What is Progress and How Existing Approaches Fail to Measure it

Human Progress and the Four Qualities of Life

The lack of agreement and clarity on what is human progress hinders its measurement. Most people can agree⁵ that human progress can be perceived as the advancement of knowledge and circumstances – e.g., spiritual, psychological, societal, economic, technological, cultural, and ecological – that improve quality of life, which in turn delivers better lives. Quality of life, however, requires further clarification, especially in its relationship with well-being. Following Veenhoven (2000), it helps to distinguish (1) the *conditions* (or life chances) that enable a good life from the *outcomes* of a good life⁶, and (2) the *outer qualities* present in the environment from the *inner qualities* experienced by the individual. The combination of conditions versus outcomes, inner versus outer, leads to four qualities of life that can be summarized with a matrix (see Table 1):

The top left quadrant illustrates the environmental factors that contribute to a good life. Social scientists often imprecisely describe these factors using terms like quality of life, well-being, and environmental livability, whereas economists typically use the term welfare. This quadrant encompasses diverse elements such as economic stability, clean air and water, adequate food, education, freedom from discrimination, and safety. Political efforts primarily aim to enhance livability, and as a result, politically driven measures of quality of life tend to focus on livability aspects. Livability can be seen as a prerequisite for SWB.

The top right quadrant represents inner life opportunities, referring to how well-equipped individuals are to handle life’s challenges or make the most of their circumstances. This includes physical capabilities, such as good hearing, and mental abilities, such as social intelligence. Human functioning can also be viewed from a developmental perspective, encompassing the acquisition of new life skills, often described as “personal growth” or “self-actualization.” The term “art of living” (Veenhoven, 2003) is also relevant here, sometimes implying a higher level of reflection and wisdom, and other times referring to the capacity to enjoy life.

⁴ See also Barrington-Leigh (2021), Layard & De Neve (2023) and O’Connor (2024)

⁵ This argument is not new (O’Connor 2024). For instance, in 1990 the UN stated the purpose of development is to acquire human well-being (United Nations Development Program, 1990, p. iii).

⁶ Similar distinctions between opportunities and outcomes are also observed in public health research (Veenhoven, 2000). Health indicators that represent the conditions for good health, such as access to healthcare and proper nutrition, are considered fundamentally different from indicators that measure health outcomes, such as disease prevalence and mortality rates.

Table 1 The four qualities of life

	Outer Qualities	Inner Qualities
<i>Life chances</i>	Livability of the environment	Life-ability of the person
<i>Life outcomes</i>	Utility of life	Appreciation of life

Source: Veenhoven (2000)

The bottom left quadrant focuses on the external impacts of an individual's life. This involves evaluating the contributions a person makes to areas beyond themselves, such as society, the arts, or science. Moralists often emphasize the effects on others, while environmental activists prioritize minimizing ecological harm. However, living a useful life is not synonymous with living a happy one.

The bottom right quadrant represents the personal outcomes of life, that is, individual human well-being. When measured using individual perceptions, this aspect of quality of life is often described using terms like “satisfaction”, “subjective well-being”, and “happiness”. When measuring well-defined concepts, objective indicators are often preferred, but for broader concepts like human progress, subjective measures (i.e., perceptions) are arguably better (Jahedi & Méndez, 2014). By reflecting people's feelings, values, attitudes, and evaluations, subjective measures can account for many otherwise unobservable elements.

GDP as a Measure of Human Progress

Over the past decades, GDP has been the central measure to gauge human progress in societies. Rooted in mainstream economics, GDP per capita was thought to provide a reasonable indication of quality of life since it is connected to consumption possibilities, including necessities for survival at lower levels, and more luxurious goods and services at higher levels. The assumption here is that people will always choose goods within their budget that generate the highest well-being.

This thinking involves multiple assumptions: that GDP growth raises everyone's income, that income can buy all factors relevant to quality of life, and that growth does not produce significant negative consequences. Indeed, several issues with using GDP per capita as a measure of quality of life have been acknowledged (Bleys, 2012; Gaukroger, 2023), particularly since the report by Stiglitz and colleagues (2009). First, GDP does not account for the value of non-market activities like rest and leisure, or non-economic pursuits such as building and nurturing social and community relationships. Products and services that lack a market price are largely excluded from GDP calculations despite having societal value, such as informal care or a pristine environment. This omission can result in either an overestimation or an underestimation of GDP (Robeyns, 2017). Yet, well-being that is obtained through non-market versus market activities can be as important to quality of life.

Second, GDP per capita is insensitive to the distribution of wealth: it does not tell us anything about how economic gains are distributed in the population. In this regard, economic growth over the past decades has been highly unevenly distributed, with the middle classes in developed nations and people in low-income countries benefiting the least from this growth (Milanovic, 2024).

Third, the creation of well-being through market activities may come at the expense of other factors contributing to well-being. For example, working additional hours to generate a higher GDP per capita may come at the cost of social relationships and leisure time, and the production of some goods and services may come at the cost of job quality, physical and mental health, and the quality of the living environment. For these reasons, GDP per capita should be predominantly considered one of the conditions for a good life and not the outcome of a good life. This was already acknowledged by Adam Smith in the *Theory of Moral Sentiments*, in which he argued that happiness (‘inner peace and pleasure’) is the ultimate goal in life, and that wealth is a means to reach this goal, not the goal itself (Bruni, 2020).

Despite these warnings and criticisms, GDP per capita remains the main indicator of progress, something that is known as the ‘GDP paradox’ (Van den Bergh, 2009). There are various reasons for this: it is an internationally harmonized metric, built upon commonly accepted rules, which facilitates comparisons both across and within countries over time. GDP is also widely used in international institutions, economic models, and policy frameworks, which creates inertia that limits the adoption of alternative measures.

From GDP to Adjusted GDP Metrics and Composite Indicators

In 1990, the UN stated that the purpose of progress is to acquire human well-being (United Nations Development Programme, 1990, p. iii), and in 2009, the Commission on the Measurement of Economic Performance and Social Progress (CMEPSP), comprised of 25 social scientists, including six Nobel laureates, recommended “shift[ing] emphasis from measuring economic production to measuring people’s well-being” (Stiglitz et al., 2009, p. 12).

Over the years, several schools of thought in economics and the social sciences have criticized the use of GDP to gauge human progress and proposed ways to better inform policymakers and the general public (Bovenberg & Nicolai, 2024; Diener & Suh, 1997; Jansen et al., 2024). Welfare economists use the concept of utility to understand well-being and prefer measuring human progress with monetized values of well-being-affecting components (e.g., cost of inequality and natural depletion). Capabilities theorists understand progress as the expansion of individuals’ *ability* to engage in activities they value (Sen, 2009). The greater the extent to which people in a country can do this, the higher the level of quality of life in that country. Human needs theorists stress that people have physical and psychological needs (e.g., food and shelter, but also connectedness and autonomy) which are required for a fulfilling life (e.g. see Doyal and Gough (1991) and Max-Neef et al. (1991)). SWB scholars maintain that progress can be best assessed by examining what people say about how they feel (e.g. see Layard and Ward (2020), Veenhoven (2002), and Easterlin (2019)). The key idea here is that societies should improve the conditions that can likely increase SWB. According to this view, measuring human progress can be best done by examining individuals’ personal experiences and perceptions of their welfare.

The growing awareness of GDP’s limitations and proliferation of various schools of thought led to the development of several adjusted GDP measures and *composite* measures that account for social and environmental factors. For example, the Genu-

ine Progress Indicator, Measure of Economic Welfare, and Index of Sustainable Economic Welfare provide monetized estimates of quality-of-life based on economic, social and environmental criteria. Other approaches introduced composite indexes of human progress, such as the Social Progress Index, which consists of objective indicators related to human needs (Fehder et al., 2018). The most well-known composite index is probably the Human Development Index (HDI), which was created in the 1990s and inspired by the capability approach (Sen, 1985; Nussbaum, 2000). The HDI covers three dimensions: income, health, and education. By shifting the focus beyond economic growth as the only indicator of progress, the HDI offers a more comprehensive perspective on human progress. Jansen and colleagues (2024) provide a good overview of the different schools of thought, alternative GDP measures and composite indexes.

From Adjusted GDP Metrics and Composite Indices to Multidimensional Dashboards

Although adjusted GDP measures and composite indices present complex information in a condensed way (Clerc et al., 2010), they also have severe limitations. For instance, there is little consensus on how to value items that are not regularly reported in monetary terms (e.g., illegal activities) or how to quantify the costs of natural resource depletion (Costanza et al., 2007). In addition, the choice of which costs are beneficial (added to GDP) and which are detrimental (subtracted from GDP) is up to the discretion of experts. Relatedly, not all of life's conditions are equally measurable (Veenhoven, 2000). The HDI, and capability-based indexes more generally, have been criticized for their limited ability to reflect policy changes, experienced quality-of-life improvements and related inequalities. In general, any composite index can be critiqued on the discretion required to choose the components and the weights necessary for aggregation to form a single measure (O'Donnell & Oswald, 2015; Stiglitz et al., 2009). Moreover, composite indices are unable to capture the disparity between individual situations (e.g. educated and poor vs. non-educated and rich) and implicitly assume that any loss in one dimension of well-being can be compensated by a gain in another (Mahoney, 2023). In addition, the HDI specifically mixes up the conditions and the outcomes of a good life by putting life expectancy and its antecedents into one specific index (Veenhoven, 2002).

To overcome these limitations, the seminal Stiglitz-Sen-Fitoussi (Stiglitz, et al., 2009) report advocated for the use of multidimensional *dashboards* arguing that these would be more informative for policymakers than composite indexes and alternative GDP measures (Jansen et al., 2024). Alongside the growing influence of capabilities theory as a dominant paradigm in informing development policy, dashboards, which can be seen as an extension of the HDI, have become the dominant tool to gauge progress (Cooper et al., 2023). A recent report by the OECD indicates that more than 70% of member States have developed national development frameworks based on a dashboard approach for measuring multidimensional well-being (Mahoney, 2023). Barrington-Leigh and Escande (2018) also observe that frameworks based on dashboards nowadays tend to survive better than those based on composite indices. As outlined by Mahoney (2023), most existing dashboards build on the recommen-

dations in the Stiglitz-Sen-Fitoussi report, the OECD Better Life Framework, UN Sustainable Development Goals, and Eurostat's Quality of Life Framework. Many dashboards then also highlight common determinants of well-being (Mahoney, 2023) related to material living conditions, employment, health, education, leisure, social interactions, economic security and physical safety, governance and basic rights, and the natural environment.

Limitations of Existing Dashboard Approaches

Dashboards, however, are not free from limitations either. Four main problems exist: first, dashboards miss a headline indicator. The plurality of indicators in dashboards limit the possibility for stakeholders to use them to make decisions. While the use of dashboards compared to composite indexes avoids oversimplifying complex ideas like progress or quality of life, complexity also means that dashboards can become places to store data rather than tools to assist policymakers and change how people think about progress (Barrington-Leigh & Escande, 2018). Indeed, interpreting a dashboard can be difficult if not all the indicators are moving in the same direction (Mahoney, 2023). In this regard, a headline indicator could provide clear narratives of improvement or decline.

Second, dashboards often fail to distinguish between the conditions and the outcomes of a good life. Assessing conditions alone assumes the availability of an exhaustive list of conditions beneficial to quality of life (Dolan & White, 2007). Conditions and outcomes should also be kept separate so that the outcomes can reveal which conditions matter, improving the interpretability and usability of the dashboard—this is not a common practice yet.

Third, information on the relative importance of dimensions within dashboards is typically missing (Barrington-Leigh & Escande, 2018). As a result, beyond GDP dashboards present domains in isolation (e.g., economy, healthcare, education, or public transport) rather than capturing trade-offs across them. The absence of relative weights, in combination with the absence of headline indicators, lends itself to the possibility of cherry-picking.

Fourth, the relative importance may also vary across countries, contexts (Tov & Nai, 2017), and time. For instance, in low-income countries, concerns about corruption tend to be lower (Rahman et al., 2021; Tay et al., 2014), as individuals prioritize survival and meeting basic needs. However, with economic development comes increased awareness and higher demands for integrity, reflected in greater demand for institutional quality. Similarly, cultural and institutional differences influence how, for example, income inequality, economic decline, and religion are valued (e.g., Arampatzi et al., 2019; Kogan et al., 2013; Li et al., 2019). It is for this reason – differing weights across countries and time – that the OECD cautions against using its Better Life Index for tracking changes over time.

To address these challenges, in the next section we argue perceived quality-of-life, that is SWB, can be used as a single headline indicator to measure human progress in dashboards.

Why SWB Should be used as a Headline Indicator of Human Progress

Some scholars explicitly advocated for placing SWB at the center of measuring progress (e.g., Layard and Ward, 2020; Veenhoven, 2002; and Easterlin, 2019). SWB can serve both as a headline indicator and the ultimate outcome measure of what most people value because it captures people's overall evaluations of their lives. As such, it summarizes a wide range of economic and non-economic factors.

Support for using subjective measures such as SWB is growing both in academic and policymaking circles (Hayden, 2025). While economists were initially among the most skeptical, this resistance is gradually fading (e.g., the percentage of SWB-related publications in economics is increasing, Barrington-Leigh, 2022). Richard Easterlin, Richard Layard, and Ruut Veenhoven argued for using SWB, especially life satisfaction, as the primary measure of progress (Easterlin, 2019; Layard and Ward 2020; Veenhoven, 2002). Layard contends that commonly used indicators such as income, health, and even freedom are valued because they contribute to a deeper goal: happiness. By contrast, people pursue SWB for its own sake, making it a compelling candidate for a central role in progress measurement.

More recently, Barrington-Leigh (2021) and O'Connor (2024) agree that SWB can function as a headline measure and a useful organizing concept for public policy, and recommend accompanying it with additional indicators, especially relating to inequality and environmental sustainability. A multidimensional approach with SWB as a headline indicator can improve the accuracy of progress assessments, increase the relevance of findings for practical decision-making, and facilitate decision making. In the next sections, we will further explore how such analyses can inform dashboard design and policy prioritization.

How SWB can be used as a Headline Indicator in Dashboards

Many dashboards to measure progress “Beyond GDP” include *outcome* indicators such as ‘life expectancy’ and ‘satisfaction’. However, SWB indicators differ in degree of prominence across dashboards (Mahoney, 2023). In many national dashboards, SWB is mixed with the conditions of quality of life and represents just one of many domains without particular status or centrality. Indeed, the OECD Better Life Index does not include any headline indicators (despite the name). This leaves the status of SWB as an indicator a bit opaque (Barrington-Leigh & Escande, 2018).

Costanza and colleagues (2007) proposed a framework in which SWB is a headline indicator. The authors describe overall quality of life as a function of (a) the extent to which each identified human need is satisfied, referred to as “fulfillment,” and (b) the significance of the need to the individual or group, determined by its relative impact on their SWB. The outcome of a good life (SWB) can serve as a central indicator⁷, as shown in Fig. 1.

Generalizing and following the logic of the model in Fig. 1, two parameters emerge to guide policymakers:

⁷ Consistent with Barrington-Leigh (2021) and O'Connor (2024).

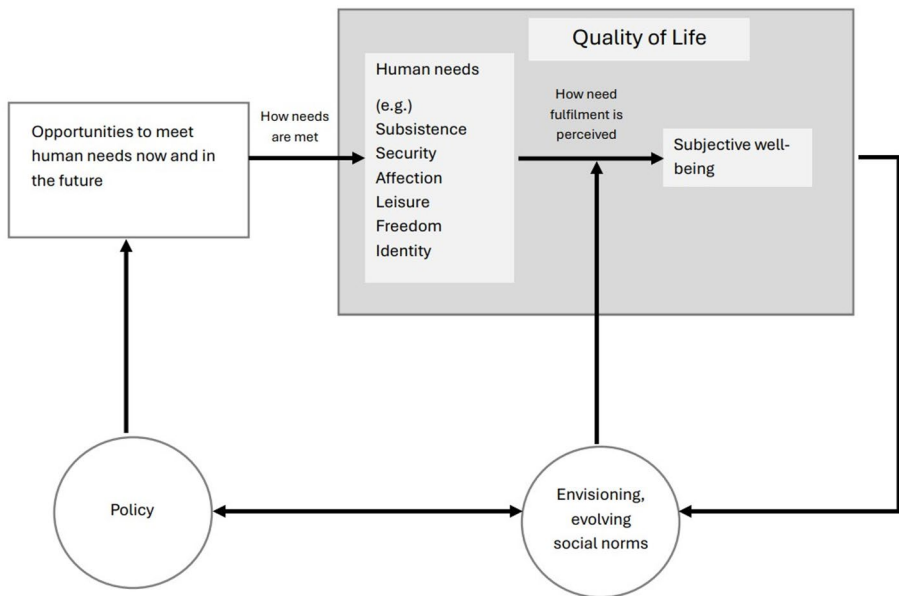


Fig. 1 Costanza's Scheme: Quality of Life (QOL) as the interaction of human needs and the subjective perception of their fulfillment, as mediated by the opportunities available to meet the needs.

- (1) The state of the conditions for a good life related to the livability of the environment and the life-ability of people in a country, such as the level of GDP per capita, social capital, and resilience. Indicators can be both objective and subjective.
- (2) The importance of the different conditions for a good life in terms of their relative contribution to SWB.

Separating the conditions for a good life (SWB) from the outcomes of a good life (and their relative importance) helps to inform decisions. Policymakers also need to clarify which group and context they are focusing on, because what is important for one group may not be important to the same degree for another group. For instance, entrepreneurs may prefer the stimulation of economic growth as the primary policy objective, while others could prioritize environmental sustainability.

Barrington-Leigh (2021) proposes a similar approach, whereby SWB serves as a headline indicator, and statistical models are used to assess the relative importance of different conditions for a good life. In other words, SWB can serve both as a standalone indicator and provide a framework for evidence-based weighting and selection of additional indicators within dashboards. Through statistical modeling, SWB can link conditions for a good life to outcomes of a good life, offering a more transparent and reproducible basis for policymaking. Such an approach would enhance accountability and reduce risks of arbitrary judgments in index construction and cherry-picking.

From a policy perspective, it is often more feasible to focus on improving the conditions that support well-being—such as economic security, health care, and social relationships—rather than attempting to influence subjective outcomes directly. Even

so, SWB measures offer valuable insights. Because they reflect how individuals experience and evaluate their lives, they help identify which conditions matter most. Statistical analyses of SWB data can reveal the relative importance of different life domains and offer guidance on how to make trade-offs between them (Barrington-Leigh, 2021; Barrington-Leigh & Escande, 2018; Cooper et al., 2023). Various initiatives using SWB as a headline indicator are worth mentioning. For instance, the Eurostat 8+1 framework measures nine key dimensions. The first eight relate to the functional capabilities individuals need to effectively pursue their own SWB, representing the essential conditions for a good life (material living conditions, productive/main activity, health, education, leisure/social interactions, economic/physical safety, governance/basic rights, and the natural/living environment). The ninth dimension focuses on the actual experience of SWB, reflecting the outcomes of those conditions. Canada treats SWB as a cross-cutting indicator, a complementary summary measure of the overall experienced quality of life. This approach reflects the understanding that different life domains shape overall life satisfaction. The most extensive use of SWB measures in decision making can be found in the United Kingdom (Mahoney, 2023), where the Treasury offers guidance through a Green Book for their civil servants on how to include SWB (in the form of life satisfaction) in cost-benefit analysis to prioritize specific policy alternatives (MacLennan et al., 2021). This approach uses WELLBYs (Frijters et al., 2024; Layard & Oparina, 2021), which are discussed in Sect. “[New frontiers in the use of SWB for Policy Use](#)”.

Advantages of SWB as Headline Indicator

SWB offers a comprehensive view of well-being (Veenhoven, 2002), making it an effective standalone indicator (Diener et al., 2009; Jahedi & Méndez, 2014; Veenhoven, 2002). In contrast, objective indicators do not reveal which conditions matter or how people value or feel about them and often overlook significant components. For example, household spending may increase due to rising food prices, which might superficially appear as an improvement in living standards, but does not represent true progress. In this example, SWB implicitly captures people’s discontent with their living standards and the stress of making ends meet. More broadly, subjective data overcome these challenges and can be used to identify the conditions that affect individual well-being and their context-specific weights (e.g., using bivariate correlations or regression analysis as discussed above).

A further benefit is that SWB measures are non-paternalistic as individuals, not experts, evaluate their own lives. In contrast, the selection of objective indicators often reflects the subjective judgment of experts on what defines a good life (Deaton, 2008). Experts may think they have comprised a comprehensive set of indicators, but nonetheless overlook significant components. As an example, American women today do not report higher levels of happiness compared to the 1970s, even though many conditions have improved, such as a narrowing wage gap (though not fully closed) (O’Connor, 2017). In fact, women reported lower happiness, both in absolute terms and relative to men. Some researchers attribute this decline to an increase in total working hours, combining workplace and household responsibilities, but the exact reasons remain unknown (Stevenson & Wolfers, 2009). This example high-

lights how expert-driven (and potentially paternalistic) measures may overlook critical aspects of individuals' well-being.

SWB reflects values that are important to individuals which may differ from existing frameworks. Many of the Beyond GDP frameworks align with influential stakeholders, which limits their transformational potential. Malay (2019) compares six prominent frameworks, including the previously mentioned HDI, Social Progress Index, Happy Planet Index, and three others, finding that those initiated by actors with institutional influence (e.g., governments, multinational corporations, international organizations) tend to produce country rankings that are highly correlated with GDP. This strong alignment suggests a low degree of divergence from the growth-centric paradigm, and thus a limited capacity to disrupt prevailing narratives or inspire new policy directions. In contrast, indicators developed by less powerful actors, typically civil society or academic institutions, displayed greater divergence and, by proxy, higher transformational potential. This underscores a central tension in Beyond GDP work: aligning metrics with influential stakeholders may ease adoption but risks conceptual compromise. It is important to develop headline indicators, like SWB, that are easy to communicate and truly reflect values different from GDP.

Limitations of SWB as a Headline Indicator

Despite its advantages, SWB also comes with some limitations. In this section, we discuss both founded and unfounded critiques of SWB. We distinguish between conceptual, methodological, and dashboard integration limitations.

Conceptual Limitations

When evaluating their lives, people reflect what is important to them.⁸ This is generally regarded as an advantage of self-reported measures but can also be seen as a limitation. A classic conceptual critique is that of Sen (1985), who observes that individuals such as destitute homeless, landless laborers, overworked servants, or subjugated housewives may not report low SWB if they have adjusted to their circumstances. Conversely, high achievers might report low well-being due to high expectations.⁹ This concern may not matter, in practice. The SWB of homeless people is typically lower (Biswas-Diener et al., 2006), although not in all life domains and cultural contexts, and it is paternalistic to say homeless people should be unhappy (consider religious ascetics who live on alms for instance).

Differences in SWB between people are also shaped by factors such as personality and cultural values, the latter of which makes cross-sectional comparisons difficult. Yet, it is unlikely that the experience of SWB differs enormously between people (Veenhoven, 2012). For one reason, SWB is largely influenced by a person's affect and mood (Kainulainen et al., 2018), and from an evolutionary perspective,

⁸Yet, there is no agreement whether life evaluation can be regarded as a weighted average of domain satisfactions, see e.g., the discussion by Rojas (2006).

⁹Graham and Pettinato (2002) distinguish the two groups as "happy peasants" and "frustrated achievers."

it is hard to imagine that we are dealing with incomparable experiences. Indeed, people share similar concerns. Despite cultural differences, in an open-ended survey across 12 countries, individuals consistently identified living conditions, family, health, personal meaning (character), and work as the most important factors for well-being (Cantril, 1965). Furthermore, progress is fundamentally about change over time, which allows us to focus on the causes of change rather than stable differences between people and countries (e.g., personality and culture).

People in different countries may pursue different concepts of well-being to different degrees, corresponding with their cultural values, for instance, interdependent well-being in collectivist versus individual well-being in individualistic societies (Burger & Pang, 2025; Hitokoto & Uchida, 2015; Lambert et al., 2020). Additionally, the relative importance of evaluative and affective components of SWB may differ across cultures. Dashboards have generally prioritized life satisfaction, but this preference has been based on both data availability and the fact that most frameworks have been developed in Western contexts.

Blanchflower and Bryson (2024) point out that life satisfaction – a measure of evaluative well-being that is most often used in dashboards—captures only one dimension of well-being. Other dimensions, such as emotional states or a sense of meaning, may not strictly align with life satisfaction. To fully capture the concept of well-being and overcome the other limitations of SWB measures, a broader set of indicators is necessary, especially those that reflect the underlying conditions of a good life.

Methodological Limitations

Apart from conceptual limitations, there are also various methodological limitations to consider. First, answers in surveys can be sensitive to variations in the method of questioning, such as preceding questions, phrasing of response options, characteristics of the interviewer, weather, and so on. Some concerns seem to be larger than others – question-wording effects are likely small (Hendriks et al., 2025), while survey (Prati & Beuchot, 2025) and question order (Deaton, 2012; Greco et al., 2026) effects can be larger. In either case, appropriate use of survey methodology can limit these concerns, such as large samples spread across sufficient periods of time, and attention to question ordering and survey effects.

Evaluating changes in SWB over time presents distinct challenges. As individuals adjust their expectations or adapt to improved living conditions, objective advances may cease to translate into sustained increases in SWB (Fabian, 2022; Van Praag & Ferrer-I-Carbonell, 2010). In this sense, progress may occur at the level of living conditions without being fully reflected in experienced well-being.¹⁰ This is one reason why SWB could serve as a headline indicator, but not the only indicator, in a dashboard of indicators. Information on the conditions of SWB can be used to better understand adaptation and inform subsequent decision making. Moreover, adaptation is not complete, because if it were, SWB would not change over time. In reality,

¹⁰It is difficult to know whether this can be called progress if not perceived. There is no agreement on objectively defined quality of life or well-being. We believe SWB is necessary as argued in the article.

we observe various long-term trajectories of SWB both within and across countries (Mikucka et al., 2017, O'Connor 2017, Easterlin and O'Connor 2022).

Recently, there has been renewed discussion concerning the measurement scale of SWB (Bond & Lang, 2019; Schröder & Yitzhaki, 2017). Although SWB is measured on an ordinal scale, it is often treated cardinally which can affect regression coefficients due to differences in how the scales are used. A good discussion of this problem is provided by Kaiser and Vendrik (2019), see also Ng (1997). Arising from this concern, policies based on mean SWB scores may favor the wrong group or policy, and gains in well-being found in policy evaluations may be statistical illusions. An important implication of this issue is that SWB research needs to move beyond averages, towards more distributional analysis. Additional diagnostics and tools specifically intended to respond to Schröder and Yitzhaki (2017) and Bond and Lang (2019) have also been developed (Chen et al., 2019; Kaiser & Lepinteur, 2025).

SWB faces two other limitations. First, as SWB is typically measured on a bounded scale, it cannot increase forever, unlike GDP, for instance. For this reason too, as with adaptation, it is important that SWB is accompanied by additional indicators. Nonetheless, in practice there is scope and precedent for positive change over a significant period of time (as mentioned above). Second, individuals may choose to respond strategically to surveys to influence reported SWB, thereby affecting political outcomes (Frey & Stutzer, 2010). However, we do not have evidence of this, and in any case, SWB serves as the headline indicator, not the sole policy target. Decision makers could instead target the conditions of a good life included in the dashboard.

Dashboard Integration Limitation

Finally, there are several limitations to integrating SWB in dashboards as a headline indicator. First, SWB does not necessarily capture two dimensions that are often deemed important in the SWB framework: sustainability and inclusion. Similar to GDP, SWB improvements can be futureless – destroying the physical environment and SWB of future generations – and very unequally distributed. This issue merits the consideration of additional indicators that account for inclusion and sustainability.

Second, SWB data is not always readily available, as this information is still collected through surveys. However, better data infrastructure and automating information-capture methods, which allows the collection of weekly or even daily SWB data through surveys, can help overcome this kind of problems. Moreover, higher-frequency SWB data can be collected through pulse surveys (Bakker et al., 2020; Lucas et al., 2021), experience sampling, and using the day reconstruction method, Big Data and machine learning. We will discuss the latter method in the next section.

Third, it may also take years for policies to affect SWB as it is the ultimate distal outcome (i.e., a long-term, general indicator). Policymakers and voters often seek short-term feedback, while measures like SWB typically change slowly over time and are influenced by multiple long-term factors. A solution for policy evaluation would be to focus more on proximate outcomes in the form of life conditions. For example, labor market reforms might first affect proximate outcomes like the unemployment rate before they affect overall life satisfaction. Such proximate outcome measures are often the first to react to policy mandates and may precede overall

SWB outcomes (see also the framework by Costanza provided above). This would also help to overcome, in part, the attribution problem, which is caused by the fact that SWB is influenced by many overlapping and interrelated factors, which makes linking changes in SWB to specific policies difficult.

Fourth, SWB is a metric that often fails to capture the imagination of policymakers (Battaglia, 2022), which hampers its practical implementation. While policymakers generally understand the concept of SWB (more than composite indexes), its use challenges many of the assumptions and routines embedded in traditional policy evaluation. In particular, policymakers are trained to work with and trust objective, cardinal indicators—especially those expressed in monetary terms. Incorporating complementary metrics that better align with the language and mindset of policymakers, as discussed in Sect. “[New frontiers in the use of SWB for Policy Use](#)”, would be helpful. At the same time, SWB often runs counter to dominant economic logic, which can be uncomfortable for technocratic systems. For example, SWB may not improve despite clear objective gains in GDP or employment rate, and it is not directly actionable in itself since only its antecedents (conditions of the good life) can really be targeted by policy. This asks for a different mindset, one that requires deliberate training and adjustment, or the use of different SWB metrics that speak more to the imagination of policymakers.

The next section introduces complementary metrics designed to overcome the limitations of standard SWB dashboards. These extensions include measures such as SWB inequality and the Happy Planet Index, which incorporate issues of inequality and sustainability respectively. Cultural-specific measures of well-being and metrics that combine widely accepted indicators, such as life expectancy, with SWB show promise for increasing the acceptance of well-being measurement in policy contexts (Sect. “[Extended Measurements of Well-being](#)”). Advances in Big Data and machine learning (Sect. “[Alternative data sources and methodologies to measure well-being](#)”) also make it possible to obtain real-time SWB information at large scales. Finally, WELLBYs and well-being efficiency measures help policymakers to uncover how well-being gains compare to their costs and how efficiently resources are translated into well-being outcomes. These extended measures also address some of the conceptual and methodological limitations discussed above.

New Frontiers in the use of SWB for Policy Use

Extended Measurements of Well-being

Culturally Sensitive Measurement of Well-being

A frequent criticism of well-being and happiness research is its strong reliance on Western Educated Industrialized Rich and Democratic (WEIRD) populations, with many measurement tools originating from Western cultural contexts (Burger & Pang, 2025). Yet, understandings of well-being can differ widely across societies. For example, East Asian cultures may place greater value on low-arousal positive emotions, such as calmness and harmony, rather than high-arousal feelings like

excitement. Similarly, Western perspectives often frame well-being as an individual pursuit, while many others view it as inherently relational or communal (Lambert et al., 2020). These differences imply that SWB indicators work best when they are aligned with the cultural setting in which they are applied. Therefore, dashboards should incorporate SWB measures that reflect the values, norms, and lived experiences of the populations they aim to represent or at least take the cultural context into account. In this context, Kryś et al. (2023) proposed a metric that adjusts individual well-being scores based on the type of well-being most valued in a respondent's indigenous culture. Their framework differentiates cultures by the extent to which they emphasize the individual versus the family, and by whether well-being is understood through an independent, person-centered lens or an interdependent, relational one¹¹.

Happy Life Years

When focusing on the outcomes of a good life, quality of life can be understood as the extent to which people live long and satisfying lives. SWB indicates how satisfied people are and how frequently they experience positive feelings, yet it does not reflect how long they live, even though both indicators are positively correlated (Veenhoven, 2008). To capture both quality and duration, human progress can be assessed using “happy life years per capita” (Veenhoven, 2010), calculated by multiplying the average level of SWB by the life expectancy at birth.

Focusing on happy life years offers several advantages over focusing on SWB alone. First, the concept is easier to communicate outside academic contexts because most people intuitively understand “years of life” and can readily grasp the combination of how long and how well people typically live. Life expectancy is already widely discussed in public debates and adding the notion that these years are happy feels straightforward. For example, stating that ‘a country provides 50 happy life years’ is more concrete than saying ‘average SWB is a 7 on a 10-point scale.’ Second, the measure resembles established health indicators such as healthy life years (e.g., Jagger et al., 2008), thereby creating a familiar framework for policymakers and the general public that bridges medical and emotional perspectives.

Sustainability: Happy Planet Index

SWB measures alone do not account for the resources that are used to produce SWB and, hence, the well-being of future generations. The Happy Planet Index (HPI) is a composite index that aims to overcome this limitation by measuring well-being in terms of long, happy and meaningful lives, while considering Earth's limited resources. The HPI measures the number of happy years by multiplying residents' overall life satisfaction by life expectancy, measured as the average life expectancy

¹¹ In this regard, a recent survey (Smith et al., 2025) identifies four types of SWB measures that are typically not well-covered in the literature: 1) low arousal positive affect, 2) relational affect, 3) social well-being, and 4) relational well-being. However, the same survey also argues that more work is needed to examine the reliability and validity of these measures.

(in years). The number of happy life years is then divided by the carbon footprint, which is an estimate of greenhouse gas emissions from consumption and economic activity per capita (Abdallah & Marks, 2024). To ensure comparability, all measures are standardized across countries.

The Happy Planet Index faces many of the issues identified above concerning composite indexes. At the same time, it provides an example tool that can be used to measure the sustainability of a country's well-being, not merely its well-being alone, and it is comparable across countries.

Inclusion: SWB inequality

National SWB is frequently aggregated from individual reports using a simple average or mean, yet there may be more or less preferred distributions of well-being with the same mean. Indeed, surveys indicate that U.K. residents tend to prefer more egalitarian societies, with lower well-being inequality, especially with fewer people experiencing low well-being (Quick & Devlin, 2018). For this reason, well-being inequality should be included in the dashboard of indicators.

Conceptually, well-being inequality is “the degree to which citizens [residents] in a country differ in the enjoyment of their life” (Kalmijn & Veenhoven, 2005). This inequality can be described horizontally across groups of people (e.g., gender, age, and race) (Jorda et al., 2019) or vertically along the distribution of scores. Horizontal inequalities are relatively easy to measure as the difference or gap in well-being means across groups, while distribution statistics like the standard deviation characterizes vertical inequalities. However, due to the ordinal and bounded nature of most SWB measures, most of the proposed vertical inequality measures have limitations (Grimes et al., 2023).

The Standard Deviation (SD) is the most commonly used statistic for SWB inequality. The problem with the SD is that it is mechanically related to the mean – changing the mean changes the SD even if the distribution has not otherwise changed. Thus, the SD might reflect differences in the mean rather than differences in inequality. A second challenge arises from the bounded scale, which bounds the SD in relation to the mean. The maximum possible standard deviation decreases as the mean moves further away from the middle of the scale (an issue called structural dependency) (Kalmijn & Veenhoven, 2005). Thus, if the mean is high or low, the SD can indicate low inequality even if there are important differences (Grimes et al., 2023; Keeping, 1962). Delhey and Kohler (2011) propose two adjusted versions of the SD measure to overcome structural dependency, which make the measure relative rather than absolute. Relative dispersion better reflects what matters from both a social and psychological point of view.

The Gini Index is another common statistic for measuring inequality (Gini, 1912). It circumvents some of the limitations of the SD because it measures inequality independently from the mean; however, it is still not intended for use with ordinal data (Kalmijn & Veenhoven, 2005).

The skewness (Grimes et al., 2023) or polarization of the well-being distribution may also be interesting. For instance, two different well-being distributions can have the same inequality values, but be skewed in opposite directions, e.g., more people

experiencing low well-being. To address polarization, Abul Naga and Yalcin (2008) developed a parametric family of inequality indices, which use inequality ordering that is suitable for any scale (Allison & Foster, 2004).

Alternative Data Sources and Methodologies to Measure Well-being

Survey data has traditionally been the main source for assessing well-being. However, post-pandemic survey fatigue, high costs, and time lags have highlighted the need for complementary tools like Big Data, which provides timely insights into well-being through sources such as social media and Google Trends™.

Big Data are data that are so large, complex, or quickly generated that they cannot be processed effectively using traditional methods. However, the development of Machine Learning (ML) techniques allows us to analyze effectively unprecedented volumes of data, i.e., Big Data. The application of ML to Big Data allowed researchers to develop new approaches to study people's attitudes, beliefs, and experiences.

In general, the computation of well-being scores using Big Data and ML consists of three steps. The first one is to extract the raw information – so-called corpus data. In the second step, the corpus is analyzed using pre-programmed lexicons, or dictionaries, that indicate quantitatively how each word or phrase is associated with specific sentiments (positive or negative) or emotions (anger, joy, etc.). In the third and last step, measures of well-being or emotions are computed by averaging the scores of all the observations produced in a unit of time.

Lexicons are based on Natural Language Processing (NLP), an ML technique to understand, interpret, and generate human language (Khurana et al., 2023). NLP involves tasks like text analysis, language translation, and sentiment analysis, and importantly, it can be used to provide the sentiment and underlying emotions of each observation. Currently, the best-known lexicons are the NRC (National Research Council of Canada Emotion Lexicon developed by Turney and Mohammad (2010)) for emotion detection and sentiment analysis, VADER (Valence Aware Dictionary and sEntiment Reasoner), TextBlob, Syuzhet, AFINN and Bing.

Compared to survey data, Big Data can provide larger and timely data sets at low costs. Harvesting and processing the data can be performed in nearly real time, which enables continuous monitoring. These tools allow researchers and policymakers to gauge public sentiment, listen to citizens' concerns, observe revealed preferences, and identify important changes as they occur (Rossouw & Greyling, 2024).

Despite the benefits, Big Data has limitations. Even if Big Data can be related to a significant proportion of the population, it is not necessarily nationally representative (Blank & Lutz, 2017). In addition, it is not easy to establish convergent validity as there are few other data sources (for example, surveys) to use as yardsticks. However, a recent systematic review found reasonable correlations between well-being measured through social media text mining and traditional survey methods (Sametoglu et al., 2024). Another potential limitation is that social media users may present socially desirable emotions, thereby not revealing their true opinions or feelings. Additionally, Iacus and Porro (2021) noted that there could be ethical concerns when using data collected from social media platforms since users may not have given explicit consent to use their posts for research. Lastly, Big Data are not a complete substitute

for surveys, as surveys can provide context, nuance, and individual-level information that cannot be captured in large-scale datasets. Big Data and ML can provide information at various levels of aggregation, but not at the individual level.

There are two groups of pioneers generating SWB data from Big Data. First, Dodds and Danforth (2010) used the Hedonometer to construct a real-time measurement of happiness from late 2008 to May 2023. Second, Greyling and Rossouw (2019), whose *GNH.today project* measures happiness and emotions in real time. These data have been used in various studies which provide evidence of the usefulness and validity of well-being measures issued from Big Data and ML (see, for instance, Sarracino et al. (2024), Greyling and Rossouw (2022), Rossouw et al. (2022) and Greyling et al. (2022)). Since 2024, *GNH.today project* has been using information-seeking query data via Google Trends™ to capture the happiness of different countries.

Innovative Tools for Policymakers

WELLBYs

Policymakers may want to know whether specific interventions increase SWB, and how these well-being gains compare to their costs. The WELLBY (Well-being-Adjusted Life Year) is a novel metric of social value and progress, developed to quantify improvements in well-being (Frijters et al., 2024). One WELLBY is equal to one life satisfaction point (typically measured on a 0–10 Likert scale) for one year.

Focusing on SWB alone, as the headline indicator, the WELLBY can be applied in multiple ways. Expected lifetime WELLBYs¹² – life expectancy at birth multiplied by average life satisfaction – provide another largely-comprehensive framework for evaluating human progress and comparing the performance of different countries (Layard & Oparina, 2021). WELLBYs can also be used to estimate non-market benefits or costs, and as such, are useful for both predicting the potential effects of interventions (ex-ante policy appraisal) and evaluating actual impacts (ex-post analysis). They help policymakers, private organizations, and NGOs aimed at enhancing well-being identify the most cost-effective interventions for improving population SWB. For instance, policies can be ranked by their WELLBYs generated per euro spent. They can also be used in cost–benefit analysis (Layard & Oparina, 2021). For this purpose, the U.K. Treasury has issued guidance on how to monetize WELLBYs. As of 2021, it valued one WELLBY at £13,000, providing a benchmark for use in social cost–benefit analyses (Cooper et al., 2023).

Well-being Efficiency

Current SWB policy advice focuses largely on life conditions, especially the amount of resources available, not how well they are used. Instead, Sarracino and O'Connor (2022) proposed a measure of countries' performance based on their ability to “produce” SWB, termed well-being efficiency. It aims to indicate how well countries transform their *resources* into SWB. Identifying inefficiencies provides one more

¹²Essentially the same as Happy-Life Years per capita (Veenhoven, 2010).

lever with which countries can improve well-being. By examining *how efficiently* resources (e.g., income, education, healthcare, public spending) are translated into well-being outcomes, this metric creates a performance-oriented lens for policymakers, who are accustomed to efficiency and cost-effectiveness metrics.

Well-being efficiency is determined first by identifying a best practice “frontier” of fully efficient countries, which score the highest SWB using the fewest resources, and second, by measuring the “distance” in output from the frontier. This is conducted using Data Envelopment Analysis (DEA) – a non-parametric frontier technique that is widely used to compute productive efficiency in management and economic studies. Future research can also look at using country-specific frontiers as is done in regional economics (e.g., Burger et al., 2022).

Ideally, countries’ resources improve over time, and their populations feel better, but in the absence of improving resources, countries can still improve SWB by increasing their well-being efficiency. Results from Sarracino and O’Connor (2022) indicate that high SWB tends to go with high well-being efficiency, but not perfectly. Many of the high-scoring countries could achieve even higher well-being if they used their resources more effectively. This insight is particularly important for the low-scoring countries. For instance, increasing well-being efficiency in a country from 50 to 75% would have an impact on SWB that is comparable to increasing its resources, such as GDP, by 50%.

Concluding Remarks

In this paper, we clarify the need to move beyond GDP as the primary measure of human progress and advocate for a comprehensive dashboard of indicators with SWB as a headline measure, in order to provide a better understanding of societal progress. While GDP has historically been a convenient measure of economic output, whose growth has, at least for some time, accompanied and enabled societal progress, it is increasingly evident that this has been possible at the expense of various aspects that matter for quality of life, including the environment.

We argue in favor of SWB as a single headline measure for gauging how people fare with their lives in a given region and year. Tracking its changes over time offers understandable, concise, and valuable insights into societal progress. SWB also offers an organizing principle that distinguishes the conditions of a good life from the outcomes of a good life. Dashboard indicators typically represent the conditions, and alone, are insufficient to assess the outcomes. Synergies and tradeoffs between domains may be accomplished using weights determined by their relations to SWB.

Some countries have made notable advances measuring and applying SWB in decision making. In this regard, the U.K. includes SWB in its Measures of National Wellbeing and has supported a range of experimental applications. Canada’s Quality of Life Framework uses life satisfaction as a cross-cutting outcome measure across government departments. Eurostat’s 8+1 framework similarly highlights SWB as an overarching outcome dimension. These cases show how SWB can support strategic planning, stewardship reporting, and policy evaluation across domains. Yet overall,

these cases remain exceptions. Most national efforts continue to treat SWB as supplementary rather than central.

To improve adoption of SWB as a headline indicator, we must address concerns over methodology, audience engagement, and conceptual clarity. We reviewed the state of the art in measuring SWB and the relative advantages and disadvantages. For instance, comparison of SWB across countries is limited by cultural comparability, as the importance of SWB and their interpretations vary across cultural contexts (Lambert et al., 2020). Assessing changes in SWB within countries over time is less subject to cultural concerns, but still faces challenges, as discussed in this study. Relevant advances go a long way towards addressing SWB limitations, for instance, ongoing methodological research, the use of additional measures that account for interpretability, sustainability and inclusion, and promising new ways of measuring SWB, including WELLBYs, well-being efficiency, and machine learning applied to Big Data.

In conclusion, in this paper we combine insights from various approaches to measuring societal progress, and argue for SWB as a headline measure of a dashboard of indicators to measure societal progress at various territorial levels. The ability to distinguish SWB as an outcome of a good life from its underlying conditions, and to assess their relative importance, offers decision makers a powerful tool for tracking progress and designing interventions that enhance quality of life for all. This approach overcomes the limitations of GDP as a measure of progress, namely its inability to capture non-market aspects of well-being, account for inequalities, and can reflect environmental sustainability. At the same time, SWB can also help organizing the information in multidimensional dashboards, herewith helping governments to make better choices. Looking ahead, further work is needed on how best to integrate SWB data into policymaking routines, how to ensure the regular and granular production of SWB measures, as well as its comparability over time and across countries. The ultimate goal is to move beyond GDP as a measure of progress and enable governments to fully capitalize on its potential as a guide for human progress.

Author Contributions

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Declarations

Ethical Approval This study complies with all relevant ethical regulations.

Competing interest There are no competing interests.

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