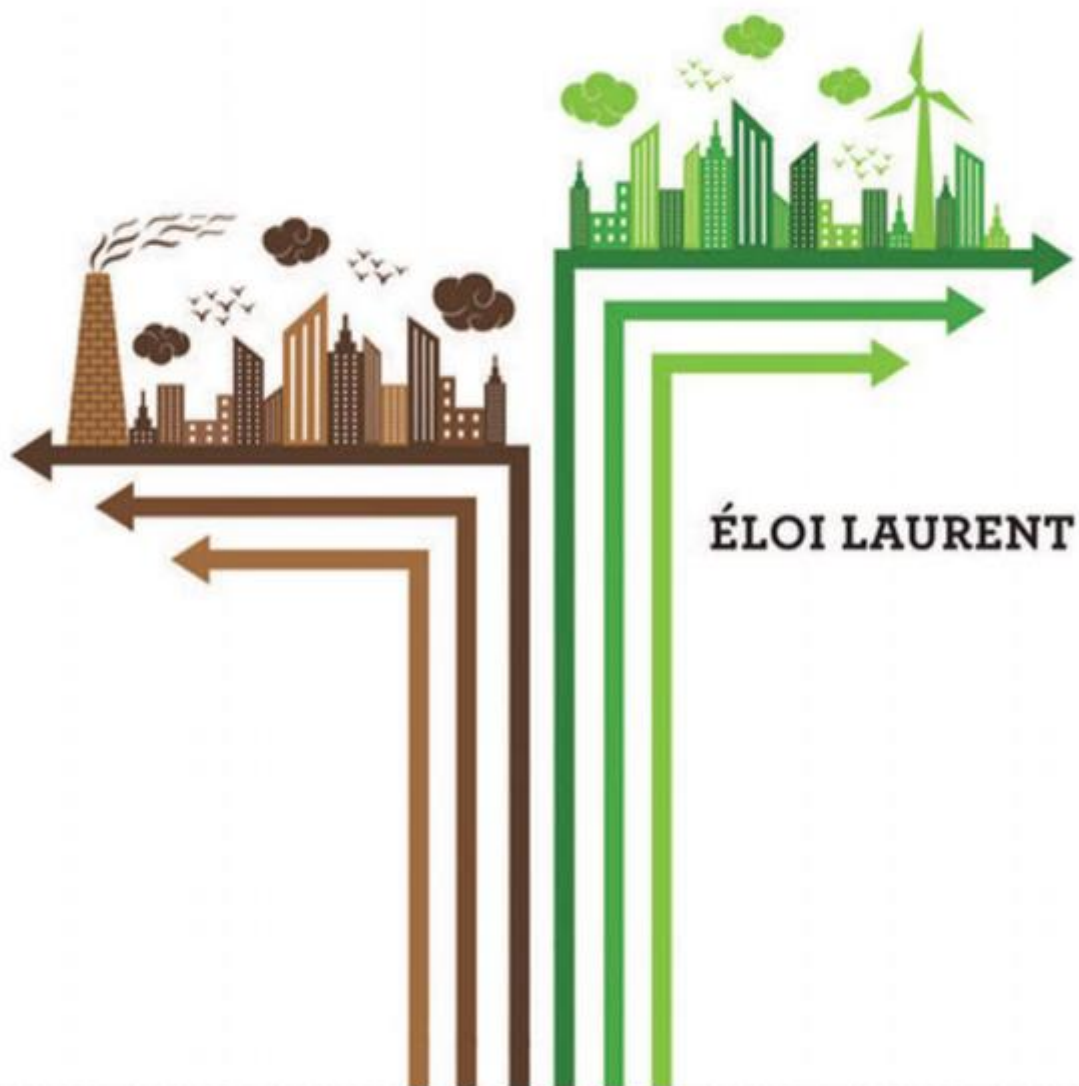


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# MEASURING TOMORROW

Accounting for Well-Being,  
Resilience, and Sustainability  
in the Twenty-First Century



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*Accounting for Well-Being, Resilience,  
and Sustainability in the Twenty-First Century*

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## CHAPTER 2

### Good and Bad Indicators

#### *The Case of GDP*

How can we know with a fair degree of certainty that governing twenty-first-century economies with conventional economic indicators such as GDP is a bad idea? We first need to learn more about the qualities and flaws of various economic indicators. An indicator is a simplified representation of a complex social reality. It can serve as both a policy input and a policy outcome. It can aid in the design or the evaluation of a given policy, or both.<sup>1</sup> It is used to perform three main tasks: to know and understand, to administer and govern, and to communicate and represent. An indicator should thus possess three fundamental attributes: formal quality, policy purpose, and political impact.

As for its formal qualities, a good indicator must be accurate, timely, regular, comparable in time and space, disaggregative (that is, it should have a certain granularity), and evolutive, to allow for improvements. But it also needs substantive qualities. A good indicator should be purposeful (that is, measure precisely what it was designed for), policy-relevant, to inform on the real complexity of the social world, and socially appropriable, which is to say, both understandable by citizens and subject to public debate.

Obviously, there are trade-offs between these qualities: purposefulness often contradicts availability, appropriability can hinder formal qualities, and regularity can pose a problem for relevance. Two major types of policy indicators offer a glimpse of ways to deal with these dilemmas. Composite or synthetic indicators offer a one-dimensional

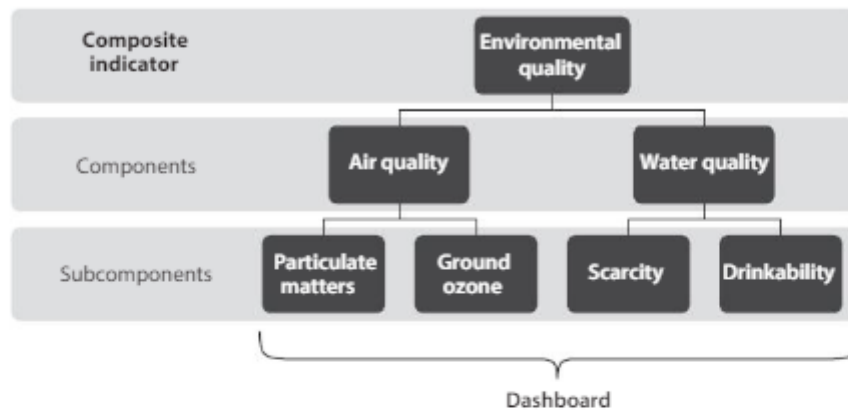


FIGURE 2.1. Composite indicators and dashboards: a simple example.

view of the social world: they are easily readable and understandable and are comparable in time and space. However, they inevitably bring about issues of data aggregation and weighting, both of which relate to the need to combine heterogeneous variables such as income (expressed in monetary units) and health (expressed in years of life expectancy) in a single piece of information. This is by no means technically impossible, but necessitates the use of specific statistical techniques.<sup>2</sup> The second of these policy indicators, the dashboard, allows the user the freedom not to choose between these different dimensions by adopting a multidimensional approach, which retains the maximum possible amount of information for action. Assessing environmental quality, for example, might mean quantifying air quality, water quality, climate, and other dimensions that are not akin to one another. This, in turn, brings about other problems such as data heterogeneity, hierarchy, and comparability in time and ranking in space.

There is, however, less contradiction between composite indicators and dashboards than is often understood. Figure 2.1 shows how dashboards can be conceived as a step in building a composite indicator. In this theoretical example, an environmental quality indicator is designed with only two dimensions, air quality and water quality, themselves aggregating two subdimensions. The key issue in the choice between a composite indicator and a dashboard is the possibility and relevance of aggregation of the subcomponents, as statistical information is being

lost in this process and dimensions become reducible to one another. Choosing between a dashboard and a composite indicator is essentially knowing when to stop aggregating data.

This issue is one of the many raised by the gross domestic product, or GDP. From a technical standpoint, GDP can be defined as a composite indicator measuring marketable and monetized economic activity. It uses monetization of its components' value at their market price and imputation of the value of those not sold on markets to aggregate many dimensions of economic activity, some positive (nutrition, health, education, environmental protection), others less so (arms expenditures or prisons, items sometimes referred to as "regrettables"). By conflating positive and negative elements, GDP not only muddles the social picture, but hides from policy view important evolutions in well-being and sustainability by giving the illusion that each of its components is in a good place because its aggregated sum is growing. GDP is thus often confused with well-being and even sustainability, while in reality it says very little, if anything, of either.

The context in which indicators are born is often an indicator itself of their strengths and weaknesses. GDP was first developed in 1934 by Simon Kuznets at the demand of the US Congress, whose members wanted to have a clear and synthetic view of what had happened to the American economy after the 1929 stock market crash. What had happened was the Great Depression. The prehistorical GDP built by Kuznets had the great merit of showing the huge contraction of almost all sectors of the American economy in the first years of the 1930s. Because the shock was systemic, a synthetic indicator was fully relevant and called for a systemic macroeconomic response, something President Roosevelt eventually achieved with the New Deal and the war effort.

Putting the first insights of the nascent pre-Keynesian macroeconomic discipline to good use, Kuznets offered three simple ways to calculate GDP, each time relying on the monetary value of goods and services produced in the country over a given period. The first was through the production approach: the aggregation of the added value of all monetized economic activities in a year. The second, equivalent measure was through the aggregation of all income distributed in the economy (i.e., profits + wages - taxes), and the third, the sum of all expenditures in the economy (summing all the components of

demand). Although Kuznets invented the process, he did not invent its name: it was Clark Warburton who first used in print the term “gross national product,” which Kuznets later adopted.

Therefore, interestingly, GDP was not born as an indicator of development but as a symptom of crisis. Even more telling, Kuznets was keenly aware that GDP relied on debatable methodological choices, writing, “The national income total is thus an amalgam of relatively accurate and only approximate estimates rather than a unique, highly precise measurement.”<sup>3</sup> Going further, Kuznets warned of the “uses and abuses of national income measurements”:

The valuable capacity of the human mind to simplify a complex situation in a compact characterization becomes dangerous when not controlled in terms of definitely stated criteria. With quantitative measurements especially, the definiteness of the result suggests, often misleadingly, a precision and simplicity in the outlines of the object measured. Measurements of national income are subject to this type of illusion and resulting abuse, especially since they deal with matters that are the center of conflict of opposing social groups where the effectiveness of an argument is often contingent upon oversimplification . . .<sup>4</sup>

He was rightly cautious. The so-called Kuznets curve, an abusive generalization of his 1955 article observing the U-inverted relation between growth and inequality in certain countries at a specific historical juncture, was interpreted by many economists as implying that increasing GDP per capita would mechanically reduce inequality and could even lead to solutions for environmental crises. (The “environmental Kuznets curve” posits that, past a certain income per capita threshold, environmental degradations gently recede.)

GDP, its own inventor warned us, is not an indicator of well-being or sustainability. Yet it became endowed with not only the magical power to solve inequality crises, but also to mitigate environmental ones, which to this day remains an enduring belief in economic circles.

The second key moment setting the stage for the reign of GDP was the 1944 conference convened among the Allied nations in Bretton Woods, New Hampshire, when the new international economic order came to life under the leadership of the United States. Another moment



of crisis gave birth to the first effort to harmonize national accounting: how national resources should be used to pay for war—the very question that gave birth to the first attempts to build national accounts by Petty and King in the seventeenth century—triggered new research in the UK. James Meade and Richard Stone, associates of John Maynard Keynes, the founding father of macroeconomic analysis, gave life to GDP as we know it.<sup>5</sup>

At Bretton Woods, GDP became the currency of national success, the sign that a country belonged among the most advanced in the world. From then on, a nation would be considered “developed” if its GDP per capita was as high as that of the richest countries. The decades that followed were marked by the imperative of reconstruction in many countries and by the need to advance the material conditions of people in the race between the “free world” and the other winner of 1945, the USSR. Industrial growth was logically put at the center of increasingly harmonized national accounts. Social progress meant growth and growth meant industrial growth. For the first time, national accounting was used to pursue a new quest other than war and to ask an entirely new question: how to pay for development.

Why and how did GDP become gradually irrelevant? Using the criteria defined at the beginning of this chapter, it can be said that its formal qualities have greatly improved and are possibly stronger than ever, but that its substantive qualities are probably weaker than at any other time. This weakness is reinforced by its misuse to evaluate and represent realities it was never meant to measure. To take a simple example, GDP still does a good job of detecting and tracking economic recessions, but it cannot measure their social impact. When good indicators are poorly used, they become bad ones.

Ironically, the great strength of GDP is now its most critical flaw. Macroeconomic reasoning is fundamentally correct in highlighting the interdependence of economic actors and the impact of their interaction beyond individual (or microeconomic) behaviors. This well-established stream of economic theory was overlooked by the governments that engaged in austerity in the face of the “great recession.”<sup>6</sup> But it turns out that the circle is even wider, well beyond GDP’s remit, for beyond economic well-being stand human well-being and, even more importantly, sustainable human well-being.

Because the crisis of GDP is substantial rather than just formal, the various attempts to build “1.1” and “2.0” versions in order to make it relevant again, while well-intentioned and valuable, fell short of meeting the challenges of the twenty-first century. “GDP 1.1” promoters now recognize that gross domestic product only reflects market and monetary exchanges considered in the too-narrow limits of national borders without accounting for the depreciation of productive structures (capital). GDP’s “gross” nature has led to the development of Net National Income, which attempts to take into account capital depreciation,<sup>7</sup> while its “domestic” limit encouraged the use of GNP as an alternative to GDP.<sup>8</sup> “GDP 2.0” is attempting something even more ambitious. It is trying to take stock of the considerable evolution of our postwar economic world and to include international trade (especially complex financial flows and the global supply chain) and the price and quality of intangible goods and services such as knowledge in national accounts innovation.<sup>9</sup> Growth might thus be better measured through GDP 1.1 and GDP 2.0, but the stakes are actually higher: it is our passion for (GDP) growth that should be questioned, not just its measurement.

GDP’s relevance is fast declining in the beginning of the twenty-first century, alongside that of the other conventional economic indicators of which it is the flagship. Economic growth, so buoyant during the three decades following the Second World War, has gradually faded away in advanced and even developing economies and is therefore becoming an ever-more-elusive goal for policy. Both objective and subjective well-being—those things that make life worth living—are visibly more and more disconnected from economic growth, as this book will make clear. GDP also tells us all but nothing about sustainability, the compatibility of our current well-being with the long-term viability of ecosystems, even though it is clearly the major challenge we and our descendants must face.

To put it simply, what we need to understand is not whether growth will be strong or weak in the coming years, but that the return of strong growth would ensure neither that individual well-being would improve nor that societies would become more sustainable. We thus need to work in three new directions in order to really understand our economic world.

The area I call “below GDP” includes the fundamental determinants of human development. These explain the quantitative accumulation of production factors and the qualitative improvement of their combination that are necessary for production and per-capita incomes to rise. For centuries institutions, geography, and international openness have been combined in various ways under all latitudes to enlarge or restrict the range of human development opportunities. Economic development depends on these deep determinants; attention should therefore be focused on them, rather than on a superficial dimension such as “growth.”

The factors “beside GDP” are the nonmonetary things that benefit or hinder human well-being, such as health and education. They cannot be subsumed to income. The idea that economic growth represents development, insofar as it would be a satisfactory summary measure of all dimensions of human well-being, is simply wrong. GDP growth is not another term for human development; in fact, it is often its antonym. Hence, increasing the former will not, on its own, improve the latter: specific policies are needed that directly target education, health, environmental conditions, or democratic quality. For lack of consideration of this plurality of well-being, a single dimension, usually the economic one, will dominate all the others and crush them, mutilating human development in the process.

The “beyond GDP” category highlights the ecological challenge: Does a 10 percent GDP growth rate matter if the ecosystems, water, and air that underpin our well-being are being devastated over a span of two or three decades? Is economic growth worth anything if life itself becomes impossible? To use the words of Chinese Environment Minister Zhou Shengxian in 2011, “If our planet is wrecked and our health ravaged, what is the benefit of our development?”<sup>10</sup> Our economic and political systems exist only within a larger context, the biosphere, whose vitality is the source of their survival and perpetuation. If ecological crises are not measured, monitored, and mitigated, they will eventually wipe out human well-being.