Chapter 7
Composite Indicators of Development: Some Recent Contributions

Sandrina B. Moreira
Instituto Politécnico de Setúbal (ESCE – IPS), Portugal

Nuno Crespo
Instituto Universitário de Lisboa (ISCTE – IUL), Portugal

ABSTRACT

Development is a complex and multidimensional phenomenon. The quantification of such a phenomenon requires indicators that may capture its most important components. In this chapter we present an extensive list of composite indicators of development, identifying their main possible common dimensions: income, income distribution, education, health, employment, infrastructures, values, and environment. We also discuss in detail five recent indices characterized by their comprehensiveness: 1) Regional Quality of Development Index (QUARS) of Sbilanciamoci!; 2) Wellbeing Index (WI) and Wellbeing/Stress Index (WSI) for measuring sustainable development; 3) Gross National Happiness (GNH) from the Center for Bhutan Studies; 4) Bertelsmann Transformation Index (BTI) of Bertelsmann Stiftung; and 5) World competitiveness scoreboard from the Institute for Management Development (IMD).

INTRODUCTION

The most important issues emerging from the literature on economics of development in recent years are the complexity and multidimensionality of the concept of development. Consequently, income per capita – the reference indicator for ranking countries at different levels of development – hardly gives, by itself, a sufficient indication of the disparities that exist between countries and over time. Mainly since the 1990s, the emergence of a wide range of composite indicators of development comes as no surprise. The Human Development Index (HDI) is the most internationally known indicator that aims to overcome the narrow focus on income per capita. Nevertheless, the majority of index proposals (including the HDI) are not sufficiently comprehensive in capturing the main dimensions of the concept(s) of development.

DOI: 10.4018/978-1-5225-0714-7.ch007

The present chapter seeks to provide a broad set of composite indicators of development, highlighting the dimensions covered in each of the indices listed here. On the other hand, a more limited group of indices is assembled for detailed discussion. Thus, starting with a discussion of the relevance of composite indicators for measuring development, the main focus of the present chapter encompasses two parts:

1. First, a proposal to disaggregate the main dimensions of development, and an extensive list of indices as well as their coverage of the different dimensions of development identified here;
2. Second, a detailed presentation of five recent proposals whose multidimensional nature stands out.

BACKGROUND

For many years, and mainly after the Second Word War, there has been a close connection between economic growth and development. The first has been viewed as a necessary and sufficient condition for the latter and, therefore, measuring a country's level of development through indicators of economic activity, especially the level of income per capita, has become a common approach.

However, since the 1970s, there has been a turning point in the practices and approaches to development, and the notion of development has been expanded to consider new dimensions not exclusively centered on the economic perspective. As a whole, the new concepts of development – sustainable, human, and local development are the most frequently mentioned – have been allowing a more adequate understanding of the complexity and multidimensionality of the phenomenon at issue. Regarding the quantitative assessment of the performance of countries in terms of development, composite indicators have gained greater importance as a result.[1]

Composite indicators are mathematical combinations of a set of indicators. There are many conceptual and methodological arguments in favor of this measurement approach. According to Saisana and Tarantola (2002), the main pros of using composite indicators are:

- Composite indicators synthesize complex or multidimensional issues;
- They are easier to interpret than a battery of separate indicators;
- They facilitate the task of comparing the performance across countries; and their progress over time, and thereby attract public interest;
- They reduce the size of a list of indicators without losing basic information.

Nevertheless, there are also some important criticisms levelled at composite indicators. Booysen (2002) stresses the following arguments against composite indicators:

- They always exclude one or more essential elements of the domain at issue;
- Particular components of the index may be quantified with the aid of different variables (possibly better ones);
- Composite indicators may be unable to reveal more than what a single variable alone reveals;
- The selection process of the variables may be *ad hoc*, that is, politically or ideologically motivated, or simply determined by the availability and accuracy of data;
- The data employed in composite indicators are often inaccurate and non-comparable;