

# Global Sustainability

Social and Environmental Conditions

Simone Borghesi and  
Alessandro Vercelli



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# Global Sustainability

# List of Acronyms

ABB	Asea Brown Boveri Ltd
AIDS	Acquired Immune Deficiency Syndrome
BAU	Business as usual
C&C	Command and Control
CAFE	Corporate Average Fuel Economy
CFC	Chlorofluorocarbons
CG	Corporate governance
CH <sub>4</sub>	Methane
CITES	Convention on International Trade of Endangered Species
CO <sub>2</sub>	Carbon dioxide
CSA	Canadian Securities Administrators
CSR	Corporate Social Responsibility
DDT	Dichlorodiphenyltrichloroethane
DJSI	Dow Jones Sustainability Index
DM	Decision-maker
EIA	Energy Information Administration
EKC	Environmental Kuznets curve
EKR	Environmental Kuznets relation
EMAS	Eco-Management and Audit Scheme
EPA	Environmental Protection Agency
EU	European Union
EVA	Economic value added
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investments
FIR	Financial Interrelations Ratio
GATT	General Agreement on Trade and Tariffs
GDP	Gross Domestic Product
GHG	Greenhouse gas
GLS	Generalized Least Squares
GMO	Genetically Modified Organisms
GT	The General Theory of Employment, Interest, and Money
GtCO <sub>2</sub> .e	Gigatons of CO <sub>2</sub> emissions equivalent
HFCs	Hydrofluorocarbons
HIV	Human Immunodeficiency Virus
ICT	Information and Communication Technology
IEA	International Energy Agency

IMF	International Monetary Fund
IPCC	International Panel on Climatic Change
KC	Kuznets curve
kWh	Kilowatt-hour
N <sub>2</sub> O	Nitrous oxide
NGO	Non-governmental organization
NO <sub>x</sub>	Nitrogen oxide
OECD	Organization for Economic Co-operation and Development
OLS	Ordinary Least Squares
OPEC	Organization of Petroleum Exporting Countries
OTC	Over the counter
PCB	Poly-Chlorinated Biphenyls
PFCs	Perfluorocarbons
PM <sub>10</sub>	Particulate matters (less than 10 microns in diameter)
R&D	Research and Development
RIH	Relative Income Hypothesis
SF <sub>6</sub>	Sulfur hexafluoride
SME	Small-medium enterprise
SO <sub>2</sub>	Sulfur dioxide
ST	Stakeholders theory
SVT	Shareholder value theory
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEO	United Nations Environmental Organization
UNEP	United Nations Environmental Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
WB	World Bank
WBCSD	World Business Council for Sustainable Development
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WTO	World Trade Organization

# Preface

In this book we intend to discuss to what extent the post-war process of globalization may be considered consistent with the basic requisites of sustainable development. The approach that we have chosen for this purpose aims to be as rigorous as possible, avoiding prejudice and groundless simplification. We are fully aware that this is a difficult task. Both “globalization” and “sustainable development” are overworked and abused terms, full of polemic and emotional overtones. In spite – and partly because – of this, these two keywords have caught the attention not only of researchers but also of public opinion and mass media. The hot confrontation on these issues has also stimulated widespread interest in them but, at the same time, has polarized public opinion into two opposing camps: in favor or against globalization, and concerned or unconcerned with the requisites of sustainable development. Such a polarization has not helped the understanding of the ongoing processes nor the identification of the best policies to keep them under control. We should therefore abandon the sterile and misleading confrontation between unqualified arguments in favor or against globalization and try to give sounder foundations to the different points of view.

Since the book aims to give a *scientifically sound* contribution, why did we choose to combine in the very title two keywords (globalization and sustainable development) that are so highly controversial? First of all, because they raise issues that are strictly linked and complementary. Interest in globalization emerges from the need to appraise recent socio-economic processes in terms not only of local, but also of global determinants and implications. Similarly, interest in sustainable development arises from the need to appraise recent socio-economic processes not only from a short-term, but also from a long-term perspective. Taken together, therefore, the two keywords reflect the need of extending our analysis and policy concern beyond the “here and now”. In other words, the same holistic role played by the concept of globalization from the spatial point of view is played by the concept of sustainable development from the temporal point of view. Both concepts express the awareness that we may understand the meaning and implications of current processes only by inserting them within their spatial (global) and temporal (long-run) contexts.

The second reason to relate globalization and sustainability lies in the causal influence of the first on the second. We believe that the issue of sustainable development became really topical as a result of the globalization of the environmental and social problems induced by the markets' internationalization. The analysis of the causal influence exerted by globalization on the sustainability of development helps clarifying which of its features have a positive impact on the environment, society and quality of life and which a negative impact. This suggests how economic, social and environmental policies might be redirected to eliminate, or at least mitigate, the adverse effects of current globalization while strengthening – at the same time – its positive influences on the sustainability of world development.

The analysis of the requisites for sustainable globalization is bound to engage us in a sort of patient restoration of a large mosaic of which we know neither the general design nor the details, while we can recover only a limited number of tesserae that require preliminary restoration before reassembling them in a meaningful whole. The basic tesserae are provided and validated by different scientific disciplines (such as economics, sociology, law and ecology) that are involved in the issues that we are going to discuss. As economists we rely mainly on economics and some of its specialized branches: environmental and international economics, industrial economics, finance, as well as growth and development theories. Within the limits of our competence, however, we also have to refer to other scientific disciplines such as law, social epidemiology, biology and sociology. These and other disciplines have much to say on the single tesserae of the mosaic and on how they can be restored but, generally speaking, they have so far avoided the crucial task of assembling them in a meaningful whole. This task was therefore left to the public opinion and hence mainly to the opinion-makers of mass media and political movements. It is our conviction, however, that scientific research should not sidestep this forbidding but crucial task. Otherwise, excessive weight would be given to the subjective opinion of those who, in the absence of firm arguments established by scientific disciplines, might be easily influenced by emotions and propaganda. Therefore, in this book we attempt to recover and reassemble the tesserae validated by scientific disciplines, accurately weighing the pros and cons of each assertion as in a process based on circumstantial evidence, setting aside personal prejudice and opinions as far as possible.

The task in hand is quite challenging. While we strive to take account of all relevant scientific information, we are aware that there are gaps in our coverage. In addition, as knowledge accumulates over time, the



results we have attained so far are likely to require considerable updating or adjustment in the future. Our attempt at critical reconstruction and interpretation of facts aims thus mainly to suggest a method that can be further pursued in the future in the light of new and better knowledge. Only from the joint effort of many researchers belonging to the relevant scientific disciplines can there emerge in due time a persuasive critical reconstruction of facts and a well-designed policy strategy.

The structure of this work is the following. The book opens with an introductory chapter that deals with preliminary issues that we felt had to precede the rest of our argument. In the first section we introduce the definitions of globalization and sustainable development, their origins and evolution in the last two centuries. In the second section we outline a comprehensive preview of the interpretive appraisal of the book. In the third section we discuss the nature of the gap between the ideal textbook model of perfect competition and the real markets. This gap provides the ultimate foundations for many of the theoretical arguments underlying the interpretation, evaluation and policy suggestions advanced herein. The following four chapters investigate the main requisites of sustainable development with special reference to inequality and poverty (Chapter 2), environmental deterioration (Chapter 3), energy (Chapter 4) and health (Chapter 5). The sixth chapter focuses on the latter half of the 1990s in order to understand the impact on globalization of the so-called "new economy" and of the new international market regulations introduced by the World Trade Organization (WTO). The seventh chapter shifts the focus from the macroeconomic to the microeconomic point of view in order to analyze the impact of the recent process of globalization on the sustainability of corporations. For this purpose, we examine how the corporations' initiatives of self-regulation to consolidate their social responsibility affect their own sustainability as well as that of macroeconomic development. The eighth chapter investigates the nexus between the evolution of liberal doctrines since their classic exposition in Adam Smith (1776), and the evolution of the globalization process, including its impact on sustainable development. This allows us to point out how the history of markets (including their globalization) and the history of market theory with its policy implications (liberalism) have been strictly intermingled in the last two centuries. Chapter 9 ends the argument with a few concluding remarks. In the first section we summarize the argument developed in the book, while in the second section we discuss the main policy teachings that we are inclined to draw from our analysis. In the third section we discuss the "liberal dilemma" arising from the fact that

any measure introduced to defend and expand the individual economic freedom may offer new pretexts for introducing limitations to it.

This book has two main purposes, each of which addresses a different audience. The first purpose, as we have mentioned above, is to provide an interpretation of the post-war process of globalization with special emphasis on the last quarter of the 20<sup>th</sup> century, in order to assess its sustainability. Though this theme is discussed with the maximum rigor we were capable of, we kept the technicalities to a minimum to ensure that our argument is accessible to a wide audience with a basic, though not necessarily professional, background in economics. The second purpose is to provide a fairly comprehensive textbook on globalization with special reference to its sustainability, or on sustainable development with special emphasis on the impact of globalization. We envisage it being used by undergraduates at the end of their studies in economics or at the beginning of graduate studies in development, international or environmental economics, as a premise for a more in-depth study of some of the issues discussed. Preliminary drafts of this book have been used by the authors as lecture notes for the course in environmental economics at the University of Siena since the academic year 2002–2003 and for the course in development economics at the University of Pescara since the academic year 2004–2005.

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We have utilized in this book ideas and excerpts from the following works, indicating in brackets the main chapters or sections in question:

- Borghesi, S., 2001, The environmental Kuznets curve: a survey of the literature, in Franzini, M., Nicita, A. (eds), *“Economic Institutions and Environmental Policy”*, pp.201–224, Ashgate (Chapter 3).
- Borghesi, S. and Vercelli, A., 2003, Sustainable globalization, *Ecological Economics*, vol. 44, no. 1, pp.77–89 (Chapters 1 and 3).
- Borghesi, S. and Vercelli, A., 2006, Global Health, in Farina F., Savaglio E. (eds), *“Inequality and economic integration”*, pp.107–136, Routledge (Chapter 5).
- Vercelli, A., 2004, Updated Liberalism vs. Neo-liberalism: Policy Paradigms and the Structural Evolution of Western Industrial Economies after W.W. II, in Arena, R. and Salvadori, N. (eds), *Money, Credit and the State: Essays in Honour of Augusto Graziani*, Aldershot, Ashgate (Chapter 8).
- Vercelli, A., 2006, Globalization and Sustainable Development, in Basili, M., Franzini, M., and A. Vercelli (eds), *Environment, inequality and collective action*, Routledge (Chapter 1).

We thank the editors and the publishers of the above mentioned journals and books for their permission to re-utilize parts of the already published works. Of course, the passages borrowed from these works have been extensively updated and adapted within the framework of the book in order to avoid repetition and heterogeneity.

Preliminary drafts of single parts of the book have been presented during these last years at the Universities of Bergamo, Florence, Forlì, Milano Bicocca, Perugia, Pisa, Roma 3, Venice, the European University Institute, the Rio de Janeiro Federal University, the World Congress of the International Economic Association in Lisbon, the International School on Economic Research of the University of Siena, the Swiss

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# 1

## Introductory Remarks: Definitions, Preview, Foundations

In the first part of this chapter we intend to give the basic definitions of globalization and sustainable development as well as some historical background that we believe essential for a full understanding of what we are going to say in the sequel. In the second part of the chapter we proceed to outline a preview of a few crucial arguments developed in the following chapters. In the third part we explicit the theoretical foundations underlying our arguments.

### 1 Definitions

In order to study the relationship between globalization and sustainable development we have first to clarify the meaning we attribute to these controversial concepts.

#### 1.1 Globalization: definition and evolution

Since the late 1990s the economic and social implications of globalization have attracted increasing attention from both public opinion and mass media. In spite of the hot debate, or perhaps also because of this, there is no agreement on the very definition of globalization.<sup>1</sup>

In what follows we intend to focus exclusively on *economic* globalization. By economic globalization we simply mean the progressive integration of world markets induced by the liberalization of international exchanges of goods, services and productive factors. In a similar vein Bhagwati has recently defined economic globalization as “integration of national economies into the international economy through trade, direct foreign investment (by corporations and multinationals), short-term capital flows, international flows of workers and humanity generally, and flows of technology” (Bhagwati, 2004, p.3). Although this

definition is quite narrow, we wish to emphasize that economic globalization is by no means reducible to free trade as in many economic studies. Single correlations between the degree of trade freedom and other desirable or undesirable features of development are insufficient for an evaluation of economic globalization. The latter cannot be reduced to one single variable. It is a complex historical process the characteristics of which may be somehow captured and assessed only by examining a multidimensional set of variables, interpreting their time patterns and correlations within the evolving historical context. Therefore, beside the strictly economic aspects mentioned above we should always keep in mind other political, social, cultural and institutional aspects of globalization some of which have been stressed in recent debate. In order to reach a sharper focus in our analysis, however, we will deal with these aspects only insofar as they affect, or are affected by, what we have called *economic globalization*.

Although the process of economic globalization had a long gestation period,<sup>2</sup> we can give a fairly precise birth date to its take-off in the Contemporary Era: the third decade of the 19<sup>th</sup> century, when the economic historians start to find a tendency of the prices of goods traded in different national markets to converge toward a single price (see O'Rourke and Williamson, 2000; Lindert and Williamson, 2003). In fact, given that a fundamental characteristic of a competitive market is a single price for a traded good, it is meaningful to speak of a real tendency towards a unified international market only when the empirical evidence shows a tendency of local prices to converge towards a single price. It was in that period that industrialization started to exert a pervasive influence in the direction of increasing market freedom in the UK where it had first developed, and with a variable lag in other European countries as well as in their offshoots overseas (first of all in the USA). In the same period the liberal inspiration of economic theory, thoughtfully argued by Adam Smith and further developed by the other classic economists since the end of the 18<sup>th</sup> century, began to shape the markets, in a first time through scattered and timid interventions of liberalization of domestic and cross-border exchanges in the UK, and then in the other principal industrialized countries. Systematic liberal policies started to be adopted in the UK since 1846 when the "corn laws" were repealed,<sup>3</sup> and a bit later in the other countries that were more advanced in the process of industrialization. Free trade progressed until World War I, after which a phase of de-globalization that lasted about three decades set in. In this period, the two World Wars and the great depression of the 1930s fostered the adoption of inward policies in most countries.



Globalization did not bounce back until after World War II, but from then on it continued uninterruptedly up to the present time. This book focuses on the most recent post-war phase that can be divided into two periods. The first may be called the “Bretton Woods period”, lasting from the end of World War II to the end of the '60s. In that period international markets were regulated by the International Monetary Fund (IMF), the World Bank (WB) and the other organizations set up during the peace conference held in Bretton Woods, which also established their underlying behavioral rules. After the collapse of the dollar exchange standard based on fixed currency rates in 1971,<sup>4</sup> a new international economic order gradually emerged that was based on floating exchange rates and a new policy philosophy. The latter, promptly adopted by the IMF and the WB, was further pursued by a new organization instituted in 1995 with the task of completing the liberalization of international exchanges: the WTO.<sup>5</sup>

After the end of the Second World War, the process of globalization was vigorously promoted by international organizations that supported the liberalization of trade across countries. In particular the GATT (General Agreement on Trade and Tariffs) progressively removed, or reduced, the tariffs and the other barriers to international trade, rapidly bringing back the extension of globalization to the level reached at the turn of the century before the period of de-globalization triggered by the First World War. The breakdown of the Bretton Woods system in the 1970s accelerated the process of international trade liberalization. The Uruguay Round of GATT progressively extended in the 1990s the range of goods freely exchangeable to most immaterial goods such as software, copyrights, patents and insurance. In the same period the growth of global markets was greatly enhanced by the diffusion of the information and communication technologies (see Chapter 6).

We wish to emphasize that the process of globalization of the world economy has continuously changed in the last two centuries and has become increasingly complex. The continuous evolution of the process of globalization and the marked differences between its local varieties explains why any attempt to achieve general conclusions on the features of globalization does not appear really meaningful and sound. We have to distinguish different “modes of globalization” that are affected by various economic, technological, demographic, social, and policy factors. In order to avoid vacuous generality or ungrounded generalizations, we are thus going to distinguish between different phases of globalization and differentiated impacts on specific aspects of economic life in different countries or groups of countries. In addition we