

Walter Leal Filho, Diana-Mihaela Pociovalisteanu and Abul Quasem Al-Amin (eds): Sustainable economic development: green economy and green growth

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This book's content is what its title suggests, 18 articles by 36 researchers on sustainable economic development, the green economy and green growth. It is one of the sets of interdisciplinary books by Springer World Sustainability Series and focuses on economic growth with ecological concerns. This specialization is well defined, as the book features a careful organization of articles, in terms of scope and depth. It overall fulfills its promise of filling gaps in our understanding of green growth, and various chapters of this book discuss some of the most important related issues. Despite a broad consensus that we face a global environmental crisis, the authors differ regarding the scale of the social changes required to overcome it. This book advocates approaching the subject from a green economic perspective and a green growth ideology in order to cope with the crisis. Several chapters analyze sustainable development, the green economy, green growth and related concepts, while others examine the subject descriptively, methodologically and statistically or through country case studies.

The book starts with “Industrial Symbiosis: An Innovative Tool for Promoting Green Growth,” which examines the limitations and advantages of applying concepts like industrial symbiosis, ecological innovation, and industrial ecology in order to encourage green growth. A related chapter discusses biotechnology (p. 127), which is one of the areas of most intensive scientific research, making it important to promote innovation and facilitate access to tax incentives for private companies to achieve bio-industrial development. Another chapter argues that world waste is driven by population, economic growth, and urbanization. The chapter statistically compares waste generation globally, both currently and for 2025. By graphing the relationship between per capita income and waste generation, the author demonstrates that the highest income countries are producing the most waste (p. 35). Using recent statistics from 2000 to 2015, the chapter reviews recent research on waste composition, disposal, treatment technologies, and prevention to

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provide a general comparative perspective on statistical and regional information regarding waste prevention.

The chapter on “Ways of Fostering Green Economy and Green Growth” (p. 49) is central to the book in terms of its analysis of the relationship between the green economy and interrelated issues. It reviews green economies and green growth relations politically, socially, and economically. Although it gives various examples of practice in different countries, it only discusses their positive aspects. The chapter suggests that public consciousness influences the success of political and economic initiatives. Although the chapter analyzes the social aspects of education and the media, it lacks depth and enough perspectives.

“Development of Green Economy in Belarus—New Possibilities” explains the results of local practice within the scope of the green economy. With the main focus on new Belarusian initiatives toward developing a green economy, the author looks at legislative norms, scientific reports, and international and national projects in the Republic of Belarus. Several international projects in the Republic of Belarus that aim to achieve social benefits, create new job opportunities through a green economy, and increase social accountability are mentioned. The paper considers the transformation to a green economy transaction as a long-term process requiring a multi-dimensional approach and developing legislation that supports a green economy to achieve sustainable development goals. Implementing these initiatives and projects will significantly help the Republic of Belarus to achieve its aim of a green economy with sustainable development.

In “Transition to Green Economy: Green Procurement Implementation Strategies Experiences from Hungarian Public and Private Organizations,” the authors explain the relationship between the green economy and green procurement and offer appropriate ways to implement green procurement, including an easy-to-use toolkit. By examining several case studies in Hungary, they improved the toolkit to develop the most effective version. Table 1 (pp. 252, 253) presents each version, the target groups, evaluation methods, etc. They conclude that every country can implement green procurement using specific set of tools designed for procurement development.

In “Sustainable Economic Development: Green Economy and Green Growth. Analyzing Economic Growth and Identifying Sensible Measures Addressing Socio and Environmental Concerns Whilst Promoting Green Growth.” The author discusses the effects of harmful environmental and economic actions, arguing that governments should introduce initiatives to increase social awareness about environmental issues and social well-being. Education should play a crucial role in achieving the difficult task of moving to the green economy. In brief, strategic economic policies and planning accompanied by practical action plans are necessary to successfully and harmoniously combine economic development and green growth.

Issues concerning environmental deterioration are discussed in “Greening the Economic Growth in Romania: the Environmental Footprint Approach.” This chapter focuses on increasing concern about environmental issues alongside the growing efforts of companies, researchers, and policy makers to develop green models to maintain and improve economic welfare by not affecting the life quality of future generations. The authors determine the relationship between environmental quality and growth variables that, in most cases, are measured by the Kuznets Curve. They also determine the marginal cost of economic growth when the economy is engaged in environmental protection. The chapter focuses on the case of Romania, which had to adopt new regulations and environmental behavior after integrating with the EU. The chapter highlights the difficulty of implementing environmental regulation in developing countries like Romania. The authors also

investigate countries' ecological footprints; the amount of environment needed to produce its goods and services, concluding that the more developed a country is the higher is ecological footprint. However, this is because developed countries have more its developed technology that they use for their own benefit. The authors conclude that it is hard to develop an economic growth model that can simultaneously reduce environmental damage. The authors' next study will discuss whether the environmental Kuznets Curve is valid in Romania's case.

"Understanding the Challenges Involved in Transitioning to a Low Carbon Economy in South Asia" can also be considered in relation to low carbon and green economies. The chapter primarily explores how cooperation at local, national, and regional levels can help South Asian countries, especially India and Bangladesh, which are vulnerable to climate change in South Asia, to meet the challenges they face in moving to a low carbon economy. They find that the most important hindrances to developing effective climate change adaptation mechanisms are insufficient knowledge, fragile institutional capacity, corruption, and poor trans-boundary coordination. Table 3 (p. 283) presents the necessary conditions for low carbon economy propagation, while Table 4 (pp. 284, 285) lists the issues that need to be addressed in South Asia specifically in order to progress towards a socially equitable green economy. The author concludes that progress towards a low carbon economy in South Asia is mainly prevented by a lack of appropriate climate change and human security—policy & project.

Local governments undoubtedly can play an important role in developing the green economy. In "Explanatory Factors of Social Responsibility Disclosure on Portuguese Municipalities' Websites," the authors investigate the role of municipalities in developing a green economy and analyze the declaration of social responsibility (SR) information in 60 municipalities in Portugal to identify their determining factors. They outline past studies and compare their own results to these. They applied univariate and bivariate analyses to determine how much each variable explains variance in information disclosure, as summarized in Table 5 (p. 311). They used 12 explanatory variables: total disclosure index (TDI), size, location, characterization, certification, local agenda 21, political competition, educational level, unemployment rate, inactive population, tax burden, and environmental experience in the analyses. Finally, they suggest using interviews to better understand factors that encourage municipalities to disclose SR information.

"The Relevance of Cultural Diversity in Ethical and Green Finance" examines the importance of culture in the dissemination of ethical finance. Toward this end, the chapter discusses the outcomes of the "GLOBE (Global Leadership and Organizational Behavior Effectiveness Research Program)" from various dimensions. Cultural features and ethical forms of finance are explained by comparing group differences among Nordic European, Germanic, Anglo, Latin European, Eastern European, Southern Asian, Confucian Asian, Middle Eastern, Sub-Saharan African, and Latin American. The author provides a valuable comparative perspective by revealing cultural differences regarding ethical and green finance (p. 187).

Sustainable finance is also the focus of "Sustainable Finance Role in Creating Conditions for Sustainable Economic Growth and Development." This chapter focuses on a currently popular topic, "sustainable finance in creating conditions for sustainable economic development." In the last decade, many researchers have proved that the financial system plays a critical role in economic development. Building an effective sustainable finance system requires the following critical elements: international guidelines and collaboration, finance institution standards, national policies and regulations, and voluntary commitment of financial institutions. The chapter explains how the original version of

sustainable development objectives has three categories: economic, environmental, and social (economy, ecology and equity). The authors investigated the role of sustainable finance in providing the necessary conditions for sustainable economic development in 34 OECD members between 2008 and 2013. They show that the soundness of banks, standards of the education system, and burden of the government system are positively correlated with nominal GDP per capita whereas the misery index, which combines the unemployment, inflation, and ease of access to business loans are negatively correlated with nominal GDP per capita. The authors acknowledge that it is difficult to determine the exact contribution of all variables so it is hard to develop a model.

Several chapters include important discussions about the sustainability of agriculture and prevention of deforestation. The first of these is “Green Agriculture in Hungary: The Factors of Competitiveness in Organic Farming,” which discusses green agriculture in Hungary in terms of competitiveness in organic farming based on a questionnaire answered by 70 of 830 farmers actively involved in organic farming. The chapter considers competitiveness, expenditure, market relations and revenues from organic farming, and regulations related to “certification, production, labeling and inspection of organic products.” The chapter also reviews extensive statistical information about organic farming worldwide.

“Sustainable and Economical Production of Bio-cellulose from Agricultural Wastes in Reducing Global Warming and Preservation of the Forestry” investigates another aspect of organic farming: reducing the effect of global warming and preserving forests. The authors argue that the main reason for extreme use of trees is for cellulose-based products, causing rapid deforestation that threatens people worldwide. Deforestation is strongly linked to global warming and other climate changes. Destruction of trees also reduces oxygen available to humans and increases atmospheric carbon dioxide, as shown in Figure 1 (p. 144). Given these effects and declining afforestation while industrialization is still growing, it is important to develop alternative sources for cellulose-based products, such as bacterial cellulose or bio-cellulose, mainly because of future concerns. Bio-cellulose is an adequate substitute for plant cellulose that is in high demand in the pharmaceutical sector. The authors argue that bio-cellulose production and demand can significantly reduce global warming and protect nature. The cost of the process can be reduced by using agricultural waste as a fermentation medium. The authors conclude that bacterial cellulose is a viable alternative to plant cellulose for decreasing global warming adverse effect by preserving forests.

Another case study in the book is “Urban Agriculture in the Manguinhos Favela of Rio de Janeiro: Laying the Groundwork for a Greener Future.” This chapter considers how the application of ecology to agriculture in this area of urban Brazil has created productive public areas and encouraged socioeconomic activity. The project, which is in Rio’s favela replaced Cracolândia (Crakland) with large-scale community food gardens. Developing this useful green space enhanced the social, environmental, cultural, and economic status of Rio’s informal communities. The chapter investigates Manguinhos as a detailed case study of the challenges and benefits of implementing agroecology projects in Rio’s favelas. The challenges included lack of land tenure security, disbelief of the government, and the need for long-term commitment in order to create green-based employment for local citizens. Regarding the benefits, the transformation of the area improved security and freedom for its citizens, increased their access to basic goods and services, and restored livelihoods. This case study also demonstrates how, under the right conditions, social incentives can be as important as economic incentives. These contributions can also create future economic opportunities. Transforming abused areas into productive areas benefits

the local residents by creating employment, giving access to high-quality food, improving air quality, and, most importantly, establishing the necessary conditions for the informal sector to achieve sustainability.

“Why Sustainable Consumption Is Not in Practice? A Developing Country Perspective” and “Managing Sustainable Consumption: Is It a Problem or Panacea?” both discuss the role of sustainable consumption in achieving sustainable development. Important definitions of sustainable consumption within the literature for both papers are given in Table 1 (pp. 106, 118), which helps readers identify the similarities and differences between the definitions. The Malaysia study used qualitative interviews (to address the research question of “Why is sustainable consumption not practiced?”) with 15 different ethnic participants (5 Chinese, 7 Malay, and 3 Indian. The findings are summarized in Table 2 (p. 110).

“Brazilian Public Policies and Sustainable Development that Influence the National Bio-industry” focuses on economic development and sustainability in Brazil. It argues that various public policies like improving technology, science, innovation, and research projects can resolve the tensions between economic and sustainable development. This chapter considers biotechnology and green economy as strategic areas. In Brazil, bio-industry is seen as a sustainable use of the country’s natural capital within the goal of achieving economic growth. The chapter discusses the public policies aimed at innovation and technological development, along with Green and White Papers on the objectives and implementation of those policies. In addition to these public policies, Brazil has also adopted laws to support innovation and technological development, and to create a conducive environment for innovation. Such policies and laws are necessary to promote development and reduce inequality in Brazil. They also have two-way interaction in that a region that becomes more developed tends to become more environmentally aware.

“The Role of Social and Environmental Information in Assessing the Overall Performance of the Enterprise” considers the significant issue of profit from the perspective of companies while emphasizing the importance of the environment. Recently, more and more entities have adopted sustainable development, leading them to develop a more obvious image throughout extra-financial information, but without neglecting the needs of their stakeholders. This chapter reports on how the definition and measurement of performance in financial accounting information varies according to the user. Companies nowadays use environmental and social considerations to increase their performance, safety, and reliability. Thus, profit is not their only objective. The chapter discusses the most common standard for sustainability (Global Reporting Initiative). With this extensive system for sustainability reporting, companies can measure four key areas of sustainability: economic, environmental, social, and governance performance. The authors conclude that companies that adopted this reporting standard benefit both financially and through protecting the environment and society. The authors therefore recommend that all companies adopt this non-financial reporting approach.

Overall, the book covers a wide range of concepts and country case examples, making it appealing and relevant for those who believe in the cause of sustainable development, the green economy, and green growth. However, if readers are looking for a critical opinion, this book does not include a conceptual critical view. Nevertheless, it will be of general interest to students of economics or those studying sustainable economic development policies.

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