

# Understanding How Real-World Economies Work

Much of what traditional economics believes “works” because of clever technology, substitutions, and intelligent investments, in fact, do so only because we have had huge amounts of cheap energy to throw at the problem. But if indeed we are at or approaching “the end of cheap oil” and “the second half of the age of oil,” not to mention serious climate disruption, we need a new way to think about how we do economics. Economic growth, which solved many issues in the past, now is declining and even coming to a halt in much of the world, associated with a similar slow down in the availability and use of energy. These concepts also apply to a very much broader suite of the basic resources and environmental conditions required to fuel our economy. While many people are taught and believe that technology has made natural resources increasingly irrelevant, this book contains a great deal of evidence to show the contrary. Our national and global society is becoming more, not less, dependent upon natural resources, as fossil fuels, for example, underlie essentially everything we do economically, including building their “renewable” replacements. Additionally, many of the things that are treated as *externalities* in conventional economics, that is as supposedly secondary issues not properly included in prices, are instead what we believe to be often the *main* issues of economics. Depletion of highest quality fuels is one such issue. More generally, understanding and protecting the basic systems of the Earth, such as the atmosphere, far from being a luxury or an “externality” as is indicated in conventional economic analysis, are *the* critical issues for economics. This section gives a number of applications of biophysical economics to these important contemporary issues.

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