

The research report by the BIE provides a comprehensive overview on FDI, the internationalization of business and what public policy can do about it. Thus, it is a valuable source of information both for people involved with strategies of governments as well as for students in the field of (international) economics. The report gives weight to the explanation of real-world phenomena and the theoretical background is explained succinctly and without mathematical formalism. A number of additional examples are presented in the report of firms that have invested into or out of Australia. These examples provide "practical" information, enable the reader to evaluate the strategies and to see how FDI and other forms of internationalization work in the real world. The summary and conclusions in chapter 6 contain questions and answers, summing up the foregoing discussion. The summary also shows the areas in which further research is needed. These areas for further research emphasise the importance of government policy relative to other locational factors and in the understanding of companies' strategies relating to FDI. Additionally, I'd suggest to take a closer look at what the globalization of business (i.e. the enlargement and integration of companies) means and how government policy affects FDI when countries also start to integrate (EU, NAFTA). Do both sides enlarge their bargaining power and what effect does that have?

The discussion makes it very clear that FDI cannot solely be explained on theoretical grounds. Public policy and bargaining power of the players are of significance and the report deserves praise for having shown this very clearly.

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Responding to Global Warming by *Peter Read* (Zed Books Ltd, London, 1994) pp. xiv +304, ISBN 1-85649-161-7.

Peter Read approaches his topic with an obvious concern for the impact on the Earth of unprecedented anthropogenic increases in greenhouse gases and a commitment to providing a solution. His stated objective is not to add another academic tome to the shelves of university libraries but to inform and influence policy makers to adopt his solution to global warming. Read sets out to illustrate that absorption of carbon dioxide (CO₂), the major greenhouse gas, is far less costly than reducing emissions and that "a substantial transformation of commercial fuel supply to reliance on biomass (specifically fuel-wood grown intensively and converted to useable fuel products near where it is grown)"(p.7) is the path by which it can be achieved. Passing reference is made to other forms of renewable energy such as wind and solar but the title gives no hint of his emphasis on a biomass-based solution to global warming.

Today, biomass does indeed represent the most commonly used form of renewable energy in the world, particularly in developing countries. Even in Australia the number of fuel wood heaters in domestic use far outstrips the current uptake of, for example, domestic solar hot water heaters. Of course, other free uses of solar energy, e.g solar clothes drying via your Hills Hoist and passive solar heating of homes, either by design or chance - go largely unnoticed by society and economists. But the fleeting attention to solar and wind technologies given in this book - and their relegation to niches not occupied by biomass - may encounter resistance from their promoters.

Read's major tool for implementing CO₂ absorption and switching to biomass energy economy on the huge scale required is the "Tradeable Absorption Obligation (TAO)." This system would require "energy sellers at the wholesale level to absorb some proportion of the carbon that is emitted when their product is used by the purchaser, or to contract with other firms to carry out this obligation. The TAO would be imposed as a regulatory requirement by governments. The justification for the requirement is a traditional one for government intervention in markets, that is, the preservation of public safety. The danger against which protection is sought is global warming." (p.169) Existing fossil fuel companies would become major players in the new biomass energy industry by engaging in agro forestry, conversion of biomass to liquid transport fuels (eg. ethanol) and/or burning biomass efficiently for the generation of electricity.

Read takes an unconventional and original approach to other policy instruments. A brave proposal is to sequester carbon simply by growing trees and then burying them - or 'coal making' as he dubs it - thus preventing the re-release of CO₂ if the biomass were burnt or the release of methane, a much worse greenhouse gas, if it were allowed to rot. He supports the introduction of a small dedicated carbon tax (as a supplement to the TAO) which will primarily fund the establishment of a biomass energy infrastructure. Current carbon taxes promoted by environmental economists take a similar approach though they do not focus exclusively on biomass technology.

Read is unenthusiastic about 'tradeable emission permits'. Tradeable emission permits would be purchased by big emitters of CO₂ from government. As the buyer became more energy efficient they could trade or sell part of their 'right to emit' to another emitter. Read suggests that the cost of reducing emissions such permits would impose is uncertain and may be very great. He predicts that new businesses will simply increase the demand for permits and force their price up. But at present such tradeable emission permits are being considered seriously by governments and environmental economists and are not totally opposed by industry.

The author's views may put him at odds with many other sustainable energy policy theorists. For example, the Sustainable Energy Industries Council of Australia (SEICA), specifically promotes a dedicated carbon tax - small initially but growing over time - that would fund a mix of energy technologies, not exclusively biomass. SEICA also proposes tradeable emission permits in conjunction with a small carbon tax or instead of a large carbon tax. The amount of CO₂ emissions permitted by each permit would decrease from year to year in accordance with the target adopted. This suggests a more optimistic view than Read's of future gains in energy efficiency.

Read's thesis is stimulating and creative. He has done a mammoth job of pulling together the issues related to climate change policy. A sweeping overview is provided of all the knowledge - scientific, economic, political - Read believes necessary to appreciate his argument as well as considerable qualitative and quantitative detail in support of it. To this reviewer the book would seem to be aimed primarily at energy and greenhouse policy experts, so it is perhaps unnecessary to devote as much text as he does to an overview of 'basics' such as climate change science or the Framework Convention on Climate Change. This audience would in all likelihood have such background information. On the other hand the general reader would possibly find this book too technical.

For a book that acknowledges the numerous obstacles currently facing international agreement to even modest actions to counter climate change, it is surprising that Dr Read is willing to promote such a major upheaval in the world's energy system. The scale of global cooperation and conversion required is truly enormous. Read flags some very important considerations only at the end of the book: that of the sustainability of the tree growth pro-

gram itself in terms of soil nutrients, cost of irrigation of trees and the embodied energy cost of the process.

The author's intention for writing the book - influencing policy makers to more seriously consider biomass-based energy as *the* solution to global warming - is still a long way off. But who knows. It is interesting to note that the very first Joint Implementation project financed by the US Dept of Energy is a biomass energy project in Honduras.

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The Turn of the Tide: Computerization in Dutch Society 1900-1965 by Jan van den Ende (Delft University Press, Delft, 1994), pp 267, NGL 63.60, ISBN 90-407-1005-8.

During the last twenty years, or so, many texts have been dedicated to the possibilities of the computers (in the information age). Most of them have emphasized the tremendous growth of the computer industry the past years, and many of them have promised continued growth with unpredictable (in the sense of fantastic) possibilities. Common for these texts is the focus on the way that the extended use of computers changes society. They are technologically deterministic. *The Turn of the Tide* is not such a text. On the contrary, by describing the early age of computer applications, Jan van den Ende argues against technological determinism as the only causal relation between information technology and society.

The Turn of the Tide is van den Ende's dissertation thesis, in which he wants to illuminate the background to the success of the digital computer and the rise of the information society. He wants to show that the digital computer not only stimulated societal, economic and cultural changes, but that it was itself, in part, provoked by such changes. He suggests that there was a turning point (the turn of the tide!?) around 1960, when the relationship between the development in computing technology and changes in other fields was reversed. Instead of an externally driven digital development before 1960, the users were encouraged to replace old technologies and to extend the volume of computing activities after 1960. With the description of externally driven computer development until the 1960's, van den Ende criticises the unqualified technologically deterministic standpoint of most of the relevant literature.

Van den Ende's book consists of three parts. The first part (Chapters 1 and 2) deals with the general background for his study and the theoretical concepts. The second part (Chapters 3-6) deals with the empirical studies, first the general history of computing in the Netherlands and then four case studies. In the third part of the book (chapter 7) the author discusses the empirical data in the light of theoretical concepts presented in Chapter 2. The case studies are selected to present the divergent character of the field of computing; technical-scientific calculations, data processing and process control. I will come back to these case studies later.

Van den Ende combines sociologically based and economically based theories as a framework for his study. The SCOT-approach (social construction of technology) concentrates on the meanings attached to a technology by members of relevant social groups. Both relevant social groups and the distinction between the social and the technical are constructed, ac-