

BOOK REVIEWS

***Technological Challenge in the Asia-Pacific Economy.* Edited by Hadi Soesastro and Mari Pangestu.** Sydney: Allen & Unwin, 1990. Pp. xiv and 321.

This volume is the collective product of 21 contributors — including the co-editors — whose 17 papers are organized into six sections which review issues related to technology transfer, present pertinent industry and country studies, and offer summary statements. The contributors from 12 countries had presented papers written for the seventeenth Pacific Trade and Development (PAFTAD) Conference, held in Bali on 20–23 June 1988. The conference's thematic attention was drawn to "The Challenge of Technological Change to Pacific Trade and Development". The theme "... was adopted in the belief that it is important to enhance understanding of the main theoretical issues in technology acquisition and development against the background of industry and country experiences of technological change" (pp. xiii). The conference organizers were convinced that "... now more than ever, rapid technological change is affecting comparative advantage among countries" pp. xiii).

Modified drafts of papers presented at the Bali conference were published in this title. In the first chapter, Ben Smith and James Jordan review

... the various mechanisms available for obtaining such technologies. Foreign direct investment, either in the form of a foreign subsidiary or through the establishment of a joint venture with an indigenous firm, was seen to have significant advantages in many sorts of cases. Those advantages included: better access to capital markets;

greater capacity for perceiving the scope for use of the technology in the host country; and the lesser need to rely on rapid transfer of technology (in the sense of developing indigenous human capital) in order to operate efficiently. In a completely free market environment, one would expect the introduction of new technologies, especially "lumpy" new technologies, to be very largely brought about through the establishment of subsidiaries of foreign firms or through joint ventures involving foreign firms, with the latter being more important the greater the value of local knowledge to the success of the venture. The fact that foreign firms may transfer technological capability more slowly may limit the extent to which external benefits accrue to the host country through technology diffusion. Similarly, if foreign firms are less able to make arrangements to source inputs locally, even though this may be efficient, this may further limit technology diffusion benefits. These factors suggest some rationale for restricting foreign participation in the importation of new technology, even when short-term economic efficiency is the guiding principle. (p. 23)

Their broad theoretical scope sets the stage for lively theoretic foci. Paul Krugman analyses the changing nature of comparative advantage throughout the Asia-Pacific region due to technology acquisition. He points out the impact that the change has had on export composition and economic development. Richard Nelson's chapter focuses on the need to acquire technology *and* to build national technical capabilities via major investments in education, something that, he argues, "... seems to mark all successful development cases" (p. 47).

The theoretical section prepares the way for systematic analyses of the electronics,

information, and textile industries, and robotic technology. Country studies on Japan, Korea, China, Indonesia, Malaysia, Singapore, Canada and New Zealand are also presented. Obviously, because their contents are so varied, no brief summary statement is feasible. Instead, this reviewer is content to point out that the studies contained in Parts II and III are summarized in the volume's concluding part. In it, the co-editors and David McKendrick aim "... to draw out the main issues emerging from each chapter and to highlight the main points raised ..." (p. 299). An example of points that they draw out follows,

There are two types of link between export-oriented strategy and technological development. One, small countries are likely to develop a strong specialisation in a few export commodities or services. A lot of effort is placed on developing new technologies in these sectors. Two, export-oriented industries are likely to be aware of and use the latest technology in the industry to keep their competitive edge. (p. 332).

With this basic point in mind, the summary chapter takes note of a warning against using a rigid concept of countries climbing a technological ladder at different levels of development. The paper on New Zealand, as well as the paper on Malaysia, indicate that considerable technological gaps can exist within the same country. And while a country might possess frontier technology in certain niches, it is difficult to predict which particular niches will develop. Indeed, they often develop because of historical and geographical factors. For instance, how much of the development in R&D in natural resources is an effort to renew comparative advantage in response to increased risks due to external shocks?

They further extend their line of reasoning by pointing out that resource-rich countries may have greater difficulty in choosing niches. But the advantage for densely-populated countries without natural resources is that it is easier for them to see ahead, and this makes selecting and adopting specific technologies easier. Resource-rich countries will not go through the same sort of progression. Their niches will lie in their natural resource base, but at some point some

manufacturing will have to take place. Selecting these manufacturing niches is more problematic for these countries (pp. 322-23).

Numerous points of caution against simplistic thinking appear throughout the volume. For example, Sir Frank Holmes points out that a major lesson to be learned is that,

... having more technology is less important than introducing the right kind of technology and using [it] efficiently. Furthermore, an inhospitable trading environment may severely test both niche players and government policy-makers, with many unintended consequences. (p. 323)

In summary, then, the volume is theoretically well-grounded, empirically rich in both industry and country studies and policy-oriented in its main thrust and focus. The contributors are distinguished, their topics important, their insights pertinent, and hopefully this review gives potential readers some notion of the useful nature of their ideas. The volume features consistency and intellectual linearity even though its contents are varied and stratified. It is a book that this reviewer strongly recommends to scholars and officials concerned with technology's role in development processes in Asia-Pacific and elsewhere.

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Towards Full Employment Strategy For Accelerated Economic Growth. Edited by I. Getubig and H.T. Oshima. Kuala Lumpur: Asian and Pacific Development Centre, January 1991.

The book analyses the examples of post-war economic growth in Japan, the Four Dragons, and eight other South and Southeast Asian countries, supporting a theory for employment-led, accelerated growth. It may require more than one review in order to establish to what extent such a theory would be applicable to other regions of the world, such as Africa or Latin America, for example.