in the Philippines is as equal as that of the East Asian nations, because what contributed most to Ching's lower estimate results is her use of "distribution of families by per capita income decile" in calculating the coefficient. If the calculation is based on the "distribution of families by family income" as has been the case in previous studies, the Gini coefficient increases to 0.4460. It is true that Ching's index does allow for the elimination, to some extent, of the statistical hazard caused by the family size, which is a positive point, but unfortunately does not enable a comparison with prevoius studies, thus preventing us from analyzing changes over time in the degree of inequality. Oshima's essay does, on the other hand, give us a time series of the Gini coefficient, indicating little change over a peroid of thirty years, which is, as Oshima states, puzzling. In this regard, Hayami and Kikuchi's contribution (chapter 9) shows that despite the introduction of the green revolution to a farming village in the Philippines, some factors negated the benefits, which resulted in minimal changes in income distribution in this particular village. Though village-level arguments are not necessarily compatible with nation-level arguments, this is an interesting point.

I believe that it is regrettable that a chapter was not devoted to such Southeast Asian nations as Malaysia, Singapore, and Indonesia. However, as, in this book, the subjects of analysis encompassed advanced nations and socialist nations, this was probably unavoidable. Nevertheless, there are cases, such as Malaysia, where income distribution equalized in the 1980s, which I believe is more worthy of attention than the Philippines, a case where the changes have been less appreciable. As a researcher of income distribution in Southeast Asia, this point is regrettable. In conclusion, I believe that the original information contained in the book *Making Economies More Efficient and More Equitable* points to the direction of further research into income distribution, both theoretically and positively. (Yukio Ikemoto)

Direct Foreign Investment in Asia's Developing Economies and Structural Change in the Asia-Pacific Region edited by Eric D. Ramstetter, Boulder, Colo., Westview Press, 1991, xii+310 pp.

If you plot the recent record of Japan's imports of electronics items such as color TV, videotape recorder, microwave oven, you may well be impressed by the nearly vertical pole-shaped figures appeared on the drawings denoting an abrupt surge of imports of these commodities to Japan from Asian countries since around 1987. Up until this period, Japan seemed to enjoy the position of the leading, often sole supplier of these products in the Asia-Pacific market. Apparently, however, the situation has been changing. Moreover, since these products are sold with well-known Japanese brand names, most Japanese consumers do not realize that these commodities are made by the affiliates of Japanese multinationals unless they happen to look into the rear panel. Actually, in the past decade or so, there have been a number of significant changes taking place in the international division of labor, in which the multinationals appear to have played a significant role. However, there has been little research that quantifies the effects of the multinationals activities or direct foreign investment (DFI) on industrial structures in either the host (recipient) or home (investing) economies. Readers of this book will find that a serious effort has been made, under the generally stern constraints of data, by prominent economists of the region.

The book consists of five parts. Part One sets the issues and a common analytical framework. Part Two takes up the cases of two ASEAN countries, Indonesia and Thailand. Part Three deals with two Newly Industrializing Countries, namely, Korea and Taiwan. Part Four focuses on the two major investing countries, Japan and the United States. Part Five contains three papers, two of them providing perspective views on the role of DFI in the region, and the last paper delivers concluding remarks by two of the eleven contributors of this volume including the editor, Dr. Ramstetter. Incidentally, Dr. Ramstetter has contributed either as sole writer or coauthor to six chapters in this eleven-chapter book. To a great extent, this must have reinforced the consistency of the whole book.

In Chapter 2, Professor Markusen introduces the conceptual framework of this volume with the proposition that multinationals tend to be firms in which knowledge-based, firm-specific assets are important. These assets are more likely to give rise to DFI than physical assets, firstly because these "assets can be transferred easily. . . across space at low cost" and secondly, "knowledge often has a jointness or 'public goods' characteristic in that it can be supplied to additional production facilities at very low cost" (p. 13). The major implications of this concept for the multinational-structural change relationship is that the multinational firm transfers the service of the above mentioned assets to a host country to obtain multiplant economies of scale. The host country will also benefit from the transfer since it does not have to develop such assets by itself. Moreover, the public goods nature of the assets implies spillover of such assets and, thus, permanent structural change in the host economies. The point is that knowledge will remain in the host economy and bring about a structural change even after the liquidation of a foreign affiliate. One of the interesting policy implications of this model is that in view of the heavy sunk costs involved with the development of knowledge, a small country which will not be able to bear the huge costs by itself may improve its welfare by providing incentives to the multinationals to help establish an affiliate within the economy.

The six country studies in Part Two through Part Four are concerned to gauge the degree of impact of DFI on the change in their respective economic structures in terms of such factors as growth rates and composition of GDP, fixed capital formation, generation of employment opportunities, trade structure, consumption patterns, and transfer of technology. However, the analytical methodologies adopted in each chapter vary due, perhaps, to the characteristics as well as the diversity of data availability in the countries concerned.

Chapter 3 concludes that "on average the overall contribution of foreign firms to industrialization and structural change has been relatively small in Indonesia thus far" (p. 59) as DFI has been small. The author further concludes that "the evidence suggests that technology transfer from foreign firms in Indonesia has also been limited to date" (p. 59). However, I do not quite follow this statement as I see not much evidence appearing in the text. Moreover, the statement appears to conflict with another statement that "there is little hard evidence to evaluate the effects of foreign firms on domestic technology" (p. 53).

In the case of another ASEAN country, Thailand (Chapter 4), the authors argue that "foreign firms have been important in electric machinery in the 1980s and apparel in the 1970s" (p. 100). The contributions made by foreign firms to the growth of the Thai export industry is also acknowledged as crucial. However, as for the relationship between foreign firms and structural changes, the authors are wary of determining whether foreign firm activity was the cause or a result of the structural change.

The role of DFI has been very strongly appreciated in the case of the two NICs, Korea and Taiwan. Chapter 5 stipulates that "there is strong evidence of correlation across industries between the level of foreign firm activity and economic growth in Korea" and this "implies foreign firms have been an important force in the evolution of Korea's economic structure in the 1974–1986 period" (p. 132). However, here again the authors are reticent on the causal relationship.

The results of an aggregate four-equation model developed for Taiwan indicates, inter alia, a significantly positive effect of DFI flows on Taiwan's total fixed capital formation and on exports (Chapter 6). The authors state that "Taiwan has used DFI successfully for promoting its investment, exports, and employment, and that foreign firms have played important roles in the structural changes of the Taiwanese economy, most notably the growth of the electric and electronic machinery sector" (p. 169). The chapter also includes observations on the DFI carried out by overseas Chinese, the most influential ethnic group in the Southeast Asia's business community.

The essential message of the Japanese case study (Chapter 7) is that the roles of intra-industry trade and economies of scale are particularly important factors promoting Japanese firms' global business activities in which DFI is an indispensable part, rather than an alternative to trade or to domestic investment. Typically, Japanese multinationals divide a production process into a number of subprocesses, and through DFI, locate each subprocess in countries where that subprocess may be performed at least cost.

In the case of the United States (Chapter 8), Dr. Ramstetter finds that the increase of NIC affiliate production relative to parent production has apparently stimulated the growth of U.S. parent exports to the ASEAN-4. Together with other findings, he suggests that multinational parents are very heavily involved in U.S. structural changes and that affiliate activity has important effects on U.S. parents. He comments, however, that "these findings alone (1) cannot establish whether multinational activity is a cause or a result of structural changes and (2) cannot facilitate an unambiguous evaluation of the relative efficiency of structural changes facilitated by multinational activity" (p. 231).

Chapter 9 examines the experiences of five manufacturing industries, namely, textiles and apparel, chemicals, metals, electric and electronic machinery, and transportation equipment. It is found that in all sectors, developing countries of the region have increased their shares of regional employment, production, and exports, and that the multinationals have contributed greatly to Asia's developing economies through the expansion of exports by their affiliates.

Professor Lipsey presents a lucid analysis of the role of multinationals in the export trade of manufactured goods of developing Asian countries (Chapter 10). According to his observation, the comparative advantages of U.S. and Japanese affiliates in developing Asia are mainly in electric and electronic machinery and transport equipment, and, in the case of U.S. affiliates, in nonelectric machinery to a much smaller extent. The multinationals, particularly the U.S. multinationals, have pulled the host countries toward these industries and away from the food, metals, and textiles and apparel industries. Thus the multinationals are altering the export patterns of Asian countries. The U.S. multinationals are promoting a shift of their affiliates' host countries toward R & D–intensive products, and they are also facilitating necessary adaptation to the shift of the more advanced Asian countries into higher-technological product markets, a shift that the multinationals themselves are contributing to.

Chapter 11 summaries the issues which the authors consider are at the core of the relationship between DFI and structural changes in the Asia-Pacific region.

On the whole, the book has made a commendable endeavor to provide a wealth of insightful theoretical discussions and a well-stylized empirical study on the role of DFI and structural change in this vast region.

The study has made an important experiment of extending the firm-level concept developed by Professor Markusen in the second chapter, which sets the theoretical foundation for the whole study, to the global industry level. The study appears to have been successful in finding a conceptually as well as empirically suitable case with one industry, the electric and electronic industry, and at the same time, rather a puzzling industry, i.e., the textiles and apparels, in which the multinationals are active. Since these industries are regarded as highly competitive, the results are taken as an inconsistent to the theoretical expectation derived from the Markusen's proposition and much of the theoretical literature which assumes that multinationals operate in imperfect competitive, often oligopolistic, markets (p. 303). Professor Naya and Dr. Ramstetter introduced some reasons which might have caused these markets to be imperfect, such as the tendency for Japanese firms to invest in group and development of fabric technology and apparel designs (p. 304). It seems to the present reviewer that there are at least a few more factors which make it difficult to lay down the characteristics of the industrial organization of an industry in a specific categorization. In the case of the textiles and apparels industries, the market characteristics of the synthetic fiber differs greatly from, for instance, the cotton fiber sectors and knitting sectors. Therefore, an industry with a wide range of sub-sectors such as textiles, may require a further breakdown of the industrial classification, when we carry out an analysis emphasizing the differences of industrial structure among industries. There will be many factors that add imperfectness to a normally competitive industry. In the case of DFI undertaken by the Asian ethnic–Chinese firms, the overseas Chinese connection probably is an important factor that provides these firms with special advantage in risk management, as is suggested in Chapter 6. A financial facilitation supporting investors by some of the home countries such as the Export-Import Bank of Korea will also add imperfectness to the industries of the country. Whether or not the technology applied in an industry is in a standardized and matured stage is also not always easy to judge. Recent progress of electronics technology has been changing the technology of many matured industries and transfering them into "dematurity" industries, which have made these industries more R & D–oriented, thus their markets more imperfect.

In the concluding chapter, the authors emphasize the need to study countries other than the ten countries studied here as they are relatively outward-looking and market-oriented and have been employing comparatively favorable policies toward DFI, and these characteristics might have made the study less relevant to other countries or regions (p. 309). In my view, as long as the conceptual framework incorporated locational factors (p. 12), the difference between the United States' geographical as well as historical and cultural proximity to Asia and those of Japan should be properly considered in the study, so that the characteristics of the U.S. multinationals can be compared more appropriately with those of the Japanese. Whether the U.S.–Latin American relation is comparable to the Japanese-Asia relation is an open question, but it may still be interesting to know how much the U.S. affiliates have altered the export pattern of the Latin American countries (p. 287, Table 10.6). (Takeshi Mori)