

English (a rice field) to what it means in its native Bahasa Indonesia (unhusked rice).

Overall, *The Indonesian Economy* remains a superb sector by sector account of the Indonesian economy under Soeharto and the second edition provides an excellent addition on the Indonesian economic crisis. The aforementioned quotation about waiting for the dust to settle seems to hint at a complete updating of the volume at some point in the future. Such a work would be another welcome contribution from an outstanding scholar in the field.

ANTHONY SMITH  
*Institute of Southeast Asian Studies*

---

***Technology, Competitiveness and the State: Malaysia's Industrial Technology Policies.*** Edited by Jomo K.S. and Greg Felker. London: Routledge, 1999. Pp. xii + 271.

---

This book is one of two volumes analysing the determinants of technological development of late industrializing nations. It examines the issue of technology development from a multi-faceted approach and addresses the complex issues involved through a "variety of disciplinary approaches and levels of analysis". This particular volume analyses technological development at the national or policy level, while the other entitled *Industrial and Technology Development in Malaysia: Industry and Firm Studies* is devoted to firm and industry-level investigation.

Research over the past two decades, particularly with respect to the miracle economies of East Asia, has shown that the accumulation of technological capabilities is much more than a market-driven process and that "institutional and strategic support at the firm, industry and national levels is crucial". The academicians and practitioners who contributed to this volume lend further support to this view and examine the complex economic, social and institutional dynamics in the development of technological capabilities. Though the larger part of the analysis

is devoted to an empirical study of Malaysia's technology development *vis-à-vis* its industrialization transformation, some preliminary attempt is made to provide the theoretical perspectives on the role of technology policies.

The well-written introductory chapter by Greg Felker and Jomo provides the theoretical and empirical framework for detailed discussion in the later chapters. It begins with an overview of the theoretical arguments for intentional strategies and strategic intervention by examining the various models of innovation and their implications for technology policy. This is followed by a brief introduction on the evolution of Malaysia's technology policy to nurture a national innovation culture.

Chapter Two offers a theoretical perspective to the role of technology policy and focuses on the issue of governance, or more precisely, how should policies be formulated and implemented in an increasingly complex and fluid environment. Meyer-Stamer questions the effectiveness of hierarchical state leadership, especially when private technical competencies clearly surpass those of the state. Instead, he argues the merits of "heterarchical" policy networks which involve the state and key social actors, with the state playing a supportive and subordinate role. He suggests, however, that policy networks can only be effective when there is consensus amongst all parties concerned with the direction of technological change.

A comparative analysis of technology development capabilities in East Asian newly industrializing economies (NIEs) is presented in Chapter Three. Wong Poh Kam briefly summarizes the key technological capability development strategies pursued by high-tech firms in Korea, Taiwan and Singapore, and discusses the different forms of supportive role provided by the state. He attributes successful industrial technology development in these economies to the crucial role played by the state. But he cautions that there is no single success formula. Different strategies and mechanisms were adopted in different economies and at different stages of their development.

---

Kit Machado, on the other hand, introduces a regional dimension to the discussion on technology development by highlighting the technological dominance of Japanese firms in ASEAN countries. He argues that regional production networks spearheaded by Japan have become more complex but not necessarily less hierarchical. Given such regional developments, he argues that “the degree to which technology flows to the host countries will continue to be shaped and limited by the Japanese TNCs larger strategies”. His findings have important implications for national efforts to promote industrial technology development and do not augur well for economies with weak bargaining powers.

The rest of the chapters trace Malaysia’s experience in technology development and evaluate the strengths and weaknesses of the country’s policies and institutions. Greg Felker provides a comprehensive analysis of the development of technology policies and institutions as well as a critical review of Malaysia’s strategies to foster technology from a political angle. He commends the state’s efforts in creating a fairly comprehensive technology infrastructure, but points to the significant “gap between policy goals and outcomes”. Like Meyer-Stamer, he attributes this to conflicting interests between the state and the relevant actors. His well-researched paper provides a refreshing perspective to the underlying problems behind Malaysia’s lack of technological dynamism.

Lall examines the factors behind Malaysia’s international competitiveness and points to the wide gap between “industrial development and exports” and “domestic industrial capabilities”. He calls for an even larger role of the state in creating the “supply of and demand for skills, information, institutions and infrastructure”. The rest of the volume zeroes in on the development of Malaysia’s national innovation system, providing a critical review of policies and institutions, including the financial and human aspects of technology development.

The multi-disciplinary approach adopted in this volume provides an insightful and comprehensive

analysis of the determinants of technology development. It dissects the complex issues underpinning technological development from an economic, political and management perspective to provide valuable lessons for late comers to industrial development. Perhaps one of the most useful policy lessons to draw from this volume is the important but often overlooked issue of governance in technological development. Meyer-Stamers theoretical arguments and Greg Felkers well-articulated empirical findings based on the Malaysian case study highlight why grand strategies and elaborate policy infrastructure may not succeed in the absence of consensus and co-operation between the various key players in the economy.

Though many of the authors share the view that Malaysia’s technological capability is not commensurate with its level of industrialization, they provide diverging assessment of the strengths and weaknesses of Malaysia’s national innovation system and its prospects for technological advancement. Malaysia’s industrial dynamism thus far has been based on factor and locational advantages that are increasingly being challenged, and it has been widely acknowledged that technological development is the key to sustained industrial growth. Yet, reading through this volume, one fails to get some assessment of Malaysia’s capabilities in terms of its technology-based competitive strength, pointing to the need for more research in this area. Nonetheless, this volume fills a gap in empirical analysis of Malaysia’s industrial transformation by providing perhaps the most critical and comprehensive analysis on the technological dimension of Malaysia’s industrialization process. To those interested in Malaysia’s industrial development, this book provides a detailed analysis of the many issues and challenges encountered in steering the economy towards a more sustainable technology-based competitiveness.

VIJAYAKUMARI KANAPATHY

*Institute of Strategic and International Studies  
(Malaysia)*