Book reviews


The book is described on the back cover as having been written for researchers including doctoral students, and is offered as an academic review of research topics. It makes claims of being of some value for secondary markets of post-graduate students, R&D managers, and people involved in technological innovation. These are rather curious claims, as they seem to me to be unusually modest concerning its secondary markets, and perhaps misleading regarding its primary one.

The book assembles a set of topics that are found in earlier texts on managing technological innovation. A cursory glance at the topics and diagrams reveals many of the topics, dealt with a roughly the same intellectual level, as can be found in introductory texts on the management of technology. One that will be particularly familiar to UK readers will be the text by Brian Twiss: *Managing technological innovation*, (4th ed., 1992, London: Pitman).

The specific topics are rather well covered. An introductory chapter sets the scene well for the rest of the book. There are chapters on strategy approaches and formulation, portfolio issues, technology acquisition, and organisational structures. I particularly liked the conciseness of the treatment, which seemed about right for the level at which the topics were presented. The author’s knowledge of the subject, and direct experience as a researcher are both in evidence. The ballast discarded is the material found in longer textbooks as extended descriptive case accounts. While these make interesting reading, they present considerable difficulties of integration across cases. The fine grain detail in cases also tend to date rapidly.

As an introductory textbook, the selected approach is acceptable. However, as an academic review, there is little attempt to critique the various topics and authorities. As presented, the reader has no way of evaluating the material, and particularly of its conceptual grounding. The inexperienced reader is left with the impression of an orthodoxy that receives no challenge or qualifying remarks regarding its scope, empirical testing, or conceptual credibility. The author has arrived at a valuable little book, but not exactly for the intended market. In that respect it captures one of the facets of technological innovation, you can never be really sure you will end up with the originally intended goal, although you may still finish with a success on your hands.

Hence my earlier comments. The book deserves to be considered as a secondary textbook within undergraduate business courses. It could be the basis for the main text for a similar level course on management of innovation or technology.

A serious omission is the complete absence of mention of the processes of discovery, and means of enhancing them. It is curious that researchers into processes of R&D are less interested in creativity than many R&D practitioners. It is to be hoped that the editors will address the deficiency in future volumes of an interesting series.

Tudor Rickards


The book is the swan song of Qiwen Lu who died shortly before its publication. A warm congratulation is too late for Lu. However, his legacy is a bridge for those interested in China’s economic reform of the last two decades but mostly viewing China at a distance. Lu helps the reader to reduce that distance.
Lu’s account of China’s computer industry is engaging and timely, made possible by his strengths of working both inside and outside the Chinese system. The computer industry in China was one that had a high concentration of talent and technical capacity but was low in commercial success. The critical question, since the 1970s, has been a direction of development that builds on its strength to achieve market success. Many insiders knew that an imperative for such success is a radically new institutional arrangement for both enterprises and an entire industry. The question that follows is how (the way in which) and when (timing) that the new arrangement is encouraged and nurtured. Further, for seasoned observers and those interested in transitional economies, one could make sense of Lu’s insights on learning and innovation in an age of economic reform for China in particular, and of IT industry in general from various perspectives.

The book is a journey of exploration through case studies. Each is grown out of the fertile soil of China’s economic transformation from a centrally planned system.

Case 1: Stone (si-tong, in Chinese, implies exploring multiple paths) is a success story with a humble beginning: a joint effort of visionary scientists from government funded research establishments and an entrepreneurial local township enterprise. On its way to become a serious competitor of its Japanese rivalries, Stone taps into the technology capacity within the government research institutions (p.29); establishes a new institutional structure of enterprise governance (p.32); integrates R&D, marketing and manufacturing (p.38); and turns a new high-tech venture into an industrial going concern (p.51).

Cases 2 & 3: Legend (lian-xiang means imagination) and Founder (fang-da, suggestive of direction and arrival) are further cases. Legend is a commercial spin-off of the Research Institute of Computing Technology under the Chinese Academy of Sciences (CAS), a research hotbed with great concentration of IT talent; and, Founder is a similar venture born out of Beijing University.

Lu captures Legend’s path with the expression ‘one academy, two systems’ (p.63). It sounds remarkably similar to China’s non-dogmatic approach to resolving the Hong Kong handover in the political arena. As Lu puts it: ‘Legend is a flagship in China’s science and technology system reform: as a research institute-run enterprise under CAS, Legend has created a model that has profoundly transformed CAS, the very creature of central planning where rich technology resources had been accumulated but not effectively used’ (p.100). By the mid 1990s, Legend became the number one domestic PC maker. It was number three in market share in China after AST and Compaq, ahead of IBM and other international and domestic PC makers. Founder is a genuinely internationally competitive firm that is based on leading technology in Chinese-language electronics publishing systems, not on cheap labour (p.104). Underpinning its competitiveness is a new organizational structure of innovation that integrates postgraduate education into research and development. Specifically, talented graduates had the opportunity and incentives to contribute to the research and development process for the company (p.132). By the late 1990s, Founder, having established itself at home, ventured into the Japanese and Korean markets.

Case 4: China Great Wall Computer (CGC) is a company that allows “mandarins becoming entrepreneurs” (p.151). It was a deliberate experiment in new forms of organizing the state-run computer industry in the mid-1980s by the technocrats at the Ministry of Electronics Industry (MEI). As a heritage of the old system, more than half of the mandarins were scientists and engineers. Their weakness derived from a lack of experience in turning technological capacity into commercial applications and market success. To succeed, a gradual departure from central planning was introduced with a new mechanism enabling investment decisions to be made at enterprise level so that the enterprise was able to exercise an increasing degree of financial independence. One of CGC’s strategic moves was a joint venture with IBM on product renewal and innovation (p.164). Gradually, CGC learned to open up new avenues and developing and upgrading the indigenous computer industry through a combination of indigenous design capabilities and learning from strategic alliances. CGC demonstrated that all-out privatization is not a necessary condition for a successful transformation of state-owned industries. What laid the foundation for CGC’s success was the indigenous product innovations that met specific local needs from the very beginning and the corresponding adoption of a market-oriented organizational structure (p.175).

What may be drawn from the four cases, according to Lu, is the evolution of a unique top-down mode of technology learning. This was in sharp contrast to the conventional mode of technology learning among developing
countries, including the East Asian newly industrialized economies (NIEs), whereby technology learning starts with labour-intensive assembly, and reaches the level of indigenous product design only at a later stage” (p178). China’s computer industry did not embark on that path. Lu’s theoretical model is summed up in Fig.6.1 as sources of dynamism among the Chinese science and technology enterprises (p.179).

The book reveals how the Chinese carved a delicate ‘middle way’ between wholesale privatization (remember what happened in Russia a few years ago?) and unworkable state ownership in the historical context of economic reform. The middle ground is a steady yet inventive approach of shared governance allowing degrees of ambiguity and compromise, coupled with progressive technology learning or capacity acquisition at enterprise level. Indeed, a strong foundation for the latter was laid through decades of state funding in R&D and a solid Soviet-style science-engineering education.

For me, Lu’s lasting gift is his deep scholarly conviction that enriches an understanding of China for those who genuinely cherish learning and respect difference.

Dr Qi Xu is a Research Fellow at Manchester Business School


Management development always seems to be to be crying out for stronger and more explicit links with personal creativity and discovery processes. I approached this book primarily to see whether progress had been made in that respect. In that respect, I was disappointed. However, the material may well interest some readers of CAIM journal.

The book has the feel of an authoritative text which makes a good way into a topic for the relatively inexperienced reader. My own inclination when I want to go more deeply into a subject, is to shop around I have found a metaphorical handful of such books, in the belief that they provide a ‘platform of understanding’ of the dominant perspective or perspectives. For management development, this book might be added to classics such as the Cox & Beck, (1984) which did have quite a few chapters exploring the creativity/development linkages; and perhaps to Schon’s (1983) reflective practitioner. More recently, as the authors of this volume suggest, management development has been associated with waves of interest in the learning company, and knowledge management (Senge and co-workers from the USA; Nonaka and his followers in Japan, and the Burgoyne and Pedlar studies in the UK).

The authors have steered clear of these interesting if confusing regions. Rather, they offer a simple descriptive framework of management around which they furnish a wealth of self-report data from managers being developed, or doing the alleged developing. This locates the book primarily in the UK. References to ‘otherwhere’ (European, and sometimes Transatlantic practices) are there for comparative purposes. The sense is of an extended exploration of policy implications. The conclusions reflect on their observed increased levels of management training over the last decade, with increased corporate responsibility, and increased influence of competency-based approaches. As I re-read the conclusions I shared the authors’ tentativeness and sense of ‘inconclusions’ of the scope and limitations of corporate efforts to develop managers. Such honesty can sometimes leave the reader demanding more.

Overall, I would see the volume as having value as a reference book, or secondary reading material for Human resource/organisational development researchers and teachers. It will have most appeal in the UK, with some commonwealth support.. At times of institutional squeezes on library funds, I particularly welcome Blackwell’s policy of issuing paperback and hardback versions simultaneously.

References


Tudor Rickards