

Information Technology Policy: An International History. *Edited by Richard Coopey*. New York: Oxford University Press, 2004. xv + 346 pp. Figures, tables, notes, index. Cloth, \$99.95. ISBN: 0-199-24105-8.

Reviewed by Margaret B. W. Graham

In *Information Technology Policy: An International History*, editor Richard Coopey, with the help of several acknowledged collaborators, has achieved something that eludes the editors of many multiauthored chapter collections. While maintaining the national character and integrity of chapters with widely different research methods, styles, and points of view, this book provides a coherent account of the role of government policy in the development of the international computer industry and its many collateral industries. By means of a clear interpretive story line and Coopey's comprehensive introduction, the book brings together works by leading historians of computers, the computer business, computer software, human capital—the whole not, of course, collectively known as “information technology” until well after the chronological period in which many of these chapters are set. The title, mystifying at first from a chronological perspective, actually says it all. For each chapter tells a particular story of the role of government policy toward emergent information technology from a particular national perspective and for the time period the author considers most relevant. Each story is at the same time woven into a metaplot that gives all the stories coherence beyond their own purview. This is emphatically not a book for which it is advisable to skip the introduction. Without Coopey's interpretive overlay, some of the more detailed chapters would be hard going for all but the most dedicatedly detail oriented. At the same time, the individual chapters repay close attention—as they contain many nuggets of wider comparative value than just one national story. While it is impossible to cover in one volume all countries that have had significant involvement in the business of IT—and who knows what it would be to be representative?—this is still a convincing selection from what was apparently at least in part a preexisting set of chapters.

Coopey's metaplot of IT industry development unfolds as follows: the United States pioneers the computer, invests major resources both private and public, and, led

internationally by IBM, turns the computer into a strategic technology of such power and obvious potential that it motivates many countries to begin developing their own industry as a matter of national pride and military security. Other countries, mainly European, respond, and at first—in the decades immediately following World War II—the response is forcefully, or even forcibly, shaped by national governments. Depending on what form this intervention takes, the response is more or less effective. Methods range from designating and supporting a national standard bearer, to acting as an inelastic buyer, to trying out combinations of “planned coordination” and “market coordination,” to employ Seiichiro Yonekura’s terminology in the chapter on Japan’s MITI (p.122). Ultimately, it becomes far too costly for most countries to keep up, even when, as in England, the government has intervened to concentrate and rationalize the various companies involved. Most of the early interventions, with the exception of Japan’s mixed system, prove to be ineffective. Moreover, the military rationale for major subsidy disappears with the end of the cold war. After a turning point in 1980, the general pattern in Europe seems to shift to market coordination at the national level and planned coordination at the European Union level. By the 1990s, it has become clear to all countries that IT is still “strategically” significant in a nonmilitary way—as an indicator of how well developed countries are keeping up or falling behind (e.g., the ability of Europe and the U.S.S.R to keep pace with developments in PCs), and as a springboard for developing countries that want to follow Japan’s example by leveraging certain industries into accelerated development. Few would argue that developing countries would have been successful, either in hardware or software, without some form of government intervention. Richard Heeks’s Indian chapter shows that while hardware can be an impossibly difficult path to development, software has ideal springboard characteristics. Government intervention in developed countries seems to have been more effective in protecting start-ups and maintaining competition than in subsidizing large market leaders, the course more commonly adopted.

One aim of the book apparently is to offer revisionist perspectives. Arthur Norberg and Steven Usselman, for instance, point out in separate pieces on the United States that, despite the large amounts of research-and-development funding devoted to computer science and military procurement, the U.S. government hardly pursued a policy

of “planned coordination” for computers, but, rather, assigned multiple, largely uncoordinated, agencies and funding sources to the task. The multiplicity of U.S. government inputs left a large role for individual company autonomy, even in what was viewed as a strategic technology requiring large amounts of government funding. On the other hand, U.S. policy toward competition appears to have been remarkably consistent over time. Its goal was to maintain a balance between the needs of consumers for standards and low cost and keeping the playing field open to start-ups and new entrants.

The Japanese chapter likewise offers a fascinating corrective to popular interpretations of Japan, Inc. When it came to computers, it explains, Japanese regulators relied on a combination of market coordination for production and planned coordination for longer-term matters, such as research and development and resource allocation. An especially enlightening chapter by two leading Ukrainian scientists deals with the U.S.S.R., where many hundreds of first-rate computer scientists had produced highly competitive technologies through the 1960s. Boris and Lev Malinowski reveal that decision-making among the U.S.S.R.’s constituent states led to a choice in 1970 between two equally improbable alternatives from a cold war perspective. The first was to collaborate with Britain’s ICL (System 4) to improve Europe’s chances of breaking IBM’s dominance. The second alternative, advocated by East Germany, was ultimately the one that prevailed. This was to adopt the IBM 360 as the U.S.S.R. standard. The authors tell us that this choice was made over the determined opposition of the scientific community and despite the certain knowledge that IBM’s family of computers could not adequately serve clearly identified military needs. Nor would IBM’s documentation be available, whereas ICL’s would have been.

Industrial policy, for which this book serves as a many-faceted case study, is, as Eda Kranaris explains in her clarifying chapter on European technology policy in the 1960s and 1970s, an “enormous and complex topic” (p. 209). The reader is left to decide whether the book as a whole, or any of its constituent chapters, makes a generalizable case for a best-practice approach to the development of strategic technology. But anyone choosing to spend the time and attention could certainly come up with a whole spectrum of well-supported arguments based on the international history of IT as presented here.

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