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Book Reviews/Comptes Rendus

Salmi, Jamil, and Verspoor, Adriaan M. (Eds.). *Revitalizing Higher Education.* IAU Pergamon: UNESCO, Paris. 1994.
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In the language of the bankers and government officials for whom this book is intended, those of us in higher education are in the human resource development business. And it is now the common coin of governments and international agencies that human resources are the most valuable resource in any society. Accordingly, international aid programs have recently placed a high priority on human resource development projects – that is, on training and education. In many cases, developing nations are no longer able to pay for the higher educational infrastructures they have created. At the same time, the gathering force of the electronic information age has underlined the urgency for more and better education. *Revitalizing Higher Education,* edited by two officials of the World Bank, consists of eleven studies focusing on ways to refocus, refinance and revitalize higher education in developing countries.

In the first study, "The University System: Engine of Development in the New World Economy," Manuel Castells offers an incisive analysis of the world-wide information-driven economy, concluding that the "science and technology systems of the new economy (including, of course, the humanities) are equivalent to . . . the factories of the industrial age" (p. 15). But technology transfer to developing societies "can only be effective if there is in the country a process of endogenous technological development that can receive, support, and use the know-how being transferred" (p. 23). Universities are crucial in creating that readiness: "They must provide the skilled labor force that is absolutely necessary for the process of technology transfer and technology development, . . .

generate the scientific foundation and the R&D activities that are necessary to connect with the process of knowledge generation throughout the world, . . . adapt innovations produced in other contexts and for other needs, to the specific requirements and cultural context of each country, . . . [and] perform such tasks in close connection to the industrial structure, but with a level of autonomy that will enable them to take the long-term view necessary for scientific strategy and education planning" (p. 24). "If knowledge is the electricity of the new informational-international economy, then the institutions of higher education are the power sources on which the new development process must rely" (p.16).

The trouble is, most universities in the developing world focus on the "generation and transmission of ideology" and the "selection and formation of the dominant elites" rather than on the "production and application of knowledge" and the "training of the skilled labor force" (p. 29). Consequently some countries have by-passed universities. South Korea, China, Taiwan, and, to a lesser extent Singapore and Malaysia created specialized technical institutes and flowed applied research grants through companies in order to ensure economic and technological relevance, "with substantial payoffs" (p. 32). For Castells, this is a transitional strategy. In the longer term, developing societies will need the science-oriented culture fostered by comprehensive universities: "There is certainly a major need for a linkage between science, technology and industrial applications, but it is only possible to apply that to science that exists, and there will only be scientific discovery, and connection with the world centers of scientific discovery, if universities are complete systems, bringing together technical training, scientific research, and humanistic education, since the human spirit cannot be taken apart to obtain only the precise technical skills required for enhancing the quality of regional crops" (p. 35).

But, asks Martin Carnoy in "Universities, Technological Change, and Training in the Information Age," "is there evidence that research-orientated universities and education systems are *the key element* in the growth of information-based economies" (p. 41)? After examining the university systems in five "newly industrializing countries," South Korea, Singapore, China, Brazil and Mexico, he concludes: "There is very little evidence in any of the countries studied that high quality science and engineering or technical research in universities created the basis for technological development in the economy. Rather, the success of the Korean and Singapore cases depended on an overall set of 'developmental state' strategies that pushed export-driven economic growth and technological upgrading into science-based industrial production" (p. 90). "Such change includes but is not limited to a well-organized, research-based, university expansion in science and technical fields" (p. 92).

Do investments in scientific research and advanced training yield dividends? Edwin Mansfield reports that "the social rate of return from academic research is substantial (about 28 percent) . . ." and that, while some kinds of advanced training (e.g., Korean investment in engineers) have paid off handsomely, the jury is still out on "the social rate of return from a country's investments in highly specialized types of scientific training, particularly at the doctoral level" ("Economic Returns from Investments in Research and Training," pp. 104, 121). How does anyone know they are getting their money's worth? In "Performance of Higher Education: Measures for Improvement. Evaluation of Outcomes," Ulrich Teichler and Helmut Winkler, in cooperation with Robert Kreitz, review various approaches to measuring academic performance and the higher education systems in Chile, Nigeria, Taiwan, and Thailand. They list the "shortcomings" in those four systems and propose some "principles for evaluation of higher education in Third World countries" designed to foster an "evaluation culture" (pp. 159-61). Herbert R. Kells proposes a harder-edged conclusion: "Obviously developing countries do need information capacity and some indicators at the national level.... They should be developed (defined, and procedures set) in concert with institution representatives. They should be carefully developed and used to promote achievement of the agreed upon goals, not to embarrass or punish institutions. If possible, they should be linked to incentive schemes, employing marginal funding enhancements." ("Performance Indicators for Higher Education: A Critical Review with Policy Recommendations," p. 205)

Who should hold universities to account for their performance? Frans A. van Vught argues for a "state-supervised" as distinct from a "state-controlled" approach in "Autonomy and Accountability in Government/University Relationships." Governments should require institutions to have "a quality assessment system," including performance in addressing the "needs of society," but the system's design and operation should "be left to the higher education institutions themselves" (p. 359).

Who should pay? Adrian Ziderman reviews funding practices. Many developing states are reducing operating grants and student subsidies. Universities have no alternative but to diversify their funding sources, including introducing or raising fees, "delayed cost recovery" through student loan programs, and selling services to industry. ("Enhancing the Financial Sustainability of Higher Education Institutions," p. 214). Currently income from fees ranges from 1-2 percent of current expenditures in Africa and the Middle East to 6% in Africa, 8% in Asia, and 10% in industrialized countries (p. 215). "Overall, the evidence suggests that fees set at around 25% of unit

costs are reasonable and affordable." "[F]ears about the adverse effects on equity and access are frequently exaggerated." Given their social origins, most of the students involved are capable of paying much more. The barriers to higher education are not so much fees as "poor access to earlier education opportunities, the costs for some of foregone earnings, and negative class attitudes towards higher education. Greater cost recovery will discourage some individuals who would otherwise have attended, but is unlikely to exclude many" (p. 217). Ziderman recommends work-study programs and income contingent loan repayment plans to assist students with the immediate cost and suggests consideration of three other cost-recovery methods by governments: a special income tax supplement for university graduates, employer taxes to assist with the costs of education and training, and community service by students at less than market salary rates.

On narrower topics, Edita A. Tan discusses the "Mechanics of Allocating Public Funds to Universities, Their Implications on [sic] Efficiency and Equity;" Thomas Owen Eisemon and Moussa Kourouma provide a study of "Foreign Assistance for University Development in Sub-Saharan Africa and Asia;" Daniel C. Levy ("Problems of Privatization") assesses the role and impact of private universities in the Philippines, Malaysia, Mexico and Columbia; and José Joaqúin Brunner and Guillermo Briones analyze the recent radical reform of higher education in Chile in "Higher Education in Chile: Effects of the 1980 Reform."

Certainly, as the editors argue, universities in developing countries face major challenges – those of broadening their missions to include a serious commitment to research and to working in partnership with industry, of diversifying their programs and delivery systems in response to a broader mission and social demands and needs, of raising their standards in teaching and research, of linking into the international university and research network, of broadening their financial base, of negotiating a new relationship with government in which governments provide coherent goals and the institutions have the autonomy to realize their missions as best they can. All of that needs to be done.

Developing nations, however, may need not merely more diverse universities but more diverse post-secondary systems. The impulse which led to the creation of the land grant universities in the United States and their counterparts in Canada also contributed to the emergence of community colleges and polytechnics. Properly designed, such institutions can not only meet specific occupational needs or engage in applied research but can also provide a measure of the general "scientific" or "humanistic" culture attributed here only to universities.

Revitalizing Higher Education contains a great deal of information about university systems around the world, some useful charts (a few flawed by

typographical errors), and some penetrating analyses. Each study includes a comprehensive bibliography. The book should be of interest not only to policy makers in developing countries and international aid officials but also to those interested in the strategic directions of Western universities. It may inspire some necessary reforms – endogenously rather than exogenously, one might hope.

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Yee, Albert H. (Ed.). *East Asian higher education: Traditions and transformations.* Paris: International Association of Universities Press, 1995, pp. vii, 213. Reviewed by Michael Hatton, Humber College.

This book includes fifteen essays that describe and comment on higher education in East Asia, including Burma (Myanmar), Hong Kong, Indonesia, Japan, North Korea, South Korea, Malaysia, the Peoples Republic of China, the Philippines, the Republic of China (Taiwan), Singapore, Thailand and Vietnam. The authors are a varied group, and include present and former professors, research fellows, university presidents and senior ministry officials from the East Asia region, as well as a sprinkling of U.S. writers and a lone Canadian. Albert Yee, the editor for this volume, as well as the author of two papers and co-author of another, has impressive qualifications for the task, including forty years experience in higher education both in East Asia and, more recently, the United States.

The essays are uneven and eclectic; there is little consistency in form, substance, depth of analysis or length. In spite of this, the book is engaging (absorbing, at times) and makes a valuable contribution to the literature. Readers with an interest in Asian higher education will not be disappointed in the volume as a whole, though they will almost certainly find certain chapters more compelling than others. Some of the essays don't correspond with western standards in terms of their "academic" nature; however, the reader is neatly cautioned - I think quite unintentionally - by Hayhoe and Zhong when they suggest that the future may brook "more tolerance of divergent viewpoints on what constitutes excellence in scholarship" (p. 131).

Yee authored the first chapter, in which he achieves several goals. First, he discusses the East Asian community and its diverse traditions, thereby setting the stage for the reader's appreciation of what he calls "a critical-analysis, issues-oriented approach to the study of [East Asian] higher education" (p. 14). Second, by way of example, he employs this approach, comparing elements of the development of higher education in China with those of Japan. In this