

Notes

1. Though a growth rate of 5 per cent per capita for over three decades is unprecedented, Germany, Italy, and France came quite close in the 1950s and 1960s. However, there is no other comparable performer. Even Japan, the much-acclaimed forerunner of the East Asian miracle, recorded only 1.5 per cent per capita growth during the period from the Meiji restoration to 1940.
2. These achievements need to be adjusted against many other fallouts of development, such as pollution and other environmental degradations and infrastructural bottlenecks, as well as poverty (for example, in Indonesia).
3. The problem arises from the fact that educational expenditures are considered as consumer spending as well as a contribution to higher income in the future, but these two cannot be easily separated. If we consider the factor of unrealized incomes, the problem becomes even more complex. Whether individuals realize their incomes or not from the investment in education, families and the state continue to spend on it. In such a situation, it is not easy to draw a balance between the two sources of spending. For this reason, some commentators argue that since micro returns are difficult to measure, it is better to estimate the macro returns, which can be derived from the increase in material and intellectual capital. In macroeconomics apparently, the continued costs of education are compared with total individual incomes, or the national income. Shultz (1961) used both approaches but preferred the macroeconomic one.
4. One should, however, assert this with a note of caution. The Philippines could not demonstrate higher levels in the standard of living *vis-à-vis* its Southeast Asian neighbours despite having a higher rate of literacy. Education alone perhaps cannot guarantee a higher standard of living for a nation. However, it can still be argued that the situation could have been worse had there been lower levels of education in this country.
5. Coombs (1985) indeed captures some of these changes of emphasis on development and education. Perceived anew, the basic objective of education was:

... to improve people's quality of life — not just of some people but of all the people, with special emphasis on the poorest and the most

disadvantaged who had thus far been bypassed by the development process. Economic growth based on increased productivity was still viewed as being of fundamental importance. But the broader end now in view was not simply a rise in the GNP. It was growth with equity, which militated against human exploitation and ensured a fair distribution of the fruits of development. Greater emphasis on more equitable distribution, the economists now argued, was not only a moral imperative but an imperative for healthy economic growth and future political stability. The new concept also rejected the old theoretical notion that economic and social development were distinct and separate processes and that the first must precede the second. Instead, the new thinking recognized that the two were inseparable and must go forward hand-in-hand. Half-sick farmers could hardly be expected to have the stamina to boost their productivity, just as half starved children were in no condition to learn the intricacies of reading, writing and arithmetic (Coombs 1985, pp. 18–19).

6. See Speech by the Minister of Education, Singapore, on the Budget session given on 19 March 1998.
7. Personal communication with Mukul G. Asher (January 1998).
8. Personal communication with Mukul G. Asher and B. Rao (January 1998).
9. The national education policy, which is now being vigorously pursued by the Government of Singapore, has the following explicit purpose (see Webpage of Ministry of Education).

To develop national cohesion, the instinct for survival and confidence in the future:

- By fostering a sense of identity, pride, and self-respect as Singaporeans;
 - By knowing the Singapore story — how Singapore succeeded against the odds to become a nation;
 - By understanding Singapore’s unique challenges, constraints and vulnerabilities, which make us different from other countries; and
 - By instilling the core values of our way of life, and the will to prevail, that ensure our continued success and well-being.
10. “Thus when I hear, ‘what should we learn, how should we learn, which system of education is relevant and what way’, then I strongly feel that education is not something which is detached from life. What should we learn and what we want to be — these two are intimately interrelated. You cannot pour more water in a pot than what it can accommodate” (Rabindranath Tagore, *Collected Works of Tagore*, vol. 13, p. 694, translated by Atiur Rahman).

References

- Ahmad, M. *Human Resource Development. Report of the Task Forces on Bangladesh Strategies for the 1990s*, edited by R. Sobhan. Vol. I. Dhaka: University Press Ltd., 1991.
- Ahmed, Q.K., ed. "A Market Survey of 265 Organizations of Employers in the Public and Private Sector in Bangladesh". Mimeographed. Dhaka: Bangladesh Unnayan Parishad/Institute of Engineers, Bangladesh, 1992.
- Alam, M. "Poverty and Primary Educational Development in Bangladesh". In "The Face of Human Deprivations". Bangladesh Human Development Report 1999. Mimeographed. BIDS, February 2000.
- Asian Development Bank (ADB). *Education and Development in Asia and the Pacific*. Manila: ADB, 1991.
- . *Asian Development Outlook*. Manila. 1998.
- Banuri, T. *Modernization and Its Discontents: A Perspective from Sociology of Knowledge*. Helsinki: World Institute for Development Economics Research of the United Nations University, 1987.
- Barro, R. "Wage Inequality and Distribution of Education: A Study of the Evolution of Regional Differences in Inequality in Metropolitan Brazil". *Journal of Economic Development* (July, 1991).
- Becker, G., K. Murphy, and R. Tamura. "Human Capital, Fertility and Economic Growth". *Journal of Political Economy* (October, 1990).
- Berry, A. "Education, Income, Productivity and Urban Poverty". In *Education and Income*, edited by K.C. King. Washington, D.C.: The World Bank, 1980.
- Birdsall, N., and R.H. Sabot. "Inequality, Exports, and Human Capital in East Asia: Lessons for Latin America. In *Redefining the State in Latin America*, edited by C. Bradford, Jr. Paris: OECD Development Center and Inter-American Development Bank, 1994.
- Birdsall, N., D. Ross, and R.H. Sabot. "Inequality as a Constraint on Growth". In *Social Tensions, Job Creation and Economic Policy in Latin America*, edited by D. Turnham, C. Foy and G. Larrain. Paris: OECD, 1995a.

- _____. "Inequality and Growth Reconsidered: Lessons from East Asia". *World Bank Economic Review*. Washington DC: World Bank, September, 1995b.
- _____. "Education, Growth and Inequality". *Pathways to Growth: Comparing East Asia and Latin America*, edited by N. Birdsall and F. Jasperson. Washington: Inter-American Development Bank, 1997a.
- Birdsall, Nancy, and Fredrick Jasperson. *Pathways to Growth: Grouping East Asia and Latin America*. Washington: Inter-American Development Bank, 1997b.
- Blang, M. "The Correlation Between Education and Earnings: What Does It Signify?" *Higher Education* 1, no. 1 (February 1972): 53–76.
- Capra, F. *The Turning Point: Science, Society and the Rising Culture*. New York: Bantam Books, 1982.
- Capra, F. *The Web of Life*. New York: Anchor Books/Doubleday, 1996.
- Chenery, H., and M. Syrquin. *Patterns of Development 1950–1970*. New York: Oxford University Press, 1975.
- Chieh, H.C. "What It Takes to Sustain Research and Development in a Small, Developed Nation in the 21st century". In *Singapore: Towards a Developed Status*, edited by L. Low. Oxford/Singapore: Oxford University Press/Centre for Advanced Studies, 1999.
- Clark, C. *The Conditions of Economic Progress*. London: The Macmillan Press, 1940.
- Coombs, P.H. *The World Crisis in Education — The View from the Eighties*. New York: Oxford University Press, 1985.
- Debeauvais, M. *Education and Development in the New International Economic Outlook*. IIEP Occasional Papers, No 53. UNESCO: International Institute for Educational Planning, 1981.
- Delhaise, P. *Asia in Crisis: The Implosion of the Banking and Finance Systems*. Singapore: John Wiley & Sons (Asia) Pte Ltd, 1998.
- Denison, E. *The Sources of Economic Growth in the United States and the Alternatives before the US*. New York: Committee of Economic Development, 1962.
- Denison, E. *Why Growth Rates Differ: Post War Experience in Nine Western Countries*. Washington, DC: The Brookings Institution, 1967.
- Dopfer, K. *The New Political Economy of Development: Integrated Theory and Asian Experience*. London and Basingstoke: The Macmillan Press Ltd, 1979.
- Drézé, Jean and A. Sen. *Hunger and Public Action*. Oxford: Clarendon Press, 1989.
- Escobar, A. *Encountering Development: The Making and Unmaking of the Third World*. New Jersey: Princeton University Press, 1995.
- Fuller, W. "Education, Training and Worker Productivity: Study of Skilled Workers in Two Firms in South Asia". Ph.D. thesis, Standford University, 1990.
- Gopinathan, S. "Singapore". In *Education and Development in East Asia*, edited by P. Morris and A. Sweeting. New York and London: Garland Publishing, Inc., 1995.
- _____. "Education and Development in Singapore". In *Education in Singapore*, edited by J. Tan, S. Gopinathan, and H.W. Kam. Singapore: Prentice Hall/Simon and Schuster (Asia) Pte Ltd, 1997.

- Haddad, W.D., M. Carnoy, R. Rinaldi and O. Regel. *Education and Development: Evidence for New Priorities*. Washington, DC: The World Bank, 1990.
- Haq, M. *Human Development in South Asia*. Dhaka: University Press, Ltd, 1997.
- Hayashi, T. "Modified J-System" of Human Resource Development: A Case Study of Japanese MNEs in Singapore in Electric Machinery". Paper presented at the International Symposium on Foreign Direct Investment in Asia, 22–23 October 1998. Mimeographed. Tokyo: Economic Research Institute, 1998.
- Hossain, M. "Education and Economic Performance in Rural Bangladesh". *Bangladesh Journal of Political Economy* 9, no. 3 (1989).
- Japan National Commission for UNESCO. *The Role of Education in the Social and Economic Development of Japan*. Tokyo: Ministry of Education, 1966.
- Juster, F., and P. Stafford. "The Allocation of Time: Empirical Findings, Behavioural Models, and Problems of Measurement". *Journal of Economic Literature* XXIX (June 1991): 471–522.
- Kim, E.M. *The Four Asian Tigers: Economic Development and Global Political Economy*. London and Sydney: Academic Press, 1998.
- Khan, A.R., and M. Hossain. *The Strategy of Development in Bangladesh*. London: Macmillan Press Ltd, 1989.
- Khoman, S.C. "The Education Sector in Thailand: Problems, Policy Dilemmas, and the Role of the Government". Discussion Paper Series No. 95. Mimeographed. Faculty of Economics, Thammasat University, October 1988.
- Koo, Sung-Yeal. "Formal Education and the Quality of Schooling in East Asian Countries". In *Human Capital Formation as an Engine of Growth: The East Asian Experience*, edited by Joseph L.H. Tan, pp. 34–78. Singapore: Institute of Southeast Asian Studies, 1999.
- Kuznets, S. *Modern Economic Growth*. New Haven, CT: Yale University Press, 1966.
- Leipziger, D.M. *Lessons from East Asia*. Ann Arbor: University of Michigan Press, 1997.
- Lockheed, M., D. Jamison and L. Lau. "Farmer Education and Farmer Efficiency: A Survey". *Economic Development and Cultural Change* 29, no. 1 (1980).
- Low, L., T.M. Heng, and T. Wong. *Economics of Education and Manpower Development Issues and Policies in Singapore*. McGraw-Hill Book Co., 1991.
- Lucas, R. "On the Mechanics of Economic Development". *Journal of Monetary Economics* (July 1988).
- Majumdar, T. "Economics of Indian Education for the Next Century". *Indian Economic Journal* 45, no. 4 (April–June 1997–98).
- McGranahan et al. *Contents and Measurement of 'Socio-economic Development*. Praeger, 1985.
- Min, W. "The Impact of Vocational Education in Productivity in the Specific Institutional Context of China: A Case Study". Ph.D. thesis: Stanford University, 1987.
- Mingat, A. "Towards Improving Our Understanding of the Strategy of High Performing Asian Economies in the Educational Sector". Paper presented at the International

- Conference on Financing Human Resource Development in Advanced Asian Countries. Mimeographed. Manila: ADB, 1995.
- Mincer, J. "Human Capital and Earnings". In *Economic Dimensions of Education*, edited by D.M. Windham, pp.1–31.. Report of the National Academy of Education, 1979.
- Morris, P., and A. Sweeting. *Education and Development in East Asia*. New York and London: Garland Publishing, Inc., 1995.
- Mundle, S. "Financing Human Resource Development in Advanced Asian Countries: A Report". Paper presented at the International Conference on Financing Human Resource Development in Advanced Asian Countries. Mimeographed. Manila: ADB, 1995.
- M. Ramesh and M.G. Asher. *Welfare Capitalism in Southeast Asia: Social Security, Health and Education Policies*. London: The Macmillan Press Ltd, forthcoming.
- Park, Soo-Bin. "Education and Economic Growth: The Case of Korea". Paper presented at the Department of Economics, National University of Singapore, 1995. Mimeographed. Also available at the East Asia Institute Library, Singapore.
- Park, Y.B., D. Ross, and R.H. Sabot. "Educational Expansion and Inequality of Pay in Brazil and Korea". In *Opportunity Foregone: Education in Brazil*, edited by N. Birdsall and R.H. Sabot. Washington, DC: Inter-American Development Bank, distributed by Johns Hopkins University Press, 1996.
- Pease, R.M. "Policy Learning: The Case of Singapore Models for Reform in Urban China". Mc. Soc. Sci. thesis. Mimeographed. Singapore: Department of Political Science, National University of Singapore, 1996.
- Peck, E.S. "Financing Education". In *Fiscal System of Singapore: Trends, Issues and Future Directions*, edited by Mukul G. Asher and Amina Tyabji. Singapore: Centre for Advanced Studies/National University of Singapore, 1996.
- Petri, P.A. "Common Foundations of East Asian Success". In *Lessons from East Asia*, edited by D.M. Leipziger. Ann Arbor: University of Michigan Press, 1997.
- Pritcher, L. "Where has all the education gone?" *Policy Research Working Paper #1581*. Washington, DC: The World Bank, Policy Research Department, Poverty and Human Resources Division, March 1996.
- PMED (Primary and Mass Education Division). "The Year 2000: Bangladesh Country Report". Government of the People's Republic of Bangladesh, December 1999.
- Psacharopoulos, G. and M. Woodhall. *Education and Development: An Investment Choice*. New York: Oxford University Press, 1985.
- Psacharopoulos and Tilak. "Education and Wage Earnings". In *Encyclopedia of Educational Research*, edited by M.C. Alkin, pp. 419–23. New York: Macmillan, for the American Educational Research Association, 1992.
- Quah, J.S.T. "Human Resource Development in Four Asian Countries: Some Lessons for the Commonwealth Countries". In *Report Prepared for the Commonwealth Secretariat*. London: Commonwealth Secretariat, 1993.
- Quah, J.S.T. "Singapore's Model of Development: Is It Transferable?" In *Behind East Asian Growth: The Political and Social Foundations of Prosperity*, edited by H.S. Rowen. London: Routledge, 1998.

- Rahman, A. and Z. Ali. "Higher Education, Inequality and Development". Mimeographed. Dhaka: Bangladesh Institute of Development Studies, 1995.
- Ramesh, M and Asher, M.G. *Welfare Capitalism in Southeast Asia: Social Security, Health and Education Policies*. London: Macmillan Press Ltd, forthcoming.
- Ranis, G. "The Evolution of Policy in a Comparative Perspective: An Introductory Essay. In *The Evolution of Policy Behind Taiwan's Development Success*, edited by Kuo-Tying Li. 2nd edition. Singapore: World Scientific Publishing Company, 1995.
- Rao, M.G. "Public Expenditure Policies in High Performing Asian Experience". A paper presented at the international conference on Financing Human Resource Development in Advanced Asian Economies. Mimeographed. Manila: ADB, 1995.
- Rao, V.V.B. "East Asian Economies: Trends in Poverty and Income Inequality". *Economic and Political Weekly* 34, no. 18 (1999): 1029–39.
- Rao, V.V.B. "East Asian Economies: The Crisis of 1997–1998". *Economic and Political Weekly* 33, no. 23 (6 June 1998): 1397–416.
- Rose, R. "What is Lesson Drawing?" *Journal of Public Policy* 11, no. 1 (January–March 1991): 19–21.
- Rowen, H.S. *Behind East Asian Growth: The Political and Social Foundations of Prosperity*. London and New York: Routledge, 1998.
- Saavedra-Rivano, N. "From Promising Beginnings to Divergent Paths: Brazil and Korea". In *Development Strategies in East Asia and Latin America*, edited by A. Hosono and N. Saavedra-Rivano. London: Macmillan Press Ltd., 1998.
- Selvaratnam, V. *Innovations in Higher Education*. World Bank Technical Paper No. 222. Asian Technical Department Series. Washington, DC: World Bank, 1994.
- Sen, A. *Public Action to Remedy Hunger*. Public Lecture given at Dhaka in 1989. Dhaka: Bangladesh Institute of Development Studies, 1992.
- Sen, B. and A. Rahman. "Fighting Poverty: Emerging Perspective — South Asia Poverty Monitor 1998". Mimeographed. Regional Report prepared by Bangladesh Institute of Development Studies, with support from UNDP, New York, 1998.
- Shultz, T.W. "Investment in Human Capital". *American Economic Review* 51, no. 1 (1961): 1–17.
- Siddiqui, Asif Iqbal "An Economic Investigation into the Forest Fire and Haze in Southeast Asia". Mimeographed. Singapore: Institute of Southeast Asian Studies, 1999.
- Sivard, R.L. *Women — A World Survey*. Washington: World Priorities Group, 1985.
- Sobhan, R. *Crisis in Governance: A Review of Bangladesh's Development*. Dhaka University Press Ltd., 1997.
- Stevenson, H.W. "Human Capital: How the East Excels?" In *Behind East Asian Growth: The Political and Social Foundations of Prosperity*, edited by H.S. Rowen. London: Routledge 1998.
- Stromquist, N. *Determinants of Educational Participation and Achievement of Women in the Third World. A Review of Evidence and a Theoretical Critique*. Stanford: CERAS, 1988.
- Tilak, Jandhyala B.G. *Education for Development in Asia*. New Delhi: Sage Publication, 1994.
- UNDP. *Human Development Report*. New York: Oxford University Press, 1998.

- Wade, R. *Governing the Market: Economic Theory and the Role of Government on East Asian Industrialization*. Princeton University Press, 1990.
- World Bank. *World Development Report*. New York: Oxford University Press, 1991.
- . *Bangladesh Education Sector Review, Volume I: Synthesis, Discussion Draft*. Dhaka, Bangladesh, 1999.
- . *The East Asian Miracle: Economic Growth and Public Policy*. A World Bank Policy Report. New York: Oxford University Press, 1993.
- Yee, Albert H., ed. *East Asian Higher Education: Traditions and Transformations*. Oxford and New York: Pergamon Press, 1995.

The Author

Atiur Rahman was a Visiting Research Fellow at the Institute of Southeast Asian Studies, Singapore, and is currently working as a Senior Research Fellow at the Bangladesh Institute of Development Studies, Bangladesh.