

ERD POLICY BRIEF NO. 22

Adapting Education to the Global Economy

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September 2003

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Globalization is putting a higher premium on competitiveness, requiring Asian developing countries (ADCs) to develop not only more productive but also more flexible and sophisticated labor forces. Accordingly, constant rethinking and improvement of national education systems are called for.

At the same time, ADCs are at different stages of a demographic transition, shifting from high to low mortality and fertility regimes. Although its specific timing varies from one ADC to the other, this transition offers many countries a “demographic dividend” resulting from a greater share of workers relative to dependents.

The synergy between these economic and demographic transformations offers considerable opportunities for economic growth, catch-up with more advanced economies, and poverty reduction.¹ However, countries that will fail to undertake appropriate policy reforms will not be able to take full advantage of the demographic dividend, thus faltering in the catch-up process.

A key condition to reap benefits of the situation is to ensure that the larger working-age population becomes highly productive and adaptive. Higher productivity and competitiveness require higher levels of education. Long-term education strategies in ADCs must therefore go beyond the focus on access to basic education enshrined in the Education for All and the Millennium Development Goals declarations. Competitiveness-driven reforms of education systems imposed by globalization are critical for long-term economic growth and, hence, sustainable poverty reduction.

Education in the Global Economy

In the global economy, the sources of higher productivity are increasingly dependent on science-based knowledge and information applied to production. Production is progressively shifting from

¹ Bloom, Canning, and Malaney (2000) estimated that the demographic dividend, which started in the 1960s, accounted for one third of East Asia’s growth during the economic miracle.

traditional agricultural and manufactured goods to more sophisticated agricultural and manufactured products and services. The organization of economic activity is changing from mass, standardized production to flexible, customized production. Capital, production, management, markets, labor, information, and technology are organized across national boundaries. Manufacturing processes are increasingly organized as global value chains, defined as the internationalization of these processes allowing stages of production to be located where they can be undertaken most efficiently and at the lowest cost. All this gives a substantial advantage to firms in those countries where knowledge and the means to acquire it are readily available.

The transformations of the world economy and the manufacturing processes have had a major impact on the organization of work and on the structure of labor markets. Work is becoming organized around the notion of flexibility. More intense competition on a worldwide scale makes firms acutely aware of costs and productivity. One solution that employers have adopted is to reorganize work around decentralized management, customized products, and work differentiation. The effect of individualization and differentiation is to separate workers from lifetime, full-time jobs in stable businesses. Workers are gradually being defined less by the long-term job that they hold than by the “portfolio of knowledge” that they have acquired through study and work. The education and training that a job itself provides become more important for a worker when he or she considers moving to a new job.

These changes in the nature of production and jobs have important implications for education systems. Science-oriented education and problem-solving skills—in other words, high-quality general education with a scientific bent—seem to have the highest economic return. In a job market characterized by flexibility and job change, general skills are likely to be more valuable than specific skills over a person’s career, particularly if specific skills can be acquired through on-the-job training and recurrent education.

Demographic Transition as Opportunity

The transition from high to low fertility and mortality regimes is a universal tendency, taking place in three phases. In a first phase, infant and child mortality is reduced due mainly to improvements in public health, sanitation, and nutrition. With more children surviving, women respond—with some delay—by reducing their fertility. During this phase, when mortality is lowered and fertility is still high, a large

generation of “boomers” is created, resulting in high population growth and age dependency ratios.

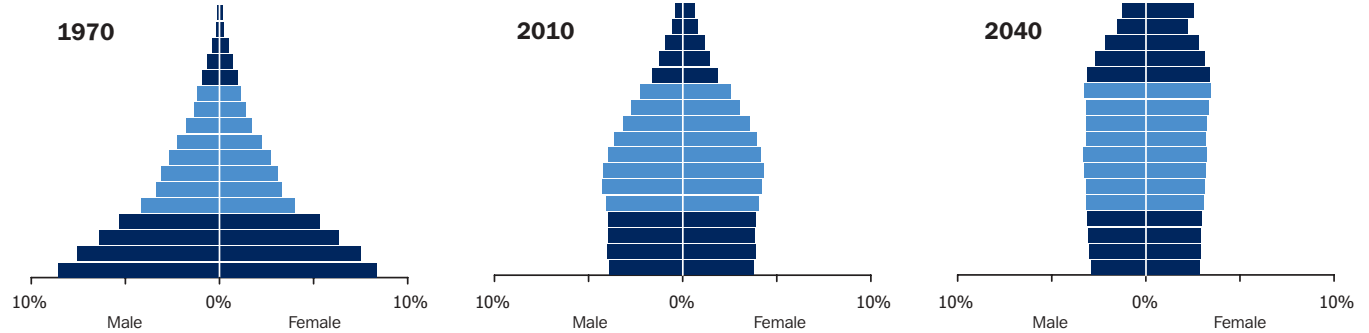
In a second phase, as the baby boomers enter the adult labor market, the share of this sector of the population increases and age dependency ratios are lowered. Assuming that labor markets are able to absorb these new workers, the result is a gain in productivity and economic expansion. During this phase when the boomers move from dependents to workers, a temporary window of opportunity called the “demographic dividend” is created. At this stage, the pressure on education systems is reduced. By reducing the share and size of the school-age cohorts, the demographic transition can help countries reform their education systems. Resources can increasingly be invested in improvements of quality and in higher levels, rather than in expanding access to basic education.

But this window is transitory, since after a few decades a third phase is initiated where baby boomers enter the old age and require support from smaller cohorts of younger workers. The figure below illustrates these three phases in the case of Thailand.

In countries where the demographic transition started early, the demographic dividend is more or less over. The share of the working-age population will reach a peak in 2010–2015 in Azerbaijan; People’s Republic of China (PRC); Hong Kong, China; Kazakhstan; Republic of Korea; Sri Lanka; and Thailand. In other parts of the region, the changing demographics are different, and many ADCs are just entering this crucial phase.

For the region as a whole, between 2000 and 2025, the school-age population (6-17 years) will fall by about 1 percent or 10.3 million children. But these numbers conceal wide regional differences (see Table 1). In some of the poorest countries, the number of school-age children will keep increasing beyond 2025. Afghanistan, for example, where enrollment rates are currently the lowest in Asia, will see its school-age population double by 2025.

**Thailand's Demographic Transition:
Age Pyramids in 1970 (phase 1), 2010 (phase 2), and 2040 (phase 3)**



Source: United Nations (2003).

Table 1
Change in the Size and Share of the Population
Aged 6-17 between 2000 and 2025,
Selected ADCs

ADC	Change 2000-2025	
	Million	Percent
All	-10.3	-1
East Asia	-50.3	-18
China, People's Rep. of	-47.5	-18
Southeast Asia	-3.4	-3
Indonesia	-2.8	-5
Lao PDR	0.6	36
Malaysia	0.6	10
Philippines	1.2	6
Thailand	-1.3	-10
Viet Nam	-2.1	-10
South Asia	45.9	13
Afghanistan	6.8	107
Bangladesh	6.0	15
India	8.0	3
Pakistan	23.1	54
Sri Lanka	-0.7	-17
Central Asia	-3.0	-17
Pacific	0.5	20
Papua New Guinea	0.4	26

Source: United Nations (2003).

These demographic dynamics have important implications for education policies. For those ADCs where the numbers of young people are falling, the challenges are less about the supply of infrastructure and more about improving the quality of education at all levels and expanding access to preprimary and tertiary education. The ADCs that expect increasing numbers of school-age children face a more varied set of challenges. They will clearly need to consolidate improvements in primary and secondary school coverage, while infrastructure demands (even at the primary level) will continue to be pressing.

Status of Education in the Region

Primary education has been the focus of many government and multilateral organization interventions in recent decades. Coverage in ADCs is generally high. Boys and girls are now equally represented

in most primary school systems in the region, with notable exceptions in South Asia (Afghanistan, India, Nepal, and Pakistan). In some countries (e.g., Afghanistan, Bhutan, Pakistan, Papua New Guinea), the challenge of meeting universal primary education is sizable, as rising populations will increase the demands placed on systems that are currently unable to meet every need.

The rapid expansion of primary enrollment brought a series of problems, such as the shortage of qualified teachers, inadequate facilities, etc. Quality and completion of primary education have become more pressing issues than access. Many children fail to complete the primary cycle in some ADCs. In Lao PDR, for example, about half of the children who enroll in primary school drop out before reaching grade 5. Quality is high in the few newly industrialized economies (Hong Kong, China; Republic of Korea; Taipei, China; Singapore), but remain low in most ADCs.

With growing numbers of primary school graduates, secondary-level schooling is becoming the critical level for determining human capital and opportunities in the labor market. There has been an expansion of secondary schooling in the region in the last 20 years. The lowest enrollment ratios are found in the poorest ADCs. Quality and relevance of secondary schooling are problematic in all ADCs, except the NIEs.

Vocational education used to raise high expectations, but is now often considered largely ineffective and expensive. The evidence is mixed on the relative returns to vocational versus general secondary education. Vocational education has a drawback in the new global economy, as it trains students in specialized skills that quickly become obsolete if not put to use immediately or constantly.

Higher education will play a greater role in preparing Asia's labor force, and should be the fastest growing level in the next decades. Many ADCs expanded higher education enrollment rapidly in the 1980s and 1990s. Hong Kong, China; Korea; Philippines; Singapore; and Thailand now have relatively high levels of the age cohort enrolled in tertiary education. The Central Asian Republics also have relatively high tertiary-level enrollment rates, although the high-quality education system developed during the Soviet era collapsed in the early 1990s in terms of curricula offered and physical infrastructure. However, many major players in the new world economy have low levels of tertiary enrollment even among the young. For example, Bangladesh, People's Republic of China, India, Indonesia, Pakistan, and Sri Lanka, to name just those heavily involved in the global economy, have traditionally underinvested in higher education and relied on high-

quality secondary schooling to supply productive labor for economic growth. Even though they are gradually expanding higher-education enrollment, they continue to lag behind.

Currently, ADC universities generally fall into two types: prestigious public and private universities that admit most of the “good” students coming out of secondary schools; and a range of other public or private institutions. Many commercial, private universities serving students from lower-income families tend to be diploma mills.

Policy Implications

In the 1970s and 1980s, as international organizations focused on assisting developing countries in their industrialization drive, vocational and higher levels of education were considered as priorities. In the 1990s, with a new focus on poverty alleviation and reduction of inequalities, the priority shifted to basic (primary and lower secondary) education. The ADB lending program on education illustrates this shift (Table 2).

Table 2
ADB lending Program on Education by Level,
1970-1990 and 1991-2000 (percent)

	Basic	Secondary	Technical/ Vocational	Higher
1970-1990	11	10	48	28
1991-2000	39	25	14	16

Globalization may require a new shift in priorities. Sustaining pro-poor growth would progressively hinge on better and higher education provided to the young. ADCs wanting to progressively move up the global value chains must implement competitiveness-driven reforms of their education systems, i.e., give greater emphasis on long run productivity. Semiskilled labor may provide ADCs with an entry point into global value chains. But they must quickly upgrade technologically in order to increase the value added of their production, and avoid falling into a “low-skill, bad-job trap”. (ADB 2003a) This implies not only increasing the quality of education at all levels, but

also developing higher education even though quality basic education may not as yet be fully available to all.

The current progress in terms of access to and quality of tertiary education in ADCs does not match its importance for economic and social development in the knowledge economy. The expansion of this subsector must be carefully planned and monitored. Due to resource constraints, partnerships with the private sector must be fostered. But the role of the state as a regulator and organizer of the framework for this expansion is critical.

A particular issue to be addressed is that universities will be absorbing an increasingly broad base of the youth population, which may mean that in order to improve or simply maintain current quality, they will need to provide remedial education to many students who have had inadequate preparation in primary and secondary education. So far, ADC governments have not responded to the increased pressure on the university system to expand by investing in remedial education. Rather, lower-income and generally less well-prepared entrants have either been absorbed in new, lower-quality higher education institutions, often private.

The demographic transition not only contributes to facilitating the necessary reforms by reducing pressure on lower education levels, it also gives them particular relevance in the context of the new economy. Countries that will fail to capitalize on the demographic dividend when it occurs will not be given a second chance to take advantage of this passing opportunity.

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