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EXPLAINER

Advancing Knowledge Economies Through Education and Skills

Education and skills development are important in creating knowledge-based economies. Photo credit: ADB.

Significant changes in education and skills development help develop knowledge economies that drive long-term growth.

Introduction

While emerging economies in Asia have enjoyed economic growth over the past three decades, the region's comparative advantages in labor and manufacturing are now fading as wages continue to rise and water and energy resources becoming increasingly costly.

Developing countries in the region will soon find it impossible to continue their successful trajectories as technology accelerates and changes the ways countries produce and trade.

In face of these challenges, building knowledge-based economies (KBEs) is essential for developing Asia to ensure strong and long-term growth and effectively prepare for the future challenges of an increasingly connected global economy. KBE describes an economy that uses information resources—skills, technologies, and processes—to achieve and accelerate economic growth potential.

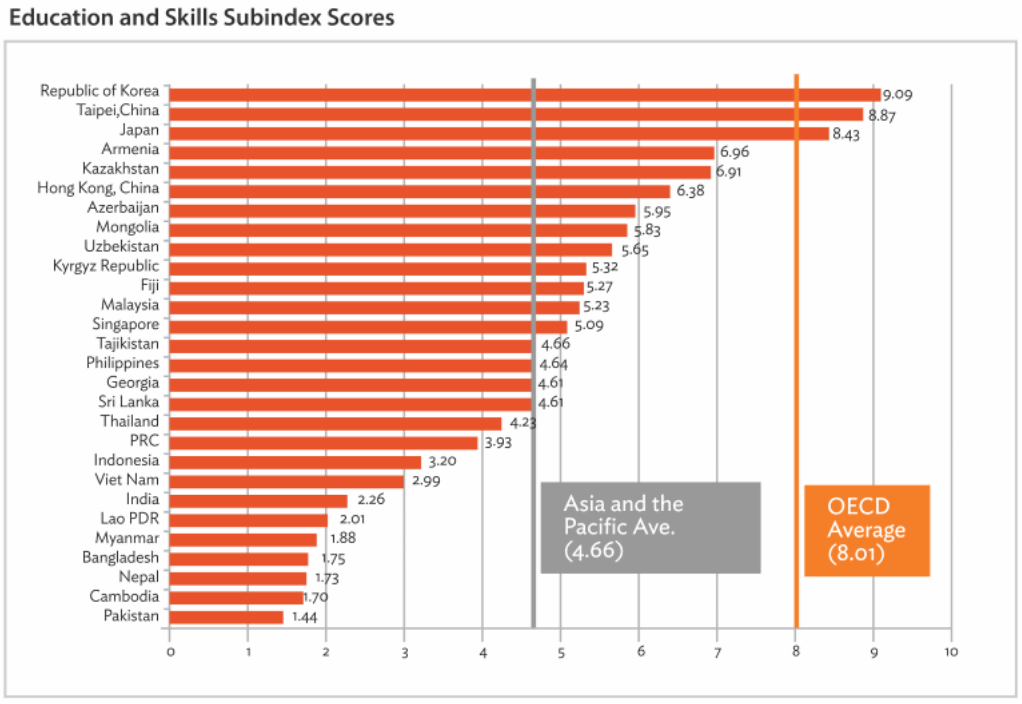
One of the main pillars of KBEs is education and skills. It is imperative that developing Asian economies improve in these areas, especially since they are already struggling with poor quality of education and poor connection of education with labor markets and jobs.

Why is education and skills improvements important in creating knowledge economies?

An educated and highly skilled workforce is essential to a KBE because an educated and skilled population creates, shares, and uses knowledge well, which in turn supports growth, technological advancement and global connectedness.

Unfortunately, the average education and skill subindex score of Asia and the Pacific in the Knowledge Economy Index is only a little over half the average score of Organisation for Economic Co-operation and Development (OECD) countries.

Ideas and technical expertise hold the key to the new global competitive challenge. An empirical investigation of the skill formation strategies of 30 leading companies across seven countries found that skill and human resource issues had become more important to corporate competitive advantage.[1]



[1] Brown, P., H. Lauder, and D. Ashton. 2007. Education. Globalization and the Knowledge Economy. London, UK: Teaching and Learning Research Programme, University of London.

What can developing Asian countries do to improve education and skills?

A study *Innovative Asia: Advancing the Knowledge-Based Economy* prepared by the Asian Development Bank (ADB) lists three general ways in which emerging economies of Asia and the Pacific can pursue knowledge-based economic development: learning from advanced economies; exploiting unique strengths; and leveraging technology trends for leapfrogging.

The table below outlines the possible framework for education and skills development to become a KBE:

Learning from advanced economies	**Exploiting unique strengths**	**Leveraging technology trends for leapfrogging**
Increase tertiary education enrollments and access to technical and vocational education and training and skills development; match human resource development with the economic and industrial competitiveness objectives of the nation	Provide established/large university campuses with greater financial and administrative autonomy to serve the needs of a knowledge economy; strengthen critical thinking and soft skills	Introduce blended models of education delivery, particularly leveraging massive open online courses (MOOC) models
Promote a diversified education system: enhance the prestige of technical and vocational education and training and its market value through cooperation between training institutions and employers; develop a spectrum of qualifications and applied degrees that link technical, professional, and academic qualifications	Incentivize industry giants to set up leading research labs in universities and develop joint research programs; establish industry-university collaborations in identified industry and economic corridors so that research and development (R&D) can be commercialized faster and talent development is linked to economic priorities	Expand the use of information and communication technology (ICT) to transform teaching and training to make it more student-centered and supportive of creativity; develop just-in-time and "on demand" training and anytime-anywhere learning to improve responsiveness to the changing market needs
Support the establishment of technology incubation centers and technology accelerators; strengthen entrepreneurship education in tertiary institutions and training institutions	Attract participation to support high-tech start-ups; develop higher education clusters to serve the needs of specific industries	Create and/or strengthen network of decentralized education and training institutions to become a breeding ground for innovators with favorable patenting incentives
Develop world-class universities in partnership with leading universities around the world; develop centers of excellence in major disciplines for science and technology and frontier areas of interest to the country	Support decentralized R&D that is linked to key development challenges; strengthen applied R&D and partnerships with local businesses	Reengineer education for "digital natives" by assimilating latest ICT for teaching and delivery, such as game-based and simulation-based teaching and learning, as well as mobile-based learning and "upskilling"

Call to Action

Developing Asian countries must act swiftly to implement policies and investments–particularly in education and skills–needed to turn themselves into KBEs. By becoming more knowledge-based, developing economies will be less reliant on natural resources and labor cost advantages.

In terms of investments, developing Asia must enhance its higher education and skill base by expanding relevant tertiary education, increasing the pool of skilled professionals and technicians from polytechnics, and enabling ICT-based education teaching and delivery.

In terms of policies, it can introduce flexible education systems by expanding polytechnics for gray-collar workers with professional credentials, supporting industry-university collaborations for commercializing R&D, and establishing effective qualifications frameworks for certification, accreditation, and quality assurance in education, including online courses.

Resources

ADB. 2014. *Innovative Asia: Advancing the Knowledge-Based Economy - The Next Policy Agenda.* Manila.

ADB. 2014. *Advancing Asia's Knowledge Economies Infographic.*

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