European Centre for the Development of Vocational Training

BRIEFING NOTE

World class competition in training: emerging economies

China, India, Russia and South Korea have similar vocational education and training policy priorities to Europe

Prompted by globalisation and technological change which has brought more demanding production processes, emerging economies are also competing with Europe in reforming vocational education and training (VET) ([1]).

Some selected examples of policies in China, India, Russia, and South Korea show that they are, like the European Union (EU), looking to raise the image and attractiveness of VET and to find better ways to identify and anticipate skills needs.

China, India and Russia have become increasingly integrated into the global economy over the past two decades. They, along with South Korea which began its transition in the 1960s, have enjoyed higher than average economic growth over this period, despite severe downturns in Russia in the early 1990's and South Korea in 1997.

In China and especially India, agriculture is the largest employer. However, the figures in Table 1 mask the substantial shift in the economic structure of these countries that globalisation has triggered. The proportion of people working in agriculture in China has fallen from 60 % in 1990 to 43 % in 2006. In 2008, China was the world's second largest exporter of manufactured goods (behind Germany). In India the contribution of services to GDP has risen from 41 % in 1990-2001 to 54 % in 2006.

India performs well in software development and information technology. South Korea, with a strong manufacturing base, is also breaking into creating software. Russia is a leading exporter of oil, natural gas and minerals. Russia and South Korea also have sizeable service sectors accounting for a proportion of the workforce comparable to that in the EU. However, the contribution of services in Russia and South Korea is substantially less as a proportion of GDP than in the EU.

Table 1: Sector distribution of GDP (2008) and Employment (2007)

Primary		
Country	**GDP %**	**Labour force %**
China	10.6	43.0*
India	17.2	60.0**
Russia	4.1	10.2
South Korea	3.0	7.2
European Union	2.0	4.3
Secondary		
Country	**GDP%**	**Labour force %**
China	49.2	25.0*
India	29.1	12.0**
Russia	41.1	27.4
South Korea	39.5	25.1
European Union	26.8	26.4
Tertiary		
Country	**GDP %**	**Labour force %**
China	40.2	32.0*
India	53.7	28.0**
Russia	54.8	62.4
South Korea	57.6	67.7
European Union	71.1	69.3

*2006, **2003
https://www.cia.gov/library/publications/the-world-factbook/geos/us.htm

In all four countries VET is predominantly school-based. It has a negative image and low status

([1]) see Briefing note March 2009 http://www.cedefop.europa.eu/etv/Information_resources/Bookshop/publication_details.asp?pub_id=541

compared to general education. China and South Korea's Confucian heritage prioritises general and moral education over specialist knowledge. In South Korea, workers who are VET graduates are paid less and have fewer opportunities for promotion compared to academic graduates. Russia suffers from incompatibilities between what the education system provides and what the labour market needs.

Most students in these countries opt for general education. Although the statistics are not directly comparable, they indicate that enrolment in VET at secondary level in the four countries ranges from 30 % to 40 % of students. Considerably lower than the EU figure of around 50 % (Table 2).

Table 2: Distribution of students' in secondary education by programme orientation, 2006 %

	2006	
Country	**General education**	**Vocational education**
China	60.7	39.3
India	60.0	40.0
Russia	67.5	32.5
South Korea	70.0	30.0
European Union (excludes UK)	51.0	49.0

Source: Eurostat/ OECD

Raising the image and attractiveness of VET

To attract more students into VET, the policies in these countries combine setting up more vocational schools, opening access to higher education through VET studies and other measures to target groups that do not traditionally participate in training.

By 2010, China will have a national network of 2 000 VET centres, offering practical skills teaching. In 2007, India announced plans to open some 50 000 new skill development centres and 10 000 new vocational schools. India wants around 50 % of its secondary students to go to VET schools by 2010. To address a shortage of skilled workers, particularly technicians, South Korea is transforming a third of its secondary level vocational high schools into specialised high schools targeting specific professions, rather than providing the traditional broader cross-sector training. Debate in Russia continues on how to improve VET schools either by restructuring its network of lower secondary VET schools (closing or upgrading them) or integrating them with upper secondary VET schools

China has increased VET in universities. Enrolment in university level VET courses by Chinese students rose from 2.9 million in 2000 to 5.9 million in 2004. China's vocational education for university graduates also supports young people wanting to start their own business. India, currently, has limited possibilities for VET graduates to go on to higher education which remains mostly academic. But it plans to open 1 600 new industrial training institutes and polytechnics. Russia is exploring ways to strengthen links between upper secondary VET schools and higher education. South Korea is establishing four-year vocational colleges that offer bachelors degrees and is increasing the number of adult learners in junior colleges and universities.

As well as attracting talent in VET through possibilities of higher education, China and India are improving access to VET for all. Several key Chinese industries, located mainly in costal areas, depend on unskilled migrant workers from the countryside. VET programmes are provided in rural areas to improve access to training for young people who live there. This aims to meet growing demand for skilled workers in industrial zones and encourage investment in rural areas through the availability of skilled labour. To encourage participation in VET schools, grants are available to young people from poor families.

India is using targeted VET courses to address gender inequality and social imbalances. Community colleges, the main provider of VET for those in the labour market, offer courses for the unskilled and the poor, especially those who left school with just a basic education. Course content is adjusted to the needs of local and regional economies.

South Korea's 2007-11 lifelong vocational skills development plan aims to increase participation by adults in VET. To reach workers in small and medium-sized enterprises (SMEs), the government provides funds for them to become 'learning organizations'. SMEs are also encouraged to join VET consortiums (comprising large enterprises, employer associations, VET institutions and universities) that can organise training for SME employees.

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Although formal training opportunities are on the increase in all four countries, recognition of prior learning as a means to attract more people into VET and open up career paths and qualification levels is largely peripheral. Plenty of training, particularly for adults, takes place in enterprises but is not certified. Trust and confidence in processes for validating prior learning is low.

But efforts are being made to improve certification procedures and standards. China has country-wide network of certification centres. India also is trying to develop recognition of prior learning. A scheme to test and certify informally acquired skills has been introduced and covers 17 of 28 Indian states. By 2007, India had developed competence standards for 46 skill areas.

Making training more relevant

In 2005, China made alignment of VET schools to labour market needs a strategic priority. Curricula and teaching methods are being adapted to the needs of economic sectors. To meet labour market needs India plans to develop a national curriculum framework that makes work-based pedagogy central. In South Korea, teaching of basic skills, comprehension, numeracy and teamwork at vocational high schools is being strengthened, partly in response to employers' criticisms.

In all four countries the major stakeholders in VET policy are central government, regional executive bodies and local authorities. The role of social partners is relatively weak, but in some cases this is being addressed.

To bring VET providers and companies together, South Korea encourages vocational schools to create student enterprises to develop skills and raise funds. It also links local industries with the colleges in industrial technology education zones and supports start-up programmes for vocational high schools students. South Korea's contract programme sets up sector networks of enterprises, a vocational high school, and junior college. Students are regarded as sector employees. They graduate from the contract programme at vocational high school and continue at junior college before going on to employment in the respective sector.

Who pays for training?

Although data for the four countries on financing VET are incomplete, it appears that each has substantially increased public funding of initial VET over the last decade. However, with the exception of India, a significant part of the money for initial VET comes from private pockets, primarily from tuition fees, but also donations and income generating activities such as sales of school workshop products.

In China, public funding for initial VET is between 50 % and 60 % of the total cost. In Russia it is around 60 % (up from 30 % in 2000). In South Korea, around 60 % of the budget for initial VET comes from private sources. Government funding varies according to school type. In China, for example, public funding covers only around 30 % of the total costs for adults at university. In Russia, and South Korea VET students in higher education have to meet a much larger proportion of the costs than those in secondary vocational schools.

In South Korea, since the late 1990s, all employers are obliged to pay a levy to the 'vocational competence development fund'. The amount varies according to the size of the firm (0.1 % of total payroll for companies with less than 10 employees, 0.7 % for those with more than 300). The fund, managed by the government, is the main source of funding for initial and continuing training, spending around $1 billion US dollars a year. However, the levy is surrounded by debate over its management, the rates charged and the distribution of the cash.

In India, the picture is less clear, although it appears that the lion's share of the funding for initial VET comes from central government, supplemented by contributions from the states.

Identification and anticipation of skill needs

All four countries forecast general human resource needs using various data sources. However, there is a lack of systematic forecasting approaches that combine quantitative and qualitative data. This limits the ability to analyse relationships between rapid technological development and emerging skill needs. Rarely are forecasting activities linked with developing curriculum and profiles.

In China, employment offices provide quantitative data, such as job vacancies, to forecast labour

market demand. Data for urban areas are relatively reliable, but those from rural areas are often incomplete. India's Planning Commission conducts or commissions surveys on human resources development, qualifications, employment and skill formation. India's national technical manpower information system conducts short- and long-term skill needs in various sectors. It also evaluates and forecasts demand and supply shortages of technical skills at the states level. District vocational surveys are also conducted to identify vocational courses suited to local needs. However, often survey results are not fed into the planning procedures for vocational courses.

South Korea has few mechanisms for identifying and anticipating labour market demand. Research institutes conduct annual studies on labour needs, economic growth and unemployment to predict labour demand for the next two years. Skill and qualification demand are determined through sample surveys of enterprises.

In Russia, skill forecasting is carried out at regional and local levels. It is highly dispersed, lacking a national institutional framework. An additional difficulty in Russia is that most labour market forecasts are based on quantitative data. Improving forecasting is a priority.

Similarities and differences with European VET policy

Despite the progress made in VET reform in China, India, Russia and South Korea, these countries remain behind those in the EU. Reforms introduced so far appear to have had only limited success.

Recent years have not seen substantial increases in the proportion of students going into VET in any of these countries. Some evidence points that opportunities to switch between learning pathways have encouraged young people to move from vocational to general education.

In South Korea the proportion of VET high school students fell from 38 % in 2000 to 35 % in 2004. India has also struggled to increase the proportion of students enrolling in VET courses. In numerical terms, China has had some success with enrolment in vocational schools rising from 11.1 million in 2001 to 14 million in 2004. In Russia, falls in enrolment in lower secondary level VET, which is regarded as being for the socially underprivileged, are offset by increases in upper secondary level VET which has a better reputation.

Many policies that China, India, Russia and South Korea are trying to implement are already used in Europe. They are addressing issues familiar to EU Member States reforming their own VET systems ([2]), in particular integrating general and vocational education in ways to ensure parity of esteem.

However, despite only limited progress, the changes China, India, Russia and South Korea are making to their VET systems are far-reaching and substantial. VET is being used not only to raise skills generally, but to address the negative impacts of poor product quality, reduce energy consumption and work accidents, and improve innovation.

Despite the current economic crisis, the long-term growth potential of these four countries remains high. Significantly, it appears that they have recognised the key role of VET in sustaining their development as their economies become increasingly dependant on secondary and tertiary sector activities, as well as more sophisticated production systems, supply chains and products.

Developments in emerging economies make a strong case for continuing VET reform in Europe.

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([2]) Consolidation, continuity and change, Cedefop 2009 http://www.cedefop.europa.eu/etv/Information_resources/Bookshop/publication_details.asp?pub_id=528

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