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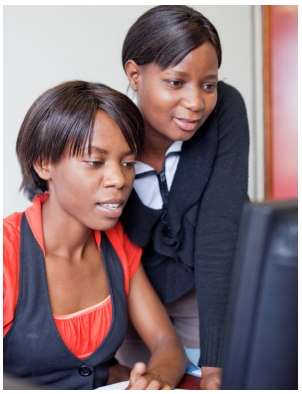


June 2012

The world at work: Jobs, pay, and skills for 3.5 billion people

The McKinsey Global Institute

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The world at work: Jobs, pay, and skills for 3.5 billion people

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1.1 billion
non-farm jobs created—
84% in developing economies
245 million
increase of college graduates
in the labor force
40%
share that foreign-born workers
contributed to labor force growth
in advanced economies
1 in 5
new non-farm jobs in
developing economies
associated with exports
(2000–10)
75 million
unemployed young workers
(15 to 24 years old) in 2010
A global labor market
emerges (1980–2010)


3.5 billion
projected 2030 global labor force, up from 2.9 billion today
38 million–40 million
potential shortage of college-educated workers in 2020
60%
share of India, other South Asian nations, and Africa in global labor force growth
45 million
potential shortage of workers with secondary education qualified to work in labor-intensive manufacturing and services in developing economies
360 million
additional older people who are not part of the global labor force by 2030
... and market challenges intensify (2010–30)

Executive summary

In the past three decades, technology and globalization have reshaped economies around the world, unleashing sweeping changes in markets and sectors. In the process, a global labor market began to take shape, bringing tremendous benefits—as well as dislocations and challenges. The most striking benefit has been the creation of 900 million non-farm jobs in developing countries, helping lift hundreds of millions of people out of poverty. During this time, advanced economies were able to raise productivity by investing in technology and tapping new sources of low-cost labor, while creating new high-wage jobs for high-skill workers.

Strains in this global labor market are becoming increasingly apparent—especially in the aftermath of the "Great Recession." Joblessness remains high, and there are expanding pools of the long-term unemployed and other workers with very poor employment prospects; youth unemployment is approaching crisis proportions. And, even as less-skilled workers struggle with unemployment and stagnating wages, employers face growing shortages of the types of high-skill workers who are needed to raise productivity and drive GDP growth. Jobs and income inequality have become grave political and economic concerns.

In this report by the McKinsey Global Institute, we identify forces of demand and supply that are shaping a global labor force that will grow to 3.5 billion by 2030. We document these shifts and analyze the implications for workers, national economies, and businesses. We conclude that the forces that have caused imbalances in advanced economies in recent years will grow stronger and that similar mismatches between the skills that workers can offer and what employers need will appear in developing economies, too.

If these trends persist—and absent a massive global effort to improve worker skills, they are likely to do so—there will be far too few workers with the advanced skills needed to drive a high-productivity economy and far too few job opportunities for low-skill workers. Developing economies could have too few medium-skill workers to fuel further growth of labor-intensive sectors and far too many workers who lack the education and training to escape low-productivity, low-income work.

These potential imbalances are based on our "momentum" case, which uses current patterns in demographics and in the demand and supply of labor to project likely outcomes in the next two decades. In this analysis, we use educational attainment as a proxy for skills because education data are available across most nations, but we acknowledge that this is a rough measure—the quality of formal education varies across countries, and training through apprenticeship can be more important than formal education in many occupations.[1] We also note that the market can at least partially correct

1 The Organisation for Economic Co-operation and Development (OECD) is developing a survey method to determine skill levels of populations more precisely. See *Better skills, better jobs, better lives: A strategic approach to skills policies*, OECD Publishing, May 2012.

imbalances through changes in supply, demand, and wages, which would reduce potential gaps.

However, analyzing these nominal gaps indicates where potential problems may arise (e.g., where it may be extremely difficult to hire graduate engineers to staff an R&D facility) and provides a framework that policy makers, business leaders, and workers can use to guide their decisions. Moreover, the magnitude of the gaps suggests that "business as usual" market responses will be insufficient to prevent adverse outcomes for millions of workers in advanced and developing economies. A concerted public and private effort will be required on multiple fronts.

The most significant imbalances that would arise in the momentum case include:

- **A potential shortage of about 38 million to 40 million high-skill workers, or 13 percent of demand for such workers.** Based on current patterns of educational attainment and demand growth, employers in advanced economies could face a shortage of 16 million to 18 million college-educated workers in 2020, despite rising college-completion rates. The remaining gap—around 23 million college-educated workers—would appear in China, despite a dramatic rise in educational attainment by 2020 (Exhibit E1).

- **A potential surplus of 90 million to 95 million low-skill workers around the world, or around 10 percent of the supply of such workers.** Labor forces of advanced economies could have as many as 32 to 35 million more workers without college education than employers will need. In India and younger developing countries, there could be as many as 58 million surplus low-skill workers in 2020.

- **A potential shortage of nearly 45 million medium-skill workers in developing economies, or about 15 percent of the demand for such workers.** Industrialization will raise demand for workers with secondary education and vocational training in India and the developing economies of South Asia and Africa. But because of low rates of high school enrollment and completion, India could have 13 million too few such workers; younger developing economies could have 31 million too few.

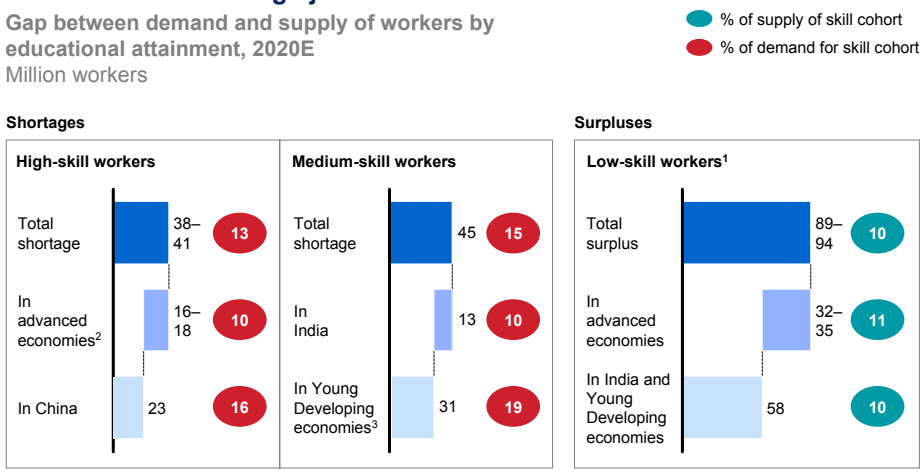
For advanced economies, such imbalances would likely lead to more long-term and permanent joblessness. More young people without post-secondary training would fail to get a start in the job market and older workers would drop out because they don't qualify for jobs that are being created. The polarization of incomes between high- and low-skill workers could become even more pronounced, slowing the advance in national living standards, and increasing public-sector burdens and social tensions. In some advanced economies, less-skilled workers could very well grow up poorer than their parents, in real terms.

In China, India, and other developing economies, the impact of potential imbalances would be felt in different ways. An inadequate supply of highly educated workers could slow China's climb into higher value-added industries and hinder the productivity gains that are increasingly important to its growth. India's problems will be different—the projected surplus of low-skill workers would imply millions trapped in subsistence agriculture or in urban poverty. This picture could be mirrored in other South Asian economies and in sub-Saharan Africa.

Exhibit E1

In the "momentum" case, the world is likely to have too few high-skill workers and not enough jobs for low-skill workers

Gap between demand and supply of workers by educational attainment, 2020E
Million workers



1 Low-skill defined in advanced economies as no post-secondary education; in developing, low skill is primary education or less.
2 25 countries from the analyzed set of 70 countries, that have GDP per capita greater than US$ 20,000 at 2005 purchasing power parity (PPP) levels in 2010.
3 11 countries from the analyzed set of 70 countries, from South Asia and sub-Saharan Africa, with GDP per capita less than $3,000 at 2005 PPP levels in 2010.

SOURCE: McKinsey Global Institute analysis

For the global labor market to continue to deliver benefits to all workers, employers, and national economies over the next 30 years, these imbalances must be avoided—and "business as usual" market solutions alone are not likely to be sufficient. Decisive action by policy makers and businesses will be required on multiple fronts.

We estimate that advanced economies could avoid a shortage of high-skill workers by doubling the growth rate in tertiary education attainment (while also raising the share of graduates in science, engineering, and other technical fields), retraining mid-career workers, and allowing more high-skill workers to immigrate. In addition, many nations can narrow the skill gap by raising the labor force participation rate of college-educated women and keeping older high-skill workers in the labor force. Even these measures, however, could leave 20 to 23 million workers in advanced economies without the skills that employers will need in 2020. To employ them, the rate of job creation for low-skill workers in advanced economies would need to be at least five times higher than in the past.

The challenge in developing nations could be even more daunting. If current trends persist, in 2020 there could be one billion workers in the global labor pool who lack secondary education. Hundreds of millions of working adults without job-relevant skills would need training; India alone has 340 million such workers, half of them with virtually no schooling. Capacity of high schools and vocational schools would have to grow at two to three times the current rates. Developing economies would also need to double or triple labor-intensive exports and investment in infrastructure and housing construction to employ low-skill workers.

A GLOBAL LABOR MARKET EMERGES

From 1980 to 2010, the number of workers in the world rose by 1.2 billion, to approximately 2.9 billion. Most of this growth was in developing economies, where a massive "farm-to-factory" shift also took place that raised non-farm jobs from 54 percent of global employment in 1980 to nearly 70 percent in 2010

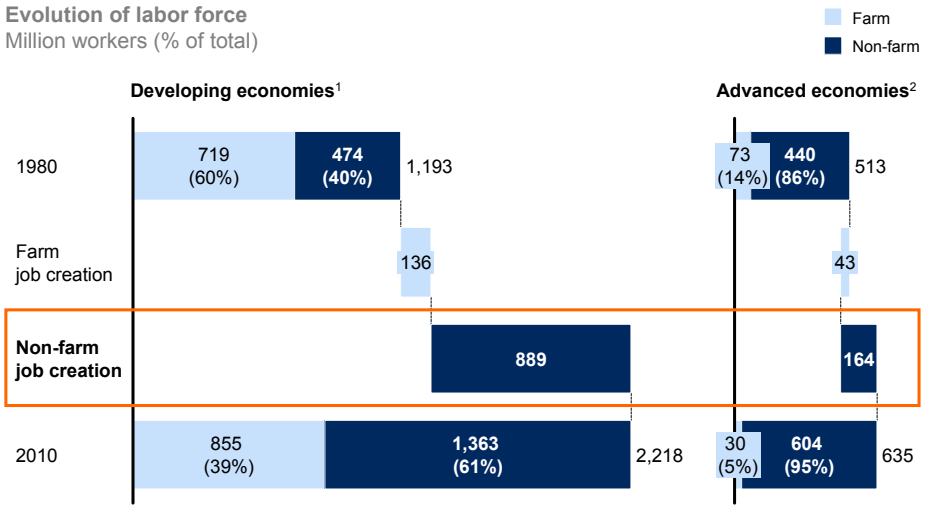
(Exhibit E2). This shift not only drove the growth of national economies in China, India, and other developing countries, but also contributed to the exit from poverty of an estimated 620 million people worldwide in the past 20 years.[2]

We estimate that at least one-fifth of non-farm jobs created in developing countries in the past decade were associated with rising exports, in effect bringing 85 million workers directly into the global economy. Also adding to this pool are immigrants from developing economies, who contributed an estimated 40 percent of labor force growth in advanced economies in the past three decades. In recent years, more of these workers have arrived with advanced skills: by 2008, foreign-born workers accounted for 17 percent of all employment in STEM (science, technology, engineering, and math) occupations in the United States.

To understand how economies are positioned in the emerging global labor market and how their labor forces are likely to evolve, we analyze 70 countries that generate 96 percent of global GDP and are home to 87 percent of the world's population. We plot median age, average educational attainment, and GDP per capita—parameters that indicate the quality and productivity of labor supply as well as its potential to expand. The 70 nations fall into eight clusters with common attributes: four in the developing economies (including China and India, which are their own clusters); three in advanced economies; and the Eastern European nations of the former Soviet bloc (Exhibit E3). Examining clusters, we can see, for example, that "Aging advanced" economies score highly in GDP per capita and educational attainment. But they have the oldest populations, which will make it difficult for them to increase the supply of high-skill talent from domestic sources. In this report we discuss potential gaps on a cluster basis; additional research is required to estimate country-level imbalances (e.g., how aging would affect supplies of high-skill workers in Germany, a member of the "Aging advanced" cluster).

Exhibit E2

1.1 billion non-farm jobs were created worldwide in the past 30 years



1 Includes 45 countries with GDP per capita less than $20,000 at 2005 PPP levels in 2010.
2 Includes 25 countries GDP per capita greater than $20,000 at 2005 PPP levels in 2010.
NOTE: Numbers may not sum due to rounding.
SOURCE: United Nations Population Division (2010 revision); ILO Key Indicator of Labor Market index; local statistics for China and India; McKinsey Global Institute analysis

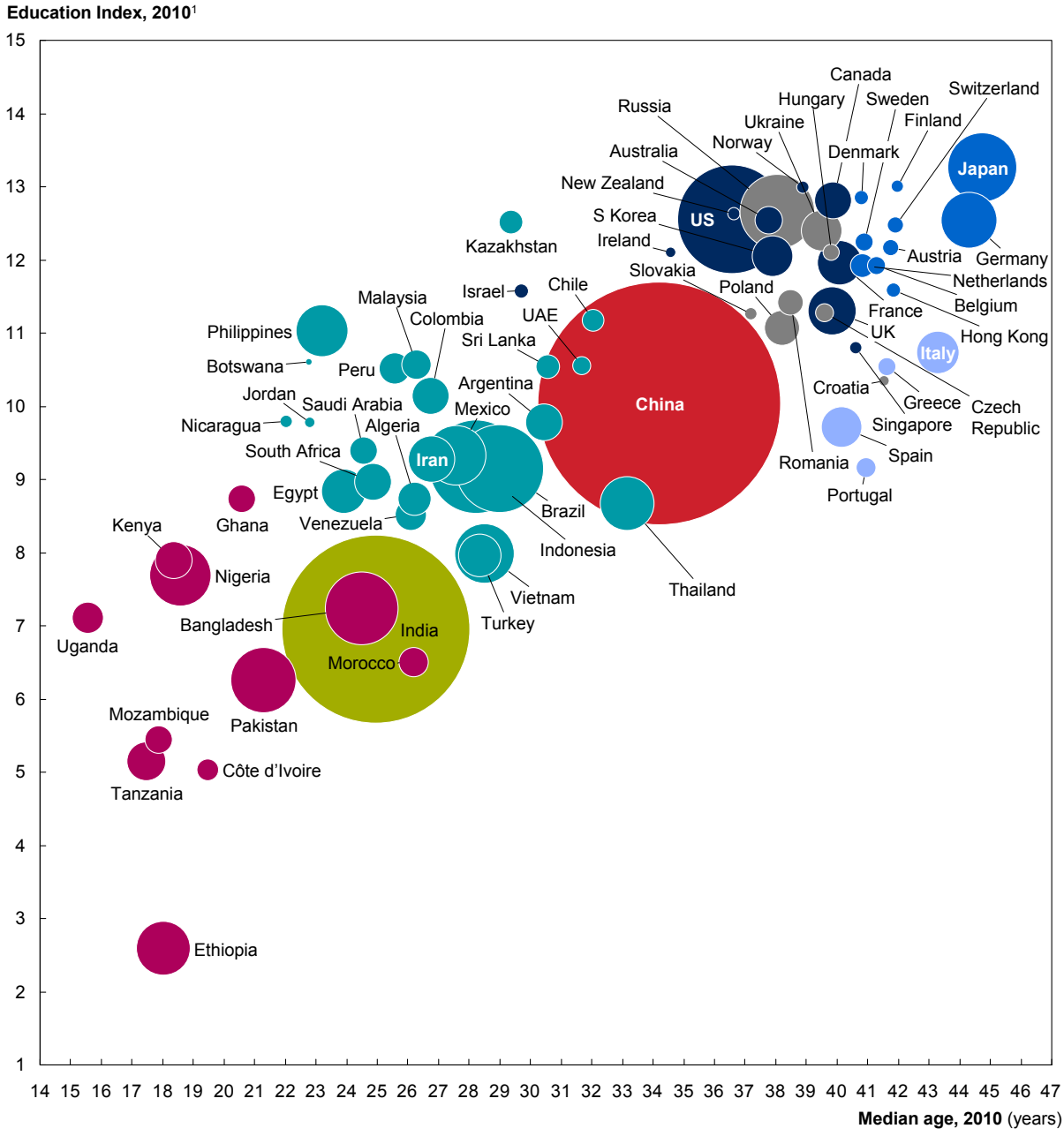
2 Based on the World Bank's definition: less than $1.25 per day at 2005 purchasing power parity (PPP) levels.

Exhibit E3

Global labor markets fall into eight clusters, each distinctly positioned in terms of age profile and educational attainment

Size of circle represents total size of the labor force of the country in 2010

Cluster	Young Developing	Young Middle-Income	India	China	Young Advanced	Russia & CEE	Southern Europe	Aging Advanced
Workers Million	322	640	469	783	290	141	60	145
GDP per capita $	<3,000[2]	3,000–20,000[3]	3,000	7,000	25,000–50,000[4]	10,000–20,000[5]	20,000–30,000	30,000–45,000



1 Calculated based on attainment levels of working-age population, and relative weights for each attainment level—4 for no education, 6 for primary, 12 for secondary, and 16 tertiary.
2 With the exception of Morocco (GDP per capita of $7,100).
3 With the exception of UAE (GDP per capita of $28,500).
4 With the exception of South Korea (GDP per capita of $23,500).
5 With the exception of Czech Republic (GDP per capita of $22,300) and Ukraine (GDP per capita of $6,000).
NOTE: All money data in this report is expressed in US dollars ($) and at 2005 purchasing power parity (PPP) levels; for more detail on methodology for clusters, please see the appendix.
SOURCE: United Nations Population Division (2010 revision); ILO; IIASA; McKinsey Global Institute analysis

Developing economies: riding a rising demographic tide

With large and rapidly growing populations and increasing access to global markets, developing economies became the world's largest suppliers of low-skill labor. These workers filled rising domestic needs as their countries industrialized and helped meet demand from the global economy, too.

China added 121 million non-farm jobs in its expanding manufacturing and service sectors in the past decade; more than 80 million of these were filled by workers shifting out of low-productivity agriculture, helping accelerate productivity gains. About 33 million jobs were created in manufacturing, and about a third of all new non-farm jobs were associated with exporting industries. China's focus, since the 1950s and 1960s, on educating both rural and urban workers across the nation, was reflected in the secondary education attainment rate of 60 percent in 2010. The result has been a dramatic increase in per capita GDP, which rose to 20 percent of advanced economy levels in 2010, from 3 percent in 1980.

India followed a similar path, but at a slower pace. In the 2000–10 decade, for example, India created just 67 million non-farm jobs, which was enough to keep pace with labor force growth, but not sufficient for more workers to move out of agriculture into more productive jobs. Indeed, while the share of farm jobs fell from 62 percent in 2000 to 53 percent in 2010, the number of farm workers remained steady at about 240 million. Also, India lags behind China in creation of higher value-added manufacturing and export-oriented jobs: 41 percent of India's job creation in the past decade was in low-skill construction, compared with 16 percent in China. And, while India rivals China in tertiary education attainment, the share of people with secondary school education is only about one-third the ratio in China, which could lead to a shortage of medium-skill workers for expanding labor-intensive industries.

The farm-to-factory transition also has played out in places such as Vietnam, a member of the "Young middle-income" cluster, which created 12 million non-farm jobs and reduced agricultural employment from two-thirds of all jobs in 2000 to half in 2010. The Philippines, another member of the cluster, created 3.5 million service sector jobs between 2000 and 2010, many of them in IT and IT-enabled services, thanks to its relatively high level of educational attainment. Countries in the Middle East and North Africa region (MENA), on the other hand, also rapidly increased tertiary attainment rates, but did not create enough high-quality service jobs. In Egypt, for example, five million students graduated from colleges between 1995 and 2006, but the economy created only 1.8 million jobs in skill-intensive service sectors.

The "Young developing" countries of South Asia and sub-Saharan Africa continue to benefit from a demographic dividend: their labor forces expanded by 2.9 percent annually from 1990 to 2010, reaching 322 million in 2010, and they have raised educational attainment. Countries like Bangladesh and Nigeria could be well positioned to take on more of the world's labor-intensive work as costs rise in China and India.

Advanced economies: High skills and high productivity to sustain growth

In response to slowing labor force growth and rising global competition, advanced economies have focused on raising productivity, often by adopting labor-saving technologies. From 1977 to 2007, manufacturing employment in advanced economies declined by 20 million, with the greatest losses in labor-intensive sectors such as textiles, leather, footwear, and wood products. Even economies like Germany that have remained major exporters of manufactured goods, saw total manufacturing employment shrink by more than 25 percent, despite their growing strength in knowledge-intensive manufacturing, which includes sectors such as chemicals, transport equipment, and advanced manufacturing (requiring a relatively small number of high-skill workers to program and run factory machines).

Across advanced economies, hiring has been strongest in services, particularly knowledge-intensive sectors such as finance and business services. Jobs also grew in labor-intensive sectors such as construction, retail trade and hospitality, and public services. Hiring rose rapidly in so-called interaction work, which requires face-to-face contact and includes the professions and business management. About half of interaction jobs require college degrees. Hiring was weakest in low-skill production and transaction occupations (assembly workers or customer service representatives), where tasks could be automated or transferred to low-cost locations.

Growing strains

In the wake of the "Great Recession," the deteriorating position of low- and medium-skill workers has raised concerns about income inequality across advanced economies. However, the growing polarization of income that is so apparent today reflects a long decline in the role of low- and medium-skill labor (workers with just high school education or some post-secondary schooling at most). Such workers were once essential to the growth of advanced economies. But since the late 1970s, companies have come to rely increasingly on investments in labor-saving machinery and information technology to raise productivity. They have also invested in R&D and knowledge workers to help drive innovation. As a result, demand for the kinds of workers who make up three-quarters of the labor force has fallen—and, along with it, the share of national income that goes to workers. After rising steadily from 1950 to 1975, labor's share of income in advanced economies fell from the 1980s onward, and now stands below the 1950 level.

High-skill workers (those with college degrees) remained in high demand and saw their wages rise—by about 1.1 percent a year in real terms in the United States, while wages declined slightly in real terms for workers who did not complete high school. Over 30 years, this has led to a widening gap between incomes of college-educated workers and workers with lower skills: the average college graduate earned 2.8 times the wage of an average high school dropout in 2008, up from a premium of 1.7 times in 1980. Even within college graduates, higher demand for certain specializations has driven wage concentration. For example, in the United States, the average STEM major earns $500,000 more (in discounted lifetime earnings) than the average non-STEM major.

The weakened position of low-skill labor is reflected in employment figures: in most advanced economies, unemployment rates for the least-skilled are two to four times those of the most highly skilled workers, whether the economy is in recession or recovery. The effects of falling demand for low-skill labor have been especially harsh for younger workers. Today, 75 million young people (aged 15 to 24) who are not in school or college are unemployed, accounting for 38 percent of the world's unemployed.[3] Youth unemployment has been high in developing economies as well. Across the MENA nations, youth unemployment consistently averaged 25 percent from the early 1990s through 2010. Left unaddressed, the youth unemployment problem could leave many advanced economies with a "lost generation" of workers.

POTENTIAL GAPS: TOO FEW HIGH-SKILL WORKERS AND NOT ENOUGH JOBS FOR MEDIUM- AND LOW-SKILL WORKERS

The most important trend shaping the global labor supply in the next two decades will be slower growth. New workers will enter at a slower rate, and older workers will leave in higher numbers. The overall effect will be to reduce the annual growth rate of the global labor force from about 1.4 percent annually between 1990 and 2010 to about 1 percent to 2030. China's labor force growth will likely drop by almost half, to just 0.5 percent annually—in "Aging advanced" economies, labor forces will shrink and will likely be flat in Southern Europe. Among the advanced economy clusters, only the "Young advanced" will grow its labor force, but only at about 0.6 percent annually to 2030.

Over the next two decades, China will be replaced by India and the "Young developing" economies of South Asia and Africa as the leading source of new workers in the global market. These nations will supply 60 percent of the more than 600 million net new workers that we project will be added to the global labor supply, bringing the total global labor force to 3.5 billion in 2030 (Exhibit E4). While China will be eclipsed as the world's major source of low-cost labor, it will assume a new and potentially more important role as the largest supplier of college-educated workers to the global labor force. Between them, China and India will contribute 57 percent of the world's new workers with some college education through 2030.

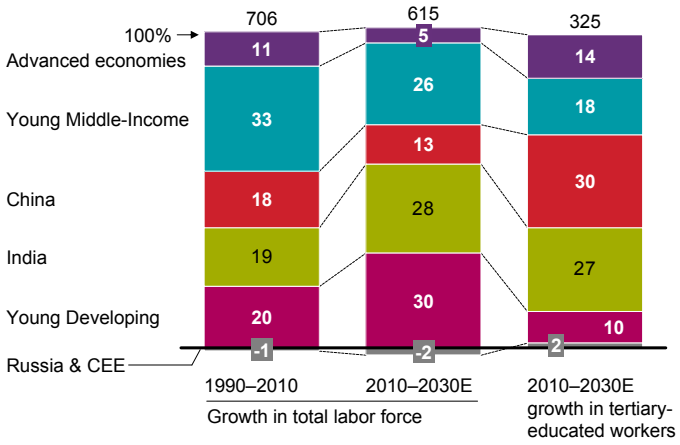
Over the same period we project that the total population of people over 55 who are not in the labor force (including a surge of retirees) could reach 360 million. Some 40 percent of the expected retirees would be in the advanced economies and China, complicating the challenge of filling skill gaps in those nations. Of these retirees, approximately 38 million would be college-educated workers, who will take with them valuable skills. Raising the labor participation rate of workers over 55 and finding ways to keep retirement-age workers employed are obvious ways to narrow potential skill gaps.

3 *Unemployment Statistics*, Eurostat.

Exhibit E4

India, South Asia, and sub-Saharan Africa will add the most workers through 2030; China and India will lead in workers with tertiary education

Net additions to labor force and tertiary-educated workers
%; million workers



1 Includes Young Advanced, Aging Advanced and Southern Europe clusters.
NOTE: Numbers may not sum due to rounding.
SOURCE: United Nations Population Division (2010 revision); International Labor Organization (ILO); Global Insight; Oxford Economics; Economist Intelligence Unit; local statistics for China and India; McKinsey Global Institute analysis

With slow-growing or even shrinking labor forces—and lower labor participation rates, also due to aging—economies will need to accelerate productivity growth. To maintain historical rates of GDP growth, we estimate that the "Aging advanced" economies would need to increase productivity growth by about 60 percent of historical levels, to about 1.9 percent annually. The Southern Europe cluster will face an even steeper challenge: these economies would need to double their 0.7 percent rate of productivity growth of the past 20 years to sustain growth in GDP per capita. To bring the productivity target down to a more easily achievable range and still sustain GDP growth, countries can also raise labor force participation rates, particularly those of prime working-age women and older workers.

In any case, advanced economies would still need to push hard for higher productivity improvements, which will require rapid expansion in highly knowledge-intensive sectors of the economy, such as advanced manufacturing, health care, and business services. This, in turn, would depend on access to high-skill workers—which, at current growth rates of supply, may lag behind demand. We project that by 2020, advanced economies could have about 16 million to 18 million too few workers with tertiary degrees, or about 10 percent of their demand.

Even China, despite its "skill dividend," will likely struggle to keep up, as its supply of tertiary-educated workers will be constrained by slow growth in the supply of secondary school graduates who will qualify for university training. Meanwhile, rapid job growth in services sectors and knowledge-intensive manufacturing will increase demand for high-skill workers. China could end up with 23 million fewer workers with a tertiary education than it will likely require in 2020, or about 16 percent of demand.

At the same time, advanced economies would also experience rising surpluses of workers with less education and increasingly limited employment opportunities At current rates of educational attainment and labor force growth, we project that there could be 32 million to 35 million more workers with only secondary education than employers will demand in 2020, equivalent to an 11 percent oversupply.

In developing countries, if patterns of educational attainment and job creation do not change, the demographic advantages (young and rapidly growing populations) that have helped many of these nations prosper could become an economic and political burden. Based on current population and education trends, India could have 27 million too many low-skill workers, who would likely be trapped in low-productivity, low-income work. “Young developing” economies could have 31 million similarly positioned low-skill workers. Meanwhile, India and “Young developing” economies could have 45 million too few workers with secondary school education.

A GLOBAL AGENDA FOR JOBS AND SKILLS

The imbalances we project in our momentum case would have undesirable implications for the global economy. Unemployment of low-skill workers would continue to rise and global growth rates would fall if high-skill jobs were to go unfilled. Wages could respond to imbalances in demand and supply by polarizing further, leading to greater income inequality. Patterns of migration and trade flows could adjust to address labor shortages and surpluses across regions. But given the volumes of low- and medium-skill workers that would need to be employed, and rising resistance to immigration in some nations, these adjustments could have limited impact.

To create better outcomes for workers and economies, policy makers and business leaders across the globe will need to find ways to vastly improve the capacity to provide job-relevant education and training. And, in both developing and advanced economies, new approaches to job creation for low- and middle-skill workers will be required.

We estimate that advanced economies will need to raise the number of young people completing tertiary education 2.5 times as quickly as they are currently doing. They will also need to guide more students to job-relevant training (in the United States, for example, only 14 percent of college degrees awarded are in STEM fields). India and the “Young developing” economies will need to catch up in secondary and vocational education and find ways to retrain hundreds of millions of adults who have little or no formal education and job skills. To meet government targets of secondary school graduation rates, India would need to add 34 million secondary school seats, to reach 82 million school seats by 2016, and hire twice the number of secondary school teachers every year.

Such goals cannot be met by conventional methods alone. Recasting the global labor force to align with future demand will require deep and wide innovations to improve the capacity, reach, and delivery of educational and company training systems. This will require new ways of teaching, collaboration with industry to craft curricula to employer needs, and new ways of building schools and training teachers.

From rural schools in India to the top universities in advanced countries, technology can be used to extend the capacity of schools and teachers. Even now, teachers in parts of India are reaching low-income students through DVD-based lessons, and top US professors are giving classes to hundreds of thousands of students per semester, rather than hundreds, through online systems. The need for innovation is high and will require more resources than governments alone can provide: private industry, private investors, and the social sector also will need to help.

Even with these steps, the shortages we project would not disappear entirely. Both advanced and developing economies will also need to consider steps to raise demand for less-skilled workers. In advanced economies there are opportunities to create new jobs for low- and middle-skill workers in service sectors, including in the fast-growing health care industry and through "marketization" of home services such as child care and elder care (turning a segment of the informal economy into an industry, with full-time employment, training, benefits, even career advancement). In some places, regulatory reform may help enable job creation for less-skilled workers, for example, by relaxing restrictions on retail trade. Additional responses to long- and short-term unemployment may also be required, including measures like Germany's job-sharing program, which provides a subsidy that allows employers to avoid mass layoffs by keeping workers on at reduced hours.

Developing economies can create demand for less educated workers by encouraging the expansion of labor-intensive sectors. By moving up the value chain—from supplying raw food or raw materials and intermediates to processed food and finished goods—economies create more jobs. By scaling up its garment manufacturing sector, Bangladesh, for example, created employment opportunities for millions of low-skill women, many of whom had never worked in the formal economy before. Government can also help create jobs in the manufacturing and construction sectors by reducing the regulatory barriers that inhibit new enterprises and infrastructure development.

For businesses operating in a global knowledge economy, an immediate priority is to develop a deeper understanding of how labor markets and skill pools are evolving in different countries to inform global recruiting and supply chain strategies. Businesses should also consider how to play an active role in public education and training. For example, IT companies in India actively shape college curricula and delivery, to ensure better access to skills. Some businesses could choose to participate directly in the booming education sector, as providers of vocational training for example. Longer term, businesses in a skill-scarce world would need to optimize demand for skilled workers, by investing in skill-saving technologies such as knowledge codification systems and smart devices that raise productivity even of low-skill workers. Finally, given the urgency of resolving unemployment and inequality problems, businesses should consider aligning their corporate social responsibility efforts to labor priorities in their communities.

□ □ □

Throughout the 20th century, industrialization, innovation, and advances in technology resulted in record wealth creation and improving living standards—a rising tide that globalization shared with the developing world. Work itself evolved: it took less human effort to raise food and build things. But it now takes greater knowledge to innovate and continue to raise productivity. As the 21st century unfolds, the supply of high-skill workers is not keeping up with growing demand, while too many workers are left with inadequate or outdated skills. Slower growth, rising income polarization, growing pools of unemployed or under-employed workers, and soaring social costs are real possibilities. To keep those possibilities from becoming realities, policy makers, business leaders, and workers themselves must find ways to bring education, training, and job creation into the 21st century.

Related McKinsey Global Institute publications

French employment 2020: Five priorities for action (March 2012)

France's labor market has been relatively resilient in the face of the global financial crisis of 2008 and 2009 and of the sovereign-debt crisis, which gathered full force in 2011. But unemployment has begun to rise again. To reverse this decline in work, the report finds that to meet even moderate ambitions for employment and prosperity, France must create more than twice as many net new jobs annually as it did during the past 20 years.

Help wanted: The future of work in advanced economies (January 2012)

Some 40 million workers across advanced economies are unemployed. With many nations still facing weak demand, hiring has been restrained. To help develop appropriate new responses, MGI examines five trends that are influencing employment levels and shaping how work is done and jobs are created: technology and the changing nature of work; skill mismatches; geographic mismatches; untapped talent; and disparity in income growth.

An economy that works: Job creation and America's future (June 2011)

For the United States to return to the employment level before the 2008 recession – finding work for the currently unemployed and accommodating new entrants into the labor force this decade – the US economy will need to create 21 million jobs by 2020, according to MGI's analysis. The report analyzes the causes of slow job creation in the period before the recession and during the recovery, and the implications of these forces for job growth.

Growth and renewal in the United States: Retooling America's economic engine (February 2011)

As baby boomers retire and the female labor participation rate plateaus, increases in the workforce will no longer provide the lift to US growth that they once did. To match the GDP growth of the past 20 years, US labor productivity growth needs to grow from 1.7 percent a year to 2.3 percent. That's an acceleration of 34 percent to a rate not seen since the 1960s.

Beyond austerity: A path to economic growth and renewal in Europe (October 2010)

Europe faces pressures on GDP growth at a time when scope to stimulate growth from public funds is limited by high debt and deficit levels. The threat to growth is unlikely to dissipate soon, and significant imbalances in labor costs and current account positions between European economies intensify the strain. This report sets out a detailed agenda for European structural reform based on analysis of existing best practice within the region.

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