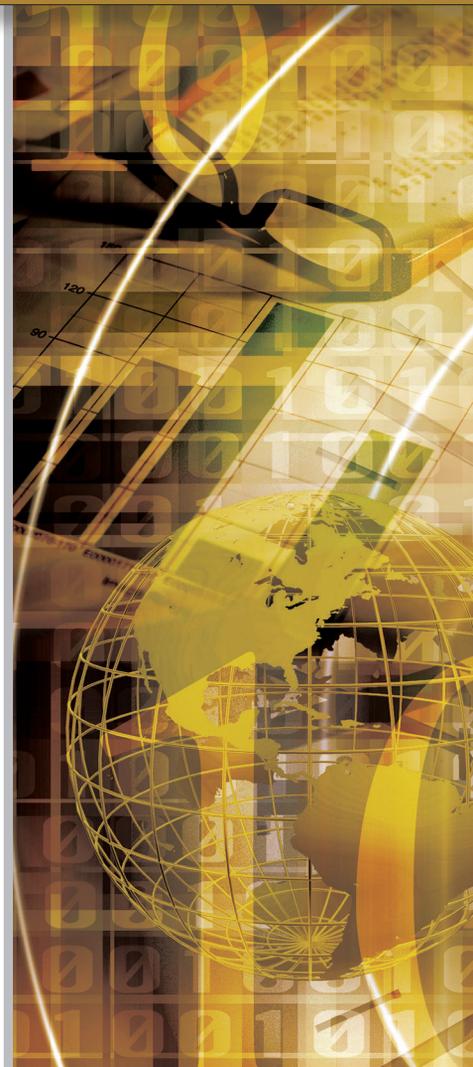


# Facts That Will Shape the Global Business Environment

10 facts on a wide range of topics that will change  
how countries and companies do business





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## The World's Exploding Middle Class

1. Middle class is hard to define and varies with different countries. But it usually means a household that has money left over from daily needs to start saving for education, sickness or old age, or to buy consumer goods such as televisions, bicycles, cars or refrigerators. For obvious reasons, it means calculating income on the basis of purchasing power parity (PPP) rather than in exchange-rate dollars. One of the best-known definitions is that of Homi Kharas, in a seminal paper he wrote for the OECD in which he suggests that middle class are households with daily incomes of \$10 to \$100. The lower sum is roughly the official poverty line in Italy.
  2. Under this measure, there are currently 1,800 million people in the global middle class, about 24 percent of the world's population. Between them, they spend \$21 trillion per year, well beyond a third of global GDP.
  3. Of these, 338 million (18 percent) are in North America and account for 26 percent of global middle class consumption. During the next 10 years, that share is likely to drop to 20 percent.
    - 664 million (36 percent) are in Europe, accounting for 38 percent of consumption, likely to drop to 30 percent by 2020
    - 525 million (29 percent) are in Asia, accounting for 23 percent of consumption, likely to rise to 40 percent by 2020
    - 181 million (10 percent) are in Latin America, accounting for 7 percent of consumption, and likely to remain at 7 percent by 2020
    - 105 million (6 percent) are in the Middle East and North Africa, accounting for 4 percent of consumption, and likely to remain at 4 percent in 2020
  4. Using the PPP definition of comparative wealth, Asia is already the world's most significant economic region, with 34 percent of global GDP, compared to 27 percent for Europe and 23 percent for the United States. But with higher growth rates and a larger population, Asia should account for more than 55 percent of global wealth by 2030, most of it being generated and consumed by a much larger middle class. Based on current growth trends, Thailand and Malaysia could have economies larger than that of today's Italy.
2. While the world's population currently has an average annual income per head of around \$8,000, by 2035 it should be more than \$20,000, excluding inflation. During the past 40 years, the size of the global economy has roughly doubled every 20 years, after stripping out inflation.
3. An explosion is about to take place in India and China, where roughly 200 million people reside in the middle class in each country as defined in paragraph one. But each also has hundreds of millions of people just below that current household income threshold of \$3,650 per year. Even if growth slows from current levels of around 8 percent per year to 5 percent, some 300 million more people in each country should acquire middle-class status

by 2020. By 2030, 800 million Indians and 800 million Chinese should have middle class status.

7. Allowing for average size of households, that translates into a potential market for 200 million cars in China and 120 million cars in India during the coming decade, along with similar numbers of potential sales of refrigerators and similar consumer goods. Such mass markets have already emerged in mobile phones, where China now has 700 million subscribers and India almost 500 million.
8. The most dramatic growth in spending of the new middle class will be seen in health care and education. A Deutsche Bank survey of Indian consumption suggests that the share of household spending on these two items will rise from 30 percent today to almost 50 percent by 2025.
9. These are people hungry to consume. Opinion polls in China report 40 percent of people say that shopping is their favorite leisure activity. A 2007 survey of 6,000 Chinese shoppers found they spend an average 9.8 hours per week shopping, compared to 3.6 hours for Americans.
10. The key to the future is not only in annual levels of GDP growth but also in the patterns of income distribution. Brazil, for example, which has some of the world's widest disparities in incomes between rich and poor, struggled to bring more than one third of its population into the middle class and its growth suffered. South Korea, by contrast, grew at similar levels to Brazil through the 1960s to the 1980s. But by 1986, more than 50 percent of South Koreans were middle class, and today that number is 94 percent. Their higher levels of consumption and productivity also explain why South Korea's GDP per capita is approaching \$20,000 per year, double that of Brazil.

## Food

1. With almost 7 billion mouths to feed, and probably more than 9 billion by 2050, total world demand for agricultural products will be more than 60 percent higher in 2030 than it is today, according to Food and Agriculture Organization of the United Nations (FAO) estimates. About half of this increase comes from population growth; the other half reflects the way people tend to eat more meat protein as they become richer.
2. More meat protein does not necessarily mean wasteful use of land. Innovations in animal genetics, nutrition and production methods have revolutionized the efficiency of chicken, pork and beef production. For example, the meat produced per unit of grain feed has increased 40 percent in East Asia since 1990, with a sizeable contribution from the efficient—but sometimes risky—use of food waste.
3. The livestock sector is one of the fastest-growing parts of the world's agricultural economy, according to the FAO. It contributes 40 percent of the global value of agricultural production and supports the livelihoods of almost 1 billion people. Globally, livestock contributes 15 percent of total food energy and 25 percent of dietary protein and it provides essential micronutrients not easily obtained from other plant food products. To meet rising demand, global annual meat production is expected to expand from 228 million tons to 463 million tons by 2050. The cattle population is estimated to grow from 1.5 billion to 2.6 billion and the goat and sheep population from 1.7 billion to 2.7 billion.
4. The world's farmers produce around 2,800 calories per person per day, more than enough to feed the entire human population healthily. But more than 1 billion people today are chronically hungry, up 10 percent since 2007, the FAO says. With just 6 percent of the world's population, the United States, Canada and Australia produce 20 percent of the world's cereals. But U.S. consumers waste 40 percent of the food produced, according to the U.S. Environmental Protection Agency.
5. Americans spend an average of about 6 percent of their income on food, compared to 12 percent for Germans and 20 percent for Poles. Indians and Chinese spend roughly a third of their income on food, Moroccans 40 percent and Azerbaijanis about 50 percent.
6. The world is losing arable land at a rate of about 40,000 square miles per year. That land is being used for biofuel production, topsoil is being eroded away by wind and water, and the agricultural land base is being paved over as we become more urbanized. Farmers will need to produce more food on less land. This means better use of inputs such as water and fertilizer and more productive crops with higher yields per acre. It could also mean a shift in agricultural geography, to exploit underused areas such as Africa's Congo River Basin.
7. Half of the world's cropland is planted in cereals, producing directly and indirectly two-thirds of human calories. The most efficient producers of wheat are British farmers, who achieve more than 80,000 hectograms per hectare, triple Russian yields and double U.S.

yields. U.S. farmers are the most productive in corn, with 96,000 hectograms per hectare, double the British or Chinese and almost triple that of Brazil and Russia. Brazil is the most productive in soy, with 28,000 hectograms per hectare, slightly more than the United States, but 50 percent higher than China and three times that of Russia. If wheat yields in Russia and Ukraine reached European norms and acreage returned to Soviet-era levels, the global harvest would grow by almost 20 percent.

8. Rich countries spent \$265 billion on farm subsidies in 2008, representing more than 20 percent of their farmers' total earnings. Subsidies made up more than three-fifths of farmers' gross incomes in Norway and South Korea between 2006 and 2008. In contrast, they comprised less than 1 percent of farm incomes in New Zealand and less than 10 percent in both Australia and the United States, although the vast U.S. farm sector received \$23.3 billion in subsidies in 2009. The European Union was by far the biggest subsidizer, paying out \$150.4 billion, which amounts to one-third of farmers' incomes. Beef and veal producers in the EU get more than 70 percent of their income from subsidies. A typical cow in the EU gets a subsidy of \$2.20 per day—greater than 1.2 billion of the world's poorest people.
9. The World Health Organization (WHO), the FAO, the European Food Safety Authority (EFSA), the Royal Academy of Sciences, the U.S. National Academy of Sciences, France's National Academy of Medicine, the British

Medical Association and 25 Nobel laureates (including Norman Borlaug) have all concluded that crops from biotechnology are as safe as conventional crops. Genetically modified food has also been consumed across the world, including tomato (China), papaya (United States and China), corn (16 countries), and squash and zucchini (United States).

10. In developing countries as a whole, the average growth in cereal yields has fallen from 3 to 6 percent per year in the 1960s to 1 to 2 percent per year today, according to the World Bank. This partly reflects a decline in public investment. In the 14 countries that depend most on farming, public spending on agriculture has almost halved as a share of total public spending since 1980. Foreign aid for agricultural development currently stands at \$5 billion per year, an inflation-adjusted drop of 75 percent since the 1980s. During the past 25 years, world wheat production increased roughly 28 percent, world wheat use increased roughly 32 percent and world wheat's harvested area decreased 8 percent. Returns per acre for U.S. farmers are now \$160 for wheat, \$400 for soy and \$550 for corn. The U.S. Wheat Associates says that this means wheat prices must rise if supplies are to be maintained.

## Demographics

1. The good news is that the world's population growth is flattening out. The less good news is that the population, at 6.7 billion in 2010, is unlikely to stabilize before 2050. By then, the population will reach 9 billion people, with each person needing to be fed, watered and (with luck) vaccinated.
2. Birthrates are falling almost everywhere and at a staggering pace. (This is measured by the total fertility rate, or TFR, which is the number of children that a woman is likely to have in her fertile years. A stable population needs a TFR of 2.1.) From 1970-1975 through 2000-2005, the TFR in Asia fell by more than half, from 5.08 to 2.47. Over the same period, the TFR almost halved in Latin America, from 5.05 to 2.55. Even in Africa, the TFR fell from 6.72 to 4.97.
3. With few exceptions, the countries still experiencing strong population growth are in Sub-Saharan Africa. Depending on birthrates, Sub-Saharan Africa's current 950 million people are likely to become 2 billion by 2050 and 3 billion by the end of this century. Of the 11 countries with a median age of 23 or younger in 2050, 10 are in Sub-Saharan Africa, the 11th is Afghanistan.
4. The world is aging quickly. In 1998, for the first time, the number of people in the developed world over age 60 outnumbered those under age 15. By 2047, this phenomenon will apply to the whole world. So far, the effects of this aging have been minor. In 1950, 8 percent of the world population was over age 60. By 2007, this proportion had grown to 11 percent, or some 700 million people. By 2050 it will be 22 percent, or 2 billion people, and most female. One in five will be over 80. Today there are nine young people for every person over 65; by 2050, there will be four per person over 65, which will have an impact on pension systems.
5. The middle class in developing countries may be the fastest-growing group of the world's population. While the population is expected to grow by 1 billion by 2020, the global middle class will swell by as many as 1.8 billion, one-third of this in China. Homi Kharas of Washington's Brookings Institution estimates that by 2020, 52 percent of the population will be middle class, up from 30 percent in 2008. (Middle class is a household income between \$3,650 and \$36,500 in PPP.) Can the biosphere adapt to this increased level of consumption?
6. The UN report, "Demographic Policy in Russia," published in April 2008, coined a new word: hyper-mortality. The report says, "mortality in Russia is three to five times higher for men and twice as high for women." This means that the size of the working-age population will fall by up to 1 million people annually by 2025. It also means the end of "the Russian steamroller," the vast manpower reserves that have sustained Russia's military since its Tsarist days.
7. A new division exists between northwest Europe, where birth rates are rising sharply, and southern Europe, where they have continued to decline. In 2008, Germany's

birthrate hit a 17-year high. In Britain, the number of births rose for the fifth year in a row as more children were born in 2007 than in any year since 1980. Britain has started hiring more midwives, tempting early retirees from the profession back to work with a cash bonus of \$6,000. Scotland, whose birth rates are rising 5 percent per year, is reporting “a mini baby boom.” Sweden’s TFR jumped by 8 percent in 2004, from 1.54 to 1.66, and is being sustained. In France, the TFR rose to 2.1 in 2007, its highest level since 1980, despite a steady fall in birthrates among women not born in France.

8. China’s fast-growing middle class will face a massive challenge in caring for its elderly. Whereas 10 percent of Chinese were over age 60 in 2000, by 2050, a third will be 60 and older. Additionally, 30 years of the one-child policy means fewer young people of working age to finance the building tidal wave of elderly people.

	1950	2000	2050
<b>Percent age 0 to 4</b>	13.7	7.6	5.1
<b>Percent age 60-plus</b>	7.7	10.1	31.1

9. Islamic fertility rates across the world are tumbling. Only two Arab countries still maintain high fertility rates: Yemen and the Palestinian territories. Some Arab countries, notably Tunisia, the United Arab Emirates, Bahrain, Kuwait and Lebanon, are now either below or close to the TFR stability level of 2.1. Algeria and Morocco, at 2.4, are dropping fast toward it. Some other Islamic countries are also in population stability or decline,

including Turkey (2.1) and Indonesia (2.2). The most dramatic demographic shift in human history appears to be taking place in Iran. Thirty years ago, the TFR for Iranian women was 6.5. Today, the TFR has fallen from 2.2 in 2000 to below 1.7 in 2007, considerably lower than the TFR of modern Britain.

10. A religious revolution will take place this century as Africa becomes the home of monotheism. By 2050, most of the world’s Christians will live in Africa and by mid-century Africa will be home to as many Muslims as Asia, and far more than inhabit the Middle East. There are currently close to 400 million Muslims in Sub-Saharan Africa, a third in Nigeria, and 150 million in North Africa. There are 250 million Muslims in what is generally known as the Middle East, and more than 700 million in Asia. By 2025, there will be as many Christians in Africa (640 million) as in South America.

## Water

### *“Water is the new oil.”*

— Peter Brabeck-Letmathe, Nestlé

1. Of all the Earth’s water, 97.5 percent is salt and 2.5 percent is fresh. Of that fresh water, about 70 percent is locked in glacial ice and 30 percent in soil, leaving less than 1 percent—.007 percent of the total water on earth—readily accessible for human use. A person can survive one month without food but only five to seven days without water.
2. Seventy percent of the world’s water is used for agriculture, 22 percent for industry and 8 percent for domestic use. Low- and middle-income countries use 82 percent of their water for agriculture, 10 percent for industry and 8 percent for domestic use. High-income countries use 30 percent of their water for agriculture, 59 percent for industry and 11 percent for domestic use. With proper water management, efficient irrigation and recycling, there should be no shortages, but rather a massive challenge of distribution.
3. Freshwater scarcity will affect business operations, argues Jeff Erikson, senior vice president at SustainAbility. Executives who consider locating plants in China are likely to consider more carefully the consequences of rapidly melting Himalayan glaciers in the Tibetan Plateau that feed some of China’s most important rivers. The Yellow River, for example, has dried up repeatedly in recent years. In 2007, the Yellow River Conservancy Commission surveyed more than 8,384 miles of the river and found that 33.8 percent of the river system registered worse than level five, which according to criteria used by the United Nations Environment Program, means it is unfit for drinking, aquaculture, industrial use and even agriculture. In the United States, manufacturers may shift new plants from the increasingly dry Southwest back to the water-rich Great Lakes region. “Water shortage has not been a lens that has been heavily considered in plant siting,” Erikson says. “That will change.”
4. In the past 60 years, there have been 37 incidents in which countries engaged in violence over water disputes, according to a University of Oregon study. But 400 separate international water agreements have been signed, and some, such as the agreement between India and Pakistan regarding water from the Indus River, have endured in spite of wars. In 1967, the Jordanian and Syrian efforts to dam the Jordan River served as a contributing cause of the Six-Day War between Israel and its neighbors. Until the early 1960s, approximately 1.3 billion cubic meters of water flowed along the Jordan River down to the Dead Sea, but today only around 200 million cubic meters flow through. Today, Turkish dams on the upper Euphrates and Tigris Rivers, the source of water for the Mesopotamian basin, pose similar problems for Syria and Iraq. Perhaps the most dangerous development is India’s fear that Chinese water projects in Tibet could reduce the flow of the Brahmaputra River. The Tibetan plateau is Asia’s principal source of water, feeding 10 of its major rivers and providing water for nearly 47 percent of the world’s people. Glaciers in the area, which feed rivers, are melting at unprecedented rates.

5. It takes 1,000 liters (about 264 gallons) of water to grow a kilogram of wheat and 15,000 liters to produce a kilogram of beef. As more people rise out of poverty and into the middle class, meat consumption also rises. It takes about 2,000 liters per day to support the typical vegetarian in Asia or Africa, but about 5,000 liters daily for a carnivore in Europe or the United States. A water footprint, or virtual water, is the amount of water used in the entire production and growth of a specific product. For example, one sheet of paper has a water footprint of 10 liters, one cup of tea has a water footprint of 35 liters, and one microchip has a water footprint of 32 liters.
6. Only 38 percent of the world's population has access to flush toilets. Despite advances in public health, 2.6 billion of the world's people—roughly two in five—lack basic sanitation. Six thousand children die each day, more than 2 million per year, from preventable water-related diseases. Bad water is to blame for 80 percent of illnesses and 30 percent of deaths in the developing world, according to the United Nations. In developing countries, women and girls walk an average of six kilometers (3.73 miles) per day carrying 20 liters of water, according to UNICEF. In rural Africa, women often walk 10 kilometers daily and twice that during the dry season, all while carrying more than 20 kilograms (roughly 45 pounds).
7. Slum dwellers in many developing countries pay far more for water than wealthier people. The well-to-do get government-subsidized water from metered connections while the poor must buy it from trucks. As a result, slumdwellers in Peru's Lomas de Manchay, outside Lima, pay \$3.22 per cubic meter for water, while the affluent apartment dwellers of Lima's Rinconada del Lago pay \$0.45.
8. Producing one liter of bottled water requires three liters of water. One liter goes inside the bottle and two are used in the production process, according to the California-based Pacific Institute. The amount of oil-equivalent energy needed to fill the bottles with water, transport them, chill them and dispose of or recycle them can amount to one-fourth a bottle's volume.
9. One drop of oil can make up to 25 liters of water undrinkable.
10. The average American uses about 575 liters of water per day, with about 60 percent of that used outdoors for activities including watering lawns and washing cars. The average European uses 250 liters of water per day. More than 1 billion people lack adequate water access and use less than 19 liters per day.

## Africa

1. Sub-Saharan Africa has been booming in the past decade, from a woefully low start. In 2007, 23 African economies were growing individually at 5 percent or more. In total, 18 non-oil-producing African countries averaged growth of 5.5 percent between 1995 and 2005. The global recession cut the region's GDP growth rate to 2 percent in 2009, but the World Bank expects a return to 4.5 percent growth in 2010.
2. Gross national income per capita in Sub-Saharan Africa has more than doubled from \$486 in 2000 to \$1,082 in 2008, according to the World Bank's Atlas method, which smoothes out exchange-rate variations by averaging them over three years. Using PPP, income per head in the region has almost doubled, from \$870 in 2000 to \$1,628 in 2008. Inflation in Sub-Saharan Africa decreased from 18 percent in 2000 to approximately 8 percent in 2008.
3. Foreign direct investment has jumped from \$6.8 billion in 2000, to \$17 billion in 2005, to \$29 billion in 2008. Senegal, Burkina Faso, Ruanda and Botswana were among the top 10 business climate reformers in the world in 2007-2008. Productivity in eastern and southern African textile factories is running at 80 to 90 percent of Chinese levels and wages are significantly lower.
4. Chinese commitments to African infrastructure projects rose from less than \$1 billion per year from 2001 to 2003 and around \$1.5 billion per year in 2004 and 2005 to at least \$7 billion in 2006—China's official "Year of Africa." Investment then trailed back to \$4.5 billion in 2007.
5. Mobile phone penetration in Africa reached 40 percent of households in 2009, compared to India's 50 percent. Average monthly revenues per user were \$50.70 in the United States, \$12.70 in Nigeria, \$10.30 in China, \$9.80 in Kenya and \$3.70 in Bangladesh, according to TeleGeography. Africa has been a pioneer of telephone services, including cash transfers, no-fee roaming between Kenya, Uganda and Tanzania, and time discounts that have resulted in a new peak of usage at 1 a.m.
6. Primary school enrollment jumped from 58 percent to 74 percent of children between 2000 and 2008, according to the U.N.'s Millennium Development Goals report. Eighteen countries have reached the goal of full primary enrollment—Madagascar, Malawi, Mauritius, São Tomé and Príncipe, Seychelles, South Africa, Tanzania and the countries of North Africa—and eight more are on track to have full enrollment by 2015. Some countries with school enrollment rates below 50 percent in 1990 improved to more than 70 percent in 2006, including Benin, Ethiopia, Guinea, Malawi, Mauritania, Mozambique and Tanzania. The elimination of enrollment fees and rural school-construction programs help explain the results.
7. Africa's oil output has jumped from 4.4 million barrels per day in 2000 to 6 million in 2009 and a projected 7.4 million in 2014, according to the International Energy Agency.

With new offshore finds in West Africa and onshore development in Uganda, this projection could increase to 8.5 million barrels or more by 2014—or roughly one-quarter of OPEC's output.

8. Africa remains by far the poorest continent, with 64 percent of those employed making less than \$1.25 per day. Output per person employed in 2008 was roughly \$5,000 per year, compared to \$11,000 in East Asia, \$19,000 in North Africa and \$71,000 in the developed world. Because of high birthrates, there were 100 million more Africans living in extreme poverty in 2006 than in 1990.
9. Life expectancy at birth in 2010 is 52 years. Infant mortality for those under 5 years is 145 per 1,000, compared to 35 per 1,000 in North Africa. Two-thirds of the world's 33 million living with HIV/AIDS are in Sub-Saharan Africa, and 60 percent of them are women. Of the world's 1 million malaria deaths in 2006, 95 percent were in this region.
10. In 30 of the world's least-developed countries, almost all located in Sub-Saharan Africa, women still have an average of more than five children. Depending on the future course of birthrates, Sub-Saharan Africa's current 950 million people are likely to become 2 billion by 2050 and 3 billion by the end of the century. By 2050, national populations are expected to more than double in the Democratic Republic of the Congo and Uganda, reaching 147 million and 91 million, respectively. Smaller countries such as Liberia, Niger, Mali, Chad and Burundi are expected to experience growth of 100 to 200 percent. These are the countries with the weakest state institutions, the least amount of infrastructure, the feeblest economies, and thus the poorest health and education systems. They also face daunting problems of environmental degradation—and the lesson from Darfur and the Rwandan genocide is that disaster can follow when population growth strains local environments so badly that people cannot feed themselves.

# China

1. In 2010, China overtook Japan to become the world's second-largest economy, with a GDP of \$5 trillion, compared to \$14.5 trillion in the United States. But in terms of PPP, China's GDP was just a fraction beyond \$8 trillion, or \$6,150 per person, compared to \$48,200 per person in the United States. After a decade of double-digit growth, China's 2010 military budget of \$78 billion is the world's second-largest after the United States, but it excludes pensions, foreign arms purchases, technology, space research and other items that Western observers say conceal a real budget of closer to \$200 billion.
2. Thirty years of booming growth has given China a financial nest egg of \$2.5 trillion in foreign currency reserves, about two-thirds in U.S. dollars. In 1999, China had none of the top 20 banks in the world; by this year, China had the world's three biggest banks by market capitalization. However, when measured by assets, no Chinese bank came into the 2009 global top 10.
3. In 2009, China became the world's biggest market for new cars, selling more than a million per month in January and February of 2010. But China's stocks of diesel fuel rose 23 percent in the same period and gasoline stocks fell by only 3 percent, meaning that they were not being driven much and suggesting many were bought as status symbols rather than for personal transport. This is one of many official statistics foreign observers question, an issue that sparked controversy in 2009 when China claimed continued growth, even though electricity output was shrinking.
4. Almost 60 percent of China's exporting companies are partly or wholly foreign-owned, and only half the content in Chinese exports is produced in China, according to the U.S. International Trade Commission. After many years of trade surpluses, China's foreign trade dipped into deficit in March 2010, helping ease U.S. anger at China's alleged manipulation of its currency to keep exports artificially cheap. Chinese labor costs are rising fast and the EIU claims that the cost of producing one unit of output in China will soon exceed that in the United States, mainly because of higher U.S. productivity rates.
5. To tackle the global recession of 2008, the Beijing government announced a \$586 billion stimulus package and it ordered its banks to lend. From January 2009 to February 2010, China's banks lent \$1.7 trillion—more than one-third of the country's GDP, a level unprecedented in any other country in history. Most of this money went to local government financing vehicles and to state-owned enterprises, driving land speculation and a potential property bubble.
6. China's heavy investment in infrastructure and new plants led to warnings by the State Council in late 2009 of massive overcapacity in steel, aluminum and cement. Between 2007 and 2010, China brought on capacity for an extra 200 million tons of steel, more than Europe's entire output. Return on investment is slowing quickly, however; in 2000, it took \$1.50 of credit to generate an extra \$1 of GDP, but by today, it is taking \$6 of credit to generate that dollar GDP increase. China's

unit labor costs appear set to overtake those in the United States within the next two to three years, mainly because of rising Chinese wages and much higher U.S. productivity.

7. After three decades of the one-child policy, China's workforce as a share of the total population will begin shrinking by 2015. One in three citizens will be over 60 years old by 2035, while fewer than 5 percent will be 5 or under. This suggests that China is likely to get old before it gets rich, although only 7 percent of Chinese have a formal pension. This has helped force up the Chinese savings rate while depressing personal consumption, which currently runs at only 37 percent of GDP, compared to 57 percent in India, 60 percent in Germany and just below 70 percent in the United States. On top of that, strong cultural preference for the one child to be male has led to disproportionate abortions of female fetuses. This means that up to 80 million young Chinese males will have no available female mate.
8. China is desperately short of arable land, with 0.27 hectares per capita, less than 40 percent of the world average, and urban development, soil erosion and desertification are also eroding this stock. With 22 percent of the world's population, China has only 7 percent of its arable land. Of the country's remaining arable land, only 28 percent is high-yield farmland, while 32 percent is low-yield. One-sixth of China's total arable land is polluted by heavy metals.
9. China has only 7 percent of global water resources, and they are unevenly divided between north and south. Each citizen has only a quarter of the world's average share of fresh water per capita. Afflicted by recurrent droughts, the Beijing water table has fallen from 15 feet below the surface in 1950 to more than 300 feet below today, suggesting increasing exhaustion of artesian water. The World Bank forecasts that by 2020 there will be 30 million environmental refugees in China due to water stress. More than half of China's 660 cities suffer from water shortages, affecting 160 million people, and 90 percent of its cities' groundwater and 75 percent of its rivers are polluted. As a result, 700 million people drink contaminated water every day.
10. Pollution (blamed for a sharp rise in birth defects) and land seizure have been the main triggers of up to 80,000 riots and angry protests per year, although the 2008 Tibetan and 2009 Uighur disturbances had ethnic and religious roots. An authoritarian state, China has routinely executed more than 5,000 people a year in the past decade and detains more than 6 million in Laogai forced labor camps, where the official rule is: "Except for those who must be exterminated physically out of political consideration, human beings must be utilized as productive forces, with submissiveness as the prerequisite." Historians claim that some 27 million people died in prisons and labor camps during Mao Tse-tung's rule.

## Gender

1. The disproportionate increase in male and manufacturing unemployment in the United States means that 51 percent of the U.S. workforce in 2010 is female. Increasing women's participation in the labor market to male levels will boost GDP by 21 percent in Italy, 19 percent in Spain, 16 percent in Japan, 9 percent in France and Germany, and 8 percent in the United Kingdom.
2. The gender pay gap, as measured by the mean hourly pay of all part- and full-time employees, was 22 percent in the United States and United Kingdom in 2009, meaning that women earned on average 78 percent of male pay. In the United States, the average woman earns \$434,000 less during her lifetime than the average man, a gap that rises to \$713,000 for female graduates.
3. Women in developed regions such as the United States and Europe are likely, because of higher qualifications, to become the primary breadwinners within the next two to three decades. In 2009, women earned 58 percent of bachelor's degrees and 60 percent of master's degrees awarded by U.S. colleges, and 59 percent of degrees awarded in the European Union. In the 27-nation EU, in the 25-to-34 age group, 34 percent of women have university degrees compared to 26 percent of men. A clear trend has emerged of higher female achievement in education. Among those ages 35 to 44, 25 percent of women and 24 percent of men have degrees; among 45- to 64-year-olds, 18 percent of women and 21 percent of men have degrees. However, in Japan women accounted for only 39 percent of all university undergraduates in 2005, although their numbers were slowly increasing. More than two-thirds of all women enroll in education, social sciences or humanities courses, 15 percent study scientific and technical subjects, and fewer than 3 percent pursue engineering.
4. Women are increasingly qualifying in traditionally male professions and subjects. Women were 60 percent of doctors graduating from British medical schools in 2007, and in the United States they made up 48 percent of enrollees at medical schools in 2009. In 1966, only 2 percent of U.S. college-educated women studied business and management; today, that number has reached 50 percent. In Europe, women in 2006 comprised 60 percent of graduates in business, administration and law. Women in scientific research remain a minority in Europe, accounting for 30 percent in 2006, but they are quickly catching up with men, their numbers rising 6.3 percent per year over from 2002 to 2006, compared with 3.7 percent for men. In the EU, 45 percent of all Ph.D graduates were women in 2006; they equaled or outnumbered men in all broad fields of study, except for science, mathematics and computing (41 percent), and engineering, manufacturing and construction (25 percent).
5. Women have not yet reached parity in senior posts. In Europe, women represent only 44 percent of grade C academic staff (the lowest step of a typical academic career), 36 percent of grade B academic staff and 18 percent of grade A academic staff (full professors), and are particularly underrepresented in science and engineering. On average, women lead only

- 13 percent of institutions in the higher education sector, and only 9 percent of universities.
6. Women can benefit from strict gender guidelines in public service. In Canada, women now hold 43 percent of executive posts and 55 percent of all federal jobs, compared to 5 percent and 42 percent respectively in 1983. A Carleton University study found that women were attracted to the federal service because of generous family policies and maternity leave.
  7. Women now make up 15 percent of directors of Fortune 500 companies, yet only 2 percent of Fortune 500 and 5 percent of FTSE 100 CEOs are female. Legislation requires that 40 percent of corporate board members in Norway be women, and similar legislation is pending in Spain and South Africa. More than 90 percent of companies in Germany and Sweden allow flexible working schedules to encourage greater workforce participation by women.
  8. Patterns of female education vary widely around the world. In Brazil, Russia and the UAE, women represent more than 60 percent of college graduates; in India and China, they are at 47 and 42 percent, respectively. At the University of Indonesia, women are 60 percent of students. UNESCO figures show that women make up 58 percent of the total Saudi student population, but only 16 percent of the workforce. In Iran, more than 60 percent of graduates have been women since 2006. At the Islamic Azad University—a private institution with 1.6 million students across Iran—70 percent of graduates in the applied physics department are women.
  9. Globally, the percentage of women holding parliamentary seats went from 11.3 percent in 1995 to 18.8 percent at the end of 2009—largely because of legislated quotas like the law requiring 30 percent of seats in Iraq’s National Assembly to be held by women. Women occupy at least 30 percent of parliamentary seats in 20 countries, but none are in Asia. The upper house in India’s parliament passed a bill in March 2010 to amend its constitution to reserve one-third of India’s national and state legislatures for women. In South Africa, the ruling African National Congress party has pledged a 30 percent quota for women at all levels of government since 1994.
  10. Since 1970, average life expectancy for women has increased by 15 to 20 years in developing countries. However, poor and less-educated women in rich and poor countries still struggle. Of the 113 countries that failed to achieve gender parity in primary and secondary school enrollment by the target date of 2005, only 18 are likely to achieve the goal by 2015. Girls account for 55 percent of the out-of-school population. Women in Africa receive less than 10 percent of all credit going to small farmers, and 1 percent of the total credit to the agricultural sector, even though they comprise the majority of agricultural workers. The World Bank has pledged that by the end of 2010 at least half of the Bank’s rural and agricultural projects, expected to total \$800 million, will address a gender concern. The Bank will channel at least \$100 million towards female entrepreneurs by 2012.

## The European Union

1. The European Union (EU) comprises 27 states and is the world's largest economic bloc, with some 500 million people and a collective GDP of \$18.3 trillion, as measured by the IMF, or about 30 percent of the global economy. But the European Commission, the EU's executive arm, is relatively puny, with a staff of some 23,000 (10 percent of them translators), fewer than the total employees of the city of Washington, D.C. The EU's annual budget of \$160 billion is spent mainly on agriculture (46 percent) and the structural funds for regional development and infrastructure (30 percent). The EU is also the world's most generous supplier of humanitarian aid, and its cradle-to-grave welfare and public spending levels explain why EU nations fill 15 of the top 25 slots in the EIU's quality-of-life index. European countries also occupied six of the top 10 places in the latest World Economic Forum Global Competitiveness Report.
2. The EU's supporters boast that, since its founding with the 1957 Treaty of Rome, it has secured peace and prosperity across a traditionally fractious continent. The formerly Communist states of central and eastern Europe, the formerly fascist states of Spain and Portugal, and the former military dictatorship of Greece have been successfully steered into democracy and the rule of law. But the EU notably failed in its efforts to stabilize the Balkans during the wars of the 1990s, whose resolution required U.S. military intervention. The EU's reputation for economic success was badly dented by the recent recession, during which unemployment reached 20 percent in Spain, while Greece and Ireland flirted with bankruptcy.
3. Although its founding treaty declares a commitment to forging "ever-closer union," the EU has a unique and hard-to-define political system—much less than a federal superstate but much more than a confederacy. It has national legal systems but a single supreme court, common arrest warrants and a common bill of rights. Individual countries retain national sovereignty but pool it in certain areas, so that, for example, trade policies are run by the EU. It has an elected parliament, which must approve the EU budget. The Commission has the right to introduce legislation to parliament, which must be ratified under rules of co-decision by the EU Council, the body that represents the 27 national governments. The heads of government meet four times per year, and ministers of each department of national government, such as agriculture, justice, transport and so on, also meet regularly. The EU's 27 foreign ministers meet more frequently and act as a kind of executive committee of the Council. However, most day-to-day decisions are made in Brussels in the weekly meetings of COREPER, the Committee of Permanent Representatives (in effect, each country's ambassador to the EU). COREPER II, the weekly meeting of the deputy ambassadors, handles most routine business.
4. In a series of half-forgotten judgments in the 1950s and 1960s, the European Court of Justice massively strengthened the powers of the then-European Community. The first key

ruling was that Community law superseded national law (and thus national parliaments); critics have described this as the Court's coup d'état. The second ruling was that the Treaty of Rome's commitment to free competition and to scrap tariffs between member states brought steadily more commercial issues (along with issues such as product safety and workplace health) under the court's sway and under the "competences" of the Commission. By the time the Eastern European states began the process of accession in the 1990s, the accumulated regulations they had to enact, known as the *acquis communautaire*, had swollen to more than 90,000 pages.

5. The EU has been described as "an economic giant, a political pygmy and a military non-entity," and when the Cold War was raging and all member states were also members of NATO, this absence of hard power did not greatly matter. Indeed, the EU grew safely behind the NATO shield and the American security guarantee. But while the EU and the NATO headquarters both occupied Brussels, they might have been on different planets. Well into the late 1990s, there were no formal meetings between NATO and the Commission, and Commission President Jacques Santer used a private code in his diary to schedule informal breakfasts with the NATO Secretary General Javier Solana. The pitiful performance of the EU in the Balkan Wars of the 1990s, when its members—with a combined 2 million troops—could hardly deploy 40,000 in the field, triggered a reevaluation. Plans were laid for the EU Rapid Reaction Force of up to 60,000 troops, with

its own planning and logistic support, but this plan has not yet materialized. Despite two seats on the UN Security Council (held by the two nuclear powers, France and the United Kingdom), four members in the G7 (France, the UK, Germany and Italy) and a preponderance of seats in the IMF, the EU carries far less weight in global affairs than its economy might justify.

6. The EU often demonstrates good intentions, but the reality turns out differently. Its Maastricht Treaty, for example, proclaimed a core commitment to sustainable development, even as Europe's fisheries were being devastated thanks in part to EU subsidies. The Treaty of Lisbon "constitution" was intended to end Europe's "democratic deficit" and bring the remote EU closer to the voters, who were steadily less inclined to vote in EU parliament elections. The result was less than democratic. When the Dutch and French voted against the Treaty provisions in a referendum, it was slightly modified and then passed by national parliaments instead. The EU's own Eurobarometer survey in 2009 found that a small majority of EU citizens support their country's membership, but with wide national differences. Support was greatest in Luxembourg, the Netherlands, Spain and Ireland, with more than 70 percent of citizens there believing that membership is "a good thing."
7. The Common Agricultural Policy (CAP) was devised when European governments feared Europe would not be able to feed itself, but quickly became a program to manage the

milk lakes and butter mountains of Europe's agricultural surpluses. These days, the annual \$69 billion CAP budget is meant to smooth problems of supply and demand, to help struggling small farmers and to help maintain the rural economy, landscape and ecosystem. In 10 of France's 22 regions, EU direct aid accounts for 100 percent of net farm revenues. Overall, France gets almost 20 percent of the EU's \$70 billion farm budget. Rich farmers benefit most, with 80 percent of subsidies going to 20 percent of farms, including those estates owned by the Queen of England, the Prince of Monaco and Heineken breweries. The average European dairy cow gets \$913 in subsidies annually, while \$8 per human per year was sent in aid to Sub-Saharan Africa.

8. The European Monetary Union, embodied in the euro currency, has proved quite volatile, sinking against the U.S. dollar to as low as 84 cents, then rising as high as \$1.50. It has also been controversial since its launch in 2002, blamed by many for higher prices. It is the currency in 16 of the 27 member states, and in October 2009, with more than €790 billion in circulation, the euro had the highest combined value of banknotes and coins of any currency in circulation. Countries that use it in effect surrender their sovereignty over interest rates and money supply to the European Central Bank, whose charter requires it to maintain price stability, usually interpreted as keeping inflation below 2 percent. But there is no parallel political authority over the member states' domestic economic policies, and a state whose finances are in

trouble cannot devalue. This helped trigger the euro crisis of 2010, when Greece flirted with bankruptcy and its government's euro bonds had to pay 7 percent interest against 3 percent for German bonds. A pledge of some \$40 billion in eurozone and IMF loans helped ease the crisis, while requiring Greece to cut a 10th of public spending in three years. Big budget deficits and rising sovereign debt aroused fears that Portugal, Italy and Spain could follow Greece into crisis.

9. The EU hails two Frenchmen as the fathers of the European project. Robert Schuman, French foreign minister, made the 1950 declaration of "a supranational authority" to run the coal and steel industries of France and Germany. Thanks to the discreet labors of Jean Monnet, an international civil servant who had been deputy secretary general of the League of Nations and then part of the British mission to the United States in World War II, this became the nucleus around which the EU was to be built. Schuman and Monnet believed in a political union, an eventual United States of Europe, but their vision was to be blocked by two nationalist politicians. The first was French President Charles De Gaulle, who believed in a "Europe of nation-states" and boycotted European meetings in order to win the right to a national veto. The second was Britain's Margaret Thatcher, who argued passionately against a federal Europe in a famous speech in Bruges in 1988. To her, Europe's priorities had to be the closest possible alliance with the United States, the eventual enlargement into Eastern Europe (she spoke in the year before the Berlin Wall

tumbled), and a true free and single market across Europe. Ironically, the Single European Act, her legacy, proved to be a driver of deeper economic integration.

10. The EU's secret weapon may be the Erasmus Programme, which has already given more than 2 million students the chance to live and study for 3 months in a different university in another European country at no extra cost. Steadily being expanded, the target is to have 3 million Erasmus students by 2012 and more than 5 million by 2020. This "Erasmus generation," 60 percent female, is seen as a powerful force in creating a pan-European identity. The political scientist Stefan Wolff suggests, "Give it 15, 20 or 25 years, and Europe will be run by leaders with a completely different socialization from those of today."

## Health

1. Total global expenditures for healthcare in 2009 were at least \$4.8 trillion, according to the WHO. About half of global spending on healthcare, \$2.5 trillion, came from the United States, which has more than 5 percent of the world's population. U.S. spending on healthcare in 2009 was 17.3 percent of GDP, an increase of 1.1 percent over 2008. This came mainly from increased costs for Medicare (for the elderly) and Medicaid (for the poor). State and government spending on healthcare is now \$1.2 trillion, and is on track to overtake private spending (\$1.3 trillion) in the near future.
2. Total global expenditures for healthcare was \$666 per person per year in 2009. The 30 members of the Organisation for Economic Co-operation and Development (OECD), on the whole the world's richest countries, accounting for 18 percent of global population, spent just under \$3,000 per person on average. The country with the highest total healthcare spending per person per year was the United States, at \$8,090.60. Meanwhile, the United States is 32nd in the world in life expectancy, at 79.2 years.
3. The WHO estimates that the minimum spending per person per year (an amount needed to provide basic, life-saving services) is between \$35 and \$50. There are 64 WHO member states in which healthcare spending—including government, household and private sector spending, and funds provided by external donors—is lower than \$50 per person per year. There are 30 WHO member states in which healthcare spending is lower than \$20 per person per year. The country with the lowest total spending per person per year on healthcare was Burundi, at \$2.90, where life expectancy is 50.3 years.
4. The countries with the highest proportion of doctors per person are Turkmenistan and Cuba, with 140 and 170, respectively. Germany has a doctor for every 265 people and the United States has one for every 440 people. In the African states of Niger and Malawi, there are more than 50,000 people for every doctor. Japan and Switzerland have the highest numbers of hospital beds per person, with more than 14 beds for every 1,000 people. France has 8.4 beds per 1,000 and the United States 3.6.
5. The country with the highest life expectancy for both sexes is Japan, at 82.3 years, although life expectancy for men is higher in Andorra, Iceland, Hong Kong, Switzerland and Australia. Japan has the highest life expectancy for women, at 86.2 years. Afghanistan has the lowest life expectancy for both sexes, at 43.8 years. It also has the highest death rate, averaged the past five years at 19.7 deaths per 1,000 people, compared to 9.1 in Japan. Afghanistan also has the world's highest infant mortality rate, at 157 per 1,000 live births, compared to 3.1 in Sweden.
6. The world's fastest-growing disease is diabetes, with more than 250 million victims worldwide. The WHO now calls it "a global epidemic" and expects deaths to double by 2030. Almost 80 percent of deaths take place in low- and middle-income countries, and

55 percent of deaths are among women. The highest incidence of diabetes is in the United Arab Emirates, where it afflicts 19.5 percent of adults. The world's fastest-growing vector-borne disease is dengue fever, with more than 50 million infections per year. In 1970, only nine countries suffered from this mosquito-borne disease; now more than 100 countries have had cases.

7. In 2010, more than one-third of the world's adults are overweight and more than 500 million are obese. The WHO estimates that by 2015, 2.3 billion adults will be overweight and more than 700 million will be obese. Once considered a problem only in high-income countries, obesity is now dramatically on the rise in low- and middle-income countries, particularly in urban areas. Obesity is a major risk factor for chronic diseases such as diabetes and cardiovascular disease (mainly heart disease and stroke), which is already the world's leading cause of death. At least 20 million children under the age of 5 years are overweight. Childhood obesity is associated with a higher chance of premature death and disability in adulthood. A primary cause of obesity is attributed to the global shift toward more energy-dense foods that are high in fat and sugars but low in vitamins, minerals and other micronutrients. People are also engaging in less physical activity due to the increasingly sedentary nature of work, changing modes of transportation and increasing urbanization.
8. More than 35 million people around the world are living with Alzheimer's disease or other types of dementia, a figure that is doubling every 20 years, according to the World Alzheimer Report. The report concludes that by 2050, Alzheimer's will affect 115.4 million people, with most of the growth expected in Asia and Africa. The disease afflicts one in eight people age 65 and older, and nearly half of people older than 85.
9. Chronic diseases are responsible for almost half of the 50 million deaths per year globally, mostly from circulatory diseases such as heart disease and stroke, cancer and chronic obstructive pulmonary disease. Infectious diseases are responsible for another one-third of deaths, mostly concentrated in the developing world. The WHO reports that work is dangerous—at least 200,000 people are killed and more than 120 million injured in the workplace every year, and up to 160 million cases of occupational diseases occur every year, stemming from exposure to chemical, biological and physical agents, and other environmental hazards.
10. An estimated 180 million people worldwide have visual impairments. Of these, nearly 45 million are blind, 80 percent of whom live in developing countries. About 80 percent of blindness is considered avoidable (treatable or potentially preventable). Some 121 million people are estimated to be deaf or to have a disabling hearing impairment.

## Urbanization

1. In 1950, there were 83 cities with more than 1 million people; today there are roughly 480. Half of the world's population now lives in cities, and 60 percent will be city dwellers by 2025. The UN forecasts that the world's urban population of 3.4 billion will rise to 6 billion by 2050, or two-thirds of the total population.
2. There were two megacities (metropolitan areas with more than 10 million people) in 1950, but today 26 cities have populations of 10 million or more, according to a 2010 report by Demographia. Of these, 16 are in Asia, including five in China (Shanghai, Shenzhen, Beijing, Guangzhou and Dongguan), three in India (Delhi, Mumbai and Kolkata), and three in Japan (Tokyo, Osaka and Nagoya). The United States has two (New York and Los Angeles), while Europe's only megacities are Paris, Moscow and Istanbul.
3. The world is not flat—it is defined by spikes of urban wealth. Nearly 100 cities account for 30 percent of the world's economy and almost all of its innovation. Many are historic centers that have evolved through centuries of dominance, including London, New York and Paris. Two cities, Tokyo and New York, have trillion-dollar GDPs, and New York alone accounts for 10 percent of U.S. GDP, and more than the GDP of Brazil. London and Paris combined have a GDP equivalent to that of India.
4. A.T. Kearney's 2010 Global Cities Index found that five of the world's 10 most global cities are in Asia and the Pacific: Tokyo, Hong Kong, Singapore, Sydney and Seoul.<sup>1</sup> Three (New York, Chicago and Los Angeles) are in the United States and only two (London and Paris) are in Europe.
5. The Global Cities Index analyzed 65 cities with more than 1 million people across every region of the globe, assessing everything from a city's business activity, human capital and information exchange to its cultural experience and political engagement. Data ranged from how many Fortune Global 500 company headquarters were in a city to the size of its capital markets and the flow of goods through its airports and ports. Other factors included the number of embassies, think tanks, political organizations, universities and museums. Such metrics reflect a city's soft power: its capacity to influence others.
6. The growth of megacities has political implications, since prominent mayors may wield influence comparable to that of heads of governments. China in 2025 is expected to have 15 fiercely competing megacities with an average population of 25 million. These cities will likely demand the same kind of privileges currently enjoyed by Hong Kong, Shanghai and the tech center of Dalian. Such regional power centers will likely prove a challenge for the central government in Beijing.

<sup>1</sup> *The 2010 Global Cities Index* was produced by A.T. Kearney's Global Business Policy Council in partnership with the Chicago Council on Global Affairs and Foreign Policy magazine. Foreign Policy published the Index in its September/October 2010 issue.

7. The most growth in urbanization in the coming years will be in midsize cities, since at a certain point megacities tend to grow more slowly. The UNs' 2005 data on 20 megacities shows that the populations of 13 megacities grew slower than the average annual growth rate of the world's urban population from 1975 to 2005 (2.4 percent). A major growth factor will be the size of the rural population that moves to cities—which could be 400 million in China and 300 million in India. This means that cities such as Mumbai and Delhi will grow faster than Mexico City and São Paulo.
8. The world's megacities take up approximately 2 percent of the Earth's land surface, yet they account for roughly 60 percent of human water use and nearly 80 percent of all human produced carbon emissions. Most are vulnerable to sea-level rises and more than half are located in earthquake zones. Infrastructure challenges are also increasing. A 2005 survey of London's food consumption found that the city needed 125 times its own land area for its food supply. Mexico City now pumps its water 1,000 meters uphill to meet its needs, while China is building three canals from Yangtze to Beijing to meet water shortages. Today's water prices are now often subsidized; the World Bank reports that nearly 40 percent of utilities worldwide cannot even cover their operating and maintenance costs.
9. The proportion of urban dwellers living in slums fell from 47 to 37 percent in the developing world between 1990 and 2005, the UN reports, but the total number of slum dwellers is still rising. Most slum dwellers come from the fringes of the urban world, located in legal and illegal settlements with insufficient housing and sanitation. This is due to mass migration, both internal and international, that has spiked growth rates of urban populations and human concentrations to levels never before seen. Slum dwellers move to cities for the opportunities, but often have minimal or no access to education, health-care or the urban economy.
10. Urban population size has always reflected wealth and power. In 100 AD, only one city, Rome, had a population of 1 million. In 1000 AD, the world's largest city was probably Cordoba, Spain, with an estimated 450,000 citizens. In 1500 AD, Beijing led the world with at least 700,000 people. In 1900, the largest city was London, with 6.5 million people. In 1950, it was New York, with 12 million people. In 2005, Tokyo was the largest city in the world, at 33 million. By 2050, without strict urban planning, Greater Shanghai and Greater Mumbai could each exceed 50 million inhabitants.

## Longevity

1. During the twentieth century, life expectancy in developed countries almost doubled, increasing on average by more than 30 years for men and women. In Canada, Japan and France, life expectancy for newborns in 2010 is already more than 80 years. One Danish study suggests that most babies born in rich countries in this century can expect to reach their 100th birthday. This means that the fastest-growing age group worldwide in this century—and thus the fastest-growing consumer group—will be those people over the age of 60. By 2030, when today's newborn babies are in college, 36 percent of Germans, 30 percent of French and 22 percent of Americans will be over 60. Thirty percent of Chinese will also be over 60, which means that longevity isn't just a rich-world phenomenon.
2. In 1998, the number of people age 60 years or older in the G7 countries overtook those younger than 15. Based on current demographic trajectories, more people worldwide will be older than 60 than under 15 by 2043. Within the next five years, for the first time in human history, there will be more people worldwide older than 60 than younger than 5.
3. Centenarians will become much more common in the future. In 1990, there were 37,306 Americans ages 100 and older. By 2025, there could be more than a million. In developed countries, the number of centenarians has increased 7 percent per year since 1950. In 1980, a 65-year-old British male had a one-in-1,000 chance of celebrating his 100th birthday. Today, his chances have increased tenfold, to one in 100.
4. A new analysis by the Bank for International Settlements, "Aging and Asset Prices," suggests that housing prices may fall by as much as 30 percent during the next 30 years in developed countries, as more elderly attempt to sell their homes to raise capital while there are fewer young people to buy them. "In the past 30 years, during the active years of the baby boomer generation, asset prices have increased massively," the report says. "Asset prices propelled by the boomers' savings will be under pressure when this large generation retires and starts to sell its assets to the relatively smaller subsequent generation."
5. Longevity will be expensive. In 2004, when the elderly comprised 12 percent of the U.S. population, they accounted for 34 percent of all health spending. A 2005 survey of U.S. Medicare accounts found that healthcare costs per elderly person were \$10,778 per year for ages 65 to 74; \$16,228 per year for ages 75 to 84; and \$25,291 for those 85 and older. Since the survey was completed, U.S. healthcare costs have risen by 23 percent and are projected to equal one-fifth of the U.S. GDP by 2020.
6. After obesity, the world's next-fastest-growing illness is senile dementia. The Alzheimer's variant afflicts 26 million people today, and the lowest estimate among several forecasts suggests the disease could affect more than 80 million people by 2020. The highest forecast runs into the hundreds of millions. The illness is expensive because of the need for constant surveillance and care. The Alzheimer's Association says the 3 million sufferers in the

United States cost \$112 billion per year, and a MetLife study finds indirect costs can add up to \$75,000 more per year per patient.

7. Greater longevity offers some potential advantages, including increased human resources, more wisdom and more experience available for society as a whole. For the elderly, it means more life to enjoy and more time to spend with grandchildren and great-grandchildren. It could also mean more entrepreneurs: According to the U.S.-based Kauffman Foundation, the highest rate of entrepreneurship in America has shifted to the 55-to-64 age group, with people over 55 almost twice as likely to establish successful companies as those between ages 20 and 34. America's fastest-growing tech startup, according to *Forbes Magazine's* Fast Tech 25, is First Solar, which was founded by a 68-year-old.
8. While the increase in life expectancy has been steady, new diseases soon risk slowing down this advance. Most of the immediate benefits of reduced smoking, better diets and widespread medical care have already been achieved. In the United States, recent reverses in earlier longevity trends are attributed to the spread of diabetes and obesity. A 2009 Oxford University study of more than 900,000 people found obesity reduces life expectancy by three years and chronic obesity reduces it by 10 years—the equivalent of lifelong smoking.
9. Many factors are claimed to increase life spans: moderate alcohol use in general and red wine in particular, low-calorie diets, reduced stress, and a happy marriage and friendships. Primate studies suggest that strong and stable social bonds enhance longevity in baboons, as does high social rank (dominance, in the case of baboons). A study by Professor Julianne Holt-Lunstad of Brigham Young University concluded that humans with strong personal relationships are 50 percent more likely than others to survive during a specific period of time, even allowing for factors such as age and health status.
10. Poverty is the main factor in shortening life spans, according to a Columbia University study reported in the *American Journal of Public Health* in December 2009. The study claims that income disparity and dropout rates are at least as important a health problem as smoking in the United States. The average low-income person (defined as household earnings less than two times the federal poverty line) loses 8.2 years of perfect health, the average high school dropout loses 5.1 years and the obese lose 4.2 years, while the average smoker loses 6.6 years of perfect health to the habit.

## Migration

1. The total number of international migrants has risen from approximately 150 million in 2000 to 214 million today. Migrants represent roughly 3 percent of the world's population; grouped into a single nation, it would be the world's fifth-most-populous country.
2. Based on surveys of 135 countries, Gallup has found that 700 million people—more than 10 percent of the global population—say they would like to emigrate. The first preference for 210 million people is North America (165 million to the United States, 45 million to Canada). Another 210 million put Europe as their first choice, with 45 million people each opting for France and the United Kingdom, 35 million selecting Spain and 25 million picking Germany. The other most attractive locations are Saudi Arabia (35 million) and Australia (25 million).
3. Europe hosted 70.6 million immigrants in 2005, the latest year for which figures are available. North America, with more than 45 million immigrants, is second, followed by Asia with about 25.3 million immigrants. Most of today's migrant workers come from Asia.
4. According to the World Bank, remittances from migrants to their home countries totaled \$420 billion in 2009, of which \$317 billion went to developing countries. This is more than three times the total of international aid flows and larger than the annual GDP of Sweden. The total value of remittances has tripled in the past decade.
5. The top recipients of cash remittances in 2009 were India (\$55 billion), China (more than \$40 billion), Mexico (\$21 billion), Philippines (\$17 billion), Poland (\$15 billion), Bangladesh (\$11 billion), Pakistan (\$9 billion) and Morocco (\$8 billion). The top recipients of remittances in terms of share of GDP included smaller economies such as Tajikistan (45 percent), Moldova (38 percent), Haiti (30 percent) and Honduras (25 percent).
6. The economic impact of immigrants on host countries is difficult to measure. Harvard Professor George J. Borjas, a pioneer of such studies, estimates the net value in the United States is modest, in the low tens of billions of dollars, but could be doubled if immigration were restricted purely by skills. (In 2009 the EU inaugurated such a system, known as the Blue Card, which allows highly skilled non-EU citizens to work and live in almost all EU countries.) In a recent paper for the U.S. Federal Reserve, Professor Giovanni Peri of the University of California, Davis, wrote that, "Data show that, on net, immigrants expand the U.S. economy's productive capacity, stimulate investment, and promote specialization that in the long run boosts productivity. Consistent with previous research, there is no evidence that these effects take place at the expense of jobs for workers born in the United States."
7. The Brookings Institution found that immigration depressed wages by 2.3 percent in the United States from 1980 to 2007. The Center for Immigration Studies found a 3.7 percent

depression of wages from 1980 to 2000. However, most illegal immigrants pay taxes and Social Security without being able to obtain benefits in return. The Internal Revenue Service (IRS) annually collects around \$7 billion via “ghost” social security accounts.

8. The country with the largest number of illegal immigrants is believed to be India, which has 20 million or so, mostly from Bangladesh. However, reliable statistics are elusive because of the large numbers. The Pew Charitable Trusts estimates 12 million illegal immigrants in the United States, but other studies put the number at around 9 million. According to Pew, 55 percent are from Mexico and another 22 percent are from elsewhere in Latin America. Illegal immigrants are approximately 5 percent of the U.S. workforce.
9. Estimates of illegal immigrants in the EU range widely, from 3 million to 7 million. This seems low, when U.K. officials estimate 570,000 illegal immigrants in Britain alone. It partly reflects shifts in the flow, with 373,000

people apprehended at the border in 2001 compared to 110,000 in 2009, and the many migrants who returned home when they could not find work during the recent recession.

10. Migration certainly affects the source countries. Six of the 10 countries with the highest percentage of educated people living abroad are in Sub-Saharan Africa. They include half of Ghana’s and a third of Angola’s graduates. Nearly half of the U.K.’s newly licensed doctors and nurses have been educated in other countries. About 37 percent of the U.K.’s 243,910 registered doctors earned their medical qualifications outside of Great Britain and 18 percent of U.K. healthcare workers (mainly for the elderly) are immigrants.

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