

The Rise of the Multi-Polar World

accenture

High performance. Delivered.

• Consulting • Technology • Outsourcing

Contents

Foreword	1
Executive Summary	2
1. Introduction	4
2. Winning Talent	7
3. The Way the Money Goes	12
4. The Battle for Resources	17
5. The Emerging Consumers	21
6. The New Map of Innovation	25
7. Achieving High Performance in a Multi-Polar World	30
References	32

Foreword



William D. Green,
Chairman & CEO, Accenture

Globalization, a force that has been shaping the political and commercial world for most of our working lives, is entering a new and more complex phase. It is no longer a concept exported to the emerging world by the traditionally-dominant economies of the West. Emerging economies have grasped globalization, packaged it up, and are, every day, sending new versions of it back to the West.

This Accenture analysis—based on original research as well as our experience working with organizations around the world to help them achieve and sustain high performance—attempts to identify and understand the forces creating this new era of globalization. Our analysis focuses on the fast-evolving economic geography of what we call 'the multi-polar world'. It is essential reading for both business and government organizations striving to achieve high performance in an increasingly complex global environment.

As with all far-reaching change, this new world brings with it massive opportunity—as well as risk. We see economic, cultural and political power growing rapidly in nations that are only beginning to unlock their potential. The rise of China and India is well documented—and indeed at

Accenture we have significantly increased our presence in these economies, which are likely to become even more important in future decades. The stories of Mexico, Russia, South Korea, Brazil and the emerging economies of Eastern Europe are perhaps less familiar, but they are increasingly crucial to understanding our world. Half a billion new workers and perhaps a billion new consumers in emerging markets will truly change what it means to compete on the global stage.

We are at a critical moment as a global economy. Move one way, toward greater freedom of trade, the possibilities of new technologies, the promotion of education and skills training on a vast scale...and the opportunities seem endless. Step the other way, toward the retrenchment into tariffs, a rejection of the newest new things and a reluctance to change the social and cultural patterns of generations...and those opportunities could be lost.

The multi-polar world has been born out of—and is thriving on—competition on an unprecedented scale: new markets are open not only to traditional players but also to local and resourceful operations that understand them more closely.

In order to achieve high performance, businesses will need to continually refine market focus and position, and develop distinctive capabilities that can adapt to shifting sources of competitive advantage, as well as harness innovation to create new markets. At the same time, of course, the challenge of ensuring a corporate culture that embraces diversity will be more acute. Having processes and core values that are universal will be essential as organizations operate across borders, within different cultures and with more dispersed structures.

'The Rise of the Multi-Polar World' explores the implications of this global re-balancing for multinationals and public sector organizations in their quest for high performance. We hope it will stimulate understanding, debate and opportunity.

A handwritten signature in black ink, reading "W.D. Green". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

William D. Green,
Chairman & CEO, Accenture

Executive Summary

The changing balance of economic power

The contours of the global economy are changing. The collective economic dominance of the United States, Europe and Japan—the so-called triad economies—is giving way to a greater dispersal of global economic power as developing economies contribute an ever-increasing share of the world's output, trade and investment. The raw figures tell their own story: today the developing world accounts for 49 percent of global GDP, up from 39 percent in 1990, and is likely to surpass the developed world within the next two decades. This extraordinary transformation of the global economy, its drivers and characteristics, and its implications for business form the main focus of this study.

Drivers

The emergence of a world characterized by multiple centers of economic power and activity—a concept we term the 'multi-polar world'—is being driven by three powerful, mutually-reinforcing trends:

- The increasing power of information and communications technologies: faster communications have allowed business functions to be disaggregated geographically and have also brought a vast array of service activities, many located in emerging markets, within the scope of international trade for the first time.

- Government policies to increase economic openness: successive rounds of trade liberalization under the auspices of the World Trade Organization (WTO) and the accession of some key emerging economies—especially China in 2001—have dramatically increased levels of economic interdependence.
- The increasing size and geographic reach of the multinational enterprise: a search for new markets, economies of scale, and new sources of capital and labor has vastly increased the geographic presence of multinational companies in emerging markets.

New levels of global interdependence

The rise of the multi-polar world should not come as a surprise: the forces driving it—technology, economic openness, and multinational strategies—are exactly the same as those that have propelled earlier phases of globalization. In this sense the multi-polar world can be seen as a new and deeper phase of globalization. But in its character and effects, it is very different. Globalization is now becoming a two-way process in which developing/emerging economies are changing from passive recipients to active shapers of globalization. The name of the game is increased economic interdependence, as demonstrated by the five key dimensions that make up the multi-polar world:

i) Winning talent

Talent has now become a global commodity, fought over by multiple competitors. At a time when many Western economies are grappling with the effects of older and, in some cases, shrinking workforces, the balance of global labor supply is shifting to developing economies owing to their rapid population growth: about 97 percent of the 438 million people to be added to the global workforce by 2050 will come from developing countries.¹ Not surprisingly, Western multinationals are increasingly seeking to tap into these new sources of talent. However, these supply-side shifts are occurring in tandem with fierce competition for skilled employees: not only are indigenous companies in emerging economies competing head-to-head with overseas multinationals for new recruits and experienced managers, they are also seeking to lure diaspora workforces back home.

ii) The flow of capital

Developed economies have traditionally been the major sources of outward foreign direct investment (FDI), investing first in other developed economies and then, over time, in emerging economies. By contrast, emerging economies have traditionally been net exporters of portfolio capital—stocks, bonds and the like—as developing-economy investors sought to channel domestic savings to the more secure and sophisticated capital markets of developed economies. But as we move toward a multi-polar world, we are beginning to

see the first signs of an inversion of this dynamic. Emerging economies are becoming an increasingly significant source of outward FDI, about 17 percent of the world total, as their companies look for expansion opportunities in overseas markets, typically in other developing countries but often in the developed economies of Europe and the United States as well. At the same time portfolio investment is flowing into emerging markets with greater regularity as global investors seek the returns promised by high growth rates. As with talent, the story is again one of increased global interdependence as the suppliers and demanders of capital become more geographically diverse and intertwined.

iii) The battle for resources

The theme of deepening global interdependence is illustrated crucially in the interplay between supply and demand for natural resources. Emerging economies are growing at a fast pace and, as they grow, so does their appetite for natural resources of all kinds: energy resources, minerals and metals, and water. Since 2000 these economies have been responsible for 85 percent of the increase in world energy demand and they will absorb the lion's share of projected energy demand up to 2030.² Meanwhile, the supply of resources is becoming strained and both developed and emerging economies are competing fiercely in many regions—notably in South America and Africa—for access to the best sources. In this context the challenge for leaders is fast becoming one of how to manage the complex balance between three overriding imperatives: of economic growth, energy security (of supply for resource-poor countries and of demand for resource-rich areas), and sustainability.

iv) The emerging consumers

To date the growth of emerging economies has been built largely on a proficiency in supplying low-cost goods and services to the developed Western economies. Now, however,

these economies are becoming important consumer markets in their own right and a lucrative target for multinational manufacturers, service providers, and retailers. Rapid growth and deeper integration is fueling rising employment and incomes in emerging economies, creating a burgeoning middle class of potential consumers numbering many millions. Emerging economies will account for more than half of global consumption by 2025, adjusted for differences in purchasing power. Already developing-country markets for many products and services rival those of industrialized countries. China, for example, is by far the biggest market for mobile phones with over 395 million subscribers and, in 2007, it is set to overtake Japan to become the world's second-largest car market. Mexico represents the world's second-largest soft drinks market. It is clear that multinational companies are refocusing their sights on emerging economies as the sheer growth potential of these markets becomes evident.

v) The new map of innovation

Innovation has long been regarded as the domain of the 'triad' economies of the United States, Japan and Europe, founded on a base of dynamic markets, skills, and advanced technology. Yet in the emerging multi-polar world this simple characterization no longer holds true: due to a combination of deep investment in education and skills, strategic targeting of emerging industries, and rapid diffusion of new technologies, many emerging markets are moving up the value chain at a far more rapid pace than was previously thought possible. In short, innovation is becoming more geographically diffuse with clusters of innovation springing up in locations as diverse as Beijing, Bengaluru, Greater Seoul, and Krakow. The message is clear: developed nations can no longer take their lead in innovation for granted.

Achieving high performance in an interdependent world

Multinational companies from both the developed and the emerging economies need to understand these trends if they are to achieve high performance in an increasingly complex global environment. High performance will depend on a finely tuned ability to adjust market focus and positioning to constantly shifting locations and sources of competitive advantage. National and regional boundaries will become less important as companies begin to organize by value creation rather than geography. This could mean grouping consumer markets in terms of growth potential rather than location, or segmenting the workforce by skill level rather than location, so that a high-skilled worker in China is part of the same talent management strategy as one in the United States. Companies will need to be simple on the inside, but differentiated on the outside—simplifying their global operations to achieve scale economies while differentiating their products and services for the diverse markets in which they operate. Finally, culture matters: having a diverse leadership team with knowledge spanning disparate markets will be of utmost importance.

1

Introduction

A new economic geography

For the past 50 years economic power has been firmly rooted within the United States, Europe and Japan. As recently as 1990, the only emerging markets in the world's top 10 economies were Russia and Brazil, in seventh and eighth place respectively. Today that list would include China as the world's fourth-largest economy and by 2015 it is likely to feature India and South Korea.³ The world is moving from an era of geographically concentrated economic power to one characterized by multiple centers of economic and business activity.

A fundamental shift

It would be easy to see this transformation simply in terms of the astounding growth of China and India. But these economies are rather the headline acts of a more fundamental dispersal of global economic power. Economies such as Egypt, Mexico, Poland, South Korea and Turkey may not boast billion-plus populations, but their growth rates have been just as impressive. Back in 1990 the bulk of global output was generated by industrialized economies, with a smaller proportion, roughly 39 percent, coming from developing countries. Today, emerging economies account for 49 percent of global GDP, and by 2015 they are expected to generate more than half of the world's output at purchasing-power parity.⁴ Every conventional measure of economic activity—output, trade, investment—tells the same story of economic power spreading out from the core industrialized economies to the developing world.

Why is this economic geography changing?

The rise of the new multi-polar world is not happening by accident or simply as a consequence of broader economic convergence between nations. It is being driven by three powerful, mutually reinforcing trends:

The increasing reach of information and communications technologies

Moore's law, the observation that the processing power of computers approximately doubles every 24 months, has enabled growing economic integration by eroding time and distance as barriers to trade and capital flows. Since the mid 1990s faster communications stemming from internet technologies and the spread of fibre-optic networks have facilitated the disaggregation of business functions across different geographic locations and resulted in supply chains that snake around the globe. These advances have also

enabled a vast expansion in the scope of international trade and investment to include many types of service activities—especially software, information technology and back-office processing—in which emerging markets often have a significant competitive advantage. Changes in the pattern of investment bear this out: inward foreign direct investment (FDI) flows into services have surged from US\$95 billion in 1989–1991 to US\$436 billion in 2002–2004, with services investment flows to developing economies increasing more than sevenfold.⁵

Policies to increase economic openness

Despite occasional protectionist episodes, the prevailing policy impulse over the past two decades has been toward increased economic openness and market liberalization. In 2005 alone there were 205 regulatory changes in investment regimes across the globe, of which

the vast majority, 164, were more favorable to FDI.⁶ Progressive rounds of trade liberalization under the World Trade Organization (WTO) have also been instrumental in dismantling many tariff and non-tariff barriers to trade and investment, while China's accession to the WTO in 2001 both opened up large swathes of its economy to external competition as well as increasing China's own weight in the global economy. Vietnam became a member of the WTO in early 2007,⁷ cutting tariffs and other restrictions on trade and progressively opening up its services sectors to competition, while Russia looks likely to follow suit later in 2007.⁸ Overlapping the multilateral system of trade liberalization is the 'spaghetti bowl' of regional agreements, either in the form of traditional free trade areas such as the North American Free Trade Area (NAFTA) or deeper forms of economic integration among neighboring countries, such as the European Union (EU) and the Association of South-East Asian Nations (ASEAN) as well as many smaller groupings.

Increasing size and reach of the multinational enterprise

Policy and technology may have provided the conditions, but it is the increasing scale and scope of the multinational company that has been the essential catalyst for the multi-polar world. Over the last three decades or so multinational companies have vastly expanded in size and geographical reach in a search for new markets, scale efficiencies, and competitive sources of capital and labor. By 2004 the world's hundred largest multinationals had US\$4.7 trillion in foreign assets (53 percent of total assets, up from 34 percent in 1993), US\$3.4 trillion in foreign sales (56 percent of total sales, up from 43 percent in 1993), and 7.4 million overseas employees (50 percent of the total, up from 44 percent in 1999).⁹ More than 65 percent of the affiliates of these multinationals are located outside their home country.¹⁰

The new globalization

A multi-polar global economy does not represent a departure from globalization, but a new and deeper phase of it: the same forces that have propelled the globalizing trend thus far—open markets, technology, and corporate strategies—are now assisting emerging economies in becoming important players in their own right. This fact has major implications for businesses and policymakers: conventional assumptions about strategies and policies may no longer apply.

Seen through the lens of a CEO, a multi-polar world is one in which customers, resources, employees, and sources of capital, innovation and ideas become more geographically dispersed. As such, it forces a fundamental reappraisal of assumptions about leadership, organizational structures, geographic strategy, operating models, people and values.

A multi-polar world also adds new degrees of complexity to policy-making, for essentially two reasons: first, the existence of more countries with economic power means that there are more countries looking for a say in international policy-making; second, greater economic interdependence implies that global problems cannot be resolved purely within the context of national policy-making. Examples abound of this increased complexity and interdependence in policy-making: the ongoing efforts to secure the Doha round of global trade liberalization in a context where developing nations have emerged as a major negotiating force for the first time; the focus on reducing carbon emissions on a global basis following the Stern report in the United Kingdom; and the debate around how to reduce major external imbalances such as the US current account deficit while allowing an orderly readjustment of currency values. Two key conclusions follow. First, politics and public diplomacy matter more than ever in the multi-polar world. Second, co-

ordinated responses to essentially global problems cannot exist without an appropriate framework of international institutions and mechanisms in support.

Five key dimensions of the multi-polar world

As discussed, the forces driving the multi-polar world are exactly the same as those that have underpinned earlier phases of globalization. But in this new phase, it is becoming more of a two-way process with developing economies changing from largely passive recipients to active shapers of globalization. This heightened interdependence can be seen in each of five interrelated dimensions that make up the multi-polar world: winning talent, multi-directional capital flows, new consumer markets, the battle for resources, and the new map of innovation. Companies from both the developed and the emerging worlds need to understand these trends if they are to achieve high performance in an increasingly complex global environment. These trends are explored in detail in the following chapters along with the implications for business.

2

Winning Talent

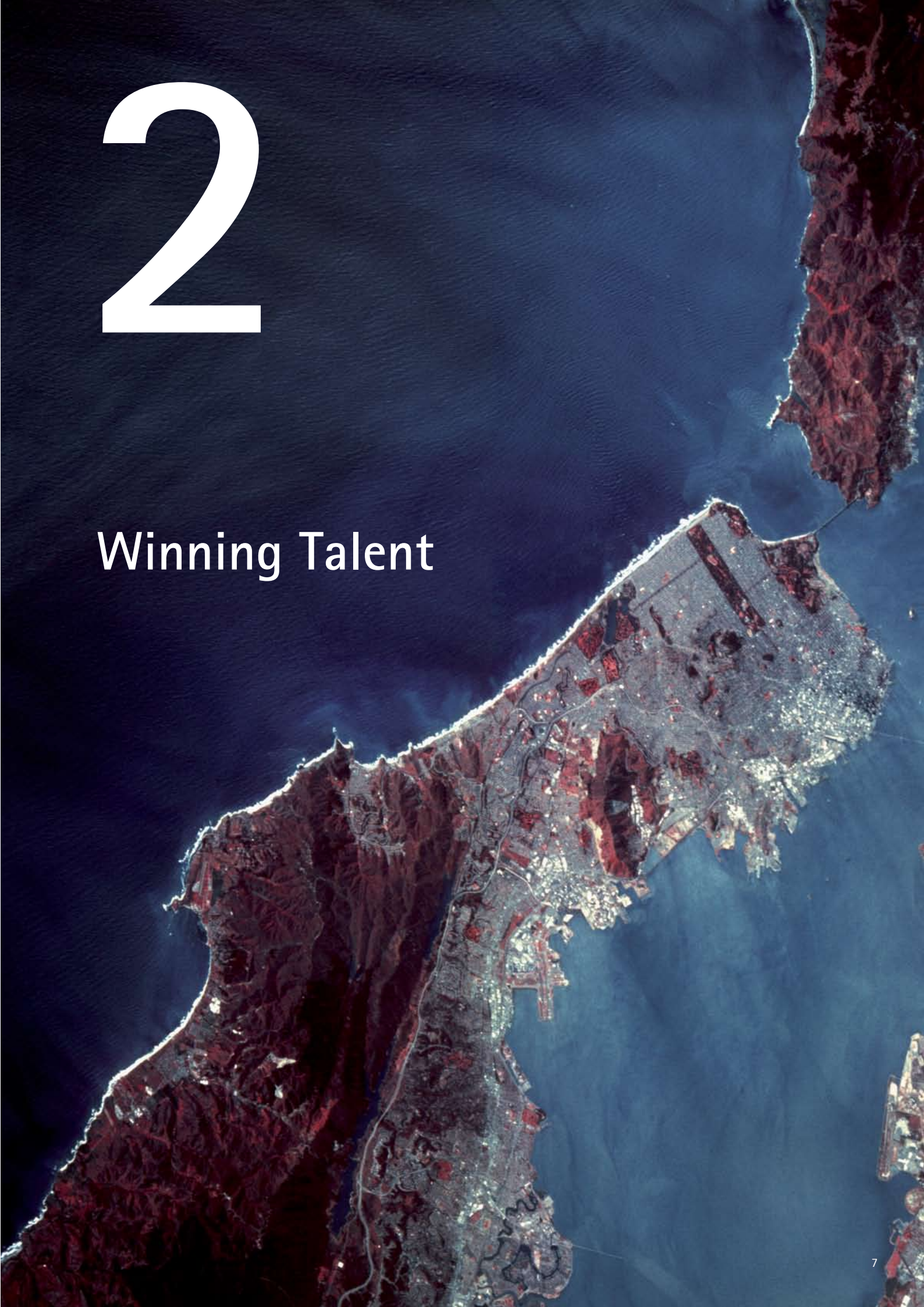
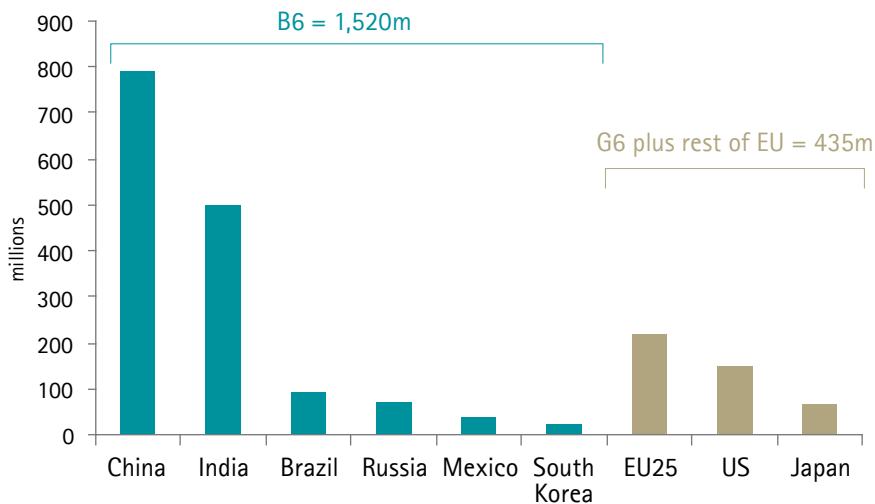


Figure 1 – The global labor force in 2005 (millions)¹¹



B6: 'Big Six' = Brazil, China, India, Mexico, Russia and South Korea
 G6: France, Germany, Italy, Japan, United Kingdom and United States

Talent is no longer the exclusive preserve of the Western world. It is a global commodity, fought over by multiple competitors and economies from both the developed and the emerging world. The barriers that used to prevent the free flow of labor are disappearing and the concept of a national labor force is becoming a thing of the past. The sheer size of emerging market workforces is staggering: both China and India's individual workforces are larger than those of Europe, the United States and Japan combined (see Figure 1).

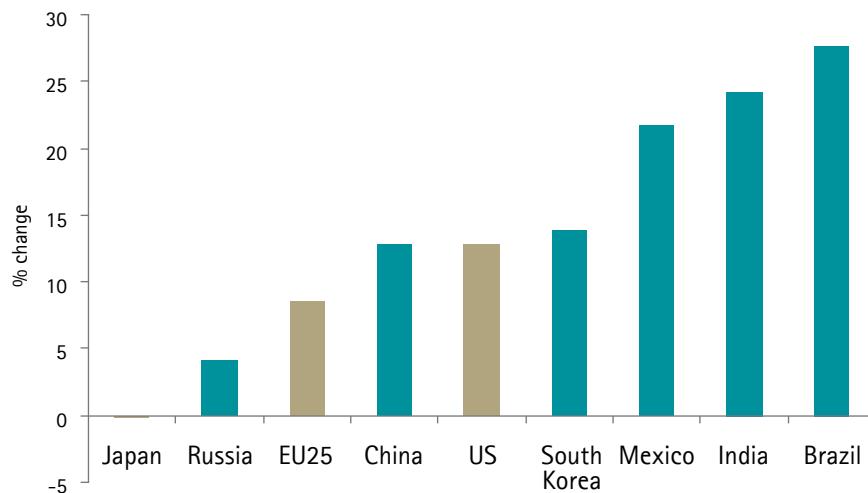
Where is the new talent coming from?

The emergence of these workforces has allowed developed world multinationals to utilize new sources of low-cost labor and increase their competitive advantage. In Europe a recent survey found that 40 percent of companies have already begun to utilize talent pools in emerging markets, with Asia and in particular India accounting for 40 percent of the operations being set up.¹² Companies such as General Motors, GE and Hewlett-Packard have been able to realize cost savings of up to 30 percent through drawing upon these sources, with India again proving to be the most popular location.¹³ Indeed, India is now believed to have 28 percent of the world's outsourced information technology (IT) workforce.¹⁴ This trend is set to continue as the impact of information and communications technology means that a significant proportion of the world's service jobs could be carried out remotely.

Figure 2 shows the extent to which growth in the emerging economy workforces is outstripping that in the developed world – in particular, the performance of the next wave of emerging economies (such as Brazil, Mexico and South Korea) shows how sources of competitive labor advantage are becoming ever more numerous and diverse.

Moreover, these economies are moving up the value chain and are no longer just sources of low-skilled, low-cost labor. As they develop economically, investment in education and training means that the skill levels of the workforce are rising – indeed, there are now 33 million university-educated young professionals in the developing world compared with 14 million in the developed world.¹⁵ Furthermore, the relative position of developing world economies in terms of educational attainment is also improving – in a ranking of the top 30 OECD countries by proportion of their 25-34 year olds with educational qualifications,

Figure 2 – Growth in emerging economy workforces (percentage change 1995–2005)¹⁶



South Korea has jumped from 21st place in 1960 to third place today. It is not surprising, then, that South Korea now produces the same number of engineering graduates as the United States, despite only having one-sixth of the US population.¹⁷

As a result, businesses are now looking to emerging markets for their higher value-added activity such as product design and research and development, rather than seeing them just as traditional low value-added, low-cost centers of industrial production. Mexico is currently reaping the rewards of a concerted effort by policymakers to produce more engineering graduates and to build links with foreign multinationals. Mexican students are now often taught with materials and technology donated by these companies, which in turn allows the companies to help shape course content to meet their requirements. Honeywell Aerospace recently began development of a US\$40 million

systems integration and testing laboratory, which will employ 300 Mexican engineers.¹⁸ Similarly, Intel's decision to invest US\$1 billion in a chip assembly and testing plant in Vietnam, which could employ up to 4,000 Vietnamese workers,¹⁹ demonstrates how emerging economies are climbing up the value chain and becoming an integral component of today's multinationals.

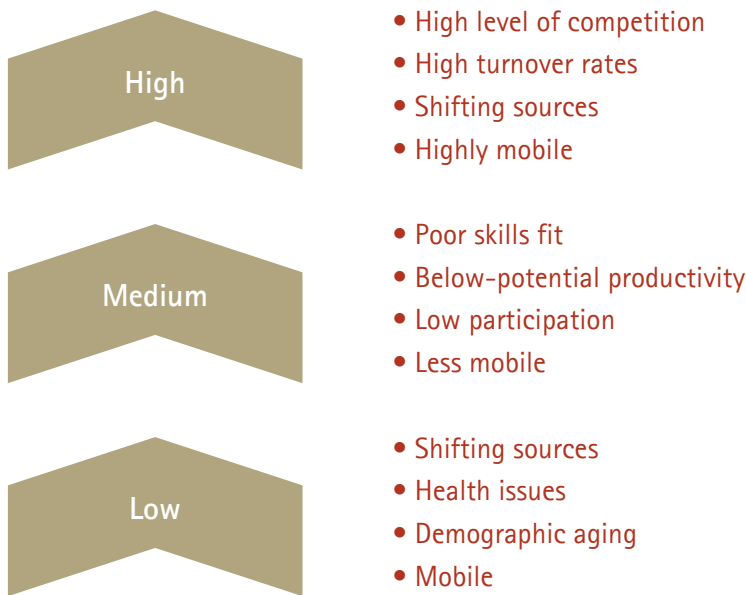
This trend shows that the utilization of overseas workforces is no longer a tactical measure designed to reduce the cost base – it is a strategic imperative for multinationals across the developed world. However, demographic aging is likely to impact on these new sources of labor and restrict their long-term growth. For example, in China the workforce is expected to start falling in size within the next ten years.²⁰

Who needs talent most?

Demand for these new sources of talent is increasingly fierce and for multinationals is in part being driven by the need to combat the effects of demographic aging in the developed world. In the United States the retirement of baby-boomers means that the 500 biggest companies could lose half their senior managers in the next five years or so. Some industries will suffer more acutely than others, with the aerospace industry facing 40 percent of its employees retiring over the next five years.²¹

At the same time, the sources of competition for talent are increasing. Indigenous companies are looking to keep the most valuable individuals and are being aided by governments keen to reverse the brain drain and to attract the diaspora workforce back into the domestic labor market. Such a high level of competition presents a number of challenges for employers. For example, employee turnover within the Indian IT sector is already

Figure 3 – Challenges facing the high-performance business by employee skill level



40 percent a year and wage inflation stands at 16 percent.²²

Furthermore, multinationals need to be aware that while there are significant sources of new talent that they can utilize in emerging markets, they may not necessarily have the requisite skills. Language and cultural fit are just some of the factors that mean that of the developing world supply of university-educated graduates, only a fraction are suitable to work for a foreign company. While India may produce about 300,000 IT engineering graduates every year compared with 50,000 in the United States, in practice Indian and Western firms are competing for the top 30,000-40,000 of these graduates.²³

Accessing the new talent

The shift toward a global talent economy where different skill levels can be sourced from multiple locations has a number of implications. For the high-performance business, segmenting the workforce into low-, medium- and high-skilled employees and developing strategies for each will be essential, particularly given the different challenges presented by each skill level (see Figure 3).

For example, for low-skilled workers in developing countries the potential for health issues such as HIV/AIDS means that businesses will need to develop human resource and support mechanisms that can cope with new problems in new contexts. At the same time, flexible structures will be essential if organizations are to re-orient themselves around new sources of cost advantage. For medium-skilled workers, though, the focus will be need to be on training and education in order to

develop the highly-skilled workers of tomorrow and alleviate the pressure of competing for a dwindling supply of workers. And for those high-skilled workers, successful strategies to compete will need to revolve around measures that develop links with academic institutions in the developing world to access new sources of talent as well as working with governments to identify key skills requirements and manage the immigration process.

Business Implications

Competing for a global workforce.

The battle for talent has gone global and competition for the top tier of talent will only intensify, despite the increase in size of the global labor pool brought about by the development of rising economies. Locations of competitive advantage are shifting and the demographic issues that currently tax developed economies will soon be as pertinent to the emerging economies.

Emergence of differentiated workforces within companies.

The workforce profile of the multinational of the future will be increasingly fragmented, with human capital flexibly located across the globe, depending on the latest key source of competitive advantage. Multinationals will have to develop flexible operating models that both anticipate and adapt to those new sources of labor.

Maintaining culture within a fragmented organization.

An organization's culture is often what differentiates it and confers competitive advantage. This represents a significant challenge as businesses strive to ensure that localization does not mean the loss of identity. 'Hub-and-spoke' systems can help, whereby devolution of decision-making and accountability to regional as opposed to local offices helps recognize the cultural differences presented by different markets while maintaining a uniform approach. Further, articulating a list of core values or principles that are universal and inclusive can help transcend cultural differences and engender a sense of community, even within the largest and most diverse organizations.

Local tailoring and execution of global talent management strategies.

As higher-value-added activity and business functions are located in emerging economies, the challenge of maintaining managerial control over these disparate elements will increase. Hub-and-spoke systems can help bring central control closer to the local markets while ensuring that it is culturally aligned. These systems also help to maintain a balance between local differences and organizational uniformity when operating across geographies.

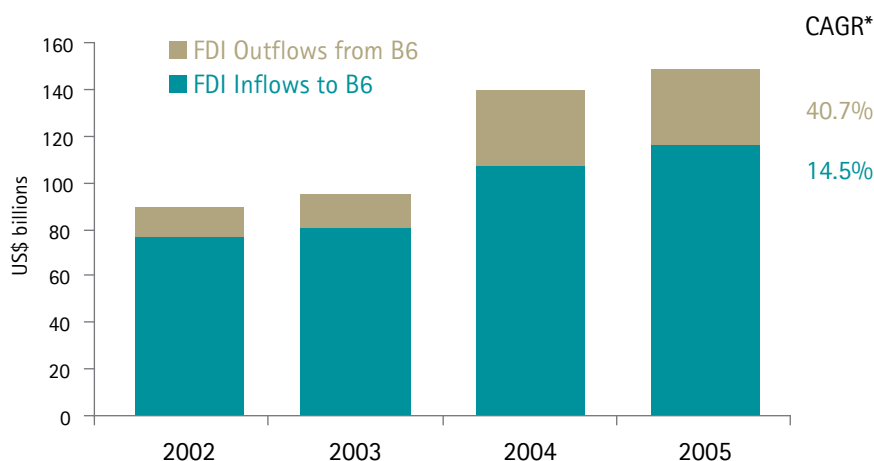
Adapting to the social fabric of society.

Multinationals locating business functions in emerging economies will have to work with local partners and policymakers and take responsibility for issues that may not have been encountered before, such as a high rate of HIV/AIDS among the working population.

3

The Way the Money Goes

Figure 4 – B6 inflows and outflows 2002–2005 (US\$ billions)



*Compound Annual Growth Rate

B6: Big Six = Brazil, China, India, Mexico, Russia and South Korea

In the past, capital flows were characterized by two clear patterns. First, developed economies were the only major outward investors of foreign direct investment (FDI) investing initially in each other's economies and then, over time, in emerging economies. On the other hand, developing economies tended to be net exporters of portfolio capital—the purchase of stocks, bonds and other securities—as investors there sought better and more secure returns in the more sophisticated capital markets of industrialized economies. Today, however, global capital markets are characterized by greater interdependence where flows are becoming larger, more numerous and multi-directional in nature.

Emerging economies as a destination for FDI

Over the last 50 years the focus of developed world FDI has changed in both destination and nature. Initially, multinationals investing abroad did so mainly in other developed economies. In the 1980s and 1990s most multinationals began investing on a large scale in developing economies as the advantages of access to lower-cost labor and untapped consumer markets became apparent.²⁴ In 2005, developing markets attracted about US\$334 billion in FDI, roughly 36 percent of global inflows. The bulk of such investment has gone to developing markets in Asia.²⁵ Factors such as new European Union (EU) membership have also affected capital flows: the Czech Republic, Hungary, Poland and Slovakia, for example, have proved to be attractive locations for automotive production in particular, with average wages being 30 percent of the level in older EU economies.²⁶

Emerging economies as sources of FDI

But while emerging markets have become increasingly important destinations for FDI, those emerging markets are now becoming significant sources of outward investment (see Figure 4). In particular, there has been a huge expansion of 'South-South' capital flows (i.e. between developing economies), so much so that these flows are now growing more rapidly than those between developed and developing economies.

FDI from emerging economies increased to US\$133 billion in 2005, 17 percent of the world total.²⁷ Previous Accenture research suggests the prime drivers of this growing trend are a need for sustainable growth; the necessity of expanding capabilities and assets; access to more mature markets; heightened competition at home; and the increased ability to build political influence.²⁸

Who are the new corporate giants?

Ever deepening global integration within the five dimensions identified—talent, capital, resources, consumer markets, and innovation—has given rise to a relatively new player in global markets: the developing-country multinational. The number of emerging-market based multinationals has mushroomed over the past decade or so, with 62 such companies now featuring in the Fortune Global 500 list of the world's biggest companies by revenue, compared with just 20 in 1995. China is home to 20 of the 62, including such names as Sinopec, China National Petroleum, China Mobile Communications and Bank of China.²⁹ Of the others, 12 are from South Korea, six from India, and five each from Mexico and Russia. The emergence of Chinese, Indian and Russian multinationals is notable. In 1995 the Global 500 had included only three Chinese companies, and one Indian company. An alternative ranking of the top 100 emerging-country multinational companies, compiled by the United Nations Conference on Trade and Development (UNCTAD) on the basis of size of assets, puts Hutchinson Whampoa (Hong Kong SAR), Petronas (Malaysia), Singtel (Singapore), Samsung Electronics (South Korea), and CITIC Group (China) as the top five.³⁰ These emerging-market giants are also growing fast, with the top 50 in the UNCTAD ranking increasing their foreign assets and foreign sales by 36 percent and 58 percent, respectively, in 2004.³¹

Where emerging economies are investing

The principal recipients of this new outward direct investment have mainly been other developing economies, generally located within the same region and benefiting from proximity to, and cultural ties with, investor economies. However, China has been the most significant exception to this trend. In 2005, about half its outward FDI went to natural resource projects in Latin America³² and it also invests heavily in Africa's infrastructure to secure future supply of natural resources, itself an increasingly popular sector for investment. Africa is now a target for both emerging and developed market firms. Investors in 15 economies in Africa are almost equally from developed economies (54 percent) and emerging markets (46 percent).³³

Investment by emerging markets into developed economies has also taken off and is expected to intensify in

coming years. Developed economies are attractive to emerging economy multinationals because of the large customer base and sophisticated business environments they offer. As emerging markets move further up the value chain to more advanced goods and services, they need increased access to sophisticated technology and knowledge, high-skilled workers, mature markets and well known brand images. Significant FDI and in particular cross-border mergers and acquisitions (M&A) allow emerging market multinationals to harness these capabilities.

How emerging-market multinationals are going global

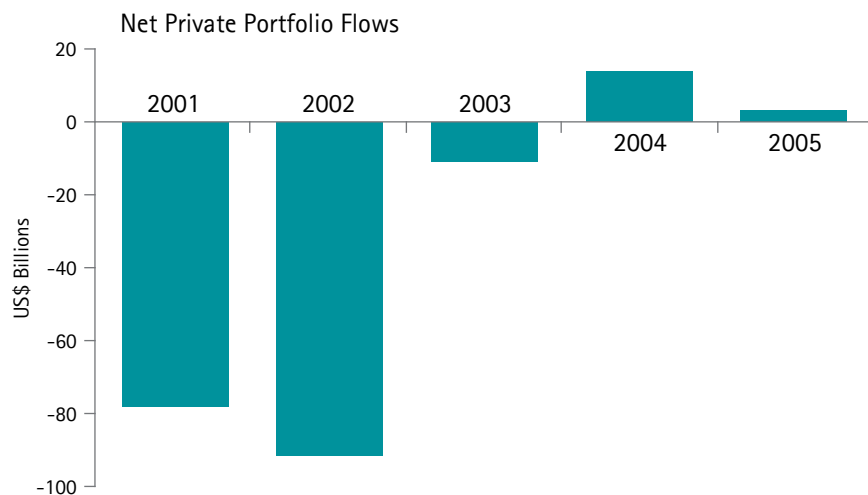
A notable development has been the gradual emergence of cross-border M&A as the dominant vehicle for outward investment in preference to joint ventures and overseas subsidiaries. When Lenovo acquired IBM's personal computer division in 2004, it went from being a relatively

unknown Chinese company to the world's third largest PC manufacturer competing with Dell and Hewlett-Packard. Similarly, India's outward FDI will continue to increase, mainly in the form of cross-border M&A in telecommunications, energy and pharmaceuticals. For example, the Indian conglomerate Tata recently completed deals in the United States (Eight O'Clock Coffee Company), the United Kingdom (Tetley Tea) and Thailand (Millennium Steel). Furthermore, the recent US\$8.1 billion bid by Tata Steel to acquire the Anglo-Dutch company Corus made headlines the world over.

Increased portfolio investment in emerging markets

At the same time as these changes in direct investment, we are witnessing a new dynamic in flows of portfolio capital – purchases of stocks, bonds, and other securities. Traditionally, emerging economies have had high savings rates, but underdeveloped financial

Figure 5 – Developing economies' net private portfolio inflows³⁴



Large net outflows in 2001–2002 change to net inflows in recent years

systems and thin capital markets limited the scope to channel such savings into productive uses. As a result, portfolio investment from developing markets typically flowed to developed markets that were attractive on account of their more sophisticated and secure financial markets. For example, the United States has traditionally been a recipient of portfolio flows from all over the world, with a particularly buoyant bond market. However, in recent years portfolio equity flows to developing economies have increased significantly as their financial systems strengthen and international capital markets become more integrated. This phenomenon can be seen in the upward trend in net private portfolio flows to developing economies (see Figure 5).

New investment opportunities

Portfolio equity flows to developing economies have increased significantly in recent years. In

2005, international investors spent US\$61.4 billion in emerging market equities and in 2006 the value of shares in the Morgan Stanley Capital International emerging market index passed US\$2 trillion for the first time.³⁵ This trend seems set to continue, underpinned by greater investor confidence, unlike in the past when foreign investors quickly fled at the sight of trouble such as the Mexican peso devaluation in 1994 or the Asian crisis in 1997.³⁶

In addition to equities, emerging market debt is also increasingly attractive to investors. Encouraged by favorable global market conditions, governments and private bodies refinanced their debt. Consequently the value of foreign currency bonds issued by governments and the private sector grew to a record US\$131 billion in 2005.³⁷ Forty percent of emerging market debt is now 'investment grade', meaning it can be held in mainstream portfolios, up from just 3 percent 10 years ago.³⁸

The boost in portfolio capital flows to developing economies is driven by an increase in international corporate equity placements in emerging markets and foreign investments in emerging market stocks. Reasons for investing in emerging markets include diversification, the potential for higher returns, increased confidence in the long-term viability of emerging markets and a broader range of investment opportunities. In bond markets it is clear that there is now far less uncertainty about emerging market debt. The bond spreads seen in these economies are progressively more synchronized with US high yield bonds and volatility has declined dramatically.

Greater competition for portfolio capital

As developing economy companies expand, the battle for scarce capital will intensify. Not only is more money from the developing world

flowing into developing economy stock markets; developing economy companies are now choosing to list on developed economy stock markets to achieve greater access to capital. For economies like China and India, where branding is very important, the prestige and market visibility of listing in developed markets is fundamental. Chinese companies are now the NASDAQ's biggest source of new listings, currently making up 29 of the 3,200 companies on the exchange with an additional 10 from Hong Kong.³⁹ The number of non-US listings on the New York Stock Exchange has increased significantly in recent years and it is likely that the number of developing economy companies choosing to list will continue to rise.

Business Implications

Advent of emerging economy multinationals.

Companies such as Tata, Lenovo, Samsung, Haier, Gazprom and LG are already (or will become) household names. Western multinationals are going to face increasing and intensifying competition on both their home ground and the global stage.

Increased competition in, and susceptibility to, global M&A.

As emerging markets develop, they will become stronger competitors for acquiring assets. M&A from B6 and other emerging markets will become increasingly common.

New sources of equity and debt finance.

As emerging markets develop, they will become stronger magnets for portfolio capital. Emerging-market multinationals appetite for financial capital will also increase, with listings and initial public offerings by these companies on the major international bourses becoming more frequent. The combined effect of these trends is that Western multinationals will have to compete for finance against newer, hungrier companies who need capital. On the other hand, as emerging economies grow richer, it is likely that a number of developed economy companies will choose to list on emerging economy stock markets to take advantage of new, potential investors in debt and equity.

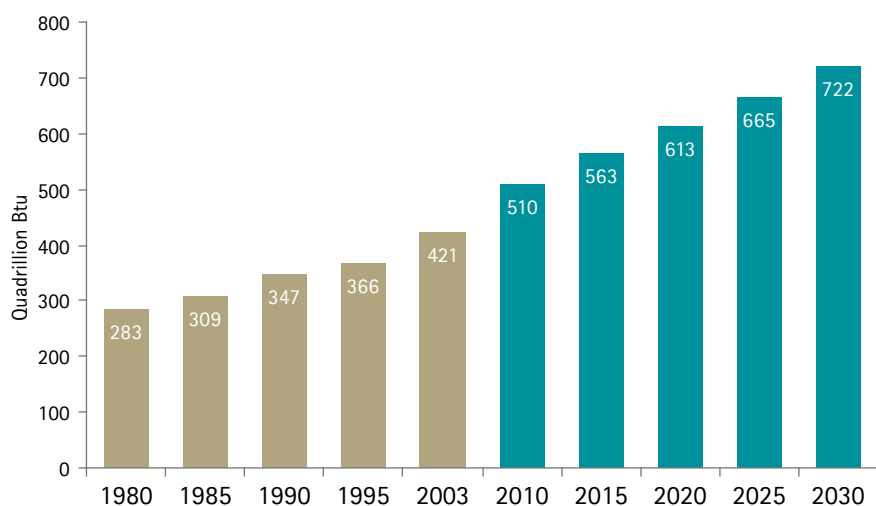
Frontier thinking on foreign ownership and capital movement.

The continuing liberalization of capital markets and further industry consolidation is likely to accelerate the trend in cross-border mergers and acquisitions. The 'true' nationality of capital ownership will become harder to pinpoint and 'national champions' will increasingly fall into foreign hands. This will present a number of challenges for businesses and policymakers. Multinationals making overseas acquisitions will look to articulate the economic benefits of foreign ownership to the local economy. Policymakers will continue to establish a transparent regulatory regime and encourage competition as the openness of capital markets becomes an increasingly important determinant of national competitiveness.

4

The Battle for Resources

Figure 6 – World marketed energy consumption (quadrillion Btu)⁴⁰



Approximate equivalents of quadrillion (10^{15}) British Thermal Units (Btu):
100 Quadrillion Btu (per year) is about 50 million barrels of oil equivalent per day
1 Quadrillion Btu is about 293 billion kWh (kilowatt-hours)

Demand for energy is higher than ever before—in the decade to 2005, world energy consumption increased by 23 percent. Whereas in the past, it would have been the industrialized economies of the developed world that accounted for the majority of this demand, emerging economies are actually responsible for 85 percent of this increase.⁴¹ At the same time, it is emerging economies that are typically becoming the suppliers of primary commodities to meet these global energy demands. For energy supply to match global demand, new sources are being tapped and the battle for resources is intensifying. Many of the world's major energy reserves are located in some of the world's most unstable countries, making the issue increasingly political. And the battle is no longer limited to just energy and power – but has also shifted to include water, minerals and land resources. According to the World Economic Forum, a quarter of recent armed conflicts have involved some struggle over natural resources.⁴²

Demand may outstrip supply

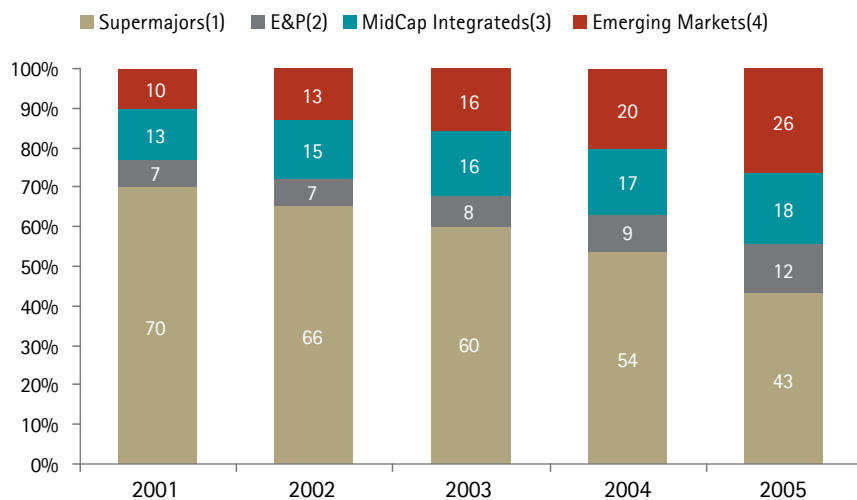
Emerging markets are developing at an unprecedented rate resulting in huge and unparalleled demands for energy and raw materials (see Figure 6). China and India are currently driving the increase and this trend is set to continue, with additional pressure from the other emerging economies. The burgeoning consumer markets of China and India are important contributors to this demand as higher disposable incomes result in greater demand for cars and household appliances. Car ownership may be highest in the United States, but it is growing by 30 to 40 percent each year in China.⁴³ In order to try to meet the imperative of higher demand, at present both China and India are aggressively seeking to secure energy reserves from new sources such as Africa and Latin America.

As a result of this rising demand, resources are becoming increasingly strained. The world's spare oil

capacity has dropped from about 15 percent to 2–3 percent of global supply.⁴⁴ The oil market is increasingly influenced by commodity traders and hedge funds speculating on fears of future disruption, including concerns such as uncertainty over Iran, nationalization of energy assets in Latin America and Russia, and attacks on oil production in the Niger Delta. Since the supply of resources is so heavily intertwined with geopolitical issues the changing pattern of demand is colored by uncertainty and risk.

The implications of the demand for water are as significant as those for demand for energy. Water is a key driver of growth as an input to production in agriculture, industry, energy, transport and for a healthy population. Throughout history, water has been a source of dispute and even conflict between uses and between users at a local, national and international level. As water becomes even scarcer relative to

Figure 7 – Oil companies by share of market capitalization (percent)⁴⁵



Notes

1. Includes ExxonMobil, BP, Royal Dutch Shell, Total and Chevron
2. Exploration and Production: includes ENI, Statoil, Repsol, BG Group, Norsk Hydro, Conoco Phillips, Occidental Petroleum, Marathon and Amerada Hess
3. Includes Encana, Devon, Burlington, Apache, Canadian Natural, Anadarko, Talisman, EOG Resources, Kerr-McGee, XTO, Nexen, Santos and Woodside
4. Includes Gazprom, LUKOIL, Surgutneftegas, Sibneft, Novatek, China PTL, CNOOC, Oil & Natural Gas, Petrobras and PetroChina

demand, there are fears of water becoming an increasing source of conflict. Indeed, the tensions already in play between Egypt and Sudan attest to this potential. Today shortages already affect billions of people worldwide and they are forecast to affect one-third of the world's population by 2025.⁴⁶ Such shortages are often exacerbated by a lack of necessary infrastructure, constraining economic growth and forcing governments to address the issue through improved agricultural practises, and transboundary agreements.

Three competing imperatives:

Economic growth

Economic growth and energy demand are linked, but as the multi-polar world emerges, the strength and direction of that link has been changing. For emerging economies like China and India, their spectacular growth rates have led to huge increases in energy

consumption, fueled by the ever-growing number of consumers. They hunt for energy supplies to ensure future growth and industrialization. Meanwhile, for other emerging countries, like Russia, energy consumption has been the engine of economic growth. For instance, the oil sector in Azerbaijan provided an estimated 90 percent of total export earnings and more than 50 percent of GDP in 2006.⁴⁷

Energy security

Deeper interdependence in energy markets is changing the nature of energy security. Russia wants to ensure 'security of demand' above all for its huge gas monopoly, Gazprom. The Middle East also wants sufficient access to markets and consumers to substantiate future investment and protect national revenues. By contrast, developed economies must ensure 'security of supply' by diversifying their sources. Energy independence has been a long-term goal for the

United States since the 1970s, while India and China and India seek urgently to ensure that they have enough energy resources to power their economic growth and to avoid social instability.

These concerns are reshaping the industry (see Figure 7). Growing resource nationalism riding on the back of high energy prices is beginning to threaten resource supplies. The tightness of spare capacity leaves consumers vulnerable to any external shocks, as seen in the reaction to terrorist attacks on energy installations in the Niger Delta and natural disasters such as hurricanes Katrina and Rita that hit the Gulf of Mexico in 2005. There are also concerns that even though oil may not be running out yet, the availability of cheap oil is. This will only increase the rush to find new cheap sources, spur technological innovations and discover alternative energy resources.

Sustainability

Since the earth's resources are finite, how we best use them is becoming an increasingly complex question. With a growing global population and a higher per capita consumption rate, countries' resource needs are becoming ever more integrated and inter-dependent. In order to support economic development, management of natural resources is essential, coupled with the continued development of sustainable alternatives.

Fears over global warming add an extra dimension to this battle for resources. The effects of climate change are hard to predict but are likely to only further disrupt energy production. For instance, in California, hydropower generation is predicted to fall by 30 percent, as storage lakes dry up, if there is global warming of 4 degrees Celsius.⁴⁸ Governments will look to source more of their energy supplies through renewable means, such as wind, solar and hydro. Politics and governance will become more significant factors in changing society's use of resources.

Business Implications

Diversification of sources and resources.

Diversification of sources allows countries to spread the risks of energy supply shocks and avoids dependency on unstable sources. For example, the rapidly-emerging market in liquefied natural gas allows countries to import gas from distant producers, such as China, at affordable prices. Higher fossil fuel prices means multinationals are investing in alternative and renewable sources of energy such as biofuels, biomass, wind, solar and hydropower.

Increasing importance of environmental impact and sustainability.

Commitments to reduce energy intensity and greenhouse gas emissions will increase the prospect of a bio-economy, in turn tackling climate change issues that place a strain on energy resources. Multinationals have been broadening their valuation models to include both their Socially Responsible Investment and Corporate Social Responsibility efforts as well as their carbon footprints.

Growth in innovation.

Innovation in production efficiency, development of renewable and recyclable goods, and the acceleration of the bio-economy are fundamental across all sectors. Increasingly consumers favor companies and products that they believe to be socially and environmentally responsible. Therefore, multinationals should be aware of the associated benefits of using innovative methods to produce such goods. Resource-intensive companies (such as transportation, automotive and chemical industries) will progressively respond by streamlining their operations and supply chains, and exploring alternative sources for raw materials and energy.

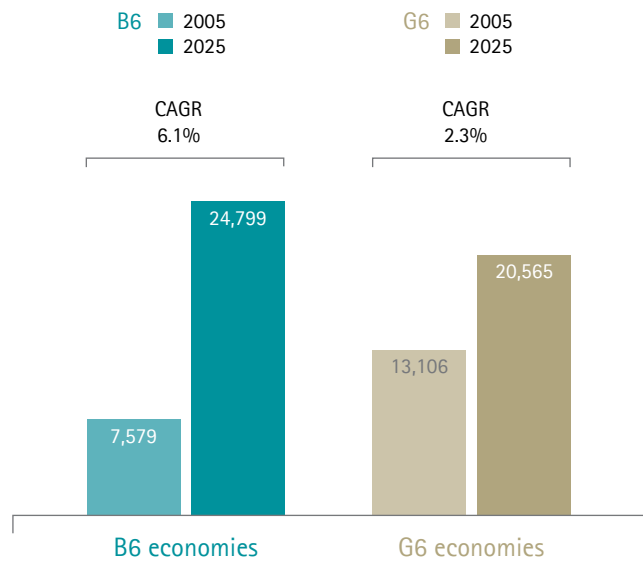
Continued activity of state-backed national energy champions.

National resource producers are currently riding on the crest of high energy prices, but their future is unclear and huge investments are still needed in skills and technology. Oil companies are finding it increasingly difficult to find new energy sources at profitable levels. It is imperative that they deepen their relationships with national resource companies, for instance, by providing key management skills in return for access to their reserves. Licensing and partnerships will become increasingly important.

5

The Emerging Consumers

Figure 8 – Consumer spending in the G6 and B6 (real US\$ billions at PPP)⁴⁹



B6: 'Big Six' = Brazil, China, India, Mexico, Russia and South Korea
 G6: France, Germany, Italy, Japan, United Kingdom and United States
 CAGR = Compound Annual Growth Rate

Figure 9 – Top 15 consumer markets in 2025 (consumer spending: real US\$ billions at PPP)⁴⁹

	2005	2025	CAGR
China	3,088	14,527	8.0%
United States	7,335	12,512	2.7%
India	1,924	4,264	4.1%
Russia	749	2,489	6.2%
Japan	1,780	2,291	1.3%
United Kingdom	1,058	1,707	2.4%
Germany	1,180	1,512	1.2%
Brazil	757	1,465	3.4%
France	917	1,374	2.0%
Italy	836	1,168	1.7%
Mexico	648	1,139	2.9%
Canada	539	1,045	3.4%
Spain	560	945	2.7%
South Korea	413	914	4.1%
Australia	339	592	2.8%
G6	13,106	20,565	2.3%
B6	7,579	24,799	6.1%
World	30,374	54,998	3.0%

The new consumer markets of the emerging world

Consumer spending has traditionally been concentrated in the developed countries of the West. Indeed, in 2005, the G6 economies accounted for close to half of global consumption, despite being home to just one-tenth of the world's population. In contrast, emerging consumer markets have flattered to deceive. Despite two decades of booming growth, the rise of emerging economies has been largely built on a proficiency in supplying low-cost goods and services to Western markets. With a reliance on investment and exports and a traditionally high savings rate, consumption has been slow to take off.

However, as emerging markets become more developed, the influence of the spending power of their populations is increasing, bringing about a fundamental shift in the balance of global

consumption. China is already the biggest market for mobile phones, televisions and, during 2007, cars. India is the biggest market for gold and is set to become the largest clothing market during 2007.⁵⁰ But this is just the tip of the iceberg with emerging market consumers set to embark on what will be a remarkable shopping spree. As shown by Figure 8, consumer spending in the B6 economies of China, India, Brazil, Russia, Mexico and South Korea will by 2025 be greater than that in the G6 economies, at purchasing power parity (PPP).

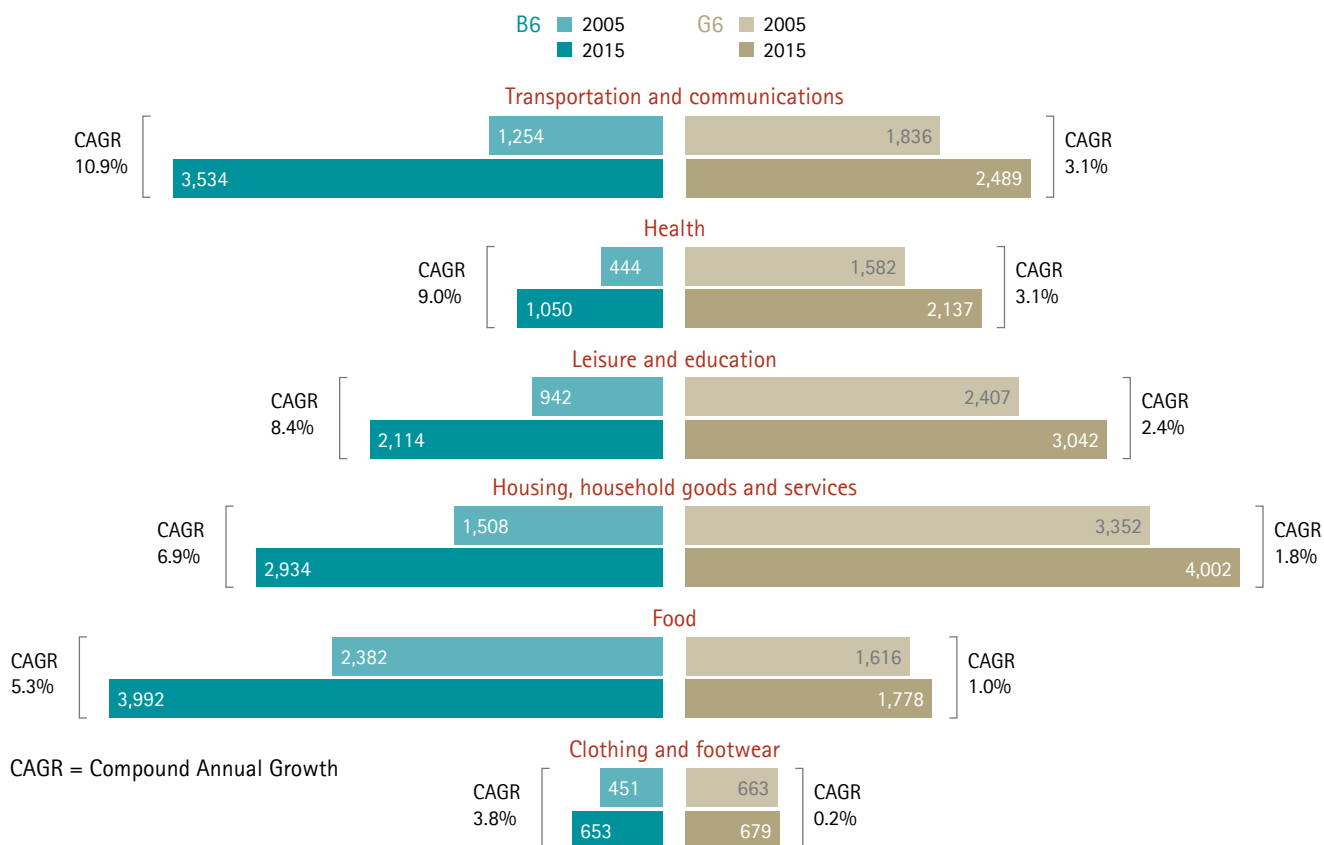
Drivers of growth in consumption

The sheer size of the population in emerging economies captures the imagination. Over 80 percent of the world's six billion people live in emerging economies with China and India each boasting billion-plus populations. Nor is this vast pool of potential customers

standing still. China will double its per capita income in 10 years—five times more quickly than the United Kingdom and the United States did during the industrial revolution. Vast numbers of new consumers will enter the market, while existing consumers will seek more sophisticated products and services. The fastest growth in consumption will be in the burgeoning middle classes—those with earnings high enough to trigger discretionary spending. Our research suggests that, by 2010, China and India will together contain 123 million middle-class households. This is more than the total number of households—not just the middle class—in the United States.

Many emerging economies will see their consumption levels fueled by a considerable 'demographic dividend' as the working-age cohort of their population swells as a proportion of the total. Incomes in emerging economies will also

Figure 10 – Sizing the consumer markets (consumer spending, real US\$ billions at PPP)⁵¹



be boosted by rising levels of employment. Asia is forecast to supply 66 percent of new jobs between 2005 and 2020, with the United States contributing just 3 percent and the European Union contributing 2 percent. These jobs will not just be low-wage. Salaries will be boosted by urbanization and the acceleration in the trend of global sourcing which will shift higher value-added jobs to emerging economies. The rapid economic growth enjoyed in emerging economies will be the primary catalyst underpinning these trends. As consumption takes off, increased output will in turn drive increased employment, wages, and domestic spending, creating a virtuous circle of economic prosperity anchored increasingly in domestic demand.

Saving has traditionally been high in a number of emerging economies. With low welfare safety nets, families put money aside for the costs of illness, unemployment,

education and old age. But there is evidence that purse-strings will be loosened in the coming years, thanks to rising incomes, strengthening social provision and government policies to reduce reliance on growth driven by investment and exports. Consumer spending in emerging economies has also been held back by a lack of access to consumer credit. The use of credit cards—a major facilitator of consumer spending—remains very low in emerging economies. In 2005, for every 100 people in China, India and Russia, there were approximately two credit cards compared with 240 in the United States.⁵² But financial market liberalization across the emerging world will boost the availability and affordability of consumer credit, fueling spending and reducing the savings rate across emerging markets.

Sizing the consumer markets

Overall, the consumer markets of the B6 are forecast to grow at an average rate of 7.4 percent between 2005 and 2015, more than three times faster than those of the G6. The fastest growth in consumer spending will be seen in the transportation and communications sectors (see Figure 10). Transportation spending will be driven by purchases of motor vehicles and the infrastructure needed to support rapid urbanization. Communications will be fueled by the growing penetration of mobile phones and internet services. Growth in healthcare spending is forecast to be the next fastest-growing industry, driven by aging populations and weak public health provision, with the slowest-growing categories being food and clothing. As incomes rise, preferences will shift away from basic needs toward discretionary items.

Accessing the consumer

The ability of companies to profit from the emerging consumer markets will be dictated by their access to these markets. The regulatory environment will be key to this. Although regulation varies considerably by country and industry, the trend is toward greater liberalization of domestic markets. In 2006 all the B6 economies advanced up the World Bank's "Doing Business" ranking, which assesses the impact of regulation on a country's business environment. Businesses will also face the challenge of physically connecting up their operations in emerging economies, with both customers and suppliers. Unreliable power supplies, congested roads and bottlenecks at ports and airports will continue, and are likely to be exacerbated by rapid rates of urbanization over the coming years.

Business Implications

The importance of market share.

With slowing growth and saturation of the more mature markets of the West, the future scale and growth of multinational companies will depend on their success in capturing market share in these new centers of consumer activity. But it will not be easy. While many multinational companies have experience of operating in emerging economies, this has largely been as part of global supply chains serving Western markets. Selling to the emerging market consumer presents a wholly new set of challenges.

Globalization takes on non-Western characteristics.

Early consumerism in emerging economies adopted many Western ideals, brands and products. But we are seeing a definite shift in consumption in emerging consumer markets toward indigenous brands. Part of this is due to the growing availability of goods and services produced locally. We are also seeing a strengthening of national and regional identity and occasional rejection of Western-themed globalization. As consumer markets in emerging economies grow in size and influence, they will start exporting their own brands, fashions, cultures and tastes back to the West at scale.

Adapting to the market.

Western multinationals will need to be prepared to adapt their business models to suit the unique characteristics of each emerging consumer market. Competitive cost structures and pricing will take on a new importance when accessing low-income, price-sensitive shoppers. A premium will be placed on local knowledge.

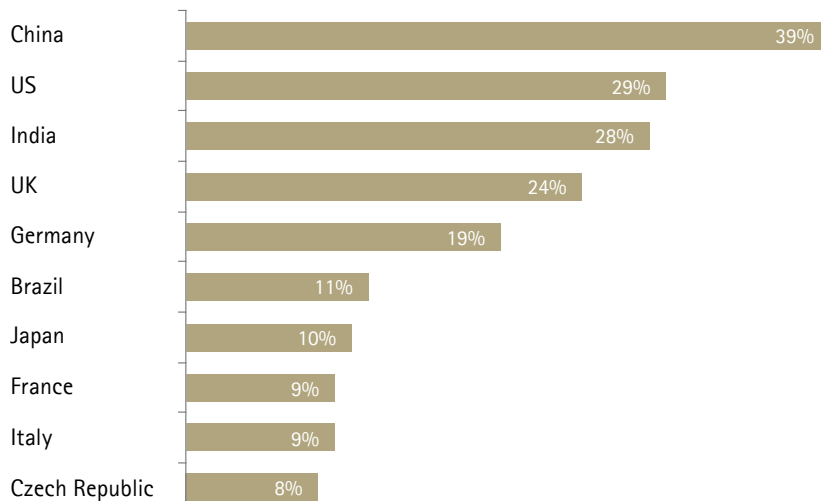
Rise of emerging market multinationals.

Large domestic markets in emerging economies will provide a springboard for emerging market multinationals in their global expansion: witness the rise of China's Haier and South Korea's Samsung and LG. But emerging-market businesses will need to focus on moving rapidly upmarket to meet the evolving needs of their customers. Excellence in research and development, the ability to bring innovations to market, supply chain and talent management will become important domestic differentiators. merger and acquisition capabilities will be sought in the quest to boost market share, acquire valuable brands, and reap economies of scale at home.

6

The New Map of Innovation

Figure 11 – Leading destinations for R&D spending from 2004 – 2007⁵³



Survey of 104 business leaders who were asked to identify the top three most attractive destinations for R&D spending from 2004 to 2007.

The developed economies of the United States, Japan and Western Europe have traditionally monopolized the fields of technology and innovation. Demand generated by dynamic markets, an abundant supply of talented labor and locally-based high-value activities guaranteed their status as world leaders in research and development (R&D). At the other end of the value chain, emerging economies were viewed almost solely as sources of low-cost and low-value activity. However, this view is now shifting. Emerging economies such as India and China are aggressively pursuing policies to move up the value chain, developing from technological imitators to genuine innovators.

This new map of innovation is characterized by geographically-diffused centers of R&D excellence, particularly in China and India, but also in locations such as the Czech Republic and Brazil (see Figure 11). This is attracting the attention of developed-world multinationals,

who are now rapidly diversifying their R&D footprint to capture the benefits of this change. For example, GE and Microsoft now have R&D centers in Bangalore, Wall Street has outsourced sophisticated research on global capital markets to India⁵⁴ and companies such as Eli Lilly, GlaxoSmithKline and Novartis have established drug discovery operations in Singapore⁵⁵ after the government there took active steps to position itself as a prime destination for biomedical R&D and clinical trials.

New patent patterns

The geographical spread of patent applications also points to the dispersion of innovation around the globe. Although Japan (with 371,495 applications), the United States (198,339) and Europe (129,155) had the highest number of domestic patent applications in 2002, countries such as South Korea (76,860) and China (40,346) are catching up fast.⁵⁶ For example, patent applications filed by Chinese

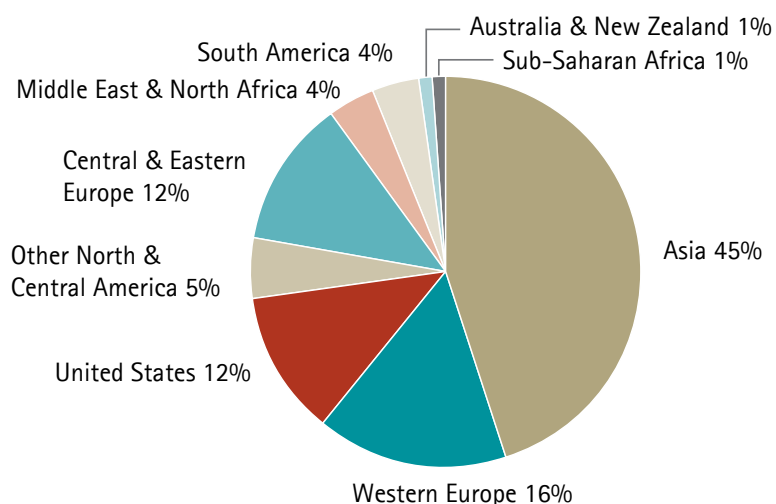
inventors and companies rose by 44 percent between 2004 and 2005⁵⁷ and China currently holds 12 percent of the world's nanotechnology patents.⁵⁸ Further, the absolute numbers of patent applications probably over-emphasize the strength of the United States and Europe. A significant proportion of these applications will have occurred as a result of innovations developed overseas, yet these patents will still be attributed to an organization's home location.

What is driving this globalization of innovation?

i. New talent

Developed economies such as the United States and United Kingdom have traditionally been seen as producing highly talented scientists and engineers as well as attracting overseas skills and expertise, which in turn has contributed significantly to their ability to innovate. The phenomenon of a 'brain drain' into

Figure 12 – Geographic origin of science, technology and engineering graduates (first degree, 2006)⁵⁹



these economies has often depleted the talent pool of rapidly developing economies. However, a shift in the distribution of skills and talent is now occurring on three fronts: the return home of students educated overseas, a greater proportion of science and engineering graduates and cheaper labor costs. Each is augmenting the innovative capacity of emerging markets.

Many students from emerging economies studying in the developed world are now combining their elite education with knowledge of Western markets and management practises, which they then use to build capabilities back home. A recent Accenture study showed that new business leaders in India are often being educated and trained abroad, and then returning to India to set up new companies with a view to operating internationally.⁶⁰ Not only are national governments actively encouraging students abroad to return for work—for example, in Beijing returnees are

offered generous research grants and opportunities to run their own R&D projects—but developing economies are also increasing efforts to improve education and create job opportunities. This is particularly the case in the fields of science, engineering and technology, where Asia and Central & Eastern Europe together account for a larger proportion of graduates in these subjects than the United States and Western Europe combined (see Figure 12).

This endowment is fueling the transition to high-value activity. For example, Poland won at least 25 major technology or research-driven investments in 2005, mainly as a result of the country's thriving universities, which are producing 55,000 graduates per year in mathematics, science, computing, and engineering.⁶¹ A combination of technical skills and cheaper labor costs is luring many Western multinationals to emerging economies. With a highly-skilled

workforce and labor costs that are 60–70 percent lower than in Western Europe or the United States, Poland is currently receiving a great deal of interest from multinationals in the high-tech and automotive sectors with the likes of Motorola, Cap Gemini and Delphi all setting up R&D centers in Krakow.⁶²

ii. Government support for R&D

Innovation is a key driver of economic competitiveness. More and more emerging economies are placing innovation at the heart of their national policies. While the United States remains the standard-bearer in terms of worldwide R&D, governments in emerging economies such as China are increasing investment and relentlessly developing policies to encourage innovation through tax credits and grants. Although the United States was responsible for 32 percent of global R&D spending in 2006, compared with 13 percent for China, R&D spending in China has

been growing at an annual rate of about 17 percent, far higher than the 4 to 5 percent annual growth rates reported for the United States, Japan and the European Union. According to a report from the Organization for Economic Co-operation and Development (OECD), China overtook Japan at the end of 2006 to become the second biggest spender on R&D.⁶³

This emphasis on innovation in policymaking can be seen elsewhere in Asia. In Taiwan, a government initiative to create science-based industrial parks and industrial technology research institutes was a critical factor for the innovation performance of a country whose strengths lie in the semiconductor industry. South Korea, China and India are also committed to growing links between industry and universities to stimulate innovation and turn entrepreneurs into the linchpin of fast-growing technology markets. In all three countries, policies focus on strong top-down efforts to improve interaction between academia and business. India is opening up its education systems and industries to outside investment, and China will strengthen its legal framework and enforcement of intellectual property (IP) rights. Additionally, China plans to invest in a wide range of fields to help leapfrog existing technologies and become more competitive, from energy, aviation and information technology to biotech, nuclear power and even space exploration.

iii. Global standards of Intellectual property

In a recent survey over 38 percent of business leaders cited protection of (IP) as the biggest challenge for globalized R&D—a higher proportion than for any other factor.⁶⁴ Global standards are beginning to be set outside the United States and Western Europe, while some developing countries are trying to align themselves with international standards. India is adopting worldwide IP standards to bolster its trade and attract inward

FDI, particularly in R&D. The Trade-Related Aspects of Intellectual Property Rights (TRIPS), which first came into effect in 1995, is increasingly affording patent protection to end products as well as manufacturing processes, thus spurring competitors to innovate rather than merely copying existing products. Its effect is felt perhaps most strongly in the pharmaceutical industry, where the 'reverse-engineering' of drugs has thereby been reduced. Other markets are creating their own sets of measures to protect IP, thus encouraging investment and ameliorating conditions for joint ventures. For example, China is forming standards of mobile telecommunications and open source software⁶⁵ while Singapore is developing its own international web services standards.

iv. Focus on tomorrow's markets

The emergence of the Asian consumer—increasingly affluent, tech-savvy and image conscious—as well as the sheer size of these markets offers huge potential for companies to sell at scale as well as develop high-end products and services.

A burgeoning middle class and growing markets has always been a key driver for R&D, even in industrialized economies such as the United States, where buoyant consumer demand has acted as a magnet for foreign R&D. Wherever large markets open up to foreign investment, R&D is likely to follow: hence the correlation between countries that have opened their manufacturing sector to foreign ownership and those that are now attracting significant levels of follow-on R&D investment.⁶⁶

Success in emerging markets—where consumers are increasingly receptive to new technologies and services—is being seen as an indicator of a product's chances of success in other markets around the world. In fact emerging markets are proving to be ideal test beds for new products, services and technologies. Nokia, for

example, recently unveiled three new handsets in China, including one that could retail for as little as US\$54⁶⁷ while the Philippines is becoming a test bed for turning the cellular phone into a cash register.⁶⁸

National governments in developing markets are also actively encouraging the push into emerging sectors. The South Korean Government's Frontier 21 R&D Program, launched in 1999, funds 10-year programs aimed at specific market needs and targeted new technologies. The government is firmly committed, through the "Ubiquitous Dream" policy, to ensuring its whole population has access to state-of-the-art mobile communication and digital multimedia broadcasting technologies as well as giving every household an internet-connected robot by 2010.⁶⁹ The Chinese government is also making significant overtures to move up the value chain and lead the world in fast-growing industries. For example Beijing recently listed nanotechnology as a major priority in its national plan for scientific development, citing it as an area where they could potentially leapfrog the developed world.⁷⁰

Business Implications

R&D will become more dispersed.

In a world of dispersed innovation, companies seeking high performance will increasingly look to deconstruct and distribute their R&D functions according to the location of specialization across different parts of the globe. For example, in the future we may see a Japanese automotive company building competitive advantage by carrying out pure research in the United Kingdom, conducting R&D on chassis design in Poland, while their labs in Brazil search for the next innovation in biofuels and a hub in Taiwan develops the latest software for satellite navigation systems.

Integration within local networks of innovation is essential.

Tapping into the innovative potential of emerging economies will depend on the ability to build links with local universities, think tanks and government. Multinationals should aim to work with policymakers in order to bolster local infrastructure and create an enabling environment for continued innovation.

Local competitors are a formidable challenge.

Cheaper cost structures, local knowledge and relationships provide incumbents from emerging economies with an inherent advantage in their own markets. With a growing consumer base at home and a conscious push into high-value activity, these multinationals will be able to use strong economic growth in domestic markets as a springboard for global expansion—challenging developed world multinationals both at home and abroad.

The new consumer has different needs.

Burgeoning consumer markets in the rapidly-developing world offer an immense opportunity for both incumbent and developed-world multinationals. As emerging-market consumers become more influential, their ability to shape global tastes and product development will grow. Consequently it will be important for businesses to recognize the inherent difference in their tastes and lifestyles, and not only adapt but also develop new products and services to serve the needs and wants of this new wave of consumers.

Flexible thinking is imperative.

The next innovation or cluster of innovation may come from areas that were previously off the radar of most business executives. The challenge is not simple: multinationals need to anticipate the next big technological innovations as well as their economic geography. Successful companies will be those who are prepared to change attitudes and approaches as well as plan for uncertainties, with an open mind about geographical and organizational implications.

7

Achieving High Performance in a Multi-Polar World

The advent of a new and deeper phase of globalization characterized by multiple poles of economic power and unprecedented levels of interdependence means that the multinational of the future—whether from the East or West—is likely to look very different from the one we know today. Of course the evolution of the multi-polar world will not happen in linear fashion, so there can be no set formula for success. However, Accenture research indicates that high-performance businesses will be characterized by a clear market focus and positioning, a set of distinctive capabilities, and an approach to people and values (or 'high-performance anatomy') uniquely adapted to the new realities.

Market focus and positioning

Anticipating shifting locations of comparative advantage

High performance in a multi-polar world will require an ability to adjust market focus in response to shifting patterns of comparative advantage across geographies, as different countries become relatively more or less attractive as markets for products and services or as sources of talent, capital and innovation. The concept of a national market will begin to disappear as geographic boundaries become more permeable. Greater interdependence will also mean more challengers appearing more quickly and competing in more sections of the value chain.

Organizing for value creation

Too many companies remain stuck to traditional operating models arranged by geography that fail to recognize the dramatic differences in market opportunities, needs and management challenges. Successful companies will increasingly be segmented by value creation, not geography. With the rise of the multi-polar world and increased economic

integration, national and even regional boundaries define less and less of a company's mindset. This approach would see, for example, mature markets such as Germany and Japan grouped together and sources of future growth, such as China and Brazil, as another grouping despite their relative geographic location. It would imply companies viewing their workforce through a skills and mobility lens. For example, companies will come to regard, and to manage, their high-skilled employees as one workforce—Chinese and US engineers, for instance, having more in common than US engineers and US administrators. Talent management strategies will be crafted accordingly. Companies that grasp the implications of the multi-polar world will also look to deconstruct their innovation value chain, stratifying locations by their suitability for different stages of the innovation function—discovery, basic research, and development—and by their competitive advantage in new and emerging industries. Thus China could simultaneously be a location for basic manufacturing in cars, contract research in pharmaceuticals, and advanced research in emerging areas such as biotech and nanotech.

Distinctive capabilities

Simple on the inside, differentiated on the outside

The world's largest companies are getting even bigger. Companies such as ExxonMobil, Citigroup, GE, Microsoft and Toyota are reaping economies of scale and of scope in the multi-polar world, creating a new breed of mega-institution. But with growing size comes growing complexity. As these companies continue to expand and enter new markets, their greatest challenge will be to simplify their global operations internally while at the same time differentiating their products and services to serve the diverse markets of the multi-polar world.

People and values

Diversity of leadership

With significant operations outside the traditional triad economies, having a diverse leadership team with knowledge spanning disparate markets is important. To be successful, companies need to move away from the traditional US and Europe-centric view of international business. Lenovo, which acquired IBM's personal computer business in 2005, is one of a new breed of global companies, driven by the emergence of the multi-polar world. Today, Lenovo is a New York-based company, traded on the Hong Kong stock exchange, carrying out research in North America and Japan and led by a management team with a mixture of US and Chinese executives.

Maintaining core values

At the same time, core values will need to be maintained and strengthened. Companies such as Citigroup and GE each now employ well over 100,000 people. Companies will face the challenge of retaining core values and corporate identity throughout huge workforces across many countries, often composed of virtual teams. The need for properly articulated global identities, which can translate easily into local contexts, has never been greater.

References

- ¹ Economist Intelligence Unit (EIU) labor force projections; Accenture analysis.
- ² The Economist, 'More of everything', 2006.
- ³ EIU; Accenture analysis; comparison at market exchange rates.
- ⁴ Purchasing power parity adjusts for differences between countries in the price of a standard basket of goods and services.
- ⁵ United Nations Conference on Trade and Development (UNCTAD), World Investment Report 2006, Annex A, Table A.1.4, p.268.
- ⁶ UNCTAD, World Investment Report, 2006, Overview, p.11.
- ⁷ World Trade Organization Press Release 455, 'General Council approves Viet Nam's membership', 7 November 2006.
- ⁸ Katinka Barysch, 'The EU and Russia: from principle to pragmatism', Centre for European Reform, November 2006.
- ⁹ UNCTAD, World Investment Report 2006, Chapter 1, Table 1.13, p.31; World Investment Report, 1997, Ch.1 pp 28-34.
- ¹⁰ UNCTAD, World Investment Report 2006, Chapter 1, Table 1.17 p. 34.
- ¹¹ EIU; Accenture analysis.
- ¹² UNCTAD.
- ¹³ Adecco, 'Offshoring and the global labor market', August 2006, p.2.
- ¹⁴ National Association of Software and Services Companies (NASSCOM).
- ¹⁵ International Institute for Management Development (IMD) World Competitiveness Yearbook 2006, p.50.
- ¹⁶ EIU.
- ¹⁷ American Electronics Association (AeA), 'Losing the Competitive Advantage?', 2005, p.6.
- ¹⁸ BusinessWeek Online, 'Mexico: Pumping Out Engineers', May 2006.
- ¹⁹ USA Today, 'Intel to invest \$1 billion in Vietnam as country strives to raise high-tech profile', November 2006.
- ²⁰ Center for Strategic and International Studies (CSIS), 'The Graying of the Middle Kingdom', April 2004, p.10.
- ²¹ The Economist, 'Turning Boomers into Boomerangs', February 2006.
- ²² The Economist, 'A survey of talent', October 2006, p.9.
- ²³ Adecco, 'Offshoring and the global labor market', August 2006, p.16.
- ²⁴ METI—Ministry of Economy, Trade & Industry <http://www.meti.go.jp/english/information/downloadfiles/cw91221e.pdf>
- ²⁵ UNCTAD, World Investment Report 2006, "FDI from Developing and Transition Economies: Implications for Development", Annex Table B.1.
- ²⁶ World Investment Report, 2006, p. xxii.
- ²⁷ UNCTAD, Op. cit p.18. The figure is US\$120 billion if FDI from offshore financial centers is excluded.
- ²⁸ Accenture, 'India Goes Global', www.accenture.com/forwardthinking, 2006.
- ²⁹ <http://money.cnn.com/magazines/fortune/global500/2006/countries/A.html>; Accenture analysis.
- ³⁰ UNCTAD, World Investment Report 2006, Ch. I, pp.31 – 32.
- ³¹ Ibid.
- ³² International Financial Corporation, March 2006.
- ³³ Ibid.
- ³⁴ World Bank, Global Development Finance 2006.
- ³⁵ Includes 25 emerging market country indices: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Israel, Jordan, Korea, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand and Turkey.
- ³⁶ The Economist, October 2006.
- ³⁷ World Bank, Op. cit. p.45.
- ³⁸ The Economist, Op. cit. p.48.
- ³⁹ NASDAQ, Press Release, October 23, 2006.
- ⁴⁰ Energy Information Administration.
- ⁴¹ The Economist, 'More of Everything', September 2006.
- ⁴² World Economic Forum, Global risks at a glance, 2004.
- ⁴³ Chicago Tribune, 'Oil Safari: A Travelogue Addiction', July 2006.
- ⁴⁴ Financial Times, 'Eyeing energy supplies from opposite ends of a telescope', July 2006.
- ⁴⁵ Wall Street Research.
- ⁴⁶ World Economic Forum, Op cit.
- ⁴⁷ EIU Viewswire, Azerbaijan country Outlook, January 2007.
- ⁴⁸ Stern Review, 'The Economics of Climate Change', October 2006, p.126.
- ⁴⁹ EIU; Accenture analysis. Purchasing power parity adjusts for differences between countries in the price of a standard basket of goods and services.
- ⁵⁰ EIU.
- ⁵¹ EIU; Accenture analysis.
- ⁵² Euromonitor.
- ⁵³ EIU, 'Scattering the seeds of invention. The globalization of research and development', 2004, p.9.
- ⁵⁴ Newsweek International 'Education: A Learning Curve', February 28, 2006.
- ⁵⁵ Biopeer, 'Asia races ahead in R&D, biotech', April 13, 2006.
- ⁵⁶ World Bank. World Development Indicators 2005, Chapter 5 Table 5.12.
- ⁵⁷ <http://ifcblog.ifc.org/emergingmarketsifc/trends/index.html>.
- ⁵⁸ Accenture Outlook article 'Moving up the value chain', September 2006, p.50.
- ⁵⁹ Science and Engineering Indicators, National Science Foundation, 2006.
- ⁶⁰ Accenture, 'India Goes Global', www.accenture.com/forwardthinking, p.10.
- ⁶¹ Business Week, 'Looking For Innovation In The East, Where the Engineering Pool is Deep', December 12, 2005.
- ⁶² Ibid.
- ⁶³ Financial Times, "China overtakes Japan for R&D", December 3, 2006.
- ⁶⁴ EIU, Op. cit. p. 3
- ⁶⁵ Accenture Outlook article 'Moving up the value chain', September 2006, p.49.
- ⁶⁶ EIU, Op. cit. p. 7.
- ⁶⁷ Accenture Outlook article, 'Moving up the value chain', September 2006, p.49.
- ⁶⁸ World Economic Forum, 'World Economic Forum on East Asia', June 2006 Report, p11.
- ⁶⁹ UK Department of Trade and Industry, 'Global Watch Service', 2006. <http://www.globalwatchservice.com/pages/ThreeColumns.aspx?PageID=148>.
- ⁷⁰ Wall Street Journal Online, 'China's Nanotechnology Gains Have U.S. Looking Over Its Shoulder', September 2006.

Copyright © 2007 Accenture
All rights reserved.
Accenture, its logo, and
High Performance Delivered
are trademarks of Accenture.