



The Emerging Global Labor Market

June 2005



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The Emerging Global Labor Market



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Preface

The *Emerging Global Labor Market* series is the end product of a year-long project by the McKinsey Global Institute (MGI), working in collaboration with our colleagues in McKinsey offices and practice groups around the world. This research builds on our extensive work on offshoring, global industry restructuring, and the impact of multinational company investment in developing countries. It spans detailed cases of eight industry sectors (automotive, health care, insurance, IT services, packaged software, pharma, retail, and retail banking) and an analysis of the available talent pool in 28 low-wage countries and another 8 mid- to high-wage ones. It also includes the Location Cost Index, a tool for companies to evaluate location attractiveness based on six groups of criteria: labor cost, vendor landscape, market potential, risk profile, business environment, quality of infrastructure.

MGI Fellows Martha Laboissière from McKinsey's São Paulo Office and Jaeson Rosenfeld, previously from McKinsey's Boston Office, worked closely with me to provide leadership to this project. The project team also included MGI Fellows Robert Pascal from McKinsey's North America Knowledge Center in Boston, Charles de Segundo from McKinsey's London Office, Sascha Stürze from McKinsey's Berlin Office, and Fusayo Umezawa from McKinsey's Tokyo Office.

We have benefited enormously from the extensive input received from McKinsey's global network of industry and functional experts, especially Ajay Dhankhar, Detlev Hoch, Chris Ip, Noshir Kaka, Krish Krishnakanthan, Glen Mercer, and Anupan Sahay, and from our external Academic Advisory Board, which included Martin Baily, senior advisor to MGI and senior fellow at the

Institute for International Economics and formerly Chairman of the Council of Economic Advisors to President Clinton; Olivier Blanchard at the Massachusetts Institute of Technology; and Richard Freeman at Harvard University.

Tim Beacom, MGI's dedicated research and information specialist, Nitin Seth from McKinsey's India Knowledge Center and Vivien Singer from McKinsey's North America Knowledge Center in Boston provided essential research support. Susan Lund and Gina Campbell provided thoughtful input and editorial support. Moreover, Deadra Henderson, MGI's Practice Administrator, Terry Gatto, our Executive Assistant and Rebeca Robboy, MGI's External Relations, supported the effort throughout.

As always, the findings and conclusions draw from the unique perspectives that our colleagues bring to bear on the sectors and countries researched here. These perspectives are a product of intensive client work with the world's leading firms. They are supplemented by in-depth analytical work and extensive interviews and dialogues with executives, government officials, and other leading thinkers. As with all MGI projects, this work is independent and has not been commissioned or sponsored in any way by any business, government, or other institution.

Our aspiration is to provide a fact base to the public debate on offshoring and the emerging global labor market to enable policy makers and business leaders to make more informed and better decisions.

Diana Farrell
June 2005

Additional Acknowledgements

Beyond the project contributors already mentioned in the preface, we would also like to explicitly acknowledge McKinsey colleagues, executives and experts around the world who contributed specifically their industry, local market insights and knowledge to this study. To those who chose to remain anonymous we also extend our gratitude. McKinsey & Company's unparalleled network is an essential component of any McKinsey Global Institute effort.

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Additional Acknowledgements

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Additional Acknowledgements

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Guiding Principles

Any job that is not confined to a particular location has the potential to be globally resourced, or performed anywhere in the world. Broadly speaking, this includes any task that requires no physical or complex interaction between an employee and customers or colleagues, and little or no local knowledge.

Such jobs can be performed wherever a company deems most attractive. A company may choose to have a particular location insensitive job performed in the demand market (that is, in the market in which the resulting output is sold), in a border zone (nearshore), or remotely (offshore). Therefore, not all location insensitive jobs will move offshore.

We evaluate only service sector jobs. Although manufacturing jobs may be insensitive to their location as well, this study focuses on service jobs, whether they are in service sectors or in a back-office service function (e.g., accounting) in a manufacturing sector.

We focus on the demand for low-wage employment from high-wage countries. To estimate potential demand for globally resourced labor, we treat countries as neither inherently on the supply side nor inherently on the demand side in the global labor market. However, since cost is a major determinant of companies' location decisions, developed countries are most likely to provide the bulk of demand for offshore labor, and developing countries the bulk of supply. When we evaluate the actual rate of offshoring today and how fast it will grow, we examine only the demand for low-wage labor from high-wage countries.

We assume that demand for labor for a particular activity is the same onshore and offshore. In reality, capital/labor tradeoffs and increased service levels may cause high-wage countries to seek more labor in low-wage countries than they would for performing the same activity in the demand market. Productivity differences between the original location and the new location may also influence demand for labor. Since these effects can be either positive or negative and tend to level over time, our default assumption is that the number of FTEs¹ needed for an activity is the same whether located onshore or offshore.

For the demand evaluations we do not consider any supply constraints. All evaluations are made under the assumption that global supply will be able to meet demand. Actual supply conditions are examined in the second report in this series, "The Supply of Offshore Talent in Services".

¹ Full time equivalent

Introduction

Offshoring has rapidly become part of the everyday social lexicon. Conflicting and sensational reports of developed-world companies moving jobs to emerging markets like India and Brazil are now a staple of the news media and political debate.

The trend alarms many observers. Some believe that almost any job is subject to dispatch abroad, and that soon the developed world will lose even high-paid, professional service jobs that previously were not at risk: "If you can describe a job precisely, or write rules for doing it, it's unlikely to survive. Either we'll program a computer to do it, or we'll teach a foreigner to do it."¹ Others claim that offshoring white-collar jobs in R&D and elsewhere will erode one of the main sources of competitive advantage for developed countries, and eventually reduce their standard of living. They point to offshoring as a key cause of weak employment growth in the United States, maintaining that jobs lost abroad will not return soon. Swayed by such arguments, policy makers on both sides of the Atlantic have adopted or are now considering legislation that would penalize companies for offshoring jobs and prohibit any state-funded projects from being performed abroad.

But there are equally forceful proponents of offshoring. They argue that offshoring increases company productivity and profits, bringing benefits to their home economies. They say it represents a well-functioning global free market in

¹ David Wessel, "Barbell effect—the future of jobs: new ones arise, wage gap widens," *Wall Street Journal*, April 2, 2004.

labor: "arguing that [offshoring] hurts is arguing that free trade hurts."² They also suggest it affects only a tiny proportion of jobs in developed countries, and accelerates economic growth in the countries hosting offshore employment.

A big problem in this debate has been the shortage of hard facts with which to resolve conflicting arguments and reach a clearer understanding of offshoring's potential impact on the global economy. The purpose of the research described in this report is therefore to provide this fact base and help bring more clarity to the discussion.

For reasons described below, our research has concentrated on the offshoring of service jobs rather than jobs in manufacturing, and on jobs offshored from the United States and Western Europe to low-wage markets. The report's findings should help companies and policy makers in both developed and emerging markets to address the different issues raised for them by offshoring.

This introduction examines the context for our research, defines terms used in the report, explains the report's scope, and introduces the questions covered by each of the report's three sections.

CONTEXT FOR THE RESEARCH

Relocating jobs is nothing new. As communications have improved, companies have migrated jobs in high-labor-cost areas to cheaper and less restrictive labor markets. Initially they moved jobs within countries. For example, many manufacturing plants in the Northeastern United States shifted to the South and Southwest during the 1980s to take advantage of lower infrastructure costs, a less unionized workforce, and tax incentives. Then improving information and communication technologies made it possible for companies to disaggregate the value chain and outsource either entire processes or pieces of them to other companies in the same country. Numerous companies now provide other firms with technology support, software development, transactions processing, accounting, human resources management, and other tasks.

² Timothy Aepfel quoting Haseeb Ahmed in "Leadership (A special report) — Offshore face-off: moving jobs overseas can cut a company's costs; But is it bad for the U.S. economy? Two economists debate the issue," *Wall Street Journal* May 10, 2004.

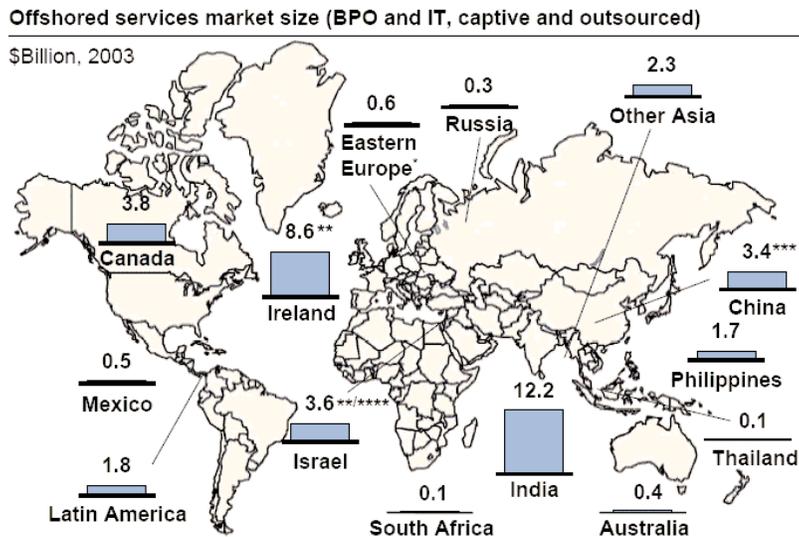
Recently, a confluence of factors has made it possible for companies to relocate or outsource their service activities even farther afield, to lower-wage locations offshore. These factors include further liberalization, improvements in information technology, a decrease in the perceived risk of operating in developing countries, and a shortage of labor in developed countries.

Ireland was one of the first offshoring locations, but emerging markets such as India and the Philippines were fast followers. Exhibit 1 shows the approximate value of offshore services in countries that supply them.

When companies decide where to locate a particular activity, they have to weigh the feasibility of performing it in a different location, away from the home market, against the benefits offered by performing it in that specific location, such as economies of scale and low labor costs.

Exhibit 1

INDIA AND IRELAND ARE THE DOMINANT PRODUCING COUNTRIES



* Includes Poland, Romania, Hungary, Ukraine, and Czech Republic.
 ** Primarily composed of MNC captives.
 *** Estimate, based on total Chinese BPO and IT services revenue (7.8) minus domestic demand for IT services (4.4).
 **** Estimate, based on 2001 market size of 3.0 and assumed growth rate of 20% p.a.
 Source: Software Associations, U.S. country commercial reports; press articles; Gartner; IDC; Country government Web sites; Ministry of Information Technology for various countries; Enterprise Ireland; NASSCOM; McKinsey Global Institute analysis

In the 1990s the lowering of bandwidth and telecommunications costs made many services less sensitive to their location. Manufacturing was similarly affected—better communication made it easier to operate a remote manufacturing location—but to a lesser extent, because cheaper communications didn't do much to help manufacturers with the costs of transporting their physical inputs and outputs. At the same time, the risks, both real and perceived, of locating service activities in developing countries, were lowered. The successes of early movers and supporting measures taken by governments in emerging markets, for example, to protect intellectual property, made other companies more confident of moving their services to these locations.

As companies continue to learn how to manage globally dispersed processes, the exact location of many functions will matter less and less. Already, a great many business processes can be performed remotely, and several can be performed anywhere in the world. A customer service call can be answered, an MRI can be read, and R&D can take place remotely. But how many such processes are performed remotely today? How fast is that number growing? To begin answering such questions, we need to define more precisely the options facing the companies driving this trend.

DEFINITIONS

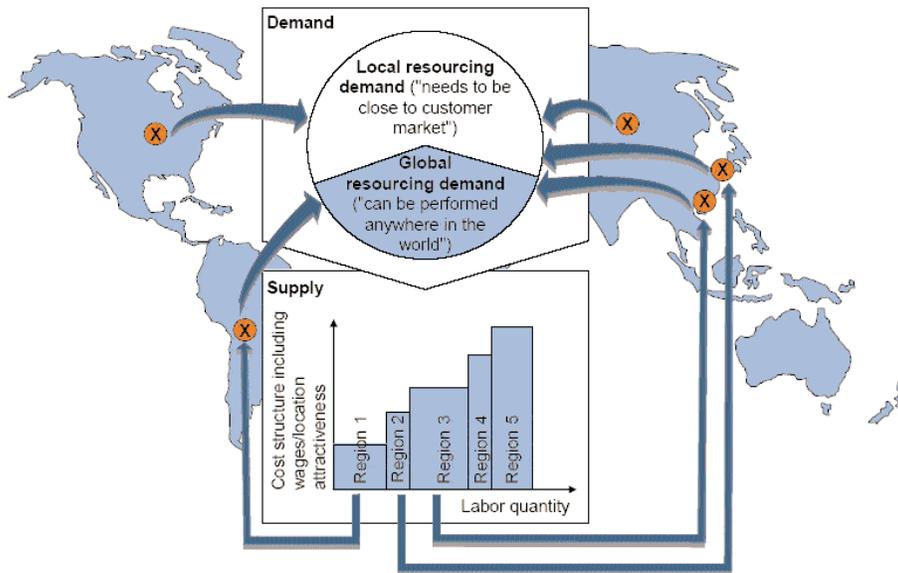
We define as "global resourcing" the process a company goes through to decide which of its activities could be performed anywhere in the world, where to locate them, and who will do them.

Any activity that is not constrained by the need for customer contact or local knowledge or by complex interactions is subject to global resourcing: it can be performed wherever a company deems most attractive (Exhibit 2). An obvious example of such an activity is answering customer service calls for a bank; these calls can be answered just as easily in Chicago, Dublin, or Manila.

Having identified services that could be performed remotely, a company faces two sets of decisions illustrated in the matrix in Exhibit 3. First, should it "offshore" those services, by which we mean perform them in another country outside the market where they are sold? Or should it perform them "onshore,"

Exhibit 2

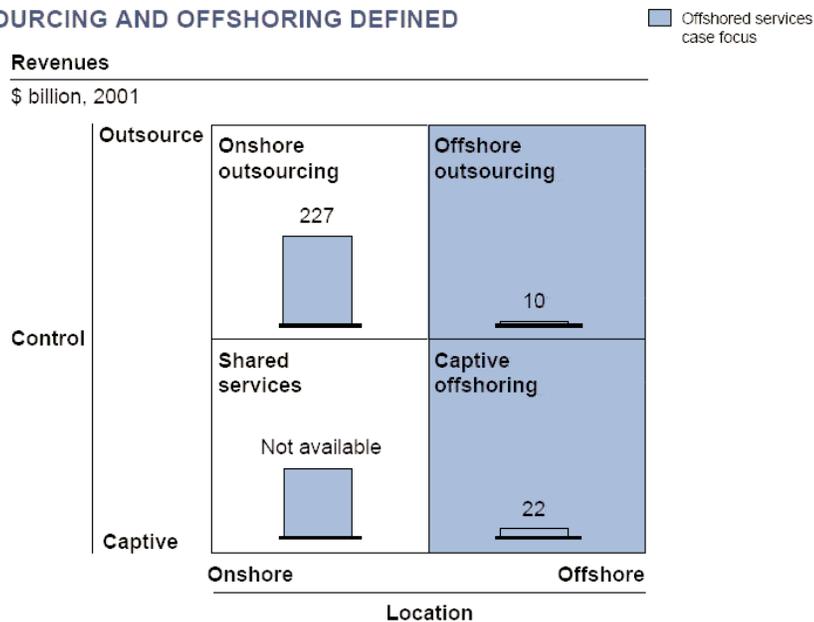
GLOBAL RESOURCING ENTAILS CHOOSING THE OPTIMAL LOCATION TO PERFORM PROCESSES THAT COULD BE LOCATED ANYWHERE



Source: McKinsey Global Institute analysis

Exhibit 3

OUTSOURCING AND OFFSHORING DEFINED



Source: Gartner; IDC; Aberdeen Group; UBS Warburg; Nasscom; U.S. import-export data; McKinsey Global Institute analysis

in the same market in which it sells them?³ And, second, should the company perform those activities in a wholly-owned "captive" unit? Or should it "outsource" them, by which we mean buy them from a third party?

The following are examples of location decisions that fall into each quadrant of the matrix:

- Wells Fargo operates call centers for its business units in several locations in the United States, including Utah and California. This is a captive onshore activity.
- Halliburton outsources software applications management to Accenture in the United States. This is an outsourced onshore activity.
- DHL, a German company, locates its European ITservices center in Prague. This is a captive offshore activity.
- The South African Depository System has its software application development performed by TCS, an Indian firm. This is an outsourced offshore activity.

The main focus of our study will be to understand the shift from "onshore" to "offshore" locations, although we will also touch on the "captive" versus "outsourced" decision. We also limit our attention to jobs that are relocated from high-wage to low-wage countries, even though the reverse process also occurs. For instance, R&D centers are often located in the United States even though they serve many countries, including developing ones.

Many service activities are labor intensive, so companies would benefit if they could offshore them to places with lower labor costs. But not all services can be offshored: some are much more sensitive to their location than others. Computer programming, for example, is relatively location insensitive. It can be done just about anywhere, because computer code can be cheaply and instantaneously "shipped" via the Internet to and from virtually any location in the world. At the other end of the spectrum comes services like haircuts, which have to be done close to the customer.

It is not necessarily rational for companies to transfer all location insensitive activities offshore. Consider server maintenance for United States companies.

³ The term "nearshoring" means offshoring to a country near the home market.

Even though server maintenance could be relocated elsewhere, that may not make sense because the United States has in place a better infrastructure and lower risk levels for server maintenance than other locations (this example will be explored in more detail in our IT services case).

Regulatory or organizational factors may also prevent a company from relocating services offshore. For instance, an insurance company might want to relocate its US property and casualty operation to a developing country; however, industry regulations require some of these services to be performed by a registered insurance agent. Since it is not possible to gain certification as a US agent in a foreign country, the activity has to remain in the US. Organizational factors play a part in the decision too. A software company might achieve lower wage costs by offshoring certain lower-end elements of its software development process. However, the company's process is well-developed and understood within the organization, and its smooth working depends on all members of the development team being in the same place.

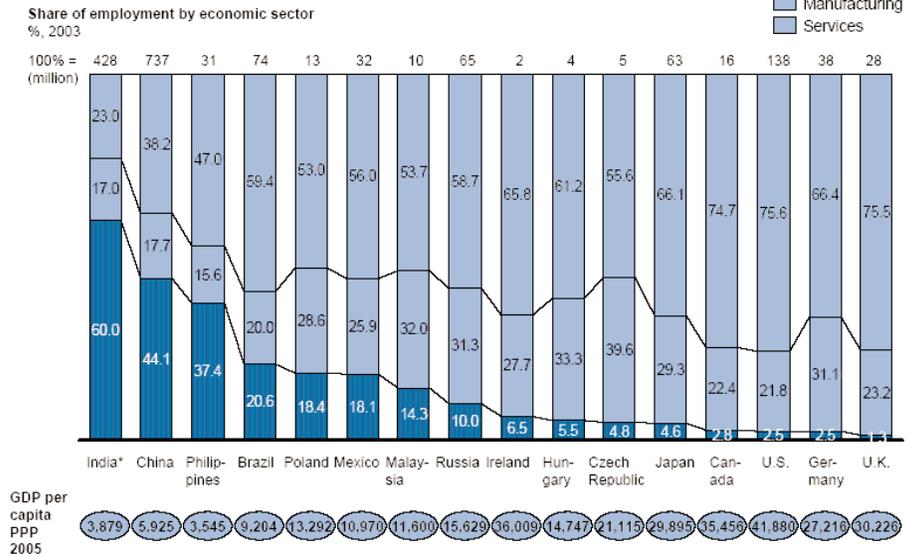
WHY WE FOCUS ON OFFSHORING SERVICES TO DEVELOPING COUNTRIES

Within the universe of jobs that are not constrained to one location, the focus of this report is the offshoring of service jobs from developed economies to developing markets. This is the issue that has dominated both the media and political debate, and for good reason. The service sector in developed countries supplies most jobs and the bulk of many countries' positive trade balances, and the trend toward offshoring jobs is growing fast. An additional reason for our focus on this area is the absence of data on its effects on the individuals, companies, and countries that provide offshored service labor.

The service sector is the biggest source of employment in developed countries (Exhibit 4), because they have already experienced the gradual shift in employment from agriculture to services that occurs as a country grows its GDP per capita. And while world trade has been growing at a brisk 6.9 percent annually for both services and manufacturing from 1980 to 2002, the offshoring of services to emerging markets, though still small, has been growing even faster (Exhibit 5). It is projected to grow at 30 percent annually from 2003 to 2008 (Exhibit 6). This would increase its share of services trade from 3 percent to 10 percent, making

Exhibit 4

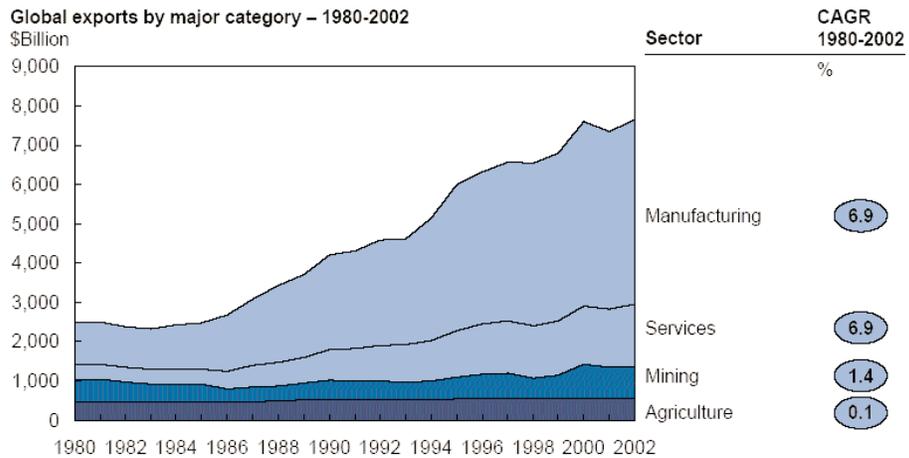
THE SERVICE SECTOR PROVIDES THE BULK OF EMPLOYMENT IN HIGH-WAGE ECONOMIES



* Shares as of 1999.
Source: ILO; Global Insight WMM; CIA World Factbook

Exhibit 5

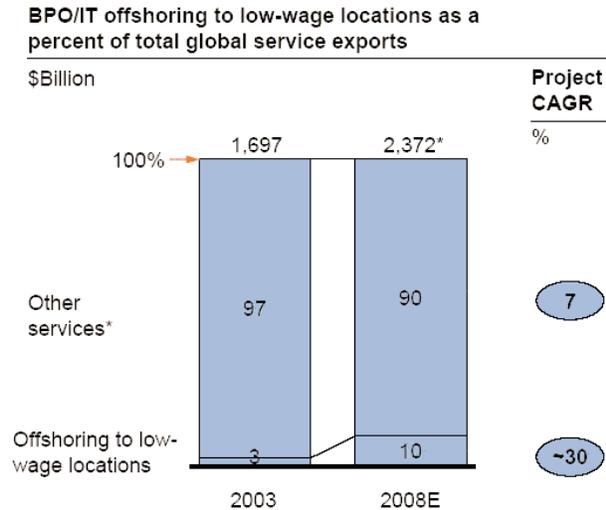
GLOBAL SERVICES AND MANUFACTURING TRADE HAVE GROWN RAPIDLY OVER THE LAST 20 YEARS



Note: Exports were used to measure global trade. In addition, the data are in nominal dollars since no deflators were available from the WTO for services trade.
Source: WTO; "International Trade Statistics 2003"

Exhibit 6

OFFSHORING REPRESENTS AN EVEN FASTER GROWTH SEGMENT OF TRADE



* Estimated at 6% annual growth from 2002 figure.
Source: WTO; McKinsey Global Institute analysis

it a significant subcomponent of services trade. To put this in perspective, travel represents approximately 30 percent of services trade the Organization for Economic Co-operation and Development (OECD) countries, while transportation represents 20 percent.

QUESTIONS ADDRESSED BY OUR STUDY

Our research sheds light on several key questions:

- What is the total number of jobs worldwide that can be globally resourced? How close will actual demand for offshoring from developed economies to emerging markets come to this potential total? How does the potential for offshoring and its degree of adoption differ among industries?
- What is the current supply of labor suitable to perform offshoring services in developing markets?

-
- How does supply and demand meet? Which countries will provide offshoring labor? Will different types of offshoring be attracted to different countries? How will offshoring affect employment and wages in developing and developed countries?

The report covers offshoring between a wide range of developed and developing countries (36 countries in all). To assess the situation on the ground, six full-time team members devoted 12 months to this research. In addition we tapped the expertise of consultants at 82 McKinsey offices in 44 countries, as well as conducting nearly one hundred interviews with companies in our focus countries.

We also collected the most comprehensive data available on actual offshoring demand through interviews with companies and from their own and analysts' reports. We collected detailed statistics on labor supply for 16 countries from sources of national statistics—making adjustments for consistency when necessary—to build the most comprehensive view of global labor markets that exists. We also collected data on 50 separate measures of the cost of operating in the 16 focus countries to understand which countries would serve as the most attractive offshore locations.

We determined not only the potential number of jobs that theoretically could be relocated offshore, but also the actual demand to date and how that will grow over the next five years. In addition, we determined both the potential supply of labor in each country as well as the realistic level of supply that is sufficiently skilled to provide services to overseas companies. This analysis allows us to understand the dynamics that bring together supply and demand in the global labor market, including the constraints that might appear and the potential impacts on wages and employment in both developed and developing countries.

We hope that this analysis will ultimately lead to a new way of looking at the range of issues presented by the offshoring of services.

Executive Summary of Part I—Demand for Offshore Talent in Services

"Outsourcing is a problem for the US and First World in general, because all tradable goods production and service jobs can be outsourced."¹

"It's hardly the size of the [offshoring] phenomenon that accounts for the uproar. More important, I think, is concern about how big this trend could become and the fact that it's affecting a segment of the workforce that hitherto was never subject to this kind of competition, namely service workers."²

Only facts about the dynamics of demand for offshore talent can prove or refute claims like these. So far, however, the debate about offshoring has been fueled by anecdote rather than fact and, as one observer of the debate commented recently, "the plural of anecdote is not data."³

The McKinsey Global Institute has therefore conducted a large-scale research study with the aim of providing hard data about the emerging global labor market. This report, the first in a series of three, quantifies potential, actual, and projected demand for offshore labor in services. Its key findings, outlined below, have implications for players on the demand side of the emerging global labor market and for policy makers in countries that would like to participate to a greater extent on the supply side.

¹ Paul Craig Roberts, interviewed by Timothy Aepfel, "Leadership (a special report)—offshore face-off: moving jobs overseas can cut a company's costs; but is it bad for the U.S economy? Two economists debate the issue," *Wall Street Journal*, May 10, 2004.

² Raghuram Rajan as quoted in "The outsourcing threat is: a) big b) small c) both," *Washington Post*, June 13, 2004.

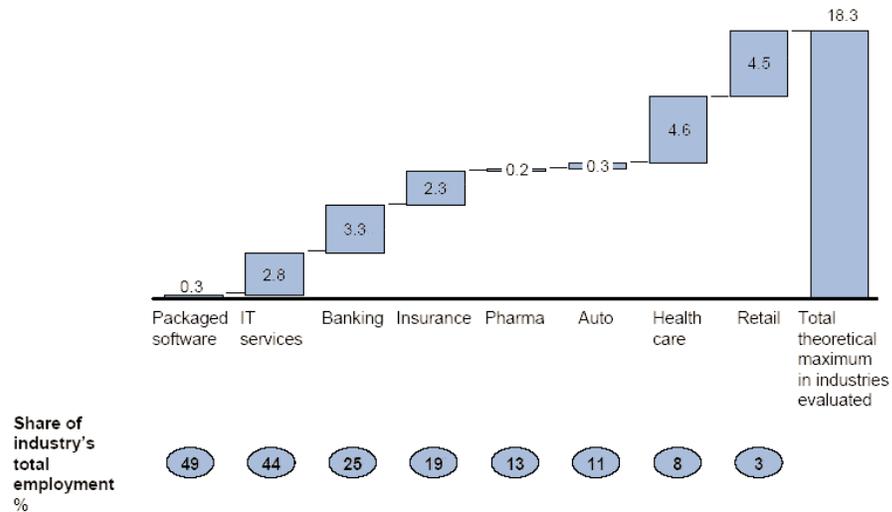
³ William A. Wulf, "Outsourcing/Offshoring of engineering jobs", Keynote address, annual meeting of the United States National Academy of Engineering, New York, NY May 2005.

Eleven percent of worldwide service employment could in theory be performed remotely

By breaking down eight representative sectors⁴ of the global economy into the functions they comprise and the occupations undertaken by people in those functions, we have calculated that 18.3 million jobs in these sectors could be done by people located anywhere in the world in 2003 (Exhibit 1). Extrapolating from these eight sectors to the global economy in 2008, we estimate that 160 million jobs, or about 11 percent of the projected 1.46 billion service jobs worldwide, could in theory be carried out remotely, barring any constraints on supply.

Exhibit 1

THEORETICAL MAXIMUM GLOBAL RESOURCING IN SECTORS EVALUATED IS APPROXIMATELY 18.3 MILLION FTEs
million FTEs, 2003



Source: McKinsey Global Institute analysis

⁴ The eight sectors are: auto, health care, insurance, IT services, retail, retail banking, packaged software, and pharmaceuticals.

This 11 percent theoretical maximum is an average across all industries in the global economy. In fact, individual sectors vary quite widely in the amount of labor they could employ remotely, with some more amenable to the practice than others. A sector's capacity to locate jobs remotely and its size together determine the potential scale of its employment of remote labor.

As a rule, the more customer facing functions a sector has, the lower its potential to resource those functions remotely. Consequently the retail sector, with the vast majority of employment tied to stores, has the lowest such potential: 3 percent of all retail jobs could be performed remotely. However, because of the large scale of the retail sector as an employer, that percentage represents a potential 4.9 million of the world's retail jobs in 2008. In contrast, almost half of all employment in the packaged software industry could be resourced remotely. Yet this fraction represents a potential 340,000 jobs by 2008, because that sector employs far fewer people than retail worldwide.

Like industries and functions, some occupations are more amenable to remote employment than others. Engineering and finance and accounting occupations are the most amenable (52 percent and 31 percent, respectively), while generalist and support staff occupations are much lower (9 percent and 3 percent, respectively; Exhibit 2). However, because of the high share of total employment in every sector represented by the latter two categories, they in fact contain the highest number of jobs that could theoretically be filled by remote talent—a combined total of 26 million.

Actual offshore employment will reach 4.1 million jobs worldwide in 2008

The number of service jobs performed remotely will remain modest compared to total employment in service activities in developed economies over the medium term. Although the trend toward offshoring is growing among companies in developed countries, a gap exists between the number of service jobs that they could locate remotely and the actual number of jobs that they have located offshore, or plan to offshore, by 2008.

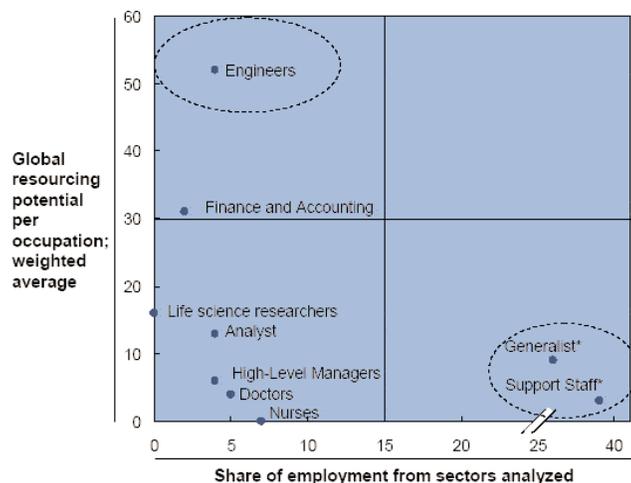
To date, 565,000 service jobs in the eight sectors we evaluated are performed in low-wage countries for companies and customers in developed countries. By 2008, we expect that number will grow to 1.2 million for the same eight sectors (Exhibit 3). Extrapolating to the global economy, we estimate that total offshore

Exhibit 2

ENGINEERING OCCUPATIONS ARE THE MOST AMENABLE TO REMOTE LOCATION

%, 2003

○ High-priority opportunities



* Generalist accounts for 36% and support staff accounts for 39% of employment in sectors analyzed.
Source: McKinsey Global Institute analysis

employment amounted to approximately 1.5 million jobs in 2003. In 2008, total offshore employment will reach an estimated 1.2 percent of total demand for labor in services from developed countries, equivalent to 4.1 million employees. To put this number in perspective, consider an average of 4.6 million Americans starting to work with a new employer every month in the 12 months to March 2005.⁵

Of the eight sectors we analyzed, retail and health care employ offshore labor the least. We estimate that of the high-wage employment demand in each sector, less than 0.1 percent of retail and 0.07 percent of health care employment will actually be located in low-wage countries by 2008. At the other end of the spectrum are packaged software and IT services, which we estimate will offshore 18 percent and 13 percent of their high-wage employment demand, respectively, by 2008.

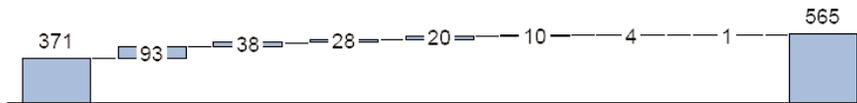
⁵ Source: US Bureau of Labor Statistics

Exhibit 3

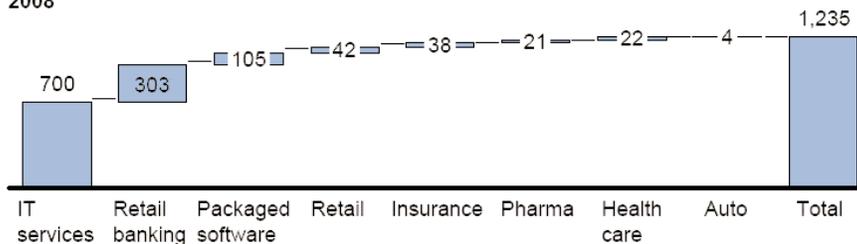
OFFSHORE EMPLOYMENT IN THE EIGHT SECTORS ANALYZED IS PROJECTED TO DOUBLE BY 2008

thousand FTEs in low-wage countries

2003



2008



Source: McKinsey Global Institute analysis

Company-specific barriers more than regulatory barriers deter companies from offshoring

Cost pressures make offshoring potentially attractive for numerous companies in developed economies. Nevertheless, they could locate many more jobs remotely than they actually do. Regulatory barriers beyond companies' control have so far been held largely responsible for their slow uptake of offshoring. However, our research indicates that company-specific barriers are generally more powerful than regulatory barriers in deterring many companies. Such barriers include having processes unsuited to offshoring, managers' attitude toward offshoring, or insufficient scale (Exhibit 4).

Most of the sectors we evaluated reported cost pressure at home combined with much lower labor costs abroad as their main incentives to resource labor globally. Companies that already conduct some operations in low-wage countries find the switch to resourcing service labor from them easier than do less internationally experienced firms. Those companies that find the prospect of offshoring difficult generally face company-specific barriers of three types: operational issues, management attitudes to offshoring, and structural issues.

Exhibit 4

DEGREE OF ADOPTION IS DRIVEN BY COST PRESSURE BUT LIMITED BY OPERATIONAL FACTORS

Drivers/inhibitors		Packaged software	IT Services	Banking	Insurance	Pharma	Auto	Health care	Retail
Sector characteristics and dynamics	• Cost pressure		+				+	+	+
	• Cost differential (perceived or real)	+		+	+	+			
	• Availability (perceived or real) of quality vendors								
	• Availability (perceived or real) of suitable labor								
Organizational, operational, and technical factors	• Global presence and experience in managing global footprint	+		+					-
	• Scale of business processes to be globally resourced								-
	• Suitability of process to support global resourcing	-	-	-					-
	• Intensity of paper-based processes in sector								-
	• Suitability of IT to support global resourcing			-					
	• Alignment of management incentives with profit maximization					-			
Legal, regulatory, and social factors	• Comparison of global resourcing Return On Investment (ROI) (perceived or real) with alternative profit-maximization strategies								-
	• Access to attractive markets								
	• Social/political position towards global resourcing								
	• Labor market regulation in the home country								
	• Product market regulations in the home country								
	• Intellectual Property (IP) regulation in the producing country							-	-

Source: Interviews; McKinsey Global Institute analysis

Unsuitable business processes are the most important operational issue inhibiting companies from offshoring. Several companies, especially those that have been through a series of mergers and acquisitions, have business processes that are too convoluted to allow easy separation into discrete groups of activities, some of which could then be offshored. This issue can affect companies even in sectors with a high potential to resource labor remotely. Several packaged software companies, for example, find their software development processes unsuited to parallel execution at multiple R&D locations around the world. Similarly, a great many players, especially in health care, still rely on paper-based processes that cannot be moved too far away from core operations. Legacy IT systems may also be too idiosyncratic for companies to disaggregate and manage remotely. This issue is particularly restricting for insurance companies, some of which still run IT systems more than half a century old.

Management attitude and strategies are another important determinant of whether a company goes ahead with global resourcing, when it would be both

convenient and reasonable. In several sectors, we found managers unwilling to become more involved overseas. Some were unprepared to deal with the new challenges it presented or were uninformed about the opportunities. Mindsets like these are particularly prevalent among local and even national companies whose managers have little or no experience leading operations abroad. As a consequence, they are unlikely to prioritize global resourcing ahead of alternative measures for reducing costs.

Finally, other company-specific barriers we identified were structural. For example, many companies find their offshorable activities are too small in scale to warrant the risks of locating them remotely—smaller retailers in particular face this barrier. Until good intermediaries can achieve scale benefits by serving multiple smaller companies, enterprises like these will not pursue offshoring opportunities.

Regulatory barriers to offshoring play a smaller role than company-specific barriers in explaining the pace at which companies are resourcing labor remotely. Regulatory barriers include labor market regulations in the home country, such as high statutory severance awards; product market regulations in the home country restricting, for instance, where a service can be provided; and insufficient legal protection for intellectual property in offshore locations. With the exception of regulations governing drug development in the pharmaceutical sector, these barriers are less inhibiting overall than company-specific barriers. However, their force varies considerably by country and by sector. As an example, formerly state-owned German companies find it difficult to lay off redundant employees because of German labor laws.

Offshore employment will grow gradually, making no sudden impact on labor markets overall in developed countries

Observations that we made in the course of our research combined with these key findings have a number of implications for companies and countries on the demand side of the emerging global labor market and also for policy makers in countries on the supply side.

From a company perspective, as we saw above, several in the sectors we studied would need to make changes to their organizational structure and operations before they could save costs by resourcing labor globally. But tapping

low-cost labor pools could provide them with opportunities beyond cost savings. Some will also be able to enhance revenues, accelerate product development, and provide customized services profitably in ways that would not have been feasible with onshore cost structures. For example, using offshore labor to develop simplified versions of its software is enabling one packaged software company to enter emerging markets with lower-priced versions of existing products.

At a country level, our observation is that labor markets in developed economies are experiencing and will continue to experience the trend toward offshoring as a slow, evolutionary change. It will have less impact on patterns of employment than the decline in manufacturing employment developed economies have experienced recently. In the United States, for example, the share of manufacturing jobs in overall employment fell by 11 percentage points to 21 percent in the 30 years to 2002. By contrast, the total number of service jobs in the United States that could in theory be filled remotely represents 9 percent of total current employment.

The moderate impact and generally slow pace of offshoring will not soften the blow for those individuals in developed countries who do lose their jobs as a result. However, most are college graduates, and therefore likely to be more amenable to retraining than manufacturing workers. And in the United States, growth rates in both wages and jobs in the computer and data processing services sector, where offshoring is prevalent, are higher than in the economy as a whole.⁶

From the standpoint of countries on the supply side, the gap between companies' potential to employ labor remotely and their actual rate of offshoring represents an opportunity to increase that rate. Understanding what makes individual companies reluctant to offshore and what they require from an offshore location will allow policy makers on the supply side to target companies in particular sectors and tailor their offerings. We examine this opportunity in more detail in "How Demand and Supply for Offshore Talent Meet," the third report in our series on the emerging global labor market.

⁶ Source: US Bureau of Labor Statistics, (SIC 7370; Current employment statistics)

Executive Summary of Part II—Supply for Offshore Talent in Services

*"What makes this trend so viable is the explosion of college graduates in low-wage nations. In the Philippines, a country of 75 million that churns out 380,000 college grads each year, there's an oversupply of accountants trained in U.S. accounting standards. India already has a staggering 520,000 IT engineers, with starting salaries of around \$5,000."*¹

*"The quest for workers is creating a talent crunch that some believe might dull India's competitive edge in outsourcing. 'With rising wages, many companies are just not making money here in India, especially in call centers,' says Chiranjit Banerjee, a director for human resources firm Quest Research Ltd."*²

Today there are conflicting views on the potential for offshoring service jobs to low-wage nations. This report, the second of three to analyze the emerging global labor market, quantifies the supply of talent in 28 low-wage countries and 8 mid- and high-wage ones.³ The analysis covers a range of occupations that could be performed

¹ "The new global job shift; The next round of globalization is sending upscale jobs offshore. They include basic research, chip design, engineering even financial analysis. Can America lose these jobs and still prosper? Who wins? Who loses?" Pete Engardio, Aaron Bernstein, Manjeet Kripalani, Frederik Balfour, Brian Grow and Jay Greene, 3 February 2003. *BusinessWeek*.

² "Good help is hard to find; Higher wages and lavish perks reign as outsourcing outfits scramble for talent." Josey Pulienthuruthel and Manjeet Kripalani, 14 February 2005. *BusinessWeek*.

³ Mid- to high-wage countries studied in-depth were: Canada, Germany, Ireland, Japan, the United Kingdom, and the United States; Australia and South Korea were studied by way of extrapolation. Low-wage countries included in the in-depth study were: Brazil, China, Czech Republic, Hungary, India, Malaysia, Mexico, Philippines, Poland, and Russia; other low-wage countries studied were: Argentina, Bulgaria, Chile, Colombia, Croatia, Estonia, Indonesia, Latvia, Lithuania, Romania, Slovakia, Slovenia, South Africa, Thailand, Turkey, Ukraine, Venezuela, and Vietnam.

remotely: engineers, finance and accounting professionals, analysts, life science researchers, doctors, nurses, and generalists. The findings have wide-reaching implications for both multinational companies (MNCs) seeking to tap into low-wage labor pools and for countries seeking to attract such investment and spur job creation.

Offshore talent potential exceeds high-wage country potential by a factor of two

We found there are approximately 33 million young professionals⁴ (university graduates with up to 7 years of experience) in our sample of 28 low-wage countries. This compares to 15 million in our sample of 8 higher-wage nations (United States, United Kingdom, Germany, Japan, Australia, Canada, Ireland, South Korea) and 7.7 million in the United States alone. Including support staff, doctors, and nurses of all tenure groups, the figures rise to 392.8 million potential workers in low-wage countries, compared to 181.3 million in high-wage countries.

In each of the eight occupations we studied, the total number of young, university-educated talent in low-wage countries like China, India, and the Philippines, surpasses that in our high-wage sample. India alone has nearly as many young professional engineers as the United States, and China has more than twice as many; China has twenty times the number of doctors as the United Kingdom; Russia has almost 10 times as many finance and accounting professionals as Germany.

Three factors reduce the potential talent supply in low-wage nations

Although the potential supply of talent in low-wage countries is large and growing rapidly, only a fraction of potential job candidates could successfully work at a foreign company. The reasons are limited suitability, dispersion of the labor force, and domestic competition for talent.

⁴ Young professionals include engineers, finance and accounting, analysts, life science researchers, and professional generalists. It excludes doctors, nurses, and support staff.

Thirteen percent of the potential talent supply in low-wage nations is suitable to work for multinational companies

Interviews with 83 human resource managers in multinational companies⁵ reveal that 13 percent of potential job candidates in degree specific occupations could successfully work at a multinational company. This share rises to 19 percent when taking into account the possibility that many graduates who are unsuitable for their own profession may be found suitable for a generalist position (e.g., an engineer could work as a call center agent or an analyst).

The reasons for low levels of suitability are: lack of necessary language skills; the low quality of significant portions of the educational system and its limited ability to impart practical skills; and a lack of cultural fit, which can be seen in interpersonal skills and attitudes towards teamwork and flexible working hours.

The suitability of job candidates varies by occupation and by country. On average, 15 to 20 percent of the engineers, finance and accounting majors, life science researchers, and analysts could be hired by foreign companies, while only 10 percent of generalists could due to stricter language requirements (Exhibit 1). There is a wide variation among countries, however. While 50 percent of engineers in Poland or Hungary are suitable to work for multinational companies, only 10 percent of Chinese ones and 25 percent of Indian ones would be suitable (Exhibit 2).

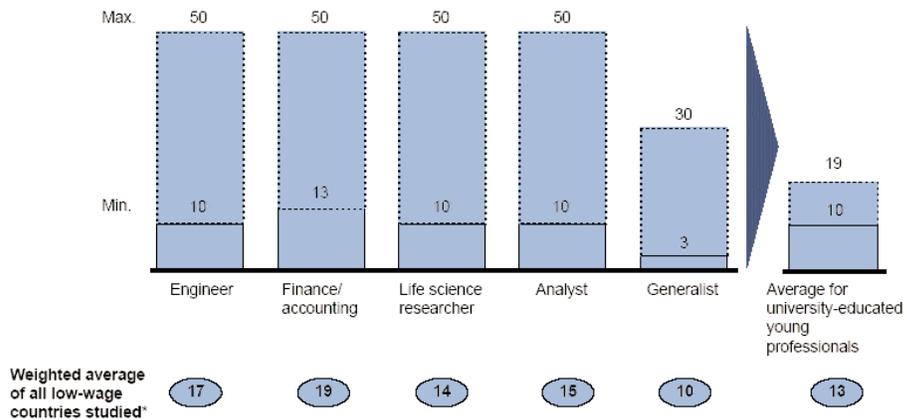
Interviews indicate that, in general, university graduates from Eastern European countries are, on average, well-suited to work for multinational companies. Job candidates from Russia are well-educated but often lack a grounding in practical skills from their university education, while in India the overall quality of the educational system, apart from the top universities, could improve significantly. In China and Brazil, language deficiencies are the most pressing issue.

⁵ We conducted 83 interviews with HR managers at multinational companies, HR agencies primarily supplying MNCs as well as heads of remote centers in each country. For each occupational group, we asked a quantitative question ("Of 100 random candidates with the correct degree, how many could you employ if you had sufficient demand for all 100?") and a qualitative question ("What are the main deficiencies of the candidates you turned away?"). Answers to both questions were surprisingly homogeneous across interviewees in most of the countries.

Exhibit 1

IN LOW-WAGE COUNTRIES, ON AVERAGE ONLY 13% OF UNIVERSITY GRADUATES ARE SUITABLE TO WORK IN A MULTINATIONAL COMPANY

"Of 100 graduates with the correct degree, how many could you employ if you had demand for all?"
%



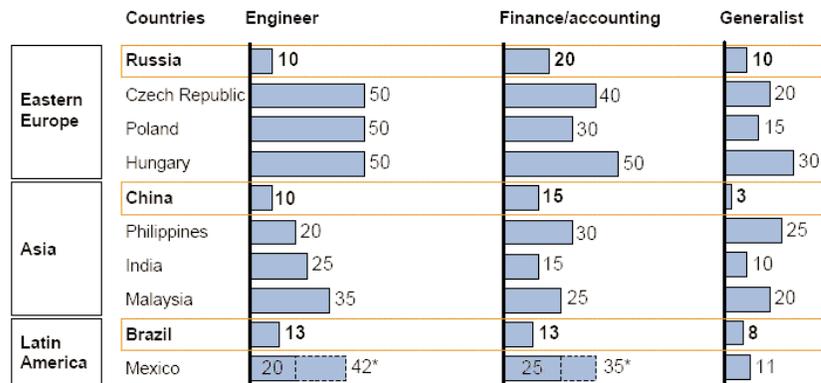
* Argentina, Brazil, Bulgaria, Chile, China, Colombia, Croatia, Czech Republic, Estonia, Hungary, India, Indonesia, Latvia, Lithuania, Malaysia, Mexico, Philippines, Poland, Russia, Romania, Slovakia, Slovenia, South Africa, Thailand, Turkey, Ukraine, Venezuela, Vietnam.

Source: Interviews with HR managers, HR agencies and heads of global resourcing centers; McKinsey Global Institute analysis

Exhibit 2

SUITABILITY VARIES MARKEDLY BETWEEN COUNTRIES AND SEEMS ESPECIALLY LOW IN NASCENT GLOBAL RESOURCING MARKETS

"Of 100 graduates with the correct degree, how many could you employ if you had demand for all?"
%



All suitability rates are empirically based on a total of 83 interviews with HR professionals working in each country

* Mexico is the only country where interview results (higher number) were adjusted since interview base was thinner and risk of misunderstanding high.

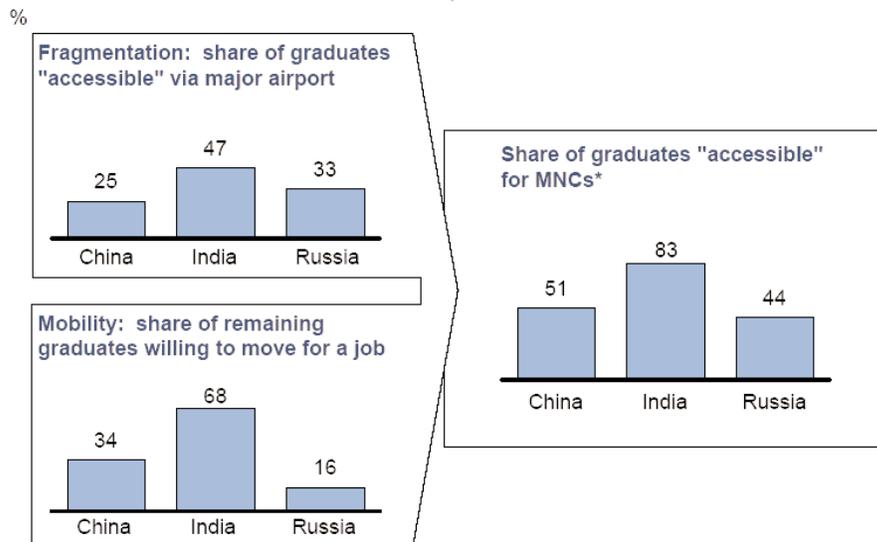
Source: Interviews with HR managers, HR agencies and heads of global resourcing centers; McKinsey Global Institute analysis

Dispersion of the labor force reduces the pool of suitable talent further

In large emerging markets, such as China, India, and Russia, the pool of potential talent is further diminished by the fact that many university graduates do not live in major cities with international airline connections (usually a key criteria for multinational companies seeking an offshore location) and are unwilling to relocate. In China, we estimate that just half the potential talent pool is geographically accessible to multinational companies. In Russia, only one-third of students graduate close to a major international airport, and few are willing to relocate. In contrast, nearly half of all Indian students graduated close to a major international hub, such as Mumbai, Delhi, Bangalore, or Hyderabad, and Indian graduates are also the most willing to move (Exhibit 3).

Exhibit 3

RUSSIAN UNIVERSITY GRADUATES ARE LESS FRAGMENTED, BUT ALSO LESS MOBILE THAN CHINESE ONES, INDIA'S ARE MOST "ACCESSIBLE"



* Accessible graduates = Graduates who studied close to a major international airport + (Remaining graduates x Empirical mobility rate)

Source: Country labor & graduation statistics; Surveys on student mobility; McKinsey Global Institute analysis

Competition for talent from non-offshoring companies reduces available supply in China

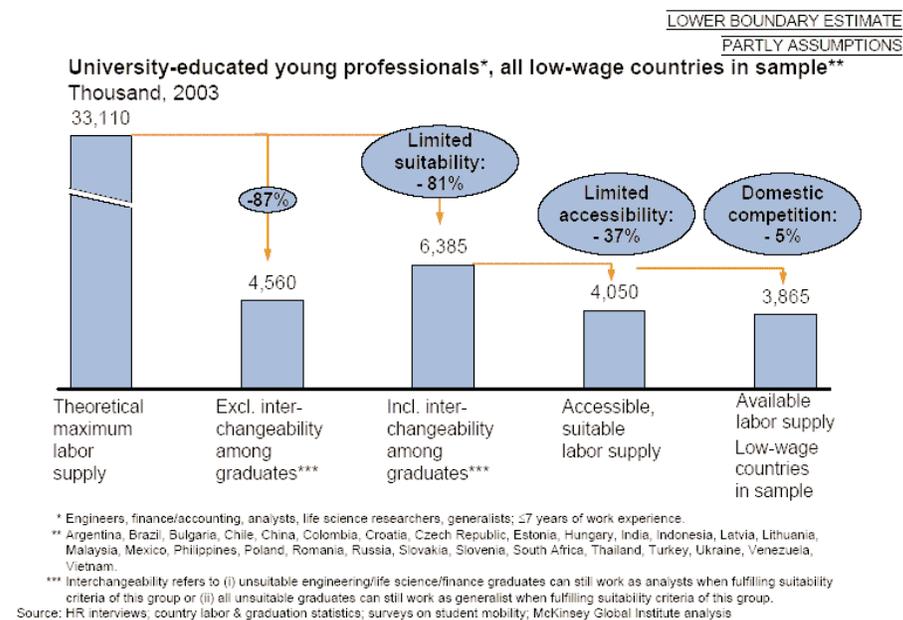
In China, the suitable labor supply is further reduced by competition for talent from non-offshoring oriented companies within the country (including domestic companies, multinationals meeting domestic demand, and foreign joint ventures).

The available talent pool for multinational companies is 8 to 12 percent of the total and is growing rapidly

The three factors described above greatly reduce the pool of talent available for multinational employment. While there are 33 million potential young professionals in emerging markets, 4.6 million are suitable to work for a foreign company. If we include the fact that some professionals unsuitable for positions in their occupations might be suitable for generalist positions, suitable supply increases to 6.4 million. Lack of accessibility and competition from non-offshoring employers reduces these pools further still (Exhibit 4). Altogether, we estimate that 2.8 to 3.9 million—or 8 to 12 percent—of the young professionals in low-wage countries are available for hire by export-oriented service offshoring companies. This compares to 8.8 million in our sample of high-wage countries.

Exhibit 4

SUITABILITY HAS THE STRONGEST IMPACT ON AVAILABLE, UNIVERSITY-EDUCATED LABOR SUPPLY FROM LOW-WAGE COUNTRIES



But even the 3.9 million is a lower boundary estimate of the potential talent pool in low-wage countries. In reality, the most suitable job candidates are also likely to be the most mobile and to have studied in a major city.

At 6.4 million, the pool of talent available for offshoring is large. In some occupations, such as engineers, finance and accounting, and analysts, it is 75 percent or more of the suitable pool of labor in our sample of high-wage countries. Given their sheer size, India and China dominate the suitable labor supply in many occupations. India accounts for nearly 30 percent of the young professionals,⁶ for instance, while China and Russia have 11 percent and 10 percent, respectively.

The large pool of suitable talent in low-wage countries is also growing quickly. The stock of suitable, young professional talent in emerging markets is growing at 5.5 percent annually, while the number in developed countries is growing just 1 percent annually. This growth in stock is fueled by a strong increase in graduates in these countries. Growth is particularly rapid in degrees for which there is high demand from multinational companies. The share of degrees awarded in business and economics jumped from 18 percent to 31 percent in Russia, and from 16 percent to 36 percent in Poland in just five years.

By 2008, we expect the supply of suitable young engineers to be nearly the same between the developing and developed countries in our sample, and suitable finance and accounting professionals will surpass the supply in our high-wage sample.

Middle manager shortage looming in low-wage nations

Middle-manager scarcity is a constraint to growth in offshoring for many countries. India has been developing its export-oriented service sector, especially in IT and call-center businesses, for more than a decade, creating a sizeable pool of experienced middle managers. Nonetheless, India still has a scarcity of managers because growth in the offshoring sector has averaged more than 20 percent per year over the last 10 years, and even more briskly in some cities. Rapidly rising wages for IT project managers, which have increased 23 percent annually over the last four years, signal this scarcity.

⁶ This includes engineers, finance and accounting, analysts, life science researchers, and professional generalists with less than 7 years of experience. It excludes 3 occupations: doctors, nurses, and support staff.

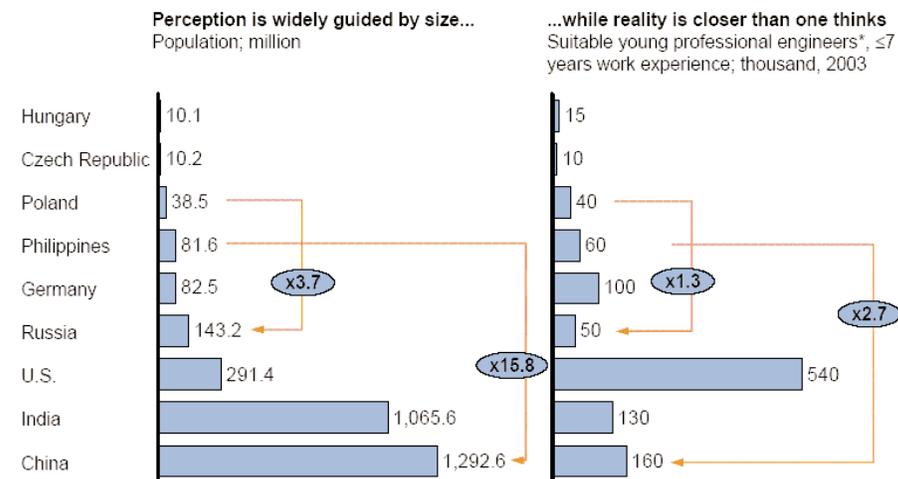
More nascent offshoring markets—like Russia and China—are also growing rapidly and, even worse, they lack India's depth in the market, making manager scarcity even more severe. In fact, some Russian entrepreneurs have tapped India for middle managers.

Many smaller countries have sizable, attractive talent pools and multinational companies should look beyond aggregate numbers

Given differences in the portion of university graduates that could successfully work for a multinational company, many smaller countries can be attractive offshoring locations (Exhibit 5). Even though China's population is 16 times the size of the Philippines, for instance, its pool of suitable young professional engineers is only 3 times the size of the Philippines. Poland has nearly as many qualified engineers as the much more populous Russia. Poland, Hungary, Russia, and the Czech Republic together have as many suitable generalists as India, and nearly as many suitable engineers. As a result, many countries are likely to play a role in the emerging global labor market.

Exhibit 5

POPULATION IS NOT ALWAYS AN APPROPRIATE INDICATOR FOR SUITABLE LABOR SUPPLY



* Including all engineering disciplines (except civil engineering); including all IT and computer science degrees. Source: Global Insight; Country Ministries of Education/Labor Statistics Offices; HR interviews

Multinational companies should thus focus specifically on the suitable talent supply for the job categories they need, rather than relying on the size of a country's overall population. As we will see in the next report, the "follow the leader" strategy that so many companies have used in choosing an offshore location to date leads to accelerating wages and high turnover. Within countries, companies should size the labor supply at the city level, and explore multiple locations, smaller cities, and telework options to alleviate limited talent accessibility. Multinationals should also consider emigrant talent in other countries to fill middle-manager positions in offshoring operations.

Countries should focus on improving the quality of talent

Countries seeking to play a role in the emerging global labor market should concentrate on improving the *quality* of their talent, not just the *quantity* of educated workers. In many developing countries, a large potential labor supply could be unlocked by improving the suitability of college graduates, particularly their language skills. For instance, if Chinese engineering graduates were to reach the current suitability rate of Indian engineers by 2008, the supply would nearly double, jumping from 212,000 today to 395,000 in 2008. Improving the suitability of graduates is far from simple, but educational improvements can be coordinated closely with domestic and multinational companies to develop practical skills training in universities and external management training programs. Study and work abroad programs can help students gain international experience and create a worldwide diaspora of highly educated and globally minded workers.



Executive Summary of Part III—How Supply and Demand for Offshore Talent Meet

*"Something new is going on. America is short of jobs as never before, and the major candidates for our offshore outsourcing are ramping up employment as never before. So yes, I think two and two is four."*¹

*"The essential conclusion remains that offshoring, and more broadly import competition, while clearly having an important effect on some industries, workers, and communities, were not significant causes of the 'jobless recovery.'"*²

Opinions differ about the dynamics of supply and demand in the emerging global market for service labor. Some argue that the potential supply of offshore talent is nearly limitless, while others point to signs of limited supply already forcing wage increases. Having analyzed potential and likely demand for offshore talent in the first report in our series, and quantified potential supply in the second, in this third and final report we look at the fit between the two.

Supply and demand necessarily clear through price, represented in the labor market by wages. Mapping likely demand for offshore talent against the potential suitable supply shows that, as the conflicting views indicate, this market is not clearing smoothly. We discuss measures to improve the market's efficiency that could be taken both by companies on the demand side and by policy-makers in countries on the supply side.

¹ Stephen S. Roach as quoted in "Who Wins and Who Loses as Jobs Move Overseas?" Erica Kinetz, 7 December 2003. The New York Times.

² Charles L. Schnultze. "Offshoring, Import Competition and the Jobless Recovery." August 2004. *Brookings Policy Brief No. 136*

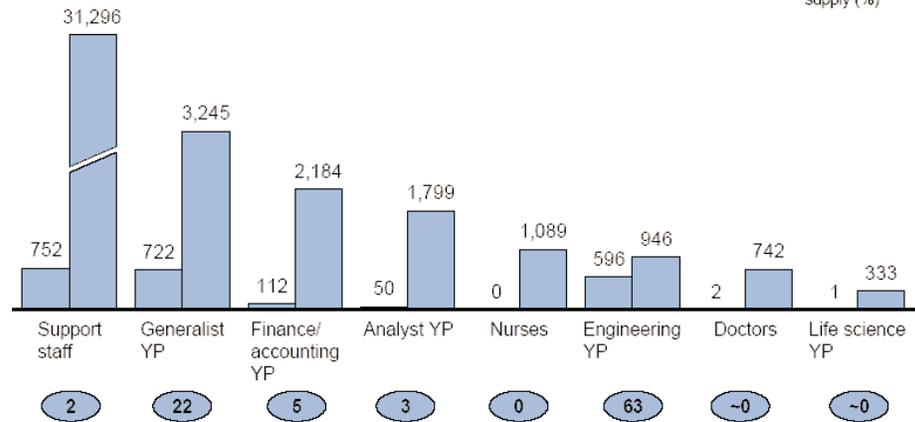
Potential supply of low-wage talent is greater than likely demand

Our results show that, at an aggregate level, the potential supply of suitable talent from the 28 low-wage countries we studied exceeds demand for offshore talent from companies in high-wage countries. This is true for each of the eight occupations we analyzed (Exhibit 1).³ For instance, in 2008 the supply of support staff suitable for employment by multinational firms will exceed demand by 98 percentage points, and the suitable supply of young professional generalists will be 78 percentage points greater than expected demand.

Exhibit 1

POTENTIAL SUITABLE SUPPLY EXCEEDS LIKELY DEMAND FOR GLOBALLY RESOURCED TALENT IN MOST YOUNG PROFESSIONAL (YP)* OCCUPATIONS

Likely low-wage labor demand and suitable supply**, 2008
FTEs thousand



* ≤7 years of work experience.
** Assuming constant suitability rates from 2003 to 2008; aggregated low-wage supply from 28 countries.
Source: McKinsey Global Institute analysis

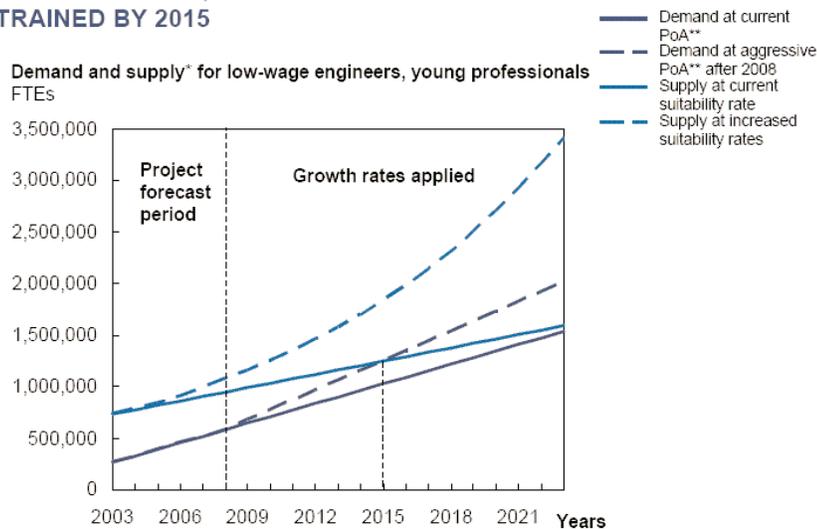
Only the supply of available engineers in low-wage countries is less abundant, contrary to opinion among many engineers in high-wage countries. Even if the combined supply of all 28 low-wage countries we studied is utilized, wage rises for engineers would reflect constraints in low-wage supply as early as 2015 if we assume an aggressive rate of growth in offshore demand for this occupation,

³ The occupations are: engineers, finance and accounting professionals, analysts, life science researchers, doctors, nurses, generalists, and support staff.

and an annual growth rate of 5 percent in the supply of labor suitable for employment in multinationals. If countries were to implement measures to make more of their graduates suitable for such employment, and supply were thus to grow at higher rates, this scenario would likely change (Exhibit 2).

Exhibit 2

AT CURRENT SUITABILITY RATES AND AN AGGRESSIVE PACE OF ADOPTION IN DEMAND, SUPPLY OF ENGINEERS COULD BE CONSTRAINED BY 2015



* Supply forecast is based on extrapolation of 10 low-cost countries to a further 18 low-cost countries and does not include effects of supply fragmentation.

** Pace of adoption is the rate at which companies are pursuing offshoring.

Source: McKinsey Global Institute analysis

Local supply/demand inefficiencies persist

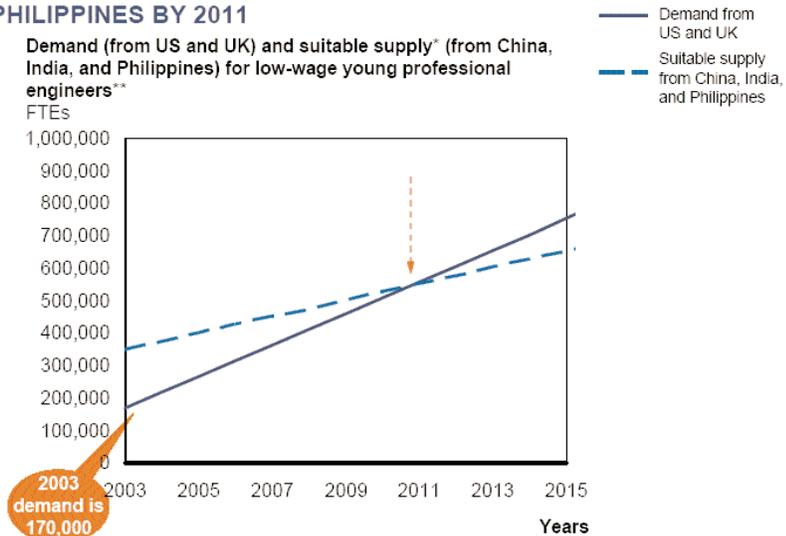
Matching supply and demand at this aggregate level gives an illusory impression of plenty. In practice, misalignment between supply and demand is creating localized labor supply constraints. On the supply side, potential employees are widely dispersed across low-wage countries and far from perfectly mobile. On the demand side, companies hiring offshore frequently follow each other to locations that have a track record in providing offshore talent. The resulting agglomeration of companies in popular locations has some positive effects, such as accelerating improvements in infrastructure, communications and the business environment. But it also leads to a concentration of demand in limited supply pools, which puts upward pressure on local wages and attrition levels.

Agglomeration is already affecting the supply and cost of labor in some cities in Eastern Europe and India. For example, if current demand trends continue, the supply of suitable labor in Prague and Hyderabad will be constrained as early as 2006 and 2008, respectively. (Labor market conditions in these two cities are examined in detail in this report.) And once companies have chosen a location, it is hard for them to switch to another one because of sunk costs in physical and human capital.

Agglomeration effects could also be felt at a country level in certain occupations. At present, India, the Philippines, and China are often the top choices for locating IT and engineering-based services for companies from the United Kingdom and the United States, the main sources of demand. If U.S. and UK companies continue to concentrate their activities on these three countries and current rates of offshoring persist, the demand for engineers from these two countries would fully absorb the suitable supply by 2011 (Exhibit 3).

Exhibit 3

US AND UK DEMAND COULD ABSORB THE ENTIRE SUPPLY OF SUITABLE YOUNG PROFESSIONAL ENGINEERS FROM CHINA, INDIA AND THE PHILIPPINES BY 2011



* Supply forecast does not include effects of supply fragmentation and local demand.
 ** ≤7 years of work experience.
 Source: McKinsey Global Institute analysis

Demand will disperse if companies analyze potential offshore locations rationally according to their specific needs

Companies have different requirements from offshore locations, depending on a host of factors including their home market, their first language, what activity they want to offshore, the scale on which they want to offshore, and whether they want to outsource or set up a captive operation. This means different companies will assign different costs and benefits to the same location. Put another way, there is no single, homogeneous supply curve in the emerging global labor market—every company faces a different curve.

This feature of the market will act as a natural force for dispersing demand to fit supply more congruently, if companies act rationally to harness it. To do so, they need better information about the talent supply that suits their needs, and they also need to know the real costs of employing suitable talent in any potential location. Companies will find more information on the distribution of suitable talent across developing countries in "The Supply of Offshore Talent in Services," our previous report in this series. But each company needs to make its own analysis of location costs for each potential location.

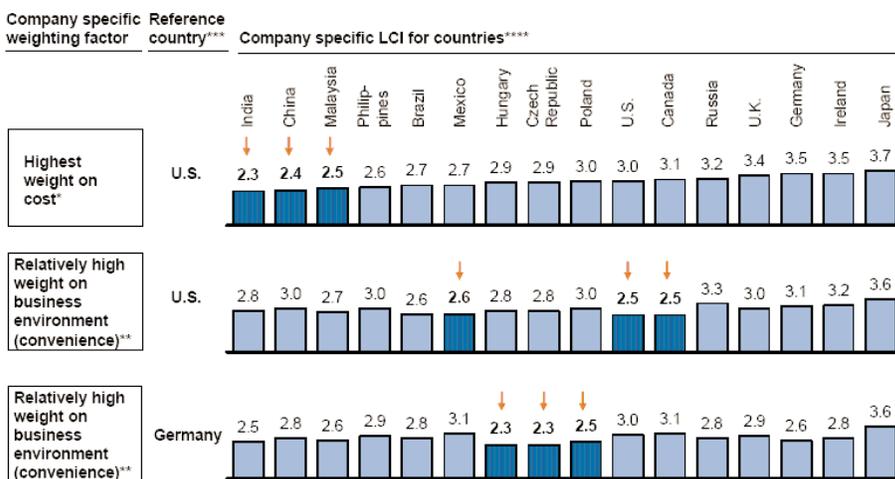
What will that analysis entail? First, a company needs to define in detail the criteria governing its choice of location. At a broad level, these are likely to include: labor cost; the quality of local service vendors; market potential; the intrinsic risks of the location; its business environment; and the quality of its infrastructure. The company can then weigh these criteria according to its particular goals and requirements. When it has gathered the relevant data about the criteria from each potential location, it can calculate its own true cost of offshoring in any of them. (In this report we describe the Location Cost Index, a data-based tool created along these lines for assessing potential offshoring locations.) A company that ranks potential locations in order of their true cost will in effect be drawing its unique supply curve.

If companies consider only current wage levels in their assessments of offshoring locations, then India and China will seem the best choice to all of them, as these three countries at present have the lowest average labor costs for services workers. But when companies rank countries according to their unique cost criteria, more locations will emerge as attractive to more companies (Exhibit 4). Our database on supply countries shows they vary considerably on the basic cost criteria.

Exhibit 4

RANKING OF POTENTIAL OFFSHORE LOCATIONS VARY ACCORDING TO COMPANY'S UNIQUE CRITERIA

■ Attractive country



* Cost:50%, vendor landscape:10%, market potential:10%, risk profile:10%, business environment:10%, quality of infrastructure:10%
 ** Cost:35%, vendor landscape:0%, market potential:0%, risk profile:20%, business environment:35%, quality of infrastructure:10%
 *** The reference country is the company's home country from whose viewpoint locations are evaluated
 **** Location Cost Index. In this ranking 1 is the most attractive and 5 is the least attractive
 Source: Location cost index database

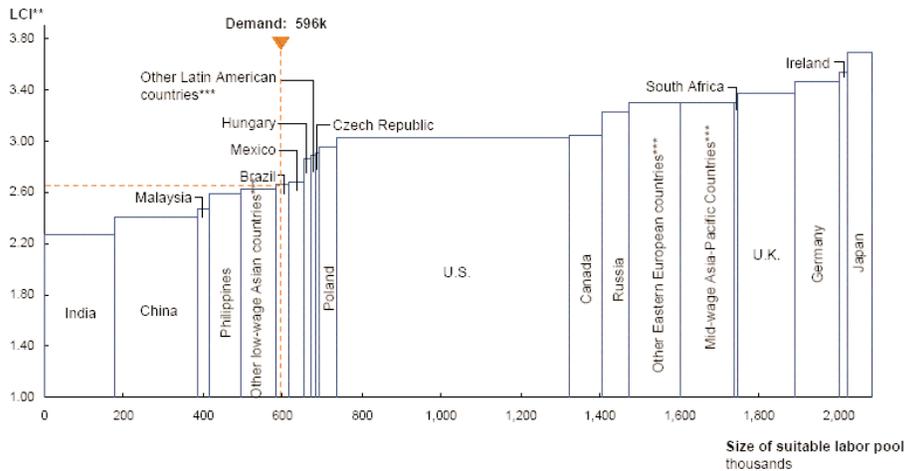
Global resourcing will raise average wages in low-wage countries and have muted impact on employment and wages in high-wage countries

What would be the effect on wages of engineers in low-wage countries if labor cost was the most important factor in the choice of location for all U.S. companies seeking to employ engineers offshore? Our analysis shows that demand would be satisfied by supply from the Asian countries plus a fraction of supply from Latin American countries (Exhibit 5). Average wage levels in countries to the left of the point where the market clears in this analysis could likely double. While wages will increase, making offshoring to low-wage countries less attractive, they will not reach wage levels for the same occupations prevailing in the United States or Western Europe. Instead, the market will clear when wages for offshore engineers are roughly equivalent to the level of wages in Mexico or Brazil, or about 30 percent the level of wages for engineers in the United States (Exhibit 6).

Exhibit 5

IF ALL COMPANIES SEEKING YOUNG PROFESSIONAL ENGINEERS WERE COST-DRIVEN, THEIR LIKELY DEMAND WOULD BE SATISFIED BY TALENT FROM COUNTRIES LEFT OF MEXICO...

Demand for remote labor vs. supply curve – young professional engineers*, 2008

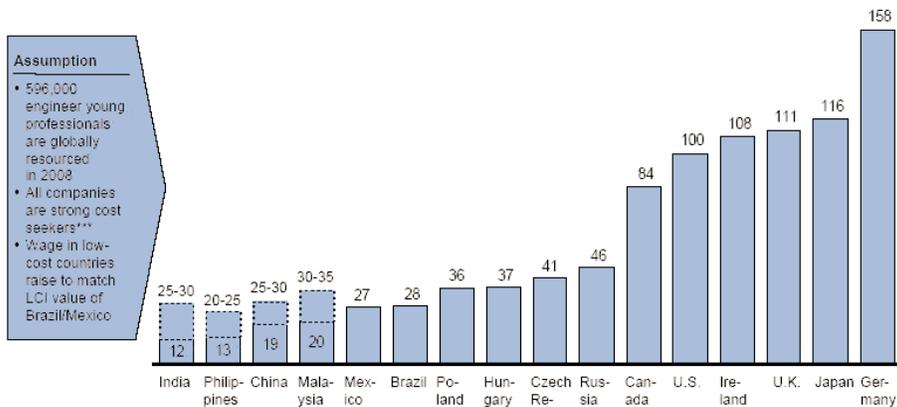


* 57 years of work experience; supply does not consider limited talent accessibility and domestic labor demand
 ** Location cost index. Applied the weighting of cost: 50%, vendor: 10%, market: 10%, risk: 10%, infrastructure: 10%, and environment: 10%
 *** The LCI values for the other countries are estimated
 Source: McKinsey Global Institute analysis

Exhibit 6

...AND WAGES OF YOUNG PROFESSIONAL ENGINEERS IN THOSE COUNTRIES COULD RISE TO APPROXIMATELY 30% OF U.S. LEVEL*

Comparison of hourly labor cost; Index**, U.S. = 100



* Does not consider stickiness, limited talent accessibility, domestic labor demand and manager scarcity which might inflate wages beyond these levels at least for some occupational categories.
 ** Hourly labor cost reflects average of all job categories within a country
 *** Weighting of labor cost with 50% within LCI
 Source: Watson Wyatt; local sources (e.g., Labor census); interviews, McKinsey Global Institute analysis

Wage costs overall in supply countries will rise more slowly if companies select locations according to their unique requirements. The resulting mixture of rational location strategies will disperse demand so that it fits more evenly with the distribution of suitable supply.

In contrast, local wage inflation will likely continue in some offshoring locations as long as companies concentrate their demand on a few cities. Because it is hard for companies to switch locations quickly, individual companies may see wages in their chosen offshoring location rise above the levels of neighboring countries along their individual cost curve, if demand in their chosen location begins to outstrip supply.

Offshoring will have little effect on wage levels in developed countries because it will have only a small impact on overall employment in those countries in the occupations we analyzed. Consider the impact in the United States. Over the past 30 years, the United States has experienced an 11 percentage point decline in manufacturing jobs, but wages have remained stable. By comparison, we estimate that a total of 9 percent of jobs in services in the United States could theoretically be performed remotely. However, it is unlikely that all these potentially transferable jobs will move offshore over the next thirty years, because of the considerable barriers to offshoring detailed in the first report in this series.⁴ Assuming that half the potentially transferable service jobs—a more realistic estimate, although still high—are actually relocated offshore over that period, the resulting job turnover would be around 225,000 jobs per year—or 1-2 percent of the 16 million jobs created⁵ per year in the U.S. economy.

Countries providing offshore talent can take steps to attract "best fit" companies

Since there is no general, fixed ranking of offshoring locations from the demand perspective, there is no preordained set of "winners and losers" on the supply side. Individual countries seeking to attract offshoring investment should target those companies and sectors whose requirements most closely match what the country can already offer, and then hone their attractive features. That strategy

⁴ The Emerging Global Labor Market. Part I-Demand for Offshore Talent in Services. Available at www.mckinsey.com/mgi.

⁵ Douglas Brown and Scott Wilson *The Black Book of Outsourcing: How to Manage the Changes, Challenges and Opportunities*. Wiley, 2004.

depends on supply countries forming a clear understanding of their potentially attractive features and which sectors or companies might favor them. Countries on the supply side of the emerging labor market will also benefit greatly from marketing their attractions to their target sectors. This is especially true for countries whose characteristics are rather similar to surrounding, and therefore competing, peers.

Concerning the attractiveness of a location's labor supply, the focus of government efforts should be on improving the quality of graduates rather than growing sheer numbers of graduates, as we explain in our second report in this series.⁶ Other important attractiveness factors that governments can influence in the short to medium term are their support for foreign investors, the state of the infrastructure, the competitiveness of their tax regime, and the effectiveness of intellectual property law.

Finally, policy-makers and educational institutions in high-wage countries should equip their graduates to work effectively with their peers in today's low-wage countries. In Europe, for example, those countries and companies that encourage their graduates to look for opportunities to the east, with appropriate language training, funded exchange programs and internships, will be best placed to benefit from the talent pool represented by new EU members, such as Hungary, the Czech Republic, and Poland and by emerging markets in Asia.

* * *

⁶ The Emerging Global Labor Market Part II-Supply of Offshore Talent in Services. Available at www.mckinsey.com/mgi



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