

Where on Earth Companies Choose to do Business – And Why

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By:

Richard W. Judy
*Discovery Institute,
Seattle, Washington USA*

dickjudy@workforceassociates.com



Where on Earth Companies Choose to Do Business—And Why

The factors that drive companies' global site selection and sourcing decisions and what it means for HR management.

Introduction – Or Welcome to the World of Supply-Chain Management

Make it or buy it? What should you make and what should you buy? And, if you are to make it, *where* should you make it? Or, if you are to buy it, *from whom* should you buy it? How do and how should companies answer these questions in the rapidly changing, highly competitive, increasingly globalized, knowledge-based economy of the early 21st century?

Recall the vertically integrated firm of yesteryear. It was rooted deeply in one geographical location. Raw inputs came in one end and finished outputs rolled out the other.

Many examples come to mind: Think of CEMEX in Monterrey, Mexico; Embraer of São José dos Campos, Brazil; Tokyo Tsushin Kogyo (rechristened “Sony” in 1958); the Ford Motor Company of Detroit in the 1920’s; the list could go on and on. Everybody who added value to the product worked for the company. Outside suppliers provided raw materials, fuel, power, water, and...well, that was about all. Oh yes, an outside accounting firm provided annual auditing services and outside attorneys handled whatever litigation was beyond the capabilities of the in-house lawyers. How those companies have changed!

In the halcyon days of yore, the HR (then called “personnel”) folks did it all. Not only did they help hire and fire, they met the payroll, handled the pension plan (if there was one), provided training (sometimes), ensured compliance with government regulations, adjudicated grievances, and counseled both bosses and workers. In short, they generally did all things relating to the employment of people in the company.

Oh, you’re thinking, that’s an exaggeration, an example of nostalgic memory at work: Surely such a pure form of vertical integration and self sufficiency never really existed. Well, actually, it did. The examples cited earlier actually existed. Counterparts existed elsewhere and they still do in some places in the world. In the old Soviet Union, for example, enterprises endeavored to be as self sufficient as possible because they couldn’t count on the ponderous planned supply system to provide them with the inputs they needed to meet their assigned output targets. Even today, in many economically underdeveloped parts of the world where virtually no supporting infrastructure exists, companies have no option but to rely on themselves for almost everything.

But the point is this: The times, they are a'changin'. And they're changing rapidly. The dominant form of business organization is moving from a single-location "we'll do it all in-house" model to a globally distributed, "lean" corporation structured according to the "we'll outsource everything except our core competence" philosophy. In its most extreme variant, this new business model becomes the "virtual" company that makes nothing, buys everything, and defines its core competences as "brand management" and "supply-chain management."

Make no mistake, this is a *global* movement. True, the lean and globally distributed corporation appeared years ago in the most economically developed countries, but the form is spreading like wildfire not only there but now also to many of the advanced developing countries. This dramatic change in the dominant form of business organization is pregnant with implications for the people-managing function and the HR profession.

This paper is about the forces that are driving the world-wide movement toward the spatially distributed "lean corporation," how it is shaping corporate sourcing and location decision-making, the degree to which people issues influence that decision-making process, and the implications of all this for the HR function and profession.

Seven Forces Driving Change

1. Technological Innovation.

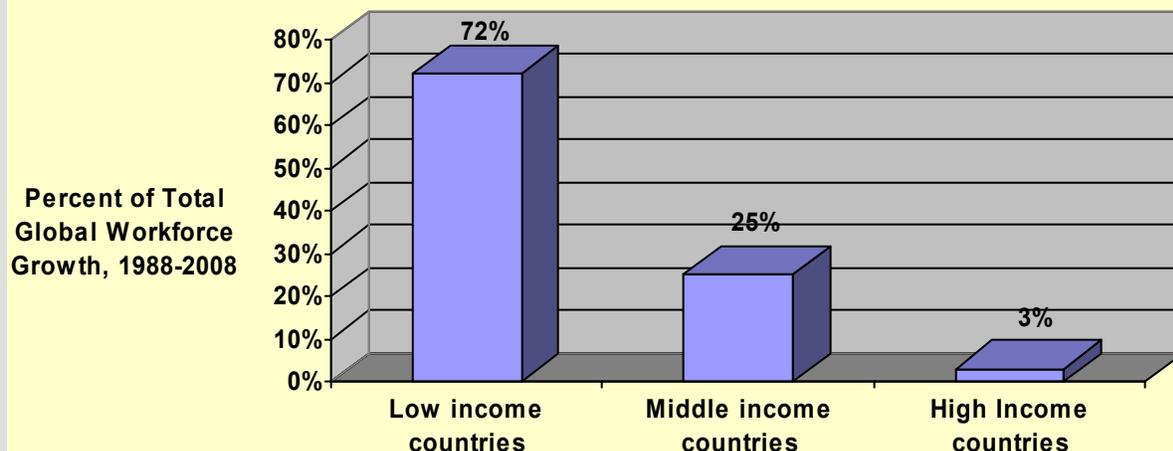
Technology is the most powerful single force that is transforming the global economy and its forms of business organization. More specifically, it is the breathtaking rapid pace of change in information technology (IT) and its knock-on effects in telecommunications and the global transportability of goods and services.

The spread of broadband communications across the globe means, of course, that more and more businesses, as well as more and more buyers and sellers, are able to exchange all forms of data instantaneously and inexpensively. It is only slight exaggeration to say that everyone soon will be able to transact all kinds of business quickly all around the globe all around the clock.

2. Uneven Global Demographic and Workforce Growth.

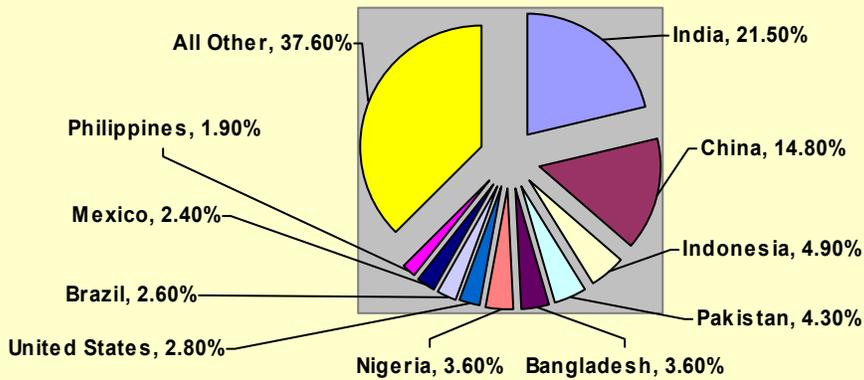
Most global population and workforce growth in the last half century has come in the "developing" countries of the world. It is a certainty that virtually all the growth of the global workforce in the early 21st century will

**Figure 1. Percent of Global Workforce Growth, 1998-2010,
by Groups of Countries Classified by Income Levels**



Source: 2000 World Development Indicators CD-ROM, World Bank

Figure 2. Percent of Global Workforce Growth by Selected Countries, 1998-2010



Source: 2000 World Development Indicators CD-ROM, World Bank

continue to come outside the already developed countries of Europe, North America, and East Asia. Figure 1 tells the story.

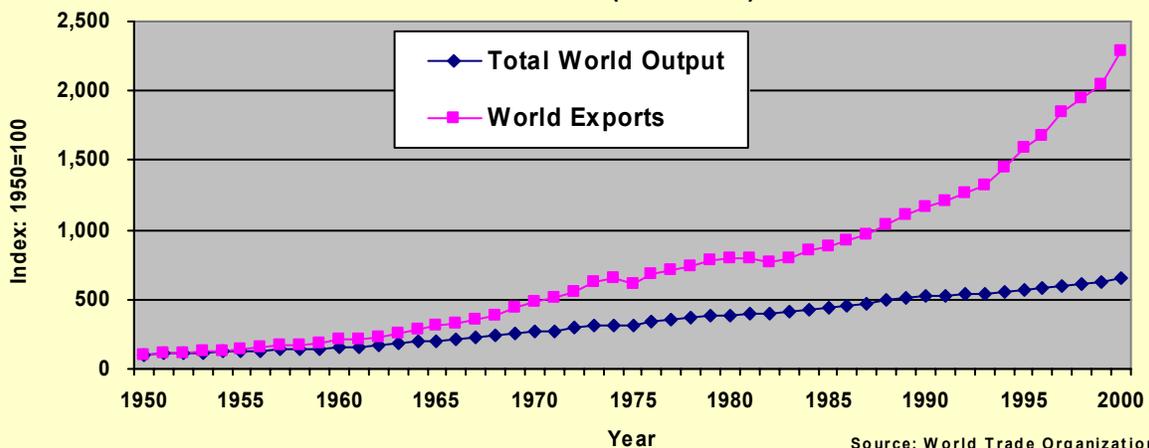
From 1998 to 2010, the global workforce will grow from 2.85 billion to 3.38 billion workers or by 19%.¹ The overwhelming share of that growth will come in what the World Bank classified as the “low income” countries of the world. Another quarter of global workforce growth will come in the “middle income” countries. But a mere 3% of the world’s increased workforce will come in the “high income countries.” Among the low-income countries, two countries by themselves will contribute 36% of the total growth in the world’s workforce (See Figure 2). Those two countries are India (21.5%) and China (14.8%).

Among the developed countries, only the United States will show appreciable workforce growth during this decade. The European Union will actually lose about a million workers during the period and Japan will lose about 2 million.

3. Globalization and the Economic Emergence of Developing Nations.

In the last several decades, technological advances in telecommunications and transportation have combined to shrink the globe. Some speak of the “death of distance.” Producers and consumers worldwide now share a common information system. Anyone anywhere who has the capacity to use it has access to vast amounts of technological, product, and financial information. With national borders increasingly porous to the flow of information, markets that once were limited to localities or countries are rapidly becoming global in scope.

Figure 3: The Index of World Output and Merchandise Exports, 1950-2000 (1950=100)



Source: World Trade Organization

The globalization of information flows is both the cause and effect of freer global flows of technology, goods, and money. Figure 3 shows the results of this development. In the second half of the 20th century, total world output (world GDP) expanded about five and one half times. Meanwhile, the total volume of world merchandise exports grew by nearly twenty-two times. In other words, in the past half-century, the world's exports of goods have grown about four times faster than global output. Clearly, the world economy is now much more integrated than it was at mid-twentieth century.

The greater integration of the world economy has been accompanied by the dramatic economic growth of several developing nations. Indeed, the two trends are hardly distinguishable. In Asia, the astonishing economic recovery of Japan beginning in about 1950 was followed soon by the economic takeoff of the first four Asian Tigers (South Korea, Taiwan, Hong-Kong, and Singapore), then by Thailand, Malaysia, Indonesia, and now by China, India, and possibly even Vietnam. Despite fitful starts and some stops, Latin America, too, has its "tigers." NAFTA has spurred economic growth in Mexico while Chile, Brazil, Costa Rica, and other Latin countries are well along the path to serious economic growth.

4. From Goods Production to Services Production in Developed Countries.

Globalization and the entry of new nations onto the stage of economic development are producing new geographical alignments of world production. As labor-rich developing nations discover the key to serious economic development, they invariably specialize first in the production of low-skill, low-wage, labor-intensive manufactured goods. That puts pressure on similar industries in already developed nations where unit labor costs are higher. Manufacturing in the already developed economies is forced to climb the technology and value-added ladders or go out of business. More and more economic activity shifts from production of "goods" to the production of "services."

In the past half century, the economies of the already developed nations have shifted dramatically.² In the United States, for example, the share of workers involved with goods productions dropped from 47% in 1950 to 23% in 2000.³ To one degree or another, the same is true of all other developed countries as well. While a similar trend is visible in the developing countries, the share of workers engaged in goods production remains very high, e.g., nearly 75% in China.⁴

As the number of goods-producing jobs in the developed countries stagnated or declined in the past few years, the number of those jobs in several developing countries increased. Low labor costs and an improving business environment in several large developing countries have attracted international investment and caused a shift in the locus of world industrial production and employment.

5. The "Knowledge-Based" Economy.

Rapid technological change is bringing about a "knowledge-based" economy in many parts of the world. That means that a high and rising share of many nations' GDP consists of output from "knowledge-intensive" industries, i.e., industries in which the quantity and quality of firms' intellectual property is critical to competitive success. These include the IT industries as well as many other high-tech industries. Among others, they include financial, business, health, and educational services. In fact, the "knowledge content" even of everyday goods and services is rising rapidly.

What distinguishes the goods and services produced in the 21st century knowledge-based economy from those of yesterday's economy is their much higher value-to-weight ratio. In past, the weight of \$10,000 worth of goods might have weighed several tons. In the future, the weight of \$10,000 worth of goods may weigh only a few kilograms...or less. Think computer chips versus cement. In the extreme, products have zero weight. Think of software or financial information transmitted electronically. It has value but it weighs nothing. It can be shipped anywhere on earth at a zero marginal cost. This eliminates transportation charges from the calculus of determining where on earth something can be produced and delivered at minimum cost.

6. Maturing Political and Economic Institutions.

Most nations have seen a trend away from socialism and statism. Reluctantly, sometimes very reluctantly, nations are abandoning their attempts to centrally plan and direct their economies. They may not like the market

economy, but an increasing number of the world's formerly statist economies now see no feasible alternative to it. China and Russia are the obvious examples. But they are not alone. Even nominally capitalist countries with very heavy-handed state control over important parts of the economy are inching their way toward liberalization.

Slowly, countries stifled by bureaucratic controls and regulations are dismantling these impediments to economic growth. Progress toward more liberal economic institutions is not everywhere—far from it, there remain vast regions of the world where it has yet to begin—nor is it uniform or monotonic. But, as Francis Fukuyama argued some years ago in his book, *The End of History*, the contest among competing economic systems is over. There is no workable alternative to the market economy. Those nations that genuinely seek better lives for their people will move toward it; those who fail to move in that direction will languish in the backwaters of stagnation and poverty.

Political stability and good government present a different picture. Here geopolitics is complicated by ethnic and religious strife. Corrupt and ineffectual governments—sometimes genuine anarchy—still prevail in too much of the world. An arc of instability and bad government extends from Africa through the Middle East into Asia. Nations within that arc will see their serious economic development and genuine integration into the global economy delayed until instability ends and good government ensues.

Although political stability and institutional liberalization are proceeding unevenly among the world's low-income nations, they are making notable progress nevertheless. China, India, and other populous nations of Asia with rapidly growing workforces are moving forward. The same is true of significant areas of Latin America. One single event, the entry of China into the WTO, will thrust a quarter of the world's workforce into the global economy much more deeply than ever before.

7. Broader Markets and Fiercer Competition Everywhere.

The death of distance means that global markets become local markets. Well-informed buyers and sellers around the world increasingly participate in the same markets and create more options for all participants.

The implications of broader global markets for all kinds of goods and services are profound. Companies' market power diminishes except where it continues to be protected by governments. With diminished market power goes pricing power. The result: Fast action and fierce competition in the markets for virtually every good and service. Flexible and responsive companies that innovate rapidly and wisely, that collapse "time to market," thrive in this fast-paced milieu. Companies that fail to do these things find themselves producing "commodities." In commodity production, the single source of profit is controlling—nay, reducing—costs.

In the "new economy" where tech is high and the pace is fast, the dominant competitive pressure is to respond quickly and innovate constantly in order to stay ahead of the pack. For all the rest, in the "old economy," the imperative is to reduce costs in order to remain competitive in dog-eat-dog markets. These pressures and imperatives are changing the face of global businesses, where they locate their production, and how they source their inputs.

Smart Sourcing and Supply Chain Management Become Key

An important implication of everything discussed here is that a company's sequence of value-creating activities, the supply chain of value creation, must be optimized. That imperative applies with equal force whether the value is being produced inside the firm or acquired from the outside and then assembled for final delivery to the customer.

Supply chain management is a new and burgeoning field of managerial specialization and study. To visualize the breadth of this new field, consider Stanford University's Supply Chain Management Forum which divides its research along these lines:⁵

- Demand management and order fulfillment
- Third party logistics and outsourcing

- Supplier contracting
- Supply chain partnerships
- Incentives and performance measures
- Global supply chain management
- Multi-location inventory coordination
- Reverse logistics (product recycling, disposal, and repair)
- Supply chain re-engineering
- Industry-wide supply chain integration

This list of topics is obviously too lengthy to treat in a short paper like this. Here, we focus on only two sets of questions:

1. Make or Buy? How do companies decide which products to produce inside the company and which to outsource?
2. Internal sourcing: Where to do it? When companies produce goods or services *inside* the company, how do companies decide where in the world to do it? What factors do they consider when they decide to locate new capacity? What weight do different companies in different industries give to those various factors in reaching their decisions?

Make or Buy?

To cope with escalating competition in globalized marketplaces, companies must strive for greater productivity and efficiency in everything that they do. From this flow two fundamental behavioral maxims:

1. Focus on What We Do Best—And Do it Most Efficiently

To thrive—perhaps even to survive—in this milieu, a company finds increasingly that it must identify its “core competencies,” the things that make it unique, those that constitute the essential pieces of the company’s value proposition to its customers, the features that differentiate it most strongly and successfully from the competition. Having identified its core competencies, the firm is pressured then to devote its full energies to becoming the very best at those things. For most companies, doing it best also means doing it most efficiently, i.e., at the lowest long-run cost.

2. Obtain From Others What They Can Do Better or More Efficiently

Beyond its core competencies, a company cannot operate most efficiently if it tries to do in-house what it can more economically obtain from others. Hence comes the pressure to source from external providers who can supply the best value, most reliably, and at lowest cost.

Where Should We Make It?

Rational calculation is far from always the process by which companies decide to make or buy and where to do it. In fact, a thorough investigation of companies’ siting and sourcing decisions would almost certainly conclude that “non –rational” reasons still are among the most important factors influencing corporate decisions. Some of these are:

Founder’s preference. Many, probably most, small and medium-sized companies are located where their founders lived when they started the company. The same is true for the headquarters of many large companies. Eli Lilly & Co.’s head offices are still in Indianapolis where pharmaceutical chemist Eli Lilly started the company. Gottlieb Daimler founded Daimler-Motoren-Gesellschaft in Stuttgart; Daimler-Benz is still there. Soichiro Honda started in Hamamatsu, Japan; Hondas are still made there. Unilever’s origins lay in London and Rotterdam; the company’s 73 factories are now scattered globally but its bifurcated head offices remain in the two cities of its birth. The list could be extended indefinitely.

Inertia and accident. Many companies grow by acquisition. When they do, they frequently end up with parts of their businesses located where the acquired companies were previously located. When Sun Microsystems bought Star Division Corporation, it ended up willy-nilly with a business location in Hamburg, Germany. Flextronics International Ltd. (Incorporated in Singapore, Managed from San Jose) is a high-tech contract manufacturer with design, engineering and manufacturing operations in 28 countries and on four continents. Many of these locations were inherited from customers whose manufacturing operations Flextronics acquired as part of deals to furnish outsourcing products and services. This example could be repeated many times, especially for contract manufacturers.

When rational calculation (rather than inertia or historical accident) prevails, value sourced internally should be sourced from where it can be provided most cost-effectively. When new value-creating capacity is added within the company, it should take account of all the possibilities and opportunities provided by technology and the increasingly integrated global economy.

The criteria: Which factors do they (or should they) consider?

Before companies (often multi-national corporations or “MNCs”) undertake a significant foreign investment, they normally conduct what is sometimes called a “full situational analysis.” What factors enter into that analysis?

Here it is very important to stress that different businesses in different industries will place greater or lesser weight on some of these factors. A capital-intensive manufacturer will view its options very differently than a software developer or a service producer like an insurance company. Leaving discussion of “weights” to later in the paper, our aim here is to identify and briefly discuss the most important factors that enter into businesses’ calculus of decision.⁶

Proximity to customers, sources of raw materials and transportation costs. These are the classic factors that influence where companies decide to do business. They remain important today in the 21st century global economy. Indeed, the dominating factor determining where companies decide to locate sales offices is obviously where the market is or where management thinks it can be developed. Production requiring lots of raw materials input is obviously going to be located with the cost of transportation and materials handling in mind. Since these classical location-determining factors are so familiar, they need no further discussion here. But one thing seems clear, technology and the death of distance have eroded the relative importance of transportation costs and proximity to raw materials in company’s sourcing and siting decisions.

Agglomeration, clusters and the external economies of scale. Likes tends to attract like. Finance draws to London, Frankfurt, New York, Hong Kong, etc. because lots of other banking and financial companies are already located there. Dubai and Bahrain are homes to old and thriving gold souks. Information technology companies clusters in Silicon Valley. Guangdong has a cluster focusing on household electric appliances, such as televisions, air conditioners, and cathode-ray tubes. Taiwanese companies with OEM licenses from U.S. personal computer manufacturers set up production bases one after the other in Shenzhen.

Such agglomeration occurs for many reasons but principally because, often by historical accident, particular areas have developed a local comparative advantage in one or another kind of economic activity. Such comparative advantage consists of groups of firms employing similar technologies, workforces, supporting companies, research and educational institutions, etc. (see box).

Clusters Defined

An **industrial cluster** is a set of industries related through buyer-supplier and supplier-buyer relationships, or by common technologies, common buyers or distribution channels, or common labor pools.

A **regional cluster** is an industrial cluster in which member firms are in close geographic proximity to each other. A more inclusive definition would be: regional clusters are geographic agglomerations of firms in the same or closely related industries.

Industrial districts are concentrations of firms involved in interdependent production processes, often in the same industry or industry segment, that are embedded in the local community and delimited by daily travel to work distances.

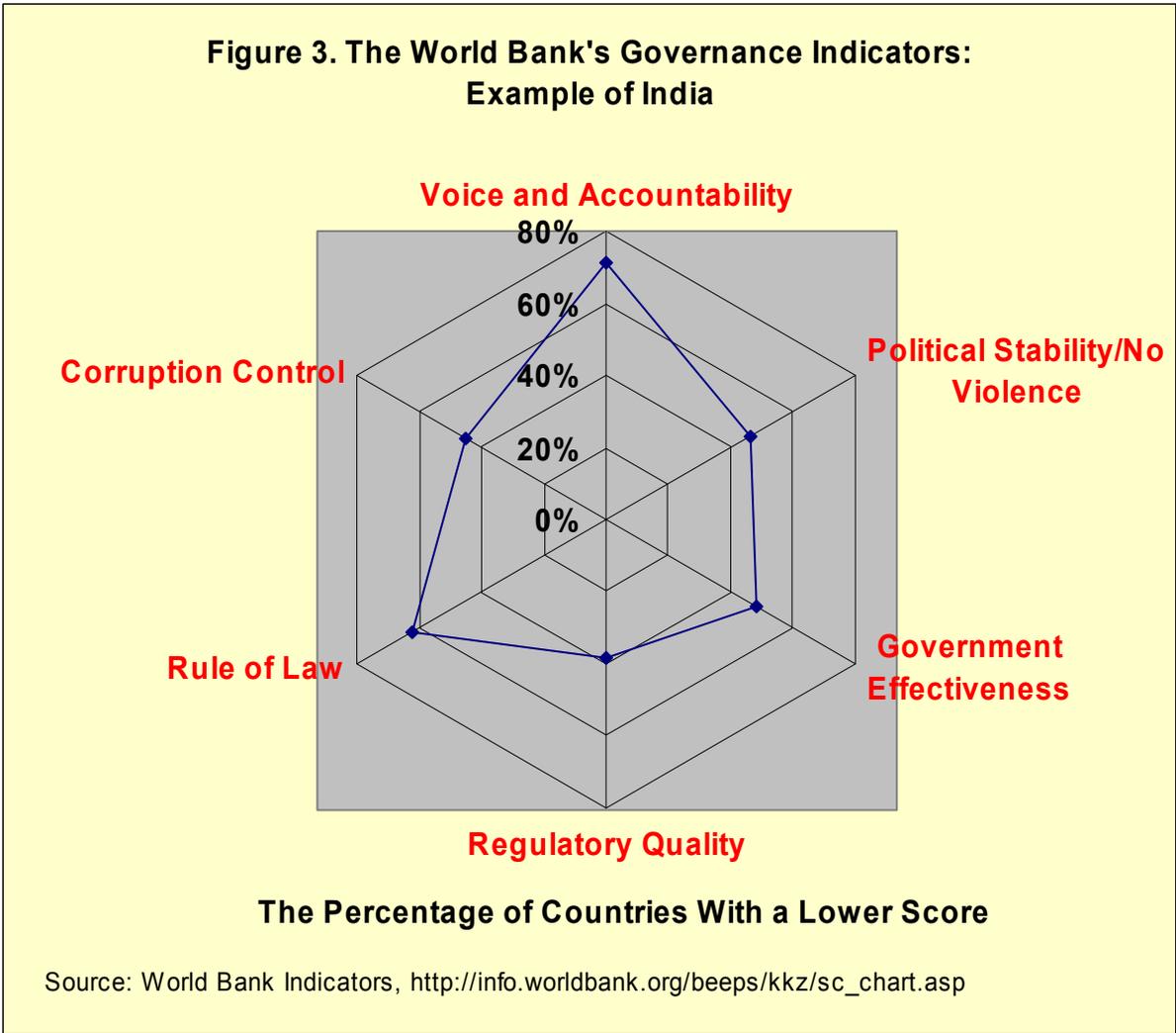
The Competitiveness Institute,
<http://www.competitiveness.org/about/about.htm>

Political and social stability is a risk factor that can be of prime concern, particularly where direct foreign investment is concerned. Unless they expect to recoup their investments in very short order, companies are unlikely to put capital investments at risk where there is doubt about political and social stability.

Unfortunately, the assessment of political and social stability is notoriously subjective. Worse, it is not easy to obtain assessments that are comparable among different countries. But difficulty does not diminish the importance of taking this factor into account when businesses are deciding where on earth to do business. An ill-considered choice can become very costly if the political or social climate turns hostile.

Where should a company turn for reliable information about political and social risk? The global gold standard for this kind of information is set by the Economist Intelligence Unit (EIU) and the *Economist* magazine itself.⁷ Another option is to consult with professionals who specialize in such assessments.⁸ These specialists regularly monitor a series of indicators to arrive at a composite assessment of the political risks prevailing in virtually every country of the world. At a minimum, these assessments take into account the following factors:

- Government stability
- Socioeconomic conditions
- Internal conflict
- Military in politics
- Religious tensions
- Ethnic tensions
- Law and order



A less expensive source of political risk information is from the World Bank Competitiveness Indicators. These indicators, although costless, are limited in scope (data only on corruption and unions) and often seriously out of date.⁹ Still another source of information comes from the U.S. Central Intelligence Agency's *World Fact Book*.¹⁰ The CIA's information, which is renewed annually, is reasonably comprehensive and free for the taking.

Quality of Governance can be closely related to political and social stability since bad governance can easily lead to political instability. But a nation's quality of governance goes beyond questions of stability to assess how well governed it is and the predictability of its business environment. It includes, at a minimum, these factors.

- Rule of law
- Regulatory framework
- Corruption
- Government effectiveness
- Bureaucracy
- Democratic accountability

Many of the same sources of information cited previously for political and social stability offer information about quality of governance. A very accessible source of information is from the World Bank Institute's interactive governance webtool. Here are available indexes on the rule of law and other factors for nearly all countries of the world. The data are available in impressionistic maps or as charts showing percentile rankings (see Figure 3).

Corruption can be a serious tax on international business and is particularly burdensome for multi-national companies. Transparency International (TI) is the premier global source for corruption assessment.¹¹ Every year TI publishes its Corruption Perception Index (CPI) which reflects the degree to which corruption is perceived to exist among public officials and politicians. Every nation is scored on a range between 10 (highly clean) and 0 (highly corrupt). The 2001 CPI provided information on 91 countries. Table 1 presents the rank and score for the best 20 and worst 21 scoring nations on the 2001 CPI.

The regulatory climate is an important factor for some businesses. Rules, regulations, and the administrative procedures for their enforcement can be streamlined and efficient or they can be onerous and burdensome. Several assessments of nations' regulatory climates are available. The World Bank Governance databank contains useful information.¹² Figure 4 displays a color-coded map of the world's nations ranking them from the best (top 10 in the world) to the least hospitable "red light" countries.

Intellectual property rights (IPR) are important to knowledge-based compa-

Table 1. Transparency International's 2001 Corruption Perceptions Index; The Top 20 and Bottom 21 Scoring Nations

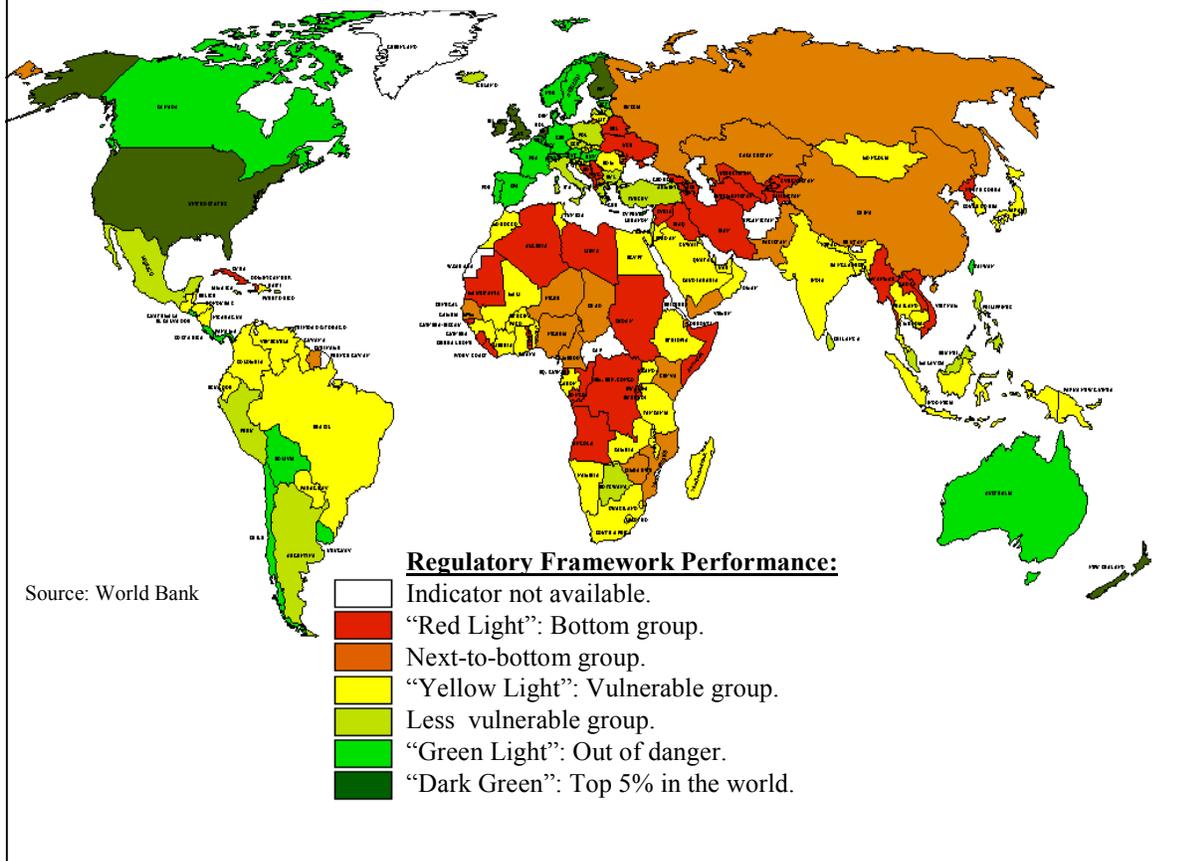
<i>The Best-Ranking 20</i>			<i>The Worst-Ranking 21</i>		
<i>Rank</i>	<i>Country</i>	<i>Score</i>	<i>Rank</i>	<i>Country</i>	<i>Score</i>
1	Finland	9.9	91	Bangladesh	0.4
2	Denmark	9.5	90	Nigeria	1
3	New Zealand	9.4	88	Indonesia	1.9
4	Iceland	9.2		Uganda	1.9
	Singapore	9.2	84	Azerbaijan	2
6	Sweden	9		Bolivia	2
7	Canada	8.9		Cameroon	2
8	Netherlands	8.8		Kenya	2
9	Luxembourg	8.7	83	Ukraine	2.1
10	Norway	8.6	82	Tanzania	2.2
11	Australia	8.5		Ecuador	2.3
12	Switzerland	8.4	79	Pakistan	2.3
13	United Kingdom	8.3		Russia	2.3
14	Hong Kong	7.9	77	Cote d'Ivoire	2.4
15	Austria	7.8		Nicaragua	2.4
16	Israel	7.6	75	Vietnam	2.6
	USA	7.6		Zambia	2.6
18	Chile	7.5	71	Honduras	2.7
	Ireland	7.5		India	2.7
20	Germany	7.4			Kazakhstan
Source: Transparency International				Uzbekistan	2.7

Intellectual Property Rights and Trans-National Corporation Location Decisions

*“As far as FDI goes, most studies suggest that IPRs come fairly low on the list of factors affecting TNC location decisions. However, the general tightening of IPRs in recent years may itself have raised their **signaling** value to investors: countries with stronger property rights protection may, as a result, be regarded as more favorably inclined to private business. *** (A recent) survey of US TNCs (indicated that) investment is likely to be sensitive to IPRs mainly in industries like pharmaceuticals. Other FDI – constituting the bulk of investment of interest to developing countries – is not likely to be affected by IPRs. In fact, the largest recipients of inward FDI in the developing world in the past two decades or so, led by China, have not been models of strong intellectual property protection. TNCs have had many other advantages that have served to effectively protect their proprietary intellectual assets.”*

Sanjaya Lall, “Indicators of the relative importance of IPRs in developing countries,” UNCTAD/ICTASD Capacity Building Project on Intellectual Property Rights and Sustainable Development, November 2001, p. 6.

Figure 4. Map of Regulatory Framework Indicators



nies. As the global economy becomes more of a knowledge-based economy, IPR policies and practices should become a critical factor to all high-tech companies as they evaluate the relative desirability of locating research and engineering operations in various nations. The operative word in the preceding sentence is *should*. In fact, the available evidence suggests that, with the notable exception of pharmaceutical and IT companies, the managers of most MNCs take inadequate account of the safety and security of their intellectual property when making their siting and sourcing decisions.¹³

Taxes and subsidies bulk large in the minds of many corporate managers as they contemplate the expansion or contraction of production in alternative locations. No company likes to pay taxes and all enjoy receiving subsidies. For those reasons, companies customarily emphasize the importance of these factors in their discussions with local politicians and economic development officials in the various locations under consideration for expansion. These local worthies, in their turn, often find themselves in a bidding war with their brethren elsewhere in vying for the favor of a new manufacturing plant or other sizable corporate capital investment.

Physical infrastructure. Transportation and telecommunications are the two most important types of physical infrastructures in the minds of most businesses as they assess the relative desirability of various locations. Transportation is among the “classical” determinants of industrial location discussed earlier.

Airline connections can be critically important for many businesses. The accessibility, frequency, and cost of those connections, both for passenger and freight, can be a key determinant of location and sourcing decisions.

Port facilities and other elements of sea transportation infrastructure remain important for shipping goods where the value-to-weight ratio is lower and time of delivery is not so critical as to require air transport.

The quality, density, and capacity of internal surface transportation infrastructure, i.e., roads and railroads, can be important for manufacturing and other operations whose supply chains stretch over significant land distances.

The quality of a nation’s or an area’s telecommunications infrastructure is of key importance to most businesses. That includes the availability, quality and costs of:

- telephone connections for both domestic and international communications;
- broadband communications capacity for Internet and intranet communications.

One of the richest sources of information about taxes, subsidies, physical infrastructure and other important attributes of nations is the *World Competitiveness Yearbook* which is published annually by the International Institute for Management Development.¹⁴

People Considerations. The quantity and quality of talent available has become a determining factor governing the location and sourcing decisions of many modern businesses. Increasingly, companies and nations realize that they are in a global war for talent. The most competitive nations and companies must not only have the right workforce now, they must be able to continue to produce it, to attract it from elsewhere in the world, and to retain it.

Some HR and workforce considerations relate directly to the quantity, quality, and cost of talent. The relevant criteria and related questions are given below. Appendix I indicates how one company factored these considerations into its decision-making process.

- Workforce quantity
 - ⇒ What is the size and availability of the workforce pool? Is the labor market tight or slack, particularly as it pertains to the kind of workforce that we will need?
 - ⇒ What is the breadth of talent that is available? More specifically, are we likely to find an ample supply or a shortage of the types of talent that we will need? Is there likely to be a sufficiency of local managerial talent or will we need to import more expensive expatriate managers?

- Workforce quality
 - ⇒ What is the work ethic? How realistic are their expectations respecting work and reward?
 - ⇒ What is the work culture? Do workers normally display high morale on the job? What loyalty do they normally feel toward their employers? Do they respond well to monetary or other incentives?
 - ⇒ What are local workers' education and skill levels?
 - ⇒ How trainable is the workforce?
 - ⇒ What language skills that are relevant to our business does the local workforce possess?
- Labor cost
 - ⇒ What are the prevailing wage and salary levels for the talent that we will need?
 - ⇒ What are the non-direct labor costs?
 - ⇒ What do we know about productivity (output per worker/hour)?
 - ⇒ How are all of these changing over time?

Beyond these direct workforce considerations, other indirect factors can also be of great importance. These include:

- Labor market operations
 - ⇒ What are the local labor laws, regulations, practices? How difficult is it to hire and fire people? How much red tape and bureaucracy is involved?
 - ⇒ What is the state of industrial relations? Is the local workforce unionized and/or radicalized? If we source or site there, is our workforce likely to be unionized? How reasonable and responsible are the local unions and their leadership? Is the recent local history of industrial relations one of peace or strife?
 - ⇒ What have been the labor experiences of multi-national corporations and other foreign investors who are already there?
 - ⇒ What is the system of matching jobs with workers? How does recruitment happen?
- Education and training capabilities
 - ⇒ What is the output, capacity and quality of schools, colleges, universities and technical training institutions, particularly with respect to the kinds of talent we will need?
 - ⇒ What is the local government's willingness to assist in training or retraining the workforce to meet our needs?
- Attractiveness of the area for relocation
 - ⇒ Do local laws and regulations make immigration easy or difficult for the kinds of expatriate talent that we may need? Is employment permission easily obtained? How attractive and available is citizenship?
 - ⇒ What is the socio-cultural environment that expatriates encounter? For example, what is the local attitude toward foreigners? Is it hospitable or otherwise? Is there religious or ethnic discrimination? Will the expatriate talent that we may need encounter troubling cultural conflicts?
 - ⇒ What is the cost of living in comparison to that of our country and other places where we

do business? How is that changing over time?

- ⇒ What is the availability and cost of housing, health, public transportation, shopping and other basic amenities for expatriates? Do expatriates normally employ domestic servants? If so, are they available at reasonable cost?
- ⇒ What is the size and diversity of the expatriate community, especially of the nationalities and cultures of the expatriates that we may employ? Is this a hospitable community?
- ⇒ What is the quality of life for expatriates in terms of climate, entertainment, recreation, and other leisure time activities?
- ⇒ What are the employment and other opportunities for trailing spouses?
- ⇒ What are the educational opportunities and choices for expatriate families?

Mini-Cases and Illustrations of Business Sourcing and Siting Decisions

What follows are examples of corporate sourcing and siting decisions that illustrate the way in which the various criteria discussed previously have come to bear on the outcome. These mini-cases and illustrations have been chosen to represent the way different criteria or factors have operated with varying degrees of strength depending on the circumstances of the situation. Appendix A provides a rather longer case study illustrating how one prominent company approached the issue of siting its global operations.

Marriott International. This well-known global leader of hospitality brand management was born in 1927 as a nine-seat root beer stand. Today it operates in 57 countries and territories and employs 150,000 persons in more than 2,000 operating units worldwide. Market considerations are the prime drivers of site selection decisions for Marriott. Where do people want to visit? Which new destinations offer hospitality opportunities? Since Marriott endeavors not to own hotel real estate but, rather, provide hospitality services, workforce considerations also bulk large. Recruiting, training and retaining the proper quantity and quality of staff at competitive costs is an on-going HR challenge. The ability to do that is a necessary but never a sufficient reason for Marriott to create a new business location.¹⁵

Intel goes to Costa Rica. In the mid-1990's, Costa Rica set out to strengthen its high tech sector. Incentive packages of subsidies and tax breaks were dangled before various companies. Intel Corporation, which employs a multifaceted set of criteria when considering a site, was attracted by Costa Rica's blandishments and other attractions. In 1998, a \$300 million semiconductor assembly plant began operations near San Jose and by 2000 was employing about 2,000 people. Intel insiders say, however, that the incentives were only one of Costa Rica's attractions since nearly every other potential location was also offering such lures. One workforce-related factor that definitely attracted Intel to Costa Rica was the nation's labor laws which permit non-union plants, something Intel managers considered a must.

A computer cluster grows in Dresden. Germany has high corporate tax rates and labor markets that discourage many foreign businesses. Eastern Germany also has perceived vestiges of communism including occasional problems with work ethic. But Dresden, before the collapse of communism, had been the home of Robotron and Zentrum Mikroelektronik Dresden, the most advanced computer companies operating behind the erstwhile Iron Curtain. It is also home to Technische Universität Dresden. That meant that it had a reservoir of skilled technical talent and was producing more of it. These workforce attractions have been sufficiently attractive to overcome other disadvantages and to induce several high tech companies to locate operations in Dresden. Among them are Advanced Micro Devices, Inc. chip fabrication plant, American Microsystems Inc.'s design center, Siemens' DRAM fab, and others.

Caterpillar makes global tracks. Although it had long been a world-wide supplier of earth-moving and other heavy equipment, Caterpillar's manufacturing base had long remained in the United States and, more specifically, near its corporate headquarters in Peoria, Illinois. In the 1960s, however, the company began an inexorable process of global growth and diversification, a process that continues to the present. In recent years, about half of Caterpillar's total sales have originated outside the United States, with the Asia/Pacific share growing most rapidly of all. Between 1998 and 2000, the number of full-time Caterpillar employees working in the United States declined by 6.5%, while those working elsewhere in the world increased by 20.4%. By 2000, 45% of Caterpillar's global workforce was working outside the United States, compared with 39% in 1998. In

the Peoria area, Caterpillar's blue collar workforce has shrunk substantially in the past few years, a fact much lamented in the region. This shift was motivated by four important factors: (1) The need to locate manufacturing facilities in or near the company's most rapidly growing markets; (2) The acquisition of foreign-based companies (e.g., diesel engine producers MaK, of Kiel, Germany, and Perkins Engines located in England); A series of costly strikes and other labor conflicts at its traditional U.S. locations; and (4) Much lower labor costs in some foreign locations (see Figure 5). Rapid economic growth in the region combined with much lower labor costs accounts for Caterpillar's rapid growth in the Asia-Pacific region. In China alone, Caterpillar has now has five manufacturing operations making hydraulic excavators, construction machinery components, diesel engines, moving undercarriage and castings.

Call centers: An itinerant global industry. Many areas experiencing job loss consequent to the out-migration of labor-intensive manufacturing companies thought (and still think) that call centers were the answer to their prayers. In the U. K. and the U. S., communities from Pembroke Docks, Wales to North Dakota breathed sighs of relief when call centers arrived to sop up low-skilled workers recently rendered redundant by relocating or closing manufacturing plants.¹⁶

To the dismay of local economic development officials, many of these call centers are packing their bags and decamping for places where labor costs are lower. The first ports of call for itinerant call center operators was Ireland and Australia where everybody speaks English and labor costs initially were below those even in depressed areas of Appalachia or Wales. As greater prosperity came to these places, however, call center operators discovered India.

In a typical U.S. call center operation, labor costs account for as much as 60% of total costs. Cost per agent is roughly \$40,000 per annum. Labor costs in India for this caliber of worker are less than one-tenth of those in the United States. The call center business in India has been booming of late. Next may be the Philippines or South Africa where development officials have identified this industry as a source of jobs for that beleaguered nation's vast army of unemployed. In short, modern telecommunications enable an industry (such as call centers, for example) that depends mainly on workers equipped only with basic reading and speaking skills in a major language (such as English) to locate their business anywhere on the face of the globe. By the nature of their business, their exposures to political risk and loss of intellectual property are low.

Competitive market forces drive call centers to locate where labor costs are least. Sometimes, however, surprises in the form of unanticipated costs await companies moving in search of cheap labor. In India, where utilities and telecommunications infrastructures are often poor, call center outsourcers have had to supply their own power supply and endure unreliable telephone service or lease expensive private circuitry. Cultural differences can also affect the costs of operations. For example, many Indian workers expect their employer to transport them to work in shuttle buses or vans. Those who get to work by themselves tend to ride motorcycles rather than cars which means that the employer needs to provide motorcycle racks. Off-site eating establishments for employees often are not conveniently located which means that the employer may need to install and operate full-service cafeterias to feed workers who expect a complete meal.

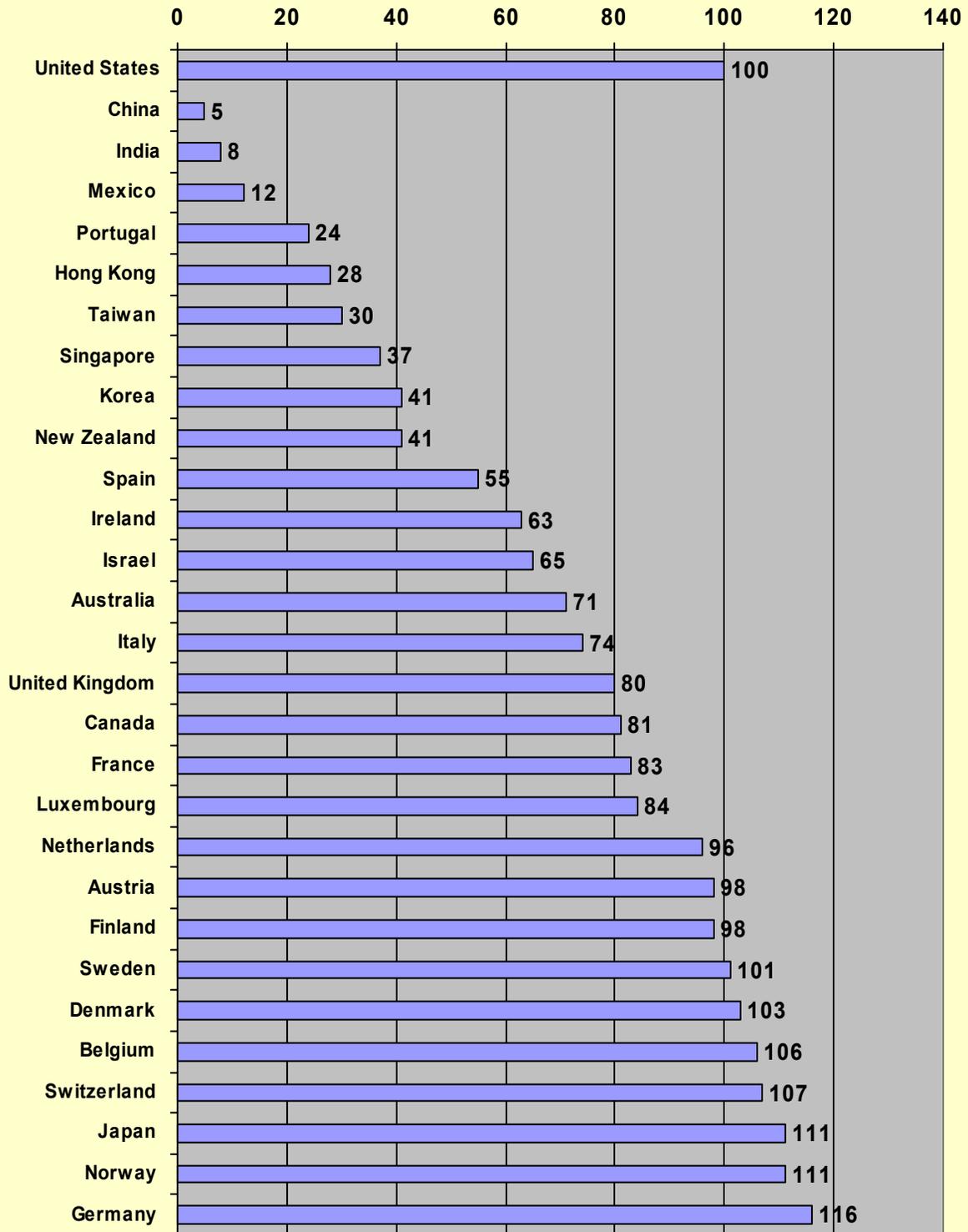
Matsushita migrates to China. Like many other Japanese and Taiwanese companies, Matsushita is moving aggressively to locate more of its manufacturing operations to China where labor costs are lower and market opportunities are great. In addition to cheap labor and a plentiful supply of engineers, Matsushita has been attracted to China because of the recent creation of clusters of component suppliers, many of them Taiwanese. The company now has 41 manufacturing operations in China and is building more.¹⁷

Some Implications for Human Resource Management

Most of this paper has approached corporate decision making about global sourcing and siting from the perspective of how it can or should be optimized. In the overwhelming majority of cases, a rational approach to these decisions requires that human resource considerations be given appropriate weight. In reality, however, those considerations are often not identified or, even if they are, are given inadequate weight vis-à-vis other factors. Why is this?

The answer is not too difficult to discover. Often, the relevant people-focused information simply doesn't make it into the decision-making process for one reason or another. Often, HR professionals simply are not at the table when these sourcing and siting decisions are being made. Often, relevant information concerning the people dimension of the decision has not been mobilized by anybody. By default, therefore, these strategic corpo-

Figure 5: Hourly Compensation Costs for Manufacturing Production Workers, 2000, Index U.S. = 100



Sources: U.S. Bureau of Labor Statistics, World Bank

rate decisions often gravitate to the real estate, financial or other divisions and professionals within the firm. When that happens, the relevant people-oriented data typically are immobilized insufficiently or are subordinated to other kinds of information.

The first implication for the HR profession, therefore, is that its practitioners should comprehend that new sourcing and siting practices are a piece of the movement toward a global, knowledge-based economy and that HR considerations merit a serious hearing when such matters are being decided. But for people factors to be considered, HR professionals must become proficient at mobilizing and presenting the people-related data and other information that are genuinely relevant to company decisions about where on earth to do business.

The second implication is that HR management in the modern lean, globally dispersed corporation is totally different from Personnel Management in the traditional, integrated, location-specific firm. Many traditional HR functions are now likely to be out-sourced; that's yesterday's news. What's new is the heightened importance of those HR functions that remain after everything in the company has been outsourced except whatever its core competences may be. If skillful supply chain management is of prime strategic importance, for example, then it obviously must also be true that the selection, recruitment, training, and retention of high caliber procurement professionals is of top strategic importance. Not just any warm body can do this job; it's up to HR to see that only the best are hired and retained.

A third implication is that human resource professionals must find ways to transform traditional domestic HR functions into ones that are flexible, adaptable and focused on attracting, motivating, training and retaining human capital in a variety of disparate global environments. This gives entirely new meaning to the concept of "diversity."

Beyond these three major implications, there are several more key questions that HR managers need to be raising when corporate sourcing and siting decisions are being made:

- How do the corporate headquarter's current diversity efforts need to be altered to have meaning and relevance as the company considers global sourcing and/or siting ?
- What is the business case for global diversity and how is it different from the domestic business case for diversity? This means reaching beyond racial, age, and gender definitions found in American diversity programs and exploring in depth the cultural, social, and religious mores of new global partners.
- Successful global companies are more likely to invest in cross-cultural awareness, experiences, and practices. Are current diversity programs training employees and managers who can actively learn from other cultures or are these employees simply attempting to make them "more like us"? How can this willingness or reluctance be evaluated?
- How does HR ensure that its current and future managers are well prepared to recruit, train, and retain a more culturally diverse workforce? Effective global HR managers need the inquisitiveness, perspective, integrity, and savvy to understand the cultural complexities inherent in a globally dispersed business environment. In companies aiming to integrate managers and other personnel from highly diverse ethnic and cultural backgrounds, HR managers will also need the training and sensitivity necessary to assess, develop, coach, educate, and rotate otherwise facilitate such integration.
- How does the HR staff itself become better educated about cross-cultural differences, different recruiting habits, and diverse negotiation styles, and become more internationally savvy? What must they know about cultural diversity to create systems and processes that are consistent with company goals and policies, yet tailored to local cultural norms?
- It has been said that the quality of schools, opportunities for spouses, and receptivity to other groups of people is what draws talent from one part of the world to another. What can the HR professional do to ensure that his/her own company and community are receptive to people from other parts of the world?

- What kinds of alliances do HR managers need to create in new locations in order to find talent? Examples may include forming relationships with area universities and colleges as well as local professional association chapters.
- How can new technologies, intranets and email and meeting software help HR and management teams to deal more effectively with time zone differences and language difficulties to make effective strategic decisions quickly?
- How will expatriates and other mobile personnel be prepared for their overseas assignments? How can the company become a “learning company” so that it learns from the experiences of expatriates returning from overseas assignments and integrate that learning into its business practices?
- Since companies are increasingly working with skilled technical talent that is in demand globally, what are the incentives and rewards that need to be put in place to retain this talent? How do different cultures respond to the benefits and practices prevalent in some companies such as tuition reimbursement, meritocracy, career counseling, job opportunities for spouses and/or significant others?
- How does the career section of the company’s website reflect the need for talent that can handle flexibility and a global environment? Which assessment tools may need to be put in place online to vet potential job applicants’ acceptance of the quick changing nature of the company’s business? How should job interviews be conducted to elicit candidates’ previous experiences in being flexible and adventurous?

Appendix I: Alpha Plans for Global Growth: A Case Study

This case features the global site selection process employed by a well-known global company with headquarters in Silicon Valley California. To protect the innocent and preserve corporate confidentiality, we'll use a pseudonym and call the company "Alpha."

Genesis and genealogy. Alpha is a high tech company whose origins and its roots are in Silicon Valley. The reasons for that are very clear.

Close proximity to the great research institutions of the San Francisco Bay Area, especially to the University of California at Berkeley and Stanford in Palo Alto, was key. Many of Alpha's original ideas and technologies emanated from the classrooms, offices and laboratories of those universities. Alpha's founders and many of its early employees held degrees from Berkeley or Stanford. Some even had done time on these universities' faculties.

In some way, practically every Bay Area high tech company can trace its ancestry to Hewlett-Packard, the Silicon Valley bellwether that showed the way and set the pace for all who came later. Alpha is no exception. HP showed it could be done. HP spun off ideas and talent at a pace rivaling Berkeley or Stanford. Together with the universities, HP jump-started the information technology cluster of companies, human talent, and supporting businesses that have made Silicon Valley what it has become.

Growth. Alpha had the right ideas and the right technology at the right time and in the right place. The company successfully rode the high-tech boom of the 1980s and 1990s. The dawn of the 21st century found Alpha a multi-billion dollar company with large market shares of both the hardware and software that are central not only to the Internet but also to the growth of E-commerce.

From modest beginnings a couple of decades earlier, Alpha had grown by 2000 to a global giant with about half of its net revenues coming from outside the United States. The company had offices in more than 160 countries conducting sales and support, research and development, and manufacturing operations.

Whereas internal growth had Alpha's path during the its early years, mergers and acquisitions of both companies and technology began to assume greater prominence in the late 1990s. Indeed, in the three fiscal years from 1998 to 2000, Alpha acquired a more than a dozen companies or technologies developed by other companies.

Alpha's worldwide cadre of employees had grown to more than 35,000 by 2000 and continued to grow at the rate of more than 20% annually. A veritable gazelle among large high-tech companies, Alpha was confronting many of the problems and dilemmas of rapid growth.

Problems of growth. One of those problems concerned the geography of the company's growth. As Alpha's top management put it, "Where in the world should Alpha grow in the first decade of the 21st century?"

Where to locate sales and service offices was a fairly straightforward question, reasoned Alpha's managers, because that decision was driven by where the markets were or were going to be. If the market or potential market was big in Russia or in China, then the sales and support office in those countries—indeed, throughout those countries—should be located wherever they needed to be to support those markets. Beyond market size, other important considerations for siting sales and service offices had to do with political stability of the country or region, transportation and telecommunications infrastructure, cost of offices and facilities, and the availability of a multi-lingual workforce pool from which to recruit sales and support personnel.

Where to locate research, development, and manufacturing activities presented much greater challenges. Intellectual property is the heart of Alpha's business. And intellectual property is produced by human talent In the early years, of course, much if not most of the talent producing Alpha's core intellectual property held engineering or computer science degrees from Berkeley or Stanford. Not surprisingly, therefore, the company's headquarters and the offices housing R&D labs are situated in Palo Alto.

In its early days, Alpha manufactured much if not most of its own hardware in the Bay Area. Soon, however, the company was buying components, and then important assemblies of components, from outside suppliers. This trend continued and in the 1990s Alpha found itself a pioneer of outsourcing and supply chain management.

Alpha's core competences lie in engineering design and brand management. This is a company of top talent. Recruiting bright engineers and scientists, never easy since top talent is always scarce, was easier initially in Silicon Valley than in most other places because the Valley was and is a global Mecca for such talent. Many of the best and brightest from everywhere in the world flocked into Silicon Valley during the 1980s and 1990s. They came because that was where the action was in the information technology industry. That was where the professional opportunities were the best and most abundant. And that was where the ideas, venture capital, entrepreneurs were making it all happen. In short, the talent came because that was where the companies were and that was where the action was. The companies came or sprang up there because that was where the critical mass of people, ideas, capital, and competitors-cum-customers were coming together. One of the world's occasional virtuous cycles of economic growth was creating one of the world's most famous clusters of high tech economic development.

As Alpha grew, the company could and did hire hundreds and then thousands of engineers and other employees from this swelling pool of talent, squeezing them into office buildings scattered all around Santa Clara County. To attack the scatter and co-locate its people, Alpha eventually built its own "campus" in the County. But Alpha's hiring frenzy was so furious that the new campus was no sooner built that it began to bulge at the seams.

Where to grow now? By the turn of the new century, Alpha's problems of growth were being further complicated by several new challenges.

The first challenge arose from the ever-increasing crowding and the cost of living in Silicon Valley. Traffic congestion on Valley freeways was horrendous. Meanwhile, the costs of home ownership were ascending to the stratosphere. In short, the Valley was becoming too expensive, too inconvenient, and its vaunted quality of life was eroding. Consequently, it was becoming increasingly difficult and expensive to recruit and retain top talent in the Valley. In response, Alpha's management decreed a limit on the company's workforce growth in the Bay Area.

A second challenge sprang from Alpha's acquisitions. Some of the technology and some of the companies being acquired by Alpha were located right in Silicon Valley. But, as the company's global reach extended, Alpha was acquiring companies and technologies far afield from the Bay Area. The acquisition of new engineering talent and technology often meant that a new Alpha business site came into existence. That was because the people associated with these acquisitions often lived—and liked to live—where they were...in Austin, Cambridge, Boulder. Later came acquisitions in Europe and the Far East—with the same result. Willy-nilly, as it seemed, Alpha was spreading out over the globe with little rationale for where that spread was occurring.

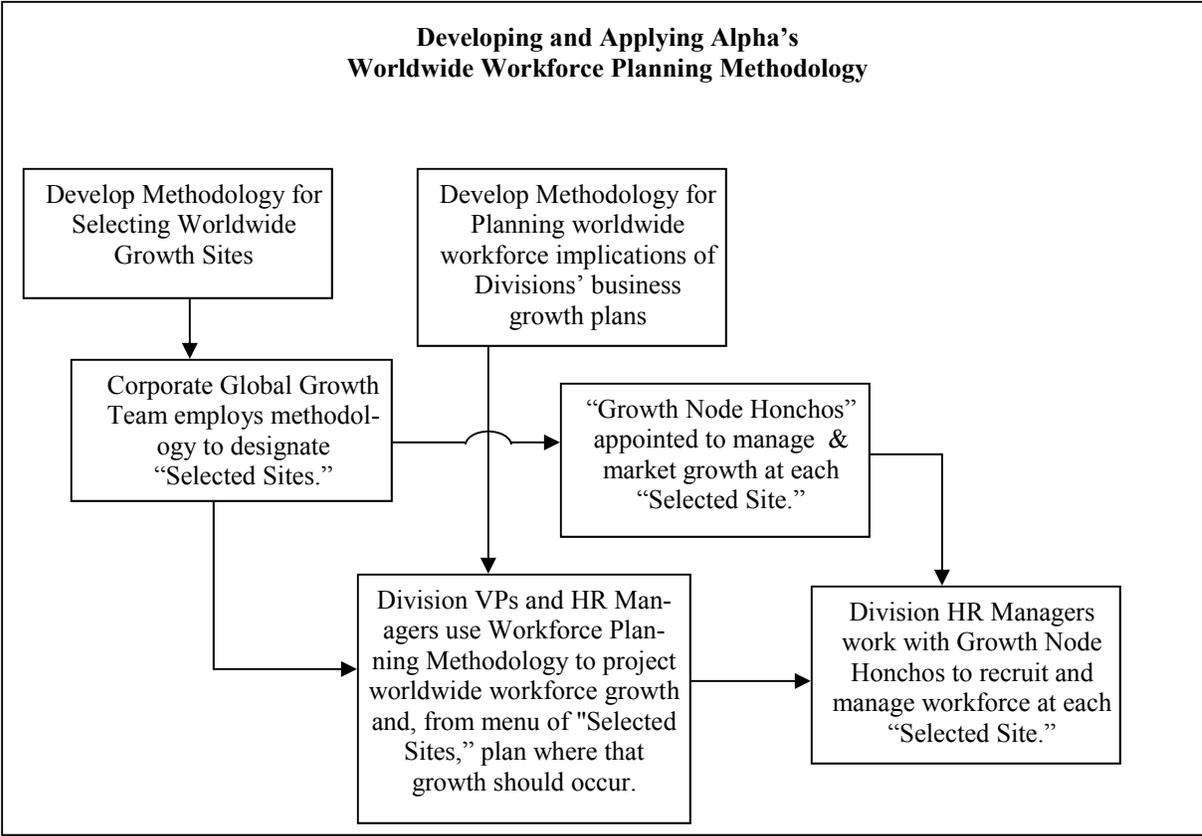
A third challenge was the growing awareness that "worker dearth" was here to stay, not only locally but nationally, at least with respect to top technical and managerial talent. Earlier, in the early 1990s, as Alpha was outgrowing the then-existing Bay Area workforce pool, the company's recruiters had begun to scour colleges and universities across entire United States. Then, to augment the U.S. workforce pool, Alpha had recourse to the H1-B visa as a means of recruiting promising young foreign talent.

In the end, however, Alpha saw that it and all its competitors were trying to recruit from the same talent pool, a pool that wasn't growing fast enough to meet the company's business global growth plans. As an increasingly globalized company, Alpha saw itself as a prominent combatant in the "global war for talent." To remain competitive in the global marketplace, Alpha had no option but to do its best to recruit and retain the world's best and brightest engineers, no matter where they might be.

These three challenges all pointed in the same direction: Alpha had to become—indeed was becoming—global not only in sales and service but also in research and development. But unlike sales and services, it was totally impractical to site research and development in 150 countries around the world.

All of this distilled to the question: "Where on earth should Alpha grow its research and engineering business?"

Wanted: A methodology for worldwide workforce planning. Alpha decided to break the problem into several parts. First, the company would designate a limited number of “selected sites” around the world where the global growth of its research and development would occur. Next, a “Growth Node Honcho” would be appointed to manage each of these growth nodes. Finally, the company would develop a worldwide workforce planning methodology to be used by the operations and HR managers of Alpha’s several product divisions. This methodology would be a way of systematically projecting the workforce implications of their business plans and to examining the relative desirability of the various selected sites as places for division growth. In the end, the division managers would choose from the menu of selected sites and decide how much and how fast to expand their research and development operations at each of them.



Candidates to Become “Selected Sites.” Alpha began the process of selecting worldwide growth sites with a list of locations outside the Bay Area where the company was already conducting engineering activities of some sort. These existing Alpha locations fell into two categories: (1) Those that came to Alpha by way of acquisition, i.e. they were the places where acquired businesses were located when they were acquired and where their personnel continued to work; and (2) those where Alpha had initiated operations for various reasons, e.g., to take advantage of labor costs that were lower than in Silicon Valley; to tap specific pools of local talent; or to “localize” product design and documentation. These sites numbered twelve:

Inside the United States	Outside the United States	
San Diego CA	London, Ontario, Canada	Moscow, Novosibirsk & Pereslavl-Zalessky, Russia
Portland OR	Limerick, Ireland	Hangzhou, China
Boulder CO	Cambridge, UK	Osaka, Japan
Research Triangle, NC	Grenoble, France	Tel Aviv, Israel

Several of Alpha’s existing worldwide locations, by virtue of their prior existence and the heft of their technical staff, became candidates to become “Selected Sites” for the company’s global growth. But Alpha’s top management wanted to cast the net wider and consider a much larger number of candidates as well. In the end, there would be fifteen worldwide “Selected Sites.”

Criteria for selection. All the candidates were to undergo rigorous evaluation to determine their suitability. Alpha decided upon five major categories of considerations to take into account: Workforce; Business Environment; Marketing; Cost, and Other Conditions. Within each of these categories Alpha developed a set of criteria by which to score each of the candidate sites. The table below shows the categories and criteria.

Workforce	Business Environment	Other Conditions	Marketing	Cost
Size of workforce pool	Political stability	Airline connections	Present size of market	Wages & salaries
Workforce quality	Intellectual property rights laws & their enforcement.	IT bandwidth	Potential size of market.	Non-salary labor costs
Work ethic	Labor laws, regulations & practices	Telephones		Travel
English skills	History of labor-management relations	Quality of utilities		Expatriate living
Education	Official honesty	Available real estate		Infrastructure
Job stability	Government attitude & incentives	Cultural compatibility		Productivity
Productivity	Bureaucracy	Time zone		Education & training.
Workforce availability	Immigration ease	Quality of life		
Breadth of talent pool.		Personal safety		
Quality of local universities		Ability to be a major presence		
Size of local universities				
Attractiveness for relocation				

Each of the fifteen candidates were ranked on a scale from one to ten according to each of 28 criteria. The higher the rank, the better the candidate was deemed to be.

Then, a set of ‘weights’ was developed for the purpose of reducing the multiplicity of scores to a single number. The sum of the weights was constrained to equal exactly 280. Initially, members of the senior management committee charged with evaluating the candidates were invited to supply their own “weights” and apply them on a worksheet similar to that displayed on the next page as Table B-1. Every member then “defended” his/her worksheet and weights at committee meetings.

Table B-1
Candidate Locations to Become Alpha's "Selected Sites"

Criterion	India	UAE/Dubai	Pakistan	Philippines	Ireland	France	U.K.	Israel	Russia	Malaysia	Taiwan	China	Japan	Weights
Size of workforce pool	7	6	3	3	4	7	6	4	8	4	5	9	8	7
Worker quality	6	5	4	4	5	7	7	7	6	5	6	3	7	18
Breadth of talent pool	7	6	4	3	5	7	7	7	6	4	5	3	7	20
Quality of universities	8	5	4	4	7	8	9	9	6	5	7	4	9	19
Size of universities	7	6	3	3	3	7	8	5	7	4	4	7	7	13
Attractiveness for relocation	3	7	1	5	6	8	6	4	1	4	4	3	6	9
Workforce availability	5	7	7	7	7	8	5	5	7	3	5	3	4	12
Government cooperation	7	9	9	7	8	7	7	6	2	7	5	3	4	8
Intellectual property right laws	5	8	5	5	9	8	9	7	1	6	5	2	9	18
Government corruption	6	9	6	5	10	8	10	7	1	6	6	4	7	11
Labor laws	5	10	7	7	6	3	7	5	3	8	7	5	7	8
Government incentives	6	10	8	6	7	4	6	5	0	7	6	4	2	4
Political stability	5	7	4	5	9	8	10	4	1	5	6	5	7	13
Immigration ease	4	9	1	7	6	5	5	5	4	5	5	4	2	9
IT bandwidth	8	8	6	7	10	10	10	7	2	8	8	5	10	15
Telephones	5	9	3	7	9	9	9	7	2	8	8	5	10	15
Utilities quality	4	9	4	7	10	10	10	8	4	8	8	5	10	10
Available real estate	6	7	6	8	7	6	6	6	3	8	5	7	4	7
Worker English skills	9	7	8	9	10	6	10	9	3	7	5	3	4	10
Cultural compatibility	6	7	5	6	8	7	8	8	6	6	6	4	4	8
Worker stability on job	1	7	8	7	9	8	7	5	6	7	6	4	8	6
Work ethic	7	8	6	8	8	6	7	10	6	7	8	6	7	10
Time zone	2	1	2	3	4	3	4	2	2	2	3	2	5	3
Quality of life	4	7	3	6	7	8	7	5	3	6	6	4	7	8
Airline connections	6	7	2	8	6	6	10	7	5	7	9	7	9	11
Ability to be a presence	3	10	10	9	8	5	4	5	5	6	5	4	1	3
Potential market size	6	5	1	4	2	3	5	3	3	3	2	8	6	3
Present market size	7	8	8	7	6	5	5	5	3	7	5	9	5	2
Average score, unweighted	5.5	7.3	4.9	6.0	7.0	6.7	7.3	6.0	3.8	5.8	5.7	4.7	6.3	280
Average score, weighted	8.2	10.1	6.5	8.0	10.1	10.1	11.0	9.0	5.6	8.1	8.4	6.2	9.7	
Loaded Cost Per Engineer (Bay Area = 1)	0.40	0.45	0.18	0.20	0.63	0.81	0.80	0.96	0.38	0.43	0.63	0.40	0.96	

Example of Alpha's Single-Page Country Summary Sheet

India:

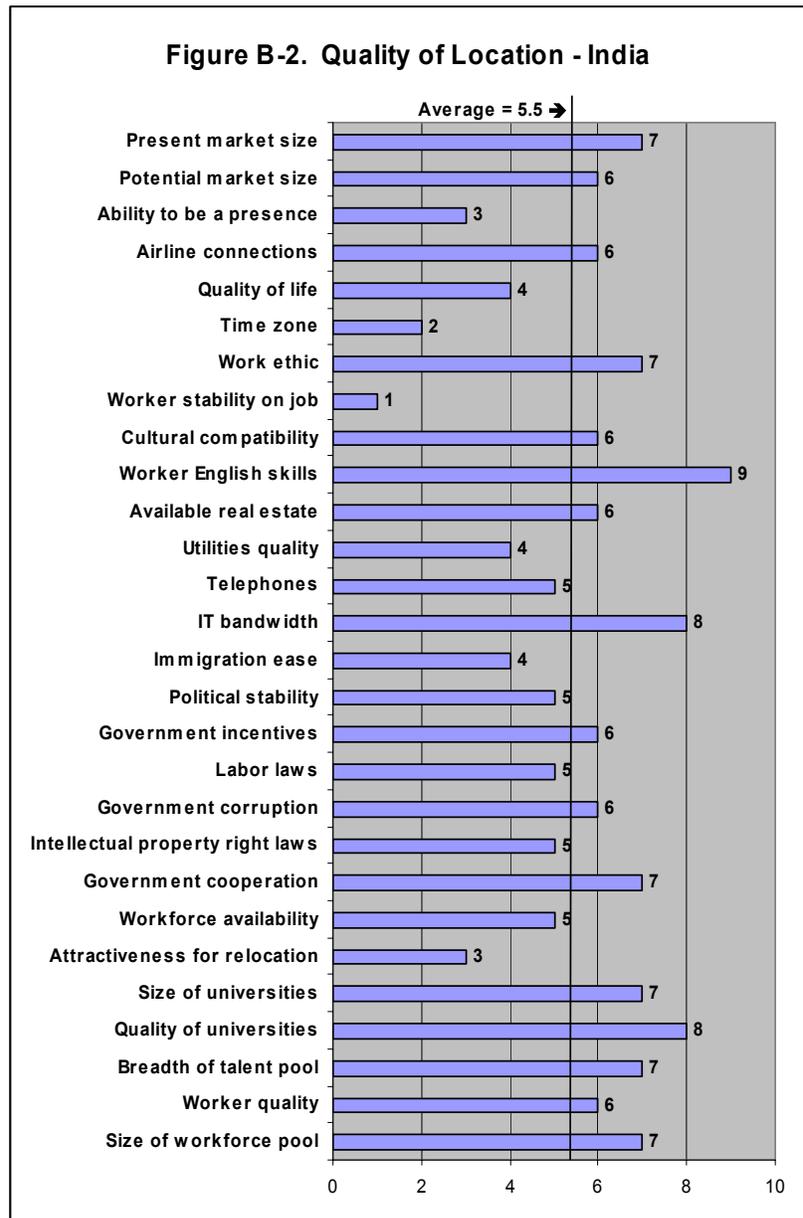
Potential Locations: Bangalore; New Delhi

Positives:

- ⇒ Excellent technical universities and institutes willing to form relationships with companies.
- ⇒ Large and diverse workforce pool at low cost.
- ⇒ Established high tech center.
- ⇒ Large existing multi-national presence.
- ⇒ Strong software engineering base.
- ⇒ Many nationals already employed at Alpha.
- ⇒ Many other contacts with nationals in Bay Area.
- ⇒ English language
- ⇒ Sizeable market potential.
- ⇒ Numerous contractors for outsourcing support services.
- ⇒ Time zone compatible with round-the-clock operations.

Negatives:

- ⇒ Worker turnover rates are high.
- ⇒ Basic utilities still unreliable.
- ⇒ No business hour overlap with the Bay Area.
- ⇒ Increasing competition for workforce.
- ⇒ Rising unit labor costs will gradually erode cost savings.
- ⇒ Compensation is difficult to manage.
- ⇒ Ponderous official bureaucracy.
- ⇒ High level of government corruption.
- ⇒ Work culture quite different from that of the U.S.
- ⇒ Travel is costly and difficult.
- ⇒ Intellectual property rights enforcement is spotty.



Appendix II: Where to Find Global Workforce Information

If workforce information is to play its proper role in corporate decision-making about business siting, then it must be mobilized. That means that someone in the company must mobilize it. Who more appropriately should mobilize relevant workforce information than HR managers? What follows is intended to be a partial guide to where to find that information.

Workforce Quantity: Basic information on global workforce numbers can be found in the following places:

The International Labour Office in Geneva maintains a rich online database of statistics and other information about workforce and labor conditions in most countries of the world.	http://www.ilo.org/public/english/support/lib/dblist.htm See also the ILO's annual <i>Key Indicators of the Labour Market</i> which is not available for 2001-2002 and its publication, <i>The World Employment Report 2001</i> , available in book and CD-ROM versions.
The World Bank publishes very useful demographic and workforce projections as well as a mass of information on virtually all countries of the world.	http://www.worldbank.org/data/wdi2002/index.htm http://devdata.worldbank.org/hnpstats/DPselection.asp The Bank's World Development Indicators is published annually and is available on CD-ROM and on-line. It includes 550 development indicators and time series data from 1960-2000 for over 200 countries and 18 country groups.
The U.S. Bureau of Labor Statistics, the Russian State Statistical Committee, and the ILO all maintain websites with links to most national labor and statistical agencies of the world.	http://www.bls.gov/bls/other.htm#International http://www.gks.ru/links.asp#asia http://webfusion.ilo.org/public/english/links/search_cat.cfm?category=Ministry
The U.S. Census Bureau maintains demographic databases not only on the United States but also on 227 other countries of the world.	http://www.census.gov http://www.census.gov/ipc/www/idbnew.html

Unfortunately, much of the workforce data to be found in both national and international databases is of a very summary sort. Projections of future workforce numbers are frequently unavailable or highly suspect in quality. Future projections are often best made using the World Bank population projections cited above for the working age groups (often these would be ages 15 to 65).

National population and workforce data vary greatly in quality among various nations. Only a small minority of countries (mainly the developed industrialized countries) publish geographically detailed data. Summary national data are seldom adequate for workforce analysis in larger countries. That means that reliable measures of the size and breadth of talent in specific locales are usually hard to locate or totally unavailable. In such cases, the analyst has no option but to collect anecdotal information from whatever sources he/she can find (interviews, the media, other companies).

Workforce Quality: Reliable information on workforce quality normally is even more difficult to obtain than that on workforce quantity. A very few countries (even a minority of OECD member countries) collect and publish detailed occupational data. Nevertheless, the OECD is an excellent place to start collecting qualitative data about nations' workforce. Worth recommending is *Society at a Glance, OECD Social Indicators*, OECD, Paris, 2001, 111 Pp. and *Science, Technology and Industry Outlook; Drivers of Growth; Information Technology, Innovation, and Entrepreneurship*, OECD, Paris, 2001, 127 Pp.

Endnotes

¹ 2000 *World Development Indicators CD-ROM*, World Bank

² “Goods” production includes agriculture, mining, construction, and manufacturing. “Services” means everything else.

³ U.S. Bureau of Labor Statistics, <http://www.bls.gov/opub/rtaw/pdf/table12.pdf>

⁴ According to the CIA 2001 World Fact Book, <http://www.cia.gov/cia/publications/factbook/>

⁵ See <http://www.stanford.edu/group/scforum/>

⁶ The academic literature certainly has not ignored this topic. See, for example, Quinn, B. and F. Hilmer.. Strategic Outsourcing, *Sloan Management Review*, Summer 1994. p.43-55; Hill, C. W., Make or Buy Decisions, in: C. W. Hill, *International Business: Competing in the Global Marketplace*, 2nd edition, Irwin, Chicago, 472-478; Cavusgil, S. T., A. Yaprak and P. Yeoh, A Decision-Making Framework for Global Sourcing, in: Heidi Vernon-Wortzel and Lawrence H. Wortzel, eds., 1997, *Strategic Management in a Global Economy*, John Wiley, New York, 381-392; and Kotabe, M. 1998. Efficiency vs. Effectiveness Orientation of Global Sourcing Strategy: A Comparison of US and Japanese Multinational Companies, *Academy of Management Executive*, vol. 12. p.107-119.

⁷ The EIU and the *Economist* provide political and economic analysis and forecasts for nearly 200 countries. Some of the *Economist* information is available without charge. The more in-depth EIU information is excellent in quality but hardly inexpensive. A website for both sources is <http://www.economist.com/countries/index.cfm>

⁸ For example, Political & Economic Risk Consultancy, Ltd., is a consulting firm specializing in strategic business information and analysis for companies doing business in the countries in East and Southeast Asia. See their webpage at <http://www.asiarisk.com/index.html>. Another vendor of political risk information is The PRS Group, Inc, in East Syracuse, NY. Since 1980, PRS has published its *International Country Risk Guide* which provides financial, political and economic risk ratings for 140 countries. See <http://www.prsgroup.com/icrg/icrg.html>. The PRS analyses are available inexpensively for individual countries *a la carte* at <http://www.countrydata.com/data/>.

⁹ The World Bank Competitive Indicators provide indexes of governmental corruption and unionization. See the site: <http://wbln0018.worldbank.org/psd/compete.nsf/acd41788edb363888525650c007275de/4072a0ea7428dfd8525650c00726449?OpenDocument> The World Bank Indicators are available by subscription on-line at <http://publications.worldbank.org/WDI/>.

¹⁰ The CIA *World Fact Book* is available on-line at <http://www.cia.gov/cia/publications/factbook/>.

¹¹ See the TI website at <http://www.transparency.org/index.html>.

¹² A particularly useful set of data produced by D. Kaufmann, A. Kraay, and P. Zoido-Lobaton in their book *Governance Matters* (1999) is available at http://www.worldbank.org/wbi/governance/gov_data.htm

¹³ Hadley, George T., “Intellectual property rights and foreign direct investment in emerging markets,” *Marketing Intelligence & Planning*, v18, No. 5, (2000), pp. 273-280.

¹⁴ *World Competitiveness Yearbook*, International Institute for Management Development, see the website at <http://www01.imd.ch/wcy/>

¹⁵ Interviews with Marriott managers. See also: *Marriott International, Inc. 2000 Annual Report*; and “Governor Glendening, Lt. Governor Townsend, Marriott and Montgomery County Join in Announcement of Major Expansion Plans,” State of Maryland Governor’s Press Office, <http://www.gov.state.md.us/gov/press/1999/mar/html/marriott.html>

¹⁶ “Call centre job losses sound a familiar ring,” *Financial Times*, May 3, 2002.; “ITV call centre jobs in the balance,” BBC News, Wednesday, 27 March, 2002, 17:27 GMT.

¹⁷ “Old adversaries decide trade, not tension, is key to future,” *Financial Times*, April 10, 2002.

Richard W. Judy

Senior Research Fellow, Discovery Institute; Director, Center for the 21st Century Workforce



As Director of the Institute's Center for the 21st Century Workforce, Richard ("Dick") Judy directs studies integrating economic development and workforce development at various levels from the global to the local. Among the most innovative is the *Workforce 21st Century* series of original studies focused on the state and local levels.

Dick is the Institute's chief demographic analyst and has been at work recently interpreting the results of Census 2000. He was co-author of the book, *Workforce 2020*, published by Hudson Institute where he was a Senior Research Fellow from 1986 to 2001. Recently, Dick has assisted numerous Workforce Investment Boards (WIBs) in their planning and board member orientation. He has consulted with state WIBs in Illinois, Missouri, Nebraska, Nevada, Ohio, Oregon and Virginia as well as local WIBs in those and many other states. Other recent engagements were with the Council of State Governors, the Midwestern Legislative Leadership Council, and the Southern Legislative Leadership Council. He serves as an advisor to the National Science Foundation on science and engineering workforce statistics.

Dick's previous work has included project directorships for studies of economic reform and development in Hungary, the Baltic states, Russia, and Ukraine. He was a member of the Blue Ribbon Commission for the Reform of the Hungarian Economy. At the request of the prime ministers of Estonia, Latvia, and Lithuania, he established and headed the Baltic Economic Commission. Besides *Workforce 2020*, Dick was the principal author of several books including *Mechanical Engineering in the 21st Century*, and *The Information Age and Soviet Society*.

Earlier, Dick was Professor of Economics and Computer Science at the University of Toronto where he was a founder of the Center for Policy Analysis. He also served as a founder and CEO of companies involved in software, consulting and agribusiness. He is a senior officer of Workforce Associates, Inc., a private consulting firm.

He has worked with more than 50 organizations worldwide including the U.S. Chamber of Commerce, the Association of Chamber of Commerce Executives, National Technical Institute for the Deaf, General Electric Corporation, State Farm Insurance Co., TRW, National City Bank, National Association of Manufacturers, the OECD, the World Bank and many others. He has been a frequent keynote speaker at national and international conferences sponsored by the Society for Human Resource Management. Recently, he delivered the keynote addresses at international HR conferences in Brazil and Venezuela.

Dick's doctoral work was in economics at Harvard University. He also studied at the University of Kansas, Columbia University, and as an exchange scholar at the University of Moscow. He has also been a visiting scholar at Hangzhou University in China and at the Academy of Sciences in Novosibirsk, Russia. He is a veteran officer of the United States Air Force with ten years of reserve and active duty.

- Dick's Email address is dickjudy@workforceassociates.com
- Phone: (317) 841-0133
- Fax: (317) 841-0704