# Low-Cost Domestic Outsourcing:

A Rational Option in a Global Economy

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Abstract:

For competitive U.S. companies, the case for offshore outsourcing of IT services can be very compelling when compared to traditional consulting rates in the major metropolitan areas of the United States. With a low-cost domestic alternative made available, the cost gap quickly narrows and the benefits of a domestic outsourcing solution become evident.

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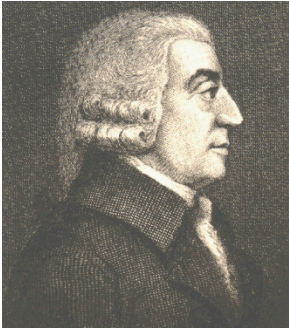
Adam Smith   David Ricardo

Adam Smith, in the law of absolute advantage, formalized the concept that products and services will be produced by those who can do so at the lowest cost. David Ricardo expanded the concept in the law of comparative advantage by demonstrating that work will be done in the lowest-cost manner relative to other alternatives.

These principles are behind today's economic reality: every day, U.S. jobs are being lost to cheaper labor around the world. Technological advances in communication have made it possible for businesses to move highly skilled software development jobs offshore to places like India and China, among others. While the threat of lost jobs is very real, the greater threat is that U.S. companies and many more jobs may be lost if we choose not to compete on a tougher level. If businesses don't focus on their core areas of expertise and carefully manage costs, their competitors will be the ones who take away jobs, not foreign software programmers.

All organizations must adapt with an intelligent outsourcing strategy since they have an obligation to shareholders, customers and employees to survive and remain competitive. Over the past 30 years, for many industries, that has meant "offshoring" labor. From the auto industry moving manufacturing facilities south of the border to textile companies manufacturing their goods in Asia, offshoring has become commonplace in many industries. The reduced cost of producing goods has kept U.S. companies' products competitive with foreign-made goods and has allowed previously threatened industries to thrive. At the same time, the cost of goods has remained low, benefiting the consumer.

The question, then, is not should U.S. business take advantage of the lowest cost means of production, including information technology services — it is an economic reality that they must. The question is whether or not IT services provided by U.S.-based technology professionals can be competitive. Policy-makers can debate the ethics and merits of trade policy, immigration and domestic loyalty, and whether or not offshoring is good or bad for the overall economy. But the business challenge is to look objectively at the cost-value equation and determine the optimized delivery model for IT services.

The history of information technology is littered with examples of the bandwagon effect, the most obvious being "dotcom mania". The apparent initial success of offshore outsourcing for some industries has created such an effect. Many businesses said, "if it worked for them, it will work for us" and jumped in without careful consideration. Reports of $100-per-hour work being done in India for $20-per-hour caused many businesses to begin outsourcing. For some companies offshore outsourcing worked; for many it didn't. Some early adopters have found that outsourcing is, in fact, more difficult than they initially thought.

There are many hidden costs, communication issues, and productivity challenges that inhibit success. Additionally, companies have been challenged by political risk that can diminish the benefits. It's becoming clear that comparing raw hourly rates is not an "apples-to-apples" comparison. There are instances of significant cost-savings having been achieved, but are we being thorough in evaluating all the factors? More importantly, are we challenging ourselves in the U.S. to increase our competitive intensity to provide a high value alternative to offshore?

Offshore Trends and Concerns

The Offshore Labor Market

While there are many locations in the world that claim to provide offshore IT services, by far the predominant supplier country is India. India has numerous advantages over even lower-cost alternative countries. These advantages include a large technically trained workforce, English language skills, government policies that have supported and promoted the IT services industry, and the necessary infrastructure and experience. India accounts for about 90% of the IT offshoring industry.

As a consequence of this success, the increasing demand for Indian IT work has resulted in many of the issues associated with a high demand for labor. According to Hewitt and Associates, among others, IT wages in India are increasing at a rate of approximately 14% per year. Comparatively, increases in the U.S. are reported to be less than four percent. The recent depreciation of the U.S. dollar has also served to shrink the cost gap. Likewise, as one would expect in a high-demand labor market, turnover rates are increasing significantly in India for people with experience. As a result, over time, the cost gap between India and the U.S. will narrow.

The Risks and Uncertainties Inherent in Offshore Engagements

There are a number of reasons organizations have concerns about sending work offshore. Certainly some have expressed concerns about instability, military tensions and geopolitical risks. Relative to specific IT projects, Gartner, Inc., has identified numerous risks, including cultural misunderstandings, infrastructure failures, security and privacy violations, and contract and liability issues with foreign legal systems. Political issues and customer backlash must also be added to the list. Whether it is the State of Indiana canceling a large offshore contract as a result of political pressure, or Dell repatriating offshore services after running into quality problems, there are clearly reasons for caution and concern.

The Importance of Organizational Compatibility

Organizational compatibility is one of the most overlooked elements when evaluating offshore outsourcing. Clearly, most organizations recognize and attempt to address some of the more obvious elements associated with distance, language and time zones. What needs more attention than it often receives is the business and information

technology process maturity of each party. Achieving alignment is often no small task. A large number of Indian software companies have been certified at Level V (the highest attainable) on the SEI software engineering Capability Maturity Model. Offshore firms were very diligent in securing these certifications to address some of the initial concerns associated with offshoring and to enhance confidence in their capabilities.

By definition, the processes and quality discipline required for this certification are rigid. However if the organization purchasing offshore services does not perform in the same manner as the service provider, there will be discontinuity. A procuring organization must consider whether its own internal processes are mature enough to stand up to the demands of a Level 5 supplier. One offshore experienced manager noted in <u>CIO Magazine</u>, "Well-defined and accepted internal software development and maintenance processes are also key to making an offshore situation work. If you're an organization that develops and maintains by the seat of your pants, you're in trouble."

Process and quality maturity is important, but to work cohesively the majority of domestic IT organizations have three choices. First, they can invest the time and effort required to improve their own processes, sometimes taking multiple years and hundreds of thousands of dollars, if not more. Second, they can limit the use of offshore suppliers to isolated projects, or third they can take the risk and hope for the best. In any case, the SEI certification claims of offshore service providers do not, in and of themselves, assure large-scale offshore success for the customer organization.

Sometimes Offshore Just Isn't an Option

For some organizations, using offshore services just isn't an option. This is certainly true for many government entities and their suppliers. It is also true for organizations committed to keeping jobs in the U.S. Companies that have particular concerns about intellectual property, data privacy or security, or are very sensitive to any adverse publicity, tend to have less interest in offshoring. Finally, sometimes the work that needs to be accomplished simply does not lend itself to an offshore solution.

All of these factors create demand for an alternative solution, yet the need to lower costs has to be addressed. The question becomes: is there a way to manage the costs associated with software development and support and yet avoid the concerns associated with offshoring? Before answering the question, let's fully examine the impact of labor costs on software development and support.

The Mistaken Exclusive Focus on Labor Rates

The primary driver behind the move of software programming work to offshore locations is simple labor arbitrage. Based on typical programming billing rates, a U.S.-based contract programmer working at a client site would typically command $70 per hour. Comparatively, the offshore labor rate for reportedly similar skills would be 35% to 40% of that amount, say $25 per hour. On the surface the 65% cost savings seems obvious, but some perspective is required.

Additional Costs of Offshore

Even the most sophisticated users of offshore IT services will acknowledge that there are additional costs associated with executing global projects. The most obvious are travel and data communications costs. The travel costs alone for an offshore team member who needs to travel to the client site for a few weeks during a year will add $3 or more to the hourly rate.

Depending on the project size, data communications can likewise add more than a dollar to the rate. Additional tangible costs include the client team traveling to the offshore location, incremental data security costs, process changes, and contract management. An additional $5 per hour or a 20% increase in the cost of labor is a reasonable estimation of the cost of the incremental overhead required for doing work offshore. As a result, the labor cost saving drops to 57% from 65% (the $25 labor rate is increased by 20%, to $30 per hour, compared to the previously mentioned U.S. onsite rate of $70 per hour).

Offshore Productivity Loss

Gartner has done significant research on how communications and cultural differences impact the productivity of a typical IT project. Research indicates that there are communications and effectiveness factors that result in more effort required for an offshore project. Often this extra work is required of the more expensive on-site team, not just the offshore team. The result is a higher project cost. It is difficult to precisely measure the impact of productivity loss on any particular IT project. However, combining the Gartner research, analysis presented in CIO Magazine and anecdotal evidence, a 30% loss in productivity is a reasonable conclusion.

Jim Goodnight, Chairman of SAS, a very large North Carolina-based software solutions company, notes in CIO Magazine, "What does it really cost for us to use a development center in India? We're estimating probably 35% to 40% additional overhead." Returning once again to our example, the full cost of the work done offshore is now $39 per hour ($25 is increased by 20% for additional overhead, plus an additional 30% for lost productivity, equaling an effective rate of approximately $39). The percentage cost savings is no longer 65%, but when all costs are included, the labor rate savings is more accurately 44%. This analysis is confirmed by the experience of most users of offshore services that indicate a maximum savings potential of approximately 40%.

The Impact of Labor Costs on a Typical Project

Today, a typical budgeted IT project has a number of important characteristics. Given continual improvement in software development technology, the cost of software products is increasingly a larger percentage of a project's overall cost. Likewise, the planning, definition, change management and training are significant components of the total cost.

These are not activities that can typically be sent offshore. In fact, the labor-intensive activities that can be done offshore (typically programming and testing) may only represent about 25% of a total project's cost. Assuming that the labor cost savings is 40%, when considering the full cost of the project, the overall project cost reduction is 10% since only one-fourth of the work can benefit from the labor arbitrage. If the project is critical to the company's competitiveness, its regulatory compliance or will generate a very significant return on investment, the risks associated with achieving a 10 percent cost savings need to be seriously examined.

As software development technology improves, as re-usable software becomes more prevalent, and as programming methods become more productive, the importance of labor costs will diminish because they become an increasingly lower percentage of the overall project cost. Ultimately, labor costs will no longer exclusively drive the decision-making process as organizations will make decisions based on other important factors.

For some projects and IT support engagements, this level of cost savings may be quite compelling and worth the risk and investment of doing an offshore project. But if it is a $10 million project that is expected to return $100 million in new income (or a project that assures regulatory compliance and keeps the CEO out of jail), any amount of risk or potential delay often outweighs the savings associated with an offshore solution.

The Domestic Low Cost Alternative

All of the previous comparative analysis assumes that the cost for a U.S.-based programmer is $70 per hour. What if that was not the case? What if, in fact, the cost was dramatically less? There are many locations in this country with a below average cost of living—significantly lower than the traditional IT business and employment centers that grew during the technology boom, such as Boston and San Francisco. Often these areas are populated with experienced yet less highly paid workers whose skills are not fully utilized. In particular, there are many such locations in which the IT workforce is diverse, well educated and experienced.

CIBER has created CIBERsites to take advantage of the under-utilized and talented workforces in these secondary markets. CIBERsites are highly efficient, low-cost development centers that tap into domestic labor markets to offer a "made-in-America" solution for project-based, outsourced application development and support needs.

CIBERsite locations are carefully selected to provide maximum value and benefit. For example, the first CIBERsite opened in 2005 in Oklahoma City. Oklahoma City was selected due to its diverse workforce population of military personnel, retirees and students. Many of these employment candidates have not only the same technical education as overseas IT workers, but often have more professional experience. Recognizing the perceived risks associated with an offsite engagement, CIBERsites processes and procedures have been designed to provide a world class delivery infrastructure that is fully compliant with U.S. business laws and practices, implements industry standard practices for physical and data security, and employs only those who pass thorough background checks and drug tests. Additionally, to provide ease of access, CIBERsites are selected in areas near major airports, making a trip to a CIBERsite a two-hour flight versus a two-day journey overseas.

Billing rates from CIBERsites are significantly lower than typical IT services performed at customers' locations. While the raw billing rate is higher, typically $38 per hour for services that would be typically performed offshore at $25 per hour, when all things are considered, CIBERsites becomes a very cost-competitive alternative.

All of the figures in the Cost Comparison Table can and should be considered and even challenged by those making an IT services sourcing decision. But what must also be considered is that there are unquestionable additional overhead and productivity losses in any offshore engagement. When all things are considered, the cost gap between a highly competitive, cost-conscious domestic alternative and an offshore solution is very narrow indeed.

CIBER is uniquely positioned to create an offering such as CIBERsites. CIBER is large enough to handle the projects of the Fortune 1000, but with a lower price point than the more familiar names in IT. There are solutions focused on "farm sourcing" (using workers in rural areas), or sometimes "home sourcing" (using virtual workers based out of their homes); but only CIBERsites provides an industrial strength solution with the world-class delivery processes, and the sales engine and volume of work to sustain the high productivity required to keep costs low.

It is important to note that the CIBERsites solution is not simply predicated upon finding lower cost labor in the U.S. CIBERsites offer world class distributed delivery methodologies and tools, fully secure development centers with comprehensive disaster recovery, and a variety of services — including application development and support in newer technologies (.Net, Java, C++, etc.), legacy technologies (e.g., traditional mainframe technologies), and testing and data management capabilities (such as ETL and database administration). In addition, CIBERsites continually innovate and improve the efficiency of application development and support and reduce costs through the use of tools, technologies, processes and management practices.

Cost Comparison Table (Note: costs shown in U.S dollars)

Cost	Local Programmer	Offshore Programmer	CIBERsite Programmer
Typical bill rate	$70.00	$25.00	$38.00
Overhead Cost	$0	$5.00 (20%)	$1.90 (5%)
Total Cost per Hour	$70.00	$30.00	$39.90
Lost Productivity	$0	$9.00 (30%)	$0
Total Cost	$70.00	$39.00	$39.90

In Conclusion

The case for offshore outsourcing of IT services can be very compelling when compared to traditional consulting rates in the major metropolitan areas of the U.S. But when the possibility of a low-cost domestic alternative is made available, the compelling case for offshore outsourcing becomes less compelling. The cost gap quickly narrows, and the benefits of a domestic outsourcing solution become evident.

When one takes a realistic and hard look at offshoring, you find that, in fact, it is not an apples-to-apples wage comparison. There are many hidden costs that have been identified. Communication gaps such as language, time zone differences, and requirements and technology translation issues are often the most immediately obvious problems with offshoring. Many companies are finding that the intellectual property protections offered in other countries simply don't measure up and aren't worth the risk. Quality control, compliance issues, institutional knowledge gaps, lack of data and security standards, loss of control and high employee turnover have all made offshoring less of a bargain than was once thought.

Clearly, there is often a strong case to be made for using offshore services and no one expects the practice to cease. There are numerous examples of success and significant cost-savings. If a client has a pre-determined offshore strategy and the need to globally diversify; if a client is looking for the lowest possible cost in the long-run or has a need for specialized skills that cannot be found in the U.S. at attractive price points; if a client wants to leverage the process maturity of an offshore organization; or if a client wants to take advantage of global time zones, outsourcing IT work offshore may be the right answer.

But low-cost domestic outsourcing centers such as CIBERsites offer a compelling alternative. The critical action for anyone investigating the use of lower-cost application development and support solutions is to objectively and completely evaluate the alternatives. "When you're a hammer, everything looks like a nail." Similarly, pure-play offshore service providers would seem

to objectively assist decision-makers in determining where work should be done. Companies such as CIBER that provide offshore services, as well as a domestic alternative, can evaluate the client's unique needs within a given situation and prescribe the solution that will work best when all factors are considered.

Before succumbing to the belief that IT services delivered from offshore have, in Ricardo's terms, a comparative advantage, it is incumbent upon decision-makers to consider all the factors that go into making up that advantage. As Ricardo himself acknowledged, the cost of labor is only one of the factors that determines the cost of production. With the development of a cost-effective solution for IT services that is based in the U.S., for many situations, the comparative advantage may well reside on our own shores.

About the Author

Tim Boehm serves as President of CIBER's newest division, CIBERsites. CIBERsites are low cost domestic application and support centers located throughout the United States. Mr. Boehm is responsible for opening the first CIBERsites in Oklahoma City and Tampa in early 2005. He anticipates opening four additional CIBERsite locations in the near future.

In addition to his role as President of CIBERsites, Mr. Boehm serves as Regional Vice President for CIBER's Southeast region, representing seven business units and approximately $70 million in annual revenue. Mr. Boehm has been instrumental in helping establish CIBER's market position and messaging, enhancing the application outsourcing practice and developing the offshore delivery capability.

Footnotes

Stephanie Overby. "India Sees IT Wages Rise," *CIO Magazine, September 1, 2004* (Hewitt and Associates cited as the source of the wage information).

Stephanie Overby. "The Hidden Costs of Offshore Outsourcing," *CIO Magazine, Sept 1, 2003.*

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