

An Economic Analysis of Offshore Outsourcing: Challenges and Wages Factor

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ABSTRACT

Although most U.S. businesses enjoy the low wages benefits through offshore outsourcing, their long-term savings may be reduced to a smaller level. Also, numerous economic and regulatory factors also encumber domestic business; it would not be economically viable to offshore many of these functions. On the other hand, there are multiple factors beyond the obvious wage disparity that could reverse the trend. This paper analyzes the offshore outsourcing through implied cost structure and wages factors.

INTRODUCTION

In its simplest form, outsourcing appears to be caused by a disparity in wages across the globe. For example, the average annual wages for an engineer is significantly less in other countries than in the U.S.

As trade barriers fell during the Clinton administration, companies gained more access to manufacturing resources located in where the standard of living is lower, and the wages are correspondingly lower also. President Clinton sponsored legislation that granted China “permanent normal trade relations” in 2000 (Allen, 2000). Prior to that industry was reluctant to make large investments in China because for twenty-two years, trade relations were reviewed and renewed on a yearly basis. Clinton also championed the NAFTA agreement, which became law in 1994. The North American Free Trade Agreement is somewhat of a misnomer. It is more of an investment agreement, covering the rights that companies had when creating businesses inside other countries that were also covered by the NAFTA agreement.

After a close look into this issue, it is more complex than just the wage differences. The other related issues can be identified below:

1. While wages are central to this issue, questions arise as to the nature of the wage disparity. Is this disparity exclusively the result of substandard living standards and wages at the offshore

source, or is some or all of the disparity a result of domestic political forces causing wages in some industries to exceed their fair market value?

2. What roles do tax and regulatory burdens play in a corporation's decision to source products and services offshore?

3. What overhead costs does a corporation reduce or eliminate when deciding to outsource offshore?

4. What is the domestic government doing to compete against foreign governments for jobs? What infrastructure is being provided in exchange for corporate tax dollars, and how does that compare to foreign countries?

5. What additional costs or complexities do outsourcing cause? While the reduction in labor costs can be significant, how is the supply chain affected when it stretches around the world instead of across town?

This paper intends to discuss various concerns on offshore outsourcing, especially on cost structure and wage related factors. This paper first discusses various challenges faced offshore outsourcing decision. The next section identifies corporate profit and wages factors that may affect offshore outsourcing decision. After that, this paper conducts a wages analysis that centers on domestic automobile industry. A conclusion is given at the last section.

OUTSOURCING CHALLENGES

While the cost savings attract companies to seek labor outsourcing, there are other ramifications that could reduce the desirability of exporting work overseas. Some of those challenges are:

1. Poor control of information that consumers expect to be kept private.
2. Scams perpetrated on consumers by call center employees with commission based pay.
3. Higher cost of managing offshore call centers.
4. Theft of intellectual property.
5. Poor protection of patents, copyrights, and trademarks.
6. Help desks staffed by employees with insufficient English language skills.

These outsourcing challenges are discussed and analyzed below.

Poor Control of Private Information

Processing financial information offshore is a fast growing segment of the outsourcing industry. Large corporations having accounting functions such as accounts payable and payroll processed abroad, however, financial information for private citizens is being processed offshore as well. It is estimated that between 150,000 and 200,000 tax returns of American citizens were prepared in India this year (Dobbs, 2004). It is also estimated that the 15 largest American financial firms spent \$1 billion on outsourced labor in 2003. By 2008, this segment is expected to grow to \$2.5 billion. This increase will equate to 500,000 additional financial jobs being relocated offshore (Dobbs, 2004).

The obvious benefit is that Americans can get their tax returns processed, (a non-value generating function that is a drain on the economy), at a reduced rate. On its surface this should be good for the individual consumer and the economy as a whole. Less obvious, are some of the

potential negative ramifications. Foreign workers, beyond the reach of U.S. law enforcement agencies now have access to credit card numbers, social security numbers, and bank records, of American citizens. This creates an environment that is ripe for identity theft, credit card fraud, and electronic theft from consumers and their financial institutions.

It is difficult to protect private citizens from the actions of foreign workers, unlike the protection they can receive from extortions attempts perpetrated by domestic workers subject to domestic laws and punishments. Legislation has been proposed to require companies to notify Americans when there has been a breach in the security of their private information being processed offshore. Such legislation would make the offshore processing of this information less attractive; consumer pressure might cause companies to rethink this type of outsourcing.

Call Center Scams

Call centers are the fastest growing portion of India's IT services industry, with expected growth of 60% in 2004 alone. According to Terry Healy, Vice President of Sales and Marketing of Houston Texas based CCC Interactive, an outsourcing company, 250,000 call center jobs have been outsourced to India and the Philippines since 2001.

The distance and the different culture both prove to be "managerial challenges" when attempting to use an offshore call center. Capital One encountered just such a "managerial challenge" in January of 2004. A scheme at a call center in Navi Mumbai, India was discovered that had been defrauding American consumers for months (Heller, 2004). The call center, owned by Wipro Spectramind, whose reputation was built on writing high quality software for clients such as Compaq, Home Depot, and Nokia, employed 600 agents. The agents made outbound telemarketing calls on behalf of client company Capital One, attempting to generate credit card business. Supervisors told agents to enhance their sales presentations to increase the yield rate on their calls. The "enhanced" sales pitches included false claims about the credit card membership fees, and about free gifts for signing up.

The scheme appears to have been pervasive throughout the organization, involving supervisors and quality control personnel, as well as call agents. In theory, 10% of the calls were to be monitored to ensure that they did not cross "legal and ethical boundaries" (Heller, 2004). The quality control teams stopped listening two weeks of each month while the fraud was being perpetrated. While overly aggressive sales pitches are not unique to offshore call centers, controlling this behavior when the labor force is located 12,000 miles away enhances the managerial challenges.

Higher Cost of Managing Offshore Call Centers

To maintain control over the quality of service delivered by offshore call centers, the cost of management typically runs 18% more than the cost of managing an equivalent domestic facility. It can still prove to be a worthwhile endeavor because offshore call centers typically cost 20% to 50% less, thus offsetting the higher management costs.

While it is intuitively obvious that adopting information technology and managerial techniques will improve the level of service at offshore call centers, it also makes them less attractive financially.

Theft of Intellectual Property

For years the manufacturers of name brand and designer products such as watches, shirts, and handbags have had to contend with low cost offshore manufacturers imitating their products and stealing their customers. More recently, the targets of offshore counterfeiters have been DVDs, CDs, VHS tapes, and software. These bootlegged products have received attention from the American government; however the losses continue to be enormous. The primary source of these counterfeit goods is China.

Moving the legitimate manufacturer of products closer to the source of the counterfeiting will pose increased risks for the theft of intellectual property rights. For example, automobile parts have been the target for counterfeiters for a long time. While they could duplicate the form and perhaps the function of the components, they lacked the understanding of the processing necessary to make parts of equal quality to the original equipment manufacturers (OEMs).

Many companies try to diminish the possibility of intellectual property theft by:

- Prohibiting floppy disks and CDs in the workplace.
- Providing no drives on computers for floppies and CDs.
- Prohibiting laptops.
- Partitioning databases.
- Keeping the development network separate from the Internet.

Poor Protection of Patents, Copyrights, And Trademarks

SolidWorks Corporation, an American company producing solid modeling and drafting software, discovered that an employee of the offshore outsourcing firm they used in India tried to sell intellectual property to a competitor. The employee has been caught and arrested by Indian authorities. The case will come to trial later in 2004, and is viewed by the industry as a litmus test of India's resolve to improve enforcement of intellectual property rights. In May of 2004, the Office of the U.S. Trade Representative released a report criticizing several countries, India among them, for failing to protect American intellectual property rights. (Dobbs, 2004)

In 2003, General Motors contemplated suing a Chinese automobile manufacturer for copying the design of a GM car also being manufactured in China. Investigation revealed that the offending company was owned in part by GM's local partner in China, Shanghai Auto. In December of 2003, Toyota failed in Chinese court to defend the use of its own logo from Chinese manufacturer Geely. Geely is able to market cars with a trademark that most observers mistake for one which belongs to Toyota.

These anecdotes indicate how difficult it is for companies to defend their intellectual property in developing countries that both lack the infrastructure to defend such property, and whose focus is

on creation of jobs in their own country, not defending the rights of countries with greatly superior standards of living.

Help Desks Staffed by Employees with Insufficient English Language Skills

In 2001, Indiana based insurance company Conseco purchased a call center based in India for \$52.6 million dollars. Conseco anticipated that the purchase of Exlservices would reduce its customer service costs by \$60 million dollars per year. By any measure, a one-year payback appeared to make the investment sound, however customers complained that they could not understand the service personnel because of their accents. The poor service coupled with costs not being as low as anticipated, lead Conseco to sell the call center in 2002 at a \$20 million loss.

Dell Computer has experienced similar difficulties with their call center located in Bangalore, India. As a result they have removed two business computer lines from the center. One disgruntled customer told Fox News, “They are extremely polite, but I call it sponge listening. They just soak it in and say ‘I can understand why you are angry’ but nothing happens.” (Heller, 2004).

CORPORATE PROFIT AND WAGES FACTORS

Outsourcing is a topic that we either feel for or against. There are no entanglements with other issues, no extenuating circumstances. We are led to believe that with the stroke of a pen, or by slapping the wrists of some errant corporate executives we can just stop it and go back to the way things used to be. The news snippets always portray outsourcing as having a single cause, corporate greed. If one suspects that it is driven exclusively by corporate greed how do non-existent growth of the stock market, poor corporate dividends, and single digit corporate profits enter into the picture?

Rather than simply tabulate the number of, and dollar value of, jobs that have left this country, one needs to examine both the destination countries, and take an introspective look at America itself. It is important to examine the cost structure and the social issues that have led businesses to flee this country in alarming numbers.

Corporate Profits

Frequently in editorials of major newspapers, on a major networks evening news broadcast, or on news-talk radio on the drive into work in the morning, outsourcing is distilled, by the political pundits, into a simple problem with a simple cause: corporate greed. In this view of the problem, the loss of jobs could be stemmed by replacing the current group of CEOs with ones who possessed greater social conscience. This section investigates this view is through financial data.

We can check the performance of the three major U.S. stock market indices over the last five years (Greacen and Chou, 2005). In round numbers, the Dow is down 10%, the NASDAQ is down 40%, and the S & P 500 is down 25%, over that period. These indices indicate that if there were extreme profits as a result of corporate greed, they have not manifested themselves in the form of increased shareholder value.

The Hoovers.com website illustrates financial data for twenty-four major U.S. manufacturing companies. In each of these charts (Greacen and Chou, 2005), the net profit margin calculation includes non-operating income or losses, in addition to the “net income after taxes.” This sometimes results in a percentage that is slightly different than dividing “net income after taxes” by “revenue.” Of these twenty-four companies, only one, General Electric, posted a net profit margin in excess of 6% all three years of 2001-2003.

The “net profit margin” data did not provide for negative numbers, returning 0% for the profit margin of companies that incurred a loss for the year. Therefore the calculation of “average net profit margin” is the dividend of the average of “net income after taxes” divided by the average of “revenue.” For the three years (2001-2003) shown in these tables, “average net profit margin” ranged from less than 3% to less than 4.5%. A more representative number might be even lower. In each year, General Electric raised the average of this calculation by approximately .5% on its own. Major companies that are bell weathers of the American culture earned almost nothing. Goodyear lost money each of these three years (2001-2003), while General Motors ranged from a high of 2.1% to two years where the margin was measured in fractions of a percent.

Another useful indicator would be Return on Assets. Unfortunately, EBIT (earnings before interest and taxes) for these companies do not appear to be readily available in the public domain. A pre-interest figure is a necessary component of a calculation of return on total assets. Instead a somewhat less useful calculation of “return on equity” was generated. “Total equity” was first calculated by subtracting total liabilities from total assets. This component proved interesting in and of itself. General Motors saw shareholders equity fall \$13 billion between 2001 and 2002. Goodyear has seen shareholders equity slip into negative numbers. Sixteen of the twenty-four companies saw shareholder equity fall from 2001 to 2002. Seven companies had lower shareholder equity in 2003 than 2001.

“Return on equity” is a misleading calculation in that it reflects how the capital pie is divided between debt and equity, more than it reflects profitability for the shareholders. For example in 2002, General Motors had a 42% return on equity (ROE), nearly four times what it would be a year later, because corporate liabilities had wiped out shareholder value. In spite of some misleading tendencies, some conclusions can still be drawn. In 2001, seven of the twenty-four companies had ROE of less than 1%. In 2003, three companies from the sample population had ROE that was negative, and another seven had ROE that was single digit.

To summarize, it appears that neither stock holders nor the underlying corporations are making exorbitant profits which would allow them to view manufacturing their products in an area with lower overhead and lower labor rates as a discretionary option. To the contrary, it appears that major manufacturing corporations need to find every cost saving measure possible to improve the return for all of their stakeholders.

Offshore Wages

According to Chinese government data, manufacturers in Shanghai pay workers \$1.00 per hour plus \$.42 per hour in benefits. Factories in rural areas typically pay \$.60 per hour. (Sherefkin,

2003) American companies intending to do business in China must create a joint venture with a local company. These local companies may have their own agendas, separate from that of the "partnership." One Fortune 500 company that setup a Chinese facility assumed that they would be paying unskilled labor \$1.00 per hour. Their Chinese partner established various employee benefit programs including:

- Heating oil allotments.
- Medical care.
- Housing allowance.
- Free lunches.
- Clothing allowance.

The \$1.00 per hour soon reached \$3.00 per hour. Hidden costs included managers from their Chinese partner company buying themselves two new Buicks.

According to Richard Sinkin, managing director at InterAmerican Holdings Co. a San Diego based consulting firm that focuses on manufacturing in Mexico, suppliers typically pay \$2.00 to \$2.50 per hours for wages and benefits (Sherefkin, 2003).

Domestic Wages

It is generally assumed that the differential between wages in the United States and wages in an outsourcing destination country is one of, if not the primary, motivation for outsourcing labor.

While the offshore manufacturing of electronics is almost complete, that industry came of age in the Pacific Rim. Many common household electronics products were either never made domestically, or were not made domestically in the quantities that make them prevalent today. Inexpensive, audio equipment such as the Walkman, the Diskman, boom boxes, etc. were never domestic products. Although there was a domestic television industry, the growth spurt that changed television sets from a luxury item to a commodity coincided with importation of inexpensive units from the Pacific Rim. The growth of this industry represented the availability of products that were either entirely new, or previously at a price point that precluded broad rollout. Massive growth of offshore manufacturing of these products did not cause large-scale shifts in domestic employment.

In contrast, the growth of the automobile and automobile components industries in the Pacific Rim is an entirely different phenomenon. Domestically, the industry was mature before the importation of goods from Pacific Rim manufacturers, and the outsourcing by domestic manufacturers to that same area. Growth in outsourcing and importation has a one for one inverse relationship with employment in those industrial sectors in this country.

Wage disparity

As a result of this, an investigation into the disparity in wages in the domestic automobile industry and foreign counterparts is warranted. While domestic forces, either in the form of corporations, government, or organized labor are not able to influence wages paid in foreign

countries, perhaps domestic forces could reshape domestic wage patterns. This presents the questions, are domestic auto industry wages:

1. Equitable with respect to other professions in the workforce and equitable with respect to the level of education and training required?
2. Equitable with respect to similar trades outside the auto industry?
3. If wages in the auto industry were reduced sufficiently to retain these jobs on shore, would these workers be reduced to poverty?

Typical American income

The first segment of this process is to determine the income that the average American household might reasonably expect. The most conventional configuration, a married couple family, is also the most prosperous. Median income is \$60,471, according to DeNavas-Walt (DeNavas-Walt, 2002).

Depending on age, race, household configuration, and a myriad of other factors, a reasonable expectation for median national income is on the order of \$50,000. To achieve that income, it is an even bet that the household has two or more wage earners (DeNavas-Walt, 2002).

WAGES ANALYSIS: FOCUSING ON DOMESTIC AUTOMOBILE INDUSTRY

Economic Gains

Based on a 2080-hour work year, the UAW calculates that for a typical assembler the projected total wage gains over the 4-year life of the contract are as follows (Greacen and Chou, 2005):

- GM \$18,500
- Ford \$17,400
- Daimler Chrysler \$17,400

These figures include the \$3000 signing bonus, the bonuses and pay increases in years 2 through 4, in the case of GM, the Independence week vacation pay, and projected cost of living adjustments. It does not assume any overtime, and does not include a factor for the benefits from the myriad of miscellaneous fringe benefits.

Comparative Analysis

Having obtained a general overview of both wages in the blue-collar portion of the automobile industry and the nation in general, it is possible to evaluate those wages with respect to the questions posed in the opening paragraphs of this section.

1. *Are domestic auto industry wages equitable with respect to other professions in the workforce, and equitable with respect to the level of education and training required?*

The janitor job classification at the “Big Three” automakers earns \$52,000/year on straight time. This is greater than 18 of the 24 job classifications listed in Table 6. This is greater than the mean annual income for police & fire fighters, nurses, post secondary teachers, and drafters &

engineering technicians. All of these job classifications require more training, contribute more to society, and require greater personal initiative, than being a janitor. In the case of police & fire fighters, a high element of risk is present that does not exist for the janitor.

The wage situation is similar to tool and die makers. Most automotive tools are procured through vendors, not constructed in-house. “Big Three” tool and die makers primarily change and repair tools. They earn an average of \$62,400 on straight time. This is greater than or equal to 21 of the 24 job classifications. This is equal to the mean income of psychologists, and exceeds the mean of professions such as mathematicians, statisticians, computer scientists, computer programmers, and computer engineers. The disparity between the training required being a statistician and a die setter is obvious. Clearly wages paid to UAW members exceed reasonable expectations when compared to other professions.

2. *Are domestic auto industry wages equitable with respect to similar trades outside the auto industry?*

The UAW janitor might best be compared to “food preparation and serving related occupations”, and “building and grounds cleaning and maintenance occupations” (Greacen and Chou, 2005). These professions share many traits such as, no special skills required, limited educational requirements, ultra short training cycle, etc.

Comparison of the UAW contract data and the census data clearly illustrate that measured against the free market (or at least non-UAW) valuation of these professions, the wages being garnered by workers in these job classifications are exorbitant.

3. *If wages in the auto industry were reduced sufficiently to retain these jobs on shore, would these workers be reduced to poverty?*

The UAW wages are high compared to the mean income for all workers in all occupations. The wages are high compared to general household incomes. Further more, higher income households have a high probability of having more than one wage earner. UAW janitors and tool and die makers could have their wages reduced 31% and 43% respectively and still have above average incomes.

CONCLUSION

The goal of any individual, and for that matter any society as a whole, is to do as well as possible for themselves and their families. In this instance however the economic gains of a group are not achieved by improvements in education, job skills, efficiency or productivity. The gains are a result of political clout legalizing restrictive trade in a resource (in this case labor) that countermands the natural effects of the free market.

This policy is not protecting workers whose economic existence is tenuous; rather it protects those whose compensation is far above the norm by any method of measurement. Industry has found that the only way to purchase this resource (labor) at a free market price is to first escape the political subdivision that provides this restrictive policy.

REFERENCES

- Allen, J. (2000). Trading places: the final push for China. *U.S. News and World Report*, May 8, available at <http://firstsearch.oclc.org.ezproxy.emich.edu/>.
- DeNavas-Walt, C. and Cleveland R. (2002). *U.S. Census Bureau current population reports 2002: Money income in the United States, 2001*. U.S. Government Printing Office, Washington DC.
- Dobbs, L. (2004). Is nothing private anymore? *U.S. News and World Report*, May 17, retrieved online from <http://firstsearch.oclc.org.ezproxy.emich.edu/>.
- Finance.yahoo.com (2004). Available from <http://www.finance.yahoo.com>.
- Forbes. (2004). CEO Compensation, *Forbes*, available from <http://www.forbes.com/lists/2004/04/21/04ceoland.html>.
- Greacen, J.F. and Chou, D.C. (2005). Offshore outsourcing impact: an analysis of the US automobile industry. *International Journal of Management and Enterprise Development*, forthcoming.
- Heller, M. (2004). After a scam, companies keep closer tabs on offshore call centers. *Workforce Management*, June, retrieved online from <http://firstsearch.oclc.org.ezproxy.emich.edu/>.
- Khirallah, D. R. (2002). The Politics of Outsourcing, *Information Week*, retrieved online from <http://firstsearch.oclc.org.ezproxy.emich.edu/>.
- Roberts, B. (2004). The perfect storm brews offshore, *Electronic Business*, March, retrieved online from <http://firstsearch.oclc.org.ezproxy.emich.edu/>.
- Sherefkin, R. and Sedgwick, D. (2003). Ford GM push vendors toward China. *Automotive News*, vno6045, June 23, retrieved online from <http://firstsearch.oclc.org.ezproxy.emich.edu/>.
- UAW - GM contract. (2003). Solid economic gains - 2003 UAW GM and Delphi report, retrieved online from <http://www.uaw.org/contracts/03/gm/gm02.cfm>.
- UAW - Ford contract. (2003). Solid economic gains - 2003 UAW Ford report, retrieved online from <http://www.uaw.org/contracts/03/ford/ford02.cfm>.
- UAW - Chrysler contract. (2003). Economic gains - 2003 UAW DaimlerChrysler hourly report, retrieved online from <http://www.uaw.org/contracts/03/dch/dch02.cfm>.