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# MANAGING EMERGING OUTSOURCING TRENDS: THE INDIAN EXPERIENCE

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## ABSTRACT

*A number of US and UK based firms have outsourced a variety of activities to India because of cost efficiencies and the presence of a large English-speaking population. Outsourcing is a dynamic process and is constantly evolving. To be proactive, managers must identify emerging trends impacting outsourcing. Six emerging trends are identified along with discussion on managerial implications for managers based in the US, UK, India, and other countries.*

## INTRODUCTION

The twin effects of globalization and advancement of technology (computers, telecommunications, and the Internet) have made it possible to outsource work to locations like India, which has an abundance of affordable and skilled labor (Engardio & Einhorn, 2005; Kapur & Ramamurti, 2001). According to Gopalan and Embry (2003), India has the distinction of having a stable democratic political system with consistent on-going free-market reforms; a large pool of well-educated English-speaking workers especially in the engineering and sciences disciplines; internationally competitive labor costs; many firms with CMM-Level 5 certification; and an independent judiciary that protects intellectual property. These factors have made India an attractive location for outsourcing and off-shoring activities. Future projections indicate increased outsourcing activity.

Successful managers are constantly engaged in a proactive scanning of the environment to identify and capitalize on trends before their competitors can do so; in this process, they emerge as market leaders defining and shaping trends that others follow. As an example, Jack Welch, former CEO of General Electric, is widely credited as a pioneer who recognized India's potential in the early 1990's (Solomon & Kranhold, 2005). Due to his initiative, GE invested in a number of business ventures in India and engaged many of India's leading firms such as WIPRO and TCS. In 2000, GE inaugurated the Jack F. Welch Technology Centre in Bangalore, India, where thousands of Indians are engaged in research on a variety of products ranging from aircraft engines to refrigerators. GE led the way for others to follow.

## REVIEW OF OUTSOURCING LITERATURE

Given the need to "track" events that have occurred on a frequent basis, our sources of information for this paper were heavily drawn from publications such as the Financial Times, Wall Street Journal, Economist, Business Week, Forbes, and on-line publications, in addition to journals such as the Academy of Management Executive. While our overall objective was to focus on articles that specifically dealt with outsourcing as it pertained to India, we included other articles that we considered relevant to our discussion that addressed emerging trends which are impacting outsourcing

Each of us completed an independent assessment of the references and separately developed a list of the most significant themes/trends. The two lists were compared to assess degree of similarity or difference. With one exception, both reviewers had identified and categorized similar trends. The lists were merged to create a master list of six trends. These trends are not mutually exclusive and in many instances impact one another. They are discussed below.

### **REVERSE BRAIN DRAIN**

The "brain-drain" phrase was originally coined to describe the exodus of highly trained well-educated individuals from developing countries that migrated to Western nations like the USA, UK, and Australia. However, outsourcing has created a situation where there is a movement of skilled labor in the opposite direction, viz., from USA and UK to India.

According to Kris Lakshmikanth, CEO of Head Hunters, a recruiting firm based in India, "Contrary to what has been happening so far, the Indian job market is witnessing reverse migration with lots of foreigners looking for jobs in India" (Sehgal, 2004). The same sentiment was echoed by Anil Mahajan, executive director of Talent Hunt Private Ltd., a leading India-based HR firm. Indian recruiting firms have received inquiries not only from US and UK based professionals, but also from Germany and Italy. According to NASSCOM, India's software industry association, approximately 20,000 Indian technical professionals have returned to India to take advantage of newly created positions (Kripalani & Puliyeenthuruthel 2004).

### **UPWARD SPIRAL IN INDIAN LABOR COSTS**

There has been a steady increase in wages and salaries paid for outsourced jobs in India. This growth can be attributed to a variety of factors such as a shortage of skilled labor, double-digit growth rates, and tremendous competition for seasoned workers. According to NASSCOM, the average annual salary for an entry level software writer based in India increased from \$4,082 in 2000 to \$6,628 in 2004 (Puliyeenthuruthel & Kripalani, 2005). The average annual salary for a project manager jumped from \$13,585 to \$31,131 for the same time period. To address turnover, companies such as WIPRO and INFOSYS have increased wages by as much as 10-15 percent across the board. The desire to be globally competitive to attract the best global talent has also been instrumental in raising salaries for all employees (Forbes, 2003). All of these developments raise the question of whether India will continue to remain a viable location for outsourcing from a cost perspective. This increase, combined with other countries offering similar services for a lower price, has the potential of undermining India's strategic advantage in labor costs per employee.

### **DECREASED EMPLOYEE LOYALTY AND EMERGENCE OF INNOVATIVE WESTERN STYLE HR PRACTICES**

Cross-cultural management scholars who study Indian work culture have for the most part concluded that Indian employees are loyal, disciplined, and deferential to authority. (Gopalan & Rivera, 1997). However, with growth rates of 35-50% in many IT-related and back-office processing jobs, such jobs have become a revolving door with attrition rates of more than 50 percent a year. Many new recruits acquire valuable on-the-job training and end up leaving for higher offers after only four weeks on the job. Employee "poaching" has become a regular feature in the Indian workplace, especially in urban centers such as Bombay (Mumbai), Bangalore, Madras (Chennai), and New Delhi. The lure of higher wages combined with an acute shortage of skilled workers has made it easier for the younger employees to "job hop" (Puliyeenthuruthel & Kripalani, 2005; Roberts, 2004). A variety of HR practices including employee tuition reimbursement programs, signing bonuses, and professional developmental activities have been started to increase retention.

## **INCREASING NUMBER OF CROSS-BORDER MERGERS AND ACQUISITIONS**

Investment bankers based in India predict that in order to achieve economies of scale to satisfy global demand and to achieve a competitive position in the marketplace, there will be an increase in the number of mergers and acquisitions and other related types of consolidation activity. Acquisition is also seen as a way to reduce competition, increase market share, and slow attrition rates among workers.

As an example, IBM Global Services paid \$150 million to acquire Daksh, a New Delhi based call center with a workforce of 6000 workers. GE sold 60% of GE Capital International Services (GECIS) to US venture capitalists for \$500 million. Other potential targets include 24/7 Customer in Bangalore and vCustomer in Pune, each of whom employs approximately 4000 employees. The trend is not one way. Indian firms that wish to position themselves as global players have increasingly purchased US and UK based firms to extend their market reach. Over the last 12 months, Indian software and manufacturing companies have made acquisitions in South Korea, UK, US, Australia, and Germany (Kripalani & Pulienthuruthel, 2005).

## **MANAGING THE POLITICAL AND PUBLIC RELATIONS PROCESS**

Outsourcing is emerging as an emotionally charged issue in the USA and UK. A variety of stakeholders have proposed diverse measures to limit outsourcing activities. These measures include the following: Using prison labor (Financial Times, Feb. 17, 2005). For example, Perry Johnson, a Michigan-based training firm, runs a business-to-business call center staffed by inmates from Oregon's Snake River Correctional Institute. Federal and state legislations have been passed that either ban or severely limit outsourcing. Currently eight states have passed some type of legislation that imposes limitations on outsourcing (Business Week, 2004). Indian-based firms are learning that effective lobbying pays off. The Indian IT umbrella trade organization, NASSCOM, has hired one of Washington's top lobbying firms, Hill and Knowlton, to neutralize protectionist measures. Besides lobbying, Indian managers must understand that losing jobs is a politically charged issue. To avoid backlash in the US, Indian firms must emphasize that outsourcing has resulted in financial advantages to the US.

## **EMERGING ALTERNATIVE OUTSOURCING SITES-INCREASED COMPETITION**

A new and emerging phenomenon is called near sourcing and is taking place in Europe. Many eastern European countries that were part of the Soviet bloc, especially Poland, Slovakia, Czech Republic, and Hungary have emerged as competitors for many services that Indian firms have been providing. Although central European countries cannot compete with India or China on wage rates, they have other advantages such as a broad knowledge of European languages, and being in the same time zone as the outsourcing countries (Wagstyl, 2004a, 2004b).

China's primary weakness as an attractive site for outsourcing is its lack of protection for intellectual property rights. According to the US Business Software Alliance, 92% of all software in China is pirated or unlicensed (Magnusson, 2004). The counterfeiting extends to music CDs, books, movies, video games, etc. Other Asian sites are becoming popular for hi-tech outsourcing. For example, EDS has opened offices in Auckland, New Zealand and in Malaysia (Forbes, 2003).

## **CONCLUSIONS**

The work model has changed due to outsourcing. We consider outsourcing to be an evolving phenomenon-managers have to be constantly engaged in an assessment of the external environment

to identify key trends. We have identified six trends that managers should pay attention to if they would like to manage this process in a more effective manner.

Globalization has forced countries like India and China to develop their peoples' skills to be competitive in a global economy. In both countries, educational institutions have quickly adapted their curriculum to meet the requirements of a rapidly changing workplace. While the overall literacy rates of these two countries is less than in the US and UK, their literacy rates and overall number of graduates are higher in science, mathematics, medicine, and information technology. This is one reason why some economic theories that had postulated that lower skilled jobs will move to countries like India while higher skilled jobs will move to the USA have been somewhat incorrect (BusinessWeek, 2004). Perhaps it is not the overall literacy rate that matters-it is the literacy rate in certain sectors of the economy that are in global demand that really counts. US institutions of higher learning should take a hard look at their curricula to see if they can be revamped to be globally competitive. Additionally, more US students should be encouraged to major in science and mathematics. In the long run, a country's populace has to possess market-driven skill sets if it desires to be globally competitive.

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# CURRENCY FLUCTUATIONS AND THE MANAGEMENT OF EXPATRIATE ASSIGNMENT COST

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## ABSTRACT

*Rapid changes in currency values can significantly impact the decisions of multinational companies pursuing global expansion strategies. One aspect of the implementation of these strategies is expatriate assignments, which "are a necessary investment" for any organization looking "to grow on a global scale and gain experience in the international business arena" (Krell, 2005, 61). The cost of expatriate assignments have been estimated to be up to "three to five times an assignee's host-country salary per year, more if currency exchange rates become unfavorable" (Krell, 2005, 61). This paper will examine the impact of currency exchange rate dynamics on the cost of expatriate assignments and what organizations can do to more effectively manage the cost associated with these overseas human resource issues.*

## INTRODUCTION

Currency values change constantly, and the relative purchasing power of any country's currency will likewise vary over time. This is expected and even planned for by multinational corporations (MNCs) as part of the risk of doing business. Small swings in the value of a currency do not pose a problem, but large and/or sudden swings can cause problems for a nation's macroeconomic health, and also cause great damage to a MNC's ability to both remain profitable and invest further in overseas operations. For example, since the creation of the euro in 1999, there has been a wide variance in its purchasing power relative to the U.S. dollar. At its inception, 1 euro bought \$1.19 US. Three years later, the currency had devalued to \$0.89 US, representing a 25% drop in value. By February 2004, it had climbed back to almost \$1.30 US, a 46% gain (Papatheodorou, 2004). These currency swings have affected the ability of Europeans to buy American products (and vice versa), including commercial organizations. For example, the following table illustrates the reduction in acquisitions made by European companies of American firms since 1999 (Lattman, 2005):

Year	European Acquisition In U.S. (\$Billions)	Number of Acquisitions
1999	\$243	63
2000	265	75
2001	81	22
2002	45	9
2003	17	6
2004	43	14



The effective management of expatriate costs, especially in light of recent currency fluctuations requires companies and their human resource professionals to take a more pro-active approach to the process.

### **SHORT AND LONG TERM EXPATRIATE ASSIGNMENT COST**

Companies send employees on overseas assignments for a number of reasons, and depending on the objective of the assignment, companies utilize both short and long term expatriate assignments. Some of the reasons companies send employees on overseas assignments include the following:

- ◆ Attend a corporate or regional meeting;
- ◆ Participate in trade conferences for networking or business development purposes;
- ◆ Assess a potential market for the company's products and services or perhaps perform this function for a client that has retained the firm for such an evaluation;
- ◆ Conduct a feasibility study of a work site for a new operational facility or branch office or do the same for a client;
- ◆ Launch a new product or service in one or more foreign markets;
- ◆ Provide technical consultation to company or client staff;
- ◆ Implement a new system or procedures in a company or client work site;
- ◆ Participate in special educational sessions as a trainer or trainee (Latta, 2004, p. 53).

Short term assignments generally involve sending employee overseas for a three to twelve month period. In addition to the above reasons, short-term assignments can be utilized to fill temporary vacancies or to participate in global team projects. Individuals on short term assignments typically will travel unaccompanied by their family and the primary expenses will be traditional travel cost and per diems.

Long term assignments (longer than three months) can grow out of short term assignments and can lead to assignees remaining overseas for several years. In these situations, the cost issues associated with the assignment will increase considerably for both the employee and the employer. For example, physical relocation cost of the employee and their family's possessions can be considerable. Noel Kreicker, president of IOR Global Services estimated that "moving of household goods can easily cost \$40,000" per employee (Krell, 2005, p. 62). The "hard costs" of overseas operations are the monies spent to build factories and warehouses, purchase equipment, stock inventory, etc. The single largest operational cost is labor, and expatriate labor is much more costly than local wages in most cases.

Cost issues associated with expatriate assignments "can vary dramatically" and be difficult to calculate. They can vary depending on the length of the assignment and include overall compensation, housing, cost-of-living allowances, and physical relocation (travel). The cost issues can be further complicated by cross country differences and variations in international tax concerns and currency fluctuations (Nurney, 2005 and Krell, 2005). Often times, the cost associated with an expatriate assignment can "easily be the single largest expenditure most companies make on any one individual, save perhaps the CEO" (Selmer, 2001, p. 1219). In addition to the complex nature of administering expatriate cost, organizations have in recent years have had to deal with a growing reluctance by individuals to accept long-term expatriate assignments. This reluctance has been associated with "concerns over spousal employment and disruptions to children's schooling" and appears to have intensified in recent years (Jacobini, 2005, p. 11).

Probably the most significant cost of expatriate assignments though, "involves smoothing out differences in pay and benefits between one country and another", and "currency fluctuations

can make the cost equalization process - a formula designed to ensure that expatriates in different countries receive about the same salary and living expenses- more of an art than a science" (Krell, 2005, p. 62).

Krell provided the following example of how exchange rate fluctuations can affect expatriate costs. In the worksheet from Associates for International Research Inc. in Cambridge, Massachusetts, accurate exchange rates from the United States (home country , U.S. dollar) to France (host currency, Euro) and realistic (but not complete) cost-equalization figures for an expatriate who has brought along three family members to an assignment in Paris are presented. The expatriate employee's base salary is \$120,000 and net home pay of \$101,201 along with the home-country spending figures are kept constant. The example illustrates how unfavorable exchange rates, in this case a weak dollar against a strong euro, can diminish returns (Krell, 2005).

<b>Illustration of Unfavorable Exchange Rates</b>			
Year	2005	2004	2003
Exchange Rate (USD=EUR)	0.751	0.817	0.984
Host Expenditure on Goods & Services	\$100,868	\$95,246	\$81,054
Home-Country Spending on Goods & Services	\$(54,582)	\$(54,582)	\$(54,582)
Goods & Services	\$46,286	\$40,664	\$26,472
Host Expenditure on Rent & Utilities	\$88,476	\$81,336	\$67,524
Home-Country Spending on Housing & Utilities	\$(17,667)	\$(17,667)	\$(17,667)
Rent & Utilities	\$70,809	\$63,669	\$49,857
Net Host Compensation (Net Home Pay + G&S Differential + R&U Differential)	\$218,296	\$205,535	\$177,530
Source: Associates for International Research Inc. (Krell, 2005). <a href="http://www.shrm.org/hrmagazine/articles/0305/0305krell_currency.asp">http://www.shrm.org/hrmagazine/articles/0305/0305krell_currency.asp</a> , 7/11/2005.			

## **EFFECTIVE MANAGEMENT OF EXPATRIATE COSTS**

The effective management of expatriate costs, especially in light of recent currency fluctuations and the decrease in the number of long-term assignments requires companies and their human resource professionals to take a more pro-active approach to the process.

Dianne Jacobini believes that the trend to more short-term expatriate assignments requires companies to develop new models to effectively administer expatriate assignment costs and that without "careful planning and monitoring, costs may skyrocket while employee morale and willingness to accept short-term assignments declines" (Jacobini, 2005, p. 11). Jacobini identified a number of important pre-departure planning issues that must be addressed to avoid problems with expatriate assignments including possible adverse corporate tax issues, higher individual cost in the home or host location, immigration and work paper issues, Social Security issues and tax equalization issues. Failure to plan and administer these issues can lead to unexpected and sometimes unnecessary tax costs in addition to the negative impact on employee morale and less willingness to accept short-term assignments (Jacobini, 2005). If the firm lacks the internal expertise to develop strategies and policies to manage international assignees, then certainly decision makers will need to employ consultants and service providers with in-depth cross-border experience and facilities in locations where expatriates will be assigned. In addition, Jacobini

recommends that companies develop systems that allow tax professionals to consult with decision makers to plan for expected tax costs. These issues can be especially complex when a short-term assignment becomes a long-term one. For example, some allowances and reimbursements that may not be reportable as income to a short-term expatriate may become reportable to a long-term assignee. In addition, these expenses may be reportable in the home and/or host country retroactive to the initial start of the assignment (Nurney, 2005). Jacobini also recommends that companies should work with a service provider to obtain proper work papers and visa, make sure that health issues, including international health insurance coverage and medical care is adequate in the host country and that potential medical evacuation issues are addressed (Jacobini, 2005).

It is also important to have a system to monitor employee travel and track compensation wherever paid (Jacobini, 2005). Travel cost can be impacted especially hard by currency fluctuations for both short and long term expatriate assignees. Cost estimates for travel for long term expatriates will need to include home leave visits to maintain connections with family, friends, and others, emergency leave in the event of death or illness of a close family member, evacuation if a member of the expatriate's family becomes ill, business trips to headquarters, periodic rest and recreation trips to escape arduous living and working conditions, and in addition, visits by new expatriates to their host country prior to the start of the assignment (Latta, 2004).

Employers may also need to include premium financial incentives to expatriates as part of their overall compensation packages in certain situations. For example, according to the 2004 Worldwide Survey of International Assignment Policies and Practices by global consulting firm ORC Worldwide, firms paid average incentives of 15 percent of pay when shifting employees from a short-term assignment to a long-term assignment. Hardship premiums or allowances were reported to be paid at an average rate of 31 percent of pay with additional incentives offered for hazardous-duty or danger pay and remote-site allowances (Nurney, 2005).

Krell also identified several ways to manage costs of expatriate programs without threatening the returns or well-being of expatriates:

- ◆ Encourage cheaper airfares;
- ◆ Eliminate foreign service premiums;
- ◆ Tighten policies and limit exceptions;
- ◆ Shorten assignment lengths;
- ◆ Reduce the number of assignments;
- ◆ Show managers the bill (Krell, 2005).

The recent run-up in oil prices and the corresponding impact on air fares may make this initiative especially critical for all firms but more so for small and medium sized companies who can not always negotiate corporate wide discounts that large firms may be able to obtain (Latta, 2003). The elimination of foreign service premiums, especially those associated with security issues in highly dangerous environments may also make it difficult to recruit assignees for certain locations.

### **SUMMARY AND CONCLUSION**

"For companies that want to grow on a global scale and gain experience in the international business arena, expatriate assignments are a necessary investment in a long-term strategic goal. But those investments are expensive" (Krell, 2005, p. 61).

Over the past two decades, the two major threats of globalization and unforeseen currency changes have combined to pose new and significant risks to MNCs. It is becoming much more difficult for multinational companies to avoid the consequences and costs of global competition, and the effective use of expatriate assignments has become an important for all types of firms, both large and small. While it is difficult given the competitive environment companies face today to

ascertain, measure, and assess the return on the cost of expatriate assignments, it is necessary for firms to effectively manage and justify the expensive investment associated with their expatriate programs. Many firms consider these programs invaluable components of their global strategic initiatives (Krell, 2005). If these investments are to provide companies with the required returns, proper administration, including accurate measurement and cost control, and consideration of the host country's macroeconomic and currency situation, are essential.

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## HEDGING FOREIGN EXCHANGE EXPOSURE WITH DEVELOPING COUNTRIES

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### ABSTRACT

*Hedging foreign exchange exposure with industrialized countries is fairly simple. One can hedge in the forward market or money market or swap. However, hedging foreign exchange exposure with a developing country is much more difficult. Because the only option is money market hedge, interest rates in developing countries are extremely high. Therefore, one must adjust the invoice price while trading with a developing country in order to compensate for the high interest rates. This paper presents a unique technique to hedge foreign exchange exposure with developing countries.*

### INTRODUCTION

Hedging foreign exchange exposure with industrialized countries is fairly simple. Besides currency swap one could hedge in the forward market or money market or buy currency options. Let us go through an example how the forward hedge and money market hedge takes place within industrialized countries. Let us assume that a U.S. firm Label, Inc. sells computers to a U.K. firm invoiced in British Pound payable in 90 days. The invoice amount is £300,000.

Spot rate \$1.90/£ 90 day forward rate \$1.89/£.  
U.S. interest rate 8% per year.  
U.K. interest rate 6% per year.

Forward market hedge brings in the following amount:

$$\$1.89 \times £300,000 = \$567,000$$

Money market hedge yields the following:

Quarterly interest in U.K. 1.5%

Label, Inc. has accounts receivable of £300,000, therefore they should create a liability in British Pounds. They should borrow so much that principal plus interest in 90 days equals £300,000.

$$x + .015x = £300,000$$

$$x = £295,566.50$$

X = amount to be borrowed

Therefore borrow 295,566.50 and convert to U.S. dollar immediately at the spot rate.

$$£295,566.50 \times 1.90 = \$561,576$$

Invest \$561,576 in U.S. for 90 days quarterly interest in U.S. is 2%

Therefore  $\$561,576 (1.02) = \$572,808$

The money market hedge brings in a higher amount than forward hedge. Therefore money market hedge is preferred.

The hedging was fairly simple, but hedging with developing countries is not so easy. Because interest rates in developing country is extremely high. Before discussing specific technique for hedging foreign exchange exposure with developing countries let us review some literature on hedging.

### LITERATURE REVIEW

Different approaches are used to hedge foreign currency exposure. Nordson, a company in Ohio uses short term borrowing in local currencies to hedge international sales and also purchases longer term foreign denominated debt. If you have a high volume of international sales and the dollar becomes weak, you have to be very skillful in currency hedging. Nordson uses foreign denominated fixed rate debt and foreign currency deals to hedge the value of its investment in wholly owned foreign subsidiaries. Because of FASB rule hedging faces some limitation. It must be perfect hedge, not speculation. With computer technology, hedging has become much more sophisticated [O'Leary 2004]. According to research by Merrill Lynch Companies that suffered losses because of inadequate hedging have seen their stock prices go down. The market is trying to force corporations to focus on foreign currency hedging. Traditional practices such as forwards and derivatives to hedge transaction risk are no longer considered to be adequate. Not hedging the company's foreign exchange exposure is seen as a disservice to the shareholder. Companies that source components, assemble, test and market in many locales, foreign exchange hedging offers many benefits. It not only protects a company from wide swing in currency market but offers predictable cash flow needed to fund operations. Moreover, a company that hedges can maintain stable prices. Denver based software firm J.D. Edwards and Co. lost \$6 million because they did not hedge their foreign exchange position. But now they hedge 100% of their foreign exchange position. They hedge not to speculate but to maintain stable earnings. Some basic hedging involves forward foreign exchange contracts, currency options. Forward contract allows a firm to lock in a future exchange rate. Option is more speculative, it allows them to profit if the currency moves in the desired direction. While forward contract usually cost 1 percent, options usually cost 3 percent. The most conservative way to hedge is to hedge 100% with forward contracts [Norm 2003].

FAS 133 had a dramatic impact on foreign exchange hedging. It requires substantial documentation of individual hedges. This caused a loss of flexibility in hedging. FAS 133 wants to ensure that hedging is done to protect a company's foreign exchange exposure and not to speculate with profit motive. Companies now will use fewer options, collars, (participating forwards and other exotic (Foreign exchange derivatives because of unfavorable accounting treatment for these derivatives. The main purpose of FAS 133 is to protect investors from losses occurring from speculation companies are required to fully describe their derivative and hedging activities in the footnotes of their financial statements. [Jeffrey 2000]

Hedging is called for when an investor or corporation expects a decline in the value of the currency in which their investment is denominated. Fund managers and corporation often use the forward market where the cost is usually very small usually the bid-ask spread. But for individual investor the forward market is very expensive because of the relatively small amount and lack of sophistication of the individual investors. They can use foreign currency futures offered by International Monetary Market (IMM) of the Chicago Mercantile exchange on major currencies.

The Mid-America Exchange in Chicago offers small futures contracts for major currencies. Options on major currencies are available from Philadelphia Stock Exchange of both European and American style. [Eugene 91]

Production decisions of Multinational corporations are independent of exchange rate volatility but based on forward rate. However, some empirical studies have shown that exchange rate volatility has an impact on trade. There is a positive impact on trade. There is a positive relationship between trading activity in forward markets and export. When multinational corporations sell foreign currency in the forward market, speculators buy them to maximize their utility or expectation on profit. [Fung Lai 91] Most hedging policies center around the forward market, options but none of the articles discuss about hedging with a developing country in the absence of forward market and where no options are available.

### **HEDGING TECHNIQUE WITH A DEVELOPING COUNTRY**

Let us assume that Label Inc., a U.S. corporation, is selling its product to Bangladesh. They must invoice in Bangladesh Taka to be competitive, and offer 90 days to pay. There are no options available on Bangladesh currency Taka. There is no forward market. Therefore how can Label Inc. hedge its foreign currency exposure? The only option is money market hedge. However, interest rate in Bangladesh is extremely high. In order to properly and safely hedge, the invoice price must be adjusted. The amount in U.S. dollar that Label Inc. must have in 90 days is \$400,000. Label must do the following to make sure it receives \$400,000 in 90 days. The following information is given:

U.S. 90-day CD rate 2%  
 Spot rate \$1 = 60 Taka  
 Bangladesh interest rate 16% annually

First Label Inc. need to determine is how many dollars it needs immediately. Since the amount it gets immediately. Since the amount it gets immediately can be invested for 90 days to get \$400,000, the amount it needs now is

$$\text{ATRN} (1 + \text{US}_i) = \$400,000 \text{ (EQ 1.1)}$$

ATRN = Amount to be received now  
 $\text{US}_i$  = 90 day CD rate

$$\text{ATRN} (1 + .02) = \$400,000$$

$$\text{ATRN} = \$392,157$$

Since they have an asset ie, accounts, receivable in Bangladesh Taka, they should create a liability in Bangladesh Taka. They should borrow for 90 days equivalent to \$392,157. Borrow the Taka and immediately convert to U.S. dollars.

$$\text{ATB} = \$392,157 \times 60 = 23,529,420$$

ATB = Amount to be borrowed.



Now, remember that Label Inc. will have to pay 16 percent annual interest on the borrowed funds. Therefore, the total amount owed at the end of 90 days will be

$$\text{Taka } 23,529,420 (1 + i_{BD}) \text{ (EQ 1.2)}$$

$i_{BD}$  = Bangladesh interest for 90 days

$$\text{TAKA } 23,529,420(1.04) = \text{Taka } 24,470,597.$$

Label Inc. will owe Taka 24,470,597 in 90 days to the Bangladesh Bank; therefore, Label Inc must invoice the Bangladesh importer for Taka 24,270,597. In this case, Label Inc. has a perfect money market hedge without any risk. Therefore when the invoice amount is received, they pay off the note from Bangladesh Bank.

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# **A PREDICTIVE MODEL OF MUNIFICENCE FOR US MANUFACTURERS USING FDI AS AN INDICATOR OF GLOBALIZATION**

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## **ABSTRACT**

*Industry's ability to produce consistent positive economic performance in the region it operates is critical for a successful economy. Globalization introduces competition to regional industries that now compete worldwide for capital, which is used to produce economic output and jobs. US based jobs and wealth are being lost to offshore manufacturers through the globalization process, which in turn has a significant economic and political impact. Therefore globalization needs to be researched empirically to support better economic and financial decisions which are influenced by this force.*

*Foreign direct investment (FDI) is an excellent measurement or proxy for many aspects of globalization. Munificence is a well-researched Industry task operating environment dimension. This project presents a model demonstrating that foreign direct investment (FDI) as a measure of globalization is a significant predictor of munificence for manufacturers in the USA. The featured model is useful to economists and economic planners because it begins to build empirical data for FDI as a predictive indicator of economic activity for manufacturers. To date most of the literature studying FDI evaluates it as a dependent variable and typically analyzes what factors attract FDI. While this is important it is not the only useful way to study FDI.*



## **AN EMPIRICAL INVESTIGATION OF U.S. FDI IN LATIN AMERICA**

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### **ABSTRACT**

*Due to the many changes since the late eighties in terms of financial liberation, privatization, trade agreements and other policy changes (both national and international) have a significant influence on the changes that occur in the business environment in Latin America, providing incentives for investment decisions, not only for companies already operating in the region, but for new entrants as well. Currently, foreign direct investment (FDI) flows are the outcome of a combination of factors, including the international environment, national policies, and corporate strategies. Thus, this study evaluates the volume of FDI inflows into the region; the factors that attract them, including incentives and regulations; and their contribution, economical and societal, to Latin American development. This research also explores some of the potential costs of FDI, and its implications on policy options. Using an econometric model, this study evaluates the determinants of FDI into this region and base of the results draws some general conclusions.*



# **EFFECTS OF GENDER AND FAMILY ON PAY DIFFERENTIALS IN WESTERN INDUSTRIAL SOCIETIES: CONVERGENCE AND DIVERGENCE**

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## **ABSTRACT**

*This study takes a comparative approach to examine factors that influence gender-based pay differentials and career paths in western industrial societies, particularly comparing the United States and selected European countries. Results indicate that increased participation of women in the workforce while maintaining their traditional roles at home is a global phenomenon, but patterns of the work-family relationship and the impact of gender and family on pay differentials differ across borders. Factors that influence gender equity in wages and wage growth range from cultural norms to quality of labor, career patterns, and corporate practices. Types of regime pertaining to the role of state in work-family arrangements and wage settings also help explain trends and developments in pay gap adjustment and career patterns between men and women in western industrial societies. Based on recent national and regional statistics and previous research on the effects of gender and family on pay equity, several propositions have developed through a multivariate conceptual framework. Suggestions for future research and implications for the practical field are discussed.*



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