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Offshore Outsourcing

A global shift in the present IT industry

von

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by

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June 2004

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Abstract

The paper analyses the offshore outsourcing of IT services (OOIT), which have become increasingly important for the global IT industry. Through this rapid process of firm relocation, a new terminology has emerged, which forms the starting point for our paper. We compare wage cost differentials of IT workers in key offshore locations like India to those in the US and Europe, incorporating the hidden costs of offshoring – including long-term risks and opportunities – in order to determine the total cost of offshore outsourcing activities. The debate on the potential future negative employment impacts in the major OECD countries recently became a point of political contention in the US presidential election campaign, reflecting widespread fears in the US and elsewhere that outsourcing will lead to decreased income and job loss. In Europe, policy makers are searching for instruments to guide these developments so that major social disruptions do not lead to disproportionately negative welfare impacts in the short term. The future costs and benefits of outsourcing can currently be assessed only in broad terms due to the lack of adequate data and representative statistics. However, the theory of comparative advantages suggests that overall, offshoring and inshoring countries will gain from the new international division of labour in the long run.

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Introduction

Over the last 30 years, textile, automobile and steel manufacturers have outsourced work to foreign countries. Now it is IT's turn.

Offshoring at the same time has created huge multinational corporations whose turnover easily exceeds the GDP of most developing countries. Offshore outsourcing is currently changing all business models of IT-companies and can be seen as a key force in the new post-dot-com era of the global IT industry.

This transformation from former highly concentrated IT industries in the developed economies to a more globally distributed value chain puts current business models of many IT industries at risk and creates new uncertainties for the digital work force, placing their jobs at risk of moving offshore. They will face increased wage pressure if they have to compete with IT specialists abroad, in particular in India and China.[3]

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[3] Cf. e.g. Freeman, R. B. (1995), who addressed the topic of global wage competition in the low-skilled labour market very early on. However, at that time, the empirical evidence was insufficient to support the hypothesis that offshoring outsourcing of low-skilled jobs had a significant long-term impact on the U.S. labour market. It now seems that this debate from the first half of the 1990s is again repeating itself, but from a different perspective. Today, high-skilled IT service jobs are under threat from low-wage competition through offshore outsourcing China and India. Freeman drew the wise conclusion in 1995: *"That we lack compelling evidence that trade underlies the problems of the less skilled in the*

However, offshoring of IT jobs is just one dimension of job losses, while labour-saving technological progress in IT production and application makes IT jobs obsolete regardless where were located.

Currently we face a new trade-immiseration debate, but this time not only concerning low-skilled workers in developed countries, but also high-skilled workers in IT service – an even more frightening prospect.

Production Location – A New Terminology

What is Offshoring/Inshoring?

Offshoring, can be defined as relocation of business processes (including production, distribution, and business services, as well as core activities like research and development) to lower-cost locations outside national borders. This term assumes the perspective of the country of origin.

Offshoring can be seen in the context of either production of goods or services moving offshore. China has emerged in the 1990s as the preferred destination for offshore production, while India has become the destination for offshore services. But China, as well as many other developing countries, is currently expanding its capability for inshoring of IT services in particular.

Inshoring refers to the relocation of business processes from higher-cost to lower-cost countries, taking the view of the destination country.

Sometimes one distinguishes in the literature between **nearshoring** (compared to true offshoring) when the location of the first destination is at a closer proximity to the country of origin than the latter. Major nearshoring destinations are Mexico and Canada for U.S. businesses, while Ireland and Eastern Europe are nearshoring sites for European companies. Geography and trade are therefore still closely linked even in the global information society when it comes to the offshoring of IT services (see e.g. Krugman, P., 1992).

Furthermore, business processes that stay in the country of origin are called **onshore processes**.
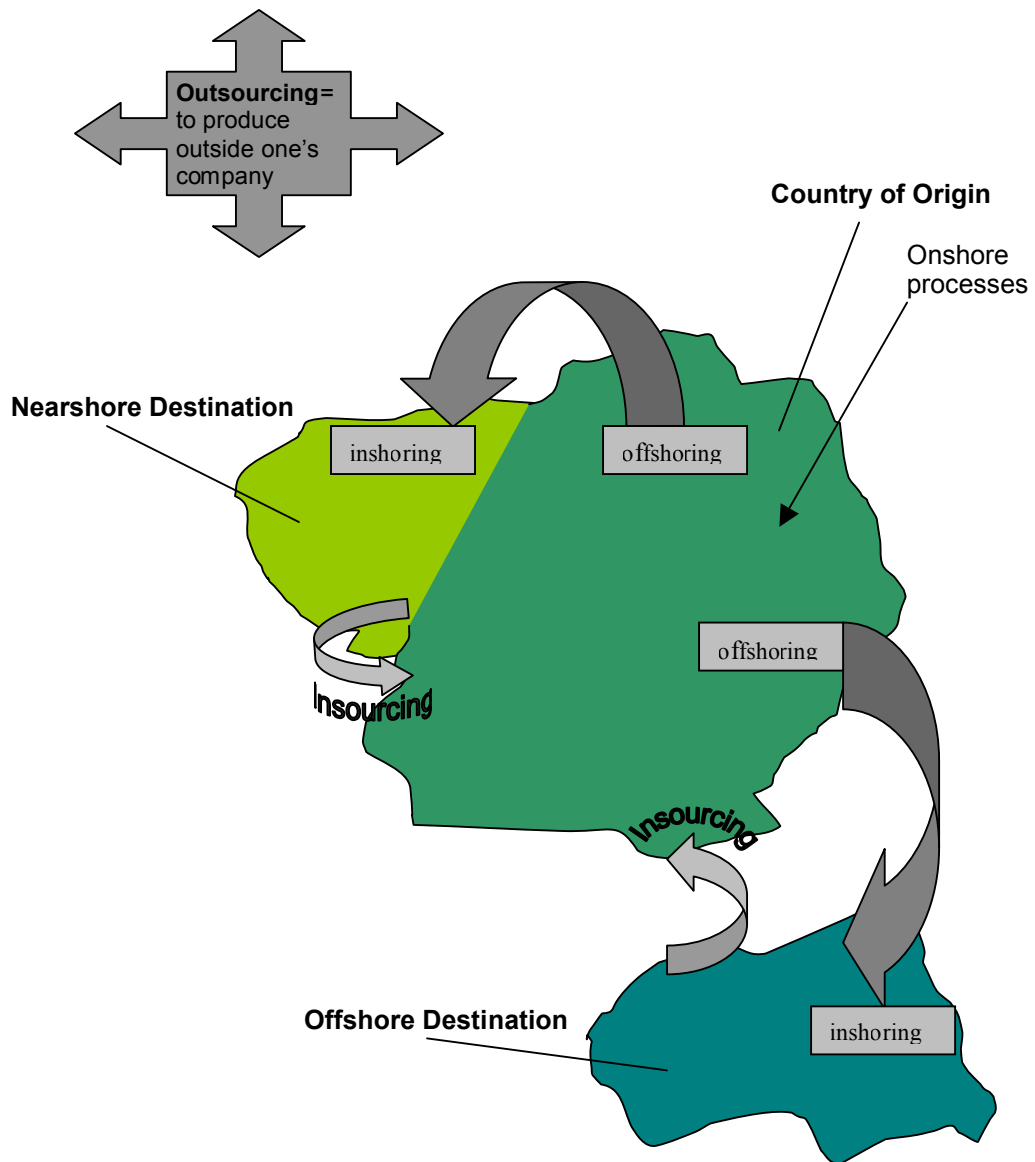
What is Outsourcing / Insourcing?

The theoretical foundation in the economics of outsourcing was first established by Ronald Coase[4] in 1937 who asked the question, "what establishes the boundaries of a firm?" By comparing the costs of internal supply of a particular task or service with the external market costs of the same task or service, managers and entrepreneurs could decide about the efficiency of internal or external production by making internal/external cost comparisons. By establishing transaction cost calculation, Coase laid the foundation of modern transaction cost economics.[5]

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past does not, of course, rule out the possibility that trade will dominate labour market outcomes in the future." ibid. p. 30.

[4] See Coase, R. (1937).

[5] For a recent survey on transaction cost measurement see e.g. Wang, N. (2003).

Outsourcing = to produce outside one's company

Country of Origin

Onshore processes

Nearshore Destination

inshoring

offshoring

Insourcing

offshoring

Insourcing

Offshore Destination

inshoring

In contrast to outsourcing, one can also find the term '**insourcing**', which means that firms take back services previously outsourced to off/or nearshore destinations.

Outsourcing became a popular buzzword in the 1990s. It was a welcome addition to the business vocabulary. By splitting the value chain of a company's production process into a sequence of tasks, its comparative advantages relative to competitors could be utilized to increase the company's profitability.[6] By focussing each company on its own core competencies, it was able to achieve major improvements in efficiency and profitability.

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[6] See e.g. Hammer, M., Champy, J. (2001).

Additionally, outsourcing reduces the amount of sunk costs in fixed investments, which, under a volatile demand, could lead to significant under-utilization of production factors. By outsourcing some of the production capacity to subcontractors, a company might gain significant flexibility to utilize a consistently higher level of its own capacity.

Outsourcing, however, involves transferring a significant amount of management control to the supplier. This creates a risk of diminished control over the whole supply chain. A typical outsourcing relationship seeks to reduce this risk through a higher degree of coordination than between totally independent buyers and sellers. Buying products from another entity is not outsourcing or out-tasking, but merely a pure vendor relationship. Likewise, buying services from a provider is not necessarily outsourcing or out-tasking either. Outsourcing always involves a considerable degree of two-way information exchange, co-ordination, and trust.

One way of exchanging this information is to transfer information to offshore outsourcing service providers (OOSP). To enable efficient information transfer, companies offer specialised training to improve business processes. They then store, process and communicate information using a specific 'system' of hardware and software.

When did the outsourcing of IT services start?

The concept was first applied by Ross Perot, when he founded Electronic Data Systems in 1962. EDS told a prospective client, *"You are familiar with designing, manufacturing and selling furniture, but we're familiar with managing information technology. We can sell you the information technology you need, and you pay us monthly for the service with a minimum commitment of two to ten years."*

Organizations that deliver such services feel that outsourcing requires that management responsibilities for running a segment of business be turned over to specialists. In theory, this business segment should not be mission-critical, but practice often dictates otherwise. Outsourcing business is characterized by expertise not present in the core of the client organization.

A related term is **out-tasking**: turning over a narrowly-defined segment of business to another business, typically on an annual contract, or sometimes a shorter one. This usually involves continued direct or indirect management and decision-making by the client of the out-tasking business.

When did the offshoring / outsourcing of IT services start?

With the rise of globalisation, offshore outsourcing of IT (OOIT) is increasingly taking the form of **Business Process Outsourcing**, where whole business processes (like support and development) are outsourced – in contrast to the former task outsourcing. The client is usually free to choose who provides the outsourced business processes. Pressure from the stock market to do more for less requires managers to take the cheapest offer they can get. Companies like IBM, Microsoft and Hewlett Packard either buy services from sub-contractors is countries such as India and China, or locate development and support jobs there.

One of the first mega-deals in the world of IT outsourcing was the $3.2 billion contract between Xerox and EDS in 1994. The years of 1994 and 1995 can be seen as the initiation of the IT offshore outsourcing process. A key driver in this development were shortages in the IT

skilled labour force. Internal firm growth depended crucially on the outsourcing of IT services especially when the new economy was spurring growth in the U.S. economy.

Since then, the number of IT offshore outsourcing companies has been steadily rising:

The research company Gartner, Inc., in Stamford, Connecticut, estimates that by the end of 2004 one out of ten U.S. IT companies, and one out of twenty non-IT companies, will be planning to move offshore.

It is obvious that offshoring can take place either inside a single multinational corporation, for example, or through an outsourcing contract with a foreign company. Similarly, outsourcing can emerge inside the boundaries of one country. Thus, offshoring and outsourcing are independent options, which, if they occur simultaneously, lead to offshore outsourcing as a specific form of outsourcing.

Business Economics of OOIT

What activities are outsourced?

Typical offshore activities are technology-based services. Industry-watchers agree that programming of software is one of the first jobs to be offshored. The major reason for this can be seen in the fact that technology is easily teachable and learnable everywhere - a Java-code does not know any cultural differences. Business activities that are closely entwined with national particularities do not move offshore as easily, if at all. To sum up, we can say that time-consuming, clearly definable work is particularly suitable to go offshore.

According to a CIO Research Report[8], 86 percent of respondents in a survey said they currently outsource application development offshore and 26 percent move call centres offshore. Other activities frequently sent offshore include system administration/support (23%); help desk (17%) and business process (e.g. financial applications) (17%). On average, the value of current offshore outsourcing contracts is $16.2 million in the 101 organizations included in the survey – not very high for an economy like the U.S. with its $10.3 trillion GDP.

IT professionals most frequently answered that their organizations would not outsource system and architecture planning (45%), R&D (43%) or business processes (38%).

Opportunities offered by offshore outsourcing

Globalisation in IT is driven by cost optimisation: the expected **cost savings** up to 40% by offshoring outsourcing IT services is simply too compelling to be ignored in today's economy. Let us consider India, for example: U.S. companies are expected to save up to $11 billion in 2004 by outsourcing to India.[7] The shrinking life-cycle of many products and services from the IT industries has significantly increased the demand for higher **flexibility** of IT firms, which often lack time to build up sufficient man-power and other capacities to meet the actual time-frames of IT projects. Volatility of demand and heterogeneity of IT projects make it nearly

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[7] Estimated number by Sunil Metha, Vice President of the National Association of Software and Service Companies (Nasscom), India

impossible to maintain adequate manpower and capacities within an organization to carry out tasks in time. Immediate access to external resources can thus offer a company a major competitive advantage.

"We've been asked to do more with less," says Jim Honerkamp, CIO at Clopay Corp., an Ohio-based manufacturer of commercial doors. *"At the same time, our application portfolio has been increasing. The only way to look at this was through an offshore solution."*

Outsourcing companies can particularly cut

1. Labour costs
2. IT-development time
3. Maintenance costs
4. Time frame of production processes overall

- Outsourcing work and payments to low-cost countries can **reduce fixed R&D costs**. In addition, the substitution of variable costs for fixed costs gives the outsourcing company greater flexibility in reallocating its capital.
- Outsourced work conforms to companies' needs over a longer time frame, whereas contracts with offshore service providers are made more on short-term, case-by-case basis. The majority of cooperation with offshore programmers, for instance, is based on contract periods between one and five years.
- Cutting costs can cut the IT budget by as much as 50 percent, enabling the company to provide new market services faster, by optimising its process chain and improving customer perception. This adds up to a reduced **time-to-market**.
- **Quality criteria** are another incentive for offshore outsourcing. The ideal outsourcing partner assures high-quality work at low prices and a modern IT infrastructure, and guarantees international quality standards.
- By outsourcing processes outside its core business, an enterprise can devote itself entirely to value-added activities within its **core competencies**. This can help to unlock internal resources.

Indeed, offshore outsourcing is not a completely new area for IT. According to a CIO Research Report[8] when 101 IT executives were surveyed in 2003, the majority (67%) said their company began outsourcing after 2000. The benefits of outsourcing are well known. In the following, several risks of moving offshore will be examined more closely.

Risks of offshore outsourcing

- Many economically attractive labour pools abroad carry **location-specific risks** that must be balanced against expected cost savings. Cost savings that make a location attractive at one point in time are sometimes significantly reduced by new taxes, exchange rate volatility and rapid increases in local wage rates.

  Therefore, companies must balance high-potential returns against higher country-specific risks that depend on potentially shifting political, regulatory and economic conditions.

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[8] CIO Research Reports Weighing the Benefits of Offshore Outsourcing by Lorraine Cosgrove Ware, Sep 02, 2003

One possible way for companies to address this problem is **locational and/or vendor diversification**. If a company only uses one location or a single vendor, this can be compared with investing only in one stock. Investing capital in several different companies or countries provides risk-reducing portfolio effects on invested capital. This is why analysts or consultants often advise managers to create significant outsourcing portfolios to hedge against business risks and high volatility of returns on capital.

- **Short-term IT offshore outsourcing decisions** can later lead to specific problems. Such decisions are often induced by a company's lack of capital or its attempt to meet short-term objectives such as improving quarterly profit rates. The consequences of these decisions are often, however, long-term as well, and affect organisations for years to come. This phenomenon of time inconsistency with regard to the short- and long-term costs and benefits of outsourcing must be taken into consideration.

  Often, companies make short-term IT outsourcing decisions after having already been reducing their IT budgets for several years. These budget cuts might have been necessary or beneficial in the short-run, but at a later stage, significant upgrades to IT infrastructure may become necessary , and a backlog of application development may become visible.

  Therefore 'offshore solutions' might cut costs in the short-run but not necessarily in the long-run. Some firms rush too fast into offshore arrangements because they are en vogue in the business community. Too often, only hourly labour rates of IT workers are considered, which do not justify moving offshore if one considers the **total cost of offshore outsourcing**.

  Moving beyond day-to-day concerns is necessary, since short-sighted IT decisions can become very expensive later on. Therefore it is necessary for management to plan such a move carefully.

- Huge current investments imply that the risks of IT **offshore security** have become manageable. India, considered as an example of a mature offshore destination, can show double-digit growth in revenues from IT services, which are expected to reach $57 billion in 2008, according to a joint study by McKinsey & Co. and Nasscom. Based on a U.S. model of spending 5% to 7% of the IT budget on security, and with the IT budget consuming 15% of a service company's revenue, India is expected to spend $450 to $600 million on information security and assurance by 2008. According to Rich Mogull, research director for information security and risk at Gartner Inc. "*the security risks offshore generally aren't any different than the security risk you face onshore*." Only distance but more crucially different laws – especially data security and copyright legislation – have to be considered. To minimize security risks, companies have to know their own security and privacy requirements before they move offshore. Key areas of offshore security are access control, network security, facilities and operations, and applications security. Experts suggest including stringent security measures in the service level agreement (SLA), including periodic assessments, audits and tests.

- The outsourcing company usually bears costs, when they change even one single component of their offshore outsourcing system. In other words, the company is to some extent **locked in**[9] by an offshore relation and faces **switching costs**[9] when moving from one service provider to another, changing the offshore destination, or bringing outsourced IT activities back home.

  Varian and Shapiro point out that switching costs are the norm in business relations of an information economy. They distinguish between several types of lock-in (a more accidental unintentional historical lock-in and a strategic intentional managed lock-in) and associated

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[9] Shapiro, C., Varian, H.R. (1999).

switching costs. One type of lock-in effect concerns *information and database*, which, with regard to IT offshore outsourcing, means huge investments in IT technology to store and manage the transferred information. If offshore service providers arrange upgrades or convert data into new formats, the outsourcing company might face incompatibilities or high switching costs if one changes to another supplier of such services. Switching costs can therefore create significant barriers to exit from one contract to another.

Other types of lock-ins mentioned by Varian and Shapiro are *specialized suppliers* and *search costs*. Among outsourcing contracts, lock-in effects can emerge if organisations change their offshore vendor or even the offshore destination, e.g. from India to China. Choosing one single service provider today will make the company more dependent in the future. Therefore, companies should maintain alternative sources of supply, which can be called a **multiple sourcing strategy**. By holding multiple OOSPs, the ability to switch vendors later on at comparatively lower switching costs, gives outsourcing companies a higher bargaining power. This is a strategy of risk insurance against otherwise high switching costs by keeping the amount of value at risk – associated with a particular contract partner – under control.

The *search costs* mentioned range from selecting and testing new vendors to identifying alternative offshore countries. In complex mass markets, these costs are often very substantial and the associated switching costs include productivity interruptions when changing ingrained habits in current business relations.

- Newspaper headlines taking wage differentials of IT workers as a benchmark often give the idea that companies are saving up to 80 percent by moving IT work offshore. However, one has to be very cautious when interpreting this partial cost advantage as the effective total costs of OOIT that might be incorporated as higher net profits by the outsourcing company. United Technologies, an acknowledged leader in developing offshore practices, is currently saving only just over 20 percent even when wage differentials are as high as 80 percent[10]. In order to realize such substantial cost savings, companies have always to consider the **total costs of offshore activities**.

Outsourcing consultants point out that **unexpected costs** can arise during any phase of the offshore project and therefore reduce the positive net effects of cost savings.

Breakdown of the phases of an offshore project:

1. Selecting a vendor
2. Transition period
3. Managing the contract

$\Rightarrow$ **1.** The expense of **evaluating and selecting a vendor** can cost from .2 to 2 percent of the annual costs of the deal[10]. This expensive process can take 6 months to one year, i.e. could cause a significant delay, requiring time commitments from senior executives in IT, and further expenditures of human resources in the IT, financial, legal and other departments. Project leaders, for instance, may work full time on this, and hence, vendor selection is associated with high opportunity costs. Extensive travel expenses enter the picture as well, as companies need to see what the service providers' real capabilities are. Furthermore, the market of service providers is complex, and entails changing terms and conditions. Therefore, in some cases, organizations will need to buy expensive studies from independent consulting firms or even employ offshore outsourcing consultants.

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[10] The Hidden Costs of Offshore Outsourcing by Stephanie Overby, Issue of CIO Magazine, Sep. 1, 2003
[10] ibid.

Clearly defined goals for the outsourcing project will shorten the process without disregarding its importance: choosing the vendor relationships carefully is a must-do for successful outsourcing.

⇒ **2.** A further expensive phase of an offshore endeavour is the **transition period**, when knowledge is transferred from onshore workers to members of the outsourcing team, costing on average up to 2 to 3 percent in addition to the annual offshore costs[10]. An offshore located contractor means extensive travel expenses and cultural or language training for employees who visit the contractor's site, possibly for months. Basically, being in a state of transition company's costs double: it pays for both the offshore worker and the in-house trainees. Those involved in-house do not produce anything during this period. Moreover, data transfer between client and outsourcing vendor might require additional network bandwidth and security technologies. Companies using an offshore outsourcing service will also need to comply with the other country's communications and data encryption regulations and requirements when upgrading networks.

⇒ **2.1.** Organizations that make layoffs in the course of outsourcing jobs can incur **human resource costs** for severance pay and employee benefits. Some companies might have to pay retention bonuses to managers they want to keep within the organisation during the transition process and beyond. An extra 3 to 5 percent of the original contract value is to be expected on average.[10] Layoffs can also cause problems in workers' morale (see the following section on *politics of OOIT*), resulting in a significant decrease in productivity.

Offshore outsourcing takes time - at least two or three years, say experts - so CIOs can use that time to cut the workforce through attrition rather than layoffs. Additionally, offshore consultants claim that CIOs have to communicate the company's layoff plans and offshore goals honestly and early on in order to build consensus.

⇒ **2.2.** Another problem that should not be underestimated are the cultural differences that may result in **productivity lags**. Companies have to face totally different attitudes when comparing American to Indian workers, for example. Offshore programmers have been known to say, "*This doesn't make sense, but this is the way the client wants it*". Such differences result in an average 20 percent decline in application development efficiency during the first two years of a contract for IT organizations going offshore, according to Meta Group Vice President of Service Management Strategies Dean Davison. According to Meta Group, lags in productivity can add as much as 20 percent in additional costs to the offshore contract. Companies may have to bridge cultural gaps by sending in-house workers to their offshore partner more often than anticipated, as face-to-face interaction can help clear up misunderstandings and different interpretations.

In addition, the generally high turnover rates at offshore service providers diminish productivity. According to the National Association of Software and Service Companies (Nasscom), attrition rates are as high as 35 percent in India. Therefore, one has to expect to spend an extra 3 to 27 percent on productivity lags when projects are sent offshore[10].

⇒ **2.3.** Well-defined **internal software development** and **maintenance processes** are also key to the efficiency of offshore projects. Onshore companies face productivity lags when moving to emerging markets, but at the same time, U.S. companies have to adjust their internal standards to high standards in India. Companies often have to pay for costly and time-consuming training, education and support from consulting firms to bring them-

selves up to a CMM Level 3[11]. Many organisations spend an extra 1 to 10 percent on improving software development processes[10].

⇒ **3.** Companies might underestimate the amount of effort and resources it takes to **manage the actual offshore relationship** properly. When work and data transfer are carried out daily, a significant number of invoices and time sheets have to be audited. An additional payment of 6 to 10 percent has to be expected for managing the offshore contract[10].

⇒ **1+2+3** Abstract of the hidden costs of OOIT considering as example
If a company spends $16.2 million on offshore outsourcing contracts[12], then it will actually spend 15.2 percent in extra hidden costs even in the best-case scenario, and up to 57 percent in a worst-case scenario.
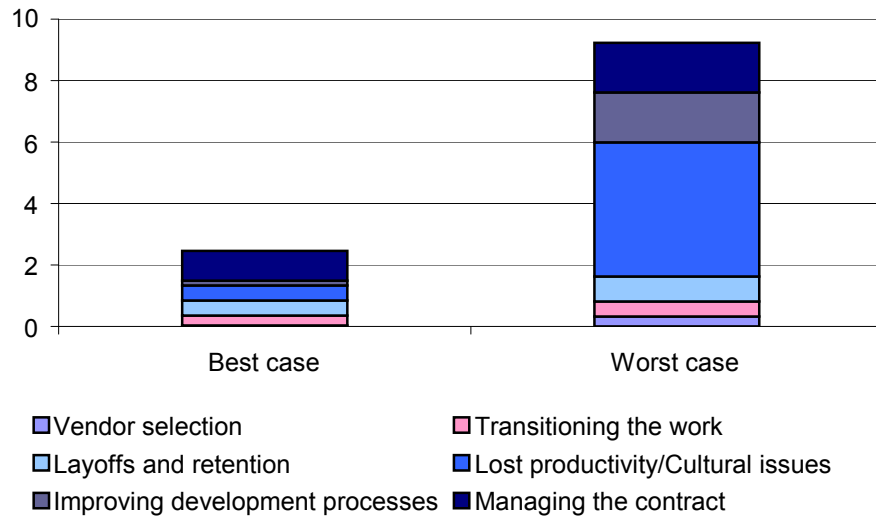
Hidden Costs[13]	Best case			Worst case		
Vendor selection	$16.2	x0.002	= $0.0	$16.2	x0.02	= $0.3
Transitioning the work	$16.2	x0.02	= $0.3	$16.2	x0.03	= $0.5
Layoffs and retention	$16.2	x0.03	= $0.5	$16.2	x0.05	= $0.8
Lost productivity/Cultural issues	$16.2	x0.03	= $0.5	$16.2	x0.27	= $4.4
Improving development processes	$16.2	x0.01	= $0.2	$16.2	x0.1	= $1.6
Managing the contract	$16.2	x0.06	= $1.0	$16.2	x0.1	= $1.6
Total hidden costs	**15.2%**		**= $2.5**	**57%**		**= $9.2**
Original contract value			+ $16.2			+ $16.2
Total costs of outsourcing			**= $18.7**			**= $25.4**

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[11] Acknowledged measuring unit. A select group of experienced IT appraisers assess the effectiveness of development processes on a scale from one to five (=best value).

[12] $16.2 million = the average value of offshore contracts for 101 companies recently surveyed by the CIO Magazine. CIO Research Reports Weighing the Benefits of Offshore Outsourcing by Lorraine Cosgrove Ware, Sep 02, 2003.

[13] figures in millions.

**Hidden cost of outsourcing
in Mio $**

Vendor selection Transitioning the work
Layoffs and retention Lost productivity/Cultural issues
Improving development processes Managing the contract

**Total costs of outsourcing
in Mio $**

Total hidden costs Original contract value

The hidden costs of OOIT increase when considering the **hidden risk of failure,** which should be determined under the assumption that most rational investors are risk averse. The

concept of "risk aversion" implies that when facing choices with comparable returns, one tends to choose the less risky alternative, a construction we owe largely to Milton Friedman and Leonard J. Savage (1948).

It is well known that OOIT and internal IT-projects have a high failure rate, which is difficult to quantify since companies tend to be reticent about their total failures.

A recent study[14] found that one-third of major Swiss IT projects are terminated ahead of schedule. This may provide an initial impression about the potential failure rate of OOIT as part of major IT projects.

According to another study (November 2002) by DiamondCluster International, a Chicago management consultancy, 78 percent of executives who have outsourced an IT function have had to terminate their agreements prematurely. Poor service, a change in strategic direction and costs were the most frequently cited reasons for the outsourcing companies' dissatisfaction.

One could draw the conclusion that outsourcing companies are perfectly irrational. However, IT firms progress along the OOIT learning curve (see below) rapidly, which decreases OOIT failure rates. First-time movers might therefore not generate the pertinent information on long-term costs and benefits in this rapidly changing environment.

Furthermore, a riskier investment must have a higher expected return in order to provide an incentive for a risk-averse investor to select it. It has been already mentioned that the expectation of significant cost savings, or increasing returns on investment are companies' major incentives for OOIT.

Learning by Doing and Learning by Using

Often, OOIT project failures are cited as anecdotal evidence that the expected cost savings (especially of hidden costs) are completely unattainable. However, this could be an overstatement in the long run. Companies that follow the IT offshore trend often learn from the experiences and mistakes of their predecessors. Therefore offshore outsourcing of IT services exhibits all the same patterns that other innovation processes do. One can expect that hidden costs of OOIT will diminish over time following a **learning curve** of offshore outsourcing. This decrease in costs is due to effects **from learning-by-doing** (see Arrow, 1962) or **learning-by-using** (Rosenberg, 1994) over time. However, there is currently no systematic statistical information about these developments beyond the individual company level, i.e. anecdotal evidence.

Four stages of going offshore

Organisations are confronted with many challenges when they outsource IT work offshore. Although each company faces its own specific problems, a scheme by John C. McCarthy, Research Director of Forrester Research, divides firms into four sections, the 'four stages of going offshore'.

This classification has two central advantages for our analysis:

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[14] Sources: Accenture, Cash, Gartner, Ernst & Young, Dynamics Research

- It helps differentiate the risks
- It clearly shows that, despite the offshore 'hype', many firms have still not started to move IT work offshore.

As he has observed in his research, companies can be classified in four types:

1. Bystanders
2. Experimenters
3. Committeds
4. Full exploiters

Bystanders	Experimenters	Committeds	Full exploiters
• 60 % of the Fortune 1000	• 25-30 % of the Fortune 1000	• 5-10 % of the Fortune 1000	• <5 % of the Fortune 1000
No offshore relationship	Have offshore experience and relationships	Employ OOSPs for more complex application management and mission-critical development services	Take full advantage of offshore activities; For example, one company in this group has 95 percent or more of its legacy maintenance done in India.
	OOIT is no key element of their IT strategy	Incorporate sophisticated governance techniques, such as creating an offshore-specific sourcing office	OOIT is a core skill and investment in the IT process maturity makes up a high percentage of work offshore; Processes based on CMM
	Multiple OOSP (often more than 10)	2 or 3 service providers	

Source: Forrester Research Inc., (2003).

A variety of approaches

Bystanders

Bystanders might perceive that the savings in offshore deals are overstated. Their scepticism is also rooted in security risks that make them uncomfortable. Therefore, members of this group especially need to hear about vendors' base-level security investments and processes, as well as disaster recovery plans. Additionally, bystanders need simple spreadsheets that show the costs and savings based on case studies.

Experimenters

The biggest challenge for experimenters is their lack of a centralized global program management office and, therefore, their lack of a system when collaborating with multiple offshore vendors. Vendors need to develop their soft project management skills in order to assist clients in setting up their management offices. Suppliers with consistent on-time and on-budget delivery track records can use their resulting credibility to share best practices from committeds or full exploiters on consolidating and managing multiple vendors.

Committeds

Committeds need further support if they plan to broaden outsourcing activities across their organization and to push a higher percentage of the work offshore. Therefore, vendors need to offer workshops on best practices and consult on how to raise the companies' CMM capabilities.

Full exploiters

Full exploiters want to hear about innovative pricing and relationship models. They seek to evolve their relationships into full partnerships. In this segment, vendors need to deploy their domain expertise and train accounting teams to have business-level discussions with non-IT executives.

Source: Forrester Research Inc., (2003).

Offshore countries

About one in five (21 percent) global companies that outsource abroad send IT work to **India,** with cost savings currently listed as the no. 1 reason global companies outsource IT work[15]. The low-cost labour pool, high quality work and experience delivering a variety of services continue to make India one of the top outsourcing destinations for U.S. companies looking to cut IT development and maintenance costs in the coming years. One area where Indian companies still need to upgrade their capabilities is in upstream IT consulting services.

As regards software development and process methodologies, all top-tier Indian vendors are certified at CMM Level 5, which is the highest level on Carnegie Mellon University's Capability Maturity Model.[16]

An increase in offshore wages might compensate or even overcompensate for the benefits of India's mature offshore infrastructure. This depends crucially on the development of demand and supply in mature offshore labour markets. If driven by a rapid increase in demand for cheap IT-skilled labour by multinational companies, current supply will not be able to meet the increasing foreign demand and wages will increase rapidly. This might in the long run diminish the wage differentials between the countries of origin and country of destination. Furthermore, other destinations that have not been targeted as attractive locations for offshoring activities

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[15] Source: IT Toolbox, Sep 16, 2003
[16] http://www.sei.cmu.edu/cmm/cmm.html .

might become increasingly competitive. India is facing the problems of wage inflation of IT workers and of offshore destination countries like Canada, China, Israel, Russia and South Africa challenging its lead.

Gartner Inc. analyst Iyengar expects demand to outstrip supply within five years.

Currently, the United States is the frontrunner in offshore IT outsourcing. But European or Japanese companies are joining the offshore movement in increasing numbers. Besides the UK, Germany – Europe's strongest economy – primarily owes its experience offshoring not to small and medium-sized enterprises but to global players like Siemens and SAP, which progress along the offshore learning curve rapidly.

In March 22, 2004, the German labour union IG Metall (2004), evaluated that 10,000 German IT jobs at the Munich-based Siemens Corporation are endangered by outsourcing to alternative sites like China, Eastern Europe and India[17]. This figure includes the announced relocation of 2,300 German jobs in Siemens' mobile phone sector ICM to Brazil. In Germany, Siemens currently employs 170,000 employees, representing only 40 percent of its total workforce.[18] The home base of German multinational companies has been shrinking rapidly in terms of the share of domestic employees for many years. The view that multinationals are by nature acting in the national interest – *"what's good for GM (General Mototrs) is good for America"*- is sounding less and less convincing to the public in most countries, especially when those countries are small in the context of the global economy. The ability of governments to control multinational companies at the national level is diminishing, leaving only the U.S. (with about one-third of global GDP) and the EU as significant players that could exercise a countervailing power to the multinationals.

Multinational companies are increasingly spreading their production locations more evenly around the globe, aiming to ultimately become entities with global citizenship (see World Economic Forum, 2004)[19]. IBM Germany's director Walter Raizner spurred major public debates with his estimation that Germany's ICT sector already lost 70,000 jobs in 2003.

At CeBIT, an annual computer fair in Hanover, Bitkom spokesman Volker Müller challenged this estimate by arguing that the job losses occurred not during 2003 but over the period 2001-2003. However, the threat of OOIT becomes a significant bargaining chip in wage negotiations at home. So the question remains unanswered whether OOIT job losses are being hyped up or downplayed by particular interest groups to put pressure on policy makers.

However, one should keep in mind that the expected leap in high-skilled employment in the German IT industry during the Internet bubble years has not materialized.[20] Instead, significant labour shedding has taken place since then, and the future outlook seems bleak for the coming years. The devaluation of IT work through global OOIT, however, already signals that these jobs are losing their high status at home. Similarly to airline pilots, who face low wage competition in developed countries, the traditional high rank of IT jobs on the job market is diminishing due to the high level of IT skills needed. Standardization of IT jobs leads to deskilling relative to the average skill level of the labour force.

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[17] Siemens CEO von Pierer pointed out that the cost of employing 12,000 engineers in China is equal to employing 2,000 engineers in Germany. (Reuters)

[18] Other recent studies come up with different numbers. See e.g. Schaaf, J. (2004). He expects 50,000 IT-jobs in Germany are at risk due to OOIT, assuming a total number of ITZ-jobs in Germany of about 1.4 million.

[19] World Economic Forum: Global Corporate Citizenship: The Leadership Challenge for CEOs and Boards

[20] The German Federal Ministry of Economics and Labour expected in 1994 that the ICT industries would create up to 350,000 additional new jobs. See e.g. BMWA (1999). p. 2 .

Currently, no official statistics reliably measuring offshore movements of jobs are available. Hence, reports of an increasing relocation of German IT jobs are based only upon partial information and speculation drawn from case studies and non-representative statistical surveys.

One should keep in mind, from a macroeconomic perspective, that IT job losses are not the final impacts on the particular countries. Income generated abroad and a new international division of labour will sooner or later lead to an increase in export demand for commodities and services where the country of origin still holds a comparative advantage. Machinery or automobile manufacturers in Germany might create jobs through increased exports compensating for job losses in the IT industry or IT services. Therefore the numbers of job losses are not the net effect on the whole economy. Since e.g. Germany – currently the world champion in exports with a huge surplus in net exports – could hardly claim to be an exporter of jobs to other countries. Rather, the opposite seems to be true as long huge net surpluses prevail in foreign trade. Countries with huge trade deficits, like the U.S., might much more rightfully claim to be net job exporters.

A study published by the Centre for Economic Policy Research (CEPR) in London found that German companies created 430,000 jobs in Eastern Europe between 1990 and 2001. According to the study, a large part of these jobs emerged because German companies needed local affiliates to enter foreign markets and reduce production bottlenecks at home. Furthermore, new jobs have been created in Germany as well (e.g. by parent companies providing their Eastern subsidiaries). The CEPR study yields the result that Germany experienced only a net drain of 89,196 jobs to Eastern Europe from 1990 to 2001 – less than 9,000 jobs annually – which is a surprisingly small number of job losses. This is due to the fact that German jobs normally do not compete with jobs at offshore destinations in Eastern Europe.[21]
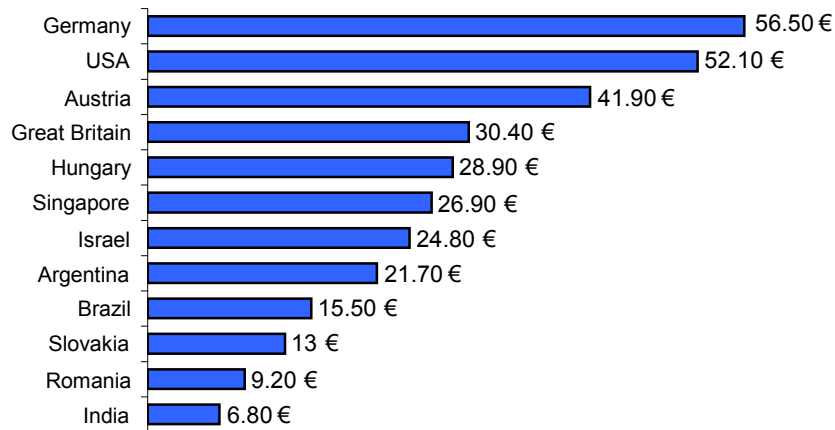
Moreover, heated outsourcing debates may cool off when job losses due to outsourcing are considered in relation to 241,000 IT job losses in Germany in 2002 alone, due to the bursting of the stock market bubble.[22] Up to now, outsourcing by German enterprises has focused primarily on nearshore destinations like Bulgaria, the Czech Republic, Hungary, Ireland, Poland, Romania and Russia. However, offshore destinations will increasingly include Brazil, China, India and the United States.

One key incentive to go offshore currently remains the still significantly lower wage costs of IT –workers, and this dominates other incentives like better access to local markets, etc. (see e.g. the labour cost comparison published by Siemens for software engineers below).

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[21] Marin, D. (2004).
[22] See e.g. Financial Times Germany article on March 1, 2004 by Mark Schieritz.

Siemens estimates: average labour costs per hour for software engineers in 2001

Country	Cost
Germany	56.50 €
USA	52.10 €
Austria	41.90 €
Great Britain	30.40 €
Hungary	28.90 €
Singapore	26.90 €
Israel	24.80 €
Argentina	21.70 €
Brazil	15.50 €
Slovakia	13 €
Romania	9.20 €
India	6.80 €

Politics of Outsourcing - Winners and Losers

Economists call it globalisation, but IT workers, especially programmers and technicians in call centres, call it unemployment due to job exports. It would be difficult to refute their claim that they are the losers in this process. To quote Paul Krugman, a leading international trade theorist:

"Yet it's bad economics to pretend that free trade is good for everyone, all the time. 'Trade often produces losers as well as winners', declares the best-selling textbook in international economics (by Maurice Obstfeld and yours truly). The accelerated pace of globalisation means more losers as well as more winners; workers' fear that they will lose their jobs to Chinese factories and Indian call centers aren't irrational."[23]

Several groups represent this growing opposition to these negative impacts of globalisation.

One example is The Organization for the Rights of American Workers, called Toraw, a group of displaced, angry American workers. Its goal is to guarantee that U.S. citizens and immigrants with permanent Green Card status are gainfully employed before non-immigrant foreign workers fill such positions, and it has set about lobbying for visa reform[24]. At the end of 2003, one year its founding by 12 workers, Toraw has 225 members from 27 states. This is still a far cry from a strong labour organization comparable with the traditional trade unions in other industries, like the AFL-CIO, but the latter have also begun lobbying to restrain the current rapid offshore outsourcing of IT services.[25]

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[23] Krugman, P. (2004b).

[24] Two types of visas are criticized: the H-1B, which allows highly-skilled workers to work for U.S firms, and the L-1, which allows companies to transfer workers based in other countries to facilities based in the U.S. Unlike H-1Bs, L-1s do not require that workers be paid in accordance with the prevailing wage.

[25] See e.g. AFL-CIO (2004).

However, IT jobs will - given a liberal trade regime - increasingly move to emerging markets after all. This is an inevitable process and a matter of simple arithmetic: Computer programming, for instance, is calculated to cost $80 per hour in the U.S; In India, $22 per hour, and in China $15 an hour. This wage differential is a persistent structural wage gap, as opposed to a cyclical one, which will change the future global IT labour market in a persistent way. However, the expectation that IT wages in India could climb to U.S. level will be a pipe dream of Indian programmers as well.

Labour market experts do not see a 'white knight' industry providing an easy alternative for IT workers in the developed market economies, as the services sector did for displaced manufacturing workers in the past.

In the short run, IT employees in these countries will probably not gain from this development. To stay employed in this era, they will sooner or later have to accept lower wages, change jobs more frequently, or even relocate and consider retraining for new professions and skills. In addition, colleges teaching IT in the US and Europe need to change their curricula to prepare students for global competition by focusing on skills needed onshore.

Thus, taking the U.S. as an example, the lack of highly skilled IT workers may be due to fast technological progress associated to large increases in productivity growth[26].

Productivity growth and outsourcing are mutually dependent. In a recent study by the Institute for International Economics, Catherine L. Mann found that globalised production and international trade made IT hardware 10 to 30 percent less expensive. These lower prices translate into higher productivity growth at home. She concludes that in the same way, globally integrated production of IT software and services reduce these prices and stimulate further diffusion of IT, leading to even higher demand for workers who can design, tailor and implement IT packages.

Therefore, there is a two-way interdependence:

1. High productivity growth   →   need for outsourcing
2. Outsourcing   →   higher productivity growth.

But pointing out the compensatory effects will not calm the storm at the losing end. For IT employees, it is currently hard to accept that after having been a well paid elite for a number of decades, they are now losers in a global OOIT game, and that their current or former companies are now the winners.

India's National Association of Software and Services Companies, Nasscom, commissioned a report by Evaluserve, which found that offshore outsourcing is even important to maintaining growth in the U.S. economy. According to the report, for every $100 worth of work sent abroad by U.S. companies, $130 to $145 will be reinvested in the US economy. However, these reinvestments do not necessarily take place in the same areas and locations where jobs are lost. Even if overall US welfare increases make an impact, at least in the long run, the short-run losses and distributional effects cannot be ignored, especially by those facing the negative consequences. A study in The McKinsey Quarterly[27] found that the U.S. economy gains from OOIT in four ways:

    a) Cost savings, which create additional value in the U.S. economy;

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[26] See e.g. Remarks by Alan Greenspan at the Boston College Finance Conference 2004: *"But for the past twenty years the real incomes of skilled, especially highly skilled, workers has risen more than the average of all workers, whereas real wage rate increases for lesser-skilled workers have been below average, indeed virtually nonexistent. This difference in wage trends suggests that, at least in relative terms, we have developed a shortage of highly skilled workers and a surplus of lesser-skilled workers."*

[27] McKinsey&Company (August 2003). 'Offshoring: Is it a Win-Win Game?' *MGI perspective*

b) New revenues, from Indian outsourcing firms buying new equipment from American companies;

c) Repatriated earnings, because many Indian outsourcing firms are US companies that repatriate offshore earnings;

d) Redeployed labour, where the money saved creates new jobs, as during the past 20 years after U.S. manufacturing jobs moved abroad to places like the Macquiladoras in Mexico after NAFTA went into effect in 1992.

These overall welfare benefits will not easily divert the focus from lost IT jobs. It is a delicate task to convey a more balanced view to policy makers regarding the beneficial long-term economic effects of outsourcing, much less to convey the situation to those potentially affected or even the voting public. It is also challenging for employers in the IT industry who have to communicate their offshore visions to staff, risking negative impacts on workers' morale and productivity and even backlash effects on their company name. A good example is the U.S. toy industry, which faced severe public criticism and boycotts after jobs were outsourced to Chinese prison workers, many of them political prisoners.[28]

President Bush's annual economic report, released on February 9, 2004, highlighted the benefits of sending jobs to other countries. Gregory Mankiw, Chairman of the Council of Economic Advisers looked at outsourcing too favourably. "*Outsourcing of professional services is a prominent example of a new type of trade. The gains from trade that take place over the Internet or telephone lines are no different than the gains from trade in physical goods transported by ship or plane. When a good or service is produced at lower costs in another country, it makes sense to import it rather than to produce it domestically.*"[29]

In response to the Annual Economic Report of the President and the protests by IT workers and the U.S. public, U.S. Senate Democrats proposed a new law, the **Jobs for America Act**[30]. This act requires companies that lay off 15 or more workers and send their jobs overseas to provide at least three months advance notice. It also requires notification to the Departments of Labour and state and local government agencies. The legislation, which amends the **Worker Adjustment and Retraining Notification (WARN) Act**, will require the Department of Labour to compile statistics of offshored jobs and report them to Congress on an annual basis. This will increase public awareness about the current process and thus make companies more cautious about the results of such actions for public opinion. Similar initiatives in Europe seem to be possible in the future.

As polls in the U.S. show that jobs are the top issue for most voters, it is not surprising that offshore outsourcing is part of the current Bush election campaign. John Kerry, the Democratic nominee, proposed a series of tax programs on March 26, 2004, which aim to slow outsourcing and create 10 million new jobs in four years. He unveiled his program in Michigan, where 6.6% of all workers are unemployed.

Details of Kerry's recently released plan include:

- Closing loopholes that give tax breaks to companies exporting jobs. Corporations can currently take advantage of tax deferrals for money earned overseas, as long as the money is kept overseas. Kerry proposes forcing companies to pay the same tax rate for money earned overseas as they pay in the United States. The tax reform

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[28] For evidence that such claims might sometimes have been exaggerated see e.g. Lardy (2004). However, this still has a significant impact on public opinion around the world.

[29] Excerpt of the Economic Report of the President, February 2004, p. 25

[30] February 12, 2004

would apply only to U.S.-owned factories that import those foreign-made products to the U.S.

- A jobs tax credit giving companies in industries threatened by outsourcing a break on payroll taxes for each new worker hired in the U.S.
- Furthermore, Kerry wants to cut corporate taxes by 5%.

Thus, Kerry proposes tax disincentives that should discourage companies from moving jobs overseas and removal of existing incentives for offshoring. Currently American companies can defer paying taxes on income earned by their foreign subsidiaries until they bring the income back to the United States, and if they keep the money abroad, they avoid paying U.S. taxes entirely.[31][32]

It is a moot point whether these political measures really affect the companies' behaviour. Bradford DeLong, professor of economics at the University of California at Berkeley argues: *'Kerry's measures look too small to have a material impact on the labour market. It is like putting a finger to plug up a dyke.'* He points out the significantly increasing number of out-sourced jobs, and echoes a view held by many economists that the democrats have exaggerated the impact of OOIT on unemployment.[33] Forrester Research, estimates that the U.S. has lost 400,000 IT jobs to outsourcing over the last few years, which is painful for the employees affected but small in relation to an economy employing about 130 million people.

The World Trade Organisation deplored attacks by both, Democrats and Republicans, on re-straining outsourcing by pointing out, the US benefits by free trade in goods and services, and not by withdrawing into a shell.[34] It is also highly disputable: if such an approach complies with current GATS regulations as a non-tariff barrier to break.

Outlook

Gartner Inc. found that by 2004, more than 80 percent of executive boardrooms in the United States will have discussed offshore outsourcing, and more than 40 percent of U.S. en-terprises will have tried a pilot program or actual outsourcing, either offshore or nearshore (Canada, Mexico, South America, etc.). Forrester Research predicts that $136 billion in wages, or 3.3 million jobs, will move offshore from the U.S. in the next 15 years. But economists also respect compensatory job effects – *'Frequently cited projections indicate that millions of jobs will be lost to offshore workers. What these projections ignore is that the globalisation of soft-ware and IT services, in conjunction with diffusion of IT to new sectors and businesses, will yield even stronger job demand in the United States for IT-proficient workers.'*, Catherine L. Mann quotes[35].

As more jobs will move to emerging markets, the IT work done offshore will approach higher levels. Indeed, it already has. A CIO Magazine survey found that 11 percent of the

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[31] More than 99% of companies paying corporate taxes would see their tax bills lowered, the campaign says. But the 1% paying higher taxes are some of the biggest and most powerful companies in the U.S. Kerry's campaign estimates the change would save $12 billion a year, which would be used to reduce the corporate tax rate from 35 to 33.25 percent.

[32] For another comment on Kerry's Tax Reform Plan see e.g. Hufbauer, Grieco (2004).

[33] Cf. e.g. Drentner (2004).

[34] *"Closing the door to the service trade is a strategy for killing jobs, not saving them,"* WTO director general Supachai Panitchpakdi said at National Press Club, Washington, March 04.

[35] International Economics Policy Briefs (December 2003). 'Globalization of IT Services and White Col-lar Jobs: The Next Wave of Productivity Growth'.

companies had outsourced system and architecture planning offshore, and 14 percent had outsourced research and development, two categories that analysts and chief information officers have predicted would never leave these shores.

IT labour that can be sent offshore will be sent there sooner or later, but many outsourcers expect that within five years, operations automation will erode the competitiveness of offshore labour. Therefore, the whole process of IT job exports might become another episode in the economic history of the international division of labour. Currently, the main task will be to contain disruptive changes that might trigger protectionist sentiments in the U.S. and Europe against a global free-trade environment. The best way out of this dilemma would be to help spread out the benefits of this new division of labour within the U.S. and Europe more evenly so that the winners do not heap the negative impacts on a few losers.

These impacts can be compensated by the public welfare system, which is becoming increasingly problematic with regard to high deficits in U.S and European budgets. To start a dialogue between business leaders and the local governments, social organizations including trade unions and other NGOs should discuss the framework of global corporate citizenship proposed at the last World Economic Forum (2004). This might give a reasonable agenda for a dialogue to establish a code of conduct of companies engaged in OOIT.

- *"Set the strategic direction for corporate citizenship in your company and engage in the wider debate on globalization and the role of business in development*
- *Define key issues, stakeholders and spheres of influence which are relevant for corporate citizenship in your company and industry*
- *Establish and implement appropriate policies and procedures and engage in dialogue and partnership with key stakeholders to embed corporate citizenship into the company's strategy and operations.*
- *Build confidence by communicating consistently with different stakeholders about the company's principles, policies and practices in a transparent manner, within the bounds of commercial confidentiality."*

Without establishing a global dialogue between all stakeholders in OOIT and ways to balance the different interests, a disruptive way of offshore outsourcing of IT services will lead to major backlashes, which will harm all stakeholders in the end. Up to now many companies that have expanded to become multinational corporations have failed to become global corporate citizens in the process. There remains some hope that this might change in the future. Otherwise, political pressure could lead to a backlash on globalisation.

In current protectionism debates based on the social costs of globalisation, Joseph Stiglitz points out: *"But if those [displaced workers] in developed countries – where unemployment is low, strong social safety nets are in place and there are high levels of education – turn to government for help, how much more necessary is assistance in developing countries?"*

Stiglitz is one of 24 members of the World Commission on the Social Dimension of Globalisation,[36] which issued a report recently. Its basic approach is '*that social progress cannot be separated from economic development. But it* [the report] *differs from the conventional wisdom on globalisation in arguing, first, that economic progress by itself may not entail social progress and, second, that the policies pushed by the international economic institutions - espe-*

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[36] Commission was established by the International Labour organisation in 2002 and is co-chaired by President Tarja Halonen of Finland and President Benjamin William Mkapa of Tanzania,

cially market liberalisation and an unbalanced trade liberalisation agenda may not lead to economic growth and stability in developing countries.[37]

Since 1990, global GDP growth has been slower than in previous decades. This, the Commission said, '*is at variance with the more optimistic predictions on the growth-enhancing impact of globalisation*'.

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[37] Comment by Joseph Stiglitz, Nobel Prize Laureate for Economics in 2001, in Financial Times on Feb.25, 2004

Abbreviations

ICT…………………..information and communication technology
IT…………………….information technology
NGO…………………non-governmental organisation
OOIT………………...offshore outsourcing of IT
OOSP……………….. offshore outsourcing service provider

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