ICT Offshore Outsourcing: Its Appeals and Impacts

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Abstract

ICT offshoring is not a new phenomenon, nor is it one which is likely to become old anytime soon. Many companies see ICT offshoring not only as a tried and true cost saving method but a necessity to remain competitive in the market. Although many attempts at offshoring IT projects fail, the competitive advantage offered overall by this practice is not something that can be legislated away by protectionist movements. IT workers need not go into a catatonic state of fear but need to understand how offshoring can advance their careers past the comparatively monotonous routine of programming and train themselves up for the roles that aren't being outsourced.

Keywords: ICT offshoring, IT services, offshore, outsourcing.

1. Introduction

ICT offshoring is the movement of the provision of information and communication technology services to a location abroad. ICT offshoring emerged most prominently after the dotcom crash in early 2000 (Ferguson 2004). Companies saw the competitive advantage offered by setting up the provision of some of their IT services offshore at a lower cost as a reality as developing countries proved they had the skills necessary to provide these services. Higher standards of education and ease of communication across the world were the major catalysts which allowed this to occur. Similar to the offshoring of manufacturing services that occurred in the 1990s, this trend grew quite rapidly and a contagion effect occurred as more companies needed to utilize the lower labour costs offered overseas (Tiwana, et al, 2008) and so developing countries increased their education standards even more to cater for the demand. The result being that those companies who failed to offshore ICT services in a similar fashion to their competitors found themselves at a significant competitive disadvantage (Shao, and David, 2008). For many western ICT professionals, this appeared to be the end of their careers; ICT professionals, a group who historically had little union involvement, rallied together with the common cause of career security. The

press caught on to the story and there was talk of protectionist policies to save the worker, as there was during the outsourcing of manufacturing (Ferguson 2004). This literature review reports on the impact of and reasons for outsourcing in depth and goes on to review some suggestions for western ICT professionals to help them grasp the reality that is ICT offshoring.

2. ICT offshoring; what it is and why companies do it

ICT offshoring can occur in three major ways; offshore insourcing, offshore affiliate outsourcing and offshore outsourcing (Tiwana, 2008). Offshore insourcing involves moving the provision of some ICT services to an offshore subsidiary and involves relocation of jobs as well as job losses. Offshore affiliate outsourcing moves the provision of some IT services to a company in which the company which is buying the services has a majority financial interest. This is to minimize the agency problem associated with contracting a completely new company (Tiwana, 2008). Offshore outsourcing is the form usually used by western countries and moves the provision of some ICT services to a company completely unrelated to the original firm. It involves job losses at a domestic level that are usually permanent in that it is most likely the original firm will never hire those same people for those same jobs again (Shao and David, 2008). Offshore outsourcing allows companies to take advantage of lower labour costs and other resource advantages in different countries. The countries which are favored by companies to provide ICT services from offshore are developing countries such as India, China, the Philippines, Hungary and several Latin American countries (Shao and David, 2008).

The primary reason for offshore outsourcing is the desire to cut costs and to increase productivity (Ferguson, 2004). This desire can be fulfilled because IT skills are a global commodity and they are much cheaper in other parts of the world (Ferguson, 2004). Companies find an increase in productivity outside their home country as offshore outsourcing enables them to have a 24-hour workforce,

which can be particularly helpful during implementation of new software (Aron, 2007). The following jobs are most prevalently being outsourced; maintenance and repair, training, applications development, mainframe data centres, consulting and reengineering. Further, businesses are seriously considering more outsourcing of networks, client/server mainframe data centers, end-user support, desktop systems, and full IT departments (Ferguson, 2004). Looking at these jobs it is evident that those which are most commonly outsourced are those which tend to be more technical than business oriented. This follows the idea that businesses are seeing IT technical jobs is work which is to be done by construction workers, and not artists as was envisaged in the early 90's (Chakraborty and Remington, 2005).

3. How different countries approach outsourcing

3.1 ICT offshoring and America

American firms, along with most other firms from western countries, generally tend towards offshore outsourcing (Tiwana 2008). They see the advantages of cost reduction in sending the provision of some ICT services overseas as workers in developing countries cost approximately a third as much as domestic workers (Shao and David, 2008). American firms set out the requirements for the project and involve the overseas firm in the design of the project, even in the early stages of design (Tiwana 2008). They then leave the project to the overseas firm and only review the overseas vendor's work during the late stages of testing. They hold the vendor to a specific contract for the project and leave the requirements quite inflexible.

3.2 Japanese ICT offshoring; a different approach

In contrast to the American way approach of setting a specific contract with inflexible requirements, Japanese companies expect companies to whom they outsource to be ready for constant changes in requirements (Tiwana, 2008). This mainly stems from the fact that most Japanese companies outsource development of embedded software, for which the hardware is developed elsewhere (Tiwana, 2008). This means that as progress is made in the development of the hardware, new requirements for the software may come to light. Japanese companies only consider offshore outsourcing when the required technical expertise is not available in subsidiary or affiliate companies, and as such is not motivated primarily by cost reduction (Tiwana, 2008). Since knowledge differences are a requirement for the Japanese to start an offshore

outsourcing contract, they are very wary of being taken advantage of. They have a peculiar solution to this dilemma whereby they create and spend large amounts of money on "dummy projects" (Tiwana, 2008). These projects are given to the offshore company as if they were real projects and the Japanese companies then rate these companies on the basis of the quality of the delivered code and whether each vendor sought clarifications for the intentionally ambiguous requirements. The highest ranked company from this "competition" is given the real project, this company need not have the lowest cost or the highest degree of technical knowledge. Japanese companies see the outsourcing arrangement as a long term, mutually beneficial arrangement (Tiwana, 2008).

4. How technology is making offshoring more appealing

Businesses need to be able to monitor the production of processes in real time to be able to make sure it is being completed in compliance with their requirements and that it is of a high standard (Aron, 2007). Internet technologies have allowed this real time monitoring to occur so that companies can break processes into chunks of related tasks and get them processed by offshore firms and watch their completion (Aron, 2007). Real time monitoring allows companies to significantly reduce the risk associated with outsourcing, especially with regards to finding problems in coding during early stages of development.

Leading Japanese companies have utilized technology to protect their intellectual knowledge. The concern for intellectual property theft is a legitimate one given that, for example, Honda found on one occasion that a Chinese company outsourced to by Honda was found to have been selling replicas of its motorcycles, and GM suppliers had completely replicated an entire car (Tiwana, 2008). Japanese companies utilized advances in encryption technology and created an art called 'modularisation', whereby they break an outsourced project up into smaller bits which are outsourced to different vendors in a way that only the client can piece them back together (Tiwana, 2008).

5. The impact of ICT offshoring

5.1 The impact of offshoring IT services on the US economy

The public opinion in the US regarding outsourcing is evident from an Associated Press-Ipsos poll in May 2004 which found 69 percent of Americans believe that

outsourcing hurts the US economy and only 17 percent believe it helps. However, the Institute of International Economics reported in 2003 that GDP growth between 1995 and 2002 would have been 0.3 percent lower per year without offshore outsourcing of jobs in IT (Chakraborty and Remington, 2005). To bring this figure to light, economic theory provides a basis whereby it states that "all other things being equal, a company should focus on business activities where they possess superior talent and knowledge" (Chakraborty and Remington, 2005). Therefore, because companies have been able to draw upon the skills of offshore workers to complete more mechanical tasks, they are better able to focus on what gives them a competitive advantage.

Between 2000 and 2002 the US IT industry lost 600,000 jobs, which was approximately 25 percent of all private industry losses over the same period. Employment in the IT industry fell from its peak in 2000 of 5.4 million to 4.8 million in 2002. Almost all IT industries lost jobs in 2002 (Chakraborty and Remington, 2005). In the short term, these job losses are likely to be permanent, in that these workers will not be called back to their same employer. If IT outsourcing follows the same trend as manufacturing outsourcing then the following figures provided by the Institute of International Economics are a good indicator; upon reemployment manufacturing workers lost 12 percent of their previous earnings on average (Chakraborty and Remington, 2005). However, in the long term, offshore outsourcing increases labour productivity, real wages, employment, GDP and improves standards of living. Unfortunately this hardly sweetens the deal for the IT worker in the US at the moment.

5.2 The impact of offshoring IT services on IT workers in developed countries

It is quite clear that offshore outsourcing poses the greatest risk for IT workers in developed countries as it typically translates to the exportation of domestic jobs to foreign countries (Shao and David, 2008). However, the software industry experienced a 130 percent job growth between 1992 and 2003, in addition, the median salary for full-time IT employees rose from $US44,242 to $US66,595 in this period (Shao and David, 2008). There is further predicted a growth of 45 percent in the employment for computer engineers in application and systems software, while there is expected to be a shortage in skilled labour to fill these positions. Nonetheless, IT workers in developed countries recognize that their jobs are being moved overseas for cost and expertise reasons and political backlash is on the rise. Stringent laws are being lobbied through various legislatures in an attempt to stop the trend and save technical jobs, although the success of these moves is yet

to be seen (Shao and David, 2008). Routine and labour intensive IT tasks that require little in the way of human interaction are the jobs which have been sent abroad and will continue to be (Shao and David, 2008). The impact of this move will most likely see the business side of IT staying domestic while the actual labour is sent overseas, much like the manufacturing industry today.

5.3 The impact of offshore outsourcing on ICT academic curricula

In response to the changes brought on by offshore outsourcing, a number of changes to ICT academic curricula have been proposed. These changes come as a response to statistics on uptake of computer science degrees; in 2000 3.7 percent of new freshmen indicated they planned to study IT, whereas in 2001 in was 3.3 percent and then in 2002 2.2 percent. This is a 40 percent drop in two years (Ferguson, 2004). Graduates of ICT courses must still be technically competent, but the emphasis will be more on understanding what programmers are doing rather than doing it themselves (Ferguson, 2004). Emphasis must be placed upon communication and business skills. Students will need more interpersonal skill, project management skills and real work experience in IT. Departments need to educate students about the outsourcing process and provide students with communication and multicultural skills to help deal with foreign companies. Communication skills are of the highest importance, CIOs found poor communication as the most common reason why outsourced projects failed to meet their specifications (Ferguson, 2004). Curricula should look at the impact of international intellectual property laws on outsourcing; these laws vary greatly between countries. In addition, a multicultural component to the degree should give students experience working in culturally diverse teams and exposure to languages commonly encountered in the outsourcing process; like Chinese, Russian and Hindi (Ferguson, 2004).

6. The western ICT professional and offshoring

IT offshoring is not something that ICT professionals can hide from or ignore; "ICT professionals must continuously develop new skills that will enable them to remain valuable to their local market place as IT outsourcing matures" (Shao and David, 2008). "The movement of tech related jobs [is] an irreversible megatrend" (Ferguson, 2004). IT professionals must analyze which type of work is most likely to be outsourced and which skills will still be in

demand locally, and then make sure that they educate themselves so as to possess these skills. Routine, labour intensive IT tasks that require little client interaction have been and will continue to be outsourced (Shao and David, 2008). These jobs include detailed design, application development, program coding and testing, application development, and system support and maintenance (Shao and David, 2008). IT professionals need cultural and language skills along with business know how in order to remain valuable (Ferguson, 2004).

7. Conclusions

This essay has reviewed the findings of six articles with regard to the appeals and impact of ICT offshoring. It then goes on to look at the suggestions made in the articles to IT professionals which provide some direction in their actions. It is clear that the literature puts forth that IT offshoring is here to stay because it offers companies a larger pool of skilled workers to choose from and it allows businesses to save money on labour where it is available cheaper abroad. IT offshoring has cost the jobs of many IT workers but academic institutes have access to information that can help them produce graduates who will remain valuable in the business world where outsourcing is a part of everyday life. IT professionals who want job security need to seek out good educational institutes which build up their skills so that they remain valuable and need to be tolerant and understanding of the offshoring process. IT professionals need most specifically to understand if they specialize in routine, labour intensive IT roles their jobs are and will continue to be at risk unless they re-educate themselves so that their skill set includes business and cultural skills.

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