ACM ON GLOBAL IMPACTS OF IT

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Association for Computing Machinery Task Force

The ACM task force on Global Impacts of IT Outsourcing was set to:

- Assess the major forces shaping the movement of IT jobs globally, with a focus on software and systems research, development and services
- Provide a more informed context for making professional career decisions, setting future educational requirements, and understanding future employment trends
- Provide information to help ACM members and the wider computing community make realistic career decisions that take into account global trends
- Enable educators to effectively shape the future of education in computing and computer science in the context of a global workforce
- Allow industry to fairly assess the impact of migrating tasks across global boundaries
- The report's conclusions are intended to embolden policy-makers worldwide to incorporate a broader understanding of the issues.

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WG Methodology

- discuss directly with willing corporate managements the question of what they take offshore and how they manage it to their advantage (rather then why they do it… we exploited the why from the benefits that they outlined, be it excellence, be it saving, be it market access, etc..) with companies that provided us with the real story, not a PR smoother
- Chair: Orna Berry
- Other participants: Alok Aggrawal, Stefanie Lenway and Valerie Taylor.
- Alok was key with his own IBM/Evalueserve experience

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Why Offshoring

- <u>Reduced Labor Costs and Increased Margins</u>
- <u>Access to skills</u>
- <u>Experience</u>
  - For example, China already has the largest number of mobile phones in the world
  - Experience in particular domains of knowledge e.g., biotech are often more readily available in some of these countries.
- <u>Time shifting</u>
  - Mass General's move to hire U.S. trained Indian physicians to read X-rays during the second and third shifts. This increased patient service at a reasonable cost.
- <u>Time to market</u>
- <u>Market access</u>
  - For example, Magic Software went to India for market access and its initial distribution agreement has lead to a global integrated software supplier.
- <u>Ability to send Overflow work</u>
- <u>Extending Venture Capital Money</u>
  - By March 31, 2005, more than 170 startups already had their R&D centers in India.
- Note: Reasons for Offshoring Change with Time

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Case Study: SAP

- SAP Labs is an integral part of SAP's global research and development organization. It has units in nine locations world wide. Each of these centers has a specific focus, for example the one in Bulgaria provides technology but the one in India provides scale
- The key drivers for setting up SAP Labs units are:
  - To distribute global development efforts and enable SAP to access world's best IT experts
  - To support local and global markets, develop first-class solutions and drive innovation and competitive advantage for SAP, its customers and partners
- It is with the same perspective the company established its unit in Ra'anana (Israel). It is the company's fourth largest lab worldwide and employs 500 people. Since 1998, it has acquired six Israeli start-up companies, each of which has improved SAP's offerings.
  - The offshore unit in Israel not only provides access to quality R&D talent, but also helps SAP in improving its product offerings
  - proximity to the local customer base has helped it customize SAP applications, according to their specific requirements

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Case Study: IBM Research Division

- IBM invests about 6% of its revenue in research and development
- With eight laboratories around the world employing around 3,050 researchers, IBM holds more than 25,000 patents and files for more patent applications than any other company each year. Five noble laureates have worked in these labs
- IBM opened three new research labs in the 1990s - in Austin (1995), China (1995) and India (1998)
  - These research labs provide an access to the highly skilled people in these regions
  - IBM's initial aim was to attract local talent and work on problems that are relevant to these emerging countries
    - For example, India Research Laboratory (IRL) has about 100 researchers and focuses on areas critical to expanding India's technology infrastructure and IRL researchers are working on several projects like bio-informatics, text mining, speech recognition for Indian languages, natural language processing, grid computing, and autonomic computing
    - Similarly, IBM China Research Laboratory (CRL) also has approximately 100 researchers and has been working on Text-To-Speech systems and can now provide language support for Chinese, Taiwanese Chinese, Cantonese, Korean, Japanese and French
  - IBM is active in building relations with academic institutions all over the world. For example, the India research lab is located inside the Indian Institute of Technology (IIT), Delhi campus where it has access to a vast pool of talent

Case Study: Veritas

- Veritas established its Pune (India) base in 1994. It is Veritas' third largest R&D center and it works on a diverse range of product lines.
- Key drivers for setting up an offshore center in India:
  - The availability of low-cost computer programmers in India
  - Access to the emerging markets of the A-PAC region, which have the potential to be the future growth drivers for storage software
- The center employs 22 percent of Veritas' global engineering workforce and plans to increase its employee strength from the 900 in 2004 to around 1500 by 2005
- Initially, set up for leveraging cost advantage; the center is a key contributor of quality R&D work, and accounts for almost 32 % of patents filed by Veritas
- The center also works as a peer rather than as an offshore support center. It has the autonomy to decide its product development route map and has also been given a separate budget for advanced technologies

Case Study: Magic Software

- The company established its base in India, in 1998, mainly for market access and distribution of its products. The key drivers for establishing this center can be described as follows:
  - After realizing, the potential and technical expertise of IT professionals available in the country, Magic software established a research and development center in India
  - Another driver for Magic Software was the cost advantage in India, when compared to other developed nations.
- The offshore unit in India was set up essentially for distribution, but evolved into a research and development center as it gained access to the technical expertise available in India
- The establishment of a development center has in turn, boosted marketing capability as it has provided the opportunity to forge partnerships with local software firms

Thank you