

# **STRATEGIES FOR SMALL SCALE VENDORS IN INDIA TO APPROACH LOWER MAINLAND COMPANIES**

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## **APPROVAL**

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**Title of Project:** **Strategies for Small Scale Vendors in India to Approach Lower Mainland Companies**

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## **ABSTRACT**

The top IT companies in India are interested in high value projects from Canada, while several small companies in India would be interested in accepting small-scale projects from Canada. This project develops strategies through which small-scale vendors in India may approach Lower Mainland companies for their smaller projects. Through a survey on Lower Mainland companies, the project recommends that small-scale Indian vendors should differentiate themselves through economies of scope, not necessarily through achieving quality, but by building a strong reference list through previous work with other clients. Vendors should also prepare a differentiation strategy with respect to other countries and provide a strong level of communications with the client through a local contact. Vendors should not accept more than a 20% advance and should finish projects with no time overrun in order to improve client response.

**Keywords:** Outsourcing Strategies to India; Small Scale Projects Outsourcing; IT Outsourcing to India.

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## **1: INTRODUCTION**

This project develops strategies through which small-scale vendors in India may approach companies in the Lower Mainland of British Columbia, Canada (hereafter called Lower Mainland) for small outsourcing projects. For the purpose of this project, we assumed anything less than \$20,000 to be a small-scale project. In order to develop these strategies, this project reviews literature on outsourcing and conducts a survey on several companies within the Lower Mainland. The purpose of this report is to assist North American companies to be productive by outsourcing their small-scale assignments. On the other hand, this would be beneficial for the companies in India as this would give them an opportunity to enter the North American market by understanding their customers' needs better.

The first part of the project involved the findings from peer-reviewed academic journals. The study first looks at the advantages and disadvantages of outsourcing. Then it examines the strategies a company should consider before considering outsourcing. Next, it reviews some reasons for outsourcing and looks at a specific study on outsourcing to India. A literature review on surveys was also conducted. A survey is then developed and presented, along with the results of the client interviews. In the final step of the study, the findings from the survey, combined with the literature review, are used to develop recommended strategies for small-scale Indian companies to approach Lower

Mainland companies. In the end, the project suggests several areas where the existing research could be extended.

## **1.1 Indian IT Market**

Since the liberalization of Indian industry in the early '90's, the Indian IT sector has experienced phenomenal growth. In 1996, the IT sector was about \$1.24 billion. In 2001, it had reached \$8.75 billion. By 2006, the total market is expected to grow to \$28.5 billion. Of this, \$15.2 billion will be IT software and service exports, \$7.3 billion will be in the Business Process Outsourcing and the remaining \$6 billion will be the domestic market. The total market is expected to be about 7% of India's GDP<sup>1</sup> in 2008. The current largest IT markets are the USA and the UK (Compare Infobase Ltd., New Delhi, 2008).

Morris et. al. (Morris & Basant, 2006) indicates that, for small firms in the Indian IT industry, approximately 88% of the total have a turnover of less than 100 million Rupees<sup>2</sup>. "This suggests that a large portion of IT firms are small entrepreneurial ventures managed by self-employed individuals." Morris et al mentions that 52 firms dominate the market. The top five firms share 32% of the market, the next top 47 firms about 35% and small firms share less than 11% of the market. Morris et al also indicates that 38% of IT workers work in small enterprises. The top Indian IT firms, according to Dataquest 2005-

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<sup>1</sup> Gross Domestic Product

<sup>2</sup> The August 2008 currency exchange rate is Cdn \$1 = 41.73 Rupees. So 100 million Rupees is about Cdn\$2.4 million.

2006 report<sup>3</sup> are Tata Consultancy Services, Wipro, Infosys Technologies, Satyam Computers and HCL technologies.

## **1.2 Big Vs Small IT Vendors – Relative Advantages**

The bigger players in the market offer the following advantages as compared to smaller players

- A wider reach - they often have offices or resellers spread all over globe to develop markets and find new opportunities.
- Larger talent pools – they can offer a variety of turnkey services for their customers as they have expertise in a wide gamut of technologies.
- Better risk tolerance – due to their size and available resources, the large companies are in a better position to take risk (losses) on a project without jeopardizing the solvency of the organization.

The smaller players offer the following advantages when compared to bigger players

- Lower overhead costs – with lower costs, they are more flexible in their price offerings and can offer more competitive pricing
- Smaller bureaucracies – with a flatter structure, smaller companies enjoy faster response time, since teams are able to make decisions quickly

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<sup>3</sup> [http://dqindia.ciol.com/content/DQTop20\\_2006/ranking06/2006/106081725.asp](http://dqindia.ciol.com/content/DQTop20_2006/ranking06/2006/106081725.asp) accessed on August 17, 2008

- Customers have a true sense of ownership - "The customer benefits from a true sense of ownership when the same individual can follow an information systems project through the design, implementation, validation and maintenance phases."<sup>4</sup>
- They are more willing to take on smaller budget projects. They are able to provide better service and the ability to handle smaller budget projects with better flexibility.

### **1.3 Outsourcing Business in Lower Mainland of BC**

According to Industry Canada (Industry Canada, 2008), excluding self-employed businesses, there are over 1 million small companies (small companies are those with less than 100 employees). The Industry Canada report states that 79% of small firms were connected to the Internet and only 33% had their own web-site: this percentage is rapidly growing. According to an Ipsos Reid study, (Dellazizzo, 2006) Canadian firms spent approximately \$41 billion dollars on IT in 2006. Small firms spent about \$13 billion. With about a million small firms in Canada, we can safely assume that on an average a small firm spends about \$13,000 per year on its IT budget. According to Chambers et. al (Chambers & Church, 2006) there are 347,500 small businesses in British Columbia which contribute about 22% to the Canadian GDP. Within the Lower Mainland of British Columbia, there are 95,607 businesses – this number is growing at 0.6% (or about 547 businesses) per year. Most of the growth occurs in Professional, Scientific, and Technical

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<sup>4</sup> <http://www.bizjournals.com/albany/stories/2002/03/18/focus9.html> accessed on August 18, 2008

Services and the Information, Cultural, and Recreation sectors (Chambers & Church, 2006). Applying \$13,000 IT to BC companies, we get an annual figure of \$1.24 billions spent by small scale companies in Lower Mainland. Even if 10% of these projects are outsourced, that would amount to \$124 million. Thus the overall outsourcing market can be assumed to be worth at least \$124 million per annum and growing at 0.6% per annum.

#### **1.4 Outsourcing to India**

According to the annual NASSCOM<sup>5</sup> survey, IT services exports in India grew by 35.5% in 2006-07 to USD 18 billion; while ITES-BPO (IT enabled services – Business Process Outsourcing) exports grew by 33.5% registering revenues of USD 8.4 billion. The survey further projected “overall IT software and services sector will grow by 24-27% to USD 49-50 billion in FY08”. A forecast study conducted by XMG (XMG, 2007) in 2007 states that the outsourcing market for IT, BPO and Call Centre services to be around US \$450 billion by 2010, a compound annual growth rate (CAGR) of 16% when compared to US \$297 billion achieved in 2006. The report further states “India will continue to lead the offshore segment through 2010 with at least 15% share”.

According to Chandrasekhar et al (Chandrasekhar & Ghosh, 2006), the greatest advantage of outsourcing to India is the cost saving offered by Indian companies. The authors suggest that “cost comparisons between India and the US point to savings of around 80 percent to the source companies”. According to the research data (University of California, Berkeley, 2003) published by the Haas School of Business at the

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<sup>5</sup> National Association of Software and Service Companies – India.

University of California, Berkeley, the wage difference between a US employee and an Indian employee can range anywhere between 400% to 1500% depending upon the type of profession. Chandrasekhar et al suggest that by outsourcing 10 small jobs to India, a small scale Silicon Valley Company can save around \$1.5 million in payroll costs. They also suggest that the cost of setting up a call centre in New Delhi is about one-third the cost of setting up similar call centre in the US.

## **2: LITERATURE REVIEW**

### **2.1 Outsourcing Literature**

Information Technology (IT) outsourcing can be defined as “the significant contribution by external vendors in the physical and/or human resources associated with the entire or specific components of the IT infrastructure in the user organization” (Lawrence & Venkatraman, 1992). The current global economy has led to a spate of outsourcing jobs and services to developing countries by developed countries. IT is no exception, and India has emerged as a major outsourcing destination for countries around the world. According to a KPMG report (KPMG, 2005), “around 250 of the Fortune 500 companies are clients of Indian Information Technology companies”.

#### **2.1.1 Outsourcing Advantages**

Loh et al (Lawrence & Venkatraman, 1992) and Barthelemy (Barthelemy, 2001) cited that reasons for outsourcing could range from economies of scale or scope achieved by a vendor serving several clients on similar technology or working on a wide gamut of technologies and leveraging their experience for the best-suited technology for the client requirements. The IT training budgets might be bigger than the whole IT budget of an enterprise and the time spent on training might be longer than the lead-time of delivery by an expert vendor. Besides, no kind of training would make them equipped to handle the intricacies learnt while working on a project that the vendors have already achieved by working on several similar projects.

They also suggested the another reason for outsourcing IT jobs is the vendor's better understanding of trends in the IT industry and thus ability to offer leading-edge software and systems. The vendor that is an IT company has its core-competency in software development, faces more-varied issues, and can thus have more expertise than their individual clients can. They often have employees with several years of experience in specialized areas that their customers may have to deal with once only. For example: a company that has to migrate from legacy systems to an ERP<sup>6</sup> system would be at a much lower knowledge base as compared to the vendor who has implemented several such migrations across several industries verticals.

Other than the factors mentioned above, Grover et al (Grover, Cheon, & Teng, A descriptive study on the outsourcing of information system functions, 1994) suggest that the risk of technology obsolescence could be minimized by outsourcing. The high risk of technological obsolescence can be passed on to the service provider and the service provider handles the risk by its "ability to diversify the risks across a broad range of service receivers". Grover et al also suggested that, instead of spending their valuable resources on understanding and managing the complex IS<sup>7</sup> infrastructure, companies can focus on their core business by outsourcing the IS infrastructure. This in turn helps the firm to "focus available IS talent on IT activities that promote competitiveness rather than routine activities of systems maintenance or operations".

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<sup>6</sup> Enterprise Resource Planning

<sup>7</sup> Information Systems



### **2.1.2 Outsourcing Disadvantages**

Like every aspect of business, outsourcing is not without its share of concerns and has certain dark sides to it. One such dark side could be hidden costs associated with outsourcing that may not be evident at the outset. Barthelemy (Barthelemy, 2001) suggested that 14% of the 50 companies surveyed by his paper termed their outsourcing experience a failure because they failed to include the hidden costs in their risk management. Barthelemy suggested four hidden costs behind such experiences:

- vendor search and contracting (time and cost associated with searching a vendor)
- transitioning to the vendor (switching in-house activities to the vendor)
- managing the outsourcing effort (agency costs associated with managing the vendors)
- transitioning after outsourcing (switching vendors or reintegrating IT activities internally)

These hidden costs should be planned for and provisions be made for these contingencies to mitigate the risks associated with these hidden costs. The organizations that failed to see these hidden costs in the beginning and thus did not make provisions for cost or schedule overruns are often not prepared when faced with the realities of these hidden costs. On the contrary, the organizations that proactively plan for these contingencies are better equipped to face them with sufficient buffers for each type of hidden cost.

Quinn (Quinn, Strategic Outsourcing: Leveraging Knowledge Capabilities, 1999) suggests that since the vendor has more knowledge depth than the customer does, the

customers may not be able to guide the vendors by direct orders. Often the customer is at vendor's mercy to help them with the issues faced in the development that might be solely due to the incompetency of the vendor. It may also not be possible to measure the impact of the supplier's contribution and the customers may fail to strike a balanced deal with the vendors, who are experts in the specific technology. Not understanding the amount of effort needed to offer the service; a customer is not in a position to evaluate the service cost efficiently and may end up overpaying for the services provided.

Outsourcing may also lead to internal backlash from staff that either fear for their own jobs or are apprehensive of outsourcing not achieving the responsiveness that can be achieved internally. According to Palley (Palley, 2007), outsourcing can have "significant effects on wage levels and employment conditions by affecting a worker's sense of security and bargaining power". It is not only the fear of job loss, it is also that the workers lose their power to bargain for their remuneration or benefits due to fear of exerting excessive pressure, leading to their jobs being outsourced. There is also a fear of information pilfering to competitors who also are clients to the vendor.

Grover et al (Grover, Cheon, & Teng, A descriptive study on the outsourcing of information system functions, 1994) suggest that outsourcing reduces "real or perceived control over the quality of software and timetable of a project" because the work is executed by a vendor not under direct supervision of the company management. They also suggested that the outsourcing reduces the long-term career prospects for IS staff and, as a result, employee turnover for IS staff is much higher.

### **2.1.3 What to Outsource**

According to Quinn et al (Quinn & Frederick, Strategic Outsourcing, 1995), a company should develop its core-competency in-house, “where it can achieve definable pre-eminence and provide unique value for customers” and “strategically outsource other activities including many [activities] traditionally considered integral to the company, for which the firm has neither a critical strategic need nor special capabilities”. A firm’s survival in the market depends upon how it adapts itself to the changing trends in the industry and whether it is at the forefront of innovation in its core business. Trying to manage an ever changing complex world of Information Systems would leave a part of the firm’s resources dedicated to its non-core IT part and that would eventually have to be compensated from other areas of the firm, which often is the core business.

According to a Computer Economics report (Computer Economics, 2006), the eight major categories of IT outsourcing are Software Development, Website/E-Commerce, Hosted Applications, Disaster Recovery Services, Network Operations, Desktop Support, Data Centre Operations and Help Desk operations. This list can act as a guideline about the industry trend in outsourcing their jobs. However, no organization should outsource its core-competency activities. For example: for an software development organization, software development is its core competency, and, while it is safe to outsource non-critical modules of their development process, the outsourcing of the crucial and core modules of their development should be avoided.

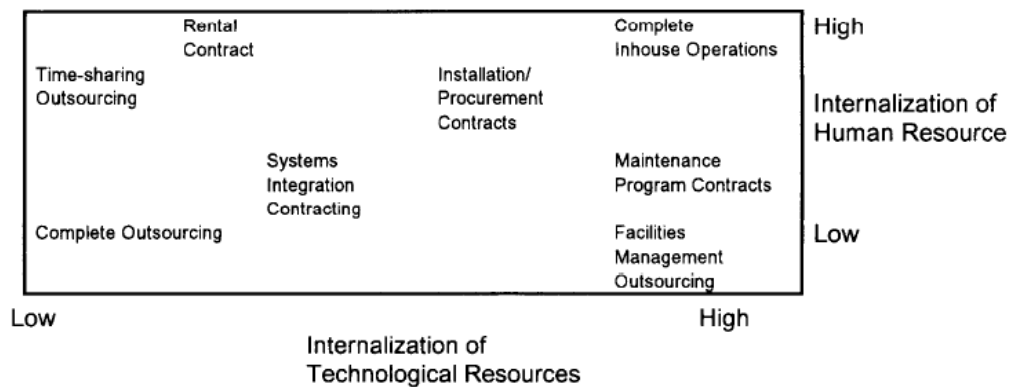
#### **2.1.4 Outsourcing Checks**

Quinn (Quinn, *Strategic Outsourcing: Leveraging Knowledge Capabilities*, 1999) suggests six steps to ensure a smooth functioning of outsourcing operations. They are “ensuring goal and value congruence” (aligning the vendor’s and customer’s value and incentive system), “highly trained procurement and contract management group” (checking the vendor agency costs by improving their knowledge through constantly evaluating best-in-breed solutions from many sources), strategic and operational monitoring to ensure that “the supplier is not moving in directions inimical to the buyer’s interests”, calculating “insourcing transaction costs and actively measuring the benefits intended from the outsourcing relationship” (comparison of internal development costs including transaction costs viz a viz outsourcing costs), “developing feedback systems to leverage and share knowledge and innovation” (gaining from vendor’s expertise on the field) and creating a “mutual three level contact system” (including top managers, champions on both side, bench and operating level personnel).

Barthelemy (Barthelemy, 2001) suggested that hidden costs related to IT can be reduced by outsourcing activities that are not idiosyncratic or shrouded with too many uncertainties, spending some time researching vendors, contracting or hiring people with outsourcing experience, drafting the right contracts, cultivating vendor relationships and having a key IT skill base in-house. IT outsourcing should be carried out after detailed analysis as against trial and error experience. Barthelemy suggested that companies “should watch for managers with experience in outsourcing, joint-ventures management

or leading multi-skilled or cross-functional teams” in order to hire and retain such individuals.

Grover et al (Grover, Cheon, & Teng, A descriptive study on the outsourcing of information system functions, 1994) suggest five levels of outsourcing: Complete Outsourcing – transfer of entire IS centre, Facilities Management Outsourcing – where there is a shortage of IT staff, Systems Integration Outsourcing – medium level of internalization of technological and human resources, Time-Sharing Outsourcing – practised in the late 1950s with mainframe computers and Other Types of Outsourcing – rental / installation / maintenance contracts. They classify those five types under two broad categories of outsourcing of human resources and of technological resources and explained the extent of outsourcing in each case with the help of a 2x2 matrix (refer to Figure 1). The authors plotted internalization (opposite of outsourcing) of the two types of resources and show the placement of the categories under the five levels of outsourcing mentioned above.

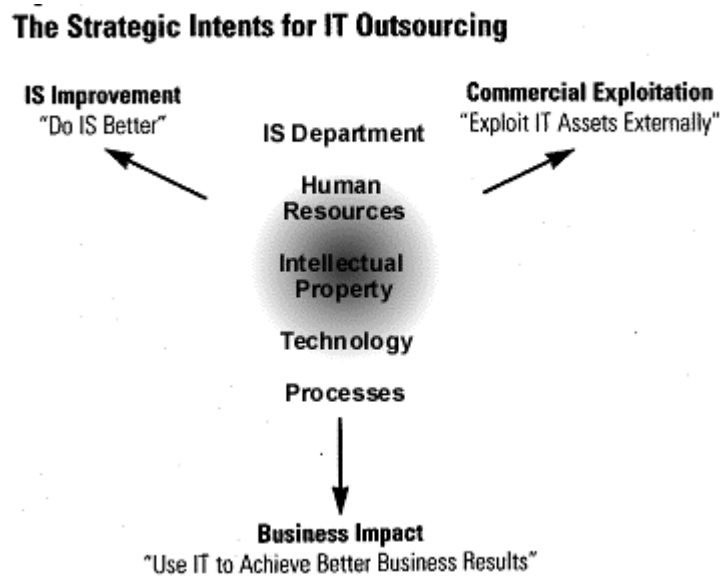


**Figure 1: Alternative Types of IS Outsourcing by Permission (Grover, Cheon, & Teng, 1994)**

### **2.1.5 Outsourcing Reasons**

According to Lawrence et al (Lawrence & Venkatraman, 1992), the decision to outsource IT depends on several factors at the levels of the economy, industry and firm. The factors can be caused by trends and cycles in the economy, industry or gaining a competitive edge by increasing information flow and productivity by leveraging the expertise of IT vendors to develop state of the art information systems. The authors developed a research model based on several hypotheses and concluded that a firm's business cost structure is positively related to the degree of IT outsourcing (i.e. firms with higher business costs are more likely to outsource their IT) , the firm's IT cost structure is positively related to the degree of outsourcing and the firm's IT performance is negatively related to the degree of IT outsourcing. Business cost structure was defined as the cost directly associated with product line production. The authors argue that, since IT is an integral part of running the business, with a higher business cost structure, firms would look for options to reduce their costs and may thus outsource their IT systems. The same logic is applicable to the IT cost structure as well. A firm that does not have a strong business cost structure but nevertheless a high IT cost structure is also likely to outsource jobs as an option to reduce cost and improve strategic positioning. Lastly, the authors suggest that with the increasing role of IT in the corporate world, management is becoming more conscious about the return of investment on their IT infrastructure and are concerned with "reconfigure[ing] their IT infrastructure in ways that ascertain the benefits in a clear manner". With a decrease in IT performance, management would be

looking for options to improve IT returns on investments, and one such option would be to outsource their IT infrastructure or projects.



**Figure 2: Strategic Intent for IT outsourcing by Permission (DiRomualdo & Gurbaxani, 1998)**

DiRomualdo et al (DiRomualdo & Gurbaxani, 1998) also support the reasons outlined by Loh et al. According to them, “the motivations for IT outsourcing are evolving from a primary focus on cost reduction to an emerging emphasis on improving business performance”. The authors suggest that the IT outsourcing plays an increasingly prominent role in strategies designed to close the gap between existing state of the art technologies and the in-house IT capabilities and skills of firms. DiRomualdo et al suggest three strategic intents for IT outsourcing: IS improvement, Commercial Exploitation and Business Impact (refer to Figure 2).

## **2.2 A Primary Outsourcing Survey**

A literature search did not produce any studies on why a company in the Lower Mainland would outsource their operations and / or in what forms of outsourcing it would engage. Due to this lack of knowledge, it was decided to perform primary research with Lower Mainland companies to determine the reasons for their outsourcing. However, project members had only previously performed basic phone research and wanted to improve the research response rates and consider any new techniques and avenues that would improve research feedback. In order to do this, a literature review was conducted on surveys ((i.e. phone, person-to-person interview or web-based) and their effectiveness. Following this, the most suitable survey method was chosen and developed.

## **2.3 Surveying Literature**

Zhang (Zhang, 2000) indicates that surveys are an extensively used form of research in many disciplines. For example, in business, surveys are used to determine market size and demand for a product. In medicine, surveys can be used to determine social attitudes and to map lifestyles with diseases. Surveys are used in politics to determine the popularity of a candidate or a policy. Although surveys are extensively used, Zhang also identifies the main challenge in surveys is to “conduct studies efficiently and effectively while retaining validity”.

### **2.3.1 Traditional Surveys and their Effectiveness**

Before the Internet came into common use, surveys were primarily conducted through posted mail since mail surveys were the cheapest form of survey mode (Fricker



& Schonlau, 2002). However Zhang (Zhang, 2000) indicated that this method suffered from a low response rate and slow response time. Ilieva (Ilieva, Baron, & Healey, 2002) also indicated that, in addition to the low response rate and time, traditional surveys suffered from transcription error. Transcription error occurred when the data was copied from the completed questionnaire to the statistical tool for analysis. This error resulted in non-response errors (i.e. a blank response) and data entry errors.

### **2.3.2 Web-Based/Internet Surveys and Their Effectiveness**

When the Internet grew rapidly in the 1990s, it became obvious that this would be an ideal tool to obtain survey measurements. Surveys were easier to administer - users were given a link to a website where they would enter the data or the respondent could be provided with an e-mail that would be filled up and returned. Fricker (Fricker & Schonlau, 2002) compared the perceived improvements of web over traditional surveys in four areas: responsiveness, timeliness, cost, and data quality.

For responsiveness, when an open population was surveyed, the response rate was low at about 8%. However, in closed populations (for example, surveying professors within a specific university), the rates were 19% or higher. Of course, the response rate was much higher if the sample population had access to a computer. For example, a survey of potential students to a university yielded an 8% response rate while the response rate of students at a university (with ready access to a computer) was more than 35%. Overall, Fricker et al (Fricker & Schonlau, 2002) found that the rate was much higher for closed populations than for open populations.

The literature was not clear on the timeliness of the responses of traditional surveys versus Internet surveys. There is no doubt that the response time of an Internet survey is faster than a mail-in survey. However, with Internet surveys, there is fielding time, the time from which the survey is posted on the web until the responses are adequate. Fricker indicated that a prominent commercial survey company had to leave the survey on for about 1.5 weeks in order to achieve a response rate of more than 80%.

#### **2.3.2.1 Quality**

Solomon (Solomon, 2001) cautions, “the biggest concern in the Internet surveying is coverage bias or bias due to sampled people not having access or choosing not to access the Internet.” Couper (Couper, 2000) also identifies coverage error as the “biggest threat to inference from Web surveys.” Solomon and Couper identify that the source of the coverage error is from accessibility to the Internet. Even though Internet access is increasing, the population that has access to the Internet to fill out a survey is actually less than what can be achieved using conventional survey modes such as the telephone or mail. Furthermore Fricker (Fricker & Schonlau, 2002) indicates that the Internet access and computer literacy are not only required, compatible hardware and software are required to ensure that coverage is adequate. As an extreme case, a customer who has a computer but no Internet access is unable to obtain or return a survey. To address these concerns, Dillman (Dillman, Tortora, & Bowker, 1998) recommends a “dual-mode strategy” to improve coverage by sending an e-mail or mailing a potential respondent a notification of a survey. Following acknowledgement by the end user, the potential respondent is then provided access to the survey to complete.

#### **2.3.2.2 Cost**

Fricker (Fricker & Schonlau, 2002) found that internet surveys are cheaper than traditional methods if only the mailing and printing costs are considered. However, if the programming and labor costs are added in, the Internet costs can be significantly higher. The advent of several free websites (for example: <http://www.surveymonkey.com>) for surveying, has reduced the cost of programming and manpower to practically negligible other than the staff needed to create or process the survey, which would have been needed for mail-in survey as well.

#### **2.3.2.3 Sample Type**

Schonlau et al (Schonlau, Fricker, & Elliott, 2002) recommend using a probability sample if the larger population can be inferred based on the survey sample. Otherwise, a convenience sample should be used. “If the researcher has established that a probability sample is required, he or she must then determine how to contact the surveyed population or how to develop a sample frame. On-line advertising is not an option for generating probability samples.”

#### **2.3.2.4 Response Rates**

Schonlau et al (Schonlau, Fricker, & Elliott, 2002) state that response rates range from 7 to 44 percent for Web surveys and 6 to 68 percent for e-mail surveys. Response rates can be improved if a company is formally contacted and there is follow-up on the survey. They also suggest that the “the most effective use of the Web seems to involve a sequential fielding scheme in which respondents are first encouraged to complete a

survey via the Web and then non-respondents are subsequently sent a paper survey through the mail.”

Couper (Couper, 2000) also cautions that there is a possibility of non-response from e-mail surveys sent to companies. This is primarily due to confidentiality: “Some organizations keep records of all incoming and outgoing messages, and if the topic of the survey is particularly sensitive, this may discourage employees from completing company related surveys at the office.”

Schmidt (Schmidt, 1997) suggests that in keeping with ethics, informed consent can be obtained from the respondent in two ways. These methods of achieving informed consent are by setting up the survey so the user needs to click on consent before being sent onwards to the questionnaire or by “instruct[ing] the user *not* to submit their results unless he/she has read and agreed to the content of the informed consent form.”

#### **2.3.2.5 Survey Principles**

Some of the relevant survey design principles are outlined by Schonlau et al (Schonlau, Fricker, & Elliott, 2002).

1. List only a few questions per screen. This reduces clutter, excessive scrolling and allows a respondent to concentrate on a few questions at a time. Grouping similar questions allows the respondent to frame his thoughts in a particular area.
2. Eliminate unnecessary questions. For example, eliminate questions where answers which can be easily determined by the computer (for example, the date that the questionnaire was filled in).

3. Use small graphics to reduce any possibility of slowdown. Slowdowns should be avoided to reduce any frustration with the respondent. If graphics are used, they should be relevant to the question and should help interpret the question.
4. Restrict the number of responses to reduce errors. Open ended questions should be avoided in order to reduce any errors.
5. Use matrix questions sparingly since these questions create a lot of work for the user on a screen. Matrix questions have a response scale from 1 – 7 (such as the Lickert Scales).
6. Indicate survey progress by using a progress bar. For a mail survey, the respondent can view flip through the pages to understand the size of the survey. For an internet survey, a progress bar will provide a similar indication. Without a progress bar, the survey can turn into a “seemingly endless stream of questions”.
7. Assure the respondents that their data will be kept confidential and protected. This will provide them with the assurance of privacy of their data. This can be achieved by indicating to users that the data is encrypted when being transmitted online.
8. If respondents are unable to complete a survey, give them an option to complete the survey later. This may be required if the surveys are fairly long. Giving them an option of later completion can be achieved by either providing a password to the user, or placing a cookie on the computer so the respondent can start where he

left off. The other option is to delete any previous entries and start afresh each time the user logs on.

9. Avoid forcing answers. A forced answer is where the user is unable to proceed without entering some information. Forced answers should be avoided since it may make a frustrated user to give an erroneous answer in order to proceed to the next screen.
10. Validate the input as it is being entered. This will lower the possibility of non response questions. The user should be prompted to reenter the information if it is incomplete or not selected. However, this should also be balanced with forcing an answer as discussed in the previous point.
11. Test a survey before it is released and allow respondents to easily report any problems or bugs. The survey may be tested with a sample within the population and the questions, response rates and the compatibility of the survey with the population's hardware and software should be considered. For example, when surveying respondents within a population of Linux users, the Internet survey should be tested on a Linux operating system for compatibility and speed.

Dillman et al (Dillman, Tortora, & Bowker, 1998) list similar principles to Schonlau et al, 2002 but adds the following:

1. On the opening screen, provide instructions to the respondents.
2. "Begin with a question that is fully visible on the first screen which is easily

comprehensible and easily answered by ALL respondents. “

Schmidt (Schmidt, 1997) adds two more suggestions:

1. If uncontrolled access to a survey is a concern, then restrict access to the survey by providing a password to the respondent. This is especially true if sampling a closed population set such a specific set of businesses. Instead of allowing anyone access to the site, provide a password so only specific person or businesses may access the site for the survey.
2. Collect some demographic information “to ensure that the population being considered is appropriate for the conclusions that are drawn.” Demographic information is relevant to the field of the research being carried out. For example, if surveying businesses about their market, their head office location and size and income may be a relevant demographic.

### **2.3.3 Lessons from the Survey Literature Review**

Based on the survey literature review, a web-based business survey will be conducted on a closed population, which will provide an increased response rate and less noise from possible unwanted respondents. The survey will also involve a personalized e-mail invitation to specific customers in order to improve their response rate. We will also have to be prepared for a survey response of at least 7%. Since this is a business survey, non-response errors may occur due to confidentiality: therefore respondents will be provided with an agreement that data is only provided in aggregate and no personal information will be provided in the published survey.

A web-survey was chosen because most of the survey principles provided by Schonlau et al (Schonlau, Fricker, & Elliott, 2002) have already been implemented. Several sites have templates with confidentiality agreements, various question types (matrix, drop down lists), logic branching, progress bars and survey testing capabilities. It was also chosen since it afforded the largest coverage through e-mails and therefore possibly increasing response rates. A traditional survey will not be performed since it has a low response rate, requires a long response time and may have transcription errors.



### **3: TARGET MARKET**

As mentioned in the introduction to the survey literature review, the project was not aware of any information on outsourcing by Lower Mainland companies. Therefore, a web-based survey was developed to poll Lower Mainland companies for their feedback on what forms of outsourcing they perform. Lower Mainland companies thus were the target market for the survey. Although our report is primarily intended for Lower Mainland companies, we believe that the principles observed in the survey may be applicable to other companies in Canada. The belief is based on the assumption that the business requirements and the legal obligations are similar across Canada and is not supported by research or statistical analysis.

The primary goal of the survey was to learn the type of outsourcing performed by Lower Mainland companies. We were interested to find out if they outsourced their work, the types of work being outsourced, the countries that the work was outsourced to and if they had not outsourced, what their interest in outsourcing would be. In addition, we wanted to check what they are looking for when outsourcing: quality time, the speed of delivery and financial aspects of this. Demographic information would also be collected in case this is required for further analysis.

### **3.1 Survey Development**

The survey was designed and developed by reviewing the literature on outsourcing and survey methodologies as discussed in section 2.3. The questions were also reviewed to ensure that all information was pertinent to research associated with this project. Logic branching was applied to guide the clients through appropriate questions. For example: if a client selected that they have an in-house software development team, then the next group of questions was about their software development (team size / budget et al) otherwise, the software development group of questions were skipped for them. Depending upon client's answer to "whether they have outsourced any IT project" question, they were directed towards outsourced projects related questions or if they would be interested in outsourcing their IT projects. If the answer to outsourcing projects was affirmative, then they would be asked if they were interested in outsourcing IT projects to India. Thus, the survey guided them with the questions relevant to their business needs without getting into complications of them skipping questions or reading guidelines about every question.

The survey, which is in Appendix A, consisted of 33 questions and, depending upon their answers, a client could end up answering anywhere between 6 to 21 questions. A client who neither has outsourced any IT project nor is interested in outsourcing in future would end up answering no more than six questions. Answering the questions was

voluntary (including the company information) to remove any apprehension with clients about disclosing their company information on the Internet.

### **3.2 Client Selection**

The clients were selected from a list of companies within the Lower Mainland. Most of the information about the Lower Mainland companies was collected from a database in form of a multi-sheet MS-Excel spreadsheet prepared by Business in Vancouver (BIV), a Lower Mainland newspaper. The BIV database was sorted by the newspapers themselves into several categories : hi-tech companies, biotechnology companies, telecommunications, software publishers, accounting firms, ad agencies, airlines which had offices in Vancouver, vehicle dealerships, banks and credit unions, charitable organizations, commercial printers, commercial property managers, construction, engineering and consulting firms, financial planners, food franchises, graphic design, hotels, insurance brokers, interior design, law firms, manufactures, marinas, mining companies, newspapers, post secondary institutions, public relations companies, golf courses, and radio stations. The BIV list was not comprehensive. There were several companies that students in the 2006 MBA cohort attended and were not listed in this list. Therefore, students within the 2006 cohort of the Simon Fraser University Management of Technology MBA program were also surveyed in order to cast the net for the survey as wide as possible. Surveys were also sent to colleagues who had contacts to companies not on the BIV list.

Since almost all companies need IT in one form or other with requirements ranging from developing a website to complicated e-commerce systems, it was decided that the emails should be sent to all the companies in the BIV database. The intent of the survey was to poll companies in a diverse range of fields to ensure that the results could be applicable to any company across any industry vertical as long as the company is willing to outsource its IT services / projects to India. An email was sent to around 500 companies in the list to participate in the survey. The clients were promised anonymity with respect to the information they provided to protect their identity and business practices and hence to increase the participation chances in the survey. The email sent to clients also requested them to forward the mail to anyone else who they think can provide input to the survey.

### **3.3 Survey Instruments**

The Internet was used as the survey instrument for fast response rate (Zhang, 2000) and to avoid transcription errors (Ilieva, Baron, & Healey, 2002). As suggested above, transcription error occurs when the data is copied from the completed questionnaire to the statistical tool for analysis. This error resulted in non-response errors (i.e. a blank response) and data entry errors. Besides, as learnt while researching on effective strategy for surveying for this project, the Internet option is easy to administer, as users could be easily directed to a link to the survey, thus leading to the improvements in responsiveness, timeliness, cost and data quality as suggested by Fricker (Fricker & Schonlau, 2002). It is convenient for users to go to a link, which is readily available in their email, thus enabling them to fill it in at their convenience. The only costs associated

	<b>SFU Web Survey</b>	<b>Survey Monkey</b>	<b>Question Pro</b>
Web-site	www.websurvey.sfu.ca	www.surveymonkey.com	www.questionpro.com
Price	Free	\$19.95 per month (Monthly Pro account)	\$15 per month (Professional Edition)
Allows questions to have a mandatory (required) answer	Yes	Yes	Yes
Capability to generate an E-mail to respondents?	Yes	Yes	Yes
Logic Branching	No	Yes	Yes
Survey can be pretested with data	No	Yes	Yes
Records who has responded to the survey	No	Yes	Yes
Progress Bar	No	Yes	Yes
Comment Boxes	No	Yes	Yes
Number of Responses	Unlimited	1000 per month	Unlimited
Allows html code for external linking and text formatting	No	Yes	Yes
Downloadable responses to a database	Yes, Comma delimited (CSV) file	Yes, CSV and MS-Excel file	Yes, CSV and MS-Excel file

**Table 1: Features Comparison of Web Survey Websites**

with the survey are those of subscription fees paid to the survey-hosting website. Some of the basic websites are free where as those others, which offer a wide range of services, offer them at different price. The survey principles suggested by Schonlau et al

(Schonlau, Fricker, & Elliott, 2002) and outlined in section 2.3.2 - Web-Based/Internet Surveys and Their Effectiveness - were followed.

While researching on the website suitable for our survey, we shortlisted a few websites: SFU web-survey website (<http://websurvey.sfu.ca>), SurveyMonkey (<http://www.surveymonkey.com/>) and QuestionPro (<http://www.questionpro.com/>). The SFU website is free, whereas both SurveyMonkey and QuestionPro offer both free as well as paid services. The rates for paid services are staggered depending upon the requirements for the survey. The following table lists the features and advantages of using each survey site:

After due diligence about the features, price and project requirements of each survey provider, and comparing the features, QuestionPro was chosen as a survey tool most suitable for the project since it had the lower price and the feature set that we needed to conduct the survey.

### **3.4 Conducting the Survey**

The survey was activated on the [www.questionpro.com](http://www.questionpro.com) site for 10 days (activated on July 10<sup>th</sup> and closed on July 21<sup>st</sup>). E-mails were sent to all 500 companies that were listed in the BIV database. In addition, the 2006 MBA cohort and personal contacts in the industry were used to contact companies not listed in the BV database. 37 people /

company representatives completed the survey, 21 started but did not complete and 76 viewed the survey, meaning 18 viewed but did not care to start the survey. The response rate is  $37/500$ , which is 7.4%. This response rate is in line with those suggested by 8% suggested by Fricker et al (Fricker & Schonlau, 2002).

## **4: ANALYSIS**

### **4.1 Data Collected**

Complete survey data was collected from 37 clients, whereas incomplete data was collected from 21 clients. The clients with incomplete data decided to terminate the survey without completing it. The reasons for the same are not known, but could be attributed to not finding the survey relevant or interesting, system crash or any other priority emerging during the survey session. Nevertheless, even the incomplete data, wherever applicable, was used in the analysis. For example, around 46 clients replied to the question whether they have an in-house software development team and the same is represented in the analysis. Hence, the number of responses varies for different questions depending upon the number of clients that chose to reply to the question.

### **4.2 Data Observation**

#### **4.2.1 General Observation**

The data gathered provided following information from the survey respondents.

- More than half (52%) had some form of in-house software development.
- Among the respondents who had in-house software development, 52% had less than 5 developers in their Software Development department.



- Around 67% had an in-house software development team of between 1 to 5 developers.
- About 52% also allocated 10% of their budget or less to their software development efforts.
- Around 76% of the respondents have outsourced their IT projects in the past.
- Around 40% of the respondents have outsourced their web site / ecommerce development efforts and around 17% outsourced their networking operations. 13% outsourced software development and 11% outsourced their disaster recovery services.
- 60% spent more than \$20,000 on the outsourced projects and 38% said that the average effort required is between 10 person weeks and 26 person weeks.
- 44% were outsourced only to Canadian companies, 41% to non-Canadian firms and only 15% outsourced to both Canadian and non-Canadian companies.
- Among those who have never outsourced their IT projects, only 33% were interested in outsourcing their IT projects.

Respondents were also asked if there were any reasons for not outsourcing. Most of these fell into the reasons of need. Some of the responses were:

- “Working on a new product that does not require outsourcing at this time.”
- “Nothing to do with software. We are an import/export company.”

- “We do web-site development - too small to outsource and we can do all the development ourselves.”
- “No IT jobs to outsource.”
- “We work on small projects and need tight control over how they are built.”

#### **4.2.2 India Specific Observations**

- More than half (53%) of the respondents to the survey have outsourced their projects to India.
- Among those who have not outsourced their IT projects to India, 41% are interested in outsourcing their IT projects to India.
- Among those who are interested in outsourcing their IT projects to India, 33% are interested in outsourcing their IT projects to small vendors only and to 55%, the size of the vendor did not matter.
- To 89% of the respondents interested in outsourcing their IT projects to India, the age of the vendor business did not matter.
- 80% of the vendors are interested in outsourcing projects to India due to low costs and only 20% felt that because software development is not their core competency. None of the respondents is interested in outsourcing to exploit the expertise of the IT vendor or to share the cost with other clients of the vendor.

- 78% of the respondents required some kind of reference from the vendor, whereas 22% felt that it was not important.
- Not even a single respondent felt a need for any quality practices from their IT service provider.
- Around 78% of the respondents are willing to issue advance payments against the contract whereas no respondent is interested in paying more than a 20% advance to their IT vendors and only 22% of those who are willing to pay any advance need some form of security (bond or guarantee) against the advance paid to protect themselves.

Some of the comments received about the reasons for outsourcing IT projects to India are outlined below.

- Proof of Concept. They were the lowest cost offshore country by far.
- “Low cost and [high] quality of developers.”
- “We contracted with a vendor that employed Indian resources. The Indian team offered additional capacity at a low cost to help us meet our development deadlines and target budget.”
- “They quoted the lowest price and were able to provide the most resources (people) to complete the project.”
- “Low price and good quality work.”

Some of the respondents provided other countries that they have outsourced to: They include countries in Eastern Europe (Russia, Ukraine, Latvia, and Romania) and the United States. When asked for reasons to outsource to these locations, the responses were varied but it seems that proximity with the sites was important. Some of the comments that were received:

- “Quality, near shore - offshore options, embedded staff.”
- “Strategic to establish good relationship to sell company's own products to Russia”
- “Closer to their physical location” (this referred to a US company).
- “Having subsidiaries within those countries.”

For specifically not outsourcing to India, the following comments were received:

- “Not enough back end work. Most of our work is design interface work and we would not outsource that. In the other work, it has been developing systems for our company internally, and it has meant many face-to-face meetings through the development process as the outsourced firm observed our systems and procedures and made recommendations for software to run them”.
- “The only IT work we have we feel requires a consultant that is available. Our IT requirements are very basic and therefore do not require more than an independent consultant. Developers cannot be easily brought into a face-to-face meeting with management in the event of an unexpected change in scope, or

schedule. Developers cannot interact directly with the stakeholders to optimally understand their usability needs."

- "We prefer to have a local contact that will be able to work with us".
- "We have contracted help desk support to a company in the Philippines"
- "Proximity to our service provider in Vancouver"
- "Local web-site development."

## **5: RECOMMENDATIONS**

The observations in this project indicate that companies in Lower Mainland are outsourcing their IT projects to India. Among the companies that are not outsourcing, a good proportion is interested in trying out Indian vendors and the size of the vendor is not a criterion in the client's determination. Based on these observations, we recommend the following to Indian vendors interested in exploring Lower Mainland (or Canadian) IT projects.

### **5.1 Recommendation 1: Indian vendors should continue to differentiate themselves through low cost and high quality**

Vendors should continue to maintain their low cost image but they should also maintain the good quality of their development work. India continues to be perceived as a low-cost and good quality destination and a large majority (80%) of the respondents in our survey have indicated so. Dossani et al (Dossani & Kenney, 2003) state that the primary reason for outsourcing were the cost savings and the quality provided by the vendors. Their study found that clients require savings of about 40% in order to make outsourcing worthwhile. However, they found that the savings were much higher than 40% in most cases. "One Fortune 500 firm that consolidated several fulfilment operations to Bangalore reported that the overall cost savings were 80 percent.

It is practically impossible to calculate the cost saving that can be offered to a *specific client* as it depends upon several factors like their cost of hiring developers,

overhead costs and their experience with similar products. As a result, the authors could not locate any research that could show the ballpark figure for software development in North American companies. Thus to be competitive, Indian firms should develop their own costing model that is quick and reinforces itself through a positive feedback loop, where the model efficiency improves after every project it executes.

One such model is the Function Point Costing Model suggested by Matson et al (Matson, Barrett, & Mellichamp, 1994). “A function point is a unit of measurement to express the amount of business functionality an information system provides to a user”<sup>8</sup>. It helps in calculating the effort required to develop an information system (a software application) and is independent of the underlying platform. A single strategy can thus be developed to calculate the effort required for all the software languages or platforms used by the vendor. Matson et al (Matson, Barrett, & Mellichamp, 1994) suggest that the vendor can develop a model to calculate the cost needed to develop a unit function point and can fine tune the model as they grow familiar with the model and have positively reinforced their model using the result from the projects they executed. To start with the model, the vendors can calculate the cost they incurred while delivering the project and the function points in the project to get a unit cost for function points for their future projects. Developing software according the specifications and client requirements meets the basic requirements for successful completion of the project. The meeting of

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<sup>8</sup> [http://en.wikipedia.org/wiki/Function\\_point](http://en.wikipedia.org/wiki/Function_point)

specifications and client requirements can be consistently checked with help of surveys after achieving major milestones of the project and at the completion of the project.

Another strategy for improving the service quality to their clients is identified in a study by Hirschheim et al (Hirschheim, Heinzl, & Dibbern, 2006, p. 386) who describes several critical success factors for clients when outsourcing. One critical success factor is the service quality by the vendor. Superior service quality provided by a vendor has an immediate impact on the success of the vendor in obtaining a client's project.

## **5.2 Recommendation 2: Getting certified in quality standards is not necessarily a differentiating factor**

Clients were not particular about any of quality standards followed by Indian vendors. In fact, the survey indicated that none of the clients suggested it as a requirement for Indian vendors to follow. As a corollary, we can recommend that cost cutting may be achieved by reducing the rigor in meeting quality standard certifications such as CMM (Capability Maturity Model – refer [http://en.wikipedia.org/wiki/Capability\\_Maturity\\_Model](http://en.wikipedia.org/wiki/Capability_Maturity_Model) for details) or ISO 9000 (refer [http://en.wikipedia.org/wiki/ISO\\_9001](http://en.wikipedia.org/wiki/ISO_9001) for details) etc.

There have been several studies that indicate that Indian SMEs are engaged in establishing quality standards. Sharma et al, (Sharma & Bhagwat, 2006) did an analysis of 147 Indian small and medium sized enterprises and found that 70% of the firms were interested in establishing performance measurement factors and are looking to improve their quality standards. The survey found that such practices would not give any strategic advantage to small vendors while competing in North America. On the contrary,



implementing these standards is not without costs. There are two types of cost associated with such standards: Certificate cost and Maintenance cost. Barnes (Barnes, 1998) has suggested that it takes “6 – 12 months of training and preparation period followed by an intensive year-long effort to adapt one’s procedures to the ISO standard to acquire ISO certification”. On top of these time costs there are monetary costs like registration costs, certification costs and maintenance costs (ISO certified companies are audited every six months and there are internal audits prior to official audits).

Since customers’ decisions are not affected by vendor affiliation with standards, it can thus be recommended that the vendors save these costs and pass these savings on to the customers, thereby having a cost advantage with respect to the competition. As cost is one of the most important reasons for customers to award projects, the vendor can thus gain strategic advantage.

### **5.3 Recommendation 3: Build a strong reference list by providing quality work to previous clients**

Although clients have indicated that they were not concerned with quality standards, 78% required some form of reference in order for a vendor to be considered. A vendor can only be provided with a reliable reference if they have met or exceeded the expectations of their clients in previous projects. Therefore, we recommend that vendors start producing quality work at the outset to start building a list of references immediately. We would also recommend that, for each project, a strategy is developed to obtain references. References may be posted on the website to provide immediate confidence in the quality of their work. Alternatively, they should automatically be

provided to any client when proposing or bidding for a project. Providing quality work and having happy clients are keys to a successful business. A happy client could bring 100 prospects and an unhappy client could take away 100 prospects. Stephanie (Overby, *The Hidden Costs of Offshore Outsourcing*, 2003) also recommends that clients to check vendor references and obtain peer input on the vendor as two items in a 5-item<sup>9</sup> checklist of outsourcing projects. Oza et al (Oza, Hall, Rainer, & Grey, 2005) surveyed clients to determine the factors, which affected trust between an outsourcing client and vendor. They found that that the primary means to achieve trust with a first time vendor was by providing vendor references, which were relevant to the project. In fact relevant vendor references was stated by 14 out of 18 clients surveyed which trumped other trust building relationships such as previous project experience (9 out of 18 clients), reputation (6 out of 18 clients) and personal visits (5 out of 18 clients). Incidentally, after trust has been built up through client references, this paper recommends transparency as the primary means to maintain trust.

However, organizations face a catch-22 situation: how does an organization get their first reference unless they get their first client, and how can they get the first client until there is a first reference? Ruokolainen et al (Ruokolainen & Igel, 2004) suggest several factors that play a role in getting the first reference. According to them, social capital i.e. social network of the company management - often helps a company in getting their first client. Another factor could be the background of the management, i.e., the

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<sup>9</sup> The five items were: Know your internal costs, Ask your peers for recommendations, contact the potential vendor references, estimate soft costs (employee morale, layoffs) and create a 3 to 5 year plan.

management must have an impressive profile, which is achieved through either outstanding academic credentials or working with “bigwigs” of the industry. The vendor must assure the customer of protection of their intellectual property. The vendor who is able to achieve one or more of these factors would have a competitive advantage.

Building a social network in North America can be difficult, but the vendor can try to convince personnel in big industry players on equity participation if one of the partners does not have an impressive profile to convince prospective customers. The chance of attracting key personnel to small organization can be challenging but with the spate of fortune 500 IT companies in India, it is definitely achievable.

#### **5.4 Recommendation 4: In order to obtain more projects, start small and then move on to larger projects**

According to the survey, 52% of the respondents indicate that projects of less than \$20,000 are primarily for web-site development and e-commerce development. This is similar to a study by Al-Qirim et al (Al-Qirim & Bathula, 2002) who studied small and medium sized enterprises in New Zealand (those earning less than \$5 million per year). They found that with increasing globalization and their own lack of resources to compete, 71% of the surveyed enterprises have innovated by outsourcing their business functions to others who have the resources to do such service. Of the companies that have outsourced, 46% were for web-site development, hosting, maintenance and integration.

According to our survey, clients do not care about the size of the vendor. Hayes et al (Hayes, Hunton, & Reck, 2001) studied market reaction to announcements of a relationship between ERP vendors and clients with respect to the vendor size. They found

that that a small, healthy vendor has good positive reactions from the market when a relationship is announced. Therefore, smaller companies can take advantage of the perceived low cost web-site e-commerce applications to develop a relationship with the vendor knowing that the market will take positively to any news regarding a relationship. Building a relationship with the vendor may eventually provide access to more challenging projects. Since, among those who have never outsourced, only 33% were interested in outsourcing their projects, vendors would use a similar strategy of communicating low cost and superior quality to capture those who currently perform in-house development.

### **5.5 Recommendation 5: Prepare a differentiation strategy with other countries that are competing**

Companies should be aware that their bid may be compared to other vendors and/or countries (most likely in Eastern Europe). Therefore, vendor strategies in Eastern Europe should be examined to determine points of differentiation. Desai et al (Desai, Weerakkody, Currie, Tebboune, & Khan, 2003) suggest a “Verticalization” strategy: focus on a particular industry and excel in the knowledge of that industry. For example, if a vendor specializes in the medical industry, they should be aware of all issues with the medical patenting and approval processes in order to gain an advantage over rivals. Pragmatic Marketing<sup>10</sup> also proposes several differentiation strategies:

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<sup>10</sup> <http://www.pragmaticmarketing.com/publications/magazine/1/2/07sj>

- Performing a technology assessment comparing the technologies employed by Eastern European outsourcers with that of India. Based on these technology assessments, the Indian companies can see what aspects can be improved.
- A few survey respondents have indicated that they have outsourced to Eastern Europe. Therefore, vendors should examine the macroeconomic structure in Eastern Europe and determine the legal and economical advantages of these countries compared to India. The vendor can then approach the client with a set of answers to these questions.
- Perform a post mortem analysis for the reasons that contracts that are awarded – whether to an Indian company or a competitor. This information can then be used to improve future contract bids.
- Examine the pricing structures of these companies and use this information to price their own projects advantageously

## **5.6 Recommendation 6: Improve communications between the vendor and client by providing a reliable local contact before bidding on a project**

It is advisable that Indian vendors develop a strong communication channel with their clients. Some of the respondents suggested their lack of interest in outsourcing to Indian vendors was due to absence of any local contact and the difficulties faced in organizing face-to-face meetings or due to time zone differences. For start-up companies, it would be advisable for the Indian vendors to find a local consultant or sales representative who can be hired on a commission basis or be awarded a portion of the

total project cost. This would occur until they grow enough to set up their own office in Lower Mainland or any other part of Canada where they want to carry out the business.

Some communication issues can be traced to cross-cultural difficulties. Krishna et al (Krishna, Sahay, & Walsham, 2004) indicates, “U.S. client companies normally work with extensive written agreements and explicit documentation, reinforced with frequent and informal telephone and email contact.” They also recommend that systems, controls, audits, and monitoring using established technologies or procedures should be in place to ensure good coordination and communication between the vendor and client.

Beyond cross-cultural differences, there is other advice which can improve the chances of a successful partnership. Representatives and distributors can handle miscommunications or rumours during the project by preparing a communications plan with audits at regular intervals Zhu et al. (Zhu, Hsu, & Lillie, 2001) also recommend that both the client and vendor handle any news releases in order to provide a balanced viewpoint to the reader. Grover et al. (Grover, Cheon, & Teng, The effect of service quality and partnership on the outsourcing of information systems functions, 1996), also state that the “strong relationship between partnership and outsourcing success indicates that fostering a long-term interactive relationship based on trust, communication, satisfaction, and cooperation is critical to achieving the greatest benefits from outsourcing.”

## **5.7 Recommendation 7: Financial considerations when bidding or proposing a project**

Our survey indicates that vendors can negotiate an advance up to 20% of the final project cost. This is the most that companies are willing to pay. 22% of companies will also require some form of guarantee if the advance is provided. Bloch et al. (Bloch & Spang, 2003) indicate that guaranteeing performance is one way to reduce risk. A performance guarantee provides an incentive for a company to meet the standards of the guarantee, Bloch et al also recommends splitting the cost of the benefits or savings realized when a company meets the guarantee standards as an incentive.

In order to reduce the risk of failure, vendors should describe hidden costs in a project as described by Barthelemy (3). We believe that vendors may be able to develop an estimate of hidden costs through previous experiences with similar projects or by hiring a consultant to review possible costs. A study by (Overby, The Hidden Costs of Offshore Outsourcing, 2003) looked at the total cost of outsourcing and identified several hidden costs as a percentage of the final contract price. This is summarized in the following table:

<b>Categories of Hidden Outsourcing Costs</b>	<b>Percentage of Final Contract Price (Estimate)</b>
Vendor selection which includes travel and documentation (documentation and legal costs can take 0.2% to 2%).	1 to 10%
Transition costs – possible travel required by clients between Indian and the Lower Mainland to ensure that systems are in place and programmers are aware of what to do	2 to 3%
Possible layoffs and termination packages for employees at the client side that are affected by outsourcing	3 to 5%
Cultural differences and productivity lags (for example, a programmer in India may not inquire whether the program can be efficiently implemented but follows the specifications).	Up to 20%
Vendor programmer turn-over (attrition rates can sometimes reach 35%)	1 to 2%
Language differences and possible communication gaps	2 to 5%
Ensuring that in house procedures and software development processes are in place	1 to 10%
Audits and managing the logistics of the outsourcing project	6 to 10%

**Table 2: Hidden Costs of Outsourcing**

Vendors should also alleviate any concerns with the clients: such as wage and job concerns, especially with IS staff. Overall, the effect on job losses due to outsourcing is negligible across most industries. For example, Amiti et. al (Amity & Wei, 2005) states that “that jobs are not being exported, on net, from industrial countries to developing countries as a result of outsourcing. In fact, the evidence suggests that workers who lose jobs in one industry manage to find jobs in other growing industries.” Another study by Kirkegaard (Kirkegaard, 2004) indicates that employment has not been affected by outsourcing. His paper also notes that losing jobs to outsourcing nets an overall gain to the economy in other areas. For example, jobs that are outsourced are low cost jobs that tend to be eliminated due to technological obsolescence. These jobs tend to get



replaced by higher paying jobs. In addition, he states that the US economy produces more jobs each quarter than are lost to outsourcing.

The above recommendations by no means suggest that these are the only strategies that can be implemented by the vendors. These are general guidelines rather than rules that can be applied to most of the situations. Nor do we suggest that all these recommendations will be applicable to every case. A vendor has to check the above recommendations and find out what is suitable for their situation and what in their opinion is lacking in the recommendations based on their experience and situation.

### **5.8 Target small service companies and small professional firms with website and e-commerce development**

Based on the Computer Economics report (Computer Economics, 2006), the major IT outsourcing projects are in Software Development, Website/E-Commerce, Hosted

<b>Outsourcing Category</b>	<b># of Outsourced Projects</b>	<b>Percentage</b>
Web-site/E-commerce development	21	40%
Network Operations	9	17%
Software development	7	13%
Disaster Recovery Services	6	11%
Hosted Applications	3	6%
Internal Desktop Support	3	6%
Help Desk Operations	3	6%
Other	1	2%
Data Center Operations	0	0%

**Table 3: Outsourced Project Percentages**

Applications, Disaster Recovery Services, Network Operations, Desktop Support, Data Center Operations and Help Desk operations. We used these categories in our survey and found the results shown in Table 3: Outsourced Project Percentages.

Thus, it is obvious from the results summarized in Table 3 that most of the opportunities are in Web-site / e-commerce development. Around 80% of the outsourcing projects are concentrated in the top four categories. Software Development constituted only 13% of the total outsourced projects. This might be because almost every organization requires a website whereas relatively fewer companies need customized software development. Vendors thus can use these categories in above mentioned order and their core competency to launch themselves in the North American market. Once established, a vendor can then venture into other possible areas. For example: a vendor who has both website and software development services can easily break into the North American market by acquiring website development contracts. Once it is able to convince the customer of their capabilities and sincerity, they can then attract software development projects using their initial customer as a reference.

By classifying the industry types that responded to our survey and indicated an interest, we recommend that the vendor approach small service companies and small professional firms in the Lower Mainland with e-commerce and web-design services. Examples of small services that were looking to outsource are company logo design and branding agencies, small hotels, tax consultants and tax preparers. Examples of small professional firms are legal firms, engineering firms and architectural firms. Based on our study about firms in the Lower Mainland, the main targets should be Professional, Scientific, and Technical Services and the Information, Cultural, and Recreation sectors. Examples of professional firms are legal firms and accounting firms. Some of the

industries that responded to our survey who were looking to outsource were company logo design and branding agencies, small hotels, tax consultants and tax preparers.

## **5.9 Future Research**

Future research could be carried out in the following areas:

- Conducting a similar survey in India with small-scale vendors to assess their requirements or hurdles in conducting business in Canada / United States.
- Similar research in other parts of Canada / United States to check if the requirements of businesses are similar to that of Lower Mainland or not. If they vary, what is the extent of the variation and in which areas?
- Extending survey to other potential developing countries like some of those mentioned above (Eastern European, South Asian, and Far East).
- If it is possible to set up a bureau or standards agency like the Better Business Bureau that would rate the Indian vendors and thereby make it convenient for North American companies to conduct with small scale vendors with confidence.

## APPENDICES

### Appendix A – Survey Outline

The following table shows the outline of the survey that was sent to Lower Mainland companies for their feedback. The question numbering scheme Q30, Q31 was based on the order that the questions were entered into our survey vendor www.questionpro.com. The question numbers were not visible to the respondent. In many of the questions below, the logic would branch on one question. If it does not branch, the then question proceeds to the next one the list in the sequence listed below.

Code	Description	Logic
INTRO	<p>Hello:</p> <p>We are Management of Technology MBA students at Simon Fraser University.</p> <p>We would like you to participate in this survey which solicits your opinion on outsourcing IT projects to India. Approximately 200 organizations have been asked to complete this survey which will take approximately 10-15 minutes. This survey closes on July 23rd.</p> <p>Your participation in this study is voluntary. Survey responses will be strictly confidential and data from this research will be reported only in the aggregate. Participants who complete the survey may request results by sending an e-mail to <a href="mailto:bsd@sfu.ca">bsd@sfu.ca</a>.</p> <p>It is very important for us to learn your opinions by July 23rd. If you have questions about the survey or the procedure, please feel free to contact the undersigned.</p> <p>Thank you very much for your time and support. Please start with the survey by clicking on the <b>Continue</b> button below.</p> <p>Regards Simon Fraser University 2008 MBA candidates Baljeet Dhaliwal (<a href="mailto:bsd@sfu.ca">bsd@sfu.ca</a>, cell: 778 386 9041) George Mathew (<a href="mailto:mathew@sfu.ca">mathew@sfu.ca</a>)</p>	

<b>Code</b>	<b>Description</b>	<b>Logic</b>
	Page Break	
<b>Q31</b>	Name of the Company	
<b>Q32</b>	Contact Person	
<b>Q34</b>	Title / Position	
<b>Q33</b>	Phone Number	
<b>Q34</b>	email	
	Page Break	
<b>Q2</b>	Does your organization do in-house software development? Page Break   Automatic Logic Break	No » [Q6] Have you ever outsourced your ...
<b>Q3</b>	How many software developers your organization / department have?	
<b>Q4</b>	What is the average size of the team?	
<b>Q5</b>	What percentage of your organization / department budget is dedicated for software development? Page Break	
<b>Q6</b>	Have you ever outsourced your IT projects? Page Break   Automatic Logic Break	Yes » [Q7] What type of IT jobs have you ...  No » [Q16] Would your organization be int ...
<b>Q7</b>	What type of IT jobs have you outsourced? (check all relevant ones)	
<b>Q9</b>	What was the average budget for your outsourced IT project?	
<b>Q10</b>	What was the average effort required for your outsourced IT project?	
<b>Q11</b>	Was it outsourced to a Canadian IT company or an international IT company? Page Break   Automatic Logic Break	Canadian » [Q17] Would your organization be int ...  International » [Q13] Have you ever outsourced your ...  Both » [Q13] Have you ever outsourced your ...
<b>Q13</b>	Have you ever outsourced your IT projects to India? Automatic Logic Break	Yes » [Q16] Reasons for outsourcing your ...  No » [Q17] Would your organization be int ...
<b>Q16</b>	Reasons for outsourcing your IT jobs to India? Page Break	
<b>Q14</b>	What other countries have you outsourced your IT jobs?	

<b>Code</b>	<b>Description</b>	<b>Logic</b>
<b>Q13</b>	Any specific reasons for choosing the above mentioned countries? Page Break   Automatic Logic Break	
<b>Q16</b>	Would your organization be interested in outsourcing IT jobs? Page Break   Automatic Logic Break	Yes » [Q17] Would your organization be int ...  No » [Q30] Reasons for not outsourcing IT ...
<b>Q17</b>	Would your organization be interested in outsourcing IT jobs to India? Page Break   Automatic Logic Break	Yes » [Q20] While deciding on your outsour ...  No » [Q35] Reasons for not outsourcing IT ...
<b>Q20</b>	While deciding on your outsourcing to small scale Indian IT vendor, what is the vendor size you would prefer?	
<b>Q21</b>	The number of years the vendor has been in business?	
<b>Q33</b>	Reasons for outsourcing?	
<b>Q23</b>	Do you require references from vendor? Page Break	
<b>Q24</b>	Do you require any specific quality practices followed by the vendor? Page Break   Automatic Logic Break	No » [Q26] Would you be willing to pay an ...
<b>Q25</b>	What quality practices you expect vendor to follow? Page Break	
<b>Q26</b>	Would you be willing to pay any advance to the vendor? Automatic Logic Break	No » [Q28] Would you be interested in any ...
<b>Q27</b>	What kind of advance would you be interested in paying to the vendor? Page Break	
<b>Q28</b>	Would you be interested in any financial bond / guarantees? Automatic Logic Break	Yes » [Q29] What kind of financial bonds / ...  No » Thank You Page
<b>Q29</b>	What kind of financial bonds / guarantees? Page Break   Automatic Logic Break	
<b>Q30</b>	Reasons for not outsourcing IT jobs? Page Break   Automatic Logic Break	
<b>Q35</b>	Reasons for not outsourcing IT jobs to India?	

## Appendix B – Survey Data

Q2		
Does your organization do in-house software development?		
Yes	<b>23</b>	<b>52.27%</b>
No	21	47.73%
<b>Total</b>	<b>44</b>	
Mean	1.48	
Standard Dev.	0.51	
Variance	0.26	
Q3		
How many software developers your organization / department have?		
<5	<b>11</b>	<b>52.38%</b>
<10	3	14.29%
<25	3	14.29%
<50	1	4.76%
>50	3	14.29%
<b>Total</b>	<b>21</b>	
Mean	2.14	
Standard Dev.	1.49	
Variance	2.23	
Q4		
What is the average size of the team?		
1-5	<b>14</b>	<b>66.67%</b>
6-10	7	33.33%
11-20	0	0.00%
21-50	0	0.00%
50+	0	0.00%
<b>Total</b>	<b>21</b>	
Mean	1.33	
Standard Dev.	0.48	
Variance	0.23	
Q5		
What percentage of your organization / department budget is dedicated for software development?		
<10%	<b>11</b>	<b>52.38%</b>
<25%	5	23.81%
<50%	3	14.29%
>50%	2	9.52%
<b>Total</b>	<b>21</b>	
Mean	1.81	
Standard Dev.	1.03	
Variance	1.06	
Q6		
Have you ever outsourced your IT projects?		

Yes	<b>32</b>	<b>76.19%</b>
No	10	23.81%
<b>Total</b>	<b>42</b>	
Mean	1.24	
Standard Dev.	0.43	
Variance	0.19	

#### Q7

What type of IT jobs have you outsourced? (check all relevant ones)

Software development	7	13.21%
Web-site/E-commerce development	<b>21</b>	<b>39.62%</b>
Hosted Applications	3	5.66%
Disaster Recovery Services	6	11.32%
Network Operations	9	16.98%
Internal Desktop Support	3	5.66%
Data Center Operations	0	0.00%
Help Desk Operations	3	5.66%
Other	1	1.89%
<b>Total</b>	<b>53</b>	
Mean	3.36	
Standard Dev.	2.07	
Variance	4.27	

#### Other Option [Other]

Documentation and Translation

#### Q9

What was the average budget for your outsourced IT project?

<\$20,000	10	40.00%
>\$20,000	<b>15</b>	<b>60.00%</b>
<b>Total</b>	<b>25</b>	
Mean	1.60	
Standard Dev.	0.50	
Variance	0.25	

#### Q10

What was the average effort required for your outsourced IT project?

< 5 person weeks	4	15.38%
< 10 person weeks	5	19.23%
< 26 person weeks	<b>10</b>	<b>38.46%</b>
< 52 person weeks	4	15.38%
> 52 person weeks	3	11.54%
<b>Total</b>	<b>26</b>	
Mean	2.88	
Standard Dev.	1.21	
Variance	1.47	

#### Q11



Was it outsourced to a Canadian IT company or an international IT company?			
Canadian	12	44.44%	
International	11	40.74%	
Both	4	14.81%	
<b>Total</b>	<b>27</b>		
Mean	1.70		
Standard Dev.	0.72		
Variance	0.52		

### Q13

Have you ever outsourced your IT projects to India?			
Yes	8	53.33%	
No	7	46.67%	
<b>Total</b>	<b>15</b>		
Mean	1.47		
Standard Dev.	0.52		
Variance	0.27		

### Q16

Would your organization be interested in outsourcing IT jobs?			
Yes	3	33.33%	
No	6	66.67%	
<b>Total</b>	<b>9</b>		
Mean	1.67		
Standard Dev.	0.50		
Variance	0.25		

### Q17

Would your organization be interested in outsourcing IT jobs to India?			
Yes	9	40.91%	
No	13	59.09%	
<b>Total</b>	<b>22</b>		
Mean	1.59		
Standard Dev.	0.50		
Variance	0.25		

### Q20

While deciding on your outsourcing to small scale Indian IT vendor, what is the vendor size you would prefer?			
Does not matter	5	55.56%	
Small Size (vendors with less than 50 employees)	3	33.33%	
Large Size (vendors with greater than 50 employees)	1	11.11%	
<b>Total</b>	<b>9</b>		
Mean	1.56		
Standard Dev.	0.73		
Variance	0.53		

**Q21**

The number of years the vendor has been in business?

New	0	0.00%
<3 years	0	0.00%
<7 years	1	11.11%
<10 years	0	0.00%
> 10+ years	0	0.00%
Does not matter	<b>8</b>	<b>88.89%</b>

<b>Total</b>	<b>9</b>	
--------------	----------	--

Mean	5.67	
------	------	--

Standard Dev.	1.00	
---------------	------	--

Variance	1.00	
----------	------	--

**Q33**

Reasons for outsourcing?

Economical	<b>8</b>	<b>80.00%</b>
Not core competency	2	20.00%
Using vendor expertise(vendor is better aware of technology suiting the needs)	0	0.00%
Cost sharing with other vendor clients (e.g. hosting of services)	0	0.00%
Other	0	0.00%

<b>Total</b>	<b>10</b>	
--------------	-----------	--

Mean	1.20	
------	------	--

Standard Dev.	0.42	
---------------	------	--

Variance	0.18	
----------	------	--

**Other Option [Other]****Q23**

Do you require references from vendor?

Yes	<b>7</b>	<b>77.78%</b>
No	2	22.22%

<b>Total</b>	<b>9</b>	
--------------	----------	--

Mean	1.22	
------	------	--

Standard Dev.	0.44	
---------------	------	--

Variance	0.19	
----------	------	--

**Q24**

Do you require any specific quality practices followed by the vendor?

Yes	0	0.00%
No	<b>9</b>	<b>100.00%</b>

<b>Total</b>	<b>9</b>	
--------------	----------	--

Mean	2.00	
------	------	--

Standard Dev.	0.00	
---------------	------	--

Variance	0.00	
----------	------	--

**Q26**

Would you be willing to pay any advance to the vendor?

Yes	<b>7</b>	<b>77.78%</b>
No	2	22.22%

<b>Total</b>	<b>9</b>
Mean	1.22
Standard Dev.	0.44
Variance	0.19

**Q27**

What kind of advance would you be interested in paying to the vendor?		
<10%	3	42.86%
<20%	<b>4</b>	<b>57.14%</b>
<50%	0	0.00%
50%+	0	0.00%

<b>Total</b>	<b>7</b>
Mean	1.57
Standard Dev.	0.53
Variance	0.29

**Q28**

Would you be interested in any financial bond / guarantees?		
Yes	2	22.22%
No	<b>7</b>	<b>77.78%</b>

<b>Total</b>	<b>9</b>
Mean	1.78
Standard Dev.	0.44
Variance	0.19

<b>Appendix C – Raw Text Responses: Reasons for outsourcing your IT jobs to India?</b>
Proof of Concept. They were the lowest performing offshore country by far.
Low cost. quality of developers
We contracted with a vendor that employed Indian resources. The Indian team offered additional capacity at a low cost to help us meet our development deadlines and target budget.
They quoted the lowest price and were able to provide the most resources (people) to complete the project.
Low price and good quality work.
Low cost
Knew someone there who could do web-site programming

<b>What other countries have you outsourced your IT jobs?</b>
Russia, Ukraine, Latvia, Canada
Russia
Canada; United States.
None - we only outsourced our web-site development.
Russia, Romania, USA
We have outsourced to India only

<b>Any specific reasons for choosing the above mentioned countries?</b>
Quality, near shore - offshore options, embedded staff
Strategic to establish good relationship to sell company's own products to Russia
Local to our physical location.
We have a contact in that country.

<b>Reasons for not outsourcing IT jobs to India?</b>
Not enough back end work. Most of our work is design interface work and we would not outsource that. In the other work, it has been developing systems for our company internally, and it has meant many many face-to-face meetings through the development process as the outsourced firm observed our systems and procedures and made recommendations for software to run them.
The only IT work we have we feel requires a consultant that is available. Our IT requirements are very basic and therefore do not require more than an independent consultant
1. Developers cannot be easily brought into a face to face meeting with management in the event of an unexpected change in scope, or schedule.
2. Developers cannot interact directly with the stakeholders to optimally understand their usability needs.
We prefer to have a local contact that will be able to work with us.
We are a Business to consumer company - so the only thing we wanted was a web-site for our company.
one time project only
Proximity to our service provider in Vancouver
local web-site development

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