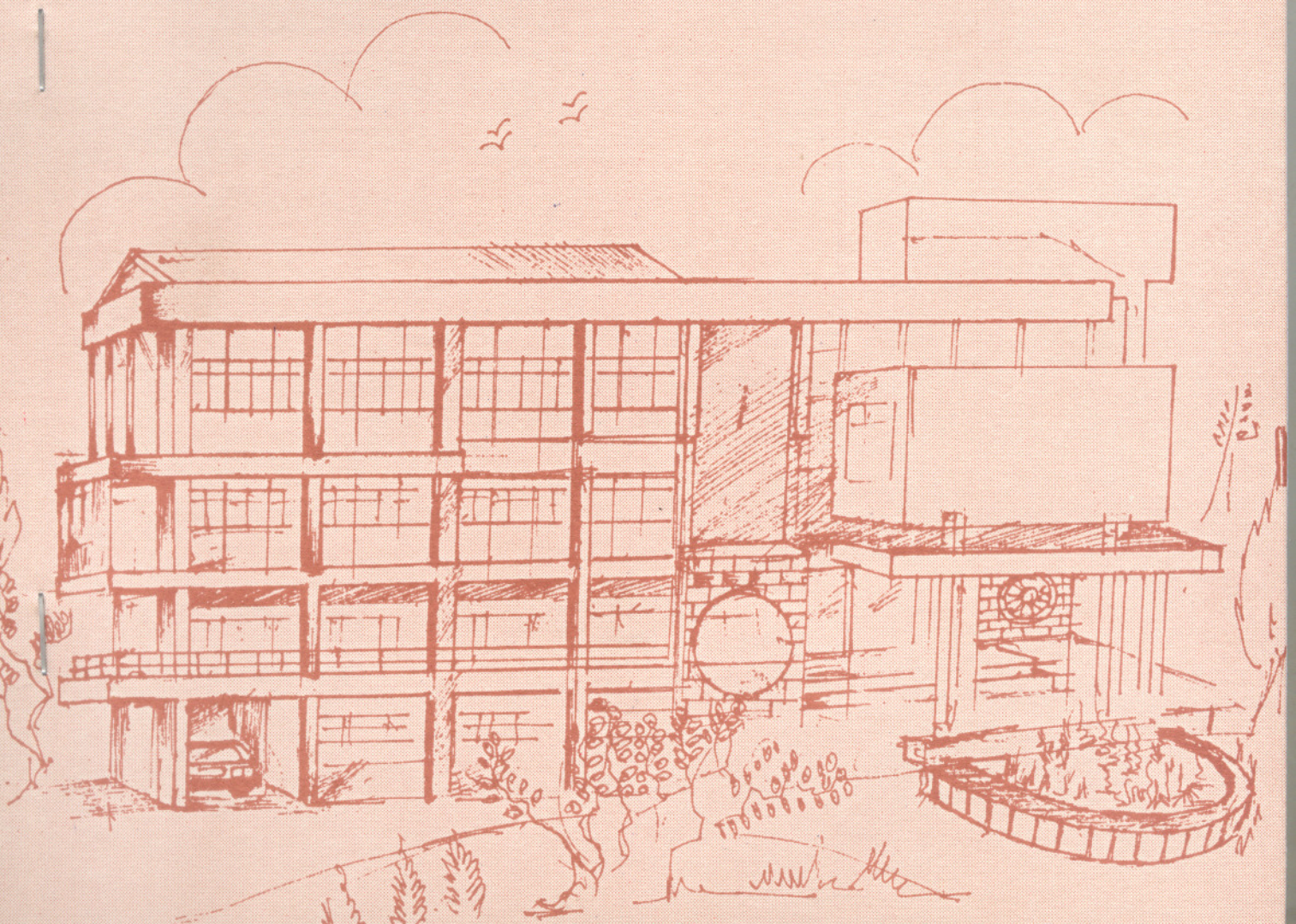
TAPMI
values and vision in management education
न हि ज्ञानेन सदृशं पवित्रमिह विद्यते

No. 81

Working Paper Series

Risks in Offshore IT Outsourcing: A Service Provider Perspective



TWP 81_2007

Risks in Offshore IT Outsourcing: A Service Provider Perspective

Saji K. Mathew
Assistant Professor
T. A. Pai Management Institute
Manipal - 576104
Email:saji@mail.tapmi.org.

Madhuchhanda Das Aundhe
Assistant Professor
Centre For Executive Education
Bangalore – 560 034
Email: madhu@tapmi-blr.org

TAPMI WORKING PAPER SERIES NO. 2007/ 04

The objective of TAPMI working paper series is to help Faculty members of TAPMI to test out their research ideas/findings at the pre-publication stage.

T. A. Pai Management Institute
Manipal –576 104, Udupi Dist., Karnataka

RISKS IN OFFSHORE IT OUTSOURCING: A SERVICE PROVIDER PERSPECTIVE

Prof. Saji K. Mathew* & Prof. Madhuchhanda Das Aundhe†

Abstract

Offshore outsourcing of Information Technology (IT) services has become a growing approach to global business practice today. However, the advantages of the outsourcing opportunity do entail a cost. Outsourcing partnerships carry risk as evidenced by reported failures of such engagements. In offshore IT outsourcing, there are risks involved for both - the client, as well as the service provider. Some of the prior research has focused on identifying various types of client risks and their sources. However, the study of risks from a service provider's perspective has not received due treatment in literature. A deeper understanding of the risks would also result in developing effective mitigation strategies which in turn would enhance partnership success. This study analyses offshore IT outsourcing risks from a service provider perspective. A grounded theory approach is has been used for understanding the risks. Based on the data collected using theoretical sampling from 5 different mid-tier offshore third party service providers in Bangalore and subsequent coding, Macro-economic, Relationship-specific and Project-specific categories have emerged as the broad service provider risk dimensions.

Key words: risk, service provider, client, outsourcing, relationship

* Assistant Professor, T A Pai Management Institute (TAPMI), Manipal, Karnataka-576 104,India, e-mail: saji@mail.tapmi.org
† Associate Professor, T A Pai Management Institute (TAPMI), Manipal, Karnataka-576 104, India, e-mail: madhu@tapmi-blr.org

RISKS IN OFFSHORE IT OUTSOURCING: A SERVICE PROVIDER PERSPECTIVE

INTRODUCTION

Offshore outsourcing, popularly known as *offshoring* has become an important global strategy of most of the organizations today. Offshoring business functions outside the boundaries of the firm was originally envisaged as a cost based strategy. The economies of scale and scope coupled with labor arbitrage provided a convincing business case, especially for US organizations, to shift business processes to offshore destinations like India (Ghemawat, 2007; Carmel & Agarwal, 2002). Offshore outsourcing is today growing and maturing from a cost strategy perspective to more value based partnerships. The partnership based contracts with a network governance structure (Williamson, 1994) focuses on the benefits of technology catalysis (Lee & Kim, 2004, Lee *et al.*, 2003) which strengthens resources and flexibility in technology service.

The client side issues in outsourcing has been well researched in the past. Transaction Cost Economics (TCE) (Coase, 1937; Williamson, 1985) provides a basic framework for understanding client side rationale in outsourcing and behavioral dimensions of service providers that could determine the transaction cost to clients. In addition, a wide array of theories from economic perspective (economic efficiency and agency cost theories), strategic perspective (resource-dependency, core competency and coordination theories) and social perspective (political, social contract and exchange theories) have been applied to understand issues in outsourcing (Lee *et al*., 2003). These theories help build a business case for outsourcing predominantly from a client side view. However efforts in theory building that support service providers in the offshore outsourcing context has been scanty. The industry being nascent and growing at a CAGR of 30% during 2001-2006 (NASSCOM, 2006), it is important to develop clear conceptual understanding of service provider issues for sustaining its successful growth.

The growing opportunities in offshore outsourcing do entail a cost to clients and service providers. Outsourcing partnerships carry risks as evidenced by reported failures

of such engagements (Prewitt, 2004; Andersen, 2002). The failure of an outsourcing contract affects clients and service providers as well. In general outsourcing contracts are designed based on certain assumptions and hence, carry risks owing to a limited understanding about the future. As outsourcing engagements continue to evolve and become increasingly complex, their success will largely depend on understanding the risks involved, and deploying effective mitigation strategies. Our research focuses on identifying and classifying risks in offshore outsourcing from a service provider perspective.

RISKS IN OFFSHORE OUTSOURCING ENGAGEMENTS

Offshore outsourcing in services could be classified into two major categories - IT outsourcing and business process outsourcing (BPO).The potential service lines for IT outsourcing are Infrastructure Management Services (IMS), Application Development (AD) and Application Maintenance (AM) in addition to other less prevalent lines of service in outsourcing such as consulting, R&D etc. (Software, 2004; Beulen, Fenema & Currie, 2005). In addition, back end data processing and call centre for customer management fall under the general ambit of BPOs.

Client-side Risks in Outsourcing Engagements

The sourcing of a business process from outside of a firm's boundaries results in loss of control and flexibility in addition to becoming weak in a particular process due to loss of qualified personnel, and competitive advantage in IT. Therefore selection of business processes for outsourcing, location, partners, number of partners, contract type etc. result in risks in differing quantities based on the choice made (Graf & Mudami, 2005; Ge *et al.*, 2004; Pandey & Bansal, 2003).

The major categories of the client side strategic risk involved in outsourcing decisions have been classified as risks due to shirking, poaching, and opportunistic renegotiation (Clemons & Hitt, 1997; Aron *et al*., 2005).

- Shirking

Shirking involves deliberate underperformance by the service provider yet claiming the same full payment for the task as if the task has been performed according to contractual norms. Possibility of shirking exists because the behavior of both the parties cannot be fully observed and contracts are signed under bounded rationality and as such cannot cover all possible outcomes and behaviors.

- Poaching

Poaching involves the illegitimate effort to make extra revenue by misusing the client's data. It may involve breach of trust that could damage the client's business. This is a serious challenge to outsourcing especially in the context of offshore outsourcing where legal framework for data security and intellectual property rights (IPR) are not well defined in the country where client's business process is outsourced.

- Opportunistic Renegotiation

This risk evolves when the power of one party involved in the partnership increases due to a condition unforeseen in the contract. A client may re-negotiate for lesser money when supply of service providers becomes abundant. A service provider may outsmart the client by knowing the client's process better than the client, thereby the client becoming too much dependent on a service provider. This increases bargaining power of the service provider which may lead to demand of more money for the same work.

Service Provider-side Risks in Outsourcing Engagements

There is very limited work done in studying the risks faced by the service providers when they get into an offshore outsourcing engagement. As organizations increasingly utilize outsourced solutions for their systems needs, understanding sources of problems in these types of projects becomes increasingly important. A study by Hazel (2006) focuses on outsourced projects from the *vendor's* perspective and identifies key risks that are difficult to manage and hence especially important for both vendors and clients to be aware of. The paper outlines two risks in particular, overoptimistic schedules and budgets and inflated client expectations, as critically important for both vendors and

clients considering outsourced projects. Both of these risks arise from the vendor's desire to win business in a highly competitive marketplace. Knowing what risks may threaten a project is the starting point for ensuring those risks do not evolve into full-blown problems. This is because once potential threats to a project have been identified, mitigating actions can be taken to reduce the likelihood of their occurrence. In particular, when conducting a pre-project risk assessment, two types of risks: the intractable and the unforeseen— are especially important to watch out.

Levina & Ross (2003) analyzed vendor's (in this paper, *service provider's*) value in outsourcing engagements based on the close examination of a long application management outsourcing engagement. This study shows that the vendor was enticed to share the value with the client through formal and informal relationship management structures. This study provides an insight into risk mitigation based on relationship management. Mathew (2006) developed a fuzzy framework for risk assessment which could be applied to assess risk of clients as well as service providers. This work identifies the sources of risk (key risk indicators) for clients and service providers and maps them to an output risk category through a fuzzy inference engine. Previous research also identifies the determinants of risk pertaining to application development outsourcing as size of the project, requirements uncertainty, project type, human resources (training), client MIS experience, client experience with outsourcing, project importance, client reputation, future business, client size, competition (client), competition (vendor), no. of prior projects and contract type (fixed price or time and materials) (Gopal *et al*., 2003).

In addition to research literature in this area, our discussions with two captive MNCs and a third-party BPO firm in India pointed towards service provider's risk as a major issue in outsourcing contracts. These discussions also ascertained that most of the research so far has focused mainly on client side risk issues along strategic and operational dimensions, and the need to understand service providers' risk in outsourcing engagements remains largely unattended.

DATA & METHODS

We followed grounded theory approach in our research (Strauss & Corbin 1990) which is also used by other researchers in IS area (eg. Allan, 2003). The choice of this methodology is based on our research objective which is not to statistically validate or generalize any hypothesis, but to build theory in a context where no substantial theory exists. The data collection involved in-depth interviews with senior management of the service provider organizations, business development managers, project managers and other experts involved in the projects. We conducted 14 interviews with 5 tier-2 offshore third party IT service providers located in Bangalore between June and November 2006. The designations of people interviewed included CEO/Chairman, Senior VP, AVP (Operations), Program Manager, Executive VP (Global Delivery & Operations), VP-Quality etc. All the interviews were audio taped and later transcribed. All the companies had clients in North America and Europe with major service focus in application development and maintenance.

Theoretical sampling was used in the interview process to gradually build concepts. We also sought contract documents from service providers with client names, deal size etc. camouflaged, but service providers were mostly reluctant to share contract documents with us. A few templates of master services agreements were shared by one service provider. Another service provider demonstrated to us with the help of power point slides their process of monitoring contract performance which helped us note down key aspects of operational risk in IT outsourcing and type and contents of SLAs for various service lines. We also examined given contract documents to extract sources of risk.

ANALYSIS:

With the help of interview transcripts, a semantic analysis was done on the transcribed interview of Case Site 1 to develop concepts regarding various kinds of risks faced by offshore IT service providers. The concepts developed were later integrated into categories of risks. Theoretical sampling was used to identify subsequent case sites. A summary of the concepts and categories developed are summarized in Table 1.

Table 1: ***Coding and Analysis of Interviews***

Sl	Categories	Concepts	Interview Statements	Case Site
1	Macroeconomic risks	government policy	Govt regulations	Case 1
			Service tax	Case 1
			Absence of liability insurance firms in India	Case 2
			No liability insurance in India, hence middlemen based on-site take up liability insurance and sub-contract the job offshore	Case 3
		exchange rate	Currency pegging	Case 1
			Currency fluctuations	Case 1
2	Relationship specific risks	Changes in client's corporate structure	client mergers & acquisitions	Case 1
			CEO/top management changes	Case 1
		Client's experience in offshoring	client's experience in outsourcing	Case 3
			more problems with first time outsourcers as clients	Case 4
		Client culture	APAC countries' manufacturing mindset	Case 4
		Asset specificity	Client pays for specific assets	Case 4
		Client size	Bigger clients have better outsourcing processes	Case 3
			Smaller clients accept/request contract documents/SLAs from service providers	Case 3
3	Project specific risks	Schedule and Budget Management	Measuring Productivity of knowledge worker in T&M contracts difficult	Case 1
			No response from client	Case 2
			Collections is an issue	Case 1
			Client requires different expertise at the same billing rate	Case 2
			Scope creep has a bearing on the budget	Case 3
			10% of the scope creep is deliberate	Case 3
		Staffing	SPs attrition rate negatively affects coordination	Case 2
			Ramp up another challenge	Case 1
			Keep shadow resources ready	Case 1
			Client's attrition affects initial training on the existing product/service	Case 1

Sl	Categories	Concepts	Interview Statements	Case Site
	Project specific risks	Requirements Capture	Scope creeps due to difference in interpretation of requirements.	Case 3
			Scope creep is a common feature	Case 4
			Complexity of a Maintenance Request	Case 4
			Dynamic flash - we did not visualise that it would be such a big development challenge	Case 2
		Knowledge transfer	We absorb client's core people	Case 1
			Resistance in knowledge transfer	Case 1
			Loss of employment due to downsizing	Case 1
		Client expectations management	We manage external processes well - we manage client expectations by better communication and transparency	Case 3
		Testing	Acceptance testing issues - conditions not clearly spelt out	Case 4
			Test bed not ready at the client end	Case 3
4	Relationship Maturity		The relationships are moving from a typical supplier one to a more involved and participative one	Case 4
			2-step proposal - detailed proposal with a team onsite	Case 3
			Partnering with the client to come up with the requirements	Case 4
			We share common goals with clients (software product companies).	Case 3
			We share the risk of our clients	Case 4

Based on the above coding, four major categories evolved – *project specific risks, relationship specific risks, macro economic risks, and relationship maturity*.

The essence of what emerged from these interviews is that the engagement between IT clients and offshore service providers follows a continuum – from a 'transaction-type' engagement to that of "partnership". The transaction type engagement refers to the fee-for-service contract as outlined by Lacity & Willcocks (1998). The service provider just provides the requirements sought by the client for a fee, which has been pre-negotiated and is not concerned with the returns and risks incurred in the project. The 'partnership' engagement, on the other hand, refers to a combined ownership of a project by both the client and the service provider. Along with the client, the service provider, then, becomes a party to the returns and risks of the project, and both of them

work towards a common goal. The various offshore outsourcing engagements are located somewhere on this continuum. The more matured a relationship, the closer it gets to a partnership kind of engagement; while a first time relationship, is often more transaction based. This dimension of outsourcing is defined as *relationship maturity*.

The other categories that emerged refer to the following 3 types of service provider's risks:

1. *Project Specific Risks*: These risks refer to the factors that affect a particular project in question. The following concepts constitute this risk:
2.
    - Schedule and Budget Management
      These risks emerge from constraints of time and money in a project which adversely affects the scope of the project.

    - Client expectations management
      Risk of poor communication strategy to manage client's expectations during the course of a project.

    - Knowledge Transfer
      Client specific constraints that hamper the required flow of information for a given project.

    - Requirements capture
      The risk of ambiguity in requirements gathering which may adversely affect project scope.

    - Staffing
      Risk due to uncertainty of availability of human resources for a project.

3. *Relationship Specific Risks*: These risks refer to the factors that affect the prospect of repeat work orders being given by a client to a certain service provider. The different concepts that constitute this risk are:
    - Changes in client's corporate structure
      Risk to the continuation of an outsourcing relationship with a client due to possible unfavorable attitude of a restructured top management towards the service provider.
    - Client size
      Risk of dictation of terms and conditions of contract by a bigger client on a relatively smaller service provider.
    - Client culture
      Organizational/regional culutre that may involve rigid mindset

- Client experience in offshoring
  This risk involves engaging with an inexperienced client with no robust processes
- Asset specificity
  This is the risk of investing in assets for specific clients which cannot be used for any other client leading to lock-in.

4. *Macro-economic Risks*: These refer to risks due to factors external to the service provider's organization. The constituents of these risks from our study include:

   - Exchange rate fluctuations
     Risk due to fluctuations in the currency rates of client's and service provider's countries
   - Government policies.
     The broad policies of the client's national government that adversely affect the economic performance of outsourcing engagements

Based on the GT methodology, we proceed from the various categories generated above towards the following propositions (Glaser, 2002).

Proposition 1. The *project specific risks*, *relationship risks* and *macroeconomic risks* can be represented as concentric circles (Fig. 1). The concentric circles depict the scope and impact of each category of risk. This conveys that the relationship specific risk factors also increase the risk of projects; similarly, the macroeconomic risk factors have an impact on the risk of both projects and relationships.

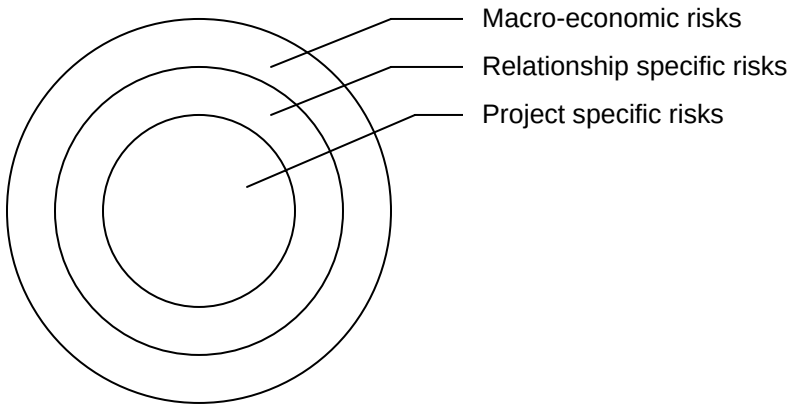


Fig. 1: Scope and impact of risks

Proposition 2. *The quantum of risk (all three categories) faced by the service provider is dependent on contextual factors like relationship maturity and type of service as shown in Fig. 2*. This is because a more matured relationship will have space to handle mistakes more tolerant towards failures and share the impact of risks while working towards mutually beneficial long term goals.

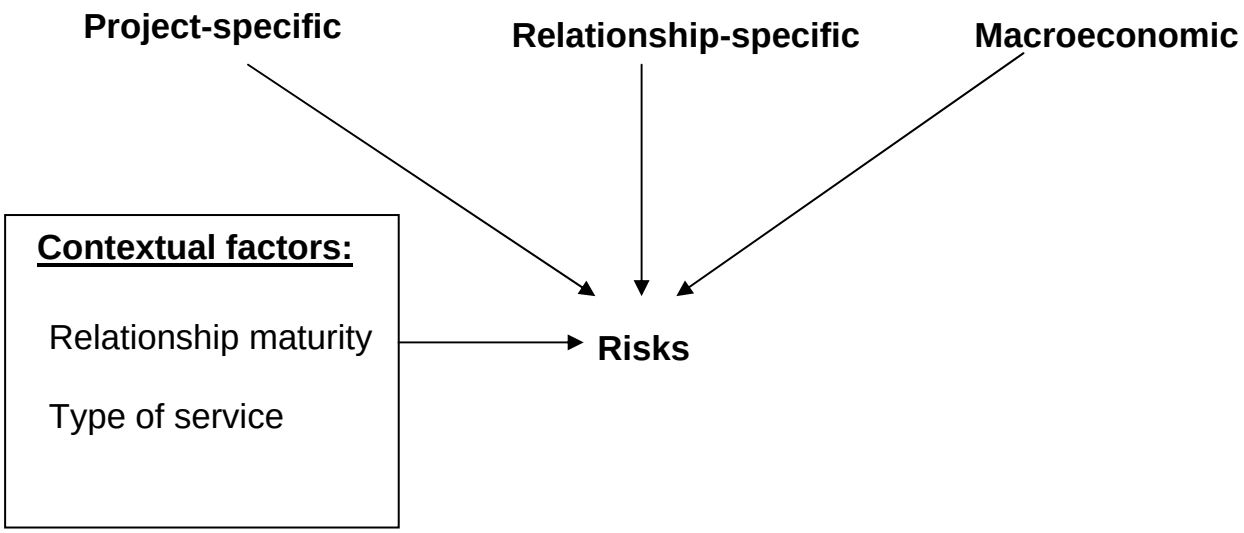


Fig. 2: Service Provider risks

CONCLUSIONS:

This research attempts to identify the risks faced by a mid-tier service provider in IT outsourcing. Three categories of risks that are faced by any offshore service provider emerge – project specific risks, relationship specific risks, and macroeconomic risks. The relationship specific risks impact the project, as well; and the macro-economic risks impact both the project as well as the relationship between client and service provider, thus the impact may be represented as three concentric circles. It may be noted that this depiction doesn't collectively exhaust all the dynamics within the risk categories. It is quite possible that a bad execution of a project could lead to a poor relationship and

hence hamper repeat orders for similar projects. Based on the study done, it also emerged that the quantum of risks of the three categories for any particular service provider is dependent on contextual factors like relationship maturity with the concerned client and type of service involved. This study is the first step in the use of SLAs by the service providers to mitigate the risks faced by them in offshore IT outsourcing. Further study would include understanding the various factors that constitute relationship maturity, identifying, testing and validating factors that influence relationship maturity, and role of SLAs in risk mitigation etc.

Acknowledgements

This work was generously supported by TAPMI. We place on record our sincere thanks to Prof. Nagabrahmam for his encouragements and consistent support. We also sincerely thank Prof. Bharath for his networking with organizations which made our research survey possible. We also thank the Research and Publication Committee of TAPMI for facilitating our research process.

References

1. Allan G., A Critique of Using Grounded Theory as a Research Method, Department of Information Systems and Computer Science, Ports Mouth University, UK, http://www.ejbrm.com
2. Andersen E., Hostile IS Outsourcing: The Story of Manufact, *Norwegian School of Management*, NSM-2002-034-CA-EN, August 2002
3. Aron, R., Clemons E. K., and Reddi S., Just Right Outsourcing: Understanding and Managing Risk, *Journal of management information systems*, Vol. 22/2, pp. 37-55, 2005
4. Beulen E., Fenema P. V. and Currie W., From Application Outsourcing to Infrastructure Management: Extending the Offshore Outsourcing Service Portfolio, European Management Journal, Vol. 23, No. 2, pp. 133-144, 2005.
5. Carmel E. & Agarwal R., The Maturation of Offshore Sourcing of Information Technology Work, *MIS Quarterly Executive*, June 2002
6. Clemons E. K. & Hitt L. M., Strategic Sourcing for Services: Assessing the Balance between Outsourcing and Insourcing, Operations & Information Management Working Paper, 97-06-01, Wharton School of the University of Pennsylvania, 1997
7. Coase R., The Nature of the Firm, Economica, Vol.4, No. 16, pp. 386-405, 1937.
8. Field, T., 10 Years That Shook IT, *CIO Magazine*, October, 1999.
9. Ge L., Konana P., and Tanriverdi H, Global Sourcing and Value Chain Unbundling, Dept. of MSIS, The University of Texas at Austin, 2004
10. Ghemawat P., Managing Differences, the Central Challenge of Global Strategy, Harvard Business Review, March 2007.
11. Glaser B.G., Conceptualization: On theory and theorizing using grounded theory, International Journal of Qualitative Methods Vol.1 No.2, Spring 2002
12. Gopal A., Sivaramakrishnan K., Krishnan M. S., and Mukopadhyaya T., Contracts in offshore software development: an empirical study, *Management Science*, Vol. 49/12, pp. 1671-1683, 2003
13. Graf M. and Mudambi S. M., The outsourcing of IT enabled business processes: a conceptual model of the location decision, Journal of international management, Vol.11, pp. 253-268, 2005.

14. Hazel T., Critical Risks in outsourced IT projects – the intractable and the unforeseen, , Communications of the ACM, Vol. 49, No. 11 ,November 2006]

15. Lacity M. & Wilcocks L. P., An Empirical Investigation of Information Technology Sourcing Practices: Lessons from Experience, *MIS Quarterly*, September 1998.

16. Lee J. and Kim Y., Effect of Partnership Quality in IS Outsourcing Success: Conceptual Framework and Empirical Investigation, *Journal of Management Information Systems*, Vol. 15/4, pp. 29-61, 1999

17. Lee J., Huynh M. Q., Kwok R. C., and Pi S., IT Outsourcing Past, Present and Future, *Communications of the ACM*, Vol. 46, No. 5, pp. 84-89, 2003.

18. Lee J., Miranda S. M. and Kim Y., IT Outsourcing Strategies, Universalistic, Contingency and Configurational Explanations of Success, Information Systems Research, Vol. 15, No. 2, pp. 110-131, June 2004.

19. Levina N., and Ross J., From the Vendor's Perspective, Exploring the Value Proposition in Information Technology Outsourcing, MIS Quarterly, Vol. 27, No. 3, pp. 331-364, September 2003

20. Mathew S. K., Understanding Risk in IT Outsourcing, A Fuzzy Framework, Journal of Information Technology Cases and Application Research (JITCAR), Vol. 8, No. 3, 2006

21. NASSCOM, Indian IT Industry: NASSCOM Analysis, August 08, 2006 http://www.nasscom.in/Nasscom/templates/NormalPage.aspx?id=2374, viewed on March 28, 2007,

22. Pandey V. and Bansal V., A Decision-Making Framework for IT Outsourcing using the Analytic Hierarchy Process, Indian Institute of Technology, Kanpur, 2003, http://www.iitk.ac.in/ime/veena/icsci04.pdf

23. Prewitt E., Filing for Divorce, *CIO Magazine*, February 2001

24. Software, CRIS INFAC SOFTWARE, January 2004

25. Strauss, A. & Corbin, J., Basics of qualitative research: Grounded theory procedures and techniques. Newbury Park: Sage, 1990.

26. Vining A., and Globerman S., A conceptual framework for understanding the outsourcing decision, *European Management Journal* Vol. 17, No. 6, pp. 645–654, 1999.

27. Williamson O. E., The Economic Institutions of Capitalism, Free Press, New York, 1985