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Critical Barriers for Offshore Software Development Outsourcing Vendors: A Systematic Literature Review

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ABSTRACT

Software development outsourcing is a contract-based relationship between client and vendor organisations in which a client(s) contracts out all or part of its software development activities to a vendor(s), who provides agreed services for remuneration. The objective of this paper is to identify various barriers that have a negative impact on software outsourcing clients in the selection process of offshore software development outsourcing vendors. We have performed a Systematic Literature Review process for the identification of barriers. We have identified barriers 'language and cultural barriers', 'country instability', 'lack of project management', 'lack of protection for intellectual property rights' and 'lack of technical capability' that are generally have a negative impact on outsourcing clients. The results also reveal the similarities and differences in the barriers identified in different continents. We suggest vendors have to address different barriers in order to compete in the offshore outsourcing business.

INDEX TERMS

- **IEEE terms**

Continents , Contracts , Costs , Cultural differences , Educational institutions , Mathematics , Outsourcing , Programming , Project management , Software engineering

- **INSPEC**

- **Controlled Indexing**

contracts , outsourcing , software development management

- **Non Controlled Indexing**

contract-based relationship , offshore software development outsourcing vendors , systematic literature review process

- **Author Keywords**

Software Development Outsourcing , Systematic Literature Review , Vendors

REFERENCES

1. A. Kakabadse and N. Kakabadse: Outsourcing: Current and future trends, Thunderbird International Business Review: Wiley InterScience 47 (2). (2005) 183-204.
2. EBSE-Technical-Report: Guidelines for performing Systematic Literature Reviews in Software Engineering, EBSE Technical Report: EBSE-2007-01. (2007).
3. T. Kern and L. Willcocks: Exploring information technology outsourcing relationships: theory and practice, Journal of Strategic Information Systems 9 (2000) 321-350.
4. M. Ali-baber, J. Verner and P. Nguyen: Establishing and maintaining trust in software outsourcing relationships: An empirical investigation, The Journal of Systems and Software 80 (2007). (2007) 1438-1449.
5. S. Sahay, B. Nicholson and S. Krishna: Global IT outsourcing. Cambridge University Press.(2003).
6. A. A. Bush, A. Tiwana and H. Tsuji: An Empirical Investigation of the Drivers of Software Outsourcing Decisions in Japanese Organizations, in press for publication, Information and Software Technology Journal (2007)
7. L. McLaughlin: An eye on India: Outsourcing debate continues., IEEE Software 20 (3). (2003) 114-117.

Abstract | Full Text: PDF (295KB)

8. B. Shao, David, J.S.: The impact of offshore outsourcing on IT workers in developed countries., *Communications of the ACM* 50 (2). (2007) 89 - 94.
[CrossRef]
9. H. Holmstrom, E. Ó. Conchúir, P. Ågerfalk and B. Fitzgerald: Global Software Development Challenges: A Case Study on Temporal, Geographical and Socio-cultural Distance. *International Conference on Global Software Engineering*. (2006) 3-11.
10. D. Damian, I. Luis, S. Janice and K. Irwin: Awareness in the Wild: Why Communication Breakdowns Occur. *International Conference on Global Software Engineering*. (2007) 81-90.
11. E. Beulen and P. Ribbers: Managing complex IT outsourcing-partnerships. *35th Hawaii International Conference on System Sciences*. (2002)
12. D. Daniela, I. Luis, S. Janice and K. Irwin: Awareness in the Wild: Why Communication Breakdowns Occur. *International Conference on Global Software Engineering*. (2007) 81-90.
13. P. Nguyen, M. Ali-baber and J. Verner: Trust in software outsourcing relationships: an analysis of Vietnamese practitioners' views. *EASE*. (2006) 10-19.
14. R. Sabherwal: The role of trust in outsources IS development projects, *Communication of ACM* 42 (1999) 80-86.
[CrossRef]
15. R. Heeks, S. Krishna, B. Nicholson and S. Sahay: Synching or Sinking: Global Software Outsourcing Relationships, *IEEE Software* March/ April 2001 (2001) 54-60.
Abstract | Full Text: PDF (128KB)
16. N. V. Oza, T. Hall, A. Rainer and S. G. Grey: Trust in software outsourcing relationships: An empirical investigation of Indian software companies, *Information & Software Technology* 48 (5). (2006) 345-354.
[CrossRef]
17. J. Stark, M. Arlt and D. Walker, H. T.: Outsourcing Decisions and Models - Some Practical Considerations for Large Organizations. *International Conference on Global Software Engineering*. (2006) 12-17.
18. M. Cataldo, M. Bass, Herbsleb, J. D. and L. Bass: On Coordination Mechanisms in Global Software Development. *International Conference on Global Software Engineering*. (2007) 71-80.
19. D. Bradstreet: Dun & Bradstreet's Barometer of Global Outsourcing, <http://findarticles.com/p/articles/mi-m0EIN/is-2000-Feb-24/ai-59591405>, September. (2000).
20. N. V. Oza: An empirical evaluation of client - vendor relationships in Indian software outsourcing companies, PhD thesis, University of Hertfordshire, UK (2006).
21. N. V. Oza and T. Hall: Difficulties in managing offshore outsourcing relationships: An empirical analysis of 18 high maturity Indian software companies. *4th International Outsourcing Conference*, Washington DC. (2005)
22. R. Sabherwal: The role of trust in outsources IS development projects., *Communication of ACM* 42 (1999) 80-86.
[CrossRef]
23. T. M. Rajkumar and D. L. Dawley: Problems and issues in offshore development of software, *Strategic sourcing of Information Systems: Perspectives and Practices*, Wiley Series in Information Systems (1997) 369-386.
24. S. Sakthivel: *Communication of the ACM* 50 (4). (2007)
25. R. Narayanaswamy and R. M. Henry: Effects of culture on control mechanisms in offshore outsourced IT projects. *Proceedings of the 2005 ACM SIGMIS CPR conference on Computer personnel research*. Atlanta, Georgia, USA (2005) 139 - 145.
26. B. Aubert, J.-F. Houde, M. Patry and S. Rivard: Characteristics of IT Outsourcing Contracts. *Proceedings of the 36th Hawaii International Conference on System Sciences*. (2003)
27. K. Siffatullah and M. Niazi: Systematic Literature Review Protocol for Software Outsourcing Vendors Readiness Model. Technical Report: TR/08-01, Keele University, UK (2008).
28. W. Kobitzsch, D. Rombach and R. Feldmann, L.: Outsourcing in India, *IEEE Software* March/ April 2001 (2001) 78-86.
29. B. Nicholson and S. Sahay: Some political and cultural issues in the globalisation of software development: case experience from Britain and India, *Information and Organization* 11 (2001). (2001) 25-43.
30. N. Khan, W. Currie, V. Weerakkody and B. Desai: Evaluating Offshore IT Outsourcing in India: Supplier and Customer Scenarios. *Proceedings of the IEEE 36th Hawaii International Conference on System Sciences (HICSS'03)*. (2003)
31. A. B. Nauman, R. Aziz, A. F. M. Ishaq and M. Mohsin: An analysis of capabilities of Pakistan as an offshore IT services outsourcing destination. *Proceedings of IEEE 8th International INMIC, Multitopic Conference*. (Dec. 2004) 403 - 408.

32. J. Goo, R. Kishore, K. Nam, H. Rao, R. and Y. Song: An investigation of factors that influence the duration of IT outsourcing relationships, *Decision Support Systems* 42 (4). (2007) 2107-2125.
33. S. C. Bhatnagar and S. Madon: The Indian software industry: moving towards maturity, *Journal of Information Technology* 12 (4). (1997) 277-288. [CrossRef]
34. R. Terdiman and F. Karamouzis: Going Offshore to Globally Source IT Services. Technical Report. Gartner Research, (2002).
35. B. Martin: *An Introduction to Medical Statistics*, 3rd edition. Oxford medical publications.(2000).
36. S. Khan, M. Niazi and R. Ahmad: A Readiness Model for Software Outsourcing Vendors Readiness Model. *IEEE international conference on Global Software Engineering, ICGSE-08*, pp:273-277. Bangalore, India (2008) 273-277.

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