Outsourcing Software Testing Offshore: Pros and Cons

Research Proposal

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1. Abstract

This paper will discuss the pros and cons of outsourcing software testing to offshore companies. While there has been an ever-increasing wealth of information on offshore outsourcing in the past two decades, it seems that software testing is lumped together with all IT services.

The information that will be presented in this paper is to be drawn from trade journals, scholarly papers, books, news articles, and personal interviews that will attempt to present an unbiased opinion on offshore outsourcing equipping the reader with a baseline level of knowledge, or give an individual pondering the question of outsourcing overseas a foundation to make their decision.

2. Scope of Research

This paper will attempt to stay within the field of offshore outsourcing of software testing; however, there seems to be little information on just that particular field. If that statement is true much of the information will come from information on offshore outsourcing of IT services, such as software development, of which software testing is a large component.

3. Project Plan

The timeline for publication collection and review, data collection, drafting and release is 90 calendar days from the approval of this research proposal.

The first two steps in this process, publication collection and review, and data collection will begin simultaneously. Publication collection will expand upon the primary list of literature presented in this document. Review of all literature will be completed on day 45. Data collection will begin with identifying potential software development managers and team members to interview; however, with such a short time frame to work in the sample will be culled from the Washington D.C. and surrounding metropolitan area. An interview questioner will be developed and finalized in one workweek. Appointments with potential individuals to interview will be set and completed on case-by-case basis. Upon approval of this proposal, various industry gatherings will be identified and attended to sample random software development professionals in the attempt to collect spontaneous answers to the questionnaire.

The next phase of the project will be analyzing and organizing data, outlining the document draft. This phase will last approximately two weeks. Draft writing will last one week. Peer review will then be conducted for one week. The last two weeks will involve final editing and completion of the research paper and be ready for distribution by day 90.

Task Description — Day 1–30

Task Description	Day 1–30
Literature Collection	Day 2–13
Interview Questionnaire Development	Day 2–13
and Scheduling	Day 2–13
Literature Review	Day 2–30
Interview Appointments	Day 15–30

Task Description — Day 31–60

Task Description	Day 31–60
Literature Review	Day 31–45
Interview Appointments	Day 31–45
Data Analyzing	Day 46–52
Data Organizing	Day 53–60

Task Description — Day 61–90

Task Description	Day 61–90
Drafting	Day 61–67
Peer Review	Day 68–83
Finalization	Day 84–90

4. Literature Review

The literature review began on the Marymount University Library website in the LibGuides—Databases by Subject. The first database, ABI/INFORM Collection, a consolidation of business and economic information was searched using the key words; "offshore outsourcing", "hidden costs of offshore outsourcing and pros", "intellectual property rights offshore outsourcing", and "cons of offshore outsourcing". A Google search was also conducted using the same key phrases.

4.1. Scholarly Sources

Rao, M. T. (2004). Key Issues for Global IT Sourcing: Country and Individual Factors. *Information Systems Management*, *21*(3), 16–21

This article dives into the subject by examining the different factors included in offshore outsourcing, such as, country factors, legal and security issues, time zone differences and the affect it has on workers interacting across the globe, and cultural issues to name a few. The article compares nearshore and offshore outsourcing, and opens the idea of global insourcing.

Jørgensen, M. (2013). A Strong Focus on Low Price when Selecting Software Providers Increases the Likelihood of Failure in Software Outsourcing Projects. In *Proceedings of the 17th International Conference on Evaluation and Assessment in Software Engineering* (pp. 220–227). New York, NY, USA: ACM. http://doi.org/10.1145/2460999.2461033

This conference paper explores the software bid process. Choosing a software developer by taking the lowest bid is a recipe for project failure. This paper analyzes a data set of over four million bids for three quarters of a million small-scale projects posted on a web-based marketplace that connects clients and developers. This bid process can translate into any IT field where the lowest price may not deliver the highest quality or best service.

Taylor, H. (2005). The Move to Outsourced IT Projects: Key Risks from the Provider Perspective. In *Proceedings of the 2005 ACM SIGMIS CPR Conference on Computer Personnel Research* (pp. 149–154). New York, NY, USA: ACM. http://doi.org/10.1145/1055973.1056006

This is a conference proceeding from the 2005 ACM SIGMIS Conference on Computer Personnel Research. This investigates risk factors that impact IT projects, such as; in-house and out-sourced project development both from the client and provider's points of view. "The Findings are of interest to all managers involved in offshore outsourcing projects".

Dibbern, J., Chin, W. W., & Kude, T. (2016). The Sourcing of Software Services: Knowledge Specificity and the Role of Trust. *SIGMIS Database*, *47*(2), 36–57. http://doi.org/10.1145/2963175.2963178

This paper explores transaction cost economics (TCE), which is a theory surrounding information systems (IS) outsourcing. The writers obtained data from 139 organizations that used different sourcing methods for development and maintenance of IS, testing TCE and reporting their results.

Swift, I. (2011). *The Perceived Effect of Hidden Costs on the Operational Management of Information Technology Outsourcing: A Qualitative Study* (D.M.). University of Phoenix, United States -- Arizona. Retrieved from http://search.proquest.com.proxymu.wrlc.org/abicomplete/docview/1023381819 /abstract/9FF6BC0BA819487EPQ/4

This paper explores the hidden costs associated with outsourcing IT services. The study's participants were senior-level with experience in IT outsourcing. Governance structure and cultural differences are key factors that must be dealt with.

4.2. Relevant Websites

I'm not quite sure what you want here. Where is this website evaluation form?

http://www.cio.com/article/2428706/offshoring/the--real--cost-of-offshore-outsourcing.html

CIO is and online magazine that is directed toward Chief Information Officers (CIO). It is geared to arm CIOs with pertinent information they need to make informed decisions in the business world. According to the Wikipedia site, they have a circulation of 140,000 readers, most of which are business leaders that need to keep abreast of current technology and trends. The above link refers to an article titled *The *Real* Cost of Offshore Outsourcing.* It explains some of the pitfalls of offshore outsourcing and the repercussions of offshore outsourcing.

Website Evaluation Score: 15 (See page 7 for details)

http://www.cio.com/category/outsourcing/

On this page of CIO there are a number of articles about outsourcing of different IT services among other areas of outsourcing.

Website Evaluation Score: 14 (Without specific article)

https://www.fdic.gov/regulations/examinations/offshore/

This is the summary page for a study done by the FDIC on outsourcing data services offshore.

Website Evaluation Score: 16

http://www.techtarget.com/network

TechTarget network is a website that has links to industry experts. It is full of independent content and analysis. Network and database covers a wide range of IT interest that include application development, business intelligence/applications, CIO strategies, cloud computing, security and many others.

Website Evaluation Score: 14 (Without tied to specific article)

http://www.techtarget.com/search/query?q=offshore

The above link has a list of current stories on all aspects of offshoring IT services.

Website Evaluation Score: 14

4.3. Book and Review

Carmel, E., & Tjia, P. (2005). *Offshoring Information Technology*. Retrieved from
http://www.cambridge.org/us/academic/subjects/engineering/technology-management/offshoring-information-technology-sourcing-and-outsourcing-global-workforce

"It looks and feels like a stodgy college textbook, but there are some fascinating insights here for IT executives who can get over that hump. The superb content isn't surprising once you realize that co-author Erran Carmel, an associate professor at American University in Washington, was a leading expert on globally dispersed software teams long before CNN's Lou Dobbs ever heard of offshore outsourcing...As you'd expect, the book has country sketches and thoroughly covers subjects such as managing contractors, risks and legal issues. But for me, the richest sections deal with 'soft' topics like cross-cultural issues and overcoming the problems of distance, time zones and language...Don't fly to Bangalore without reading this book."
Computerworld
(http://www.cambridge.org/us/academic/subjects/engineering/technology-management/offshoring-information-technology-sourcing-and-outsourcing-global-workforce)

5. Data Collection Methodology

Data collection will be conducted through interviews using a prepared set of questions. The individuals sought will be either developers who have worked on teams with offshore outsourced portions, managers that have managed teams that were offshore and outsourced, and hopefully find individuals who have used offshore outsourced software testing services. However, the amount of literature on outsourced software testing, especially offshore is little to none. This will then be compiled into a statistical analysis and reported.

6. Why Me?

I have a Bachelors Degree in Computer Science, and outsourcing of any IT services is an important topic. There seems to be little research on offshore outsourcing of software testing as its own service and I would like to delve deeper into and expose this subject. I will approach this subject with open eyes, trying to find both the good and the bad so that the readers of this report will walk away better informed, be able to know where to look for further information in order to make informed decisions. There is a whole other aspect other than the upfront price to all business decisions that can be overlooked. Hopefully, I can consolidate many of those to create new areas of awareness.

Web Site Evaluation Form

Use this form to evaluate web sites you find on the "open Internet" (Web sites you find by using a search engine such as Google). Put a circle around the number that is true about the website. Add up all the points circled. Only web sites that have a score 14 or above should be used as an information source.

Authority: Who wrote it?
1—The author or publishing organization is identified.
3—The author's or publishing organization's background and expertise is related to the subject
        s/he writes about on the web site.
1—Information about the author or publishing organization is easy to find.
1—The URL has an .edu or .gov domain.

Objectivity: What is the purpose?
1—The site has educational or factual information about the topic I am researching.
1—The site has little or no advertising or pop-ups.
2—The site presents the information objectively, without bias.

Relevancy: Is it useful?
1—The site has information that meets my research needs.
1—I can read and understand the information.
1—The site's information is well written (grammatically correct and descriptive).
1—The site has other quality links on it.
1—The site lists sources that show where the author got his/her information.

Currency: Is it up to date?
1—The site was produced or updated within the past 5 years.

Final Score _____ (add up all scores)
Excellent website 16 Good website 14-15 Questionable website 10-13 Poor website 1-9

file:///Users/robertscottlake/Desktop/OutSourcing/WebsiteEval.short%20version.pdf

Marymount Honor Pledge

I agree to uphold the principles of honor set forth by this community in the Marymount University mission statement and the Academic Integrity Code and Community Conduct Code, to defend these principles against abuse or misuse, and to abide by the regulation of Marymount University.

Word Count: 1643 (1944)