

Association for Information Systems AIS Electronic Library (AISeL)

AMCIS 2009 Proceedings

Americas Conference on Information Systems
(AMCIS)

2009

Success Factors for Information Systems Outsourcing: A Meta-Analysis

W. Alec Cram

Queen's University, wcram@bentley.edu

Follow this and additional works at: <http://aisel.aisnet.org/amcis2009>

Recommended Citation

Cram, W. Alec, "Success Factors for Information Systems Outsourcing: A Meta-Analysis" (2009). *AMCIS 2009 Proceedings*. 554.
<http://aisel.aisnet.org/amcis2009/554>

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 2009 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

Success Factors for Information Systems Outsourcing: A Meta-Analysis

W. Alec Cram

Queen's University

wcram@business.queensu.ca

ABSTRACT

This paper develops a new model for interpreting the critical success factors for information systems (IS) outsourcing. Ten meta-analyses are performed, each representing a common outsourcing success factor from within the current literature. The study's findings suggest that the most important antecedents to IS outsourcing success are attention to strategy, business relationships, finance, knowledge sharing, and service quality. Five moderators are also investigated and the industry of the customer is found to have the strongest effect on IS outsourcing success. The results from this study contribute to the academic literature by presenting past research results in a unique manner, thus enhancing the discipline's understanding of IS outsourcing success factors. As well, the findings contribute to practice by guiding organizations to the activities that are most related to the achievement of IS outsourcing success.

Keywords

Information systems outsourcing, outsourcing success, meta-analysis

INTRODUCTION

Since information systems (IS) outsourcing became widespread in the 1980s, a key challenge for organizations has been to achieve the expected benefits through effective management and oversight (Ho, Ang and Straub, 2003). The use of IS outsourcing has now grown to include 70% of today's organizations (Dibbern et al., 2004), resulting in a significant commitment of resources and a high level of risk. However, despite the widespread use of IS outsourcing by organizations, fulfillment of the anticipated benefits are often lower than expected (Han, Lee and Seo, 2008).

The level of success attained by organizations outsourcing key IS activities has been the subject of numerous research reports published during the past 20 years (Dibbern, Goles, Hirschheim and Jayatilaka, 2004; Gonzalez, Gasco and Llopis, 2006). Practices ranging from partnership (Grover, Cheon and Teng, 1996) to knowledge sharing (Lee, 2001) to trust (Lee, Huynh and Hirschheim, 2008) have been attributed to successful outsourcing agreements. Unfortunately, the wide range of factors purported to lead to optimal outcomes in these studies has created uncertainty around how organizations should best manage their IS outsourcing activities in order to achieve success.

The goal of this study is to understand to what extent the current body of literature can explain the most important factors leading to IS outsourcing success. In particular, focus is placed on the specific activities that empirical studies suggest organizations should perform in order to increase the likelihood of realizing the economic, strategic, and technological benefits traditionally associated with outsourcing. It is expected that the resulting findings will contribute to the IS field in two ways. First, the findings will benefit organizations who engage in outsourcing practices by enabling them to focus on the most important activities leading to the realization of expectations. Second, as the author is aware of no other meta-analysis conducted in reference to IS outsourcing success, the findings will represent a contribution to the academic literature by presenting past outsourcing research findings in a unique manner.

This paper is organized as follows. The next section will review key literature from the IS outsourcing field. This will be followed by an overview of the methodology used in this study. Finally, the results will be presented and discussed.

REVIEW OF LITERATURE

The origination of information systems outsourcing as a widely-publicized practice is thought to have begun with Kodak outsourcing many of its IT functions in 1989 (Lacity and Willcocks, 1998), though its roots can be traced as far back as the 1960s and 1970s with traditional time sharing and professional services (Grover et al., 1996). Within the management information systems discipline, outsourcing as a distinct area of research was recognized in 1993 with the keyword classification scheme proposed by Barki, Rivard and Talbot as part of the 'IS Management Issues' section (Gonzalez et al., 2006).

Definitions of IS Outsourcing Success

Numerous definitions of IS outsourcing exist within the literature (Dibbern et al., 2004). One widely accepted description is “the practice of turning over part or all of an organization’s IS functions to external service provider(s)” (Grover et al., 1996, p. 91). These functions can range from discrete services such as the outsourcing of application development or data centre oversight to the complete management of day-to-day IS operations. Grover suggests that the level of outsourcing differs from the practices of the past in a number of ways; most notably, this includes an increased range and depth of services being outsourced, as well as more function-specific outsourcing where discrete departmental activities are being contracted to a third party.

The concept of success in IS outsourcing has played an important role in the academic literature, but there has been little agreement on how it should be defined or measured (Rouse, 2006). Grover et al. (1996) suggest that success in outsourcing is “the satisfaction with benefits from outsourcing gained by an organization as a result of deploying an outsourcing strategy” (p. 95), where three types of benefits exist: strategic, economic, and technological. These benefit categories have been adapted in subsequent research such as Goo, Huang and Hart (2008), who consider the three principal benefits to be functional, strategic, and technological. Grover’s model has been widely cited by researchers in the field (Lee, 2001; Lee, Miranda and Kim, 2004; Han et al., 2008); however, it has also attracted criticism within the discipline due to psychometric problems (Rouse, 2006).

An alternate perspective on IS outsourcing success is proposed by Kim and Chung (2003), who define success as a function of both satisfaction and perceived benefits. The authors suggest that satisfaction considers all aspects of the customer-outsourcer relationship, while perceived benefits “measure the degree of accomplishment of expectations from the client firm’s perspective” (p. 85). Rouse (2006) supports Kim and Chung’s perspective and builds on it by suggesting three themes within the literature related to the methods of IS outsourcing success measurement: measures of outsourcing satisfaction, measures of outsourcing benefits, and measures of the fee and service aspects of outsourcing.

Antecedents to Success

A range of independent variables have been employed in the academic literature in relation to the level of IS outsourcing success. For example, Dibbern et al. (2004) summarize these determinants based on level: industry, firm, IS function, and individual. In comparison, Lacity and Willcocks (1998) suggest seven factors associated with success and failure in IS outsourcing: decision scope, decision sponsorship, evaluation process, contract duration, contract type, contract date, and size of IT function. Gonzalez et al. (2005) consider more qualitative factors as necessary for success: understanding objectives, choosing the right provider, clear benefit objectives, attention to problems, frequent contact, cost, management support, and proper contract structuring. Drawing on a selection of management theories, Gottschalk and Solli-Saether (2005) propose eleven success factors, including core competence management, stakeholder management, and production cost management. Alternatively, some research has taken a process perspective to the achievement of outsourcing success. Han et al. (2008) propose a model in which the firm’s capability results in an interaction process leading to increased relationship intensity, performance benefits, and outsourcing success.

Theoretical Perspectives

A range of theoretical perspectives in the literature help to explain why the various independent variables should relate to IS outsourcing success (Gottschalk and Solli-Saether, 2005). For example, Grover et al. (1996) utilize agency theory as a means to better understand the complex relationships and managerial challenges in the relationship between two independent organizations. By increasing the inter-organizational alignment of activities such as strategy or knowledge sharing, a decreasing level of conflict and increasing level of performance is expected. This increased performance is likely to be interpreted as contributing to ‘success’ in the outsourcing relationship.

Transaction cost economics concepts are considered by Kim and Park (2003) and Grover et al. (1996) in viewing the outsourcing phenomenon. Grover et al. (1996) posit that where an organization can receive cost reductions and economies of scale benefits from external vendor services such as outsourcing, they will be better off than providing the services internally. Where these costs and service quality are highest, the outsourcing will be considered successful.

Drawing on another perspective, Koh, Ang and Straub (2004) consider the psychological contract; specifically, “contractual parties’ mental beliefs and expectations about their mutual obligations in a contractual relationship, based on perceived promises of reciprocal exchange” (p. 357). Within the perspective of IS outsourcing, this represents an outsourcer providing benefits to the customer in exchange for a reciprocal payback. Where the contributions are sufficiently supported during the completion of the service delivery through activities such as service quality, strong relationships, and competent management, the likelihood of successfully meeting the contractual obligations is improved.

In summary, the wide range of definitions, antecedents, and theoretical perspectives in the IS outsourcing success literature has led to empirical results that are difficult to summarize and compare. This situation is consistent with other areas of management research, where diversity in research measures can be attributed to an inability of researchers to agree on a single measure, methodology limitations and construct validity concerns, or publication biases/researcher incentives to promote diversity (Pomeroy and Thornton, 2008).

METHODOLOGY

Meta-analysis is a research technique that summarizes the results of numerous empirical studies through statistical analysis and is a widely accepted method within the behavioral and social sciences (Lipsey and Wilson, 2001). The technique is particularly appealing as it is considered less judgmental and subjective than other literature review methods, while considering the relative sample and effect sizes of the individual studies (King and He, 2005).

Meta-analysis is often employed in order to understand and interpret results that appear confusing (Dennis, Wixom and Vandenberg, 2001), as is the case with IS outsourcing success. However, within the field of information systems, meta-analysis is considered to be a largely underutilized technique (King and He, 2005). For this paper, meta-analysis is regarded as an appropriate approach as it enables the aggregation and comparison of the findings across a wide range of research papers into a more concise and interpretable form. This added clarity into understanding the causes of IS outsourcing success will benefit practitioners currently in outsourcing relationships and academics who study the phenomenon.

A number of techniques can be used to conduct meta-analysis (King and He, 2005); the methodology used for this paper is based on the approach proposed by Lipsey and Wilson (2001) using the following process. First, a literature search was conducted to identify eligible papers for inclusion in the study. Next, the studies were reviewed and key data including correlations, reliability, and sample sizes were recorded. The effect sizes found in the studies were then corrected for unreliability, transformed into standard scores, and weighted based on the sample size of the study. The overall weighted mean effect size is then reported.

Due to the diversity of independent variables identified within the eligible studies, the meta-analysis performed for this study does not simply investigate a single determinant to IS outsourcing success (e.g. knowledge sharing → success). Rather, the independent variables from all studies are categorized into factor groups based on common characteristics by two raters, followed by an individual meta-analysis for each group. Where multiple measures from a single study are grouped within the same factor, the author used the measure best exemplifying the spirit of the grouping, based on definitions extracted from management literature, as suggested by Lipsey and Wilson (2001, p. 78).

This multiple meta-analysis approach is intended to more accurately identify the relationship between common factors and the dependent variable. It will enable comparisons to be made on the relative strength of the effect sizes for the individual factors, enabling a richer and more sophisticated discussion of the antecedents to IS outsourcing success.

Literature Search

A search was conducted for empirical articles meeting specific eligibility criteria using electronic search databases such as ABI/INFORM and Business Source Complete. Each paper included in the study was required to examine IS outsourcing success, or some component therein (e.g. satisfaction, cost reduction), as the dependent variable. All forms of IS outsourcing were considered eligible for inclusion in the review. In order to get a broad view of IS outsourcing success over the course of its history, no parameters were set around the publication date. Both published and unpublished studies were considered eligible. Finally, a key condition for eligibility of the review was the provision of an effect size statistic represented by the sample correlation coefficient, r , or sufficient data in the paper to enable the independent calculation of r .

Correspondence was sent to four prominent academics who had previously published papers related to IS outsourcing success in an attempt to collect unpublished studies. Two responses were received; one indicating that no unpublished papers were available and the second providing an unpublished dissertation, which was included in the analysis.

Analysis

A total of twelve articles met the inclusion criteria. These papers are listed in the References section below, preceded by an asterisk. Four key items were recorded for each article included in the meta-analysis: the sample size; the correlation coefficient; the reliability of the independent variable(s), and the reliability of the dependent variable. A total of 61 independent variables were coded within the twelve articles.

Due to the wide-ranging nature of the independent variables included in the articles, a set of factor groupings was created by the author to categorize determinants that were of a similar nature. Although no single theoretical framework was utilized to create the factors, each was conceived based on instances of similar independent variables used in the selected articles. For

example, six of the studies referred to an independent variable named 'Knowledge sharing', 'Overall knowledge sharing', 'Information sharing', or 'Shared knowledge'. As a result of this common theme, a factor grouping called 'Knowledge Sharing' was created. In total, ten factor groupings were created using this approach. The resulting model is illustrated in Figure 1, where each box on the left represents one of the independent variable factors, all leading to the dependent variable, information systems outsourcing success.

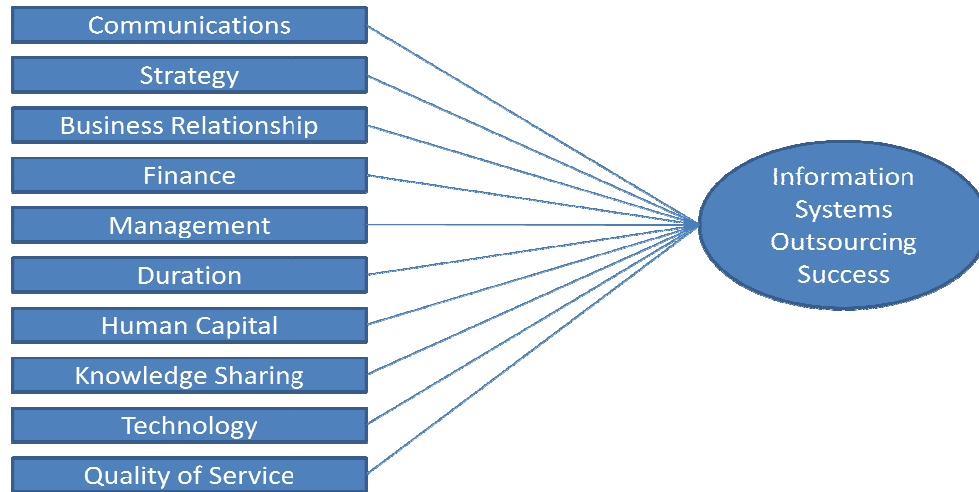


Figure 1. Research Model

Each of the 61 measures within the twelve studies was ranked by both the author and a second, independent graduate student into one of the ten factors above. Commonly used definitions for each of the factor groups were extracted from business literature and provided to the judges to aid in consistent rating.

Inter-rater reliability as a percentage of agreement was calculated at 70.5% (43 of 61). As Cohen's Kappa is considered a more robust measure of reliability as it considers the amount of agreement expected by chance (Cohen, 1960), it was calculated as well. Kappa was determined to be 0.65. Per Landis and Koch (1977), this value falls within the 'substantial' strength of agreement range of 0.61-0.80. As a result of this degree of consensus, it is concluded that the proposed factors are an appropriate method to classify the independent variables.

RESULTS

Key results regarding overall effect sizes for each of the meta-analyses are summarized in Table 1, below¹. The overall (weighted mean) effect size is reported in both standardized and unstandardized form. These figures represent the "average magnitude of the indexed relationship for specific categories of studies" (Lipsey and Wilson, 2001, pg.146). Effect size magnitude is also reported in Table 1. Lipsey and Wilson (2001) use categorizations of small ($r \leq .10$), medium ($r = .25$) and large ($r \leq .40$) to establish the relative degree of the effect size. A similar scale was used in reporting this study's data.

Factor	Overall Effect Size (Standardized)	Overall Effect Size (Unstandardized)	Effect Size Magnitude	Calculated z-test value
Strategy	0.48	0.44	LARGE	11.89
Business Relationship	0.60	0.53	LARGE	20.04
Finance	0.44	0.41	LARGE	8.97
Management	0.33	0.32	MEDIUM	11.67
Duration	0.24	0.23	MEDIUM	7.41
Human Capital	0.39	0.37	MEDIUM	14.53
Knowledge Sharing	0.67	0.59	LARGE	19.72
Technology	0.26	0.26	MEDIUM	6.03
Quality of Service	0.57	0.51	LARGE	7.49

Table 1. Overall Effect Sizes

¹ Nine factors are reported in Table 1. The tenth factor, *Communication*, incorporated information from only one study and therefore did not contain sufficient data to calculate the overall effect size.

In order to evaluate the significance of the overall effect sizes, a z-test was conducted. Results are presented above. At $p < .001$, all nine categories with sufficient data points are statistically significant as the calculated z-test value is greater than the critical-z (3.29). Therefore, there is a statistically significant relationship between the variables underlying the factor and IS outsourcing success.

Moderator Analysis

An analysis of moderator effects was performed for each meta-analysis conducted in order to identify “systematic differences among studies under review that might explain differences in the magnitude or signs of observed effect sizes” (King and He, 2005, p. 677). A test for homogeneity was conducted for the nine meta-analysis groups with multiple measures in order to determine the presence of moderators. Results are presented in Table 2, below. The homogeneity statistic (Q) was calculated for each meta-analysis. The critical value for the Chi-Square distribution is also listed in the table, where the degrees of freedom equal the number of Effect Sizes minus 1. Since the calculated-Q is greater than the critical value in each case, the null hypothesis of homogeneity is rejected and the variability across effect sizes exceeds what is expected based on sampling error.

Category	Calculated-Q	Critical-Q
Strategy	74.20	7.81
Business Relationship	38.36	12.59
Finance	13.74	5.99
Management	72.98	11.07
Duration	19.64	7.81
Human Capital	29.34	9.49
Knowledge Sharing	30.29	11.07
Technology	36.60	7.81
Quality of Service	4.52	3.84

Table 2. Homogeneity Analysis

Five moderators were examined during the analysis and a total of thirteen moderator results were established based on the information provided in the articles. The mean effect size per group was calculated. Results are listed in Table 3.

Differences between the effect sizes were determined by calculating the z' for the individual correlations, then the z-score to compute the normal curve deviate (Cohen and Cohen, 1983). In order to determine the appropriate sample sizes to use in the calculation of the z-score, three techniques are commonly used: the harmonic mean, the arithmetic mean, and the total (Cheung and Chan, 2005). Viswesvaran and Ones (1995) suggest that the harmonic mean provides the best approximation of the sample size. The moderator z-scores were calculated using all the three sample size approximation techniques. For each of the moderators examined below, the harmonic mean resulted in the most conservative z-score calculations. At a significance level of $p < .05$, eight of the moderators are significant (denoted with a *).

Moderator Category	Meta-Analysis Category	Moderator Grouping	Weighted ES	Observed Difference	z
Location	Business Relationship	North America	0.51	0.10	-1.49
		Asia/Pacific	0.61		
Dominant Industry in Study	Business Relationship	Government	0.69	0.16	2.70*
		Manufacturing	0.53		
	Knowledge Sharing	Government	0.82	0.27	3.93*
		Manufacturing	0.55		
Year of Publication	Business Relationship	Pre-2003 (Inclusive)	0.79	0.27	4.51*
		Post-2003	0.52		
	Human Capital	Pre-2003 (Inclusive)	0.09		
		Post-2003	0.42		
Strategy	Pre-2003 (Inclusive)	0.73	0.39	5.02*	
	Post-2003	0.34			
Technology	Pre-2003 (Inclusive)	0.21	0.08	-0.78	
	Post-2003	0.29			
Top Journal	Business Relationship	Top-5 Journal	0.79	0.31	5.07*
		Not Top-5 Journal	0.48		

	Human Capital	Top-5 Journal	0.39	0.19	1.64
		Not Top-5 Journal	0.20		
	Knowledge Sharing	Top-5 Journal	0.58	0.14	-2.10*
		Not Top-5 Journal	0.72		
	Management	Top-5 Journal	0.32	0.03	-0.37
		Not Top-5 Journal	0.35		
Measure of Outsourcing Success	Business Relationship	Overall satisfaction	0.64	0.05	0.81
		Perceived benefits	0.59		
	Human Capital	Overall satisfaction	0.42	0.27	2.53*
		Perceived benefits	0.15		

* - Significant at $p < .05$

Table 3. Moderator Analysis

DISCUSSION

Results

The meta-analysis results drew on twelve separate studies containing 61 measures in ten unique factors. In the nine factor groups that contained multiple data points, the standardized effect sizes ranged from 0.24 to 0.67. All studies demonstrated an overall positive relationship with IS outsourcing success.

The results indicate that Strategy, Business Relationship, Finance, Knowledge Sharing, and Quality of Service have a high-strength relationship with successful IS outsourcing. This suggests that, all things being equal, those organizations that focus on a robust strategy, a strong business relationship, mindful financial management, constructive knowledge sharing and an excellent quality of service are likely to experience a more successful outsourcing experience.

The results from the moderator analysis suggest that a number of categorical moderators influence the relationship between the determinants and IS outsourcing success. Further discussion follows below:

Industry: The analysis conducted shows that the client's industry significantly modifies the relationship between IS outsourcing success and the business relationship, as well as knowledge sharing at $p < .05$. The weighted effect size is 0.16 and 0.27 greater, respectively, for studies focusing on government respondents than those focusing on manufacturing respondents. This result suggests that governments may be able to leverage relationships and knowledge more effectively in outsourced arrangements than manufacturing organizations.

Year of Publication: The analysis conducted shows that articles published in 2003 or earlier have a significantly stronger relationship (at $p < .05$) with IS outsourcing success for the business relationship and strategy categories. However, for articles published after 2003, the IS outsourcing success relationship is greater for the Human Capital category. This result could suggest that today's organizations may be undergoing a changing focus towards human capital issues as outsourcing arrangements become more complex and pervasive.

Measure of Outsourcing Success: The analysis conducted shows that the IS outsourcing success measurement technique moderates the relationship with the Human Capital factor grouping. This analysis is based on the two indicators of IS success proposed by Kim and Chung (2003), satisfaction and perceived benefits. Where outsourcing success is measured in solely terms of overall satisfaction with the outsourcing relationship, the weighted effect size is 0.27 larger than when success is measured using the individual strategic, technological, and economic benefits. The moderator was not significant for the Business Relationship factor. This finding suggests that researchers should carefully consider what facet of IS outsourcing success is being examined in their studies and select an appropriate measurement technique, as the results may vary significantly based on the instrument used.

Implications of Findings and Future Research

This study makes two key contributions. First, the paper uses a method, to the author's knowledge, not previously utilized in the area of IS outsourcing success research, to produce a new perspective on viewing previous empirical results. The academic community can consider the findings within this paper as a contribution to the discussion regarding the key determinants to outsourcing success.

Second, the findings from the study can be used by practitioners to identify the activities that most effectively contribute to successful outsourcing relationships. By focusing on the competencies related to the factor groupings with a large effect size, organizations may be better able to allocate their resources to the skills and behaviors most important to achieving IS outsourcing success.

Future research on IS outsourcing success should focus on the refinement of the factors and moderators proposed in this paper. For example, examining the moderating effect of offshore versus local outsourcing on IS outsourcing success could provide valuable insights. Additionally, further research could focus not only on the determinants to IS outsourcing success, but also on the causes of outsourcing failure. This is an under-delivered area within research in the IS outsourcing field (Dibbern et al., 2004) and could be a useful contribution to organizational practice.

Strengths and Limitations

Lipsey and Wilson (2001) highlight four key strengths of the meta-analysis technique: the procedures impose a discipline on the process of summarizing the research findings; a more sophisticated representation of findings is produced; effects and relationships may be able to be uncovered more readily than in other methods; and the method handles information from a large number of studies in an organized way.

Each of these strengths applies to this study. First, the meta-analysis process has aggregated a previously varied set of findings into a more understandable form. Second, the paper presents an innovative result by proposing ten independent variable factors, then conducting individual meta-analyses on each grouping. Third, significant effect sizes are demonstrated and compared to each other in a more analogous manner than in previous IS outsourcing research. Finally, twelve studies containing 61 independent variables were analyzed and results produced in a structured and organized manner.

However, this research is limited in two ways. First, the meta-analysis was able to draw on empirical results from twelve publications, but would have benefited further from the inclusion of additional data. Although a thorough search was conducted, the inclusion of additional published and unpublished work would further enhance the findings of this paper. Second, although an adequate measure of inter-rater reliability was achieved, a higher reliability in the grouping process would contribute to the usefulness of the resulting findings. This could have been achieved either by more thoroughly training the independent rater prior to the grouping exercise or more thoroughly validating and defining the ten categories to minimize the intersection of multiple groups.

CONCLUSION

The objective of this meta-analysis was to present a clear picture of what organizational activities are most strongly related to IS outsourcing success. The results indicate that companies focusing on strategy, business relationships, finance, knowledge sharing and quality achieve this result. A number of constructs were found to moderate the relationship with IS outsourcing success; the most prevalent from a practical perspective is the industry of the customer. The results from this study can be applied in practice to enable a focus on the factors most associated with success. As well, the findings contribute to the literature on IS outsourcing success by presenting past empirical studies in an innovative manner.

ACKNOWLEDGMENTS

The author thanks Jennifer Robinson, Jacqueline Corbett, Yan Luo, and the three anonymous reviewers for their valuable comments and suggestions.

REFERENCES

*Studies preceded by an asterisk were included in the meta-analysis

1. Barki, H., Rivard, S., and Talbot, J. (1993) A Keyword Classification Scheme for IS Research Literature: An Update, *MIS Quarterly*, 17, 2, 209-226.
2. Cheung, M. W.-L. and Chan, W. (2005) Meta-Analytic Structural Equation Model: A Two-Stage Approach, *Psychological Methods*, 10, 1, 40-64.
3. Cohen, J. (1960) A Coefficient of Agreement for Nominal Scales, *Educational and Psychological Measurement*, 20, 1, 37-46.
4. Cohen, J. and Cohen, P. (1983) *Applied Multiple Regression / Correlation Analysis for the Behavioral Sciences*, Lawrence Erlbaum, Hillsdale.
5. Dennis, A., Wixom, B. and Vandenberg, R. (2001) Understanding Fit and Appropriation Effects in Group Support Systems via Meta-Analysis, *MIS Quarterly*, 25, 2, 167-193.
6. Dibbern, J., Goles, T., Hirschheim, R. and Jayatilaka, B. (2004) Information Systems Outsourcing: A Survey and Analysis of the Literature, *The DATA BASE for Advances in Information Systems*, 35, 4, 6-102.
7. Gonzalez, R., Gasco, J. and Llopis, J. (2006) Information Systems Outsourcing: A Literature Analysis, *Information & Management*, 43, 821-834.

8. Gonzalez, R., Gasco, J. and Llopis, J. (2005) Information Systems Outsourcing Success Factors: A Review and Some Results, *Information Management & Computer Security*, 13, 5, 399-418.
9. Goo, J., Huang, C. D. and Hart, P. (2008) A Path to Successful IT Outsourcing: Interaction Between Service-Level Agreements and Commitment, *Decision Sciences*, 39, 3, 469-506.
10. Gottschalk, P. and Solli-Saether, H. (2005) Critical success factors from IT outsourcing theories: an empirical study, *Industrial Management & Data Systems*, 105, 6, 685-702.
11. *Grover, V., Cheon, M. J. and Teng, J. T. C. (1996) The Effect of Service Quality and Partnership on the Outsourcing of Information Systems Functions, *Journal of Management Information Systems*, 12, 4, 89-116.
12. *Han, H.-S., Lee, J.-N. and Seo, Y.-W. (2008) Analyzing the Impact of a Firm's Capability on Outsourcing Success: A Process Perspective, *Information & Management*, 45, 31-42.
13. *Ho, V. T., Ang, S. and Straub, D. (2003) When Subordinates Become IT Contractors: Persistent Managerial Expectations in IT Outsourcing, *Information Systems Research*, 14, 1, 66-86.
14. *Kim, S. and Chung, Y.-S. (2003) Critical Success Factors for IS Outsourcing Implementation from an Interorganizational Relationship Perspective, *The Journal of Computer Information Systems*, 43, 4, 81-90.
15. *Kim, B. and Park, K. (2003) Satisfying Different Customer Groups for IS Outsourcing: A Korean IS Company's Experience, *Asia Pacific Journal of Marketing and Logistics*, 15, 3, 48-69.
16. King, W. R. and He, J. (2005) Understanding the Role and Methods of Meta-Analysis in IS Research, *Communications of the Association for Information Systems*, 16, 665-686.
17. *Koh, C., Ang, S. and Straub, D. (2004) IT Outsourcing Success: A Psychological Contract Perspective, *Information Systems Research*, 15, 4, 356-373.
18. Lacity, M. C. and Willcocks, L. P. (1998) An Empirical Investigation of Technology Sourcing Practices: Lessons from Experience, *MIS Quarterly*, 22, 3, 363-408.
19. Landis, J. R. and Koch, G. G. (1977) The Measurement of Observer Agreement for Categorical Data, *Biometrics*, 33, 1, 159-174.
20. *Lee, J.-N. (2001) The Impact of Knowledge Sharing, Organizational Capability, and Partnership Quality on IS Outsourcing Success, *Information & Management*, 38, 323-335.
21. *Lee, J.-N., Huynh, M. Q. and Hirschheim, R. (2008) An Integrative Model of Trust in IT Outsourcing: Examining a Bilateral Perspective, *Information Systems Frontiers*, 10, 145-163.
22. *Lee, J.-N. and Kim, Y.-G. (2005) Understanding Outsourcing Partnership: A Comparison of Three Theoretical Perspectives, *IEEE Transactions on Engineering Management*, 52, 1, 43-58.
23. *Lee, J.-N., Miranda, S. M. and Kim, Y.-M. (2004) IT Outsourcing Strategies: Universalistic, Contingency, and Configurational Explanations of Success, *Information Systems Research*, 15, 2, 110-131.
24. Lipsey, M. And Wilson, D. (2001) Practical Meta-Analysis, Sage Publications, Thousand Oaks.
25. Pomeroy, B. and Thornton, D. (2008) Meta-analysis and the Accounting Literature: The Case of Audit Committee Independence and Financial Reporting Quality, *European Accounting Review*, 17, 2, 305-330.
26. Rainer, Jr., R. K. and Miller, M. (2005) Examining Differences Across Journal Rankings, *Communications of the ACM*, 48, 2, 91-94.
27. *Rouse, A. (2002) Information Technology Outsourcing Revisited: Success Factors and Risks, Unpublished dissertation.
28. *Rouse, A. (2006) Explaining I.T. Outsourcing Purchasers' Dissatisfaction, *Proceedings of the Tenth Pacific Asia Conference on Information Systems*, AIS Electronic Library.
29. Viswesvaran, C. and Ones, D. S. (1995) Theory Testing: Combining Psychometric Meta-Analysis and Structural Equations Modeling, *Personnel Psychology*, 48, 865-885.