

INFORMATION TECHNOLOGY OUTSOURCING: ASSET TRANSFER AND THE ROLE OF CONTRACT

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Appendix

Service Descriptions

The commonly outsourced set of IT processes includes help desk management, data center management, distributed system maintenance, networking and telecommunications, existing software maintenance, and development of new software. We use service descriptions that are consistent with those used in industry (Gartner 2007). Help desk management refers to ongoing product support over telephone or e-mail. This service is offered as a stand-alone service or can be bundled with other services. Data center management refers to the day-to-day maintenance of operating server/host platforms. The client or the vendor may own the IT assets involved. Distributed systems and desktop outsourcing covers the day-to-day maintenance of the desktop/client platforms. Often product support, professional services, and help desk services form part of the service. The networking and telecommunication environment covers the hardware, software, and peripherals that enable the networking of physical assets in the client firm. Data center management, distributed and desktop management, and network related outsourcing are generally referred to as infrastructure services while applications services cover new software development and existing software maintenance.

Factor Analysis of Drivers of Outsourcing

Based on our review of the literature we identified 12 drivers of outsourcing. Table A1 lists the median scores received and the references to prior literature where the driver of outsourcing has been mentioned.

After testing for sphericity and sampling adequacy, we perform exploratory factor analysis on the 12 drivers of outsourcing based on the principal component factor method and rotate orthogonally using varimax (Table A2).

Table A1. Median Scores for Drivers of Outsourcing

Clauses	Median	References in Literature
Reducing IT costs	4	Apte et al. 1997; Ang and Cummings 1997; Loh and Venkatraman 1992; McLellan et al. 1995; Smith et al. 1998
Improving speed/responsiveness of IT activities	4	Clark et al. 1995; Grover et al. 1994
Improve IT service quality	4	Clark et al. 1995; Grover et al. 1994
Acquiring new IT hardware and/or software resources	3	Apte et al. 1997; Loh and Venkatraman 1995
Acquiring scarce or new IT expertise and skills	2	Loh and Venkatraman 1995; McLellan et al. 1995; Poppo and Zenger 1998
Transforming the internal IT organization	3	Apte et al. 1997; McLellan et al. 1995
Facilitating focus on core competencies (where IT is not core)	1	Loh and Venkatraman 1995; Slaughter and Ang 1996; Smith et al. 1998
Allowing focus on strategic IT applications	2	Apte et al. 1997
Improving alignment of IT with the business	2	Apte et al. 1997
Improving business process performance	2	Clark et al. 1995; Saunders et al. 1997
Generating cash from sale of assets	1	Smith et al. 1998; McFarlan and Nolan 1995
Generating revenue from IT resources	1	DiRomualdo and Gurbaxani 1998

Table A2. Rotated Factor Loadings for the Drivers of Outsourcing

Drivers of Outsourcing	Four-Factor Solution				Two-Factor Solution	
	BI	ISI	Cost	CE	Strategic	Cost
Improving alignment of IT with the business	0.82	0.18	0.29	0.05	0.73	0.43
Allowing focus on strategic IT applications and initiatives	0.81	0.11	-0.11	0.24	0.67	0.16
Transforming the internal IT organization	0.77	0.13	-0.02	-0.30	0.58	0.14
Improving business process performance	0.59	0.50	-0.16	0.34	0.79	-0.13
Improve IT service quality	0.33	0.82	0.01	-0.03	0.80	-0.27
Improving speed/responsiveness of IT activities	-0.03	0.78	-0.13	0.27	0.55	-0.45
Acquiring new IT hardware and/or software resources	0.21	0.61	-0.01	-0.08	0.56	-0.23
Facilitating focus on core competencies (IT is not core)	0.32	0.54	0.37	-0.29	0.58	0.12
Acquiring scarce or new IT expertise and skills	0.37	0.46	0.21	0.31	0.64	0.12
Generating cash from sale of assets	-0.02	0.13	0.76	0.07	0.15	0.56
Reducing IT costs	0.08	-0.30	0.71	0.14	-0.07	0.76
Generating revenue from IT resources and competencies	0.08	0.09	0.14	0.82	0.26	0.19

Corresponding to the three strategic intents for outsourcing (DiRomualdo and Gurbaxani 1998) we see that factors 1, 2, and 4 can be labeled IS improvement, business impact and commercial exploitation. Factor 3 can be labeled cost-focus. Restricting the factors to two and rotating orthogonally using varimax gives us the factor loading in the last two columns. The two-factor solution allows us greater degrees of freedom without losing qualitative information.

Factor Analysis of Performance Measures

A similar process is adopted to reduce the dimensionality of the performance measures. Exploratory factor analysis was performed after testing for sampling adequacy and sphericity. Based on low values of KMO sampling adequacy (< 0.5) we eliminate those performance measures that are unlikely to load onto the factors. The factors are rotated obliquely as it is very plausible that performance measures used are highly inter-correlated. The rotated factor loadings are reported in Table A3.

Table A3. Rotated Factor Loadings for the Performance Measures		
Performance Measures	Quality Based	Cost Based
Improvement in IT productivity	0.9375	-0.1732
Improvement in product/services quality	0.8164	-0.0761
Improvement in IT services quality	0.7716	0.2531
Improvement in business unit satisfaction with IT services	0.6909	0.2672
Improvement in business productivity (e.g. revenue per employee)	0.5487	-0.0420
Improvement in IT user satisfaction	0.4540	0.5119
Improvement in end customer satisfaction	0.3235	0.4303
Reductions in IT costs	0.0890	0.7882
Reductions in business costs	0.0240	0.7866

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