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INFORMATION TECHNOLOGY OUTSOURCING IN AUSTRALIA

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Abstract

In Australia there has been considerable popular discussion of outsourcing Information Technology (IT) but little academic research into its incidence and benefits. We report on research into Australian IT outsourcing conducted in 1999. The research objectives were to measure the incidence of outsourcing amongst Australian firms, identify the functions that were outsourced, the reasons why managers considered outsourcing, the costs and benefits of outsourcing, possible changes in modes of and motivations for outsourcing and factors that are associated with successful outsourcing arrangements. The three most important factors driving outsourcing in Australia are accesses to skills, improved service quality and increasing managers' focus on core business activities; cost savings are comparatively unimportant. Criteria for successful outsourcing arrangements are discussed.

INFORMATION TECHNOLOGY OUTSOURCING IN AUSTRALIA

Outsourcing Information Technology (IT) has been defined as passing IT functions previously performed inhouse to outside contractors (Gupta and Gupta 1992; Willcocks, Fitzgerald et al. 1995). The definition should be extended to IT functions not previously performed in-house. IT outsourcing can be comprehensive (two major Australian banks have recently decided to outsource all their IT functions) or partial (commonly share registries and payrolls). The service provider (hereafter the outsourcer and outsourcee are respectively referred to as the service provider and client) may be an independent entity or a wholly owned subsidiary. The outsourcing decision can be simple (a payroll is outsourced purely on cost grounds) or complex. IT applications are integrated with each other and intrinsic parts of most business activities; it may be difficult to hive off and outsource a single application. Criteria used to evaluate outsourcing decisions may be multidimensional and depend on intangible and tangible factors.

The use of IT outsourcing in Australia is increasing, this is exemplified by outsourcing decisions made by the Australian Federal Government and several public companies (McFarlan and Nolan 1995; King 1998; Beer 1999; Howarth 1999). There are myriad popular reports of firms adopting or abandoning outsourcing e.g (Caldwell 1997).

REASONS FOR OUTSOURCING

Many writers have proposed research frameworks e.g. Finlay (1999), criteria (Edwards 1998) and schemes for analyzing or assessing outsourcing (Bazinet, Kahn et al. 1998). We briefly note hypothesized advantages and disadvantages of outsourcing IT (with some supporting references) and some less rational influences.

Reduced IT Costs

Lower costs can arise from economies of scale; a service provider can supply, run and update the software needed for a common application (classically payroll and share registries) and distribute the development, maintenance and running costs over many clients (Benko 1992; Collins and Millen 1995; Lacity, Willcocks et al. 1996; Currie and Willcocks 1998). It may be difficult to quantify all the costs associated with doing work internally or outsourcing it especially as many factors are intangible (Hoffman 1997).

Risk Avoidance

By buying services at an agreed cost a client can avoid cost uncertainty, the client buys insurance as well as services from the service provider (Benko 1993).

Concentration on Core Activities and Competencies

It is rational for managers to concentrate on the firm's core activities, exploit competencies based on their experience and knowledge and contract out activities in which they are less competent. It may be especially difficult for small organizations to select computer software, hardware and staff (Prahalad and Hamel 1990; Gupta and Gupta 1992; Benko 1993; Antonucci, Lordi et al. 1998; Di Romualdo and Gurbaxani 1998).

Avoidance of Cultural Problems

An effective IT department may have to have personnel and cultures different from that of the rest of the organization; outsourcing may lessen friction.

Loss of Distinctive Competencies and Dependence

A bank that outsources the development of software driving its automatic telling machines (ATMs) may sacrifice a distinctive strategic competence and become dependent on the service provider (Earl 1989; McFarlan and Nolan 1995).

Change

Outsourcing a function may imply dismissal or redeployment of employees, changes in the work they do or their transfer to the service provider's employment and its different conditions (Antonucci, Lordi et al. 1998).

Other Factors

The Australian government opines that the private sector is intrinsically more efficient and responsive than the public sector (Beer 1999). Like TQM and BPR, outsourcing may be an indiscriminately used managerial fad for which enthusiasm may fade (Loh and Venkatraman 1992, p 340; Shapiro 1995).

METHODOLOGY

This study was motivated by three major research questions:

What is the extent of IT outsourcing in Australia?
What factors persuade Australian organisations to outsource IT functions?
What factors contribute to successful IT outsourcing arrangements?

The main instrument was a survey supplemented by six interviews of executives who had outsourcing experience.

The survey used was developed and executed by a reputable management-consulting firm prior to the authors' involvement. The questionnaire was posted to selected clients and the CIO (Chief Information Officer) or CFO (Chief Financial Officer) of 3000 Australian organisations. 277 useable questionnaires were returned.

Discriminant Analysis (DA) was used to determine whether there were significant demographic differences between organisations that did or did not outsource or between organisations that do not now outsource but did or did not intend to outsource. Large organisations use outsourcing more than small ones (p = 0.005). The most important variable was the "annual spend on IT services", firms with large IT budgets are more likely to outsource. Tests differentiating (of those firms not now using outsourcing) those who did and did not intend to outsource were not significant (p<0.05).

FINDINGS

Functions Outsourced and Relationships

The functions outsourced and the relationship between the parties are summarised in Table. Chi squared tests confirmed that there were significant variations in the frequency with which various functions were outsourced. For example most firms outsource responsibility for hardware maintenance but few outsource responsibility for corporate strategy.

Most firms (59%) perform most IT functions in-house. Nearly 25% of respondents have outsourced application development and maintenance (perhaps only a small proportion of core applications). In the past few firms would have entrusted the development of internal applications to a third party. Willcocks (1998) opines that the tasks most closely related to business knowledge and sustaining competitive advantage cannot be effectively outsourced. This is supported by qualitative findings; an interviewee stated that "the service provider does not know your business and industry as well as you do". It may be appropriate to outsource mundane or physical aspects of an operation such as a call center but to develop in-house and keep secret those aspects (e.g. the scripts operators follow and interfaces with the firm's databases) that give competitive advantage and contribute to the company's public image.

Reasons for Using Outsourcing

The survey nominated nine possible reasons for outsourcing and asked respondents to characterize the actual and anticipated benefits as low, medium or high (coded as 1, 2, 3 respectively). The responses are summarised in Table 2 anticipated benefits significantly exceeded actual benefits (p<0.001 in all cases). These nine reasons did not exactly match the hypothesized reasons for outsourcing discussed in section 0 (the survey was executed before the authors became involved).

Table 2 should be compared with Table 4 in Collins (1995), in both studies focus on core, service quality and increased flexibility ranked high. Some elaboration of these reasons was obtained in interviews with senior executives involved in outsourcing. All of the unsourced quotes in this section are those of interviewees.

Cost Savings

Cost saving is wrongly supposed to be the dominant reason for outsourcing; a typical view is: "Widespread opinion exists that IT departments are increasingly unable to deliver anything useful on time and within budget...hence creating the need for organisations to consider the possibility of getting out of the data processing business" (Due 1992, p80). Our research accords with Collins (1995) and Grover (1994) in finding that costs are a minor consideration in outsourcing decisions.

In our study the cost factors ranked 8/9 and 9/9 and there was a large gap between the means of the 7th and 8th ranked items. In Collins study (1995), amongst reasons for outsourcing "Personnel cost savings" ranked 2/10 but "Stabilize IS costs" ranked 7/10. The former is probably reflects accessing skills, the latter probably reflects managers' frustration in trying to predict and control IT costs.

Our interviews strongly suggested that managers (perhaps despairing of lower IT costs) want predictable costs: "...contract was fixed and costs will not increase" or "Through outsourcing we sought ... improved service levels at a predictable cost...".

Access to Skills

Interviewees were voluble on the difficulty of obtaining and retaining IT staff (the highest ranked item in the survey). "The company is not structured to provide a career path or reward scheme to attract and retain motivated technical professionals. ...[after we train them] ... They generally stay for about six months, then they leave, because they can't move up".

Focus on Core Business

The interviews supported the survey's high ranking of "Focus" (see Table 2). In interviews, this often overlapped with the difficulty of obtaining competent IT staff "Since we do not currently have the skills inhouse - the best we can do is replicate what a large service provider already has in place, and that is not the business we want to be in".

Reasons for Not Outsourcing

One reason for not outsourcing is the inseparability of core business processes and IT: "IT and communications are close to the same thing now. We're one group of people". Two interviewees' companies did outsource critical IT functions. An outsourced application was: "highly mission critical to the company. If the system goes off the air we can't perform our function and many other stakeholders will be effected, as they all have the power to log on to the application". The service providers had technical expertise that was hard to replicate in-house.

SUCCESS FACTORS

The interviewees identified some non-technical factors apparently associated with successful outsourcing arrangements. These are:

Contracts

"Tight" contracts, i.e. ones in which the rights and responsibilities of both parties were explicit, are essential to good outsourcing arrangements. Central were service level agreements (SLA's) specifying performance criteria and penalties for non-performance. "Companies with loose contracts viewed their outsourcing arrangement as a failure." Saunders (1997, p 72).

Partnering

There is a spectrum of business relationships ranging from strictly arms length to highly integrated and cooperative. The latter may be appropriate when companies comprise a consortium engaged on a common task such as software development. However, a lawyer opined; "Outsourcing agreements sometimes incorporate the notion of 'partnering'. Partnering is non-specific and legally ambiguous term. It is not unusual for the parties themselves to be unsure about what they are intending to achieve through a partnering arrangement."

Human Resource and Change Management

Outsourcing may create change and HR problems. Some jobs may be enriched, be deskilled or disappear and new jobs may be created. Some staff may have to transfer to a new employee and/or new location but "Some employees left because they didn't want us to select the employer they were going to work for".

The IT Resource Manager

Future IT departments may comprise a small team of technical experts whose responsibility is staying abreast of changes in technology and business needs and recommending how the former can be exploited to meet the latter. The IT manager may be responsible for getting work done using appropriate external as well as internal resources. Even if the company outsources all its IT work, a small expert technical team will be required to formulate tenders, assess bids and monitor performances.

CONCLUSION

Outsourcing is a topic that has attracted much recent academic and commercial attention. Its supposed advantages ("sticking to knitting" and economies of scale) and disadvantages (dependency and loss of skills) are well known. IT outsourcing decisions can be difficult because the stakes are high and relevant costs difficult to ascertain. Firms may be reluctant to become dependent on a supplier but equally reluctant to have to manage in-house a technology that is expensive and rapidly changing.

The three most important reasons for outsourcing are: access to skills, improved service quality and focus on core business. Cost was the least important. Issues pertaining to relationships between parties that merit further research are "partnering", contractual arrangements and the changing role of IT management.

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Table 1: Functions Outsourced

Functions	Do not use	In- house	SP ¹	SP ²	SP ³	SP ⁴	SP ⁵	SP ⁶	Total SP ⁷
Analysis & Strategy	6	248	77	26	9	3	2	1	118
Application development, implementation and maintenance	7	202	165	37	35	14	3	10	264
Desktop services	3	246	92	8	13	21	1	8	143
Network services	2	232	112	22	13	24	1	16	188
Data centre operations	30	205	19	5	1	24	0	24	73
Help Desk services	21	231	29	8	3	18	1	10	69
Hardware maintenance	3	70	157	43	6	44	3	26	279
Asset management	22	224	11	8	1	14	0	13	47
Others	6	40	18	1	0	7	0	1	27
Total	100	1,698	680	158	81	169	11	109	1,208

¹Service Provider / as-needed contractor arrangements

Table 2: Anticipated and Actual Objectives (Ranked)

Rank based on Anticipated benefits	Objective	Mean (anticipated)	Mean (actual)	
1	Access to skills	2.65	2.27	
2	Improved service quality	2.48	2.06	
3	Focus on core business	2.34	1.97	
4	Defined service levels	2.34	1.89	
5	Additional flexibility	2.31	1.94	
6	Access to technology	2.25	1.98	
7	Improved performance	2.29	1.84	
8	Cost savings	1.89	1.64	
9 .	Change fixed cost basis	1.72	1.52	

²Service Provider / strategic services

³Service Provider / project management

⁴Service Provider / facility management

⁵Service Provider / management buy-out

⁶Service Provider / total outsourcing, including asset ownership of technology component

⁷Sum of various outsourcing by Service Providers

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