

**Department of Information Systems  
London School of Economics and Political Science**



**Working Paper Series**

**145**

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**“Information Technology Sourcing: Fifteen Years of Learning”**

**April 2006**

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# **Information Technology Sourcing: Fifteen Years of Learning**

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## **Introduction**

The information technology (ITO) and business process (BPO) outsourcing services markets, together with more recent offshore variants, have been dynamically expanding revenues, capabilities and associated rhetoric, in equal measure, for over a decade. Outsourcing makes up a substantial and rapidly rising part of expenditure across corporations and government agencies alike. On our estimates, ITO global revenues exceeded \$200 billion per year at the end of 2005. After, and indeed partly because of, the slowdown between 2001-2004 this figure will rise by at least 7% per annum for the next five years. Of this, offshoring (\$US 7 billion in 2004) will probably rise to \$17 billion by 2008. Additionally, mainstream BPO expenditure in areas such as the human resource function, procurement, back office administration, call centres, finance and accounting, is set to rise from \$US110 billion in 2003 to \$US 175 billion in 2008 (Willcocks and Lacity, 2006). Use of external IT/BP services combined is likely to move from a 2005 average of 12% to 20% of the corporation's total costs by 2008/9. For many organisations, then, outsourcing is well above the parapet in sheer expenditure terms. However, much of this has been happening incrementally, as a response to immediate market conditions and specific opportunities to cut costs, rather than through long-term strategic thinking.. Moreover, despite the accumulated experience, learning has been painfully slow; there has been mixed success, and much conflicting advice.

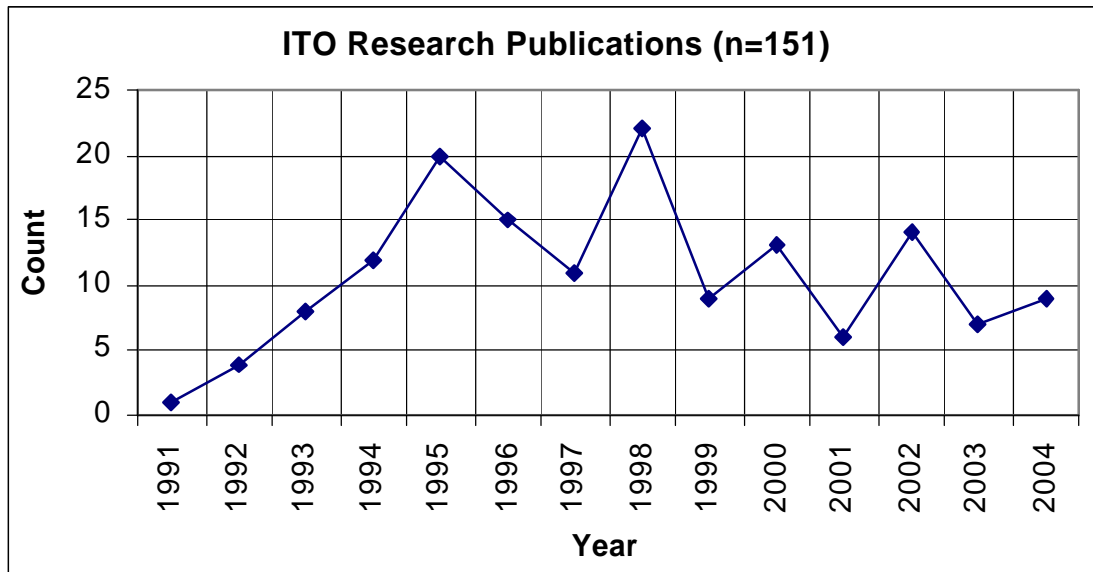
A final version of this paper will appear as Chapter 13 in Mansell, R. et al. Handbook on Information and Communication Technologies, Oxford (2006)

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## **Evolution and Critique Of The Literature**

IT outsourcing (ITO) has a long history stretching back to the 1960s. Computing power was expensive and many organizations bought data processing services from computer bureaux, often run by large IT manufacturers. Subsequently, as IT became relatively affordable, many organizations built their own IT capabilities. By 1989 some major corporations wondered whether this process had gone too far. The ITO literature as a genre got its official start in 1991 with studies of Eastman Kodak's landmark, large-scale outsourcing initiative (Applegate and Montealegre, 1991; Loh, and Venkatraman, 1992a), along with the first works around that time focused on software outsourcing (Whang, 1992; Ang and Beath, 1993). The early ITO studies (1991-1994) predominately concerned themselves with the identification of characteristics regarding firms that outsource, and this concern continues (Oh, 2005). In addition, the tradition of empirical work that still dominates ITO research began in 1993 with Huber's (1993) classic case study on Continental Bank and Lacity and Hirschheim's case studies (1993); along with the first ITO survey-based research (Heinzl, 1993). The first work on success in ITO began in 1994 (see Heckman and King, 1994) with the work focusing on satisfaction. Also during the period was the first of many studies on the impact of outsourcing on various variables, that of Loh and Venkatraman's (1992b) finding that stock prices in the US were positively affected by ITO announcements, still highly cited today.

There has been a steady stream of ITO research since that time, first peaking in 1995 and again in 1998. Figure 1 details the major academic studies in the 1991-2004 period appearing as books or articles published in top ranking journals. The most comprehensive review of the ITO literature by Dibbern et al (2004) list 212 references but many of these are not specifically IT outsourcing studies. We also leave out non-academic studies – of which there have been many, and the recently burgeoning parallel literature on business process outsourcing.



**Figure 1: ITO Research Chronology**

The years 1995 to 1998 were a defining period in ITO research growth, averaging 17 published studies a year from the sample - a period of research growth we have not experienced since, though ITO/BPO and offshore studies started in the 2004/5 period experienced a real acceleration. Much of the work performed during 1995-8 remains the cornerstone of current ITO research. For example Grover et al. (1996)'s success instrument, based in part on Parsuraman et al.'s (1988) SERVQUAL instrument, is still used today unchanged from its original form (see for example Lee et al. 2004).

This period began the flow of a wide variant of theories, assumptions, mixed findings, and contradictions that continues to time of writing (2006). Solutions to the many inconsistencies were a major plea to researchers from the two most comprehensive reviews of the ITO literature (Hui and Beath, 2002; Dibbern et al., 2004). Those wanting a more comprehensive analysis of the ITO literature are referred to these studies. Here we focus on the more limited aim of identifying four areas of inconsistency in the academic literature, before reporting on our own detailed findings from fifteen years of research in the area.

### **Defining Outsourcing**

ITO definitions abound, with little consistency or agreement in sight. Why do we need to understand how each study defines outsourcing? Simply because minor variants in

terminology can result in the study of different phenomenon, or of various subsets of the possible outsourcing population..

Some examples. Loh and Venkatraman (1992ab) kicked off an early definition of ITO as, “a significant contribution by external vendors in the physical and/or human resources associated with the entire or specific components of the *IT infrastructure* in the user organization”, which is still employed today (Oh, 2005). This definition emphasizes IT infrastructure, and could be interpreted to exclude applications development to which much ITO research has been devoted. However, the studies that employ the infrastructure definition either do not explicitly state any exclusions to this definition, or where they do (for example Grover, et al. 1996) appear to unintentionally exclude other phenomenon in the outsourcing population.

Some ITO definitions see it as involving a *transfer or turning over* of something to a vendor such as functions, assets, responsibilities, and/or people (Apte and Sobol, 1997; Cheon, et al. 1995). Consequently, if a researcher uses this definition, arguably outsourcing which did not involve a transfer would be excluded although no researcher adopting this definition makes this explicit. Here many non-transfer types of outsourcing would not be considered outsourcing. For example, in a survey of 235 organizations in Australia, only 27% involved staff transfers (Cullen and Willcocks, 2003). Therefore, a transfer-based definition restricts the study to a small subsection of the possible outsourcing population – in effect under 30%.

Other studies limit the definition of outsourcing to only those services or functions *previously conducted in-house* (Lacity and Hirschheim, 1993), thereby excluding work performed by third parties which had not been conducted previously by the client organization. Still others describe ITO as “commissioning”, or “contracting” a vendor to *run the organization’s resources* (Fitzgerald and Willcocks, 1994), inferring that the organization still owns the resources. But many possible variants of resource ownership occur and the client organization may not retain all or part of the resource base (assets, facilities, and staff). Lastly, others merely state that outsourcing is, “the provision of services by a vendor firm to a client” (Klepper and Jones, 1998), or “third-party provision of IT products and services” (Hancox and Hackney, 1999), hence *anything a third party can do for a firm*, echoing Williamson (1985).

## **Defining Types of Outsourcing**

ITO researchers have not standardized on definitions of types of ITO. Thus different perspectives on the phenomenon under study fall under a common label, despite there being no common terminology set in which to take and test ideas, constructs, or theories. For example, Millar (1994) describes value-added outsourcing as where the supplier is able to add value to the activity that could not be cost effectively provided in-house. Klepper and Jones (1998) describe it as an “intermediate” relationship characterized by complex work and substantial benefits. Lacity and Willcocks (2001) define it as when the parties combine to market new products and services. As another example, Currie (1998) identified “facility sharing” as sharing all the key tangible resources including facility, assets, and labour which Lee et al. (2004) identified as a “partnership”. But Lacity and Hirschheim (1993) defined partnerships as descriptors of negotiation techniques, power balancing, and a collection of intangible characteristics such as compatible cultures finding the term at odds with the actual contractual relationship, but without referring to the expression in terms of resource ownership as did Currie and Lee, et al. Grover et al. (1996) set up “partnership” as a mediating variable in their study. Partnership was defined as in terms of descriptive elements ranging from long-term commitment, sense of mutual cooperation, shared risk and benefits, as well as equal responsibility. Again, no one definition has been adopted. It is not surprising then, that Lacity and Willcocks (2001) found “partnerships” to be more unsuccessful, for which Lee, et al. (2004) found no support. If nothing else, ITO research needs a common dictionary.

As a result, studies offer conflicting advice regarding how firms should go about making outsourcing successful. For example, conflicting advice over long- versus short-term contracts abounds. Earl (1996) believes the uncertainty involving IT and the requirement to experiment in its application precludes having long-term contracts. Klepper and Jones (1998) argue that long-term contracts enable the supplier to learn about the organization and for the parties to establish mutual trust. Lee et al. (2004) note that in certain cultures, like South Korea, longer-term contracts are a reflection of the value that the culture places on long-term relationships. Lacity and Willcocks (1998) found that short-term contracts yielded greater cost savings. Lee et al. (2004) found the reverse. However, all these studies assume a *single-term*, which has not been the norm for some time.

Another example of conflicting advice regarding successful outsourcing structures is the degree of outsourcing performed. Lacity and Willcocks (2001) and Sambamurthy et al. (2001) suggest that “selective” is more successful than “total” outsourcing, the latter being where at least 80% of the IT budget is outsourced to a single supplier – the assumption being success is a function of exposed risk to a single supplier. Yet Lee et al. (2004) found selective sourcing to be no more successful than other degrees of outsourcing.

How is one to interpret such contradictory findings? One possibility is that success has been measured differently (therefore incomparably) in different studies. Another possibility is that it is a mistake to treat all ITO arrangements as instances of the same phenomenon: outsourcing involves a variety of choices that result in widely differing types and forms of arrangements.

There has been no definitive work on the different forms ITO takes. Many studies identify limited options, for example, Lacity and Willcocks (2001) in differentiating total outsourcing from selective outsourcing. Different functional or service scope has been well recognized with many studies on specific IT functions such as software outsourcing (Ang and Beath, 1993), ASP (Kern, et al. 2002) as well as more comprehensive studies (Ang and Straub, 1998; Oh, 2005). But all possible alternatives have not been brought together in a manner such that every study has a common base in which to refer to the type of outsourcing under study.

### **Defining Success**

We have long known that outsourcing success is hardly guaranteed (Lacity and Hirschheim, 1993). But each study regarding success, and advice on how to achieve it, is dependent on how the researcher defined “success”, “outcomes” and “benefits”, used interchangeably in the research, but, in meaning, varying considerably. For example, Grover et al. (1996) identified three categories: economic, technological, and strategic, which were further broken down into eight attributes. Domberger et al. (2002) performed a simple analysis of what drove a single attribute, “desired performance”. Lacity and Willcocks (2001), in their summary of experiences of 116 organizations, used three factors: objectives against results, cost reductions, and satisfaction. Lee et al.

(2004) used three dimensions: strategic competence, cost efficiency, and technology catalyst from the CIO's perspective. Not surprisingly, different perceptions of what constitutes successful outsourcing have yielded conflicting advice on the degree to which outsourcing practices have been successful.

### **Defining ITO Processes**

A decade of in-depth studies demonstrates that outsourcing cannot be contracted for and then not managed (Cullen and Willcocks, 2003; Dibbern, et al. 2004). Many researchers attempt to identify “best practices”, or processes that positively affect performance. However, all the studies we have reviewed look at ‘process’ merely as a means to provide background information, or descriptive information – process is not the primary purpose of the study. There is a great deal of practitioner literature advising clients as to the process to adopt when outsourcing (Klepper and Jones, 1998; Aalders, 2001). But these do not use any rigorous research methods and typically are based on a few case studies. Up to 2006, the only academic study that purposely set out to study the process and form a theory as to what process works best is Cullen (2005), which provides a comprehensive, and granular, framework describing the key management choices regarding the outsourcing process.

1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<ul style="list-style-type: none"> <li>• Applegate &amp; Montealegre</li> </ul>	<ul style="list-style-type: none"> <li>• Whang</li> </ul>	<ul style="list-style-type: none"> <li>• Loh &amp; Venkatraman (a, b, c)</li> <li>• Ang &amp; Beath</li> <li>• Heinzl</li> <li>• Huber</li> <li>• Reponen</li> <li>• Willcocks &amp; Fitzgerald</li> <li>• Lacity &amp; Hirschheim (a, b, c)</li> </ul>	<ul style="list-style-type: none"> <li>• Arnett &amp; Jones</li> <li>• Cullen</li> <li>• Fitzgerald &amp; Willcocks</li> <li>• Heckman &amp; King</li> <li>• Lacity, et al.</li> <li>• Loh</li> <li>• Millar</li> <li>• Quinn &amp; Hilmer</li> <li>• Wibbelsman &amp; Maiero</li> <li>• Willcocks &amp; Fitzgerald</li> <li>• Grover, et al. (a, b)</li> </ul>	<ul style="list-style-type: none"> <li>• Chaudhury, et al.</li> <li>• Grover, et al.</li> <li>• Clark, et al. &amp; Cronk and Sharp</li> <li>• Cross</li> <li>• De Looff</li> <li>• Jurison</li> <li>• Klepper (a, b) &amp; Lacity, et al.</li> <li>• Lacity &amp; Hirschheim</li> <li>• Lacity &amp; Willcocks</li> <li>• Loh &amp; Venkatraman</li> <li>• McFarlan &amp; Nolan</li> <li>• McLellan, et al.</li> <li>• Palvia</li> <li>• Sobol &amp; Apte</li> <li>• Teng, et al.</li> <li>• Willcocks &amp; Choi</li> <li>• Willcocks, et al.</li> </ul>	<ul style="list-style-type: none"> <li>• Aubert, et al.</li> <li>• Currie</li> <li>• Earl &amp; Goodstein, et al.</li> <li>• Grover, et al.</li> <li>• Gurbaxani</li> <li>• Heiskanen et al.</li> <li>• Lacity &amp; Willcocks (a, b)</li> <li>• Lacity, et al. (a, b)</li> <li>• Nam, et al.</li> <li>• Slaughter &amp; Ang</li> <li>• Willcocks, et al.</li> </ul>	<ul style="list-style-type: none"> <li>• Ang &amp; Cummings</li> <li>• Apte &amp; Sobol</li> <li>• Elitzur &amp; Wensley</li> <li>• Hu, et al.</li> <li>• Lacity &amp; Willcocks</li> <li>• Mitchell &amp; Fitzgerald</li> <li>• Saunders, et al.</li> <li>• Venkatraman</li> <li>• Wang, et al.</li> <li>• Willcocks &amp; Currie</li> </ul>	<ul style="list-style-type: none"> <li>• Ang &amp; Slaughter</li> <li>• Ang &amp; Straub</li> <li>• Aubert, et al.</li> <li>• Beath &amp; Walker</li> <li>• Chalos &amp; Sung</li> <li>• Currie</li> <li>• Currie &amp; Willcocks (a, b)</li> <li>• DiRomualdo &amp; Gurbaxani</li> <li>• Domberger</li> <li>• Duncan</li> <li>• Fowler &amp; Jeffs</li> <li>• Hirschheim &amp; Hirschheim &amp; Lacity</li> <li>• Klepper &amp; Jones</li> <li>• Lacity &amp; Willcocks (a, b)</li> <li>• Marcolin &amp; McLellan</li> <li>• Poppo &amp; Zenger</li> <li>• Smith, et al.</li> <li>• Willcocks &amp; Lacity</li> <li>• Willcocks &amp; Kern</li> </ul>	<ul style="list-style-type: none"> <li>• Aubert, et al.</li> <li>• Gallivan &amp; Oh</li> <li>• Hancox &amp; Hackney</li> <li>• Lacity &amp; Hirschheim</li> <li>• Lee &amp; Kim</li> <li>• Quinn</li> <li>• Sabherwal</li> <li>• Willcocks &amp; Lacity</li> <li>• Willcocks, et al.</li> </ul>	<ul style="list-style-type: none"> <li>• Bennett &amp; Timbrell</li> <li>• Dewire</li> <li>• Goo, et al.</li> <li>• Hirschheim &amp; Lacity</li> <li>• Kern &amp; Willcocks (a, b)</li> <li>• King &amp; Malhotra</li> <li>• Lacity &amp; Willcocks (a, b, c)</li> <li>• Lee, et al.</li> <li>• Schultze &amp; Boland</li> <li>• Useem &amp; Harder</li> </ul>	<ul style="list-style-type: none"> <li>• Barthélemy &amp; Geyer</li> <li>• Goles</li> <li>• Kern &amp; Willcocks</li> <li>• Kern et al.</li> <li>• Lacity &amp; Willcocks</li> <li>• Rouse, et al.</li> </ul>	<ul style="list-style-type: none"> <li>• Carmel &amp; Agarwal</li> <li>• Dibbern &amp; Heinzl</li> <li>• Domberger, et al.</li> <li>• Goles &amp; Chin</li> <li>• Hui &amp; Beath</li> <li>• Kern &amp; Willcocks (a, b)</li> <li>• Kern, et al.</li> <li>• Kern, et al.</li> <li>• Klein</li> <li>• Knolmayer</li> <li>• Seddon, et al.</li> </ul>	<ul style="list-style-type: none"> <li>• Hindle, et al.</li> <li>• Lacity &amp; Willcocks (a, b)</li> <li>• Lacity, et al.</li> <li>• Levina &amp; Ross</li> <li>• Susarla, et al.</li> <li>• Willcocks &amp; Plant</li> </ul>	<ul style="list-style-type: none"> <li>• Dibbern, et al.</li> <li>• Koh, et al.</li> <li>• Lee, at al.</li> <li>• Linder</li> <li>• Plant &amp; Willcocks</li> <li>• Willcocks &amp; Plant</li> <li>• Willcocks, et al. (a, b)</li> </ul>
1	4	8	12	20	15	11	22	9	13	6	14	7	9

**Table 1: The 151 case ITO study**

## **Information Technology Sourcing: Fifteen Years of Learning**

Having identified the difficult work still needed to synthesise the diverse definitions, approaches, foci of interest and findings across ITO studies so far, this chapter moves to a more constructive process of identifying the findings from a more limited but coherent and internally consistent stream of studies we have been conducting since the early 1990s. One key feature of this body of research is that we measured actual outcomes compared to expected outcomes in our 600 plus longitudinal case studies and six surveys. This enables us to draw conclusions as to the practices associated with success and failure and to analyze results over time. Based on this extensive research, the rest of the chapter summarises the findings. First we will comment on the degree of learning experienced in those fifteen years. Next we organise the research findings under four headings: assessing the portfolio, evaluating market options, crafting deals, and managing relationships. The key summary sources are Cullen (2005) Cullen and Willcocks (2003); Lacity and Willcocks (2001); Lacity, Willcocks and Cullen, (2007); Kern and Willcocks (2001); and Willcocks and Lacity (1998; 2006).

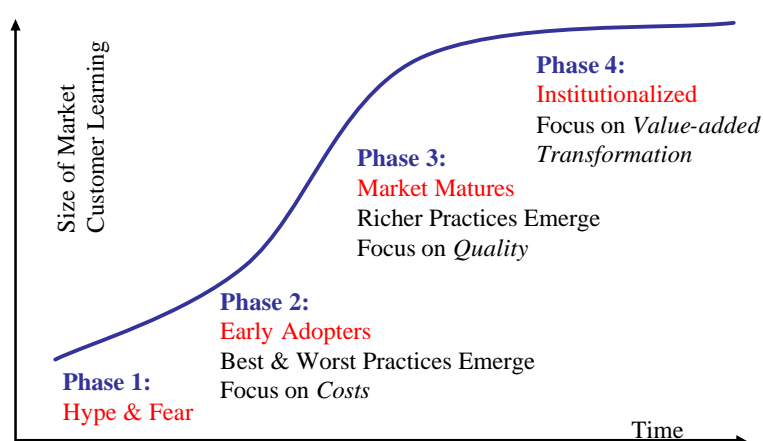
## **The Outsourcing Learning Curve**

Most of our participants were from large North American, European, and Australian companies and few approached outsourcing from a strategic perspective at the outset. Most organizations initially engaged in outsourcing for tactical reasons, such as seeking lower labour rates for staff augmentation on specific projects. Only after pilot tests were complete, supplier relationships established, and viability proven, did senior executives seek more radical and strategic uses of global resources. This incremental approach, we found, allowed organizations to gain experience with outsourcing options at an operational level before seeking more strategic objectives.

Figure 2 illustrates the typical customer learning curve for ITO and BPO approaches and more recent offshore variants. The learning curve is demonstrated through the typical learning of one particular outsourcing model, namely offshore outsourcing. The general mass

of organizations using ITO are weighted towards phase 3 and 4, with some organization on their third or fourth generation ITO, while most BPO and offshore clients, as at 2006, were much further down the learning curve.

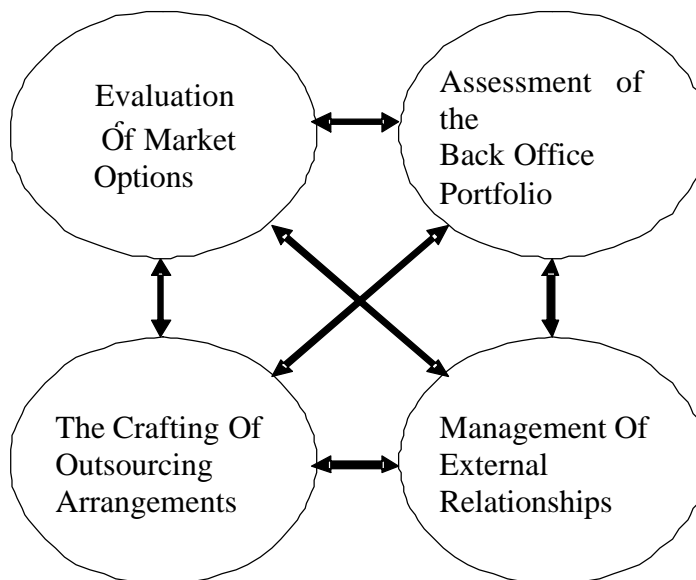
During Phase I, senior executives we interviewed became aware of offshore outsourcing through marketing hype ('you'll save 60% off your costs') or irrational propaganda ("Software: Will Outsourcing Hurt America's Supremacy<sup>j</sup>). Senior executives quickly learned about potential benefits, costs, and risks by talking to peers, consultants, and reading research. Most senior executives initially engaged in offshore outsourcing (Phase II) to seek lower costs, primarily through favorable labor arbitrage. During pilot testing, senior executives learned about the immense amount of in-house management required to effectively work with global suppliers and to achieve real cost savings. As learning accumulated, some senior executives moved to Phase III when they exploited global sourcing for quality as well as cost reasons. One phrase we heard over and over again from participants was, "we went for the price, we stayed for the quality."



**Figure 2: The Outsourcing Learning Curve**

More mature adopters in Phase IV used offshore outsourcing to strategically enable corporate strategies, such as increasing business agility, bringing products to market faster and cheaper, financing new product development, accessing new markets, or creating new business. These strategic initiatives often evolved over time. For example, a large U.S. Financial Services firm in 2005 used global sourcing of IT and back office functions primarily to enable strategic agility. It had captive centers in Manila and Mumbai, and various joint ventures and fee-for-service relationships with 14 Indian suppliers. During the refinancing boom, the company was able to beat competitors by quickly meeting the immense surge in demand for IT and business process services. As the refinancing boom burst, the company was able to immediately scale back resources. But it took them fifteen years to develop this well-oiled global network.

While at an aggregate level, the learning curve suggests a sequential progression, at the micro level, learning has been iterative and concurrent. Customers continually learned how to assess better their own service portfolio, evaluate suppliers' capabilities, craft contracts, and manage supplier relationships. Even within the same customer-supplier relationship, customers frequently revisited the scope of the deal and re-crafted contracts several times. This iterative learning process is reflected in Figure 3. In the next sections we look at each of these four areas in detail.



**Figure 3: Learning and Feedback in IT Sourcing**

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### **Assessment of the Back-Office Portfolio**

#### **IT As A Portfolio of Capabilities.**

We have increasingly found sourcing strategies beginning with the assumption that back-offices should be treated as a portfolio of activities and capabilities. Some IT activities must be kept in-house to ensure current and future business advantage and flexibility, while others may be safely outsourced. This portfolio perspective is empirically supported by our research findings that selective outsourcing decisions had a higher relative frequency of success than total outsourcing decisions<sup>ii</sup>. We defined the scope of sourcing options as:

**Total Outsourcing:** *the decision to transfer the equivalent of more than 80% of the function's operating budget for assets, leases, staff, and management responsibility to external providers.*

**Total In-Housing Sourcing:** *the decision to retain the management and provision of more than 80% of the function's operating budget internally after evaluating the services market.*

**Selective Outsourcing:** *the decision to source selected functions from external provider(s) while still providing between 20% and 80% of the function's operating budget internally.*

Selective outsourcing decisions have been generally successful during the past ten years, with 85% successes reported by 1995 and 77% reported by 2001<sup>iii</sup>. This relates to the finding that selective outsourcing is also the most common sourcing practice<sup>iv</sup>. The most commonly outsourced functions in IT were mainframe data centers, software development and support services, telecommunications/networks, and support of existing systems. The most commonly outsourced applications in human resources were payroll, benefits administration, and employee training and education<sup>v</sup>. In most cases, suppliers were judged to have an ability to deliver these products and services less expensively than internal managers. The ability to focus in-house resources to higher-value work also justified selective outsourcing.

Participants frequently encountered one or more of the following problems with total outsourcing:

- excess fees for services beyond the contract due to increase in user demand
- excess fees for services participants assumed were in the contract
- “hidden costs” such as software license transfer fees
- fixed-prices that exceeded market prices two to three years into the contract
- inability to adapt the contract to even minor changes in business or technology without triggering additional costs
- lack of innovation from the supplier
- deteriorating service in the face of patchy supplier staffing of the contract

In-house sourcing has remained generally successful (67% up to 1995, 76% up to 2001<sup>vi</sup>). We found, however, that success stemmed from the potential threat of outsourcing. Once empowered through the threat of competition, internal managers often had cost advantages over suppliers (such as no marketing expense, no need to generate a profit). In addition, they often had service advantages, such as knowledge of idiosyncratic business applications. These findings hold consistent with our more recent (2001-5) research (Willcocks and Lacity, 2006).

### **Core In-house IT Capabilities**

There are many frameworks and theories to help managers assess core capabilities to keep in-house. The most popular portfolio assessment models are based on theories such as resource dependency theory, agency theory, auction theory, game theory, institutional theory, and, by far the two dominant theories: transaction cost economics (TCE) and the resource-based view (RBV). In many ways, TCE is the ideal theoretical foundation because it specifically addresses make-or-buy decisions based on generic attributes of assets and describes appropriate ways to govern customer-supplier relationships. For example, transaction cost economics posits that transactions with high asset specificity (essentially customization), high uncertainty, and/or occur frequently are best managed internally, while the rest should be more efficiently outsourced<sup>vii</sup>. Indeed, a number of empirical outsourcing studies have found that asset specificity, the degree to which assets can be redeployed elsewhere without losing value, has been a significant factor<sup>viii</sup>. RBV has been the second theory most widely-applied to the outsourcing context<sup>ix</sup>. RBV suggests that managers keep valuable, rare, non-imitable, and non-substitutable strategic assets in-house<sup>x</sup>, while potentially outsourcing the rest. TCE and RBV are both valuable perspectives. They also guide managers to treat the entire business functions as a portfolio of transactions/capabilities--some which must be kept in-house, some which may be outsourced.

Our most direct assessment of IT as a portfolio has been the model developed by Feeny and Willcocks (1998)<sup>xi</sup>. By synthesizing research findings this suggests four broad categories

which customers must keep in-house, even if they intend to outsource nearly all of the IT (or another - e.g human resources, legal, procurement, accounting) function:

- Governance
- Eliciting and delivering business requirements
- Ensuring technical ability and architecture
- Managing external suppliers

Feeny and Willcocks suggest that these four essential tasks can be delivered by nine core capabilities. On the technical side, technical architecture and making technology work are vital. Business facing capabilities include relationship building and business systems thinking. External supply is managed through vendor development, contract facilitation, informed buying and contract monitoring capabilities, while leadership is required along with informed buying to support governance and coordination. Table 2 summarizes the activities to be kept in-house from three different perspectives.

<b>Transaction economics</b>	<b>Resource-based view</b>	<b>Core capabilities model</b>
<i>High asset specificity:</i> The physical or human assets are non-redeployable for alternative uses or users. The activities are so idiosyncratic & customized that keeping them in-house is less costly than outsourcing.	<i>Valuable:</i> activities can be used to exploit strategic opportunities or ward off threats	<i>Governance:</i> strategy, mission, and coordination
<i>High uncertainty:</i> activities cannot be clearly defined for effective third-party contracting. Threat of supplier opportunism is high unless customer incurs excessive transaction costs.	<i>Rare:</i> Few competitors offer the activities	<i>Business requirements:</i> understanding business needs as they relate to the service function (IT, HR, etc), and relationship building among management, users, and the service function
<i>High Frequency:</i> Transactions that occur frequently <u>and</u> are highly asset-specific are less costly if kept in-house.	<i>Non-imitable:</i> It is difficult or costly for competitors to imitate the activity	<i>Ensure technical ability:</i> The architecture operation may be outsourced, but the customer maintains control over architecture design.
	<i>Non-substitutable:</i> The activity has no immediate equivalents	<i>External supplier management:</i> Customers must make informed buying decisions, monitor and facilitate contacts, and seek added-value opportunities from suppliers.

**Table 2: Different Portfolio Assessment Perspectives: What core activities should be kept in-house?**

### **‘Best-Sourcing’ Of Non-Core Capabilities**

Once organizations identify core IT capabilities, it does not automatically follow that the remaining ‘non-core’ capabilities will be outsourced. We found that customers who considered additional business, economic, and technical factors relating to non-core capabilities were most frequently happy with their sourcing decisions<sup>xii</sup>.

A much more complex picture of ‘best-sourcing’ practice emerged. From a business perspective, some capabilities that are non-core today could become core in the future. Outsourcing this non-core function could well impede strategic exploitation in the future. For example, one of our case studies outsourced their web site design and hosting in 1995, which initially served as a marketing tool. As the web became increasingly important to their strategy, including online sales and customer service, the customer found their outsourcing relationship impeding the strategic exploitation of the web. It subsequently terminated the supplier at a significant switching cost and brought the function back in-house.

From an economic perspective, some non-core activities may well be more efficiently kept in-house. For example, several of our case study participants were willing to outsource their large data centers but could not find suppliers who could do it cheaper. From a technical perspective, some non-core capabilities are highly integrated with other core activities. This makes outsourcing extremely difficult, and we have many examples of organizations that run into difficulties as a result.

Assuming non-core capabilities pass these tests, we found clients still needing to evaluate the market options, in order to further validate an outsourcing model and to identify viable suppliers, as discussed in the next section.

### **Evaluation Of Market Options**

An important and ongoing sourcing process we identified was to keep abreast of market options, even where an organization was currently largely exclusively in-house. Recent work

(Feeny, Lacity and Willcocks, 2005) has identified twelve, potentially core, supplier capabilities along with practices in four general outsourcing models. These models are: Fee-for-service (time and materials or exchange-based), netsourcing, joint ventures, and enterprise partnerships (see Figure 3). These models are often blended, such as having a joint venture component to structure a shared risk and reward and a traditional outsourcing component for operational delivery. In general, we found each model most suited to particular types of activities, as discussed below.

### **Time and Materials Model**

Here, supplier capabilities are bought-in to supplement in-house capabilities under in-house management. A typical example is hiring consultants to help in-house teams implement customer relationship management (CRM) systems. Because requirements are uncertain, the customer cannot negotiate a detailed contract, and thus the variable price based on time and materials emerged as more appropriate. We found this time and materials model as the most common, and posing the least risk to customers.

<b>Model</b>	<b>Resource Ownership (Infra-structure &amp; People)</b>	<b>Resource Management</b>	<b>Customer/ Supplier Relationship</b>	<b>Typical Location of Supplier Staff</b>	<b>Typical Customer/ Supplier Contract</b>	<b>Activities most suited for this model</b>
<b>Fee for Service Outsourcing: Time &amp; Materials</b>	Supplier	Customer	one-to-one	Supplier staff on customer site	Time & Materials	Core or non-core capabilities; Customized products & services; Uncertain business or technical requirements
<b>Fee for Service Outsourcing: Exchange-based</b>	Supplier	Supplier	one-to-one or one-to-some	Mixed (some supplier staff on customer site, some staff centralized at supplier site)	Highly customized contract defining costs and service levels for that particular customer	Non-core capabilities; Customized products or services; Stable business & technical requirements
<b>Netsourcing</b>	Supplier	Varies	one-to-many	Supplier staff not on customer site	Generic contract specifying rental costs and very minimal service guarantees	Non-core capabilities; Standard products or services; Stable business & technical requirements
<b>Joint Ventures</b>	Venture	Supplier Investor	one-to-one:  Customer is both investor and first major customer	Mixed (some supplier staff on customer site, some staff centralized at venture)	Highly customized for operations delivery; broadly defined for revenue sharing	Customer non-core, supplier core capabilities; Significant market for venture's product & services  Frequently used to access offshore resources
<b>Enterprise Partnerships</b>	Partnership	Customer & Supplier	One-to-one	Mixed (some supplier staff on customer site, some staff centralized at venture)	Broadly defined for revenue Sharing, customized after partnership is formed	Customer non-core, supplier core capabilities; Significant market for venture's product & services  Used for large scale transform of large back offices

**Table 3: Suitability of Various Outsourcing Models**

### **Exchange-Based or Traditional Outsourcing Contracts**

Here, the customer pays a fee to the supplier in exchange for a customized product or service. In this model, the customer typically transfers its assets, leases, licenses, and personnel to the external supplier. The supplier manages the resources and provides back to the customer a set of products and services governed by a one-to-one contract.

In our early studies of IT outsourcing, we found that customers often had naive expectations about this model. For example, many customers expected to save 25% on IT costs by signing ten-year, fixed-price contracts for a set of baseline services they assumed would remain stable for the duration of the contract. Many customers subsequently re-negotiated, terminated, or switched suppliers mid-stream. For example, one 2000 survey found that 32% of respondents had terminated at least one IT outsourcing contract. Of those, 51% switched suppliers, 34% brought the function back in-house, and the remainder eventually reinstated their initial suppliers due to prohibitively high switching costs (Cullen and Willcocks, 2003).

Survey respondents generally provided a healthy report card for exchange-based outsourcing. Thus in one 2001 survey, respondents rated overall supplier performance as “good”, respondents realized some or most of the benefits they expected from outsourcing, and respondents characterized the majority of problems/issues as only “minor” in nature. This is explained by the scope and type of IT outsourcing practiced by responding organizations. The vast majority of respondents pursued selective outsourcing; most respondents also used multiple suppliers (82%) rather than a single supplier, which allows for best-of-breed supplier selection. These results may also be explained by the types of activities selected for outsourcing. For IT, respondents generally targeted stable, non-core IT activities such as such as disaster recovery, mainframe operations, network management, midrange operations, PC support, and help desk operations rather than IT development or IT strategy (Lacity and Willcocks, 2001).

### **Netsourcing**

Here, the customer pays a fee to the supplier in exchange for a standard product or service delivered over the Internet or other networks. Netsourcing promises to deliver best-of-breed, scalable, and flexible business applications to customer desktops for a low monthly fee based on number of users or number of transactions at the customer site. Customers can rent nearly all popular independent software vendor (ISV) products from netsourcing providers, including enterprise resource planning (ERP), customer relationship management (CRM), personal productivity and communications, e-commerce and e-business packages. Our early research (Kern et al., 2002) shows that this model is suited for customers wanting lower back-office costs at the expense of accepting standardized solutions.

The revenues generated in this space are still modest, less than \$3 billion annually in 2005. Our preliminary research on this space found that early adopters were mainly small to mid-sized enterprises<sup>xiii</sup>. These companies primarily netsourced standard applications such as email, communications, and personal productivity tools.

### **Customer-Supplier Joint Ventures**

In the joint venture model, the supplier and customer create a new company<sup>xiv</sup>. Deals are typically structured so that the customer investor provides personnel, becomes the venture's first major customer, and shares in future profits if the venture can attract external customers.

In the past, we found joint ventures between customers and suppliers often failed to attract external customers and the relationships were redefined as exchange-based. Examples include Delta Airlines and AT&T, Xerox and EDS, and UBS and Perot Systems. But in the offshore outsourcing space, joint ventures have been the preferred vehicle for large organizations to create a large offshore facility without the risks with a fully-owned captive center. Customers, such as MasterCard, CSC, Perot Systems, and TRW chose this model over a fully owned model to trade off some control in exchange for less risk. For example, MasterCard created a joint venture with Chennai-based Mpower Software Services called MPACT which had 250 employees performing IT work for MasterCard in 2005.

### **Enterprise-Partnerships**

The goal here is often to transform the back-offices of large organizations that have grown through mergers and acquisitions. We have tracked how old ITO and new start-up BPO suppliers have entered the new market space from 1999 offering to transform their larger customer's back offices through leadership, streamlined processes, and new technology (see Willcocks and Lacity, 2006).

For example, the UK-based company Xchanging created three joint ventures with customers, beginning in 2001. The first was a joint venture with British Aerospace (BAe) called Xchanging HR Services for BPO of human resource management. Becoming the venture's first customer, BAe signed a 10 year contract worth £250 million and transferred 430 HR employees to the venture. The second joint venture named Xchanging Procurement Services, also with BAe, provided BPO for procurement. Again, the venture's first customer was BAe, which signed a £800 million, ten-year contract. The third joint venture, with Lloyd's of London and the London insurance market generally, originally called Ins-sure, as at 2006 continued to provide policy and claims processing BPO. Lloyd's signed a 10 year contract worth £400 million with Ins-sure. In these three ventures, BAe and Lloyd's were guaranteed an undisclosed amount of cost savings on the business process and share in the ventures' future profits. In these deals, success will depend partly on Xchanging's ability to deliver on the contracts while simultaneously attracting external customers beyond BAe and the London insurance market .

### **Comparing Request-For-Proposal To Internal Bids**

During the last fifteen years, organizations that invited both internal and external bids had a higher relative frequency of success than organizations that merely compared a few external bids to current performance (89% by 1995, 83% by 2001 successful)<sup>xv</sup>. We believe that this was because formal external supplier bids were often based on efficient managerial practices that could be replicated by internal managers<sup>xvi</sup>.

In some cases, internal managers could not implement cost reduction tactics because the internal politics often resisted cost reduction tactics such as consolidating departments, reducing headcount, and standardizing processes and technology. Based on 85 case studies, we found that when customers allowed internal bid teams to compete with external suppliers, 83% of those decisions were successful. When no in-house bid was invited and existing costs were compared with 1 or 2 supplier bids, only 42% of those decisions were successful. The use of an internal bid team served to provide a baseline on what could be attained internally if the in-house staff was empowered to behave like a supplier, such as proposing unfavorable consolidation and standardization of technology (Lacity and Willcocks, 2001).

#### **Senior Management and Sourcing Decisions.**

Our case study and survey data both suggest that multiple stakeholder involvement and strong outsourcing performance are correlated. In our 2001 survey data, 68% of respondents had at least two stakeholders driving the decision, most frequently the back-office manager and lawyers or the back-office manager and senior executives. Our case study data shows that joint senior executive/back-office manager decisions or back-office managers acting alone had higher relative frequencies of success than senior executives acting alone (Lacity and Willcocks, 2001).

We defined decision sponsor as the person who initiated or championed the sourcing decision and who made or authorized the final decision. In our study, sourcing decisions made jointly with both senior executive and back-office manager input had the highest success rate (76% of joint decisions). It appears that successful sourcing decisions require a mix of political power and technical skills.<sup>xvii</sup> Political power helped to enforce the larger business perspective--such as the need for organization-wide cost cuts--as well as the “muscle” to implement such business initiatives. Domain expertise on back-office services, service levels, measures of performance, rates of service growth, and price/performance

improvements were needed to develop requests-for-proposals, evaluate supplier bids, and negotiate and manage sound contracts.

## **The Crafting Of Outsourcing Arrangements**

This section looks at how organizations craft outsourcing contracts, and with what results.

### **Exchange-Based Contracts Revisited**

Of the outsourcing models found in Table 3, the exchange-based model is still the most common model. But our data reveals there are several types of exchange-based contracts:

***Standard Contracts:*** the customer signed the supplier's standard, off-the-shelf contract. This is primarily restricted to the netsourcing space.

***Detailed Contracts:*** the contract included special contractual clauses for service scope, service levels, measures of performance, and penalties for non-performance.

***Loose Contracts:*** the contract did not provide comprehensive performance measures or contingencies but specified that the suppliers perform "whatever the customer was doing in the baseline year" for the duration of the contract at 10-30% less than the customer's baseline budget.

***Mixed Contracts:*** For the first few years of the contract, requirements were fully specified, connoting a "detailed" contract. However, participants could not define requirements in the long run, and subsequent requirements were only loosely defined, connoting a "loose" contract.

Detailed contracts achieved expectations with greater relative frequency than other types of contracts (75% of detailed contracts were successful). These organizations understood their own functions very well, and could therefore define their precise requirements in a contract. They also spent up to 18 months negotiating the details of contracts, often with the help of outside experts.

From our 2001 survey, customers included the following clauses in their detailed contracts:

- costs (100%),
- confidentiality (95%),
- service level agreements (88%),
- early termination (84%),
- liability & indemnity (82%),
- change contingency (65%), and
- supplier non-performance penalty (62%).

Increasingly, contracts have also included responsibility matrices which outline the responsibilities for both customers and suppliers. This innovation recognizes that suppliers sometimes missed service levels because of their customers' inaction.

No matter how detailed contracts become, changes in requirements occur. As at time of writing, many detailed contracts now have mechanisms of change, including:

- planned contract realignment points to adapt the contract every few years,
- contingency prices for fluctuation in volume of demand,
- negotiated price and service level improvements over time, or even
- external benchmarking of best-of-breed suppliers to reset prices and service levels.

In contrast to the success of the detailed contract, all seven of the loose contracts we studied were disasters in terms of costs and services. Two of these companies actually terminated their outsourcing contracts early and rebuilt their internal departments. Another company threatened to sue the supplier. Senior executives in these companies had signed flimsy contracts under the rhetoric of a "strategic alliance." However, the essential elements of a strategic alliance were absent from these deals. There were no shared risks, no shared rewards, and no synergies from complementary competencies nor any other of the critical success factors identified by researchers. Instead, these loose contracts created conflicting goals. Specifically, the customers were motivated to demand as many services as possible for

the fixed-fee price by arguing, “*You are our partners.*” Supplier account managers countered that their fixed-fee price only included services outlined in the contract. The additional services triggered supplier costs which were passed to the customer in terms of excess fees.

Six of the 11 “mixed” contracts we studied achieved expectations. The contracts contained either shared risks and rewards or significant performance incentives. A Dutch electronics company spun-off of the IT department to a wholly-owned subsidiary. Because the newly-formed company’s only source of revenue was from the electronics company, the venture was highly motivated to satisfy their only client's needs ( Lacity, Willcocks and Cullen, 2007).

### **Length Of Contract**

From the customer perspective, there is clear evidence that short-term contracts have higher frequencies of success than long-term contracts. From 85 case studies we studied, 87% of outsourcing decisions with contracts of three years or less were successful, compared to a 38% success rate for contracts eight years or longer. Short-term contracts involved less uncertainty, motivated supplier performance, allowed participants to recover from mistakes quicker, and helped to ensure that participants were getting a fair market price. Participants also only outsourced for the duration in which requirements were stable. Thus they could articulate adequately their cost and service needs. Some participants noted that short-term contracts motivated supplier performance because suppliers realized customers could opt to switch suppliers when the contract expired (Lacity, Willcocks and Cullen, 2007).

In contrast, long-term contracts have remained troublesome, with failure to achieve cost savings as the primary reason. As at 2006, we found that few total outsourcing mega-deals had reached maturity without a major stumbling block. Conflicts are increasingly being resolved through contract re-negotiations. Suppliers, however, have a clear preference for long-term relationships to recoup excessive transition and investment costs. Returning to The DuPont/CSC/AC deal, the transition activities lasted over 18 months as the contract was

operationalized in 22 countries to a population of nearly 100,000 users. The transition also included massive investments by one supplier in IT infrastructure, which the supplier could only recoup in a long-term deal. Clearly, the customer's incentives for short-term deals must be balanced with the supplier's incentives for long-term deals. The Dupont arrangements were subsequently restructured and renewed, with different terms and a different proportion of work to the suppliers, in 2003.

## **The Management Of External Relationships**

For all the sourcing models, there is an inherent adversarial nature in ITO and BPO contracts in that a dollar out of the customer's pocket is a dollar in the supplier's pocket. A knowledgeable, capable customer following good practices up to the point of signing the contract may well be sufficiently protected from the devastatingly negative consequences experienced in many early 1990s deals. If a supplier negotiates a favorable deal, it should be able to deliver on the contract and still earn a profit margin. But, as Kern and Willcocks (2001) detail, even under the most favourable circumstances, relationship management in outsourcing has emerged as difficult. Here we will mention from our consolidated research three areas where customers and suppliers found ways of improving the relationship dimension in their outsourcing arrangements.

### **Core Capabilities For Managing External Supply**

Earlier we listed nine core capabilities that need to be retained in-house. Of these, five are orientated toward managing external supply, including Leadership and Informed Buying. These two tend to be more strategic in orientation, but require relationship skills for dealing with senior executives and negotiators within suppliers. The remaining three involve key tasks, but also major skills in and time on relationship management at many different levels within the supplier.

Thus **contract facilitation** is the capability to provide a vital liaison role between the supplier and the customer's user and business communities to ensure supplier success. We found the role arising for a variety of reasons, for example to provide one stop shopping for the business user; the supplier or user demanded it; users were demanding too much and incurring excessive charges.

**Contract monitoring** is the capability to ensure that the supplier delivers on the contract. While the contract facilitator is working to 'make things happen' on a day-to-day basis, the contract monitor is ensuring that the business position is protected at all times.

**Vendor development** is the capability beyond the legal requirements of a contract to explore increasing ways the customers and suppliers can engage in win-win activities. It is in the customer's interest to maximize the contribution of existing suppliers and guard against what we call 'mid-contract sag' where minimal contractual commitments are met, but little else.

### **Relationship Dynamics**

Even with these capabilities in place, we found customer and supplier relationships sometimes troublesome, but the parties still tended to have a good relationship overall. Rather than seek to extinguish such troubles, the best relationships embraced the dynamics of these quite complex interactions. We identified four common types of customer-supplier interactions: adversarial, tentative, cooperative, and collaborative (Lacity and Willcocks, 2001). These are based on the extent of goal alignment for the task at hand:

- Tentative interactions occurred when goal alignments are unknown, such as during the bidding process. At such times, each side tended to exaggerate their strengths and hide their weaknesses.
- Adversarial interactions occurred when goals were conflicting, such as interpreting which party should pay for something ambiguously stated in the contract.

- Cooperative interactions occurred when goals were complementary, such as the customer wanted the service, the supplier wanted the payment.
- Collaborative interactions occurred when both sides had shared goals, such as educating the user community on what they could expect from the contract.

By attending to the expectations and goals of many outsourcing stakeholders, apparent anomalies in relationships could be clarified. Why, for example, did customer contract managers and supplier account managers *collaborate* to mediate user expectations, then feel perfectly comfortable *fighting* over a monthly bill? Quite simply, the dynamics of stakeholder relationships vary with the task.

### **Supplier Capabilities**

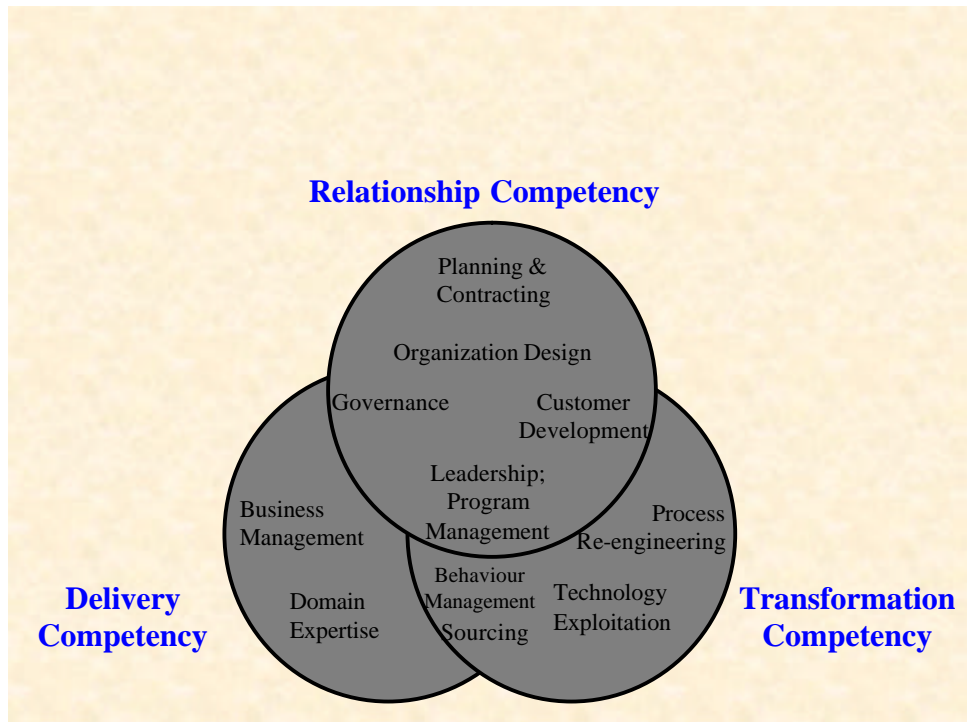
A major recent stream of our research has focused on an area much neglected in academic studies of outsourcing, namely supplier core capabilities. Depending on what is trying to be achieved, our work suggest that an outsourcing supplier needs three competencies. **Delivery** competency encompasses how well a supplier can respond to the client's requirement for day-to-day operational services. **Transformation** competency represents how well a supplier can radically improve and even transform cost, quality, and functionality in line with the client's formal and informal expectations. **Relationship** competency relates to the supplier's motivation and ability to align with client needs over time.

Our on-going work points to twelve capabilities needed to underpin these competencies (Feeny et al., 2005).

- Domain expertise – sufficient professional knowledge of the target process domain to meet user requirements
- Business management – ability to deliver both client service level agreements and supplier business and financial goals
- Behaviour management – ability to motivate and manage people, including transferees, to deliver service with a 'front office' mind-set.

- Sourcing – expertise and access to whatever resources are necessary to deliver service cost targets
- Technology exploitation – ability to develop and deploy technology required to meet service improvements swiftly and effectively.
- Process re-engineering – ability to design and implement changes to the service process to meet improvement targets
- Customer development – ability to transition ‘users’ of a service to ‘customers’ who make informed choices about service level and functionality
- Planning and contracting – ability to develop and contract for business plans which deliver ‘win-win’ results for client and provider over time
- Organizational design – ability to design and implement organizational arrangements which enable access to the capabilities required within the provider firm; and delivery of them where and when needed within the client.
- Governance- establishment and operation of processes which allow service performance to be defined and agreed, tracked and assessed over time.
- Programme management – ability to orchestrate and deploy transformational capabilities to successfully achieved required changes over time
- Leadership – ability to identify, communicate and ensure delivery of the mix of delivery, relationship and transformation activities to achieve present and future success for client and provider

Of these twelve, six capabilities emerged from our research as seeming to have major direct bearing on the quality of relationships achieved (see Figure 4).



**Figure 4:Core Capabilities In The Outsourcing Services Provider**

## **Conclusion**

The IT sourcing literature is already rich with much empirical survey and case research findings, but is still marked by inconsistencies, a plethora of concepts, research approaches, ambivalent terminology, and a lack of consistency and common focus across different research groupings. To some extent this reflects the relatively youthful state of IT sourcing research, and it could be concluded that the research has been remarkably productive, rigorous in many respects within individual studies, and also insightful in terms of the learnings achieved over time. One can posit that over time researchers will come to standardize much more, learn from each other's studies and begin to appreciate the real value in cross-research comparison and indeed of collaborative work.

As to the outsourcing phenomenon itself, we have consolidated our findings into a rich picture of evolution over fifteen years, from its origins as a relatively small IT services market in some sectors, through to the rise of selective multiple supplier sourcing as the consistently dominant approach in IT to the present day. At the same time, under semi-recessionary conditions in the developed economies, business process outsourcing and offshore variants of ITO and BPO have greatly increased their share of an ever expanding market for external business process and IT services. We conclude that organizational learning on outsourcing has on the whole been quite slow. It may well be that a lower risk approach, and a safer way to accumulate learning has been through incremental outsourcing, and that customers have adopted this outsourcing strategy precisely to develop in-house knowledge about outsourcing.

Having said that, we regularly find that organizations do not apply their learning well until their third or even fourth generation deals. While client organizations may have a history of outsourcing experiences to draw upon, the problem is change. First generation outsourcing clients often changed what they outsourced and how they outsourced the second and third times around. Each time, they found themselves in a relatively new situation, having to learn anew. Furthermore, if their knowledgeable people had left and had not been replaced, organizational learning could not occur until sometimes the fourth generation deal. At the same time people providing the service to a client also move on, and take with them valuable knowledge that cannot easily be replaced, and will no longer be applied to improving the specific outsourcing arrangement. One of our overall conclusions is that though customer and supplier maturity definitely looks set to evolve further in the next five years, we have seen few signs of the knowledge issues inherent in outsourcing IT and other back-office functions being addressed in the strategies and practices that these parties brought to bear in the outsourcing arena. By 2006 there were promising signs of some studies in this area appearing in the academic journals. But it remained to be seen whether practitioners themselves would, beyond intellectual property issues, start recognizing knowledge issues implicit in the act of outsourcing large parts of the back-office, let alone standardizing practices on ensuring key

retained knowledge, and on suppliers possessing and fully deploying complementary knowledge in the service of their customers.

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<sup>ii</sup> A detailed description of the research methodology was published in our findings reported up to 1995, which are updated to 2001 in this report:

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<sup>iii</sup> Op. Cit. Lacity and Willcocks (2001)

<sup>iv</sup> Other sample surveys on selective IT outsourcing can be found in:

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<sup>v</sup> Lawler et al, *Human Resources Business Process Outsourcing*, Jossey-Bass, San Francisco, 2004.

<sup>vi</sup> Op. Cit. Lacity and Willcocks (2001)

<sup>vii</sup> For a concise explanations of TCE, please see:

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<sup>viii</sup> Examples of empirical testing of TCT in IT context:

Ang, S. and Straub, D. 'Production and Transaction Economies and Information Systems Outsourcing – A Study of the US Banking Industry', *MIS Quarterly*, Vol. 22, 4, 535-552, 1998.

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<sup>ix</sup> Examples of empirical testing of RBV in IT outsourcing context:

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<sup>x</sup> For a concise explanation of the resource-based view, please see:

Barney, J., "Firm Resources and Sustained Competitive Advantage," *Journal Of Management*, Mar 1991; Vol. 17, Iss. 1; pg. 99-121.

<sup>xi</sup> Feeny, D. and Willcocks, L., "Core IT Capabilities For Exploiting Information Technology," *Sloan Management Review*, 39, 3, 1998, pp. 9-21.

<sup>xii</sup> Lacity, M., Willcocks, L. and Feeny, D. "The Value Of Selective IT Sourcing," *Sloan Management Review*, 37, 3, 1996, pp. 13-25.

<sup>xiii</sup> Kern, T., Lacity, M., Willcocks, L., Zuiderwijk, R., and Teunissen, W., *ASP Market-Space Report 2000: Mastering the Customer's Expectations*, CMG, The Netherlands, 2001, 57 pages.

<sup>xiv</sup> For more best practices on alliance management, please see:

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Kanter, R., "Collaborative Advantage, The Art of Alliances" *Harvard Business Review*, July-August, 1994, pp. 96-108.

Klepper, R., and Jones, Wendell, *Outsourcing Information Technology, Systems, and Services*, 1997.

<sup>xv</sup> Op. Cit. Lacity and Willcocks (2001)

<sup>xvi</sup> For a list of practices customers implemented themselves, see:

Hirschheim, R., and Lacity, M. "Information Technology Insourcing: Myths and Realities," *Communications of the ACM*, Feb. 2000, pp.99-107.

<sup>xvii</sup> For for the role of business executives as IT project champions, please see:

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