60

Sourcing Information Technology Services

60.1 Introduction

Information technology (IT) sourcing is the acquisition of resources, including human capital resources, to deliver IT services such as application development, application support, systems integration, data management, data center management, telecommunications and network management, and distributed computing (e.g., desktops, laptops, mobile devices, and resources on the cloud). In this chapter, we review the practice of and research on the sourcing of IT services. This chapter is organized around four topics: (1) IT sourcing decisions, (2) the determinants of IT sourcing decisions, (3) IT sourcing outcomes, and (4) the determinants of IT sourcing outcomes (see Figure 60.1).

IT executives make decisions about IT sourcing options and IT sourcing locations, and when outsourcing, decisions about multisourcing versus bundled services, and next-generation sourcing decisions when initial contracts approach expiration. Academic researchers have thoroughly studied the motivations, influence sources, and transaction attributes that determine sourcing decisions. Researchers have also thoroughly studied the outcomes of outsourcing. Overall, the academic evidence finds that outsourcing can deliver value to client organizations, but that it takes a tremendous amount of detailed management by clients and providers to realize expected benefits (Lacity et al. 2010a). Researchers have identified the transaction attributes, contractual governance, relational governance, client-retained capabilities, and provider capabilities that determine IT outsourcing (ITO) outcomes. Despite all that researchers do know about sourcing IT services, there are...
still gaps in knowledge and enduring practitioner challenges. Thus, the area of sourcing IT services remains an important topic for research.

### 60.2 IT Sourcing Decisions

The most fundamental sourcing decision is the “make-or-buy” decision (Williamson 1975). Should organizations insource or outsource IT services? In reality, the make-or-buy decision is more complex because there are many sourcing options, sourcing locations, and providers to be considered. For over a decade, we have argued that a better question is “How can organizations leverage the external services market for business advantage?” (Lacity and Willcocks 2001). Many IT academics, informed closely by both theory and practice, have good answers to this question. In this section, we discuss sourcing options, sourcing locations, and other decisions IT executives consider when sourcing IT services. These choices have different benefits and risks and may require unique practices to ensure positive outcomes.

#### 60.2.1 Sourcing Options

IT executives have numerous sourcing options to consider, including insourcing, staff augmentation, management consulting, shared services, traditional outsourcing, cloud computing, and joint ventures/partnerships (see Table 60.1). The IT sourcing options are not mutually exclusive; many IT organizations use many or even all of these options. Many internal shared services organizations, for example, rely heavily on outsourcing providers. Many client/provider relationships include both staff augmentation (price per full-time equivalent) and fee-for-service pricing components (Fersht et al. 2011). Many joint ventures also have fee-for-service components for the services the venture delivers to the client investor. IT executives provide a portfolio of IT services that, in turn, necessitate a portfolio of sourcing options.
Insourcing is still the most commonly pursued sourcing option. The annual Society of Information Management survey of Chief Information Officers (CIOs) conducted by Jerry Luftman typically finds that about 33% of an annual IT budget is for internal staff, compared to 9% for consulting services, 15% for domestic contractors/providers, and 3%–4% for offshore providers (Luftman and Kempaiah 2008; Luftman and Zadeh 2011). Increased use of external staff—both domestic and offshore—is growing and obviously gains more public attention than the quieter, yet larger, insourcing practice. Two scholarly works examined insourcing closely (Lacity and Hirschheim 1995; Hirschheim and Lacity 2000). We studied firms that examined the outsourcing market and decided to insource. In some of these firms, the sheer threat of outsourcing empowered IT executives to make sweeping—yet unpopular—changes to reduce IT costs on their own through consolidation, standardization, and rationalization of IT resources. The lesson for practitioners is that the external services market serves as a viable competitor that keeps in-house staff motivated.

With staff augmentation, an organization buys in low- to mid-level labor to supplement in-house capabilities. In any Fortune 500 company IT headquarters, up to 40% of the staff may be domestic contract laborers who work alongside IT employees. Organizations use a staff augmentation model to meet fluctuations in demand for IT work, to access scarce technical skills, and to avoid the HR headaches associated with employment. Staff augmentation is one of the most expensive options if IT executives buy labor from urban cities in developed countries. Staff augmentation is one of the least expensive options if firms buy labor offshore or from nonurban (rural) areas (Lacity et al. 2010b). Ang and Slaughter (2001) have one of the best studies comparing IT contractors to permanent employees. In a survey, they found that contract workers have lower levels of loyalty, trustworthiness, obedience, and performance than permanent workers. In interviews, they found that contract workers had lower task variety, identity, significance, autonomy, and feedback relative to permanent workers.

Management consulting is a short-term sourcing option in which an organization hires an advisory firm or consulting firm typically for help with new strategic initiatives, like creating a global standard enterprise resource planning (ERP) platform or developing a sourcing strategy. This sourcing option brings in external energy, signals clear commitment to the strategic initiative, and reduces political resistance. Although management consultancy has several major risks, the two most significant ones are potential cost escalation and lack of sustainability because the provider has no long-term commitment.

<table>
<thead>
<tr>
<th>Sourcing Options</th>
<th>Description</th>
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<tbody>
<tr>
<td>In-house provision; insourcing</td>
<td>A sourcing option in which the organization owns the IT assets and employs its own IT staff (Lacity and Hirschheim 1995; Hirschheim and Lacity 2000)</td>
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<tr>
<td>Staff augmentation; contract labor</td>
<td>A sourcing option in which an organization buys in low- to mid-level labor to supplement in-house capabilities; the client manages the people, usually at the client site (Ang and Slaughter 2001)</td>
</tr>
<tr>
<td>Management consulting</td>
<td>A sourcing option in which an organization buys in high-level expertise to supplement in-house capabilities (Lacity et al. 2003)</td>
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<tr>
<td>Shared services</td>
<td>A sourcing option in which an organization centralizes and standardizes IT delivery (Lacity and Fox 2008; Lacity and Willcocks 2012a)</td>
</tr>
<tr>
<td>Traditional outsourcing; fee-for-service outsourcing; exchange-based outsourcing</td>
<td>A sourcing option in which a client pays a fee to a provider in exchange for the management and delivery of specified IT services. The client is in charge of specifying needs and the provider is in charge of managing the resources to deliver those needs (Lacity and Willcocks 1998)</td>
</tr>
<tr>
<td>Cloud computing; netsourcing; application service provision</td>
<td>With this utility model, clients pay a usage-based fee to providers in exchange for services being delivered over a network, typically the Internet (Iyer and Henderson 2010; Willcocks et al. 2010b, 2011b)</td>
</tr>
<tr>
<td>Joint ventures; strategic partnerships</td>
<td>A specific type of contract entered into by two or more parties in which each agrees to furnish a part of the capital and labor for a business enterprise (DiRomualdo and Gurbaxani 1998; Lacity et al. 2003, 2004)</td>
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</tbody>
</table>
The result can be a lessened sense of accountability and a lack of alignment between the parties. Furthermore, expertise and knowledge may leave when the consultant leaves (Lacity et al. 2003).

**Shared service** is defined by Accenture as “the consolidation of support functions (such as human resources, finance, IT, and procurement) from several departments into a standalone organizational entity whose only mission is to provide services as efficiently and effectively as possible” (Accenture 2005). Shared service is one of the most important IT management trends and was listed as one of the seven habits of effective CIOs (Andriole 2007). The recent downturn in the economy has intensified the pressures for organizations in both the public and private sectors to reduce costs, shed headcount, and to do more and more with fewer resources. Shared services are seen as a powerful practice for relieving these pressures. Shared services offer the promises of lower costs, tighter controls, improved service levels, and scalability. Studies have shown, however, that not all organizations achieve the benefits they expect from shared services; many shared service initiatives take years to implement and result in meager cost savings (Lacity and Willcocks 2012a). Among all the advanced practices for successfully implementing shared services, change management may be the most important and the most lacking practice. Based on our case studies, we found that creating shared services requires a coordinated integration of four change programs: business process redesign (BPR), organizational redesign, sourcing redesign, and technology enablement (Lacity and Fox 2008; Lacity and Willcocks 2012a).

**Traditional outsourcing** is the most common form of outsourcing and has grown each year it has been tracked, with the exception of a slight dip in 2009. Gartner estimates that the global ITO market in 2012 is worth $309 billion and Booz Allen and Hamilton estimate that ITO is growing at 10% per year.* With this option, a client pays a fee to a provider in exchange for the management and delivery of specified IT services. The client is in charge of specifying needs, and the provider is in charge of managing the resources to deliver those needs. Much of the academic literature on ITO falls under this category, and there have been hundreds of published studies, which we reviewed in Lacity et al. (2010a). The fee-for-service model works best when (1) clients have a good understanding of their baseline service levels, costs, and volumes, (2) requirements are stable, (3) a capable provider is selected, and (4) the contract is designed to benefit both parties. However, fee-for-service contracts are notoriously inflexible, and changes are difficult to handle because client/provider incentives are not aligned. Change will usually harm one of the parties. In successful relationships, both parties resolve disputes caused by change by focusing on what is fair, rather than by what is designated in the contract (Lacity and Willcocks 2012b).

**Cloud computing** is the idea of buying IT services like a utility. The concept of buying IT as a utility service is not new—time sharing was indeed the first outsourcing model back in the 1960s. During the dot com boom, application service provision (ASP) was a business model in which providers hosted and rented standard applications to clients over the Internet. ASP was one way small organizations could access expensive software—like enterprise resource planning software by SAP or Oracle—while avoiding high infrastructure costs, support costs, or hefty software license fees. ASP burst when the dot com bubble burst. Clients liked the idea of renting rather than owning IT resources, but providers had difficulty generating revenues because the value of client contracts was too small, the duration of client contracts too short, the marketing costs to educate clients about ASP too high, the margins from reselling propriety software too thin, and the transaction costs of serving so many needy clients too high (Kern et al. 2002). Today, cloud computing is the reincarnated, supercharged version of ASP. Cloud computing is one of the fastest growing markets in the ITO/business process outsourcing (BPO) space. According to Gartner, cloud computing was a $68.3 billion industry in 2010. IDC and Harris and Nunn predict that cloud-based service revenues will grow globally between $44 billion and $60 billion in 2013. Gartner predicts it will reach $148.8 billion by 2014.

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Despite the tremendous public attention to cloud computing, it cannot achieve yet the plug-and-play simplicity of electricity (Willcocks et al. 2011b).

Joint ventures/strategic partnerships are not very common, but the scale and scope of these deals garnered significant media attention, particularly during the 1990s (DiRomualdo and Gurbaxani 1998). In joint ventures, the provider investor intends to sell the client’s assets or excess capacity to third parties and share the revenues with the client investor. Examples of these deals included Swiss Bank and Perot Systems, Commonwealth Bank and EDS, Xerox and EDS, and Delta Airlines and AT&T. These deals did not work as planned. The providers had their hands full just servicing the client investors’ operational needs. In addition, clients frequently oversold the value and portability of their assets. The IT deals we studied all reverted to fee-for-service relationships or were completely terminated. We found more success with joint ventures/strategic partnerships in other back office services including procurement, human resource management, claims, and policy administration (Lacity et al. 2003, 2004).

60.2.2 Sourcing Locations

IT executives have to make location decisions—where will IT staff be located? Options include domestic, offshore, nearshore, rural, or global (see Table 60.2). Location strategies may or may not involve outsourcing. For example, offshore may involve offshore outsourcing, joint ventures, strategic partnerships, or captive centers (insourcing). Location decisions are often based on a country’s business, financial, and human resource attractiveness. A country’s business attractiveness is the degree to which a country is attractive to organizations because of favorable business environmental factors such as economic stability, political stability, cultural compatibility, infrastructure quality, and security of intellectual property (IP) (e.g., Doh et al. 2009; Malos 2009). A country’s financial attractiveness is the degree to which a country is attractive because of favorable financial factors such as labor costs, taxes, regulatory, and other costs (e.g., Doh et al. 2009; Malos 2009). A country’s human resource attractiveness is the degree to which a country is attractive because of favorable people skills and availability factors such as size of labor pool, education, language skills, experience, and attrition rates (e.g., Mehta et al. 2006; Malos 2009).

A country’s attractiveness can change rapidly, as happened with the political upheavals in Egypt in 2011, which halted international investment in Egypt’s ITO services export market. For this reason, we have advised that clients base location decisions on the organization’s strategic objectives and overall commitment to certain destinations (Lacity and Rottman 2008). For example, one aerospace company selected Malaysia as their IT offshore destination because they hoped to sell planes in that country. The Malaysian government requires that some of the manufacturing be done in Malaysia, and the IT presence would certainly help to meet that requirement. Another hardware company selected China because they hoped to sell computers there. Other participants selected offshore locations where they have existing manufacturing or R&D facilities. The existing facilities serve as a launch pad, with current employees serving as guides to the country, providers, and culture (Rottman and Lacity 2006).

**TABLE 60.2 Sourcing Location Decisions**

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<tr>
<th>Sourcing Locations</th>
<th>Description</th>
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<tbody>
<tr>
<td>Domestic</td>
<td>IT service delivery center located in the same country as the client’s business users (Lacity and Rottman 2008; Oshri 2011)</td>
</tr>
<tr>
<td>Offshore</td>
<td>IT service delivery center located on a different continent than the client’s business users (Lacity and Rottman 2008; Oshri 2011)</td>
</tr>
<tr>
<td>Nearshore</td>
<td>IT service delivery center located in a nearby country (such as a U.S. client being serviced from a Canadian delivery center) (Carmel and Abbott 2007)</td>
</tr>
<tr>
<td>Rural</td>
<td>IT service delivery center located in a rural community (Lacity et al. 2011a)</td>
</tr>
<tr>
<td>Global</td>
<td>IT service delivery centers located in several countries (Willcocks and Lacity 2006)</td>
</tr>
</tbody>
</table>
Domestic location of IT staff is pursued when organizations value close proximity between business users and IT staff. Close physical proximity is associated with better service quality, faster response time, better domain understanding, easier communications, and lower transaction costs (Lacity and Rottman 2008). However, domestic staff—whether employees, contract labor, or domestic outsourcing—is the most expensive location option in high-cost locations like urban U.S. or U.K. cities.

Offshore location of IT staff is pursued when organizations seek lower costs, sunrise-to-sunrise services, access to IT talent, and/or geographical risk mitigation. Western-based organizations frequently select India, the Philippines, Eastern Europe, or China as offshore destinations, particularly for the lower cost and talent availability. The offshore outsourcing market has been estimated to be about $80 billion to $100 billion market, with India representing the largest share of IT and business service exports. Despite noise suggesting that India will lose its edge due to rising wages, the Everest Group (2011) predicts that India will maintain its lead for 12 years under a pessimistic scenario and for 23 years under an optimistic scenario. Preferred venues change based on a mix of location attractiveness factors, and a recent development has seen offshore venues such as India also re-outsourcing work to countries like Egypt and China. Research has found that locating staff offshore can deliver on many of its promised benefits (Lacity and Rottman 2008), but researchers have also found that offshore locations pose additional challenges when compared to domestic locations. For example, captive centers or offshore outsourcing are more challenging because of time zone differences (Carmel 2006), increased efforts in knowledge coordination (Kanawattanachai and Yoo 2007; Kotlarsky et al. 2008) and boundary spanning (Levina and Vaast 2008; Mahnke et al. 2008), the need for more controls (Choudhury and Sabherwal 2003; Lacity and Rottman 2008), cultural differences (Carmel and Agarwal 2001; Krishna et al. 2004; Carmel and Tjia 2005), defining requirements more rigorously (Gopal et al. 2002), and difficulties in managing dispersed teams (O’Leary and Cummings 2007; Oshri et al. 2007). Some of these issues are so difficult to manage that practitioners are turning to nearshore alternatives (Carmel and Abbott 2007).

Nearshore location of IT staff is pursued when the organization expects to benefit from one or more of the following constructs of proximity: economic, geographic, temporal (time zone), cultural, linguistic, political, and historical linkages (Carmel and Abbott 2007). Nearshore locations are selected primarily because of lower costs, but may be preferred to “offshore” because the proximity requires less time and money to travel and provides time zone overlap between the business and IT services organizations. For U.S. organizations, the North American Free Trade Agreement (NAFTA) facilitates nearshoring because it is easier to obtain visas from NAFTA partners than it is to obtain visas for India-based staff (Carmel and Abbott 2007).

Rural location of IT staff is an emerging niche trend in several countries, including the United States, India, China, and Israel. We estimated the US ITO “pure-play” rural outsourcing market to be about $200 million in 2011 (Lacity et al. 2011a). The Rockefeller Foundation sizes the global impact sourcing market—which is primarily a rural market—at $4.6 billion in 2010 (Lacity and Willcocks 2012a). The main appeals of rural locations are lower wages and higher retention rates because few or no competitors exist to poach talent. Within the United States, rural locations can reduce IT costs by up to half compared to urban locations like New York City (Lacity et al. 2010b). In India, despite the global economic recession, global demand for Indian ITO and BPO services is still very strong and consequently Indian providers are still experiencing 14%-22% turnover in urban areas (The Everest Group 2011). By building delivery centers in Tier 3 cities, Indian organizations achieve lower costs and attrition rates. Chinese providers also cited lower costs, but not necessarily lower attrition rates, by locating in Tier 3 cities. Specifically, they reported that labor costs are up to 50% lower and real estate costs are 70%-90% lower in Tier 3 cities compared to Tier 1 cities (Lacity et al. 2011a). The major downsides of rural locations are scalability and workforce availability.

Global location, having IT service delivery centers located in several countries, is the norm for large, international companies. Large global companies locate IT services globally using a combination of sourcing options discussed earlier, including captive centers, fee-for-service outsourcing, and joint partnerships. One U.S. global financial services company we studied has various captive centers, joint ventures, and
fee-for-service relationships with 14 Indian providers. This network of providers enabled the company to quickly adapt to the immense surge in mortgage applications during the refinancing boom. As the refinancing boom burst, the company was able to immediately scale back resources—all without affecting their domestic IT headcount (Lacity and Rottman 2008). Global outsourcing providers like Accenture and IBM can provide vast geographic coverage for their clients. For example, our current research on high-performance BPO is studying how Accenture provides Microsoft with coverage in 94 countries and 37 languages.

60.2.3 Other Outsourcing Decisions

If IT executives decide to outsource, there are two additional decisions that follow: How many providers? What do we do when the contract expires? As an existing outsourcing contract approaches maturity, organizations must decide what to do next: renegotiate with the incumbent provider, switch providers, bring the service back in-house, or terminate the service altogether (see Table 60.3).

Multisourcing or bundled services. When outsourcing, organizations also have to decide about the number of providers to engage. Multisourcing has the advantages of choosing best-of-breed providers, mitigating the risks of relying too much on one provider, and helping clients adapt in changing environments. Multisourcing has several disadvantages, including increased transaction costs as organizations manage more providers, interdependencies, and interfaces (Lacity and Willcocks 2001). The major advantages of bundled services from a single provider include simplified procurement, simplified governance, fewer transaction costs, and economies of scale and scope. But bundled services increase switching costs and the risks of relying on one provider (Willcocks et al. 2010a; Lacity and Willcocks 2012a).

Next generation. Most ITO clients are in their second, third, and even fourth generation of ITO relationships. As contracts begin to mature, organizations need to decide what to do next. Should they renegotiate a contract with the incumbent provider? Switch providers? Backsource by bringing the IT function back in-house? In one of our early surveys of U.S. and U.K. CIOs, we found that 32% of client organizations had canceled one or more outsourcing contracts. Of these half-switched providers, one-third brought the IT service back in-house and 11% ended up renegotiating the contract with the incumbent provider due to prohibitive switching costs (Lacity and Willcocks 2001). More recently, Willcocks et al. (2011a) surveyed Australian CIOs and found that 65% renegotiated with the incumbent, 30% switched providers, and 5% backsourced. In Willcocks et al. (2011a), the authors prescribe how CIOs prepare for the next generation based on hundreds of case studies.

60.3 Determinants of IT Sourcing Decisions

In addition to studying the types of sourcing decisions organizations make, academics have thoroughly studied the determinants of sourcing decisions, including the motives, transaction attributes, and influence sources (see Figure 60.1). These determinants are introduced later (see Lacity et al. 2010a for deeper coverage).

60.3.1 Motives for Sourcing Decisions

Researchers have studied at least 27 motives or reasons driving sourcing decisions. The most frequently found motives are listed in Table 60.4. Research has consistently found that sourcing decisions are
Managing Organizational Information Systems and Technology Capabilities

primarily driven by the need to reduce overall IT costs, usually by at least 10%–15% (IAOP 2010; Lacity et al. 2010a). Research has also found that the greater the fear of losing control of the service, concern for security, or fear of losing IP, the more likely an organization chose insourcing. Besides cost savings, research has found that organizations expect ITO to deliver a number of additional business benefits, including one or more of the following: ability to redirect in-house staff on more strategic activities, access to scarce skill sets, service quality improvements, business process improvements, and technology improvements (Lacity et al. 2010a).

60.3.2 Transaction Attributes

Researchers have examined at least 14 transaction attributes as potential determinants of IT sourcing decisions. Four attributes were commonly found to drive IT sourcing decisions: uncertainty, critical role of IT, transaction costs, and business risks (see Table 60.5). Higher values for any of these transaction attributes were associated with higher frequencies of insourcing (Lacity et al. 2010a).

60.3.3 Influence Sources

Researchers have studied the extent to which mimetic, normative, and coercive influences determine sourcing decisions within organizations. Among these, only mimetic influences were repeatedly examined and found to significantly influence sourcing decisions. Mimetic influences are influences that

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<tr>
<th>TABLE 60.4 Top Motives for Sourcing Decisions</th>
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<tr>
<td>Sourcing Motives</td>
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<tr>
<td>Cost Reduction</td>
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<tr>
<td>Focus on Core Capabilities</td>
</tr>
<tr>
<td>Access to Skills</td>
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<tr>
<td>Business/Process Improvements</td>
</tr>
<tr>
<td>Technical Improvements</td>
</tr>
<tr>
<td>Political Reasons</td>
</tr>
<tr>
<td>Concern for Security/IP</td>
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<tr>
<td>Fear of Losing Control</td>
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<tr>
<th>TABLE 60.5 Transaction Attributes Affecting Sourcing Decisions</th>
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<tbody>
<tr>
<td>Transaction Attributes</td>
</tr>
<tr>
<td>Uncertainty</td>
</tr>
<tr>
<td>Critical role of IT</td>
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<tr>
<td>Transaction costs</td>
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<tr>
<td>Business risk</td>
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arise from the perception that peer organizations are more successful and by modeling themselves based on peer organizations, the mimicking organization aims to achieve similar results (e.g., DiMaggio and Powell 1991; Ang and Cummings 1997). In the ITO context, researchers found that client organizations were influenced to outsource IT based on peer institutions that successfully outsourced IT (Lacity et al. 2010a).

Researchers have also examined the determinants of next-generation decisions. Whitten and Leidner (2006) found that both economic and relationship constructs are important determinants of second-generation outsourcing decisions. Clients renewing contracts report high levels of product quality, service quality, relationship quality, and switching costs. Clients that switched providers report high product and service quality but low relationship quality and switching costs. Clients that brought back IT in-house report low levels on all four variables.

### 60.4 IT Sourcing Outcomes

Many researchers have examined the outcomes of ITO and the determinants of ITO outcomes. In contrast, we are aware of only two studies that examined the effects of insourcing decisions—the decision to source IT services in-house after examining outsourcing options (Lacity and Hirschheim 1995; Hirschheim and Lacity 2000). We conducted 14 in-depth U.S. client case studies on organizations that examined but rejected outsourcing. We wanted to know: Did the internal IT organization change as a consequence of the insourcing decision? Among the 14 cases, two companies backsourced IT services after terminating outsourcing contracts. In both backsourcing cases, IT service levels improved, but IT costs rose in one backsourcing case and IT costs remained the same in the other backsourcing case. In three client organizations, no changes in IT performance resulted from the insourcing decision. However, in nine client companies, IT performance significantly improved. IT costs were reduced between 20% and 54% by replicating provider practices such as centralization, standardization, and rationalization. Business users accepted the drastic changes implemented to achieve such cost savings because they realized that if the internal IT organization did not implement these changes, an outsourcing provider would. The message was: the devil you know is better than the devil you do not know.

In contrast to the small academic literature on insourcing outcomes, hundreds of academic studies have examined outsourcing outcomes. Most of this research is based on large-sample surveys of outsourcing clients or in-depth case studies at client sites. Across these studies, researchers have used many different types of measures to examine the outcomes of outsourcing. The most frequently used measures include outcomes that capture a client’s general perceptions of the success or level of satisfaction with outsourcing in general or with offshore outsourcing in particular, perceptions of the quality of relationships, and the effects of outsourcing on a client organization’s business performance, such as improvements in stock price performance, return on assets, expenses, or profits after outsourcing (Lacity and Willcocks 2012b). By aggregating findings from both qualitative and quantitative studies in Lacity et al. (2010a), we reported the following: IT outsourcing decisions resulted in positive outcomes in 63% of the findings, negative outcomes in 22% of the findings, and no changes in performance as a consequence of outsourcing were reported in 15% of the findings. Many people might consider this statistic quite disappointing because only 63% of ITO engagements were considered positive by clients. The good news is that scholars have studied the determinants of ITO outcomes. We thus have a strong understanding of the practices that differentiate positive from negative outcomes.

### 60.5 Determinants of ITO Outcomes

Based on our review of the empirical ITO research, we extracted what we call robust practices, practices that have been academically tested and proven to be effective. These practices are grouped into five categories: transaction attributes, contractual governance, relational governance, client-retained capabilities, and provider capabilities (see Figure 60.1).
60.5.1 Transaction Attributes

ITO researchers have studied 17 transaction attributes to determine whether outsourcing certain types of transactions was more or less likely to result in positive outcomes (Lacity et al. 2011a). For example, ITO researchers have asked, “Are large or small transactions likely to result in positive outcomes?” and “How does task complexity affect outcomes?” Overall, only two transaction attributes were repeatedly tested and found to affect ITO outcomes: uncertainty and measurement difficulty. Both of these transaction attributes are negatively and significantly related to ITO outcomes. These two transaction attributes are derived from Transaction Cost Economics (Coase 1937; Williamson 1975, 1991a,b). Of the 15 times uncertainty was studied, 12 times (80%) researchers found that uncertainty adversely affected ITO outcomes (e.g., Barthélemy 2001). Measurement difficulty was examined seven times and was found to adversely affect ITO outcomes six times (86%) (e.g., Poppo and Zenger 2002; Table 60.6).

60.5.2 Contractual Governance

Contractual governance is the formal, written rules that govern client–provider relationships. In scholarly works we reviewed, contractual governance was operationalized most frequently as degree of contract detail (e.g., the types of clauses, number of service-level agreements), contract duration, contract value, and contract type (e.g., fixed price, time, and materials). Substantial evidence finds that (1) more detailed contracts, (2) shorter-term contracts, and (3) higher-dollar-valued contracts are significantly associated with positive outsourcing outcomes (Lacity et al. 2010a,b). Detailed contracts that defined the scope of services, prices, service levels, and responsibilities of both parties and prescribed how parties would adapt to changes in character, volume, or market best practices had better outsourcing outcomes than contracts with fewer details. Shorter-term ITO contracts in the 3–5 year range experienced successful ITO outcomes more frequently than contracts with greater than 5 year duration. Higher-valued contracts perform better than lesser-valued contracts because the transaction costs associated with outsourcing are spread over a greater volume of work.

Contract type is a term denoting different forms of contracts used in outsourcing. Examples from the ITO literature include customized contracts, fixed-price contracts, time and materials contracts, fee-for-service contracts, and partnership-based contracts. ITO researchers used different categories of contracts across studies. For example, Lacity and Willcocks (1998) used three categories and found that clients who signed fee-for-service contracts had higher rates of success than clients who signed strategic alliances or loose contracts. In Lacity and Rottman (2008), we found that different contracts incent providers differently. In the offshore context, clients found that time and materials contracts produced better work, but at considerable expense to the client. Providers were not pressured to take shortcuts in order to protect their profit margins as they were with fixed-price deals. Also, some providers placed new employees on client accounts because the client subsidizes the employee’s learning curve with time and materials contracts. Ironically, provider employees who are unproductive take more hours to complete tasks, which generates greater provider revenues. In Gopal et al. (2003), contract type was a categorical variable (either fixed price or time and materials) and the authors found that requirements uncertainty

<table>
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<tbody>
<tr>
<td>Uncertainty</td>
<td>The degree of unpredictability or volatility of future states as it relates to the definition of IT requirements, emerging technologies, and/or environmental factors (e.g., Williamson 1991b; Poppo and Zenger 2002; Aubert et al. 2004)</td>
</tr>
<tr>
<td>Measurement difficulty</td>
<td>The degree of difficulty in measuring performance of exchange partners in circumstances of joint effort, soft outcomes, and/or ambiguous links between effort and performance (e.g., Eisenhardt 1989)</td>
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Sourcing Information Technology Services

60.5.3 Relational Governance

Relational governance comprises the informal rules that manage client–provider relationships. In scholarly works we reviewed, relational governance was operationalized most frequently as effective knowledge sharing, communication, trust, and viewing the provider as a partner (see Table 60.8). In 94% of the findings, the research showed that higher levels of relational governance were associated with higher levels of outsourcing success (Lacity et al. 2010a,b). In some ways, the findings are trivial. Few people would argue that withholding knowledge, closed communications, or distrusting providers would lead to better outsourcing relationships. A more interesting research finding is that contractual governance and relational governance serve as complements, in that both need to be strong to produce positive outsourcing outcomes (Saunders et al. 1997; Sabherwal 1999; Poppo and Zenger 2002; Wülmenweber et al. 2008; Goo et al. 2009). In general, contractual governance and relational governance are not substitutes in that a poorly crafted contract cannot be overcome with friendly, communicative, and trusting account managers. Poor contracts, we have found, can make for poor relationships (Lacity et al. 2010a,b; Lacity and Willcocks 2012a).

60.5.4 Client-Retained Capabilities

Research has found that clients must learn to manage differently after outsourcing in order to achieve expected benefits (see Table 60.9). Clients must become good at managing providers by shifting their capabilities from managing resources and processes to managing inputs and outputs. This is not an easy transition for many clients. The supplier management capability was often found to be lacking in client organizations and seen as a major reason to explain negative outsourcing outcomes. Clients also need a strong contract negotiation capability, which is frequently supplemented with the aid of advisory firms.

<table>
<thead>
<tr>
<th>TABLE 60.7 Contractual Governance</th>
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<tbody>
<tr>
<td>Contractual Governance</td>
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<tr>
<td>Contract detail</td>
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<tr>
<td>Contract duration</td>
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<td>Contract value</td>
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<td>Contract type</td>
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was associated with time and materials contracts. They also found that supplier profits were higher for time and materials contracts than for fixed-price contracts (Table 60.7).
Technical and methodological capability is another important client-retained capability. Technical and methodological capability is an operational capability needed by both parties in order to coordinate work effectively. Clients must learn to understand, accept, and adapt to cultural differences between themselves and their providers (cultural distance management capability). A client also needs to be able to identify, rate, and mitigate potential risks associated with outsourcing (risk management capability).

Other client capabilities have also been identified as affecting outsourcing decisions and outcomes: absorptive capacity, client outsourcing readiness, change management capability, human resource management capability, and transition management capability (Lacity et al. 2010a). Clearly outsourcing is not about abdicating management responsibility, but about managing differently.

### 60.5.5 Provider Capabilities

Which provider capabilities contribute to positive outsourcing outcomes? The three most frequently studied and most important provider firm capabilities were human resource management capability, technical and methodological capabilities, and domain understanding (see Table 60.10). A provider’s ability to identify, acquire, develop, and deploy human resources to achieve both provider’s and client’s organizational objectives was found to positively and significantly affect client outcomes 95% of the time it was examined. Clients often engage providers because of their superior human resources in terms of both number and quality of staff. The provider’s technical and methodological capability was

### TABLE 60.9 Client-Retained Capabilities

<table>
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<tr>
<th>Capability</th>
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<tbody>
<tr>
<td>Supplier management capability</td>
<td>The extent to which a client organization is able to effectively manage outsourcing providers (e.g., Feeny and Willcocks 1998; Willcocks et al. 2007)</td>
</tr>
<tr>
<td>Contract negotiation capability</td>
<td>The extent to which a client organization is able to effectively bid, select, and negotiate effective contracts with providers (e.g., Feeny and Willcocks 1998)</td>
</tr>
<tr>
<td>IS technical/methodological</td>
<td>A client organization’s level of maturity in terms of technical- or process-related standards including the Capability Maturity Model (CMM), Capability Maturity Model Integrated (CMMI), and the Information Technology Infrastructure Library (ITIL) and best practices such as component reuse (e.g., Davenport 2005; Rottman and Lacity 2006; Kotlarsky et al. 2007)</td>
</tr>
<tr>
<td>Cultural distance management</td>
<td>The extent to which client and provider organizations understand, accept, and adapt to cultural differences (e.g., Winkler et al. 2008)</td>
</tr>
<tr>
<td>Risk management capability</td>
<td>A client organization’s practice of identifying, rating, and mitigating potential risks associated with outsourcing (e.g., Smith and McKeen 2004)</td>
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### TABLE 60.10 Provider Capabilities

<table>
<thead>
<tr>
<th>Capability</th>
<th>Description</th>
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<tr>
<td>IS human resource management</td>
<td>A provider organization’s ability to identify, acquire, develop, and deploy human resources to achieve both provider’s and client’s organizational objectives (e.g., Levina and Ross 2003)</td>
</tr>
<tr>
<td>IS technical/methodological</td>
<td>A provider organization’s level of maturity in terms of technical- or process-related standards including the CMM, CMMI, and ITIL and best practices such as component reuse (e.g., Levina and Ross 2003)</td>
</tr>
<tr>
<td>Domain understanding</td>
<td>The extent to which a provider has prior experience and/or understanding of the client organization’s business and technical contexts, processes, practices, and requirements (e.g., Clark et al. 1995; Gopal et al. 2002)</td>
</tr>
</tbody>
</table>
the second most frequently studied capability, and it was found to affect outcomes positively. Domain understanding is the extent to which a provider has prior experience and/or understanding of the client organization’s business and technical contexts, processes, practices, and requirements. Other provider capabilities were also found to be important: client management capability, managing client expectations, supplier employee performance, risk management capability, security, privacy and confidentiality capability, supplier’s core competencies, absorptive capacity, environmental capability, and corporate social responsibility capability (Lacity et al. 2010a). Providers are unlikely to excel in all of these areas, but better capabilities lead to better outcomes.

### 60.6 Research Opportunities

Despite the maturity of IT sourcing research, academics still have opportunities to advance the theory and practice of IT sourcing. In Lacity et al. (2010a), we identified nine gaps in IT sourcing knowledge. We called for more studies on (1) strategic sourcing decisions, (2) strategic sourcing outcomes, (3) dynamic interactions between client and provider firm capabilities, (4) environmental influences on sourcing decisions and outcomes, (5) configurational and portfolio approaches, (6) alternative locations, (7) emerging trends and models like cloud computing, (8) informing discipline theories, and (9) developing endogenous ITO theories. Pertaining to the last two gaps, ITO studies are highly informed by reference theory disciplines, particularly theories from economics (e.g., transaction cost economics, agency theory), management (e.g., resource base view, institutionalism), and sociology (e.g., social exchange theory, social capital theory). Many of these theories fail to adequately explain ITO phenomena—a debate that has been thoroughly discussed in a number of sources, including Lacity and Willcocks (2009), Lacity et al. (2011b), and Karimi Alaghehband et al. (2011).

ITO researchers have found so many anomalies that are counter to TCE logic in the ITO context, that we believe it is more fruitful to develop a theory specific to ITO. We analyzed the TCE anomalies in the ITO context and categorized them by research methods explanations, boundary conditions explanations, TCE assumption violations, and alternative theory explanations. With research method explanations, ITO researchers do not assume that their data provide evidence counter to TCE logic but instead attribute lack of empirical support of TCE to measurement problems, or to some TCE effects overpowering other TCE effects. Boundary condition explanations attribute lack of empirical support of TCE to the distinctive context of ITO, such as the distinctive nature of IT, the distinctive research setting (e.g., such as public sector IT), or the distinctive attributes of the data collected. TCE assumption violation explanations argue that TCE’s explicit or implicit assumptions are unsupported. TCE is based on two explicit behavioral assumptions: bounded rationality and opportunism (Williamson 1991a) and ITO authors found evidence that TCE behavioral assumptions were violated in ITO context (Lacity and Willcocks 1995; Tiwana and Bush 2007; Dibbern et al. 2008). Finally, alternate theory explanations suggest that other theories are more powerful in explaining ITO. Based on so many anomalies in the ITO empirical tests of TCE, we argued that we are asking too much of TCE—the ITO phenomenon is more complex than can be accommodated by one decision-making theory.

In Lacity et al. (2011b), we further developed the idea of an endogenous ITO theory by arguing that such a theory should be based on three assumptions. (1) We assume that stakeholder alignment must be actively and aggressively designed anew in the face of ITO. (2) We assume that managerial practices such as standardization, centralization, and tight controls contribute more to IT costs than economies of scale. (3) We assume that history matters; merely using the transaction as the unit of analysis overlooks the broader historical context that sheds significant understanding on ITO decisions and outcomes. We found that an organization’s prior history with delivering IT, with prior ITO experiences, and client capabilities are all vital to understanding the ITO decisions an organization makes today. Thus, there are many opportunities to advance the theory of IT sourcing.
Researchers also have opportunities to contribute to practice. We describe three enduring practitioner ITO challenges: (1) adaptability, (2) measurement, and (3) innovation. Each of these areas needs rigorous research.

**60.6.1 Challenge 1: Adaptability**

Adapting to change is a pervasive outsourcing challenge. Many participants from our recent research continue to comment that their contracts were out of date even before the ink was dry (Lacity and Willcocks 2012b). Change comes from many sources:

- The client’s business process and IT requirements change.
- The client’s volume of services fluctuates unpredictably.
- The market price changes radically as labor costs rise, technology costs decline, or market prices alter with changes in demand, currency value, or political stability.
- The market’s best-in-breed service performance improves.
- The political support for outsourcing within client organizations wane with senior executive turnover.

Partners try to design flexible ITO contracts to adapt to such changes, particularly during a long-term relationship. Standard in contracts are clauses for volume fluctuations for when additional resource charges (ARC) or reduced resource charges (ROOK) apply, force majeure clauses, change of character clauses, and external benchmarking to reset prices or service levels. To one extent, these contract clauses are effective. As noted earlier, greater contract detail was associated with better outsourcing outcomes in the empirical ITO review. In our case study research, we continue to hear laments that big changes cause severe consequences to the economic viability of the disadvantaged partner. In practice, significant change harms either the client or provider, which can result in a dispute (Lacity and Willcocks 2012b).

**60.6.2 Challenge 2: Measurement**

The maxim “you can’t manage what you can’t measure” has been long embraced by ITO practitioners. In contracts, there is no shortage of measures, but the enduring challenge is to measure the right things that matter to clients and to incent providers to deliver what matters most to the client. In our research, we find that providers—quite understandably—will only agree to measure processes in which they have complete control. These measures, however, are typically a small piece of the end-to-end process. Consider, for example, the process of IT user support. Clients want providers to identify root causes and propose fixes, yet the measures may incent the providers to replicate the same easy fix for each user that calls rather than fix it once for the entire user community. In our recent BPO research, high performing relationships measure end-to-end processes. Parties first diagnose the root causes for service issues, propose solutions to improve the end-to-end process, and only then determine what it means for the commercial relationship.

**60.6.3 Challenge 3: Innovation**

Even satisfied ITO clients invariably ask, “Yes, the suppliers are delivering on the contract, but where is the innovation?” At the beginning of the deal, the usual sticking point is who will pay for innovation. Sometimes, clients establish an innovation fund against which approved client/provider proposals can draw. However, if incarcerated inside a traditional cost-service-focused contract, such an initiative rarely has the size or priority to make inroads. Providers are reluctant to spend time and expert resources on an ancillary part of the contract, especially when clients themselves do not take the positive action required from them to work together with the provider to achieve the more business impactful innovations beyond minor IT operational changes (Lacity and Willcocks 2011).
60.7 Conclusion

We have consistent evidence as to what motivates IT sourcing decisions. IT executives want to reduce costs, to focus on core capabilities, and to inject IT organizations with provider resources such as skills, expertise, and superior technology to improve client IT performance. IT executives are more likely to insource IT activities that have high levels of uncertainty, criticality, business risks, and transaction costs. On the determinants of ITO outcomes, overall we know that both contractual and relational governance are important, that both clients and providers need strong complementary capabilities to make relationships successful, and that certain types of transactions and decisions affect ITO outcomes.

Outsourcing has become an almost routine part of management, but 20 years of research establishes the common denominator that, for management and operational staff, outsourcing requires detailed oversight. Outsourcing itself is not a panacea to a client’s IT challenges, but represents a different way of managing IT services. Much depends on experiential learning and sheer hard work by clients and providers alike on a daily basis. Our own work on management practice suggests that back office executives must climb a significant learning curve and build key in-house capabilities in order to successfully exploit outsourcing opportunities. They need to accept that outsourcing is not about giving up management but managing in a different way. We also find providers continually having to readdress their capabilities, their market offerings, and competitive forces. In the face of these difficulties, outsourcing will remain a fascinating and growing area for research for many years to come. It also provides a notable area where academic researchers and the distinctive qualities they bring to bear can continue to provide rich insight and guidelines in an emerging, expanding, but still much muddied field of organizational operation (Lacity and Willcocks 2012b).

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Sourcing Information Technology Services


