BUSINESS PROCESS OUTSOURCING

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This article describes a practice that is implicitly considered by every individual or organization every day, is central to the strategic business models of many modern firms, and has even become a mainstay of lay conversation (albeit with sometimes incorrect usage). We first introduce terminology necessary to explain "Business Process Outsourcing" (BPO) in general (henceforth, simply "Outsourcing"), discuss the decision process for choosing whether or not to outsource an activity, and then summarize best practices for managing the service providers. We conclude with a comment about ORMS research on outsourcing. This article is intended to serve as a tutorial, and will not provide a comprehensive review of the research literature. A follow-up article in this encyclopedia (see ***Supply Chain Outsourcing***) extends this BPO dialogue to the outsourcing of manufacturing/production/assembly, procurement/sourcing, logistics, and product design/development.

TERMINOLOGY

The Oxford English Dictionary (OED) offers this definition:

> *Outsource*: to obtain (goods, a service, etc.) by contract from an outside source; to contract (work) out.

The OED cites as the term's earliest appearance in print a 1979 item in the *Journal of the Royal Society of Arts*, in the sentence "We are so short of professional engineers in the motor industry that we are having to outsource design work to Germany."

Some interpret the term to specifically connote the act of shifting an internal activity to an outside party. However, the above definition, which we follow in this article, does not stipulate where the activity might have been formerly performed. For instance, firms are correctly said to be outsourcing their manufacturing even if they opted from day one to focus solely on designing and marketing their products, so that at no point ever possessed any manufacturing capabilities [1].

The antonym of "outsource" is "insource," which thus means to perform an activity internally. Likewise this does not require that the activity was ever previously outsourced. The OED shows both words to have begun appearing in print around the same time.

The act of outsourcing involves two main participants, neither of which has a prevailing name. Some possibilities for the one receiving the good or service are "buyer," "client," "service recipient," or "outsourcer." The providing party can be "supplier," "vendor," "service provider," or "outsourcee." Of these, the mainstream usages of "buyer," "supplier," and "vendor" slightly hint at the selling of packaged product rather than services, although nothing in the formal definitions specifies this. "Outsourcer" and "outsourcee" draw specific attention to the nature of the relationship. The latter is not commonly used, perhaps since it could be misunderstood to be the internal employee laid off when his/her function was outsourced. To add to the confusion, the firm on the selling side is occasionally labeled as an "outsourcer." In this article, we will generally identify these two parties as the "outsourcing party" and "service provider," since these are sufficiently neutral and clear. The latter also has support in the labels applied to such emerging specialist categories as "Procurement Service Providers" (PSP) or "Manufacturing Service Providers" (MSP). This article will use language descriptive of outsourcing performed by organizations for business purposes, although most of

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the concepts will be just as relevant when individuals outsource or when the objectives are noncommercial.

Besides naming the actors and their actions, we also need vocabulary to identify the constellation of linked partners that results from extensive outsourcing. A nonexhaustive list includes "virtual supply chain," "virtual value chain," "virtual integration," and "extended enterprise." The first two differ in the subtle distinction between a supply chain, which describes the parties along a physical path of flow, and a value chain, which highlights the activities performed but does not necessarily map to a physical or chronological sequence or have a crisp division of labor. "Virtual integration" forms a dyad with "vertical integration." "Extended enterprise" may be the least explicitly suggestive of outsourcing. This simply encompasses the full ecosystem of parties needed to provide a product or service, but does not allude to a consolidated alternative. Terms of this ilk are disparaged by some as business jargon, and those mentioned here may very well be passé by the time this article appears.

Two additional keywords merit elaboration, since they arise in nearly every discussion of outsourcing. They are "offshoring," which is a distinct but sometimes related business action, and "core competence" (CC), which is central to one of the popular rationales for outsourcing.

Offshoring

"Outsourcing" is sometimes misused in place of "offshoring," especially in political commentaries that unfairly disparage the former for endangering the jobs of hard-working local citizens. In fact, while offshoring moves work to another country, outsourcing only shifts tasks to another organization and need not entail a location change at all. The employees of service providers sometimes work alongside the client's internal staff, wearing the same uniforms, checking email on the same servers, and living and paying taxes in the same communities. Offshoring typically seeks to leverage an internationally based workforce that is cheaper and/or better suited for a task, but may also reduce taxes and duties, and offer proximity to end-customers and input suppliers.

In this age of global free trade and increasingly complete marketplaces for virtually every imaginable product or service, a firm can outsource without going offshore, and vice versa. Nearly every multinational corporation outsources some activities to domestic vendors and insources other activities via wholly owned facilities that may be spread across many countries. For instance, GM outsources aspects of production to vendors in the United States, as well as Canada and Mexico. Meanwhile, Toyota and BMW own production facilities in the United States. Even in the highly outsourced mobile phone sector, the majority of Nokia's production occurs at the Finnish firm's own factories around the world (including in Finland and the United States) [2]. In 2007, Wipro, an India-based leading providing of outsourced IT services, announced plans to open four software development centers in the United States. Through this, Wipro will offshore without outsourcing, while Wipro's American clients will be outsourcing without offshoring.

Outsourcing and offshoring do sometimes occur simultaneously, for which the unambiguous label is "offshore outsourcing." This strategy is motivated by a belief that the shortest path to the benefits offered by an offshore solution is to outsource to a service provider with expertise and resources in the appropriate geographies. Everything from low end manual labor to high end knowledge work is a candidate for offshore outsourcing these days.

Should outsourcing take activities offshore, the risk factors and challenges detailed in the section titled, "Advantages and Disadvantages of Outsourcing" will only be intensified by any cultural or language barriers, differences in legal codes and enforcement practices (especially vis-à-vis the protection of intellectual property), or misalignment in attitudes toward environmental and human rights issues. And geographic distance only complicates the monitoring needed to assure that a service provider's actions are true to its customer's intentions. These issues are particularly

salient when offshore outsourcing involves emerging economies.

Core Competence

Prahalad and Hamel popularized the notion of CC in a 1990 *Harvard Business Review* article [3]. Their CCs, of which most firms will have not more than five or six, are defined by three key attributes:

- They provide potential access to a wide variety of markets.
- They make a significant contribution to perceived customer benefits of the end product.
- They are difficult for competitors to imitate.

The basic message in that article is that an organization can maximize its competitive advantage by identifying its CCs and organizing activities around them. These authors deem the outsourcing of CCs to be a strategic error of the highest order, but make no pronouncement about how to handle the noncore activities.

Quinn and Hilmer [4] articulate the connection between CCs and outsourcing that has become central to the modern business zeitgeist, paraphraseable as "Focus on your CCs, and outsource everything else." By their definition, CCs are

- skill or knowledge sets, not products (which can be reverse-engineered) or functions (since CCs tend to cut across traditional functions, e.g., production, engineering, sales, finance);
- flexible, long-term platforms that are capable of adaptation or evolution;
- limited in number to perhaps two or three (more than one, but fewer than five);
- unique sources of leverage in the value chain;
- areas where the company can dominate;
- elements important to customers in the long run;
- embedded in the organization's systems (rather than dependent upon key individuals).

In the eyes of both sets of authors, CCs are *not* "things we do very well or very often," but instead *are* "things that are strategically important." These are rarely confined to individual product departments or functional areas. Given this, current usage has become somewhat of a perversion of what these articles expound, as evidenced by commonly heard statements such as "We outsource manufacturing because design and marketing are our CCs." Perhaps this can be reconciled through the way the term's meaning has evolved since the early 1990s, which is captured in far too many articles to document here.

A semantic matter is whether the second C in the term should stand for "competence" or "competency." The OED views these as interchangeable. Neither version of CC appears in the OED as of 2008. Google searches on November 2, 2008 provided the following numbers of results:

"core competence" and "core competences":
$\sim 463,000$ and $\sim 122,000$, respectively
"core competency" and "core competencies":
$\sim 754,000$ and $\sim 1,980,000$, respectively

Hence, both terms are commonplace, but "competency" seems more prevalent.

ADVANTAGES AND DISADVANTAGES OF OUTSOURCING

Even if the term "outsourcing" might be fairly new, the actual practice is not. Because no organization can do everything itself, each one must choose a division of labor in every endeavor, defining its own roles and ceding any remaining duties to other parties. The key questions are which activities and to what extent.

Proponents commonly emphasize the outsourcing party's resulting ability to focus on those activities deemed CCs for their strategic significance, as noted earlier. Converting some fixed costs to variable costs can increase financial and operational flexibility, and improve return on assets. Tax benefits may also accrue on moving certain activities to outside parties. Outsource service providers ostensibly enjoy superior cost

structures due to specialization and scale economies, and lower risk because they can balance the peaks in some customers' needs with valleys in others'. Some argue that outsiders provide better service with fewer headaches than would a company's own employees, as outsiders are easier to terminate and therefore ought to be more willing to please. But outsourcing need not be about replicating an existing function at lower cost or with improved quality. An outside party may offer transformative capabilities that are unavailable any other way [4].

Through outsourcing, firms risk eroding critical capabilities, institutional and tacit knowledge, and long-term relationships. Communication and coordination among internal and outsourced functions can be difficult and costly. Dependence leaves firms susceptible to service providers' underperformance, holding hostage of critical assets (like scarce parts or custom tooling), using their clients' product or process knowledge to benefit the firms' competitors, or even themselves becoming competitors. Outsourcing complicates decision making as power is distributed across a constellation of independently controlled firms whose relationships are shorter-term and more transactional. In many cases, the outcome has been disappointing [5–9].

Some of these difficulties of outsourcing result from the complexity, fragmented decision making, and broken information flows that come from decentralizing, which can be countered by process redesign and enhancement of information technologies. Others, however, reflect deliberate actions by service providers that are not in their clients' best interests. This possibility exists because of limitations in the client's ability to dictate and monitor the provider's actions (which are only exacerbated by any geographic or cultural separation). All this is particularly baffling for organizations whose institutional knowledge of the intricacies of the outsourced activity have been lost over time, or never existed in the first place [10].

Many processes conducted in-house also suffer from some variant of these challenges, but at least these play out under the auspices of the company's own internal checks and balances. However, many companies equate outsourcing with reductions in resource and staff requirements, and fail to recognize that investments in business controls must actually increase to address the new risks. For some activities, properly overseeing the service provider may require such intimate involvement that the firm may be better off not outsourcing.

Many of the aforementioned costs and risks are manifestations of what economists classify as "transactions costs" (e.g., costs of search, contracting, negotiating, monitoring, and dealing with changes/disagreements), which are often invoked as a determinant of an industry's extent of vertical integration in the literature termed *transactions costs economics* (TCE) [11–13]. Constructs from Principal Agent (aka Agency) Theory, which focuses on relationships in which one party (the principal) delegates work to another (the agent), have been used to analyze these types of transactions costs. This framework highlights the "moral hazard" inherent in any relationship in which the principal's goals conflict with the agent's goals, and the principal has difficulty verifying the agent's actions (i.e., incomplete information).

INSOURCE-VERSUS-OUTSOURCE DECISION FRAMEWORKS

Defining which activities a firm should perform is among the most fundamental and profound of management duties, with consequences felt in every day of operation. Skill at making this decision is itself strategically critical enough to merit consideration as a CC [14,15].

"Make-versus-buy" is a traditional term for this challenge, and appears in the index of many business textbooks, especially in accounting, economics, and operations. To avoid the slight materials centrism in that term, this article will use "insource-versus-outsource" since many such evaluations concern the procurement of services rather than goods.

The academic and practitioner literatures overflow with commentaries on this topic. Most provide qualitative lists of issues to

consider or questions to ask, but leave to the decision maker any specific quantification of the multidimensional trade-offs (or authority to make a judgment call). This is not a criticism of the extant work, but an acknowledgement of the complexity and context-specificity of the problem. Here, we will simply sketch as an illustrative example one such insource-versus-outsource decision framework.

We earlier mentioned the high level strategic sound bite advocating for focusing on CCs and outsourcing everything else, a thread that can be traced through Refs 3 and 4. An oft-invoked variant of this is the notion of "core-versus-context" articulated by Geoffrey Moore of The Chasm Group [16], which has influenced strategy at firms like Cisco Systems. This defines "core" as those activities that differentiate a company in the marketplace and thereby drive the company stock's valuation, whereas "context" is everything else the company does, and advises assigning the best people to the core while outsourcing as much of the context as possible.

An example of how these ideas might be operationalized is the seven-part framework of Quinn and Hilmer [4]:

1. Do we really want to produce the good or service internally in the long run? If we do, are we willing to make the back-up investments necessary to sustain a best-in-world position? Is it critical to defending our CC? If not,
2. Can we license technology or buy know-how that will let us be best on a continuing basis? If not,
3. Can we buy the item as an off-the-shelf product or service from a best-in-world supplier? Is this a viable long-term option as volume and complexity grow? If not,
4. Can we establish a joint development project with a knowledgeable supplier that ultimately will give us the capability to be best at this activity? If not,
5. Can we enter into a long-term development or purchase agreement that gives us a secure source of supply and a proprietary interest in knowledge or other property of vital interest to us and the supplier? If not,
6. Can we acquire and manage a best-in-world supplier to advantage? If not, can we set up a joint venture or partnership that avoids the shortcomings we see in each of the above? If so,
7. Can we establish controls and incentives that reduce total transaction costs below those of producing internally?

This set of questions implies a flowchart terminating in a spectrum of possible structures ("full ownership," "partial ownership," "joint development," "retainer," "long-term contract," "call option," and "short-term contract") that exchange control (greatest with full ownership) for flexibility (greatest with short-term contract). A key message in this is that insource-versus-outsource is not a binary decision. For a single activity, a firm may even choose to outsource a portion while performing the rest in-house. This risk-mitigation strategy is sometimes termed *partial integration, taper(ed) integration*, or simply *make-and-buy* [17,18]. Furthermore, significant activities invariably contain many subtasks. A firm should consider various permutations of these that differ in divisions of labor, relationship lengths, and ownership of assets and liabilities.

Further complicating the matter is that the factors that drive the insource-versus-outsource decision are constantly in flux, so that the correct decision will be a moving target. Linder [1] and many others [19,20] emphasize the dependence on the stage in the life cycle of the company and industry. Even within a given industry, a particular set of environmental stimuli might elicit disparate responses from direct competitors. For instance, the recent global economic slowdown has directly led some consumer electronics firms to insource more production activities (to maintain utilization of existing in-house capacity) while others increased their outsourcing (to lower costs and achieve flexibility for responding to demand volatility).

Robust quantitative frameworks are elusive here for many of the reasons that apply to all complex managerial decisions with strategic impact. The individual consequences, such as a sharpening of

organizational focus or the atrophy of the knowledge and capabilities that are preserved only by regularly doing a task oneself, are very hard to translate into dollars and cents. Measuring the true cost of coordination across organization boundaries is also thorny. Certainly the contract delineates explicitly the transfer of funds, and salary impacts can be tallied. But how does one quantify an increase in the difficulty in communication? How does one measure the increased risk of opportunistic behavior by service providers, the possibilities of which are only limited by one's imagination? Existing accounting frameworks, which already struggle to assess the true cost of performing activities in-house, are stressed even further by outsourcing. McIvor [21] articulates an "overhead allocation fallacy" in standard cost accounting: when an activity is partially outsourced, certain overhead costs (which were not liquidated in the course of outsourcing) tend to be allocated to the activities that remain in-house, making those activities look even worse relative to outside alternatives. This can encourage further outsourcing and thereby perpetuate the fallacy.

ADVICE ON MANAGING THE OUTSOURCING RELATIONSHIP

The notion of best practices is largely idiosyncratic to the type of activity being considered for outsourcing, and attempting to unify all these context-specific details would go beyond the charter of this article. Here, we simply summarize the themes that overarch the extant body of academic and practitioner knowledge.

The obvious, yet profound, first concern is to carefully evaluate whether to outsource the particular activity at all. Outsourcing is a strategic action that must not be undertaken with the single-minded objective of reducing costs, or under the influence of herd mentality. The decision maker must be open to the possibility that outsourcing may actually increase overall costs, but might willingly proceed anyway if the structural change adds new capabilities or enhances existing ones. Contemplation of the full range of pros and cons, such as those articulated in the section titled "Advantages and Disadvantages of Outsourcing", will affirm that outsourcing is no panacea. It is most prudently viewed as exchanging one set of headaches for another. Doig *et al*. [6] caution, "Don't assume that it is easier to manage suppliers than to improve your company's own performance."

After deciding to proceed, the outsourcing party must exercise caution and vigilance, which means due diligence on service providers up front, determining whether to single-source or multisource and the closeness of the resulting relationship(s), carefully writing specifications, contemplating and structurally addressing potential incentive conflicts, and installing appropriate monitoring mechanisms. In this spirit, Allen and Chandrashekar [22] and Aron and Singh [23] discourage outsourcing a process until it is well-understood and has coherent metrics. This can be harder to achieve for procured services than for procured materials, in part because the intangibility of what is being purchased complicates quality assessment and retrospective attribution of liability for problems [22]. Consequently, the outsourcing party must accept the need to invest resources (and maybe even add new headcount) in new control processes, which must be cost-justified based on the value delivered over the lifetime of the sourcing relationship. Priority shifts to skills such as relationship-building, negotiation, program and project management, and contract management. Peisch [24] points out that "Managing external resources requires an entirely different set of skills than managing the same services internally."

These challenges fall under the purview of the well-established discipline of purchasing and supply management. This community has established active professional organizations (e.g., the Institute for Supply Management (ISM), founded in 1915), certifications [e.g., the ISM's Certified Purchasing Manager (CPM) and Certified Professional in Supply Management (CPSM) credentials], university undergraduate and graduate degree programs, and a rich body of practitioner and academic literature (e.g.,

textbooks such as Monczka *et al*. [25] and numerous journals).

ORMS RESEARCH ON OUTSOURCING

The body of existing ORMS research on outsourcing is either too vast to survey in one article, or nascent, depending on one's definition of ORMS and the criteria used to determine what counts as work on outsourcing.

Mathematical modeling approaches popular among those who identify with the ORMS community are also used in other academic disciplines, including economics, accounting, and finance. All of these have studied issues relevant to the outsourcing decision. For reasons of tractability, the analytical work tends to focus on the trade-offs among a very small number of factors, primarily the ones easier to quantify. The limitations of this should be apparent from the preceding discussion. Questionnaire or interview-based descriptive surveying is a more popular format (many of this article's citations are of this sort), but this is not traditionally viewed as ORMS.

What counts as research on outsourcing? In the broadest sense, any model that includes a transaction between a supplier and a buyer firm could qualify. Such research has gone on for decades, and has generated thousands of publications. However, this author's position is that the outsourcing literature should be defined more narrowly as those works that consider the design, management, and control of an outsourcing relationship and give guidance about addressing some problem explicitly ascribable to the outsourcing.

A wish-list of specifications for an analytical, prescriptive research piece about outsourcing might include the following set of features, which does seem mathematically intractable:

- multiple parties: buyer, service provider, possibly a materials supplier, and competition for each;
- conflicting agendas, possibly also with internal conflict among agents within each firm;
- multi-attribute objective functions;
- private information that renders complete monitoring of the service provider impossible, so as to allow the possibility of deliberate deception;
- a cost model for buyer activities that reflects changes in organizational complexity, since outsourcing reduces complexity in some respects (in enabling focus on CCs) but increases it in others (for managing the service provider);
- institutional knowledge, since outsourcing jeopardizes the retention of this;
- power, since outsourcing creates dependence on outside parties.

Even this challenging list is not complete, since it does not address numerous other issues presented throughout this article, phenomena that are often difficult to quantify. Also, the best wisdom available is that firms must think of these factors strategically, and not be overly focused on short-term financial impact. This necessitates a longer-term (and more difficult to define) objective function.

This discussion should make clear why ORMS work that could truly be said to capture the essence of the outsourcing phenomenon is still sparse. Since this article was not meant to be a literature review, we will simply end here urging the reader to consider this as a roadmap to many important research opportunities.

ADDITIONAL READING

Due to publication restrictions, the bibliography for this article was limited to a small number of references. A fully annotated version containing more than 65 references is available for download at the author's university webpage.

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