Designing and Controlling the Outsourced Supply Chain

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Contents

Abstract

All organizations outsource. They differ only in the scope and extent of what they procure as goods and services from outside entities. These choices drive an organization's financial performance and long-term competitive viability, and establish the tenor of day-to-day operations. Outsourcing can solve many problems, but is also fraught with hidden costs and risks.

This monograph examines outsourcing from a lifecycle perspective. This means tracing the full arc from the germination of the idea to outsource, to the assessment of options, to the installation of control mechanisms, to grappling with conflicts that inevitably arise over time, all the way to the sunset of the chosen strategy. The analysis is highly attentive to the details of operational execution, especially regarding how human resources participate in these decision processes and are impacted by the choices made.

The lifecycle discussion applies regardless of the type of business process considered for outsourcing. This has standalone value, but also serves as a preamble to the topic from which this monograph derives its title: outsourcing in the endeavor of stewarding a product from concept to market and then operating the resulting supply chain. Specifically, this monograph looks deeply at the outsourcing of manufacturing, product design, materials procurement, and logistics.

This monograph also presents the phenomenon of offshoring in order to dispel the common confusion between outsourcing and offshoring. Both can be pursued simultaneously ("offshore outsourcing"), and this monograph makes clear which benefits and risks are due to offshoring and which are due to outsourcing.

This monograph targets scholars and practitioners at once, guided by a belief that both communities will benefit from a treatment

of outsourcing that ties together ideas from theory and extensive industrial evidence. Highlights include extended case studies featuring Amazon, Apple, Boeing, Cisco, Foxconn, Menu Foods, Nike, and Toysrus.com, with significant supporting appearances by more than fifty other firms from diverse industries and countries.

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Introduction and Preliminaries

Much like "it takes a village to raise a child," increasingly a village (possibly a global one) must collaborate in order to bring a product from concept to market. For a firm to perform every required task solo would be economically overwhelming, even if logically feasible. The decision of whether to outsource, in a supply chain or any other setting, is thus not about a yes or a no, but a matter of scope and extent. Examples of extensive outsourcing abound.

This monograph intends to shed light on this phenomenon by presenting, interpreting, and extending the corpus of current knowledge. This will include a multitude of ideas and examples from a variety of print media, presentations by industry experts, and personal data collection and interviews by the author. For the scholar this monograph will structure a dispersed pool of information, analyze it using theoretical frameworks from multiple disciplines, and provide substrate for new research. For the practitioner, this monograph will offer a basis for action. Specifically, for managers contemplating which functions to outsource, this will frame the make-versus-buy decision. Overseers of outsourced functions will receive guidance for negotiating terms, monitoring performance, and enhancing control. Because of the duality of audiences, this is written in the tone of a tutorial, and has no intent to comprehensively review the academic research literature. The prevailing goal will be to illuminate the underlying economic and behavioral drivers, implementation challenges, and potential remedies, all with great attention to the details of operational execution.

The remainder of this section will set the stage by introducing some key terminology. Section 2 will present six case studies starring the supply chains of well-known firms or products, illustrating a range of motivations for outsourcing and various ways such efforts can go awry. These cases will serve as a unifying thread throughout this monograph. Section 3 will state the arguments in favor of and opposed to outsourcing, in terms that transcend the type of activity or process. Section 4 will walk through the lifecycle of an outsourcing decision. This spans the initial notion to outsource through to the end of the engagement, with an insource-versus-outsource assessment made along the way. Section 5 will zoom in on the outsourcing of specific functions in supply chains for physical products. Section 6 will make some observations about the existing research literature and provide direction for prospective researchers. Section 7 will conclude. The Appendix explores offshoring's motives and hazards in order to clarify the common confusion between offshoring and outsourcing.

1.1 Terminology to describe an outsourced relationship

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, which added this entry in 1993, cites as the term's earliest print appearance the following sentence in a 1979 item in the *Journal of the Royal Society of Arts*: "We are so short of professional engineers in the motor industry that we are having to outsource design work to Germany."

To some this term specifically connotes the act of shifting an internal activity to an outside party. However, the OED definition does not stipulate where the activity might have been performed previously. For instance, a firm can correctly be said to outsource its manufacturing even if it at no point ever possessed any capability to manufacture.

The phrase "business process outsourcing" (BPO) focuses attention upon activities conducted by businesses. Standard domains for BPO include information technology, finance, accounting, marketing, and human resources. However, the operation of any given business involves a plethora of disparate processes, and no consensus exists regarding what qualifies as a "business process" from the perspective of BPO.

The antonym of "outsource" is "insource," which thus means to perform an activity internally regardless of whether it had been outsourced before. According to the OED, which added this term in 2006, both words first appeared in print roughly contemporaneously. The act of bringing back in-house an activity that was internal prior to being outsourced has recently been labeled as "reinsourcing" [228] or "backsourcing" [216, 368]. The latter term is popular in the IT community, but neither appears to be mainstream at this time.

The act of outsourcing involves two main participants, neither having a prevailing name. Some possibilities for the one on the receiving end of the good or service are "buyer," "client," "service recipient," or "outsourcer." The providing party can be the "supplier," "vendor," "contractor," "service provider," or "outsourcee." This party may be identified as a "general contractor" if it is responsible for an entire project but delegates some tasks to other service providers (each then called a "subcontractor"). The degrees of separation from the original client in this scenario can be conveyed by labeling the (sub)contractors as Tier 1 (or I), Tier 2 (or II), and so on. Of the preceding terms, the standard usages of "buyer," "supplier," and "vendor" hint slightly at the selling of goods rather than services, although nothing in the official definitions formalizes this. "Outsourcer" and "outsourcee" draw attention to the nature of the relationship. The latter is not commonly used, perhaps since it could be misinterpreted as the internal employee laid off when his/her function was outsourced. To add to the confusion, the service provider firm is occasionally called an "outsourcer" [63, 101].

This monograph will generally refer to the two parties as the "outsourcing party" and "service provider," since these are sufficiently neutral and clear. The latter also has support in the names for such emerging specialist categories as "procurement service providers" (PSP) [1, 235] or "manufacturing service providers" (MSP) [309]. Section 5 will reduce the need for these labels as the various parties in a supply chain can be identified by their industrial categorizations, such as OEM or contract manufacturer. Context will make evident the role of each participant in an outsourcing relationship. This monograph will use language descriptive of outsourcing by business organizations, although most of 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 acknowledge the vocabulary that alludes to the constellation of partners entailed by 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 comprises the parties encountered along a physical path of flow; and a value chain, which traces the activities performed but need not map to a physical or chronological ordering or have a crisp division of labor. "Virtual integration" is a play on "vertical integration." "Extended enterprise" may be the least explicitly suggestive of outsourcing, as it encompasses the full ecosystem needed to provide a product or service, but at no point implies a consolidated alternative. Cisco has used this term heavily in describing the architecture of its own supply chain, and at times has (along with solutions partners) marketed a package of hardware, software, and consulting services intended to hold together an extended enterprise [92].

1.2 Outsourcing versus offshoring

The keyword "offshoring" merits special attention since the concept arises in nearly every discussion of outsourcing. "Offshoring" positions work in a country other than the one containing the firm's headquarters.[1] However, the foreign and domestic workforces may all still belong to the same organization.

[1]Focusing on the headquarters as the reference point for the term "offshoring" may sometimes mislead. "Onshore" for the company might coincide

To sharply differentiate outsourcing and offshoring, note that two distinct questions about any activity are "who" (will do the work) and "where" (will it be done). Outsourcing is strictly about the "who." Responsibility for a task and the associated resources impacts control and incentives. Offshoring is only about the "where." Location decisions create proximity between some stages in the value chain and separation between others. Physical distance and its correlates (which include differences in culture, language, and business practices) determine the difficulty of coordination and physical transport.

A firm can outsource an activity without positioning it offshore, and vice versa. The firm can also do both at once, in which case the unambiguous label is "offshore outsourcing." All combinations might well be present within the firm's portfolio of activities. In this age of global free trade and increasingly complete marketplaces for virtually every good or service, firms can easily choose to serve international customers with offshore operations (some insourced and some outsourced), while simultaneously maintaining onshore operations (some insourced and some outsourced) for local customers.

Outsourcing is sometimes confused with offshoring, especially in politicized conversations [339]. Fear mongering about outsourcing (a misuse of the term since the real concern was the loss of work to India and other overseas locations) played a role in numerous recent US presidential and congressional campaigns [177, 217].[2] The confusion may

with the location of the headquarters, but could also reflect the historical origin of the company or the geography where a large number of the employees do their work. For example, Flextronics is described in Wikipedia as an "American supply chain solutions company" even though the headquarters is in Singapore (http://en.wikipedia.org/wiki/Flextronics, accessed April 9, 2014). Likewise, Wikipedia's entry for professional services firm Accenture notes: "While Ireland is the company's headquarters for tax and legal purposes, much of the operational administration occurs in the US, mainly New York City and Chicago." Meanwhile, the nation containing the greatest number of Accenture employees is India (http://en.wikipedia.org/wiki/Accenture, accessed April 9, 2014).

[2] A nation has legitimate reasons to be concerned about how offshoring can divert economic value away from the home country. Layering outsourcing on top of the offshoring has the added danger of potentially placing vital activities under the control of foreign entities. But outsourcing by itself ought not to be politically inflammatory. It shifts tasks to another organization, but need not change the location at

emanate from viewing the "out" in outsourcing as a reference to the borders of a nation, whereas the correct usage conveys location relative to the boundaries of an organization.

The Appendix examines offshoring in greater detail. Such discussion is included in this monograph because offshore outsourcing is common, and clarity is needed regarding which benefits and risks are due to the offshoring part and which are due to the outsourcing.

all. The employees of service providers sometimes work alongside the outsourcing party's internal staff, live and pay taxes in the same communities, and quite possibly have similar national loyalties.

An absolute rejection of offshoring based on nationalism might be overly simplistic. Is offshoring bad on the whole if it brings lower prices or higher quality to domestic consumers, or greater returns to domestic shareholders? Offshoring may create winners and losers, as does any other structural shift, but is not necessarily unethical or unpatriotic per se. In any event, strong feelings about offshoring will be harder to sustain as locational frame of reference becomes more nebulous. Sellers of goods and services are increasingly multinational, and their supply chains can pass through multiple countries. Customers are located all over the world. Shareholders can live anywhere. In light of these developments, what is the real significance of where the corporate headquarters is located or where the company is officially registered?

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