



# Primary vendor capabilities in a mediated outsourcing model: Can IT service providers leverage crowdsourcing?



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## ABSTRACT

Crowdsourcing platforms that attract a large pool of potential workforce allow organizations to reduce permanent staff levels. However managing this “human cloud” requires new management models and skills. Therefore, Information Technology (IT) service providers engaging in crowdsourcing need to develop new capabilities to successfully utilize crowdsourcing in delivering services to their clients. To explore these capabilities we collected qualitative data from focus groups with crowdsourcing leaders at a large multinational technology organization. New capabilities we identified stem from the need of the traditional service provider to assume a “client” role in the crowdsourcing context, while still acting as a “vendor” in providing services to the end-client. This paper expands the research on vendor capabilities and IT outsourcing as well as offers important insights to organizations that are experimenting with, or considering, crowdsourcing.

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## 1. Introduction

With increasing globalization and technological advancements outsourcing has become a daily practice for many organizations. Outsourcing implies contracting with a third party (a service provider) not directly controlled by the client organization to accomplish work for a specified length of time, cost and level of service [38,43]. Outsourcing is fueled by service providers with strong technological capabilities and access to a global talent pool, which they employ in global delivery centers typically located in developing countries, in rural areas where salaries and operating costs are low. This enables IT outsourcing vendors to achieve economies of scale when delivering services through an onsite-offshore service delivery model (e.g., [6,44]), one of the most popular sourcing arrangements for delivering IT and business services [43].

Recently, a new model has emerged that offers several potential benefits to service providers, among them an alternative to the onsite-offshore model. This next generation of outsourcing which is associated with the “human cloud”, a virtual, on-demand workforce [26], is enabled through crowdsourcing platforms. In its broadest form, crowdsourcing implies outsourcing a job to an undefined, generally large group of people in the form of an “open call” [22]. A crowdsourcing platform provides access to a large pool of potential workforce to be used on-demand [16,26,43]. The crowdsourcing model is increasingly being adopted by the open innovation movement (e.g., InnoCentive, IdeaConnection, TekScout, and many other open innovation marketplaces

and communities) as well as a large number of new business ventures such as [iStockphoto.com](http://iStockphoto.com) that sells photos, illustrations, audio and video files; and [Threadless.com](http://Threadless.com) where individuals can submit their designs to be printed on T-shirts and other garments.

As large companies such as Microsoft<sup>2</sup>, IBM<sup>3</sup>, GE<sup>4</sup> and Google<sup>5</sup> have started experimenting with crowdsourcing, its growing popularity stimulated a range of mixed reactions in the outsourcing community. Some established service providers ignore the fact that an “unknown workforce” is delivering jobs that could have been contracted to them [26]. Others realize the increasing competition and attempt to utilize this virtual on-demand workforce for their benefit. In particular, during the economic downturn, when reducing headcount across global delivery centers is seen as one of the obvious solutions to reduce costs, especially fixed costs, a possibility to tap into a global talent pool and employ required skills on demand creates an interesting proposition for established service providers.

While the expected economic benefits of this proposition are significant, it is not clear what effort is required from established IT service providers to be able to successfully leverage crowdsourcing. Kaganer et al. [26] suggest, for example, that the organizational challenges associated with the human cloud require new management models and skills from the contracting organization (the buyer). Putting this perspective into the outsourcing context, we argue that service providers interested in utilizing crowdsourcing will require additional skills and

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<sup>2</sup> <http://www.lionbridge.com/microsoft-crowdsourcing-case-study/>.

<sup>3</sup> [http://researcher.ibm.com/researcher/view\\_project.php?id=3832](http://researcher.ibm.com/researcher/view_project.php?id=3832).

<sup>4</sup> <http://www.gequest.com/>.

<sup>5</sup> <http://www.engadget.com/2013/02/07/google-mapathon-2013-india/>.

new management practices to successfully integrate crowdsourcing with internal delivery processes. However, existing research on vendor capabilities is based on the assumption that the vendor is delivering services using an internal workforce [15,37], developing core capabilities that are at the heart of the vendor's value proposition [37]. So far, it is not clear whether or how the inclusion of crowdsourcing in the delivery model will affect the vendor's core capabilities. In this paper we aim to address this gap by studying the crowdsourcing phenomenon with a focus on the capabilities required for outsourcing vendors to successfully employ crowdsourcing in delivering services to their clients. We revise and expand the theory of vendor capabilities to include the case of the mediated outsourcing model where a vendor utilizes an on-demand external workforce via a crowdsourcing platform, which is the main theoretical contribution of our research.

## 2. Literature foundations

### 2.1. Capabilities under traditional outsourcing models

Outsourcing capabilities have been mainly studied from the client perspective (e.g., [19,36,42,59]), focusing on capabilities that clients need to develop in-house to ensure the successful outcomes of the outsourcing arrangement. The most frequently studied capabilities are the Business Process Management Capability and Supplier Management Capability [34]. The former refers to clients' ability to manage a business process themselves, before outsourcing it. This capability has been associated with greater outsourcing success (e.g., [10,53]). The latter implies clients' ability to manage outsourcing providers and encompasses capabilities such as contract management and relationship management [15,20,27,48,51,52]. Client sourcing capabilities, which are required to ensure the successful delivery of services, are also referred to as "the retained organization" [43,60].

In contrast, service providers' capabilities have received limited attention in the literature. The most influential work is by Levina and Ross [37] who studied large IT vendors<sup>6</sup> and distinguished between three types of operational capabilities (also referred to as "competences" [37]), that is, capabilities involved in the provision of a service or a product [24]:

- (i) *Client relationship management capability* involves routines and resources that align the vendor's practices and processes to the client's goals. More specifically, this capability is associated with the knowledge that a service provider must have of the client's business model and industry, as well as of the specifics of the client's operations.
- (ii) *Methodology development and dissemination capability* concerns task delivery routines and resources that accomplish software design, development, and execution. Six Sigma and the capability maturity model (CMM) are some of the better-known methodologies that aim to improve software development processes. This capability is important for introducing efficiencies in project delivery and operational improvements [37], as well as managing dispersed knowledge and expertise in a global vendor organization [44].
- (iii) *Personnel development capability* is related to recruitment, training, and mentoring practices; designing jobs that will expose individuals to a variety of tasks and enable them to broaden their skills; and developing performance appraisal and compensation systems.

Building on the previous work on complementarity in organizational design (e.g., [21]) and core competencies of the Information Systems (IS) function (e.g., [58]), Levina and Ross [37] argue that these three operational capabilities are mutually reinforcing and need to be

<sup>6</sup> We use the terms "vendor" and "service provider" interchangeably. We acknowledge that, while practitioners prefer the latter term, in the academic literature, in particular IS outsourcing literature, the term "vendor" is commonly used.

simultaneously present in the vendor organization. In the offshoring context, Ethiraj et al. [13] found that higher levels of client relationship management and methodology development capabilities lead to higher levels of firm performance.

Complementary to these works is a more fine-grained view of vendor capabilities developed by Feeny et al. [14] who identified 12 capabilities that service providers could leverage into three competences, as seen through the eyes of the clients: delivery competency that reflects the supplier's ability to respond to the client's ongoing needs; transformation competency indicating the supplier's ability to deliver radically improved service in terms of quality and cost; and relationship competency reflecting the supplier's willingness and ability to align its business model to the values, goals, and needs of the client.

Among the few studies that focused on vendor capabilities, drawing on the work of Levina and Ross [37], Jarvenpaa and Mao [24] studied operational capabilities of subcontractors in a *mediated outsourcing model* (e.g., [13,39,49]). This model implies a mediating role by one (primary) service provider who is working directly with a client (end user/recipient of the service) as well as with other service providers supplying some services to the primary (or "middleman") vendor. Such an arrangement may take the form of subcontracting (when the primary service provider contracts a third party – one or more service providers [24]) or intermediation (brokering) such as legal services, moderating disparities between client and service provider, or staff augmentation by manpower agencies [39]. In the study of Jarvenpaa and Mao [24], the focus was on operational capabilities of small- and medium-sized Chinese firms who acted as subcontractors to a large IT vendor firm that was delivering services to the end-clients. Their study found a range of learning mechanisms that these subcontractors used, and demonstrated that the personnel development capability was most challenging in the mediated model, yet foundational for the development of the other capabilities [24].

Fig. 1 illustrates the focus of extant research on outsourcing capabilities, highlighting the three perspectives discussed above: perspective 1 depicts research on client capabilities (most widely discussed in the literature) in a client–vendor environment; perspective 2 depicts the focus of the few studies on the capabilities of large service providers providing services using their own resources; and perspective 3 illustrates a mediated outsourcing model and focuses on the capabilities of the *subcontractor*.

It is surprising that, despite the growing interest among outsourcing researchers to understand vendor capabilities and how they contribute to a vendor's value proposition, these capabilities have been investigated primarily from the client-facing perspective (depicted as perspective 2 in Fig. 1). These studies implicitly assume that vendor firms are using internal resources and do not take into account the involvement of subcontractors or external resources that the primary vendor may use. Nevertheless, Jarvenpaa and Mao [24] highlighted the relevance of the mediated model to the outsourcing literature and the importance of understanding this mediated business model along with the relationship between the primary vendor, who is often a large IT service provider, and sub-contractors who are typically small service providers or software development firms. However, apart from their study that focused on the capabilities of the sub-contractors, this phenomenon of a mediated model has not been investigated. Our research aims to contribute towards a better understanding of the mediated sourcing model by focusing on the primary vendor's perspective, which, to our knowledge, has not yet been addressed.

The gap we address in this paper goes beyond simply understanding the mediated outsourcing model from the vendor's perspective. We further integrate the new phenomenon of crowdsourcing into our model. Thus, we do not merely replicate the model used by Jarvenpaa and Mao; we augment this model by investigating a different type of subcontractor, namely the crowd. In particular, our interest in this perspective was fueled by the increased competition in the IT outsourcing industry where small firms and individuals are starting to be recognized as the competitors of large IT service providers. This increasing competition is evident as new technology-enabled sourcing trends such

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