DOES OUTSOURCING CREATE SHAREHOLDER WEALTH? A GLOBAL EXAMINATION OF CLIENT-VENDOR DYADS BEFORE AND AFTER THE FINANCIAL CRISIS.

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ABSTRACT

We create a general model of outsourcing returns that synthesizes and reconciles conflicts among dominant theoretical predictions, the empirical record, and practitioner conduct. To test this model, we create a dataset of 3,551 outsourcing decisions from 1991-2015, involving firms from 22 countries on both client and vendor sides. Overall, we document a positive market reaction to outsourcing announcements that shifts to negative after the global financial crisis of 2007. We then document moderators related to heterogeneous deal characteristics that affect the scale and distribution pattern of returns to outsourcing dyads.

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INTRODUCTION

> *"It is maxim of every prudent master of a family never to attempt to make at home what it will cost him more to make than to buy…What is prudence in the conduct of every private family can scarce be folly in that of a great kingdom." – Adam Smith, The Wealth of Nations (1776)*

> *"In fact, 77% of buyers said that if they had to do it over again, they would select a different provider or negotiate different terms." – Paul Singer on HFS/Accenture's 2015 outsourcing survey*

Former Prime Minister of Singapore, Lee Kuan Yew (2004: 5), bluntly states: "If you deprive yourself of outsourcing and your competitors do not, you're putting yourself out of business". Current Chair of the U.S. Federal Reserve, Janet Yellen, explains that outsourcing is simply "another form of trade…giving us cheaper ways to do things" (2004). Scholars such as Mankiw (2006) add rigor to these proclamations by noting that outsourcing is the modern application of Smithian theories of Specialization and the Division of Labor (SDL) (including subsequent refinements such as Ricardo's theory of comparative advantage). Yet high dissatisfaction rates among outsourcing firms (e.g., HFS/Accenture, 2015) suggest that theories related to Partnership Governance (PG), such as transaction cost economics and agency theory, may play an offsetting role. For example, transaction costs related to bounded rationality and the governance of opportunistic vendors may mean that hierarchies are more efficient than markets (Williamson, 1975).

Firms have clearly embraced SDL logic, as a majority do (or plan to) outsource technological, legal, financial, real estate management, human resource, customer service, and even core business functions such as R&D (Deloitte 2014). Nevertheless, while noting its mixed empirical record with respect to measureable benefits, Lahiri's (2016:1) review of the literature openly asks "Does outsourcing actually improve firm performance?" As just 18 of 57 studies found clear, positive effects, Lahiri's answer is that we simply cannot conclude that outsourcing is better or worse than not outsourcing. This leads us to ask: if SDL logic is as unassailable as proponents suggest, then why is the empirical record with respect to positive outcomes so uneven? Where are the missing gains to outsourcing? On the other hand, if theoretical deficits or PG logic dominance means that outsourcing simply doesn't generate the gains we currently predict, then should firms continue to outsource to the degree that they do?

Our specific research question focuses on whether outsourcing decisions create value for shareholders, i.e., do global markets reward announcements of new outsourcing activity? When attempting to reconcile both theoretical predictions that diverge from each other (SDL versus PG), and an

empirical record that doesn't seem to fully support either school of thought (or practitioner consensus), scholars often search for missing moderators (e.g., boundary conditions under which one theory dominates the other). We suggest a complementary approach, i.e., the adoption of a wider lens – conceptually, temporally, and spatially – that allows us to test data others may have missed. This, in turn, may help us answer our research question while also shedding light on attempts at theoretical and empirical reconciliation.

As Table 1 illustrates, empirical studies of market-based reactions to outsourcing announcements tend to examine relatively small samples over relatively short periods of time (e.g., as low as 57 events over 3 years, with an average of roughly 150 events over 8.5 years), while focusing on U.S. firms. As many of these studies also tend to prioritize SDL logic over PG logic, they may slightly overestimate predicted returns to buyers. Finally, nearly all studies ignore returns accruing to half of the outsourcing dyad, i.e., the vendor side. We suggest that SDL-based returns scholars predict, but don't find, may sometimes be found on this side of the dyad and/or outside of the U.S. In other words, an event study finding non-significant buyer-side gains might have found significant vendor-side or dyadic gains had both sides been examined within a global sample (meaning value was created but not observed).

Insert Table 1 Here

Furthermore, a rather large empirical gap exists with respect to the global financial crisis, as no study (to our knowledge) has performed a comprehensive analysis of the potential impact of the crisis on investor reaction to outsourcing announcements. Our position here is that investors exhibit Bayesian tendencies (Bayes and Price, 1763) by continually incorporating new information from key environmental changes (such as the financial crisis) into their investment models. These updated Bayesian priors (UBP) may manifest as changes in shareholder reaction to both outsourcing in general, and to deals with heterogeneous characteristics (e.g., domestic versus offshore outsourcing). The financial crisis in US and Europe exposed the vulnerabilities of developed countries and generated a slew of regulatory activities such as the Dodd-Frank Act and the JOBS Act, which completely transformed the domestic business environment in these countries relative to the emerging markets that were not directly affected by the crisis.

We thus created: (1) a large-scale dataset of over 3,500 outsourcing decisions, announced over a quarter of a century (1991-2015), involving firms from 22 countries, and (2) a theoretical model that simultaneously incorporates SDL, PG, and UBP thought. We then test shareholder reaction on both client *and* vendor sides, over the entire time frame and also before and after the financial crisis.

Our primary theoretical contribution is to offer a general model of outsourcing performance and investor returns. First, it describes the core logic of outsourcing from a fuller dyadic perspective; we thus explore the SDL bases of value creation for investors and apply it to both sides of the client-vendor partnership. Second, it considers the distribution of value creation between these sides; we thus incorporate thought from various PG theories to help explain how, when, and why each side of the dyad obtains its specific share of gains. Third, it explains the influence of commonly reported and/or freely available moderators related to time, space, and various characteristics of specific outsourcing deals (e.g., contract size and/or duration). Fourth, it utilizes a Bayesian lens to account for substantial sentiment shifts (illustrated in this paper by a temporal divergence between pre- and post-financial crisis investor preferences). Taken as a whole, these theoretical contributions help formally synthesize and explicate thought that was fragmented, implicit, or absent, into a coherent and parsimonious, yet holistic, theory of outsourcing that explains past and current results, and helps direct future research.

Our main empirical contribution is to report findings from a richer, global sample that helps us reconcile inconsistent past findings, solve the mystery of where the "missing returns" predicted by SDL logic might be, and determine the impact of the financial crisis on investor valuations of outsourcing. Our primary finding is that, as predicted by SDL theories, outsourcing activity does create value. In short, Smith, Ricardo, and modern day proponents were correct to predict that trade helps the "economic pie" grow larger – though sometimes these gains accrue more to vendors than to clients, and the pattern of gains may differ globally compared to the U.S. firms that dominate the current literature. PG theories, then, help predict how this larger pie is divided between clients and vendors, e.g., we find that different deal characteristics predict different gain allocation patterns. And UBP helps explain shifting investor preferences after the financial crisis, e.g., gains to outsourcing fell substantially post-crisis. In sum, adopting a "big picture" approach that allows us to rise above and see the entire forest, as opposed to focusing on specific trees (e.g., client-side only, U.S. side only, limited temporal frame, etc.) viewed through specific lenses (e.g., SDL only), does yield useful insight.

LITERATURE REVIEW

The outsourcing literature commonly draws upon theories of Specialization and the Division of Labor. Classical economists such as Smith (1776) and Ricardo (1817) explain how specializing in tasks where an economic actor has a comparative advantage, and then dividing tasks in accordance with these specializations, allows partners to trade what they produce in a manner that improves outcomes for both sides. Modern applications of these theories abound in the business and economics literature (e.g., papers advising firms to "focus on their core" business rather than diversify), and the outsourcing literature is no exception. The base logic is simple: the same gains to trade that benefit partners in classical economic examples should benefit outsourcing partners as well. Refined SDL applications often incorporate ideas from resource-based views (RBV) of the firm (Barney, 1991; Wernerfelt, 1984), with outsourcing clients able to contract with vendors in order to gain access to resources related to the vendor's specialty (e.g., knowledge or technology, or affordable pools of qualified labor). This division of labor between outsourcing partners generates benefits such as cost savings, the ability to focus on core competencies, efficient resource allocation and utilization, the development of higher quality products, increased speed to market, shorter customer delivery times, risk-sharing opportunities, and strategic flexibility, as supply chains can be reconfigured to suit changing environmental conditions (Kedia and Mukherjee, 2009; Lee, 2001).

Partnership Governance theories, on the other hand, tend to support a more zero-sum world view, where sometimes one partner benefits at the expense of the other. For instance, transaction cost economics (e.g., Williamson, 1975) and agency theory (e.g., Eisenhardt, 1989) assume that actions may be driven by self-interest as opposed to faithfully and reliably fulfilling promised obligations. More benign theories of partner relations, such as bounded reliability (Verbeke and Greidanus, 2009) and cultural complementarity (Clampit, Kedia, Fabian and Gaffney, 2015), assume that even benevolent partnerships are fraught with the potential for suboptimal performance outcomes, as good intentions are sometimes a necessary yet ultimately insufficient condition for positive outcomes. Thus, while SDL logic may generate gains within a given outsourcing dyad, PG logic suggests that these gains may be eroded or even destroyed due to the existence of opportunistic partners, excessively high transaction costs (e.g., monitoring costs), or simple, honest mistakes (due to miscommunication, cultural misalignments, etc.).

Most event-studies examining shareholder reaction to announcements build predictions around SDL

logic and client-side benefits. Expected gains to trade are presumed to be reflected in stock price movements after outsourcing deals are announced. And transaction costs are either ignored or framed in Coasian (1937), ex-ante terms that assume a make-or-buy decision has already weighed costs against benefits in a manner that justifies markets over hierarchies. For example, of the 13 studies in Table 1, only four explicitly test hypotheses related to PG logic, and none of these consider the vendor side.

Several papers in Table 1 (Dardan, Stylianou, and Kumar, 2006; Farag and Krishnan, 2003; Florin, Bradford, and Pagach, 2005; Hayes, Hunton, and Reck, 2000) note that the ability of clients to access specialized vendor knowledge and resources (e.g., customer service technology), and shift risk to vendors, allows clients to reduce costs and specialize in their own core competencies. Peak, Windsor, and Conover (2002) similarly note that specialization allows clients to shift risk to vendors. They, like Lee and Kim (2010), also invoke signaling theory (e.g., Fama, 1970) as a mechanism for communicating future SDL-based gains to investors who will, presumably, bid the stock price of clients up (as these anticipated gains are priced into updated valuations). Raassens, Wuyts, and Geyskens (2014), the only published paper in Table 1 with an explicitly global focus, invokes SDL logic but cautions that cross-border theories of customer interaction (e.g., Thelen, Yoo, and Magnini, 2010) will moderate results, such that outsourcing to emerging markets will be viewed less favorably when vendor tasks are complex or require personal interaction with client customers. Friedrich and Gellrich (2004), in an unpublished working paper, also examines a global client sample. While they, and Beasley, Bradford, and Dehning (2009), mention PG theories (such as TCE), their hypotheses are firmly grounded in SDL logic (e.g., access to specialized expertise, specialization allowing a focus on core competencies, etc.).

Four papers, however, do explicitly test PG-grounded hypotheses. Butler and Callahan (2014) find that HR outsourcing returns are more positive when tasks are routine and assets generic. Duan, Grover, and Balakrishnan (2009) find that markets prefer the outsourcing of primary functions that are disintegration-based, with knowledge obtained from previously performing these tasks in-house used to police potentially opportunistic vendors. Kalaignanam, Kushwaha, Steenkamp, and Tuli (2013) weigh positive SDL benefits against negative PG costs, related to the monitoring of agents, within the domain of customer relationship management (CRM) outsourcing. While they find a statistically significant negative return for their full sample, they note that strong IT capabilities, the ability to easily codify post-sale CRM processes and outcomes, and cultural similarities facilitate the monitoring of agents and, thus, generate

larger returns. Oh, Gallivan, and Kim (2006) similarly finds that monitoring difficulties and cultural differences, as well as measures of asset specificity, reduce client returns.

Empirically, this event-study based literature seems to mirror the broader outsourcing literature's failure to generate consensus with respect to whether or not outsourcing actually results in positive outcomes (Lahiri, 2016). As seen in Table 1, while many do find subsamples with positive returns, less than 1/3 of the 13 papers find statistically significant, positive full-sample returns (with the balance finding non-significant, mixed, or even negative outcomes). Interestingly, three of the four papers that explicitly test PG hypotheses find negative or NS returns for their full sample, and the fourth finds a negative link between PG moderators and outsourcing returns; yet none of these papers tests the vendor side of dyads to determine if gains predicted by SDL accrued to vendors.

Their theoretical development (applying PG thought to outsourcing) suggests an answer to the question of why we do not always find the gains to trade that we predict outsourcing creates. In the next section, we attempt to build on these implicit suggestions by explicitly testing both client and vendor sides – within a large, long-term, global sample – to determine if investors do generally reward outsourcing activity. We also test the impact of PG elements to determine if certain outsourcing deal characteristics (e.g., offshore versus domestic partnerships) tend to favor clients, vendors, or both. Finally, we analyze these effects both before and after the global financial crisis.

HYPOTHESIS DEVELOPMENT

Most tests of investor reaction to outsourcing announcements share a common theoretical base. SDL logic predicts the creation of value by trading partners who specialize in a given core competency or possess a valuable resource. Value creation is measured as abnormal client returns within a narrow domain (e.g., temporal, spatial, functional, etc.). The mystery of why full sample returns are so often negative or non-statistically significant is partially resolved by introducing special models of outsourcing that invoke various moderators to tease positive returns out from full samples (after making returns to trade conditional).

For example, Hayes et al. (2000) finds positive returns for small service firms, but not firms overall. In their model, investors tend to react positively to announcements from small firms, because: (1) it is presumed that the greater availability of information with respect to large firms means that additional bits of incremental information do not carry as much weight as they might for smaller firms operating in an

informational vacuum; and (2) the magnitude of value creation as a proportion of firm size is likely to be larger when a firm is small. Positive returns for service firms are similarly explained by information asymmetries (e.g., soft and intangible assets are difficult to quantify) and the magnitude of value creation (e.g., due to their heavier reliance upon information technology, service firms are more likely to outsource a higher proportion of tasks). The core logic is familiar: there are gains to specializing and then trading, and investors will bid stocks up as they price these anticipated gains in. And gains to the special case of small, service firms are convincingly explained. Yet does it explain why we fail to find not merely smaller gains, but no gains at all for other firms?

Special models are extremely valuable. The common saying that as scholars advance throughout their careers, they know more and more about less and less, rings true for a reason. We are always searching for boundary conditions and new explanatory mechanisms that help us refine thought that was initially broad. In the case of the returns to outsourcing, however, no initial empirical consensus has been obtained in this regard. In response, we offer a more general model of outsourcing returns that we hope adds insight with respect to whether outsourcing creates value in general, or only in special cases.

Insert Figure 1 Here

Figure 1 offers an overview of our model. It begins by incorporating the commonly theorized SDL link between the outsourcing decision and the creation of value. Importantly, we conceptualize value creation as a dyadic phenomenon, i.e., unlike studies that only examine whether value is created for clients, at this stage we examine whether value is created in general. We then incorporate value distribution thought related to PG theories, including those related to power and credibility dynamics within partnerships, to help predict specific returns on each side of the dyad. Finally, we assume that Bayesian tendencies due to large-scale changes in the outsourcing landscape (e.g., trade liberalization many years ago and, in our paper, the 2008 global financial crisis) have the ability to positively or negatively moderate the returns to outsourcing's general value proposition. We begin by briefly describing the first link in our model, before describing the remaining links in more detail.

Outsourcing and General Value Creation

The empirical record with respect to the positive effects of outsourcing is, to be kind, muddy. It is

especially disappointing with respect to studies of general investor reaction to outsourcing announcements (e.g., less than 1/3 of the studies in Table 1 finding statistically significant full-sample gains). And a rival school of theories (i.e., those invoking PG logic) does seem to offer predictions that are more consistent with this empirical record. Our model, nonetheless, acknowledges the validity of SDL logic and the recurrent decision of firms to outsource.

In short, we do not think that the dominance of SDL theory is unwarranted. We merely suggest that its predictions be tested via a more holistic lens – a lens that examines both client and vendor returns, over a long time frame, with dyads from all over the world that include a full mix of deal characteristics. Narrowly sliced samples that, crucially, focus on one half of outsourcing dyads while systematically ignoring the other are, from the standpoint of a scholar whose aim is to determine if the decision to outsource adds value, quite understandable. We do not deny that these studies are immeasurably valuable in that regard – and, indeed, as will be evident in subsequent sections of this paper, we hope to contribute to this research vein as well. However, systematically examining one half of a dyad (always the same half and typically from the same single country): (a) implies that firm performance on the vendor side is relatively unimportant, while also (b) potentially misleading some via wholesale downgrades of the efficacy of SDL concepts (such as specialization, the division of labor, trade, resources and their deployment as core competencies, etc.) applied to outsourcing in general. When viewed as a whole, we predict that the missing gains to outsourcing predicted by SDL theories will be found. We thus suggest:

Hypothesis 1. There will be a direct relationship between outsourcing announcements in general (i.e., full sample, both sides combined) and returns.

Returns to Clients and Vendors

Having examined the general return to outsourcing for the full dyad, we now turn to the issue of returns accruing to each side (i.e., the client and/or vendor side).

Main Effect. PG theories examine the interplay between partners while acknowledging – indeed, often predicting – that one side may benefit more than the other (and sometimes at the expense of the other). In an attempt to synthesize SDL and PG logic, our model suggests that while they each play an important role, they may express themselves via different channels. Due to the (previously mentioned) prominence of SDL thought in the economics and business literature in general, and also in the outsourcing literature, combined with the aligned actions of practice (i.e., firms clearly believe

outsourcing generates value), we suggest that PG elements are likely to act as moderators of a main effect driven by core SDL logic. While we will soon suggest avenues by which PG forces result in one side being more likely to reap positive abnormal returns than the other, when examining a holistic sample (i.e., large, long-term, global) that may smooth passing fluctuations, we generally expect SDL effects to dominate. We thus predict:

Hypothesis 2(a). There will be a direct relationship between outsourcing announcements and returns for both clients and vendors.

Hypothesis 2(b). General gains will be equally distributed (i.e., in the absence of specific moderators, neither side will accrue larger returns than the other).

PG Moderators. While in the minority, papers explicitly testing hypotheses related to PG (as opposed to SDL) logic (e.g., Butler and Callahan, 2014), do so for good reasons. On the client side, outsourcing decisions dictate a firm's boundaries, as managers decide whether activities should be internalized or performed by vendors. For vendors, firm boundaries may exist entirely within various outsourcing dyads; performing tasks externalized by partners is part and parcel of their business model. The goal of PG theories within the domain of outsourcing is often to help specify the conditions under which clients should internalize functions, while offering guidance that enables firms to suitably appropriate gains when value has been created. We draw upon two key elements within these theories, related to power and credibility, to help predict when the gains created by SDL logic might be unequally distributed between partners.

Describing markets and hierarchies as alternative governance structures, Coase (1937) proposed the most prominent PG theory, TCE. Williamson (1971, 1975) then applied the implications of bounded rationality – inherent cognitive constraints that limit the ability of managers to obtain and process all pertinent information (Simon, 1955) – to the context of partnerships. This allowed him to augment TCE via the specification of measurable transaction dimensions (such as asset specificity, uncertainty, and transaction frequency) that predict whether a partner will engage in opportunistic behavior (e.g., cheating, shirking, etc.) in order to appropriate a larger share of co-created gains. Agency theory parallels TCE's pessimistic view of partnerships by suggesting that unconstrained agents (e.g., vendors) will behave opportunistically rather than faithfully fulfilling contractual obligations to principals (e.g., clients). Aubert et al. (1998), for instance, links agent opportunism to adverse selection, moral hazard, and imperfect

commitment, while also highlighting principal risks arising from insufficient knowledge with respect to outsourced functions and performance measurement. Resource dependence theory (RDT) (Pfeffer and Salancik 1978) suggests that firms who control access to key resources that partners may depend upon use this power to benefit themselves. What these theories have in common is the theme of *power*. For example, after noting that "power is conceptualized in virtually all organization theories", Ireland and Webb (2006:485) describe how power within TCE and RDT frameworks may be moderated by social elements. The base prediction within these literatures seems to be that the power to be opportunistic (regardless of whether its source is related to information asymmetries, resources, etc.) inevitably leads to opportunism. In the words of Crosno and Dahlstrom (2008:192), "opportunism will arise whenever it is feasible".

While we accept the core logic of these theories, in a general sense, we argue that the power to appropriate a disproportionate share of gains may actually be a necessary, but insufficient, condition for skewed distributions to actually materialize. TCE claims that asset specificity leads to opportunism. The argument is that if a firm invests in a tailored asset whose utility is specific to the needs of a partner, the partner will be able to hold it hostage, as the investing party cannot leave (due to its inability to deploy the asset anywhere else). Yet a simple thought experiment illustrates how specificity may actually cut both ways.

Consider a vendor crafting an asset of use to a key client. It may, indeed, incur economic loss if the client severs the relationship. Offsetting this dynamic, though, is the possibility of this client becoming dependent upon this asset, as it does not perform this task in-house (and other vendors have not developed this tailored offering). The Economist (2013), for example, details Foxconn's risky move of investing billions of dollars to help build Apple's iPhone. It also notes that the degree of flexibility and responsiveness Foxconn offers cannot be replicated elsewhere. It concludes by suggesting the "reason Apple is what it is today is Foxconn" while claiming that they "are inextricably bound to each other". Thus, while there is support for specificity-opportunism links in the literature – including the offshoring literature, e.g., Butler and Callahan (2014) – evidence also exists to suggest that it may be less robust than many think. Crosno and Dahlstrom's (2008) meta-analysis of opportunism antecedents, for instance, found support for 2 of 4 tested specificity-opportunism links proposed by the literature. They also study the opportunism-resource dependency link, finding evidence that supports, but also contradicts, RDT. For

example, they find an *indirect* link between a lack of dependence upon partners for critical resources and opportunistic behavior. Findings such as these suggest that while these power-based predictions of opportunism have merit, it may be prudent to temper our confidence in them a bit. We thus highlight a second theme within the PG literature to augment the role played by power: *partnership credibility* (Clampit et al., 2015).

These streams remind scholars that to govern business partners is to govern human actors guided by social rules that may or may not preclude stark assumptions of pure opportunism. For example, Ketchen and Hult (2007) discuss social capital theory's emphasis on people and relationships that, over time, engender trust and loyalty towards not just their own firm, but also towards people in partner firms. Shared goals and experiences facilitate shared sensemaking and, thus, positive outcomes. Relational contracting theory (Geyskens et al., 1999; Macneil, 1980); Rokkan et al., 2003) highlights the role of dyadic (versus firm-based) norms, effective communication, and shared affect to promote information sharing and goal alignment. Ireland and Webb (2006), meanwhile, carve out an explicit role for trust as a potential attenuator of power. Verbeke and Griedanus (2009) develop this logic further, fusing thought from opportunism-based studies with social and cognitive theories to create a theory of bounded *reliability*, which describes conditions (and remedies) under which suboptimal partner performance arises due to opportunism or benevolent causes (such as accidental overcommitment). Finally, Clampit et al. (2015) augment bounded reliability by introducing the concept of cultural complementarity, which highlights the ability of shared experiences to not just facilitate shared sensemaking between partners, but to also facilitate the psychic assimilation of partner-firm employees into a collective in-group. This enables firms to transcend the conception of firms as rigid hierarchies with finite boundaries and towards a conception of networks of pseudo-in-groups that compete against other networks in a way that, ideally, harnesses the best traits of both markets and hierarchies and is, possibly, more reflective of the way many modern firms operate.

In order to develop our PG-grounded hypotheses, we now map the power and/or credibility based aspects of PG theories to deal characteristics that are commonly reported in outsourcing announcements. The first characteristic we examine is *deal size*. Here, we suggest that the power balance between partners plays a prominent role. Intuitively, cost savings and benefits from outsourcing (e.g. Smith et al 1998) should be positively correlated with contract size. However, agency problems, monitoring costs, and

information asymmetries may be higher with larger contracts (Jensen and Meckling, 1976). Furthermore, large and complex outsourcing deals are often customized and structured to meet specific client needs. This reduces the vendor's ability to standardize and achieve economies of scale, while encouraging a degree of client dependency that links deal size to increased risk levels and switching costs (Barki et al., 1993; Oh, 2006). While Butler and Callahan (2014) do not specifically test deal size, they do suggest that routine tasks and generic assets improve client returns. Williamson (1979), meanwhile, highlights the benefits of having multiple partners. In a competitive environment, buyers with multiple vendors – as opposed to those announcing large deals where a single vendor performs most or all of an outsourced function – maintain flexibility and reduce dependence.

From another perspective, we can expect that smaller firms generally announce smaller deals that are less subject to scrutiny and coverage by investors. Then consistent with the findings of Hayes et al. (2000), we may expect that smaller firm announcements of outsourcing deals should be more surprising (with this information not already priced into share prices), and thus result in greater positive abnormal returns. While it is true that tailored offerings may result in mutual dependence (e.g., Apple and Foxconn), we predict that the combined effects of client-side dependency, monitoring costs, information asymmetries, reduced economies of scale, and the likelihood of positive returns for small deals by small firms, means that, ceteris paribus, larger deals will favor the vendor side. We thus suggest the following:

Hypothesis 2(c). From a value distribution perspective, returns to larger deals are likely to accrue more to vendors than to clients.

The second characteristic we examine is *deal length*. The Deloitte study points to aggressive vendor marketing, e.g., slashed prices and attractive concessions at the inception of the deal. Then, as relationships mature, re-pricing issues surface, with vendors attempting to recoup lost revenue from clients who may now be dependent upon them and face exorbitant switching costs. Vendors seem especially eager to lure naïve clients (e.g., Sullivan and Ngwenyama, 2005) into deals where the balance of power shifts to vendors over time, with vendors ultimately exploiting this power to appropriate a larger share of combined returns. Gopal et al. (2003) and Lacity and Hirschheim (1995) suggest that clients choose short-term contracts to mitigate such risks. Likewise, Willcocks and Lacity (1998) find that shorter deals benefit clients more than longer deals.

Credibility effects temper this view with respect to motive and outcome (Verbeke and Greidanus,

2009; Clampit et al., 2015). Sometimes suboptimal performance or cost/time overruns occur for non-opportunistic reasons. While it is true that a loss is a loss, regardless of motive, long deals may afford arms-length partners opportunities for learning (reducing miscommunication) and relationship-building (that creates shared in-group status). For example, while Lee and Kim (2010) suggest that deal length is a signal of client confidence in a vendor, they also suggest that vendors may view short-term partners through a transactional, as opposed to relational, lens (thereby increasing the odds of opportunism).

Nevertheless, a first-time client in a long deal, for whom learning or relational effects do not occur until the end of this deal, will still incur a loss. Thus, while we respect the potential of credibility effects to attenuate loss, we ultimately think that vendors may prefer long-term contracts that guarantee returns on investments and offer higher profits, especially if clients become dependent upon them. And we expect buyers to prefer the flexibility of short-term contracts. On net, we expect that longer deals will modestly favor the vendor side, and that the market reaction to these announcements will reflect the risk of dependency and therefore generate lower client returns. We thus suggest the following:

Hypothesis 2(d). Returns to longer deals are likely to accrue more to vendors than to clients.

The next characteristic we examine is whether deals involved the announcement of new partnerships or *renewals* of existing partnerships. Renewals may be expected to serve as signals of satisfaction, yet they may also signal a degree of dependency. Our general logic, however, relies on the premise that while buyers do not outsource for a living, vendors do. This results in information asymmetries that favor vendors early on, while leaving more room for clients to learn over time and close such knowledge gaps. More time also allows transactional partnerships to develop into relational partnerships.

Regarding the former, Deloitte (2005) predicts that 50 percent of outsourcing deals will fail due to clients who "don't know what they are doing" and "don't understand outsourcing". TPI (2007b) notes that 89% of clients felt that they failed to appreciate the importance of managing partnerships, with 69% claiming that this was due to their own inexperience. Moreover, the technological superiority of vendors makes it risky for managers who have little initial understanding of processes and cost structures (Niederman et al., 2006; Sullivan and Ngwenyama, 2005).

While TPI (2007a) notes that vendors are well aware that they are more experienced at outsourcing than buyers, they also offer insight consistent with the learning effects predicted by credibility theories (e.g., Clampit et al., 2015). They ultimately conclude that as buyers better understand how outsourcing

works, and how to proactively manage partnerships, they will see larger benefits. Both TPI reports (2007a,b) note that renewals often lead to improved contract terms, stronger relationships, and more satisfied clients. In sum, we expect that information asymmetries leading to vendors having more power will diminish, as clients learn how to better manage the outsourcing process, and vendors begin viewing long-term partners via relational as opposed to transactional lenses. Experience with outsourcing, and with specific vendors, reduces both the ability and desire of vendors to engage in opportunistic behavior. As a result, TPI (2007a) reports that 56% of clients were happy with subsequent contracts with the same vendor, versus 29% who thought vendors had strengthened their position. We therefore suggest the following:

Hypothesis 2(e). Returns to renewed deals are more likely to accrue to clients than to vendors.

From 2003-2012, the Economist (2013) notes that the percentage of U.S. and European firms that source offshore grew from roughly 40% to 70%. Given its increasing prominence in the world of outsourcing, the final deal characteristic we examine is investor reaction to *offshore* outsourcing. Our general argument is that PG elements related to power and credibility may slightly favor vendors, but perhaps not enough to overcome compelling SDL benefits on the buyer side.

We first suggest that if clients go offshore, as opposed to sourcing domestically, they likely do so for compelling reasons. For example, clients may gain access to valuable resources unavailable at home, such as advanced technologies, higher quality products or services, or pools of labor that are more qualified or substantially cheaper than home-country workers (Doh, Bunyaratavej and Hahn, 2009; Kotabe and Swan, 1994). We expect this to be especially true for clients from smaller countries whose home market may be less likely to provide the specific resources or economies of scale they need to compete.

A well-known downside to cross-border partnerships is the potential for cultural distance to lead to liabilities of foreignness (LOF) that reduce firm performance (Kogut and Singh, 1988; Zaheer, 1995). Miscommunication due to language differences, friction due to cultural differences, or differences with respect to intellectual property protection make it more difficult to operate abroad. It is also assumed that culturally different vendors who view partners as out-group members may be more likely to engage in opportunism (Oh et al., 2006). Papers by Shenkar (2001), Verbeke and Greidanus (2009), and Clampit et al. (2015), however, suggest a more benevolent view, as partnership credibility elements (due to learning effects and the tendency for in-group assimilation to develop over time) temper power imbalances (e.g.,

due to information asymmetries) and more benign forms of LOF (e.g., miscommunication). The result is that both the power and inclination to engage in opportunism is lower than many reflexively assume.

Another factor that may offset the power to engage in opportunism is the possibility that larger firms, who may be more experienced with both outsourcing in general and operating in foreign countries, may be more likely to go offshore than smaller firms. Furthermore, competition for large contracts signed by large firms provides clients with multiple offshore alternatives (Lacity and Hirschheim 1993), thereby incentivizing vendors to refrain from opportunism in a bid to prevent clients from taking their business to a competitor.

On the vendor side, the U.S. is quite easily the most popular offshore destination. Many of these U.S. vendors, e.g., IBM, accept substantial amounts of both domestic and offshore business. The question for them is whether offshore business is viewed more or less favorable as onshore business. Non-U.S. vendors (e.g., those in India) often specialize in offshore partnerships. This pattern may hold true, though to a lesser extent, on the client side as well, i.e., while U.S clients may often find what they seek at home, clients from smaller markets may be quite used to dealing with foreign partners. As a result, we may expect that due to non-U.S. vendor specialization in offshore deals, and a potentially greater familiarity with offshore partners on the non-U.S. client side, non-U.S. firms may see higher returns than U.S. firms.

In sum, we argue that (1) positive credibility effects may help offset negative power effects, (2) client-side SDL effects are stronger than usual, and (3) non-U.S. sides may specialize in, or at least be more experienced at, working with offshore partners. This leads us to predict that relative to domestic sourcing, offshore sourcing will favor clients versus vendors, and that U.S. firms may see lower returns than non-U.S. firms. We thus suggest the following:

Hypothesis 2(f). Returns to offshore deals will accrue more to clients than to vendors.

Hypothesis 2(g). Returns to offshore deals will be larger for non-U.S. firms.

Temporal Period Effects

Our primary contention here is that the global financial crisis (GFC) prompted an updating of Bayesian priors (UPB) that resulted in a long-term shift of investor preferences towards outsourcing announcements in general and with respect to certain deal characteristics.

Main Effect. Barberis, Shleifer, and Vishny (1998) suggest that markets are generally Bayesian in

nature, as both rational investors (driven by fundamentals) and less rational investors (driven by behavioral influences) continually update their priors as new information arises. Schwarz and Sun (2016) suggest that while cognitive limits with respect to the number of factors investors pay attention to slows Bayesian updating, salient information is incorporated more quickly. It stands to reason that the more extreme an event is, the more salient it will be. Chiang and Zheng (2010), for instance, find evidence of herd behavior in global markets with the exception of U.S. and Latin America, before noting that when herding was triggered by an extreme event (crisis), even the exceptions exhibited herding.

While Tetlock (2007) finds that negative media reports lower returns before a reversion to fundamentals kicks in, Ferguson, Philip, Lam, and Guo (2015) find that abnormal returns are only partially corrected in subsequent trading periods, with stronger effects for "attention-grabbing" stories with high media coverage. Klibano et al. (1998) suggest that salient news induces price movements in addition to that explained by the provision of new information. Burch and colleagues (2011, 2014) suggests that some events are "super-salient", before finding evidence of a psychology-based "flight" response among retail investors, followed by a possible long-term shift towards risk-aversion. With respect to the GFC, specifically, Hoffmann, Post, and Pennings (2013) draw on Barberis (2013), Kahneman and Tversky (1972), Malmendier and Nagel (2011), and Thaler and Johnson (1990) to suggest that particularly salient events accompanied by loss may permanently alter risk perceptions and tolerances. They ultimately find that return expectations and risk-tolerance fell while perceived levels of risk rose. Both Burch and colleagues (2011, 2014) and Hoffmann et al. (2013) found that asset-prices reverted to baseline levels as time goes by as negative news is replaced by neutral or positive news. While negative GFC news, in general, eventually dissipated, the negative tone associated with outsourcing stories continued.

Barberis et al. (1998) notes that multiple pieces of news in the same direction cause overreactions that may linger for up to 5 years. Presumably, then, if the string of news continues for years, the end date of this lingering may be postponed until years after the last batch of similar news is released. Behavioral theories, such as priming effects that increase the salience and accessibility levels of related schema, have the ability to markedly increase how much attention is paid to a given phenomenon (Thaler and Sunstein, 2008). The GFC, then, may have made high-profile, post-crisis outsourcing failures more salient, with investors deciding that pre-crisis reports may have actually been more representative than was previously

assumed. The failure of IBM's partnership with Queensland, for instance, publicly played out in the headlines from 2008 to 2016, with high-profile public firings and stories of outrageous glitches, severe problems, and the project being in "shambles" a regular occurrence (e.g., Sydney Morning Herald, 2010). In the end, costs of an initial $6 million contract had ballooned to over $1.2 billion, with Queensland, IBM, and Accenture (who lost the bid) sniping at each other in the media and the courtroom.

Virgin Air and the Bank of Scotland provide further examples of high-profile outsourcing failures. On the vendor side, EDS was forced to write off more than $500 million in assets due to its inability to fulfill contractual obligations with the U.S. Navy, and IBM lost several billions of dollars when its contract with JP Morgan was prematurely cancelled for poor performance (The Economist, 2013). The Economist (2013), Gewald and Dibberd (2009), and annual TPI reports (2009-2015), meanwhile, document specific reasons for the failure of outsourcing projects, such as the fact that outsourcing as a strategy is easily replicated by competition, outsourcing may result in a hollowing out of core competencies, technology leakage may occur that facilitates and grows new competition, labor relations may be undermined, complacency may be nurtured, integration issues may arise, and customer service may deteriorate.

TPI press releases (2007b,c,d; 2009a; 2010) offered headlines such as: "Poor Contract Management Drives Outsourcing Dissatisfaction", "Tighter Times for Outsourcing Providers", Outsourcing Activity Spirals in Europe as Contract Sizes Shrink", "Outsourcing Market Shows Continues Softness in First Quarter of 2009", "More Outsourcing Buyers Opting to Restructure Contracts", etc. They also exhibit a pattern of mentioning new lows in the combined USD value of outsourcing contracts due to the GFC, followed by hopeful predictions of recovery that are soon contradicted by new data that is muddled or negative, with dissatisfaction expressed on both client and vendor sides. For example, TPI's 2010 annual report expressed optimism that the "freefall" in outsourcing spending had stabilized, and that solid growth was on the horizon. Over the next few years, however, TPI notes that spending remained relatively flat, e.g., 2011 spending fell in almost as many industries as it rose, 2013 spending showed "no net change", and in 2015 they claimed companies were "hitting the reset button" on outsourcing spending.

Lee and Kim (2010) invoked institutional theory (DiMaggio and Powell, 1983) to predict positive CARs for certain forms of outsourcing (e.g., offshore) that had become "expected" in order to "conform to popular industrial practices" that would grant "external legitimacy in the eyes of shareholders". Investors would see exemplars benefiting and reward firms that followed suit and chose to "jump on the

bandwagon". In a post-GFC environment where salience has shifted away from a "legitimacy" narrative towards a more cautious view, bandwagon effects may now run the other direction. In sum, UBP logic suggests that the GFC and subsequent pattern of negative outsourcing reports meant that some mixture of new information, negative sentiment, and shifting risk tolerances drove price movements going forward. We thus predict that overall returns to outsourcing will be lower after the GFC.

Hypothesis 3(a). Post-GFC outsourcing returns will be lower than pre-GFC returns.

Shifting Preferences. While our main expectation is for lower overall returns post-GFC, we also expect the GFC to affect investor preferences regarding deal characteristics. In general, we expect power to shift to the client side (due to reduced demand), while positive PG elements favoring clients (e.g., learning effects) continue. UPB logic means investors will incorporate this dynamic into their assessments of deal characteristics. Brown and Wilson (2008), for instance, notes that vendors had to offer client-specific inducements, as opposed to traditional "cookie-cutter" packages, in order to win contracts, while clients who were now savvier and more experienced employed sophisticated and stringent methods of evaluating vendors. On net, we expect deals that are larger, renewals, or offshore to be more favorable to clients post-GFC. Shorter deals may be viewed positively by investors on both sides of the dyad (especially the vendor side). We do add one new characteristic: business function outsourced. Here, if the function was related to financial outsourcing, we expect both clients and vendors to do worse than before (as this is where direct GFC effects were likely the strongest).

With respect to deal size, the outsourcing press is full of evidence suggesting vendors had to offer more inducements than ever to convince gun-shy clients to sign big contracts. The Economist (2008) and Prott-Alvarez (2010) note the building trend away from large deals. TPI (2007d) released a press release with the headline: "Outsourcing Activity Spirals in Europe as Contract Sizes Shrink". And in 2009(b) they noted that "the effects of the current global recession are evident in the strategies among larger corporations. They are tending to contract for shorter-duration and smaller-valued outsourcing arrangements. We expect this trend to continue until confidence in the return to growth is attained".

Hypothesis 3(b). Post-GFC outsourcing returns for large deals will now favor clients, with small deals resulting in larger returns for vendors.

With respect to deal length, clients (as noted above) seemed to now favor shorter durations. In 2007(c), TPI documented a "trend towards shorter contract duration" and renewed competition that

clearly favored buyers. TPI's 2009(b) prediction that this trend would continue was accurate, as 2010 saw new five-year lows in activity, and continued weak economic conditions for clients who remained risk-averse while favoring safer deals offering quick returns. We suggest that risk-averse investors may similarly favor both smaller and shorter deals. While larger deals, on the client side, had the offsetting factor of highly favorable contract terms, there is often no offset here. And on the vendor side, logic suggests that even if they were forced to offer less profitable terms in order to gain even short-term business, a shorter duration means less time spent under these less attractive terms while affording them the opportunity to renegotiate better terms sooner.

Hypothesis 3(c). Post-GFC investors will prefer short deals on both client and vendor sides.

With respect to renewals, TPI's Annual Reports (2009-2015) document a consistent pattern of cash-strapped potential clients who are more reluctant to sign new outsourcing deals than they were pre-GFC. This suggests that vendors may emphasize the retention of clients they already have. The outsourcing press is again full of suggestions that vendors were forced to offer unprecedented terms to clients to convince them to renew contracts and/or outsource offshore. Avalon Research (2009), for instance, notes the "increased competitive intensity for renewals". Skinner, Ford, and Stamp (2010) note that in response to the GFC, clients "were asked to share some of the pain experienced by customers". Vendors "often felt they had no choice but to agree" to extremely favorable terms, e.g., reductions in price and accelerated of benefit delivery schedules. Keeping customers, even at the expense of diluted margins, was better than losing them. And renewals offered "the ability to show investors" that even if margins were thinner, vendor revenues would continue, even during the GFC.

Hypothesis 3(d). Post-GFC investors will favor the client side for renewed deals.

With respect to offshore deals, the World Bank (2009) voiced fears about the GFC spurring renewed calls for protectionism in response to the offshore-outsourcing of jobs. Large stimulus packages in countries like the U.S. mandate the use of onshore providers, and government contracts "overwhelmingly prefer onshore vendors" (Brown and Wilson 2008). The Economist (2008) notes that while giant U.S. vendors such as IBM and Accenture will suffer as a result of the GFC, offshore "behemoths" like those in India "are particularly exposed'. With respect to vendor performance in the turbulent post-GFC climate, Wipro's CEO, Girish Paranjpe, noted: "It's like driving blind at the moment". The Economist (2013) also notes the growing post-GFC popularity of near-shoring (bringing business functions back to home

countries), providing examples of near-shoring announcements by Chesapeake Bay Candle (2008), GE (2009), Sleek Audio (2009), Ford (2011), and Otis Elevator (2011). Furthermore, we expect that positive PG elements such as learning effects by clients – who, unlike vendors, may not consider outsourcing activity to be their core-competency – are likely to continue, as will the tendency for increased in-group sentiment that tends to reduce vendor opportunism. PG elements, then, are likely to amplify the shift in power away from vendors and towards clients with respect to offshore deals. We thus propose:

Hypothesis 3(e). Post-GFC vendors will favor offshore clients over offshore vendors.

With respect to the outsourcing of financial functions, our logic is simple. This is where investor sentiment, and data that fundamentals-based investors rely upon, are likely to have been the most negative as a result of the GFC. As a result, we expect that investors will, in general, respond negatively to the outsourcing of financial functions, which may serve to further expose the vulnerabilities of the outsourcing financial firm. As Protti-Alvarez (2010) notes, "In outsourcing, financial services is, perhaps understandably, where the impact has been felt the most", and, "the financial services sector…had little money to invest in new ITO projects and spent most of its time renegotiating contracts. Meanwhile, BPO was almost dead – no one really had the capital for the investment required". We thus propose:

Hypothesis 3(f). Post-GFC returns to outsourcing will be lower for both buyers and vendors involved in the outsourcing of finance functions.

DATA COLLECTION AND METHODOLOGY

Data Collection

We hand collect a global dataset of public outsourcing deals announcements stretching from 1991 to 2015. We identify deals in Lexis Nexis and from the global outsourcing providers' firms. We then retrieve the official press release from either the vendor's or buyer's official website to guarantee the accuracy of the announcement date and other deal characteristics. For each announcement, we collect the following: announcement date, contract estimated total value, contract duration in years, and whether it is a renewal or extension of an existing agreement. Interestingly, we notice less disclosure in the deals' characteristics in the second half of our sample. We use the DataStream database for daily stock returns of individual firms and for country index returns. The data collection yields 2628 deals or announcement days, and a total of 5,295 firm announcement days with some deals involving more than one vendor. After deleting private, not-for-profit, government entities and firms with missing stock prices in

DataStream, the sample contains 3601 observations. We impose at least five deals for each country to be included in the sample and available stock returns for 265 days before the announcement day and the 10 days after. This leaves us with a final sample of 3,551 firm observations. Table 2 provides a breakdown of the outsourcing transactions by country of buyer's and vendor's origin, deal size and contract duration.

Insert Table 2 Here

Methodology

We adopt a standard market model event-study methodology described in Dodd and Warner (1983) and Mackinlay (1997). We compute abnormal returns (ARs) and cumulative abnormal returns (CARs) using market model estimates from 265 days to 11 days prior to the event day. When relevant, we report the difference in ARs and CARs significance test using the standardized cross-sectional approach following Boehmer et al., (1991).

RESULTS

Full Sample

As prefaced above, some of the relevant contributions of our study are both the extended sample period and sample size. Yet, the examination of the full sample provides a single conclusion supporting our first hypothesis of positive relationship between outsourcing and returns (Table 3). These returns are mainly driven by non-U.S. firms. However, the in-depth analysis of market reactions using combined data throughout the entire sample period yield somewhat inconclusive results. Performing a comprehensive analysis of various sub-samples revealed a ubiquitous temporal period effect across almost all sub-samples. Specifically, we find a significant shift in market reaction around 2007. We thus divide our main analysis into sub-samples of pre- versus post-2007. Our analysis comprises four sections. In the first section, we focus on U.S. firms since they represent the majority of outsourcing deals in our sample. Then, we present the international evidence from other countries. Next, we launch the interactive analysis with offshore versus onshore outsourcing. Subsequently, we test the market reaction for financial institutions. Finally, we identify the determinants of the market reaction using a cross-sectional regression analysis.

Insert Table 3 Here

Market Reaction to Outsourcing Announcements in the U.S.

We next focus on the full sample of U.S. announcements. In the pre-GFC era, we find a positive AR (0.20%) on the announcement day (Table 4, Panel A). We also report positive CARs for the three and eleven-day windows surrounding the announcement day, both significant at the 1% level. Post-GFC, we observe a remarkable absence of abnormal market reaction for all windows except a negative CAR for the twenty-one-day event window, significant at the 0.1% level. In addition, the difference in the CARs between pre- and post-2007 is significant at the 10% level for the three-day event window. This is the first evidence of market shift following the financial crisis as predicted by our third hypothesis. From 1991 to 2007, markets in the U.S. regard outsourcing as a positive value-creating managerial decision generally leading to a statistically significant increase in stock prices following the announcement. From 2007 to 2015, the market reaction has been rather reticent. Next, we divide our data into various sub-samples. First, we assess the distribution of benefits between vendors and buyers. Then we analyze the variation in stock price response to outsourcing based on deal characteristics namely: size, duration, and renewal.

Vendors versus Buyers. Panel A of table 4 presents ARs and CARs for sub-samples of U.S. vendors and buyers along with the AR differences. Similar to the full sample, the sub-sample of U.S. vendors provides further evidence of a shift in market reaction. In the pre-GFC period, vendors experience a positive and significant CAR on the announcement day and in the three-day window, significant at the 1% level. Nevertheless, post-GFC we only find a negative and significant CAR at the 0.1% level for the twenty-one-day window. Similarly, U.S. buyers experience positive and highly significant CARs for several windows in the pre-GFC era. Whereas the CARs are generally negative for the post-GFC subsample and only significant at the 1% level for the four-day window ($CAR_{0,+3}$). The two sub-sample of U.S. vendors and buyers display similar market reaction observed in the full U.S. sample. Overall, these results reject our second hypothesis that the shareholders' wealth effect of outsourcing deals is cumulatively benefiting both the vendors and buyers over the full sample period. Capital markets seem to assign higher risk aversion to outsourcing decisions following the financial crisis.

Insert Table 4 Here

Large Deals versus Small Deals in the U.S. Among the deal characteristics disclosed in the announcements, the projected deal size may convey to the market the extent of the deal's risks and benefits. Therefore, we extend our analysis by dividing the U.S. sample into two sub-samples with deals higher or equal, and less than 100 million dollars. In the results reported in Table 4 Panel B, we notice a strong empirical evidence of reversal in market reaction especially for vendors in large deals. For this sub-sample, the pre-2007 period data shows positive and highly significant CARs. For example, the three and eleven day's event windows ($CAR_{-1, +1}$; $CAR_{-5, +5}$) are positive and significant at the 0.1% level. The CARs of these same event windows post-2007 are negatively significant at the 0.1% level. For U.S. vendors in small deals, the data reveals an opposite pattern. In the pre-2007 era, U.S. vendors experience negative CARs; whereas, after 2007 some CARs are positive and highly significant. This evidence suggest that overtime investors are favoring smaller deals with less inherent contracting risks. We also posit that this reversal is reflective of an increased risk aversion toward outsourcing decisions exacerbated by the mounting systematic risk ensuing the financial crisis. Although there is no abnormal market reaction for U.S. buyers in large deals in the pre-2007 period, we find some evidence of positive market reaction post-2007. Combining this evidence with the negative market response for vendors in large deals as discussed above, we conclude that large deals result in wealth transfer in the post-financial crisis. This result refutes our second hypothesis of equal wealth effect. This is probably due to the maturity of outsourcing buyers in structuring and negotiating their contracts. Conversely, small deals are more consistent for U.S. buyers by eliciting some positive and significant CARs during the entire sample period.

Contract Duration: Greater Than or Less Than 5 Years. In Table 4 Panel C, we present results for U.S. sub-samples of deals longer than, and less than equal to, 5 years. For outsourcing agreements extending more than 5 years, U.S. vendors in pre-2007 experience a positive AR of 0.38% on the announcement day with a 1% significance level. The four-day window ($CAR_{0, +3}$) is also significant at the 1% level. There is however a reversal in investors' reaction post-2007 with negative CARs for the twenty-one-day window significant at 0.1%. Similarly, U.S. buyers in greater than 5 year deals

experience a reversal from a positive market response pre-2007 to a significantly negative CARs post-2007. Overall, long-term outsourcing agreements seem to affect vendors and buyers equally. The shift to a negative market reaction is another evidence of aforementioned increased risk aversion in the post-GFC period.

For contracts lasting 5 years or less, there is evidence of an unequally distributed shareholder wealth effect. There is virtually no abnormal market reaction for U.S. vendors throughout the entire sample period. By contrast, U.S. buyers seem to enjoy a positive and significant market reaction both pre-and post-GFC. CARs (-5.+5; -10,+10) are positive and significant at 0.1% level both pre- and post-GFC. Consequently, we conclude that deal durations do produce some differences in valuation between vendors and buyers. Outsourcing deals consistently create value for buyers with shorter contract terms.

Deal Renewal or Extension. The empirical evidence is lending support to hypothesis 2(d) with positive and significant ARs for the U.S. vendors in deal renewal or extension throughout the sample period. U.S. buyers on the other hand experience more deal renewals and extension in the post-2007 period reflecting negative CAR. This result corroborates the conjecture that negotiations of contracts' renewals or extensions give vendors the upper hand in view of the higher switching costs facing the buyers.

Market Response to Outsourcing Announcements Outside the U.S.

Canada. Table 5 presents the mean ARs and CARs surrounding the outsourcing announcements in Canada. The full sample of Canadians firms, presented in panel A, shows a positive and significant price reaction to the outsourcing event in both before and after 2007 periods. In the sub-sample of vendors, we notice a small evidence of positive and significant market reaction only for the post-2007 period. Whereas the subsample of buyers exhibits an opposite behavior with highly significant CARs in the pre-2007 period, followed by an inconsistent market response in post-2007. While rejecting our second hypothesis, wealth creation in Canada seems to accrue in the first half of our sample to buyers, then to vendors in the post-financial crisis. Similar to the U.S. sample, the examination of deals' characteristics in Canada reveals some striking reversal in investors' expectations following the financial recession. Especially, we notice a change in market reaction for Canadian buyers in large deals and deals higher than 5 years from a positive and highly significant market reaction to a rather negative one. There is another instance of reversal with buyers in smaller deals experiencing a shift from a negative to a positive valuation in the

second half of the sample. This investors' systematic devaluation of the inherently risky larger and longer deals in the post-2007 period is another evidence of increasing risk aversion as preconize by hypothesis 3 (a).

Insert Table 5 Here

United Kingdom. The sub-sample of outsourcing deals originating in the U.K. seems to differ from those in U.S. and Canada. Overall, we do not observe any evidence of temporal effect with the investors' reaction being relatively stable over the sample period. Overall, both U.K.'s vendors and buyers experience a highly significant positive valuation around the announcements. Focusing the analysis on the deals' characteristics, we generally observe a wealth creation for both parties and throughout the whole sample period. The one exception is with U.K. buyers in large deals where the market is not reacting positively and with some evidence of significant negative effect in the post-2007 period.

Insert Table 6 Here

Other Countries. Table 7 presents the four days and twenty-one days CARs (0,+3; -10,+10) around the announcement of outsourcing deals for buyers and vendors in: Australia, Belgium, Brazil, China, Denmark, Finland, France, Germany, India, Ireland, Israel, Italy, Japan, Netherlands, Norway, South Africa, South Korea, Sweden and Switzerland. With respect to our third hypothesis, we find further evidence of temporal effect in many countries with increased risk aversion vis-à-vis outsourcing announcements. There is negative and significant shareholders' wealth effect for buyers from Israel, Italy, Norway, South Korean and Switzerland in the post-financial crisis period. Most of these countries have no adverse market reaction in the pre-GFC period. We even find that the pre-GFC CARs for South Korean and Switzerland are positive and highly significant. For Australia, Denmark, Japan and South Africa, the positive wealth effect for buyers seem to disappear also in the second half of the sample. Specifically, buyers from Australia, Denmark and South Africa have no abnormal returns in post-GFC, a noticeable change from a consistently positive pre-GFC CARs with 0.1% significance.

As home to some of the major global outsourcing providers, India displays an opposite market reaction to the one reported in most other countries. Explicitly, the analysis of India's returns reject our

second hypothesis with empirical evidence pointing to unequal wealth distribution over the entire period. In the pre-2007 era, vendors experience a positive and significant market response while buyers face a negative valuation. The valuation is then reversed in post-2007 period with buyers experiencing positive and significant (0.1 % level) wealth effect and vendors receiving negative CARs for the twenty-one-day window (significant at 0.1 %). Except for Brazil, Germany and Sweden, no other country in our sample has experienced an improvement in market returns following the financial crisis. Two countries Belgium and Finland, have maintained a positive valuation during the entire sample. Overall, the evidence from most of the countries support our third hypothesis.

Insert Table 7 Here

In our pre-GFC sample, our extensive list of countries reveals sufficient prove of shareholders optimism surrounding the announcement of outsourcing deals as reflected in the positive abnormal returns. This significant wealth effect is benefiting, with varying extent, both buyers and vendors. By contrast, the investors' optimism disappears with the majority of the countries post-GFC. We may relate the lack of investors' abnormal reaction to the maturity of outsourcing as a business process that evolved into a mundane and rather essential practice. However, this argument fails in view of the significant negative valuation. We therefore attribute this adverse wealth effect mostly to the increase in systematic risk and risk aversion subsequent to the financial crisis. We also posit that the risk aversion toward outsourcing agreements is exacerbated by the above-discussed outsourcing backlash, failures and premature termination concurrent to the financial crisis. In addition, the market adjustment in the second half of our sample leads us to conclude that markets originally overvalued outsourcing agreements.

Comparison of Market Reactions to Onshore versus Offshore Deals

We next study the virtues of both offshore and onshore outsourcing. We specifically examine the effect of the contracting firms' geographic location on the market reaction to the outsourcing decision announcement. We divide our sample to four sub-samples as follow: first, we examine onshore outsourcing among U.S. based firms by testing the market reaction for U.S. vendors contracting with U.S. buyers. Subsequently, we examine offshore outsourcing between U.S. vendors contracting with non-U.S. buyers. Then, we analyze a sub-sample of non-U.S. vendors contracting with U.S. buyers. Finally, we

turn to non-U.S. vendors contracting with non-U.S. buyers. In each sub-sample, we separately examine the market reaction of vendors and buyers and over the pre versus the post-2007 periods. Table 8 presents the mean ARs and CARs for vendors and buyers in each sub-sample.

Insert Table 8 Here

From Panel A of Table 8, we find that the sub-sample of U.S. vendors contracting with U.S. buyers presents similar evidence. Pre-GFC, U.S. vendors experience positive and significant CARs surrounding the announcements. This positive valuation disappears post-GFC with the exception of the twenty-one-day cumulative abnormal return ($CAR_{-10, +10}$) being significantly negative at the 5% level. Similarly, we find a positive market reaction for U.S. buyers in the pre-GFC period. Nevertheless, stronger evidence of negative valuation effect emerges in the post-GFC period for buyers with the four-day window ($CAR_{0, +3}$) highly negative at the 0.1% level. Overall, onshore outsourcing in the U.S. provides similar evidence of negative shift in market reaction as reported in the full U.S. sample (Table 4).

By contradiction, an opposite market reaction follows the announcement of U.S. buyers contracting with non-U.S. vendors. In the pre-2007, U.S. buyers outsourcing to offshore vendors have no abnormal market reaction except for the eleven-day window ($CAR_{-5, +5}$) displaying negative and significant CARs at the 5% level. The investors' reaction is nevertheless shifting in the post-GFC period with many event windows CARs being positive and highly significant. In summary, capital markets post-GFC reward U.S. buyers for offshore outsourcing and penalize them for onshore outsourcing. This is an interesting result underlining the dichotomy in market reaction between offshore and onshore outsourcing.

Offshore outsourcing is equally beneficial to non-U.S. buyers contracting with U.S. vendors. The evidence of positive valuations for non-U.S. buyers is highly significant for both pre- and post-GFC periods. This result is certainly predictable in view of the many prominent U.S. vendors (e.g., IBM, Accenture). Foreign buyers contracting with U.S. vendors therefore anticipate gaining from efficiency and technological innovation. A fact reflected in the investors' highly significant positive valuation. By contrast, these same U.S. vendors are not benefiting from offshore outsourcing. In the pre-2007 period, we lack any proof of an abnormal market reaction. While, in the post-2007 period, we find some evidence of negative valuation. For instance, the eleven days window is showing negative CARs significant at the

1% level. This is consistent with the temporal effect reported earlier that is primarily negatively affecting outsourcing decision emanating from the U.S. This fact also invokes the Foreignness effect with the inexperience of U.S. vendors in dealing with foreign customers. The post-2007 period provides an interesting dichotomy. Judging from the market reaction to outsourcing announcement, U.S. buyers are rewarded for offshore outsourcing while U.S. vendors are penalized.

For the sub-sample of non-U.S. vendors contracting with non-U.S. buyers, both parties display some evidence of positive and significant valuation in both pre and post-2007 period. Overall, we conclude that despite the slew of contracting uncertainties, offshore outsourcing is generally value creating for non-U.S. buyers and vendors for the entire sample period, and particularly so for U.S. buyers after 2007.

Financial Institution Deals

Across every economic system, financial institutions globally are highly leveraged and subject to multitude of unique risks (hence the additional regulatory discretion over financial institutions, e.g., commercial banks). In the U.S., the FDIC[1] monitors and evaluates affiliated institutions' operations and capital adequacy. On a more global level, the Basel I and II agreements between bank regulators of the Bank for International Settlements member countries enforce and regulate banks' risk management, reporting and capital adequacy. With the financial institutions information security constraints, especially in IT functions, outsourcing can potentially increase the risk of breach and vulnerability. We foresee some excessive complications in the financial sector outsourcing process. Therefore, we examine the sub-sample of financial institutions separately and address the information content in their outsourcing announcements.

In table 9, we replicate the event-study analysis for sub-samples of financial institutions. Panel A presents the mean CARs for the full sample of financial institutions, which combines buyers and vendors from all countries. This sample presents similar temporal effect reported earlier. In the pre-GFC period, both buyers and vendors have some positive and significant market reaction. Post GFC, investors' sentiment is shifting with some evidence of negative and significant valuation. For both buyers and vendors, the difference between pre and post-GFC CARs is significant for the twenty-one-day window.

In panel B, we analyze financial institutions in the U.S. The sub-sample of U.S. vendors provides

[1] Federal Deposit Insurance Corporation

further evidence of the shift in investor reaction with a positive pre-GFC valuation changing to negative, post-GFC. By contrast, we find a consistent evidence of negative valuation for U.S. based outsourcing financial institutions during the entire sample period. Regardless of market conditions, financial institutions outsourcing decisions in the U.S. have been consistently yielding negative valuation. The information risks intrinsic to financial institutions and the loss of control risks over information technologies are probably some of reasons behind investors' skepticism in the financial sector deals. As such, our results suggest that financial institutions regulatory agencies in the U.S. should be more vigilant in assessing the related risks of contracting out services given the stock market anticipated value reduction.

Insert Table 9 Here

Panel C of table 9 reports the ARs for buyers and vendors involving financial institutions outside the U.S. There is an absence of abnormal market reaction for vendors during the entire period with a small evidence of negative CARs during the financial crisis period. The market perception does not anticipate any benefit to vendors despite the presence of high profile, well-publicized deals in this sample. On the other side, the financial institutions outside the U.S. display, here as well, some of the financial crisis effects. A positive and significant valuation in the first half of the sample followed by a negative valuation post-2007. This is another sub-sample confirming the temporal effect reported throughout our study.

Our main conclusion on financial institutions has a global reach. Generally, outsourcing announcements in the financial sector have negative wealth effect for both buyers and vendors after 2007. The financial crisis have globally exacerbated the risk investors perceive in the outsourcing process of financial institutions. To address investors' concerns, we suggest a more refined approach while implementing outsourcing agreements in the financial sector.

Cross-Sectional Regression Analysis

Next, we attempt to identify the outsourcing deals characteristics that are affecting the announcement period CARs. We run multivariate cross-sectional regressions using the eleven days $CAR_{(-5, +5)}$ and test the following model for different sub-samples:

$CAR_{(-5, +5)i} = \beta_1 + \beta_2 Size_i + \beta_3 Time_i + \beta_4 Renewal_i + \beta_5 In\text{-}offshore_i + \varepsilon_i$

Where:

$Size_i$: The deal's estimated total dollar value at the initiation of the agreement.

$Time_i$: Number of years the agreement will be in effect as reported in the press release.

$Renewal_i$: a dummy variable equal to 1 if the outsourcing deal announces a renewal of an already existing agreement and 0 otherwise.

$On/off\text{-}shore_i$: a dummy variable equal to 1 if the parties to the outsourcing deal are from two different countries (off-shore outsourcing) and 0 otherwise.

We noticed the presence of heteroscedasticity in our data, a phenomenon frequently reported in event studies. With abnormal returns being prediction errors, it is common to observe inequality in the error term variances. So, to obtain unbiased and efficient parameter estimates, we correct for the possibility of heteroscedasticity by using weighted-least-squares regressions.

Insert Table 10 Here

For the sub-sample of non-financial firms, the variable offshore has a negative and significant effect on U.S. vendors' CARs for the entire sample period. This fact corroborates our earlier result of negative valuation for U.S. vendors offshore transactions (Table 8, panel A). By contrast, the time variable has a positive and significant effect suggesting that longer contract have generally positive effect on CARs. In the post-2007, we find the renewal variable highly significant and positive which is consistent with the positive valuation effect of renewals on U.S. vendors reported above (Table 4, panel D). The negative and significant coefficient of the offshore variable for U.S. buyers in the pre-2007 period is also confirmed by earlier results (Table 8, panel B). Outside the U.S., only the pre-2007 period results are conclusive with the renewal variable negatively affecting non-U.S. vendors and positively affecting non-U.S. buyers.

Focusing the analysis on the sub-sample of financial firms, only U.S. vendors have negative and significant coefficients for deal length in pre-GFC period, which is consistent with the higher risk aversion associated with longer commitments. We generally find insufficient explanatory power of variables tested in the financial sector. This fact underlines the complicated nature of financial service firms and implies the need for further research. We suggest this path for future studies to examine other

deal specific and/or firm specific relevant factors that may predict and explain especially the negative wealth effect in the financial sector. In addition, it is relevant to mention that we compute the regressions using observations where primarily the variables size and the duration are disclosed in the announcement. We notice a lesser disclosure of these two variables, especially in the second half of our sample and within the financial sector where the market reaction is generally adverse. It appears that less deals characteristics are disclosed when the anticipated market response is negative. Future research might further investigative this fact.

CONCLUSION

In hopes of reconciling conflicts among outsourcing theories, findings, and practitioner conduct, we develop a general theory of outsourcing returns that temporally integrates thought from past studies. To help test this model, we construct an extensive global sample of outsourcing announcements from 1991-2015. We examine shareholder wealth effects following announcements of outsourcing deals by testing for abnormal stock returns for buyers and vendors across various deal characteristics. The empirical evidence suggests a temporal effect with significant shift to a negative valuation in the second half of our sample.

Before the GFC, investors in U.S. regard outsourcing as a positive value-creating managerial decision. After the GFC began, the market reaction was restrained and rather negative. Capital markets do assign higher risk aversion to outsourcing decisions in the U.S. following the financial crisis. With large deals being inherently riskier, we find a strong evidence of a reversal in market reaction for U.S. vendors in large deals. The shift from larger deals receiving positive valuation in pre-2007 to smaller deals is another evidence of the increased risk aversion after the financial crisis with markets reacting more favorably to smaller deals. Long-term outsourcing agreements are also negatively affecting the valuation of both U.S. vendors and buyers post-2007, which is a complete reversal from the positive valuation observed in the first half of the sample. With regard to contract renewals or extensions within the U.S., investors expect vendors to have the upper hand in the renegotiations and react with a positive valuation. By contrast, buyers, commonly facing higher switching costs, receive an adverse valuation.

We suggest that positive valuation for larger and longer deals, pre-GFC, are due to the highly publicized cost savings and efficiency. However, the valuation following the financial crisis is mostly affected by the increased risk aversion where investors favor smaller and shorter outsourcing deals.

Similar to the U.S., Canadian capital markets also provide evidence of growing risk aversion, e.g., Canadian buyers experience a shift from a positive to a negative valuation for larger and longer deals. There is also a reversal to a positive valuation with smaller deals following the financial crisis. By contrast, we do not report a temporal effect in the U.K. In this market, both buyers and vendors experience a highly positive valuation around the announcements and throughout the entire sample period.

The majority of the other countries in our sample provide further evidence of the temporal effect with increased risk aversion vis-à-vis outsourcing announcements. The disappearance of the positive wealth effect post-2007 is widely evident across many countries with very few exceptions. One of them is India with unequal wealth distribution between buyers and vendors over the entire period. Overall, the global outsourcing announcements analysis between 1991 and 2007 reveals a broad positive valuation accruing to both buyers and vendors. Nevertheless, we document a consistent evidence of a negative shift in investors' reactions in many countries from 2007 to 2015. We mostly attribute this adverse temporal effect to the increase in risk aversion subsequent to the financial crisis.

Furthermore, our study documents some differences in market reaction between onshore and offshore outsourcing. Following the financial crisis, U.S. buyers benefit from offshore outsourcing while receiving negative valuation for onshore outsourcing. Despite the inherent complexity in offshore outsourcing, evidence from all countries outside the U.S. suggest a positive shareholders' wealth effect from offshore outsourcing to both buyers and vendors and across the entire sample period.

The analysis of financial institutions presents another proof of the negative shift in valuation post-2007. Across all countries, outsourcing announcements in the financial sectors receive negative valuation after 2007, which is equally affecting buyers and vendors. Further, U.S. based financial institutions are systematically subject to adverse market reaction during the entire sample period.

Our extensive data set and detailed analysis of global outsourcing announcements allow us to provide several contributions to the literature. This is the first study to compare wealth effect for both buyers and vendors across various countries and multiple deal characteristics. This study allows us also to provide some general recommendations regarding the outsourcing process. With the reigning volatility following the great recession, markets are expecting only smaller and shorter deals to benefit shareholders' wealth. This is a safer approach to outsourcing in a rapidly advancing technological environment. In addition,

shareholders in most developed countries still regard offshore outsourcing as value creating decision. However, in view of the omnipresent negative valuation with banking institutions, we recommend further diligence in the finance sector outsourcing process from managers and regulators. Researchers should also focus on this area to improve our understanding of the financial sector outsourcing process. Future studies might also examine the reasons behind the exceptional steady positive valuation in the U.K. market. The British outsourcing model might potentially offer some valuable insights. Generally, our results suggest that outsourcing markets have not reached maturity yet. The negative shift in investors' reaction after 2007 is rather disturbing.

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Figure 1
A General Model of Outsourcing Returns

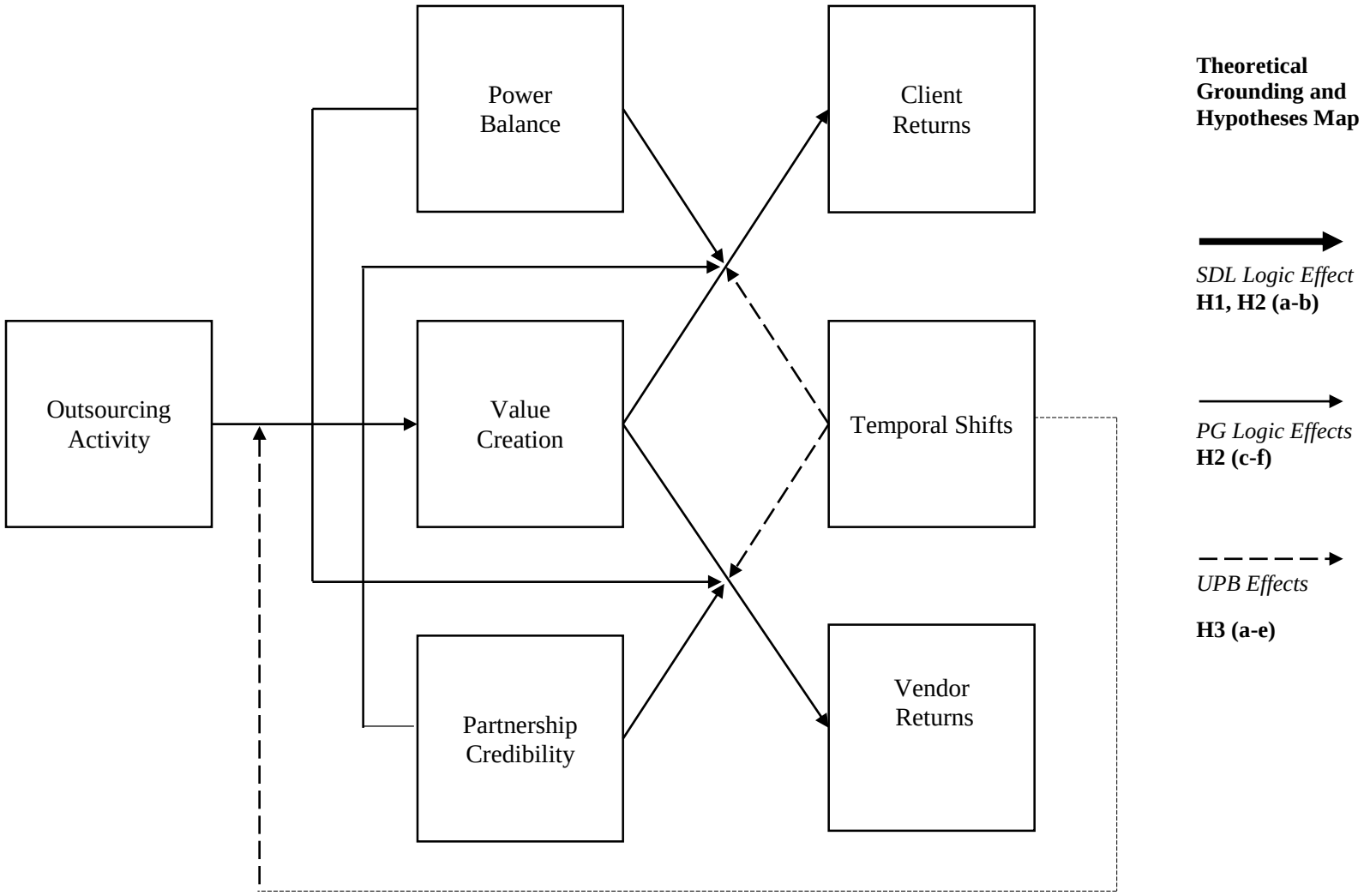

Table 1
Summary of major event studies in the outsourcing literature

Study	Sample Period	Sample Size	Country	Data Source	Full sample mean CAR % [Event window]	Vendor Side Analysis	Notes
Our Study	1991-2015	3,551	World	Lexis-Nexis, Press Reports, Outsourcing-Alert, company websites	0.24*** [-1, +1] 0.23** [0, +3] 0.51*** [-5, +5] 0.57† [-10, +10]	Yes	• Non-U.S. dyad members (clients/vendors) show higher returns (from .45 to 1.49) • Moderators related to deal characteristics, pre- vs. post-GFC, etc. are reported throughout paper
Hayes, Hunton, and Reck (2000)	1990-1997	76	U.S.	Lexis-Nexis	0.124 [0, +1]	No	• Positive AR for small firms and service firms • No AR for large firms and non-service firms
Peak, Windsor, and Conover (2002)	1988-1993	64	U.S.	Lexis-Nexis, ABI Business Periodicals, Annual reports, Newswire, WSJ	0.40 [-1, +1]	No	• Higher market reaction for strategic IS outsourcing projects versus cost-cutting projects
Farag and Krishnan (2003)	1994-2001	172	U.S.	PR Newswire, Business Wire	0.43 [0, 0]	No	• Positive CAR for strategic projects and IT industry but negative CAR for cost-cutting projects
Friedrich and Gellrich (2004)	2000-2003	222	World	Lexis-Nexis, E-Finance Lab	-0.44 [-1, +1]	Yes	• Negative market reaction on aggregate for both vendors and buyers in financial services outsourcing deals • Best performing buyers and vendors enjoy a positive valuation (vendors are riskier but top ones earn over 4 times more than top buyers+/- 20) • Not in every case, but in vast majority of them vendors gain more (or lose less) • All vendors earn over 10 and 2.5 times more over +/-1 and 3) • Equal frequency for: both win, both lose, or one wins (gain or loss, not relative: overall, vendors gain more)
Florin, et al. (2005)			U.S.		.019*** [0,+1]	No	• CARs for full sample. • Results are negative if org. restructuring is involved.
Oh, Gallivan, and Kim (2006)	1995-2003	192	U.S.	Lexis-Nexis	0.54** [0, +1]	No	• Factors inversely associated with AR: Contract size (***), Monitoring difficulty (*), Asset specificity (***), and Cultural differences (***) • Vendor size was significantly (**) and positively related to investors' reactions

Dardan, et al. (2006)	1996-2001	57	U.S.	Lexis-Nexus	.366* [-1, +1]	No	• Mediator is customer satisfaction, not directly tested
Beasley, Bradford, and Dehning (2009)	1996-2003	103	U.S.	Lexis-Nexis	0.01 [-1, 0]	No	• No significant CAR for the full sample • More efficient firms have higher CAR • Higher valuation for deals with short-term operating objectives and for firms in the service industry • No effect of leverage on CAR
Duan, Grover, and Balakrishnan (2009)	1998-2005	298	U.S.	Lexis-Nexis	.0295 [-1, +1]	No	• No AR for full sample (NS) • Positive SAR (.1438**) when primary (vs. support) functions outsourced • Stronger effect for disintegration (vs. functions never performed in-house)
Lee and Kim (2010)	1995-2005	343	U.S.	Lexis-Nexis, WSJ	1.11** [-5, +5] 1.01** [-2, +2] .82** [-1, +1]	No	• Higher returns for longer contracts, IT (vs. BPO), and offshore (vs. onshore) • Interactions: IT and offshore reduce returns for long contracts
Kalaignanam, Kushwaha, Steenkamp, and Tuli (2013)	1996-2006	158	U.S.	Lexis-Nexis, Factiva, trade publications, company websites	-0.28** [0, +1] -.7 [0, +2]	No	• All other windows NS (0,+2; -2,0; -1,+2; -1,+1; -2,+2) • Sample limited to CRM • Larger returns for high IT capability, postsale (vs. presale) CRM, and low marketing capability, economic distance, and cultural distance
Butler and Callahan (2014)	1984-2005	100	U.S.	Business Wire	-1.47** [-5, -1] .43** [0, +1]	No	• Sample limited to HR outsourcing
Raassens, Wuyts, and Geyskens (2014)	1993-2007	87	World	Lexis Nexis, Factiva, and SDC Platinum	-.15** [-1,+2]	No	• Customer Service outsourcing • 51%/49% positive/negative responses (though overall negative) • Emerging market locations favored by investors (except when there is personal contact with customers or when interactions are complex and require embedded knowledge) • 1/3 of deals to emerging markets, 2/3 to advanced (and 2/3 of these are domestic) • 100% of clients from developed; 40% each from U.S./U.K.

Table 2
Summary statistics of outsourcing deals announcements from 1991 to 2015

Country	Full Sample	Vendors	Buyers	Large deals ≥ $100M	Small deals < $100M	Deals ≥ 5 years	Deals < 5 years
U.S	2387	1877	510	589	274	715	788
Canada	241	159	82	84	68	112	87
U.K	208	64	144	51	43	70	88
Australia	44	-	44	17	6	12	22
Belgium	8	2	6	1	-	2	1
Brazil	9	-	9	1	-	2	1
China	5	-	5	-	-	-	1
Denmark	25	-	25	4	-	8	10
Finland	17	-	17	4	-	4	8
France	156	112	44	27	23	42	68
Germany	50	8	42	6	4	11	19
India	188	170	18	21	7	21	61
Ireland	11	7	4	-	-	5	2
Israel	18	13	5	2	5	3	7
Italy	17	-	17	6	-	5	6
Japan	47	3	44	8	-	17	12
Netherlands	33	-	33	8	3	18	11
Norway	16	-	16	2	2	6	6
South Africa	9	-	9	5	-	3	6
South Korea	10	-	10	-	-	4	-
Sweden	28	-	28	-	-	6	8
Switzerland	24	-	24	7	2	7	7
Total	**3,551**	2415	1136	843	437	1073	1219

Table 3
Full Sample Returns

Intervals of trading days[(a)]	Full Sample (N = 3551) Mean (%)	U.S. (N = 2387) Mean (%)	Global (Outside U.S.) (N = 1164) Mean (%)
AR_{-1}	0.06	0.02	0.13
AR_{0}	0.13*	0.12*	0.12
AR_{+1}	0.06	0.00	0.19**
$CAR_{-1, +1}$	0.24***	0.15	0.45***
$CAR_{0, +3}$	0.23**	0.11	0.46***
$CAR_{-5, +5}$	0.51***	0.17	1.20***
$CAR_{-10, +10}$	0.57†	0.12	1.49***

Two-tailed t-test: † if $p < 0.10$, * if $p < 0.05$, ** if $p < 0.01$, *** if $p < 0.001$

Table 4

Test of market reaction to the announcement of an outsourcing deal using portfolios of U.S. based firms.

Panel A: U.S. full Sample, Vendors and Buyers using pre- vs. post- 2007 sub-samples.

Intervals of trading days	U.S. Full sample			Vendors			Buyers		
	Before 2007 N = 1063 Mean (%)	After 2007 N = 1324 Mean (%)	Difference ARs/CARs Mean (%)	Before 2007 N = 758 Mean (%)	After 2007 N = 1119 Mean (%)	Difference ARs/CARs Mean (%)	Before 2007 N = 305 Mean (%)	After 2007 N = 205 Mean (%)	Difference ARs/CARs Mean (%)
AR_{-1}	0.07	-0.01	0.08	0.05	-0.02	0.07	0.10	0.05	0.05
AR_{0}	0.20*	0.06	0.15	0.21**	0.07	0.14†	0.19†	-0.01	0.20
AR_{+1}	0.02	-0.01	0.03	0.00	0.00	0.00	0.07	-0.07	0.14
$CAR_{-1, +1}$	0.29**	0.03	0.25†	0.26**	0.04	0.21†	0.36*	-0.03	0.39
$CAR_{0, +3}$	0.19	0.05	0.13	0.24	0.11	0.13	0.05	-0.28**	0.33
$CAR_{-5, +5}$	0.34**	0.04	0.30	0.26*	-0.01	0.27	0.54**	0.31	0.23
$CAR_{-10, +10}$	0.29	-0.01***	0.29	0.24	-0.05***	0.28	0.41**	0.21	0.20

Panel B: U.S. Vendors and Buyers allocated between large deals (≥ $100M), and small deals (< $100M) using pre- vs. post- 2007 sub-samples.

Intervals of trading days	U.S. Large deals ≥ $100M				U.S. Small deals < $100M			
	Vendors		Buyers		Vendors		Buyers	
	Before 2007 (N = 265) Mean (%)	After 2007 (N = 186) Mean (%)	Before 2007 (N = 108) Mean (%)	After 2007 (N = 30) Mean (%)	Before 2007 (N = 99) Mean (%)	After 2007 (N = 137) Mean (%)	Before 2007 (N = 33) Mean (%)	After 2007 (N = 5) Mean (%)
AR_{-1}	0.02	-0.11*	0.26	0.43*	-0.19	0.10	-0.08	-0.07
AR_{0}	0.48**	-0.28*	0.06	0.21	-0.21	0.26	-0.21	-0.96
AR_{+1}	0.17	0.25	0.03	0.10	-0.10	-0.02	0.49	0.22
$CAR_{-1, +1}$	0.67***	-0.14***	0.35	0.73**	-049*	0.35	0.20	-0.82
$CAR_{0, +3}$	0.45**	0.01	-0.22	-0.10	-0.58**	0.11	0.39	-0.64
$CAR_{-5, +5}$	0.59***	-0.55***	0.22	0.29	-0.53†	0.96***	1.44**	3.09***
$CAR_{-10, +10}$	0.26†	-0.53***	-0.29	0.47***	-0.37	1.67***	3.10***	3.00***

Panel C: U.S. Vendors and Buyers allocated between deals > 5 years, and deals ≤ 5 years using pre- vs. post- 2007 sub-samples.

Intervals of trading days	U.S. deals > 5 years				U.S. deals ≤ 5 years			
	Vendors		Buyers		Vendors		Buyers	
	Before 2007 (N = 296) Mean (%)	After 2007 (N = 244) Mean (%)	Before 2007 (N = 117) Mean (%)	After 2007 (N = 39) Mean (%)	Before 2007 (N = 202) Mean (%)	After 2007 (N = 432) Mean (%)	Before 2007 (N = 79) Mean (%)	After 2007 (N = 75) Mean (%)
AR_{-1}	-0.06	0.02	0.19	-0.08	0.03	0.02	-0.07	0.07
AR_{0}	0.38**	0.15	-0.19	-0.09	0.00	-0.05	0.26	0.19
AR_{+1}	0.01	-0.05	0.16	0.22	0.09	0.08	0.40†	-0.12
$CAR_{-1, +1}$	0.33†	0.12	0.16	0.05	0.13	0.04	0.59*	0.15
$CAR_{0, +3}$	0.35**	0.35	-0.17	-0.14*	-0.09	0.09	0.24*	0.16
$CAR_{-5, +5}$	0.35	0.12	0.10	-0.27***	0.02	-0.01	1.00***	1.20***
$CAR_{-10, +10}$	-0.11	-0.19***	0.93***	-0.19†	0.38	0.59*	0.99***	2.50***

Panel D: U.S. Vendors and Buyers announcements of a deal renewal or extension using pre- vs. post- 2007 sub-samples.

Intervals of trading days	U.S. Vendors			U.S. Buyers		
	Before 2007 N = 71 Mean (%)	After 2007 N = 265 Mean (%)	Difference ARs/CARs Mean (%)	Before 2007 N = 27 Mean (%)	After 2007 N = 305 Mean (%)	Difference ARs/CARs Mean (%)
AR_{-1}	0.54	-0.06	0.60	-0.18	-0.06	-0.12
AR_{0}	0.04	0.20†	-0.16	0.57	-0.05	0.62†
AR_{+1}	-0.17	0.03	-0.19	0.47	-0.14	0.61
$CAR_{-1, +1}$	0.41	0.17	0.25	0.86	-0.24*	1.10
$CAR_{0, +3}$	0.40	0.42**	-0.02	1.01**	-0.14†	1.15
$CAR_{-5, +5}$	0.88	-0.10	1.00	1.18	0.04	1.15
$CAR_{-10, +10}$	1.07*	0.38	0.68	1.37	0.95	0.42

Two-tailed t-test: † if $p < 0.10$, * if $p < 0.05$, ** if $p < 0.01$, *** if $p < 0.001$

Table 5

Test of market reaction to the announcement of an outsourcing deal for firms based in Canada.

Panel A: Canada full Sample, vendors and Buyers using pre- vs. post- 2007 sub-samples.

Intervals of trading days	Canada Full sample			Vendors			Buyers		
	Before 2007 N = 128 Mean (%)	After 2007 N = 113 Mean (%)	Difference ARs/CARs Mean (%)	Before 2007 N = 81 Mean (%)	After 2007 N = 78 Mean (%)	Difference ARs/CARs Mean (%)	Before 2007 N = 47 Mean (%)	After 2007 N = 35 Mean (%)	Difference ARs/CARs Mean (%)
AR_{-1}	-0.01	0.10	-0.11	0.00	0.00	0.00	0.03	0.34	-0.37
AR_{0}	0.13	0.04	0.09	0.02	-0.07	0.09	0.31	0.27	0.04
AR_{+1}	-0.03	-0.14	0.11	-0.19	-0.06	-0.14	0.27	-0.32	0.59
$CAR_{-1, +1}$	0.09	0.00	0.09	-0.17	-0.13	-0.05	0.55*	0.29	0.26
$CAR_{0, +3}$	0.05	0.15	-0.10	-0.17	0.33†	-0.50	0.43	-0.25†	0.68
$CAR_{-5, +5}$	0.26***	0.61**	-0.35	0.01	1.10***	-1.08	0.69***	-0.47†	1.16
$CAR_{-10, +10}$	0.21**	0.73*	-0.52	-0.39	1.04***	-1.43	1.23***	0.03**	1.20

Panel B: Canada Vendors and Buyers allocated between large deals (≥ $100M), and small deals (< $100M) using pre- vs. post-2007 sub-samples.

Intervals of trading days	Canada Large deals ≥ $100M				Canada Small deals < $100M			
	Vendors		Buyers		Vendors		Buyers	
	Before 2007 (N = 34) Mean (%)	After 2007 (N = 15) Mean (%)	Before 2007 (N = 27) Mean (%)	After 2007 (N = 8) Mean (%)	Before 2007 (N = 32) Mean (%)	After 2007 (N = 20) Mean (%)	Before 2007 (N = 11) Mean (%)	After 2007 (N = 5) Mean (%)
AR_{-1}	0.02	0.02	0.00	0.38	-0.05	0.26	0.14	1.57
AR_{0}	0.21	-0.02	0.44*	-0.22	-0.06	0.29	0.61	1.34
AR_{+1}	0.11	-0.22	0.50	-0.48	0.08	0.03	-0.70	-0.19
$CAR_{-1, +1}$	0.35*	-0.22	0.87**	-0.32	-0.02	0.58†	0.05	2.72*
$CAR_{0, +3}$	0.12	0.02	1.50***	-0.54	0.11	0.22	-2.31**	0.85
$CAR_{-5, +5}$	0.52	1.32**	2.13***	0.33	0.55***	-0.41	-1.38	1.98
$CAR_{-10, +10}$	-0.56***	1.17*	3.67***	-0.16***	0.77***	-0.13	-4.42***	2.30**

Panel C: U.S. Vendors and Buyers allocated between deals > 5 years, and deals ≤ 5 years using pre- vs. post- 2007 sub-samples.

Intervals of trading days	Canada deals > 5 years				Canada deals ≤ 5 years			
	Vendors		Buyers		Vendors		Buyers	
	Before 2007 (N = 45) Mean (%)	After 2007 (N = 25) Mean (%)	Before 2007 (N = 30) Mean (%)	After 2007 (N = 12) Mean (%)	Before 2007 (N = 30) Mean (%)	After 2007 (N = 35) Mean (%)	Before 2007 (N = 10) Mean (%)	After 2007 (N = 12) Mean (%)
AR_{-1}	0.12	0.39	0.04	0.70	-0.29	-0.17	-0.04	0.44
AR_{0}	0.01	-0.10	0.24	0.26	0.14	-0.12	1.02*	0.59
AR_{+1}	0.05	-0.33	0.32	-0.89	-0.10	-0.03	-0.02	-0.45
$CAR_{-1, +1}$	0.18*	-0.04	0.60*	0.07	-0.25†	-0.32†	0.96	0.58
$CAR_{0, +3}$	0.02	-0.04	1.11*	-0.78†	0.09	0.28	-0.24	-0.23
$CAR_{-5, +5}$	0.25*	0.83**	1.69***	-1.96	0.38	1.21	0.54	-0.15*
$CAR_{-10, +10}$	-0.21	0.95**	2.23***	0.20	0.24	-0.17***	1.25*	1.06

Two-tailed t-test: † if $p < 0.10$, * if $p < 0.05$, ** if $p < 0.01$, *** if $p < 0.001$

Table 6

Test of market reaction to the announcement of an outsourcing deal for firms based in U.K.

Panel A: U.K. full Sample, Vendors and Buyers using pre- vs. post- 2007 sub-samples.

Intervals of trading days	U.K. Full sample			Vendors			Buyers		
	Before 2007 N = 103 Mean (%)	After 2007 N = 105 Mean (%)	Difference ARs/CARs Mean (%)	Before 2007 N = 35 Mean (%)	After 2007 N = 29 Mean (%)	Difference ARs/CARs Mean (%)	Before 2007 N = 68 Mean (%)	After 2007 N = 76 Mean (%)	Difference ARs/CARs Mean (%)
AR_{-1}	0.00	0.26	-0.25	0.22	0.63†	-0.41	-0.11	0.11	-0.22
AR_{0}	0.13	0.23	-0.10	0.44	0.91**	-0.47	0.03	-0.03	0.00
AR_{+1}	-0.02	0.36	-0.38	0.28	0.11	0.17	-0.18	0.45	-0.63
$CAR_{-1, +1}$	0.11	0.84**	-0.73	0.94**	1.65***	-0.71	-0.32	0.53	-0.85
$CAR_{0, +3}$	0.21	0.95**	-0.74	0.77*	1.35***	-0.58	-0.07	0.80	-0.87
$CAR_{-5, +5}$	0.91***	1.83***	-0.92	2.07***	2.75***	-0.68	0.31*	1.47**	-1.16
$CAR_{-10, +10}$	1.03***	2.08***	-1.05	2.29***	1.33***	0.96	0.39**	2.37***	-1.98

Panel B: U.K. Vendors and Buyers allocated between large deals (≥ $100M), small deals (< $100M) and using pre- vs. post- 2007 sub-samples.

Intervals of trading days	U.K. Large deals ≥ $100M				U.K. Small deals < $100M			
	Vendors		Buyers		Vendors		Buyers	
	Before 2007 (N = 7) Mean (%)	After 2007 (N = 7) Mean (%)	Before 2007 (N = 23) Mean (%)	After 2007 (N = 14) Mean (%)	Before 2007 (N = 16) Mean (%)	After 2007 (N = 5) Mean (%)	Before 2007 (N = 19) Mean (%)	After 2007 (N = 3) Mean (%)
AR_{-1}	0.62	0.18	-0.13	0.34	0.52	-0.79	0.24	-1.41
AR_{0}	1.05	0.95*	-0.27	0.93	0.24	0.67	-0.43	-1.20
AR_{+1}	0.95	-0.18	-0.34	0.29	-0.39	0.80	0.09	-1.09
$CAR_{-1, +1}$	2.63***	0.95**	-0.74	1.55	0.37	0.67	-0.10	-3.70**
$CAR_{0, +3}$	1.69	0.94*	-0.35	-0.36**	0.25	2.34**	-0.16	1.31*
$CAR_{-5, +5}$	1.87	2.19***	-0.47	2.86	2.36***	4.83***	0.20†	1.94*
$CAR_{-10, +10}$	3.69***	-1.05	-0.47	-0.76	1.44***	0.57	1.31***	3.65***

Panel C: U.K. Vendors and Buyers allocated between deals > 5 years, and deals ≤ 5 years using pre- vs. post- 2007 sub-samples.

Intervals of trading days	U.K. deals > 5 years				U.K. deals ≤ 5 years			
	Vendors		Buyers		Vendors		Buyers	
	Before 2007 (N = 9) Mean (%)	After 2007 (N = 7) Mean (%)	Before 2007 (N = 32) Mean (%)	After 2007 (N = 15) Mean (%)	Before 2007 (N = 21) Mean (%)	After 2007 (N = 15) Mean (%)	Before 2007 (N = 19) Mean (%)	After 2007 (N = 33) Mean (%)
AR_{-1}	1.07†	0.08	0.27	-0.08	0.08	0.70	-0.70*	0.11
AR_{0}	0.88	0.80*	-0.61	1.15	0.44	0.92†	0.41	-0.34
AR_{+1}	0.10	0.15	-0.41	1.03	0.50	-0.05	-0.58†	0.47
$CAR_{-1, +1}$	2.05**	1.03**	-0.75	2.10	1.01**	1.57**	-0.87**	0.24
$CAR_{0, +3}$	1.43	1.45***	-0.79	0.61**	0.62†	1.38*	-0.41	2.32***
$CAR_{-5, +5}$	1.73†	2.79***	0.15**	4.83†	2.16***	2.84**	0.42	1.54**
$CAR_{-10, +10}$	3.29***	1.35***	-0.25	7.40***	1.99***	2.06*	2.72***	2.33***

Two-tailed t-test: † if $p < 0.10$, * if $p < 0.05$, ** if $p < 0.01$, *** if $p < 0.001$

Table 7

Test of temporal effect on market reaction to outsourcing decisions.

Countries	Vendors Before 2007 Mean (%)		Vendors After 2007 Mean (%)		Difference ARs/CARs Mean (%)		Buyers Before 2007 Mean (%)		Buyers After 2007 Mean (%)		Difference ARs/CARs Mean (%)	
	(0, +3)	(-10,+10)	(0, +3)	(-10,+10)	(0, +3)	(-10,+10)	(0, +3)	(-10,+10)	(0, +3)	(-10,+10)	(0, +3)	(-10,+10)
Australia	-	-	-	-	-	-	1.23*** N=23	2.68*** N=23	0.02 N=21	0.99 N=21	1.21	1.68
Belgium	-	-	-	-	-	-	0.06 N=3	3.14* N=3	0.99 N=3	6.13*** N=3	-0.93	-2.99
Brazil	-	-	-	-	-	-	-0.59 N=3	0.33 N=3	-0.37 N=3	6.22*** N=3	-0.21	-5.89
Denmark	-	-	-	-	-	-	3.21*** N=7	4.81*** N=7	-0.30 N=18	0.35 N=18	3.51†	4.46
Finland	-	-	-	-	-	-	0.91† N=6	1.23** N=6	1.38 N=11	6.97*** N=11	-0.47	-5.74
France	-0.33 N=35	-0.51** N=35	0.15 N=77	-0.16 N=77	-0.49	-0.35	-1.04* N=14	3.16*** N=14	0.50* N=30	-0.42 N=30	-1.54	3.58
Germany	-	-	1.61 N=7	6.31*** N=7	-	-	0.51 N=18	0.76 N=18	0.46 N=24	3.36*** N=24	0.05	-2.60
India	0.63 N=37	5.86*** N=37	-0.00 N=121	-1.16*** N=121	0.63	7.02*	0.98 N=2	-5.63*** N=2	2.80*** N=16	4.25*** N=16	-1.83	-9.88
Israel	2.01 N=7	12.25*** N=7	2.55 N=6	5.34*** N=6	-0.54	2.26	-1.64** N=14	3.24*** N=14	-0.94* N=30	-2.31* N=30	-0.70	5.54
Italy	-	-	-	-	-	-	0.44 N=8	6.63 N=8	0.10 N=9	-4.11*** N=9	0.34	10.7
Japan	-	-	-	-	-	-	1.91 N=23	2.79* N=23	-0.36 N=21	-0.74 N=21	2.27	3.52
Netherlands	-	-	-	-	-	-	1.72 N=15	3.48 N=15	0.20 N=18	-1.26 N=18	1.52	4.74
Norway	-	-	-	-	-	-	0.89 N=3	-0.14 N=3	-0.94** N=13	-2.31*** N=13	1.83	2.17
South Africa	-	-	-	-	-	-	0.15* N=5	9.64*** N=5	0.56 N=4	0.48 N=4	-0.41	9.16
South Korea	-	-	-	-	-	-	2.43* N=6	4.99*** N=6	-1.28† N=4	-7.22*** N=4	3.71	12.2†
Sweden	-	-	-	-	-	-	-0.71 N=7	-2.11*** N=7	1.92*** N=21	2.19 N=21	-2.62	-4.13
Switzerland	-	-	-	-	-	-	2.94† N=10	0.39*** N=10	1.63† N=14	-0.89*** N=14	1.31	1.28

Two-tailed t-test: † if $p < 0.10$, * if $p < 0.05$, ** if $p < 0.01$, *** if $p < 0.001$

Table 8

Test of market reaction to the announcement of offshore and onshore outsourcing deals between U.S. and non-U.S. vendors and buyers using pre- vs. post-2007 sub-samples.

Panel A

Intervals of trading days	U.S. Vendors with U.S. Buyers				U.S. Vendors with Non U.S. Buyers			
	U.S. Vendors		U.S. Buyers		U.S. Vendors		Non U.S. Buyers	
	Before 2007 (N = 424) Mean (%)	After 2007 (N = 534) Mean (%)	Before 2007 (N = 274) Mean (%)	After 2007 (N = 165) Mean (%)	Before 2007 (N = 336) Mean (%)	After 2007 (N = 583) Mean (%)	Before 2007 (N = 221) Mean (%)	After 2007 (N = 260) Mean (%)
AR $_{-1}$	0.01	0.02	0.03	0.09	0.11	-0.09†	0.57*	0.03
AR $_{0}$	0.30†	0.06	0.28	0.00	0.11	0.09	0.28†	0.19
AR $_{+1}$	-0.02	0.04	0.07	-0.22*	0.02	-0.05	0.28	0.30*
CAR $_{-1, +1}$	0.29*	0.12	0.39	-0.14*	0.23†	-0.05	1.12***	0.52*
CAR $_{0, +3}$	0.36	0.12	0.21	-0.43***	0.12	0.11	0.92***	0.45**
CAR $_{-5, +5}$	0.37**	0.27	0.95**	0.17	0.13	-0.28*	2.30***	0.49***
CAR $_{-10, +10}$	0.32†	-0.31*	0.95*	-0.17*	0.19	-0.35***	3.64***	0.48

Panel B

Intervals of trading days	Non U.S. Vendors with U.S. Buyers				Non U.S. Vendors with Non U.S. Buyers			
	Non U.S. Vendors (N = 108)		U.S. Buyers (N = 64)		Non U.S. Vendors (N = 418)		Non U.S. Buyers (N = 201)	
	Before 2007 (N = 43) Mean (%)	After 2007 (N = 65) Mean (%)	Before 2007 (N = 26) Mean (%)	After 2007 (N = 38) Mean (%)	Before 2007 (N = 151) Mean (%)	After 2007 (N = 267) Mean (%)	Before 2007 (N = 83) Mean (%)	After 2007 (N = 118) Mean (%)
AR $_{-1}$	0.26	-0.20	0.40	-0.04	0.09	0.16	-0.31	0.20
AR $_{0}$	0.11	-0.04	-0.88	-0.09	0.12	0.13	0.08	-0.07
AR $_{+1}$	0.26	0.36*	-0.23	0.43†	-0.07	0.12	0.10	0.30
CAR $_{-1, +1}$	0.63	0.13	-0.71	0.30†	0.15	0.41**	-0.13	0.44
CAR $_{0, +3}$	0.34	0.49**	-1.81	0.34*	0.13	0.28	-0.07	1.00†
CAR $_{-5, +5}$	2.64*	0.02	-2.11*	0.49*	1.23***	0.71***	0.66*	1.73***
CAR $_{-10, +10}$	0.77***	0.67	-4.99	1.69**	1.94***	0.26	1.26***	2.02**

Two-tailed t-test: † if $p < 0.10$, * if $p < 0.05$, ** if $p < 0.01$, *** if $p < 0.001$

Table 9

Test of market reaction to the announcement of an outsourcing deal for Financial Institutions using pre- vs. post-2007 sub-samples.

Panel A: Full sample of financial institutions.

	Vendors			Buyers		
Intervals of trading days	Before 2007 N = 177 Mean (%)	After 2007 N = 123 Mean (%)	Difference in ARs/CARs Mean (%)	Before 2007 N = 136 Mean (%)	After 2007 N = 81 Mean (%)	Difference in ARs/CARs Mean (%)
AR_{-1}	0.03	-0.15	0.18	-0.20	-0.11	-0.09
AR_{0}	0.23	0.09	0.14	0.28*	0.18	0.10
AR_{+1}	-0.01	-0.14	0.13	-0.16	0.01	-0.17
$CAR_{-1, +1}$	0.25	-0.21	0.46	-0.08	0.08	-0.16
$CAR_{0, +3}$	0.53**	-0.05	0.58	-0.13	0.11	-0.24
$CAR_{-5, +5}$	0.45	-0.54	0.99	0.58***	-0.72**	1.30
$CAR_{-10, +10}$	0.17	-1.97***	2.14†	0.52***	-2.71***	3.23**

Panel B: U.S. Financial Institutions.

	Vendors			Buyers		
Intervals of trading days	Before 2007 N = 92 Mean (%)	After 2007 N = 134 Mean (%)	Difference in ARs/CARs Mean (%)	Before 2007 N = 45 Mean (%)	After 2007 N = 27 Mean (%)	Difference in ARs/CARs Mean (%)
AR_{-1}	0.08	-0.17	0.25	-0.50	-0.34†	-0.16
AR_{0}	0.26	0.10	0.17	0.39	0.02	0.37
AR_{+1}	0.14	-0.05	0.19	-0.47*	-0.39	-0.08
$CAR_{-1, +1}$	0.48	-0.12	0.60	-0.58	-0.70	0.12
$CAR_{0, +3}$	0.76**	-0.01	0.77	-1.07**	-0.19	-0.88
$CAR_{-5, +5}$	0.57	-0.94**	1.51	-0.94*	-2.58***	1.63
$CAR_{-10, +10}$	0.10	-2.31***	2.41†	-1.55	-5.39***	3.84†

Panel C: Non U.S. Financial Institutions.

	Vendors			Buyers		
Intervals of trading days	Before 2007 N = 43 Mean (%)	After 2007 N = 31 Mean (%)	Difference in ARs/CARs Mean (%)	Before 2007 N = 91 Mean (%)	After 2007 N = 54 Mean (%)	Difference in ARs/CARs Mean (%)
AR_{-1}	-0.15	-0.11	-0.05	-0.05	0.01	-0.06
AR_{0}	0.13	0.05	0.07	0.22	0.26	-0.04
AR_{+1}	-0.46	-0.43	-0.04	-0.01	0.20	-0.21
$CAR_{-1, +1}$	-0.49	-0.48	-0.01	0.16	0.47	-0.31
$CAR_{0, +3}$	-0.17	-0.16	-0.01	0.34	0.26	0.08
$CAR_{-5, +5}$	0.06	0.64	-0.58	1.34***	0.21	1.12
$CAR_{-10, +10}$	0.40	-0.96***	1.36	1.55***	-1.37***	2.92*

Two-tailed t-test: † if $p < 0.10$, * if $p < 0.05$, ** if $p < 0.01$, *** if $p < 0.001$

Table 10

Determinants of market reactions: Regressions relating the CARs for the outsourcing agreement vendors and buyers to the deal characteristics

	Independent Variables							
	Observations	Intercept	Size	Time	Renewal	Offshore	R^2 adjusted	F-Statistic
Full Sample:								
Vendors	435	0.002*	-0.001	0.001***	-0.039***	-0.010*	0.080	10.47***
Pre-2007	370	-0.006***	0.001	0.014***	0.022*	-0.035***	0.150	17.28***
Post-2007	275	0.001	-0.001	-0.001*	0.037***	0.011	0.113	9.70***
Buyers	97	0.004	-0.001	0.001	-0.027	-0.011	0.006	1.15
Pre-2007								
Post-2007								
Non-Financial firms								
U.S. Vendors	260	0.001	-0.001	0.001*	-0.010	-0.023***	0.070	5.87***
Pre-2007	275	-0.009***	0.001*	0.018***	0.032**	-0.052***	0.203	18.42***
Post-2007	114	0.002*	-0.001	-0.001**	-0.006	-0.076***	0.152	6.05***
U.S. Buyers	28	0.011*	-0.001*	-0.006	-0.053*	-0.032	0.130	2.01
Pre-2007								
Post-2007	73	-0.001	0.001	0.006*	-0.080***	-0.012	0.325	9.66***
Non U.S. Vendors	71	0.001	0.001	-0.005	0.028*	0.005	0.036	1.65
Pre-2007	89	-0.004	0.001	0.002	0.046***	0.009	0.218	7.15***
Post-2007	53	0.003	-0.001	0.004	-0.026	-0.024	0.032	0.60
Non U.S. Buyers								
Pre-2007								
Post-2007								
Financial firms								
U.S. Vendors	72	0.005*	-0.001	-0.009***	-0.015	0.027*	0.147	4.05**
Pre-2007	16	-0.008†	0.001	0.006	0.054	0.010	-0.022	0.92
Post-2007	-	-	-	-	-	-	-	-
U.S. Buyers	-	-	-	-	-	-	-	-
Pre-2007								
Post-2007	30	-0.010	0.001	0.005	-0.001	0.048	0.113	1.92
Non U.S. Vendors	8	0.009	-0.001	-0.006	-0.034	-0.077	0.239	1.55
Pre-2007	57	-0.001	-0.001	0.004	0.006	0.011	0.109	2.72*
Post-2007	12	0.003	-0.001	-0.005	-0.004	-0.014	-0.188	0.56
Non U.S. Buyers								
Pre-2007								
Post-2007								

This Table reports the weighted least square regressions of cumulative abnormal returns (CARs) for the 11-days (t = -5, +5) window surrounding the announcement of an outsourcing agreement. The Parameter estimates are reported as Percentages. The independent variables include the following: SIZE: is the outsourcing agreement total value in U.S. dollars. TIME: is the length of the agreement expressed in years. RENEWAL: is a dummy variable equal to 1 if the outsourcing deal announces a renewal of an already existing agreement and 0 otherwise. ON-OFFSHORE: is a dummy variable equal to 1 if the parties to the outsourcing deal are from two different countries and 0 otherwise. In these regressions, we include the observations that have complete information about the four independent variables. Many press releases omit one or more key variables, which considerably reduced the number of observations used in the regression analysis compared to those used in our earlier analysis. Two-tailed t-test: † if $p < 0.10$, * if $p < 0.05$, ** if $p < 0.01$, *** if $p < 0.001$